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04.2025

PRODUCT OVERVIEW DRIVES



Interactive buttons

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1 Chain drives — To the chapter
2 Spindle drives — To the chapter
3 Rack and pinion drives — To the chapter
4 Folding arm drives — To the chapter
5 Louvre drives — To the chapter
6 Locking drives — To the chapter
7 Hardware sets — To the chapter
8 Accessories drives — To the chapter

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Valid from 15.04.2025

IMPORTANT NOTE

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All prices quoted shall be in Euro and are Euro ex works excluding packaging costs and excluding statutory rate of value added tax.

Orders with a net value of goods of less than 100 € cannot be processed economically and will therefore be subject to a minimum quantity surcharge of 20 €.

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By pasting this product list, previous editions become invalid.

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Product Overview

LIST OF ABBREVIATIONS

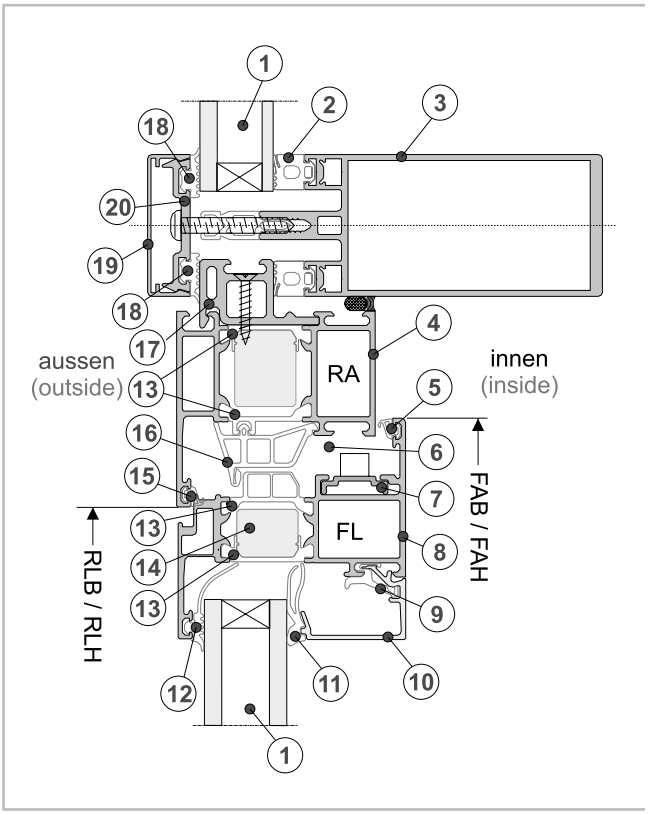
A2	Stainless Steel
BxHxT	Width x Height x Depth
DIN	German Institute for Standardisation
E6/C-0	Anodised finish
EN	European standard
FAB	Overall width of casement
FAH	Overall height of casement
FL	Opening casement
FM	Window assembly
FÜ	Window overlap
HSK	Main closing edge (parallel to hinge)
KLB	Clamping area
KW-Diagramm	Force path diagram
L	Left handed version
LxBxH	Length x Width x Height
NRWG	NSHEV – natural smoke and heat exhaust ventilation
NSK	Side closing edge (sideways on hinge)
PAF	Parallel opening window
PE	Profile installation
PG	Price class
PR	Transom assembly
R	Right handed version
RA	Window frame
RAL	Central European Colour Standard
RM	Frame assembly
RWA	SHEV – smoke and heat exhaust ventilation
Solo	Solo drive
SYNC	Synchronizes running drive systems
Tandem	2 drives with run monitoring
TWIN	2 drives in one casing
Z	Drive model with feedback contact (CLOSE)
netto	Prices are not discountable

SCALE UNITS

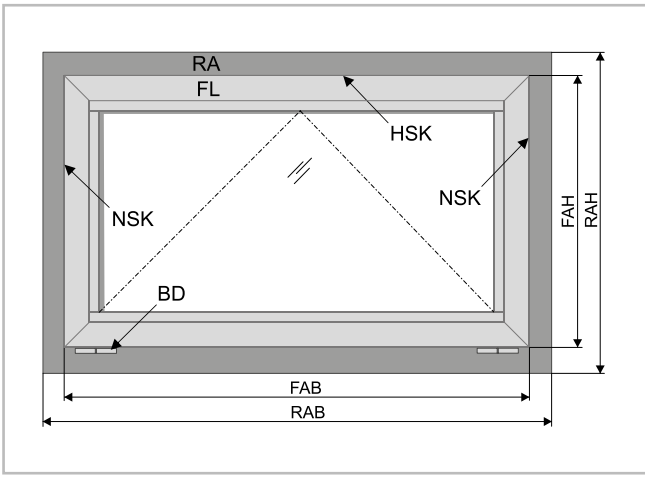
°C	Degree Celsius
A	Amps.
DEG	Degree angle
Kg	Kilogramms
m	Metres
min	Minutes
mm	Millimetres
N	Newton
s	Seconds
Stck.	Pieces
V	Volts
PU	Packaging units
W	Watts

FIGURES

€	Euro
AC	Alternating current (50Hz / 60Hz)
DC	Direct current
ED	Switching time (10 min)
F	Stroke force
I	Electrical current
L	Length
P	Elektrical capacity
s	Stroke
t	Thickness of material
U	Electric current
v	Speed



SECTION	
1	Infill (Glass structure)
2	Inner adapter seal
3	Transom profile
4	Window frame
5	Secondary seal (inside)
6	Rebate
7	Locking bar with locking bolts
8	Casement frame
9	Bead clamp
10	Glazing bead
11	Inner glazing gasket
12	Outer glazing gasket
13	Thermal break
14	Insulating material
15	Primary seal
16	Centre seal
17	Adapter frame
18	Outer adapter seal
19	Cover profile
20	Pressure plate

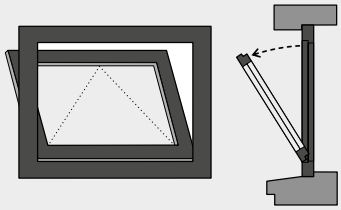


ABBREVIATIONS WINDOWS	
RA	Window frame
FL	Casement / Casement frame
HSK	Main closing edge
NSK	Side closing edge
BD	Sash hinge (Strip side)
FAB	Overall width of casement
FAH	Overall height of casement
RAB	Window frame width
RAH	Window frame height
RLB	Throat width
RLH	Throat height

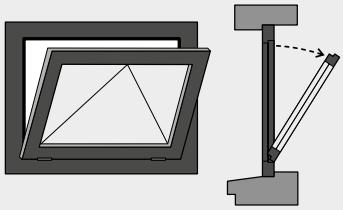
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TYPES OF WINDOWS

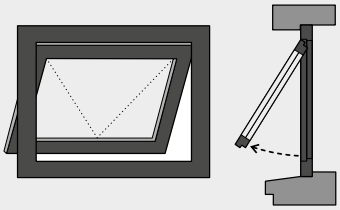
1 Bottom hung outward opening



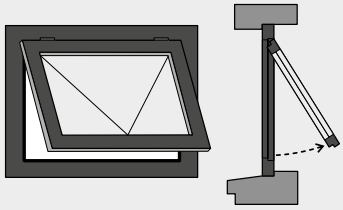
2 Buttom hung inward opening



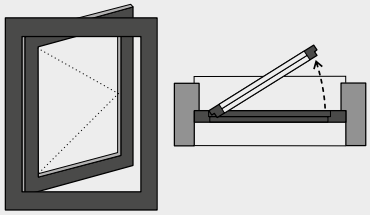
3 Top hung outward opening



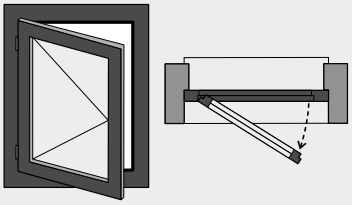
4 Top hung inward opening



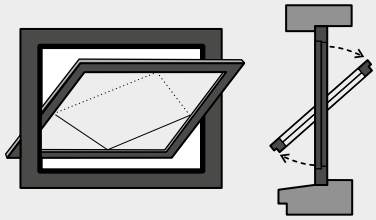
5 Side hung outward opening



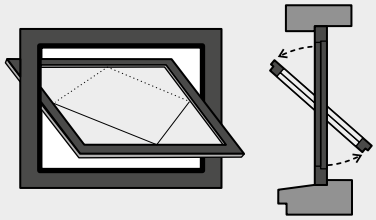
6 Side hung inward opening



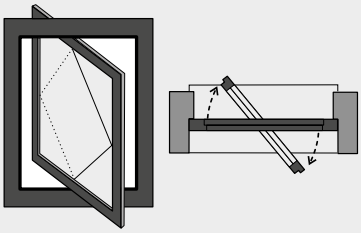
7 Horizontal pivot



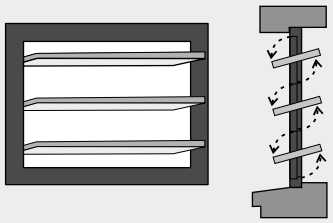
8 Horizontal pivot



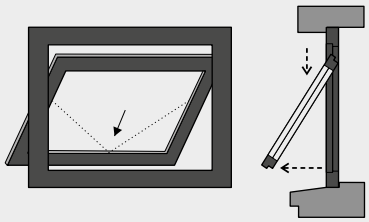
9 Vertical pivot



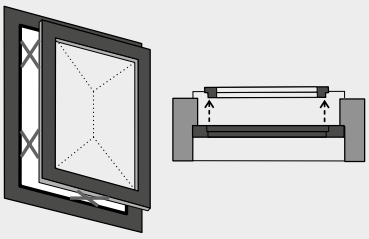
10 Louvred window



11 Friction hinged outward opening



12 Parallel slide window

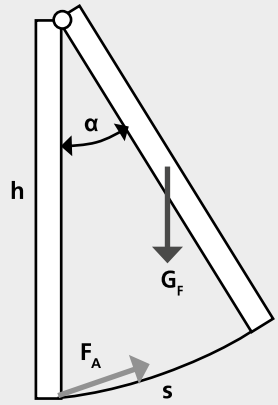


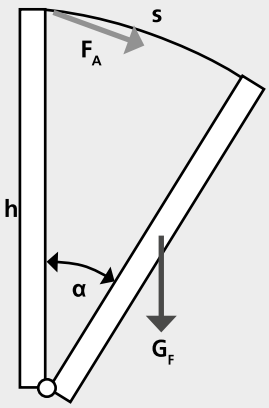
USEFUL CALCULATIONS

Casement weight: G_F [Kg] = **FAB** [m] * **FAH** [m] * **Glass thickness** [mm] * 2,5 [Kg/m²] * 1,1

Weight force: F_G [N] = G_F [Kg] * 9,81 [m/s²]

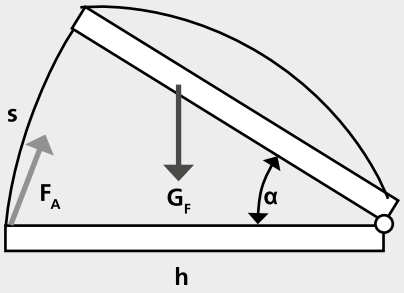
Drive force: top & buttom hung window





F_A [N] = G_F [Kg] * 9,81 [m/s²] * s [mm] * 0,54 / **h** [mm]

Roof window / Roof light



F_A [N] = G_F [Kg] * 9,81 [m/s²] * 0,54

Drive stroke if window height and opening angle are known:
s [mm] = √(2 * h² [mm] * (1 - cosα[DEG]))

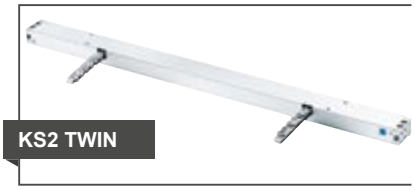
Opening angle if height and stroke are known:
α [DEG] = $\cos^{-1}$ (1 - s² [mm] / 2 / h² [mm])

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1 Chain drives

Product Overview


KS2


KS2 TWIN

KS2 CHAIN DRIVES

- Model: 24V DC, S2/S12 and 230V AC, S2/S12
- Pulling/Pushing force: max. 250 N (TWIN 500 N)
- Stroke length: 200 – 800 mm (S2)
5 – 1000 mm (S12), programmable
- Speed: 10 mm/s (S2)
5 – 14 mm/s (S12), programmable
- Housing (WxH): 42 x 26 mm, Length depending on stroke
- Opening mechanism: Rigid back stainless steel sidebow roller chain
- Version: R (right), L (left), TWIN, Z, Set 230V/24V
- Protection rating: IP 32

KS2


KS4

KS4 CHAIN DRIVES

- Model: 24V DC, S12
- Pulling/Pushing force: max. 400 N
- Stroke length: 5 – 1000 mm, programmable
- Speed: 5 – 14 mm/s, programmable
- Housing (WxH): 35 x 24 mm, Length depending on stroke
- Opening mechanism: Rigid back stainless steel roller chain
without protruding rivet heads
- Version: R (right), L (left)
- Protection rating: IP 32

KS4


KSA

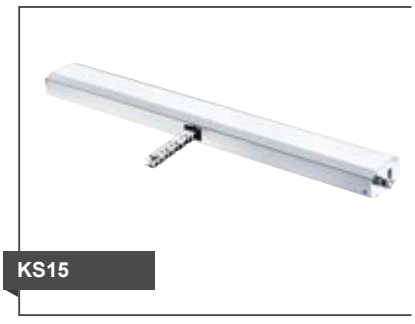

KSA TWIN


KSA D

KSA CHAIN DRIVES

- Model: 24V DC, S12 and 230V AC, S12
- ulling/Pushing force: max. 600 N (TWIN 1200 N)
- Stroke length: 5 – 1500 mm, programmable (KSA)
5 – 600 mm, programmable (KSA TWIN)
5 – 800 mm, programmable (KSA D)
- Speed: 5 – 14 mm/s, programmable
- Housing (WxH): 56 x 40 mm (D: 104 x 50 mm),
Length depending on stroke
- Opening mechanism: Rigid back stainless steel roller chain
- Version: Solo, TWIN, D, Z
- Protection rating: IP 32

KSA


KS15

KS15 CHAIN DRIVES

- Model: 24V DC, S12 and 230V AC, S12
- Pulling/Pushing force: max. 1.500 N
- Stroke length: 5 – 1000 mm, programmable
- Speed: 6 – 17 mm/s, programmable
- Housing (WxH): 120 x 60 mm, Length depending on stroke
- Opening mechanism: High-quality, robust, nickel-plated steel chain
- Version: Solo
- Protection rating: IP 20

KS15

CHAIN DRIVES

Type	Form	Model		Stroke (Factory setting)	Force		Speed (Factory setting)		Stroke in	Cut-off current	Use			Loca-tion		Functions		
		Type of cut-off	Rated voltage	Range	Pushing force	Pulling force	OPEN	CLOSE	60 s	Max.	Natural ventilation	RWA	NRWG	Facade	Roof	Run monitoring	Synchronised run	Sequence control
			[V]	[mm]	[N]	[N]	[mm/s]	[mm/s]	[mm]	[A]								
KS2	Solo	S2	24	200 – 800	200 – 50	200	10,0	10,0	600	0,7	●	■		●				
			230	200 – 800	200 – 50	200	10,0	10,0	600	0,7	●	■		●				
		S12	24	200 – 800	250 – 50	250	8,0 – 13,5	8,0	800	1,0	●	●	●	●	■	■	●	●
			230	200 – 800	250 – 50	250	8,0	8,0	450	0,2	●			●	■	■	●	■
	TWIN	S12	24	200 – 600	500 – 100	500	8,0 – 12,0	8,0	600	1,4	●	●		●	■	■	●	●
KS4	Solo	S12	24	200 – 1000	400 – 50	400	8,0 – 13,5	8,0	800	1,2	●	●	●	●	●	■	●	●
KSA	Solo	S12	24	250 – 1500	600 – 50	600	8,0 – 13,5	8,0	800	1,2	●	●	●	●	●	■	●	●
			230	250 – 1500	600 – 50	600	8,0	8,0	450	0,2	●			●	●	●	●	
	TWIN	S12	24	400 – 600	1200 – 600	1200	8,0 – 12,0	8,0	700	2,4	●	●		●	●	■	●	●
	D	S12	24	400 – 800	1200 – 400	1200	8,0 – 13,5	8,0	800	2,4	●	●		●	●	■	●	●
KS15	Solo	S12	24	800 – 1000	1500	1500	17,0	10,0	1000	5,0	●	●	●	●	●	■	●	●
		S12	230	1000	1500	1500	17,0	10,0	1000	5,0	●	●	●	●	●	■	●	●

LEGEND

● suitable ■ not recommended

S2 internal load dependend cut-off switch

S12 internal Intelligent Control Electronics for synchronised run and programmable functions

(8,0 – 13,5) force and speed depend on the stroke



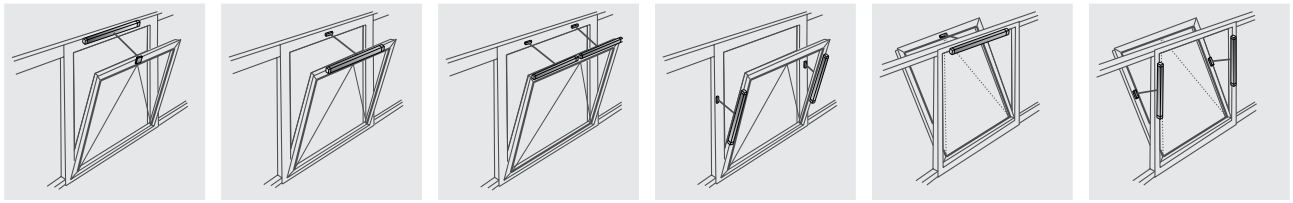
PRODUCT FEATURES KS2

- For natural ventilation, smoke and heat exhausting systems and ferralux® NRWG (EN12101-2)
- Versions R (right) or L (left) or TWIN
- Aluminium housing anodized or optionally in RAL colors
- High-quality stainless steel sidebow roller chain, without protruding rivet heads
- Slim line body that suits concealed fitting within profiles
- Rigid drive mounting on frame without brackets
- Programmable parameters of Intelligent Control Electronics S12
  - Synchronised multi-operation and sequence control without add. devices
  - Electronic soft-start, soft-close and soft-stop at end of stroke control
  - Stroke, force, speed
  - Rebate control
- Suitable for operation with M-COM for the automatic configuration of synchronised run of multi drive systems and sequence control

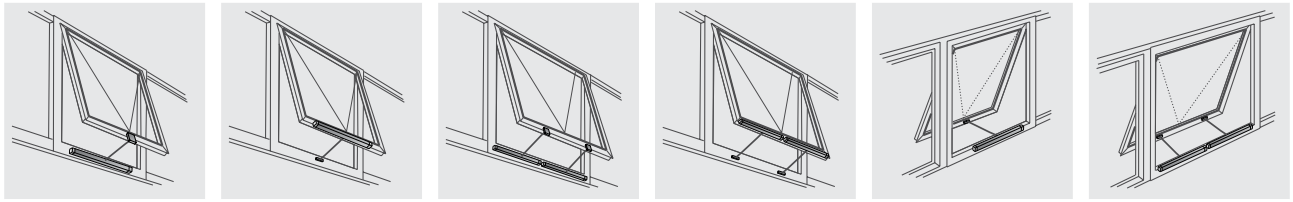
For this product series, a Type III Environmental Product Declaration (EPD) was issued according to ISO 14025 and EN 15804.
The LCA results of the different product types are listed at the end of this product catalogue.
The EPD documents can be viewed or downloaded from our homepage **www.aumueller-gmbh.de**.

FACADE

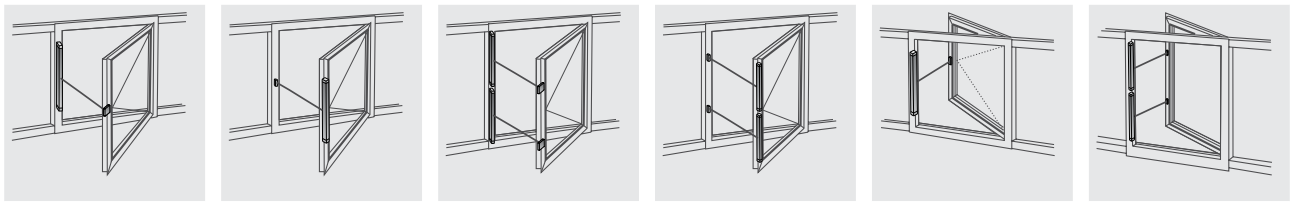
Bottom-hung



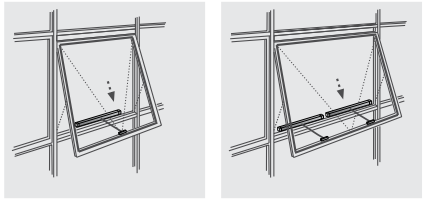
Top-hung



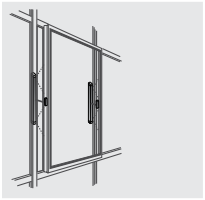
Side-hung



Friction hinged

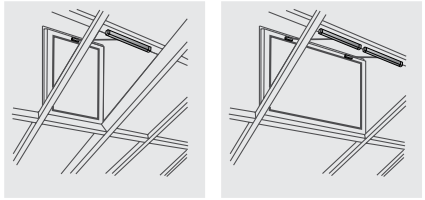


Parallel outward opening

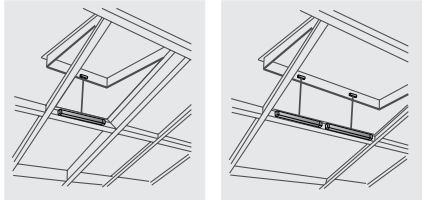


ROOF

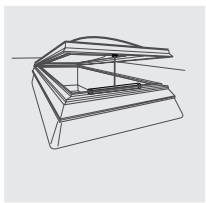
Bottom-hung

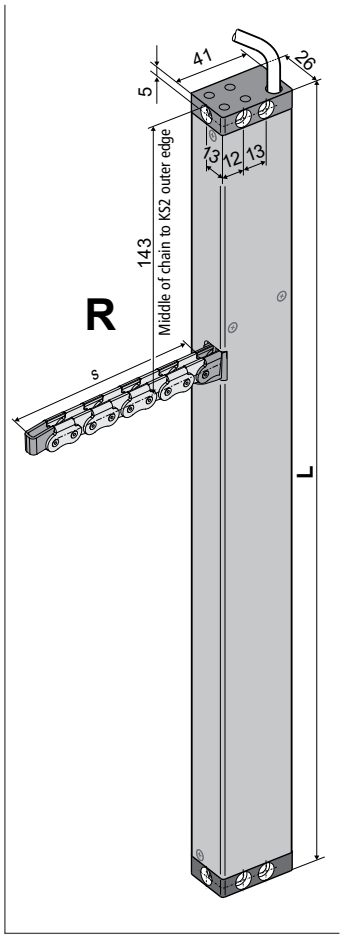


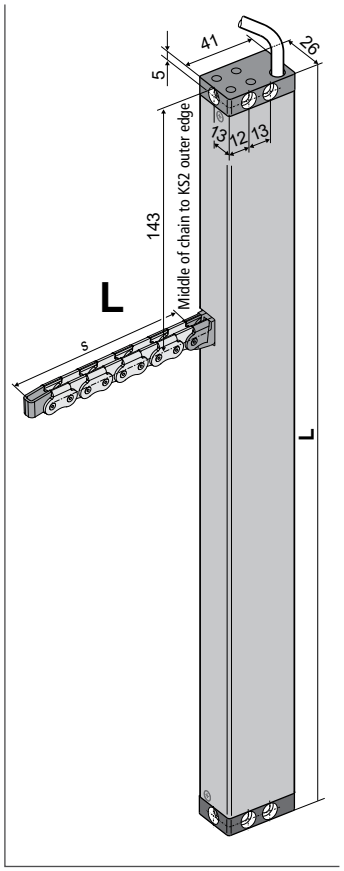
Top-hung



Sky light



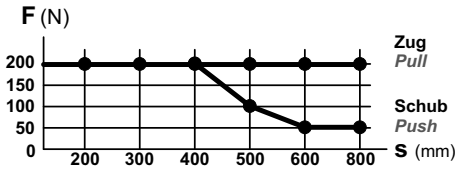




- Application: Natural ventilation as single-drive
- Internal load dependend cut-off switch S2 in OPEN / CLOSE direction

TÜV NORD CERT GmbH – Type Tested

TECHNICAL DATA

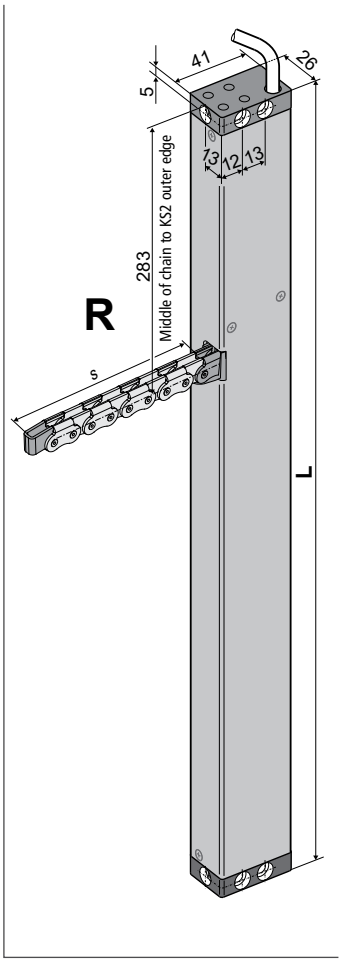
U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	0,5 A
I_A	Cut-off current	0,7 A
P_N	Rated power	12 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	200 N
F_A	Pushing force max.	
		s > 600 mm only for pulling application
F_H	Pullout force	1.800 N (fastening depended)
	Chain	Stainless steel, without protruding rivet heads. Simple connection to casement brackets. Small bending radii allow maximum opening angles of small windows.
	Connecting cable	non-halogen, grey 3 x 0,5 mm², ~ 3 m
v	Speed	10,0 mm/s 10,0 mm/s
s	Stroke	see order data
L	Length	see order data
	Sound pressure level	≤ 70 dB (A)

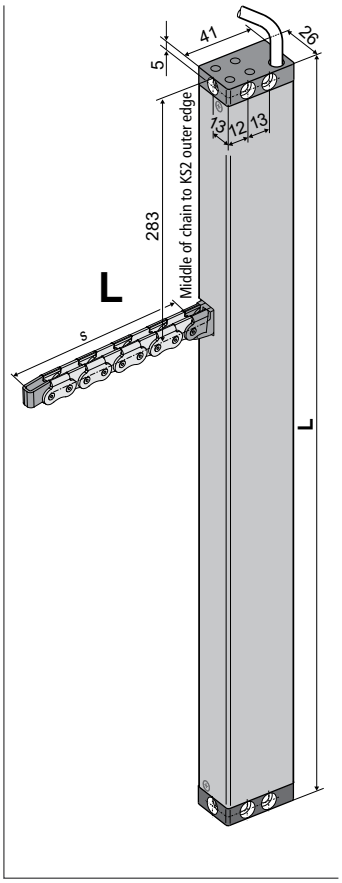
ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.		
200	335	KS2 200 S2 24V R	E6/C-0	1	**521120**		
		KS2 200 S2 24V L	E6/C-0	1	**521420**		
300	380	KS2 300 S2 24V R	E6/C-0	1	**521130**		
		KS2 300 S2 24V L	E6/C-0	1	**521430**		
400	430	KS2 400 S2 24V R	E6/C-0	1	**521140**		
		KS2 400 S2 24V L	E6/C-0	1	**521440**		
500	545	KS2 500 S2 24V R	E6/C-0	1	**521150**		
		KS2 500 S2 24V L	E6/C-0	1	**521450**		
600	545	KS2 600 S2 24V R	E6/C-0	1	**521160**		
		KS2 600 S2 24V L	E6/C-0	1	**521460**		
800	625	KS2 800 S2 24V R	E6/C-0	1	**521180**		
		KS2 800 S2 24V L	E6/C-0	1	**521480**		

OPTIONS

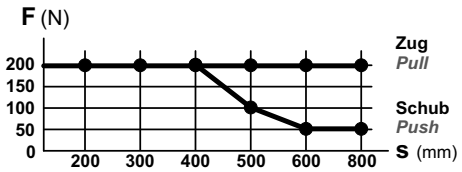
Special model	PU/pcs.	Part.-No.		
Drive housing painted/powder coated in other RAL colours				
Lump sum for coating		**516030**		
Specify at order stage:	1 – 20	**516004**		
	21 – 50	**516004**		
	51 – 100	**516004**		
	from 101	**516004**		
Extra length connecting cable:				
5 m – non-halogen, grey – 3 x 0,5 mm²		**501034**		
10 m – non-halogen, grey – 3 x 0,5 mm²		**501036**		





- Application: Natural ventilation as single-drive
- Internal load dependend cut-off switch S2 in OPEN / CLOSE direction
- Parallel connection up to 8 drives in one group

TECHNICAL DATA

U_N	Rated voltage	230 V AC (50 Hz)
I_N	Rated current	0,13 A
I_A	Cut-off current	0,2 A
P_N	Rated power	30 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +60°C
F_Z	Pulling force max.	200 N
F_A	Pushing force max.	 s > 600 mm only for pulling application
F_H	Pullout force	1.800 N (fastening depended)
	Chain	Stainless steel, without protruding rivet heads. Simple connection to casement brackets. Small bending radii allow maximum opening angles of small windows.
	Connecting cable	non-halogen, grey 6 x 0,75 mm², ~ 3 m
v	Speed	10,0 mm/s 10,0 mm/s
s	Stroke	see order data
L	Length	see order data
	Sound pressure level	≤ 70 dB (A)

ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.		
200	475	KS2 200 S2 230V R	E6/C-0	1	**494920**		
		KS2 200 S2 230V L	E6/C-0	1	**494720**		
300	520	KS2 300 S2 230V R	E6/C-0	1	**494930**		
		KS2 300 S2 230V L	E6/C-0	1	**494730**		
400	570	KS2 400 S2 230V R	E6/C-0	1	**494940**		
		KS2 400 S2 230V L	E6/C-0	1	**494740**		
500	685	KS2 500 S2 230V R	E6/C-0	1	**494950**		
		KS2 500 S2 230V L	E6/C-0	1	**494750**		
600	685	KS2 600 S2 230V R	E6/C-0	1	**494960**		
		KS2 600 S2 230V L	E6/C-0	1	**494760**		
800	765	KS2 800 S2 230V R	E6/C-0	1	**494980**		
		KS2 800 S2 230V L	E6/C-0	1	**494780**		

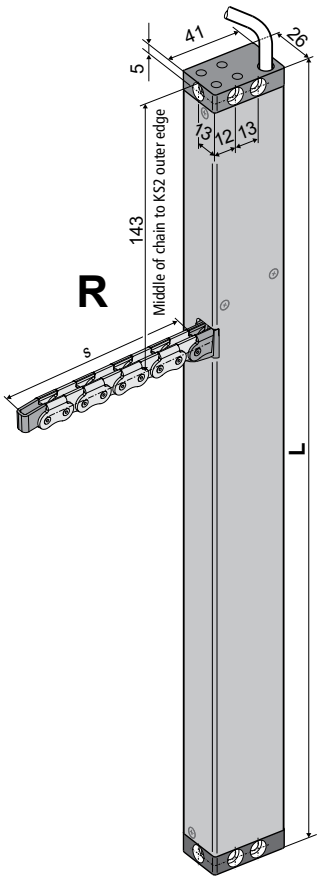
OPTIONS

Special model	PU/pcs.	Part.-No.		
Drive housing painted/powder coated in other RAL colours				
Lump sum for coating		**516030**		
Specify at order stage:	1 – 20	**516004**		
	21 – 50	**516004**		
	51 – 100	**516004**		
	from 101	**516004**		
Extra length connecting cable:				
5 m – non-halogen, grey – 6 x 0,75 mm²		**501164**		
10 m – non-halogen, grey – 6 x 0,75 mm²		**501166**		

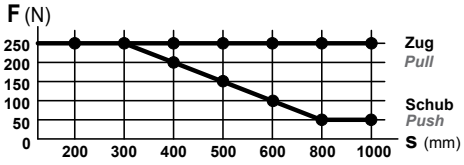
- Application: natural ventilation, RWA, ferralux®-NRWG
- Internal Intelligent Control Electronics S12
- Z-Version: Programmable feedback limit position „OPEN“ and „CLOSE“ (max. 24 V, 500 mA)

Options

- Programmable special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)



TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	0,7 A
I_A	Cut-off current	1,0 A
P_N	Rated power	17 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	250 N
F_A	Pushing force max.	
		s > 600 mm only for pulling application
F_H	Pullout force	1.800 N (fastening depended)
	Chain	Stainless steel, without protruding rivet heads. Simple connection to casement brackets. Small bending radii allow maximum opening angles of small windows.
	Connecting cable	non-halogen, grey 3 x 0,5 mm², ~ 3 m non-halogen, grey 5 x 0,5 mm², ~ 3 m (Z version)
v	Speed	Factory settings: s ≤ 400 8,0 mm/s 8,0 mm/s s > 400 – 600 12,0 mm/s 8,0 mm/s s > 600 13,5 mm/s 8,0 mm/s Adjustment range: 5 - 14 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 800 mm
L	Length	see order data
	Sound pressure level	≤ 70 dB (A)

ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.		
200	335	KS2 200 S12 24V R	E6/C-0	1	**521620**		
		KS2 200 S12 24V Z R	E6/C-0	1	**521623**		
300	380	KS2 300 S12 24V R	E6/C-0	1	**521630**		
		KS2 300 S12 24V Z R	E6/C-0	1	**521633**		
400	430	KS2 400 S12 24V R	E6/C-0	1	**521640**		
		KS2 400 S12 24V Z R	E6/C-0	1	**521643**		
500	545	KS2 500 S12 24V R	E6/C-0	1	**521650**		
		KS2 500 S12 24V Z R	E6/C-0	1	**521653**		
600	545	KS2 600 S12 24V R	E6/C-0	1	**521660**		
		KS2 600 S12 24V Z R	E6/C-0	1	**521663**		
800	625	KS2 800 S12 24V R	E6/C-0	1	**521680**		
		KS2 800 S12 24V Z R	E6/C-0	1	**521683**		

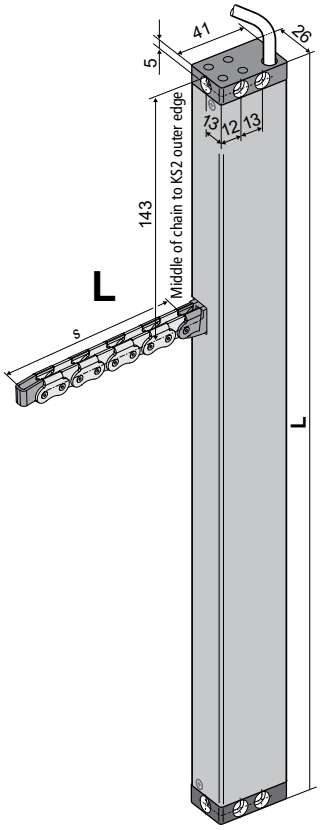
OPTIONS

Special model	PU/pcs.	Part.-No.		
Drive housing painted/powder coated in other RAL colours				
Lump sum for coating		**516030**		
Specify at order stage:	1 – 20	**516004**		
	21 – 50	**516004**		
	51 – 100	**516004**		
	from 101	**516004**		
Extra length connecting cable:				
5 m – non-halogen, grey – 3 x 0,5 mm²		**501034**		
10 m – non-halogen, grey – 3 x 0,5 mm²		**501036**		
5 m – non-halogen, grey – 5 x 0,5 mm²		**501054**		
10 m – non-halogen, grey – 5 x 0,5 mm²		**501056**		
Microprocessor programming S12				
Electronic stroke reduction 24V S12		**524190**		
Programming drives 24V / 230V S12		**524180**		
Optional accessories	PU/pcs.	**Part.-No.**		
M-COM Configuration module for synchronised multi-drive systems	1	**524177**		

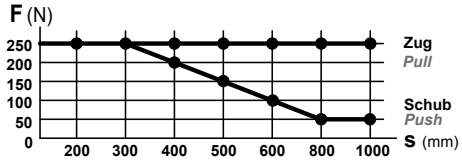
- Application: natural ventilation, RWA, ferralux®-NRWG
- Internal Intelligent Control Electronics S12
- Z-Version: Programmable feedback limit position „OPEN“ and „CLOSE“ (max. 24 V, 500 mA)

Options

- Programmable special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)



TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	0,7 A
I_A	Cut-off current	1,0 A
P_N	Rated power	17 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range range	-5 °C ... +60 °C
F_Z	Pulling force max.	250 N
F_A	Pushing force max.	 s > 600 mm only for pulling application
F_H	Pullout force	1.800 N (fastening depended)
	Chain	Stainless steel, without protruding rivet heads. Simple connection to casement brackets. Small bending radii allow maximum opening angles of small windows.
	Connecting cable	non-halogen, grey 3 x 0,5 mm², ~ 3 m non-halogen, grey 5 x 0,5 mm², ~ 3 m (Z version)
v	Speed	Factory settings: s ≤ 400 8,0 mm/s 8,0 mm/s s > 400 – 600 12,0 mm/s 8,0 mm/s s > 600 13,5 mm/s 8,0 mm/s Adjustment range: 5 - 14 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 800 mm
L	Length	see order data
	Sound pressure level	≤ 70 dB (A)

ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.		
200	335	KS2 200 S12 24V L	E6/C-0	1	**521720**		
		KS2 200 S12 24V Z L	E6/C-0	1	**521723**		
300	380	KS2 300 S12 24V L	E6/C-0	1	**521730**		
		KS2 300 S12 24V Z L	E6/C-0	1	**521733**		
400	430	KS2 400 S12 24V L	E6/C-0	1	**521740**		
		KS2 400 S12 24V Z L	E6/C-0	1	**521743**		
500	545	KS2 500 S12 24V L	E6/C-0	1	**521750**		
		KS2 500 S12 24V Z L	E6/C-0	1	**521753**		
600	545	KS2 600 S12 24V L	E6/C-0	1	**521760**		
		KS2 600 S12 24V Z L	E6/C-0	1	**521763**		
800	625	KS2 800 S12 24V L	E6/C-0	1	**521780**		
		KS2 800 S12 24V Z L	E6/C-0	1	**521783**		

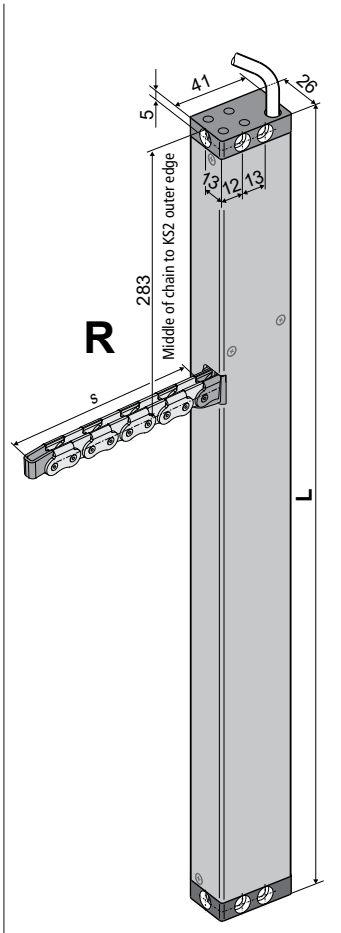
OPTIONS

Special model	PU/pcs.	Part.-No.		
Drive housing painted/powder coated in other RAL colours				
Lump sum for coating		**516030**		
Specify at order stage:	1 – 20	**516004**		
	21 – 50	**516004**		
	51 – 100	**516004**		
	from 101	**516004**		
Extra length connecting cable:				
5 m – non-halogen, grey – 3 x 0,5 mm²		**501034**		
10 m – non-halogen, grey – 3 x 0,5 mm²		**501036**		
5 m – non-halogen, grey – 5 x 0,5 mm²		**501054**		
10 m – non-halogen, grey – 5 x 0,5 mm²		**501056**		
Microprocessor programming S12				
Electronic stroke reduction 24V S12		**524190**		
Programming drives 24V / 230V S12		**524180**		
Optional accessories	PU/pcs.	**Part.-No.**		
M-COM Configuration module for synchronised multi-drive systems	1	**524177**		

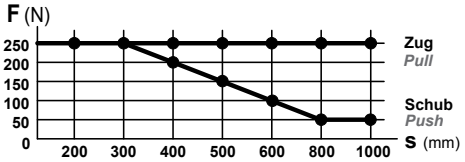
- Application: natural ventilation
- Internal Intelligent Control Electronics S12
- Parallel connection up to 8 drives in one group
- Z-Version: Programmable feedback limit position „OPEN“ and „CLOSE“ (max. 24 V, 500 mA)

Options

- Programmable synchronised run (max. 4 drives) and special functions (Attention: not possible with Z-version)



TECHNICAL DATA

U_N	Rated voltage	230 V AC (50 Hz)
I_N	Rated current	0,13 A
I_A	Cut-off current	0,2 A
P_N	Rated power	30 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	250 N
F_A	Pushing force max.	 s > 600 mm only for pulling application
F_H	Pullout force	1.800 N (fastening depended)
	Chain	Stainless steel, without protruding rivet heads. Simple connection to casement brackets. Small bending radii allow maximum opening angles of small windows.
	Connecting cable	non-halogen, grey 6 x 0,75 mm², ~ 3 m
v	Speed	Factory settings: 8,0 mm/s 8,0 mm/s Adjustment range: 5 - 14 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 800 mm
L	Length	see order data
	Sound pressure level	≤ 70 dB (A)

ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.
200	475	KS2 200 S12 230V R	E6/C-0	1	**494020**
		KS2 200 S12 230V Z R	E6/C-0	1	**494023**
300	520	KS2 300 S12 230V R	E6/C-0	1	**494030**
		KS2 300 S12 230V Z R	E6/C-0	1	**494033**
400	570	KS2 400 S12 230V R	E6/C-0	1	**494040**
		KS2 400 S12 230V Z R	E6/C-0	1	**494043**
500	685	KS2 500 S12 230V R	E6/C-0	1	**494050**
		KS2 500 S12 230V Z R	E6/C-0	1	**494053**
600	685	KS2 600 S12 230V R	E6/C-0	1	**494060**
		KS2 600 S12 230V Z R	E6/C-0	1	**494063**
800	765	KS2 800 S12 230V R	E6/C-0	1	**494080**
		KS2 800 S12 230V Z R	E6/C-0	1	**494083**

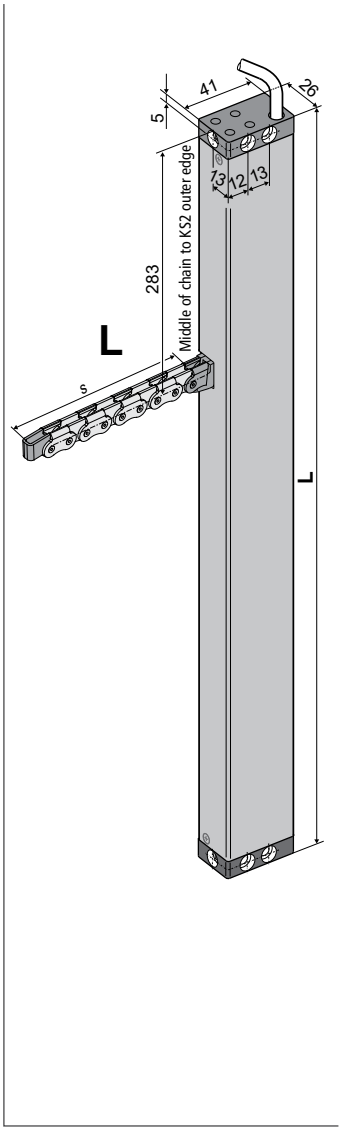
OPTIONS

Special model	PU/pcs.	Part.-No.
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Extra length connecting cable:		
5 m – non-halogen, grey – 6 x 0,75 mm²		**501164**
10 m – non-halogen, grey – 6 x 0,75 mm²		**501166**
Microprocessor programming S12		
Programming synchronised multi-drive systems 230V S12 (each drive)		**495588**
Electronic stroke reduction 230V S12		**495590**
Programming drives 24V / 230V S12		**524180**

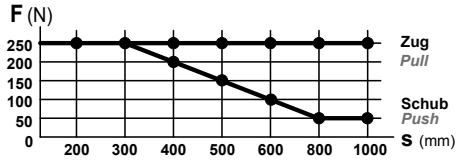
- Application: natural ventilation
- Internal Intelligent Control Electronics S12
- Parallel connection up to 8 drives in one group
- Z-Version: Programmable feedback limit position „OPEN“ and „CLOSE“ (max. 24 V, 500 mA)

Options

- Programmable synchronised run (max. 4 drives) and special functions (Attention: not possible with Z-version)



TECHNICAL DATA

U_N	Rated voltage	230 V AC (50 Hz)
I_N	Rated current	0,13 A
I_A	Cut-off current	0,2 A
P_N	Rated power	30 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	250 N
F_A	Pushing force max.	 s > 600 mm only for pulling application
F_H	Pullout force	1.800 N (fastening depended)
	Chain	Stainless steel, without protruding rivet heads. Simple connection to casement brackets. Small bending radii allow maximum opening angles of small windows.
	Connecting cable	non-halogen, grey 6 x 0,75 mm², ~ 3 m
v	Speed	Factory settings: 8,0 mm/s 8,0 mm/s Adjustment range: 5 - 14 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 800 mm
L	Length	see order data
	Sound pressure level	≤ 70 dB (A)

ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.		
200	475	KS2 200 S12 230V L	E6/C-0	1	**494120**		
		KS2 200 S12 230V Z L	E6/C-0	1	**494123**		
300	520	KS2 300 S12 230V L	E6/C-0	1	**494130**		
		KS2 300 S12 230V Z L	E6/C-0	1	**494133**		
400	570	KS2 400 S12 230V L	E6/C-0	1	**494140**		
		KS2 400 S12 230V Z L	E6/C-0	1	**494143**		
500	685	KS2 500 S12 230V L	E6/C-0	1	**494150**		
		KS2 500 S12 230V Z L	E6/C-0	1	**494153**		
600	685	KS2 600 S12 230V L	E6/C-0	1	**494160**		
		KS2 600 S12 230V Z L	E6/C-0	1	**494163**		
800	765	KS2 800 S12 230V L	E6/C-0	1	**494180**		
		KS2 800 S12 230V Z L	E6/C-0	1	**494183**		

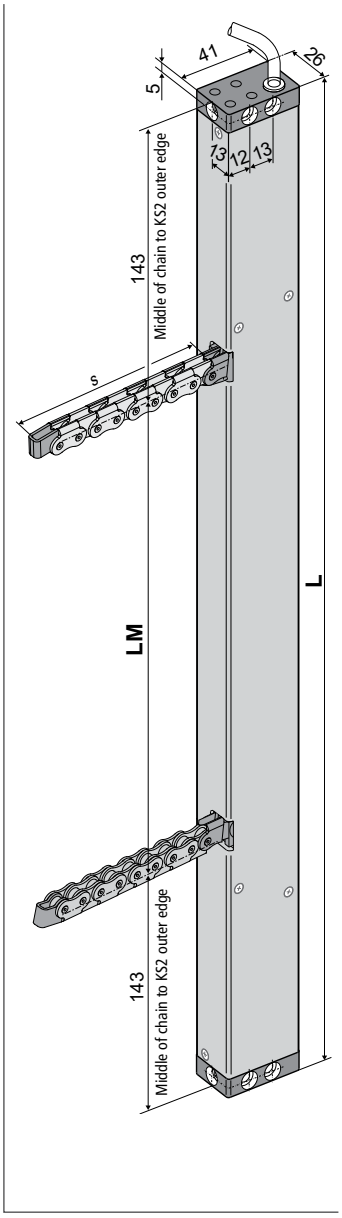
OPTIONS

Special model	PU/pcs.	Part.-No.		
Drive housing painted/powder coated in other RAL colours				
Lump sum for coating		**516030**		
Specify at order stage:	1 – 20	**516004**		
	21 – 50	**516004**		
	51 – 100	**516004**		
	from 101	**516004**		
Extra length connecting cable:				
5 m – non-halogen, grey – 6 x 0,75 mm²		**501164**		
10 m – non-halogen, grey – 6 x 0,75 mm²		**501166**		
Microprocessor programming S12				
Programming synchronised multi-drive systems 230V S12 (each drive)		**495588**		
Electronic stroke reduction 230V S12		**495590**		
Programming drives 24V / 230V S12		**524180**		

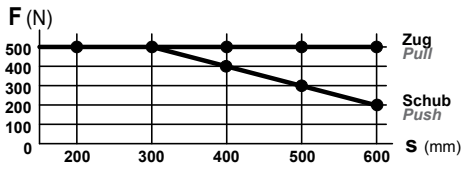
- Application: natural ventilation, RWA
- Internal Intelligent Control Electronics S12
- Z-Version: Programmable feedback limit position „OPEN“ and „CLOSE“ (max. 24 V, 500 mA)

Options

- Programmable special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)



TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	1,4 A
I_A	Cut-off current	2,0 A
P_N	Rated power	34 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	500 N
F_A	Pushing force max.	
F_H	Pullout force	2 x 1.800 N (fastening depended)
	Chain	Stainless steel, without protruding rivet heads. Simple connection to casement brackets. Small bending radii allow maximum opening angles of small windows.
	Connecting cable	non-halogen, grey 3 x 0,5 mm², ~ 3 m non-halogen, grey 5 x 0,5 mm², ~ 3 m (Z version)
v	Speed	Factory settings: s ≤ 400 8,0 mm/s 8,0 mm/s s > 400 – 600 12,0 mm/s 8,0 mm/s Adjustment range: 5 - 12 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 600 mm
L	Length	see order data
LM	Distance in between chains	see order data
	Sound pressure level	≤ 70 dB (A)

ORDER DATA

s [mm]	L [mm]	LM [mm]	Version	Finish	PU/pcs.	Part.-No.		
200	640	354	KS2 TWIN 200 S12 24V	E6/C-0	1	**521820**		
			KS2 TWIN 200 S12 24V Z	E6/C-0	1	**521823**		
400	830	544	KS2 TWIN 400 S12 24V	E6/C-0	1	**521840**		
			KS2 TWIN 400 S12 24V Z	E6/C-0	1	**521843**		
500	1060	774	KS2 TWIN 500 S12 24V	E6/C-0	1	**521850**		
			KS2 TWIN 500 S12 24V Z	E6/C-0	1	**521853**		
600	1060	774	KS2 TWIN 600 S12 24V	E6/C-0	1	**521860**		
			KS2 TWIN 600 S12 24V Z	E6/C-0	1	**521863**		

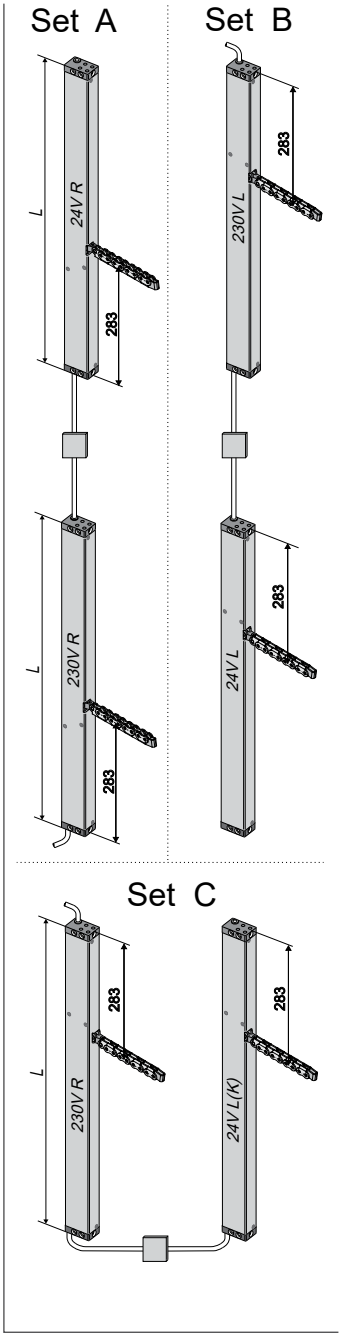
OPTIONS

Special model	PU/pcs.	Part.-No.		
Drive housing painted/powder coated in other RAL colours				
Lump sum for coating		**516030**		
Specify at order stage:	1 – 20	**516004**		
	21 – 50	**516004**		
	51 – 100	**516004**		
	from 101	**516004**		
Extra length connecting cable:				
5 m – non-halogen, grey – 3 x 0,5 mm²		**501034**		
10 m – non-halogen, grey – 3 x 0,5 mm²		**501036**		
5 m – non-halogen, grey – 5 x 0,5 mm²		**501054**		
10 m – non-halogen, grey – 5 x 0,5 mm²		**501056**		
Microprocessor programming S12				
Electronic stroke reduction 24V S12		**524190**		
Programming drives 24V / 230V S12		**524180**		
Optional accessories	PU/pcs.	Part.-No.		
M-COM Configuration module for synchronised multi-drive systems	1	**524177**		

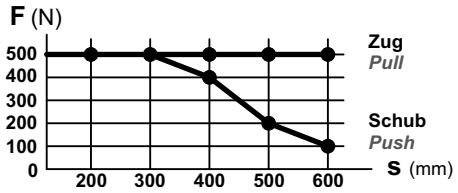
- Application: natural ventilation
- Factory-configured set includes:
  Master: KS2 xxx S12 230V AC R / L with voltage output 24V DC
  Slave: KS2 xxx S12 24V DC R / L with conection cable on the motor side
  KS2 xxx S12 24V DC L-K with conection cable on the chain side
- Parallel connection up to 8 sets of drives in one group
- Junction box to be site supplied

Options

- Programmable special functions and sequence control with locking drives (S3 / S12)
- Screw terminal connections in drive housing upon request



TECHNICAL DATA

U_N	Rated voltage	230 V AC (50 Hz)
I_N	Rated current	0,15 A
I_A	Cut-off current	0,2 A
P_N	Rated power	35 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	2 x 250 N
F_A	Pushing force max.	 s > 600 mm only for pulling application
F_H	Pullout force	1.800 N (fastening depended)
	Chain	Stainless steel, without protruding rivet heads. Simple connection to casement brackets. Small bending radii allow maximum opening angles of small windows.
	Connecting cable	Master: non-halogen, grey 6 x 0,75 mm², ~ 3 m 3 x 0,5 mm², ~ 3 m Slave: non-halogen, grey 3 x 0,5 mm², ~ 3 m
v	Speed	Factory settings: 8,0 mm/s 8,0 mm/s Adjustment range: 5 - 14 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 800 mm
L	Length	see order data
	Sound pressure level	≤ 70 dB (A)

ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.
200	475	KS2 200 S12 230V Set A (R/R)	E6/C-0	1	**494220**
		KS2 200 S12 230V Set B (L/L)	E6/C-0	1	**494320**
		KS2 200 S12 230V Set C (R/L-K)	E6/C-0	1	**494420**
300	520	KS2 300 S12 230V Set A (R/R)	E6/C-0	1	**494230**
		KS2 300 S12 230V Set B (L/L)	E6/C-0	1	**494330**
		KS2 300 S12 S 230V et C (R/L-K)	E6/C-0	1	**494430**
400	570	KS2 400 S12 230V Set A (R/R)	E6/C-0	1	**494240**
		KS2 400 S12 230V Set B (L/L)	E6/C-0	1	**494340**
		KS2 400 S12 230V Set C (R/L-K)	E6/C-0	1	**494440**
500	685	KS2 500 S12 230V Set A (R/R)	E6/C-0	1	**494250**
		KS2 500 S12 230V Set B (L/L)	E6/C-0	1	**494350**
		KS2 500 S12 230V Set C (R/L-K)	E6/C-0	1	**494450**
600	685	KS2 600 S12 230V Set A (R/R)	E6/C-0	1	**494260**
		KS2 600 S12 230V Set B (L/L)	E6/C-0	1	**494360**
		KS2 600 S12 230V Set C (R/L-K)	E6/C-0	1	**494460**
800	765	KS2 800 S12 230V Set A (R/R)	E6/C-0	1	**494280**
		KS2 800 S12 230V Set B (L/L)	E6/C-0	1	**494380**
		KS2 800 S12 230V Set C (R/L-K)	E6/C-0	1	**494480**

OPTIONS

Special model	PU/pcs.	Part.-No.
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Extra length connecting cable:		
5 m – non-halogen, grey – 6 x 0,75 mm²		**501164**
10 m – non-halogen, grey – 6 x 0,75 mm²		**501166**
5 m – non-halogen, grey – 3 x 0,5 mm²		**501034**
10 m – non-halogen, grey – 3 x 0,5 mm²		**501036**
5 m – non-halogen, grey – 5 x 0,5 mm²		**501054**
10 m – non-halogen, grey – 5 x 0,5 mm²		**501056**
Microprocessor programming S12		
Programming synchronised multi-drive systems 230V S12 (each drive)		**495588**

OVERVIEW OF BRACKETS

Typical application					1	2	3	4	5	6
Frame bracket					K93, K94	K129, K130	K96, K96-1	No	K105A, K105B, K105S, K106	K128
Casement bracket					F41, F35, F37, F17 (F21 with K130)		F95, F42	F95, F42	F18, F19, F20, F22	F21
Space requirement			min.	[mm]	16 – 30	25 – 30	38	30	Note profile depth	Schüco AWS 57RO
Overlap thickness *1				[mm]	0 – 21	0 – 21	0 – 21	0 – 21		
Opening angle *2			max.	[DEG]	35	45	60	40	60	45
Casement weight *3			max.	[Kg]	70	60	50	70	70	70
Window material			Alu		●	●	●	●	●	●
			Wood		●	●	●	●	■	
			PVC		●	●	●	●		
Type of window and mounting	Bottom hung	inward	HSK	FM	●	●				
				RM			●	●		
			NSK	FM	●	●				
				RM			●	●		
		outward	HSK	RM	●	●				●
				PR						
			NSK	RM	●	●				
				PR						
	Top hung	inward	HSK	FM	■	■				
				RM			■	■		
			NSK	FM	■	■				
				RM			■	■		
		outward	HSK	RM	■	●				■
				PR						
			NSK	RM	■	■				
				PR						
	Side hung	inward	HSK	FM	●	●				
				RM			●	●		
			NSK	FM						
				RM						
	Roof	outward	HSK	RM	■	■				■
				PR						
			NSK	RM						
				PR						
	PAF	outward		RM	●	●			●	
	Concealed								●	
FAB *4			Solo	[mm]	600 – 1200					
			Sync2	[mm]	1000 – 2500					
FAH *4			Solo	[mm]	250 – 1500					
			Sync2	[mm]	250 – 2500					

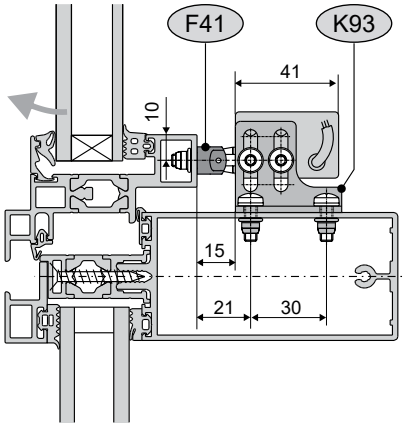
LEGEND

● suitable ■ not recommended

*1 Window sizes and opening angles may be different.
*2 Sample values of the opening angle evaluated on the basis of FAB/FAH for inward opening windows with drives mounted at the main closing edge.
For any other window heights, for outward opening windows and for windows with drives mounted at the side edges the opening angle will vary.
*3 Please respect the individual geometry of the different windows. The listed max. casement weight refers to a single drive on button hung window with a max. opening angle.
*4 Sample value of the casement dimensions for corner joints of 110 mm. The actuell casement dimensions depend on length of the corner joints, profile dimensions, stroke and position of the drives.
The values of FAB/FAH are to be used analogue for side hung windows.

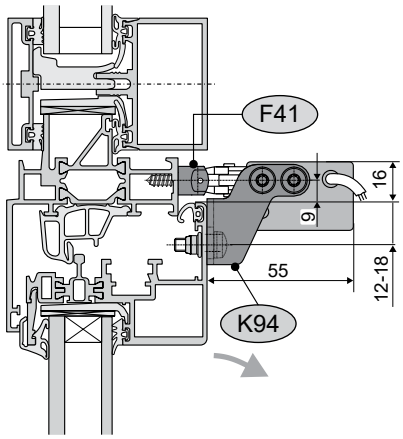
TYPICAL APPLICATIONS

1 PR, top hung
outward opening



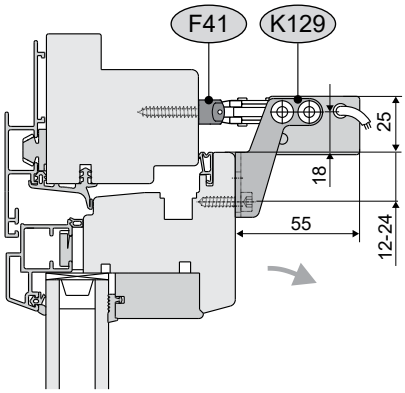
View on aluminium window

1 FM, bottom hung
inward opening



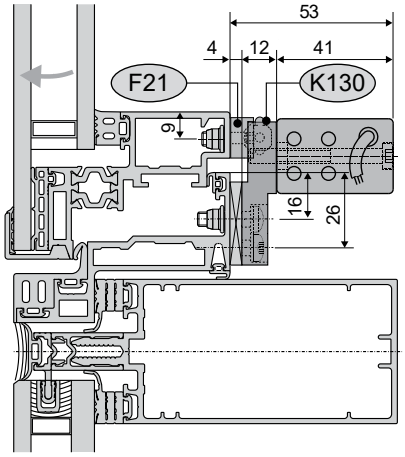
View on aluminium window

2 FM, bottom hung
inward opening



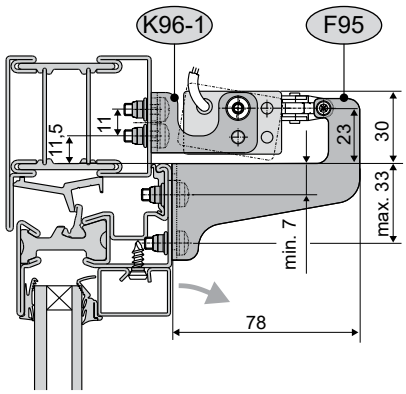
View on aluminium-wood window

2 RM, bottom hung
outward opening



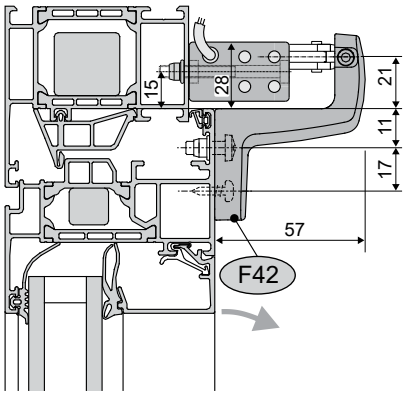
View on aluminium window

3 RM, bottom hung
inward opening



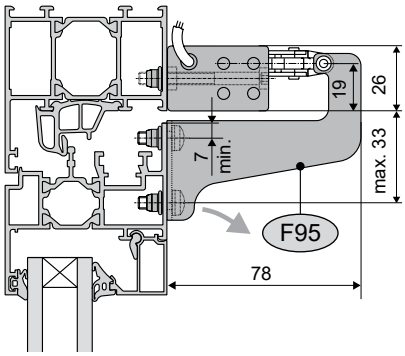
View on steel window

4 RM, bottom hung
inward opening



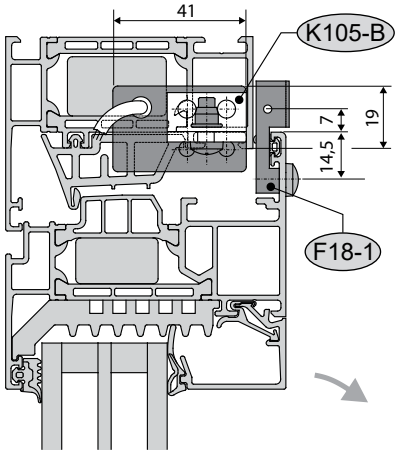
View on aluminium window

4 RM, bottom hung
inward opening



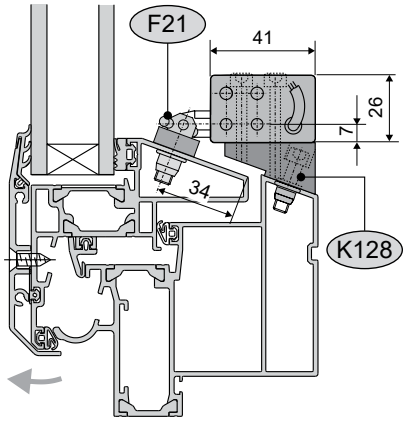
View on aluminium window

5 Concealed, bottom hung
inward opening



View on aluminium window

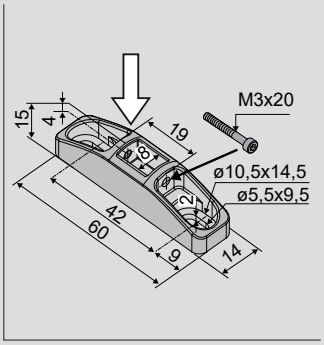
6 RM, top hung
outward opening



View on aluminium window (Facade)

CASEMENT BRACKETS

F41



Application

Surface mounting on the casement profiles / window frame profiles of inward / outward opening windows, for surface mounted drives **KS2**

Chain fixing in direction of the arrow

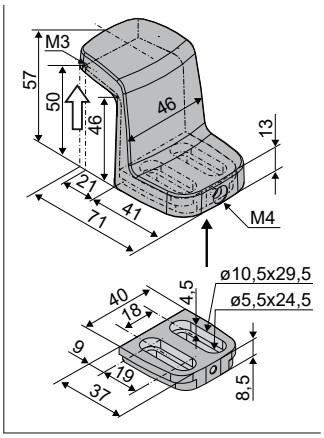
Part.-No. 151440

Material / Finish
Cast aluminum, bright chrome
Feature / Equipment
1x screw M3x20
1x Drilling template

Part.-No. 151445

Material / Finish
Cast aluminum, RAL 9006

F42



Application

Surface mounting on the casement profiles of inward opening windows, for surface mounted drives
KS2

Chain fixing in direction of the arrow

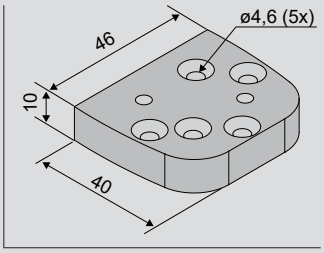
Part.-No. 151441

Material / Finish
Cast aluminum, bright chrome
Feature / Equipment
1x baseplate
1x countersunk screw M4x10
1x screw M3x25
1x Drilling template

Part.-No. 151446

Material / Finish
Cast aluminum, RAL 9006

F42-Support



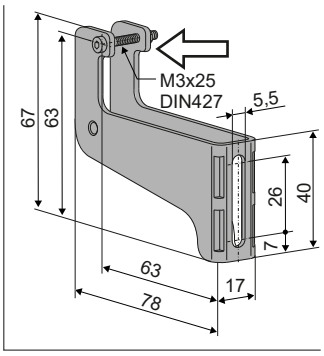
Application

F42-Support as a compensating plate when mounting on the wooden windows and plastic windows
t = 10 mm

Part.-No. 523961

Material / Finish
aluminum (E6/C-0)

F95



Application

Surface mounting on the casement profiles of inward opening windows, for surface mounted drives **KS2** with **K96-1**

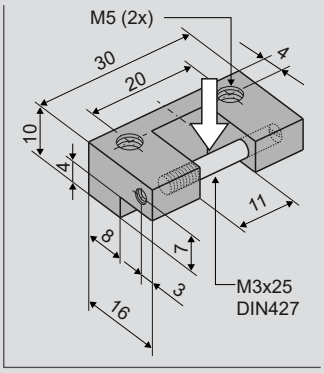
Chain fixing in direction of the arrow

Part.-No. 523972

Material/Finish
Stainless steel
Feature/Equipment
1x screw M3x25,
1x spring pin M3,

CASEMENT BRACKETS

F17



Application

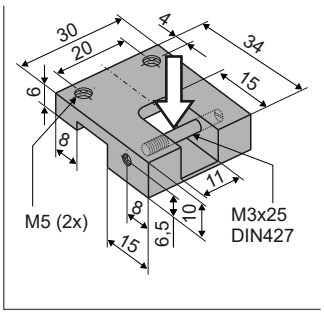
Concealed mounting inside in-/outward opening face- or flush-fitted casements, fixing inside rebate below the secondary gasket with screws removable from outside, for inside the window frame profiles concealed mounted drives **KS2** with **K105**

Chain fixing in direction of the arrow

Part.-No. 151417

Material/Finish
aluminium
(natural anodized)
Feature/Equipment
1x shaft screw M3x25,
2x rounded head screw M5x10

F18



Application

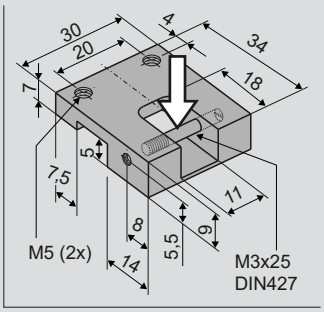
Partially concealed mounting on inner profile side of inward opening face-fitted casements, fixing below the secondary gasket with screws removable from outside, for inside the window frame profiles concealed mounted drives **KS2** with **K105**

Chain fixing in direction of the arrow

Part.-No. 151418

Material/Finish
aluminium
(natural anodized)
Feature/Equipment
1x shaft screw M3x25,
2x rounded head screw M5x10

F18-1



Application

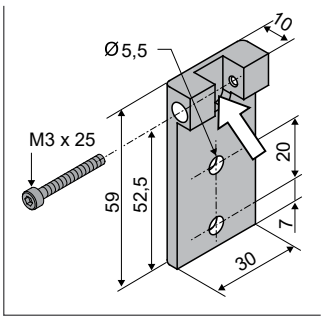
Surface mounting on inward opening face-fitted casements, for inside the window frame profiles concealed mounted drives **KS2** with **K105**

Chain fixing in direction of the arrow

Part.-No. 151428

Material/Finish
aluminium
(natural anodized)
Feature/Equipment
1x shaft screw M3x25
2x rounded head screw M5x10

F19



Application

Surface mounting on inward opening face-fitted casements, for inside the window frame profiles concealed mounted drives **KS2** with **K105**

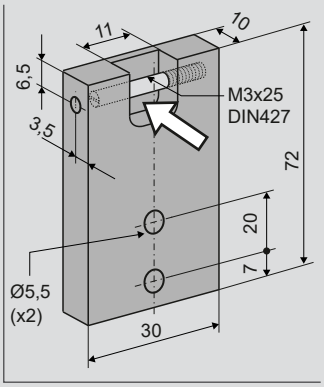
Chain fixing in direction of the arrow

Part.-No. 151419

Material/Finish
aluminium
(natural anodized)
Feature/Equipment
1x screw M3x25

CASEMENT BRACKETS

F20



Application

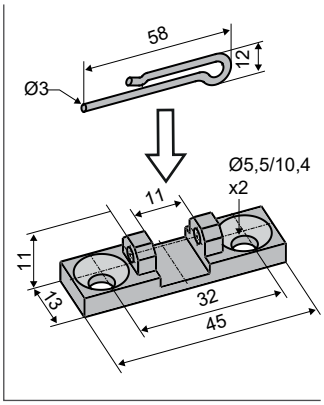
Surface mounting on inward opening face-fitted casements, for inside the window frame profiles concealed mounted drives **KS2** with **K105**

Chain fixing in direction of the arrow

Part.-No. 151420

Material/Finish
aluminium
(natural anodized)
Feature/Equipment
1x shaft screw M3x25,
2x rounded head screw M5x20

F21



Application

Surface mounting on the casement/window frame profiles on the main/side closing edge of in-/outward opening windows, for surface mounted drives **KS2** with **K128, K130**

Chain fixing in direction of the arrow

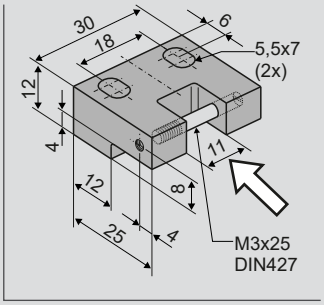
Part.-No. 151421

Material/Finish
aluminium
(natural anodized)
Feature/Equipment
1x spring pin Ø 3 mm

Optional accessories

B1 for skylight Eternit	**Part.-No. 151422**
K128 for Schüco AWS 57RO	**Part.-No. 523974**

F35



Application

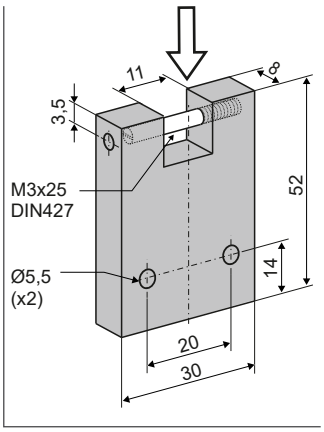
Surface mounting on the horizontal side of deep casement profiles of outward opening (friction hinged) windows, for surface mounted drives **KS2** with **K93, K94, K129, K130**

Chain fixing in direction of the arrow

Part.-No. 151425

Material/Finish
aluminium
(natural anodized)
Feature/Equipment
1x shaft screw M3x25

F37



Application

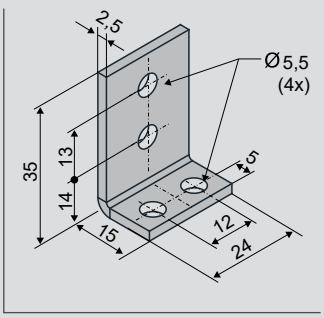
Surface mounting on the horizontal side of deep casement profiles of outward opening (friction hinged) windows, for surface mounted drives **KS2** with **K93, K94, K129, K130**
Chain fixing in direction of the arrow

Part.-No. 151424

Material/Finish
aluminium
(natural anodized)
Feature/Equipment
1x shaft screw M3x25

FRAME BRACKETS

K105-B



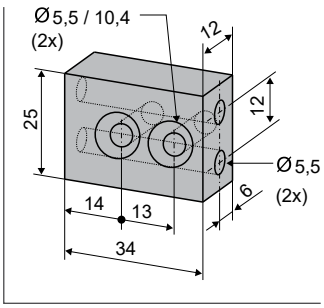
Application

Concealed mounting inside the window frame profiles of in-/outward opening windows, for rigid fixing of concealed drives **KS2** with **F17, F18, F19, F20**

Part.-No. 523977

Material/Finish
Stainless steel
Feature/Equipment
2x angle brackets,
4x rounded head screw M5x10,
4x washer A 5,3

K105-A



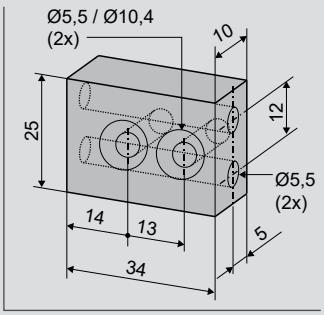
Application

Concealed mounting inside the window frame profiles of in-/outward opening windows, for rigid fiing of concealed drives **KS2** with casement brackets **F17**, (FAH min. 700 mm)

Part.-No. 523975

Material/Finish
aluminium
(natural anodized)
Feature/Equipment
2x angle brackets

K105-A -W77



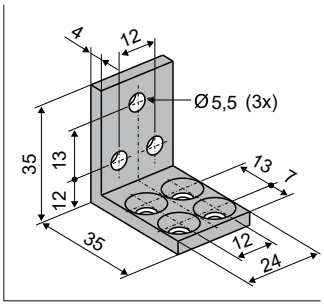
Application

Concealed mounting inside the window frame profiles of in-/outward opening windows, for rigid fiing of concealed drives **KS2** with casement brackets **F18-1**, (FAH min. 400 mm)

Part.-No. 523965

Material/Finish
aluminium
(natural anodized)
Feature/Equipment
2x angle brackets

K106



Application

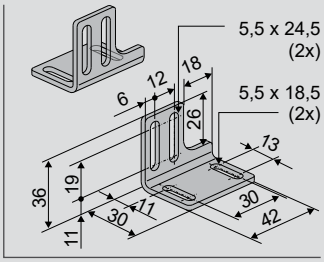
Concealed mounting inside the window frame profiles of in-/outward opening windows, for rigid fixing of concealed drives **KS2** with **F19** (FAH min. 700 mm), **F20** (FAH min 500 mm)

Part.-No. 523976

Material/Finish
aluminium
(natural anodized)
Feature/Equipment
2x angle brackets,
4x countersunk screw M5x10

FRAME BRACKETS

K93



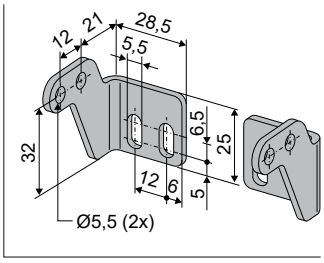
Application

Surface mounting on the transom/mullion profiles of outward opening windows, for rigid fixing of surface mounted drives **KS2** with **F41**

Part.-No. 523916

Material/Finish
Stainless steel
Feature/Equipment
4x allen screw M5x10,
4x washer A 5,3

K94



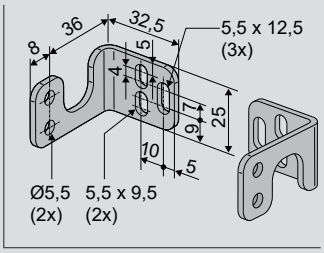
Application

Surface mounting on the casement/window frame profiles of in-/outward opening windows, for rigid or swivelling fixing of drives **KS2** with **F41, F35, F37**

Part.-No. 523921

Material/Finish
Stainless steel
Feature/Equipment
4x torx screw M5x10
4x washer A 5,3
2x torx screw M5x16

K96-1



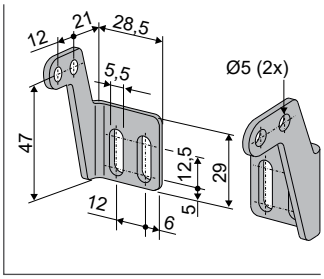
Application

Surface mounting on the casement profiles of inward opening windows, for rigid or swivelling fixing of drives **KS2** with **F95**

Part.-No. 523997

Material/Finish
Stainless steel
Feature/Equipment
4x torx screw M5x10,
2x torx screw M5x16,
4x washer A 5,3

K129



Application

Surface mounting on the casement/window frame profiles of in-/outward opening windows, for rigid or swivelling fixing of drives **KS2** with **F41, F35, F37**

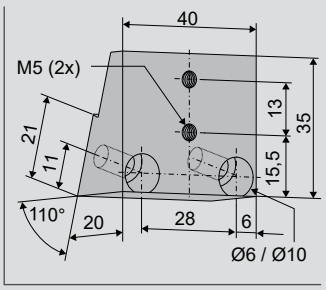
Part.-No. 523969

Material/Finish
Stainless steel
Feature/Equipment
4x torx screw M5x10,
4x washer A 5,3

SPECIFIC APPLICATIONS

ROOF WINDOWS I SCHÜCO AWS 57RO

K128



Application

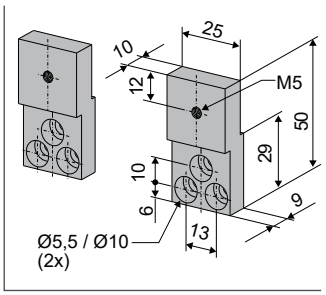
Support for F21 for mounting of drives **KS2** on the casement profiles of outward opening roof windows **Schüco AWS 57RO**

Part.-No. 523974

Material/Finish
aluminium
(natural anodized)
Feature/Equipment
4x cylinder head screw M5x10

FRICTION HINGED WINDOW I SCHÜCO AWS 102 SK

K130



Application

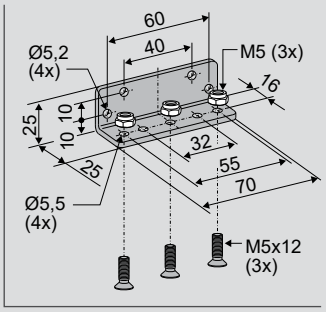
Surface mounting on the window frame profiles of the main clousing edge of outward opening friction hinged windows series **Schüco AWS102**, for rigid fixing of drives **KS2** with **F21**

Part.-No. 523968

Material/Finish
aluminium
(natural anodized)
Feature/Equipment
2x cylinder head screw M5x45

SKYLIGHT DOME

B1



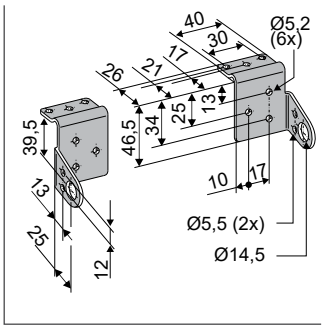
Application

Mounting angle for mounting of drives **KS2** with **F41** and **KSA** with **F14** on skylight domes

Part.-No. 151422

Material/Finish
Stainless steel
Feature/Equipment
3x countersunk-head screw M5x12,
3x nut M5

K125



Application

Surface mounting on the upstand of skylight domes, for fixing of drives **KS2** and **KSA** with **B1**

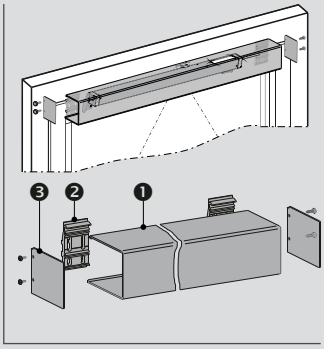
Part.-No. 523979

Material/Finish
Stainless steel
Feature/Equipment
4x screw M5x10

OPTIONAL ACCESSORIES

Cover profile set

AP KS2



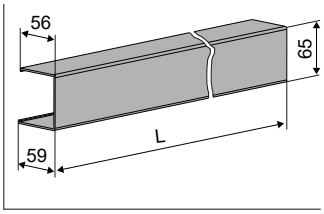
Application

Cover profile for surface mounted drives **KS2** with brackets **K94, K129, K130**. Profile length adjustable to the lenght of the drives (end caps recommended) or of the casement (without end caps)

Material/Finish
see detailled description of componets
Feature/Equipment
incl. profile brackets, **without** end caps

L = 1,5 m (incl. 2x profile bracket)	**Part.-No. 523952**
L = 2,0 m (incl. 3x profile bracket)	**Part.-No. 523954**
L = 2,9 m (incl. 4x profile bracket)	**Part.-No. 523956**

Cover profile



1

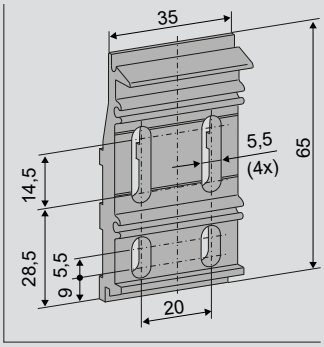
Cover profile for drives **KS2** for cutting on site

Price per metre

Part.-No. 523951

Material/Finish
aluminium
(natural anodized)
Feature/Equipment
without profile brackets and end caps

Profile bracket



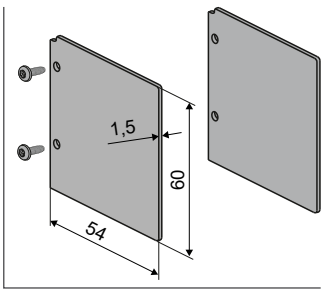
2

Profile bracket for **KS2** cover profile
< 2 m lenght: 2 pieces
> 2 m lenght: 3 – 4 pieces

Part.-No. 523948

Material/Finish
aluminium
(natural anodized)
Feature/Equipment
1 piece
(for fixing the cover profile)

End caps



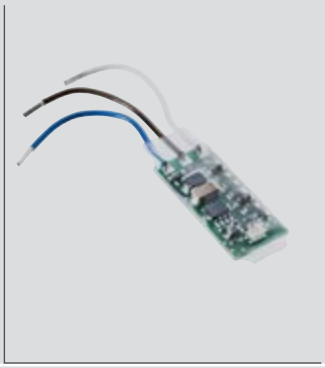
3

End caps for **KS2** cover profile

Part.-No. 523950

Material/Finish
aluminium
(natural anodized)
Feature/Equipment
2 pieces
4x screw M3x12 (taptite)

OPTIONAL ACCESSORIES

Main control unit				
M-COM 	**Application** **Configuration module** for automatic configuration and monitoring of max. 4 opening drives / 2 locking drives version S12 / S3 in synchronised multi-drive systems **Rated voltage:** 24 V DC (19 V ... 28 V) **Current consumption:** <12 mA **Drive type:** S12	**Part.-No. 524177** **Protection rating** IP30 rubber envelope **Ambient temperature range** 0 °C ... + 70 °C **Dimensions** 45 x 17 x 6 mm **Connecting wires** 3 wires 0,5 mm² x 50 mm **Feature/Equipment** Printed circuit board with components and connection wires to be installed in connection box to be supplied on site		

Special model	PU/pcs.	Part.-No.		
Casement brackets painted / powder coated in other RAL colours				
Lump sum for coating		**516030**		
Specify at order stage:	1 – 20	**516032**		
	21 – 50	**516032**		
	51 – 100	**516032**		
	from 101	**516032**		
Frame brackets painted / powder coated in other RAL colours				
Lump sum for coating		**516030**		
Specify at order stage:	1 – 20	**516031**		
	21 – 50	**516031**		
	51 – 100	**516031**		
	from 101	**516031**		



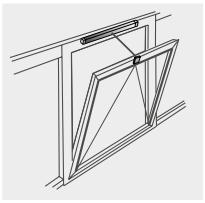
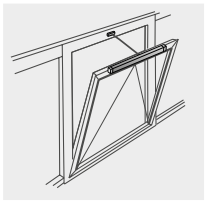
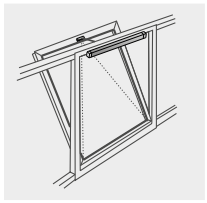
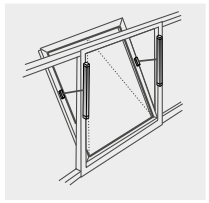
PRODUCT FEATURES KS4

- For natural ventilation, smoke and heat exhausting systems and ferralux® NRWG (EN12101-2)
- Aluminium housing anodized or optionally in RAL colors
- High-quality stainless steel sidebow roller chain, without protruding rivet heads
- Slim line body that suits concealed fitting within profiles
- Rigid drive mounting on frame without brackets
- Feedback limit position „CLOSE“ (max. 24 V, 500 mA)
- Programmable parameters of Intelligent Control Electronics S12:
  - Feedback limit position „OPEN“ (max. 24 V, 500 mA)
  - Synchronised multi-operation and sequence control without add. devices
  - Electronic soft-start, soft-close and soft-stop at end of stroke control
  - Stroke, force, speed
  - Rebate control
- Integrated plug solution
- Compatible with the plug-in configuration module M-COM® Click

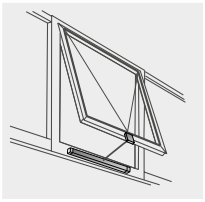
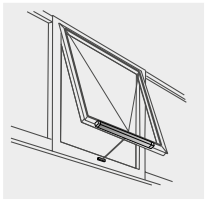
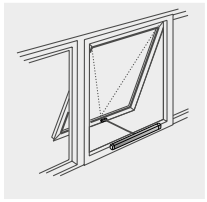
For this product series, a Type III Environmental Product Declaration (EPD) was issued according to ISO 14025 and EN 15804.
The LCA results of the different product types are listed at the end of this product catalogue.
The EPD documents can be viewed or downloaded from our homepage **www.aumueller-gmbh.de**.

FACADE

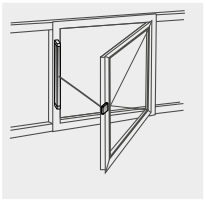
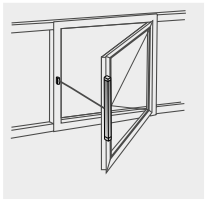
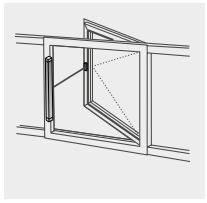
Bottom-hung

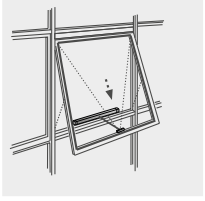
Top-hung

Side-hung

Friction hinged



Parallel outward opening



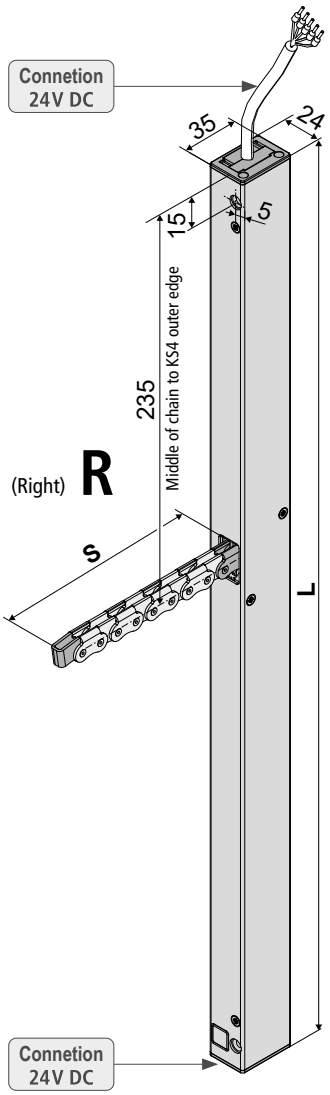
- Application: natural ventilation, RWA, ferralux®-NRWG
- Internal Intelligent Control Electronics S12
- Feedback limit position „CLOSE“ (max. 24 V, 500 mA)

Equipment

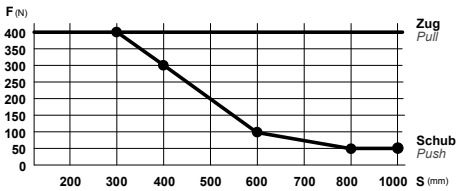
- Additional **Aumüller-Click plug set** for multi-drive operation

Options

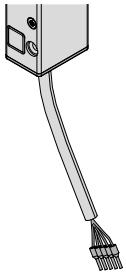
- Programmable special functions
- Programmable feedback limit position „OPEN“ (max. 24 V, 500 mA)
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)



TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	0,9 A
I_A	Cut-off current	1,2 A
P_N	Rated power	22 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	400 N
F_A	Pushing force max.	 s > 600 mm only for pulling application
F_H	Pullout force	1.800 N (fastening depended)
	Chain	Stainless steel, without protruding rivet heads. Simple connection to casement brackets. Small bending radii allow maximum opening angles of small windows.
	Connecting cable	non-halogen, grey 5 x 0,5 mm², ~ 2 m
v	Speed	Factory settings: s ≤ 400 8,0 mm/s 8,0 mm/s s > 400 – 600 12,0 mm/s 8,0 mm/s s > 600 13,5 mm/s 8,0 mm/s Adjustment range: 5 - 14 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 1000 mm
L	Length	see order data
	Feedback contact	limit position „CLOSE“ (max. 24 V, 500 mA)
	Sound pressure level	≤ 70 dB (A)

Option



Aumüller chain drives have an integrated cable routing with connection sockets on both housing ends. This enables the following options:

- **Wire Click** with various cabel lengths
  Part.-No.: **501251** - 3 m cable length / **501252** - 5 m cable length / **501253** - 10 m cable length
- Series connection of several drives into multi drive systems
- Power supply from both sides

ORDER DATA

s [mm]	L [mm]	Version	Finish	PU / pcs.	Part.-No.
200	455	KS4 200 S12 24V R	E6/C-0	1	**522020**
300	551	KS4 300 S12 24V R	E6/C-0	1	**522030**
400	551	KS4 400 S12 24V R	E6/C-0	1	**522040**
500	665	KS4 500 S12 24V R	E6/C-0	1	**522050**
600	665	KS4 600 S12 24V R	E6/C-0	1	**522060**
800	755	KS4 800 S12 24V R	E6/C-0	1	**522080**
1000	868	KS4 1000 S12 24V R	E6/C-0	1	**522000**

OPTIONS

Special model	PU / pcs.	Part.-No.
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Plug solution:		
Wire Click - 3 m – non-halogen, grey – 5 x 0,5 mm²		**501251**
Wire Click - 5 m – non-halogen, grey – 5 x 0,5 mm²		**501252**
Wire Click - 10 m – non-halogen, grey – 5 x 0,5 mm²		**501253**
Microprocessor programming S12		
Electronic stroke reduction 24V S12		**524190**
Programming drives 24V / 230V S12		**524180**
Optional accessories	PU / pcs.	Part.-No.
M-COM® Click Configuration module for synchronised multi-drive systems	1	**524167**
M-COM Configuration module for synchronised multi-drive systems	1	**524177**

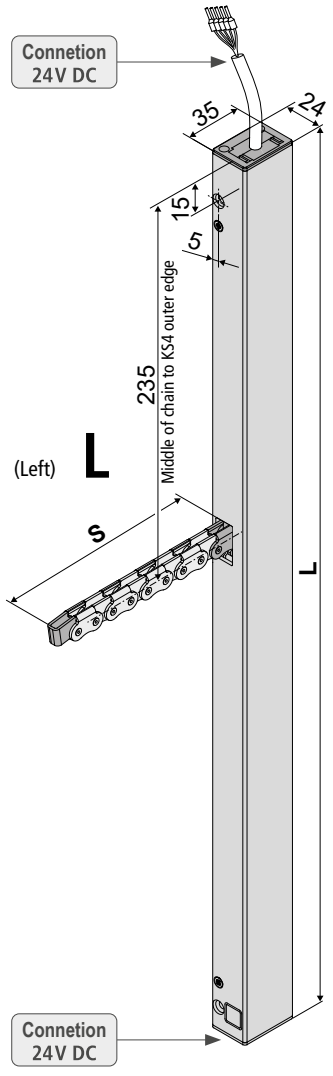
- Application: natural ventilation, RWA, ferralux®-NRWG
- Internal Intelligent Control Electronics S12
- Feedback limit position „CLOSE“ (max. 24 V, 500 mA)

Equipment

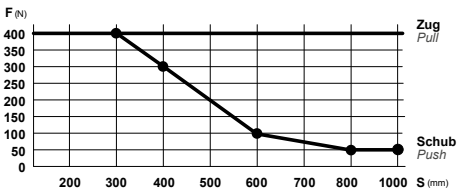
- Additional **Aumüller-Click plug set** for multi-drive operation

Options

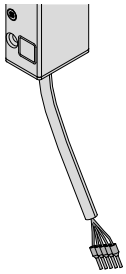
- Programmable special functions
- Programmable feedback limit position „OPEN“ (max. 24 V, 500 mA)
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)



TECHNICAL DATA

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I_N	Rated current	0,9 A
I_A	Cut-off current	1,2 A
P_N	Rated power	22 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	400 N
F_A	Pushing force max.	 s > 600 mm only for pulling application
F_H	Pullout force	1.800 N (fastening depended)
	Chain	Stainless steel, without protruding rivet heads. Simple connection to casement brackets. Small bending radii allow maximum opening angles of small windows.
	Connecting cable	non-halogen, grey 5 x 0,5 mm², ~ 2 m
v	Speed	Factory settings: s ≤ 400 8,0 mm/s 8,0 mm/s s > 400 – 600 12,0 mm/s 8,0 mm/s s > 600 13,5 mm/s 8,0 mm/s Adjustment range: 5 - 14 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 1000 mm
L	Length	see order data
	Feedback contact	limit position „CLOSE“ (max. 24 V, 500 mA)
	Sound pressure level	≤ 70 dB (A)

Option



Aumüller chain drives have an integrated cable routing with connection sockets on both housing ends. This enables the following options:

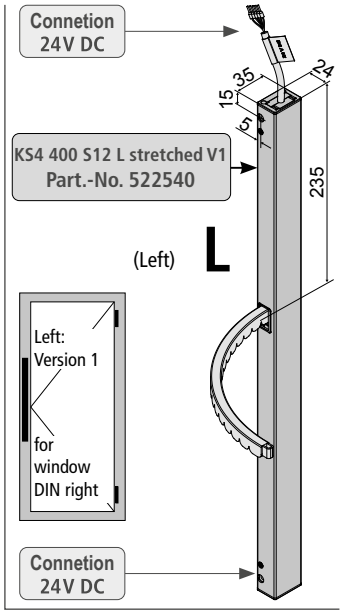
- **Wire Click** with various cabel lengths
  Part.-No.: **501251** - 3 m cable length / **501252** - 5 m cable length / **501253** - 10 m cable length
- Series connection of several drives into multi drive systems
- Power supply from both sides

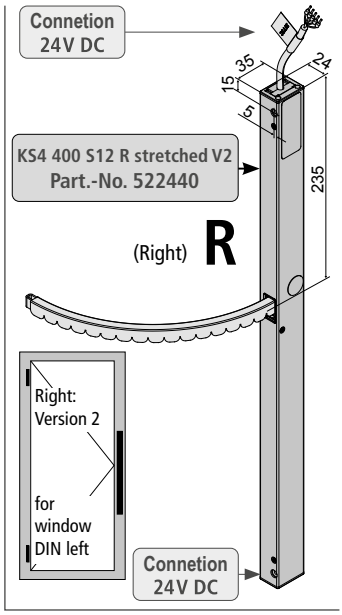
ORDER DATA

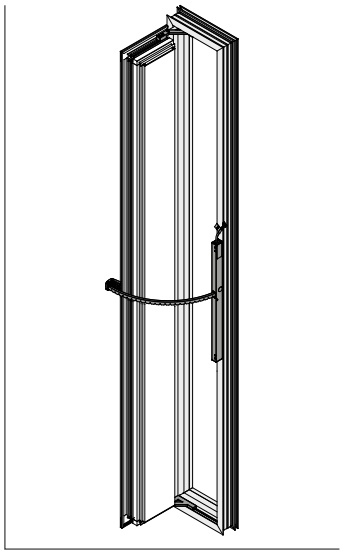
s [mm]	L [mm]	Version	Finish	PU / pcs.	Part.-No.
200	455	KS4 200 S12 24V L	E6/C-0	1	**520120**
300	551	KS4 300 S12 24V L	E6/C-0	1	**520130**
400	551	KS4 400 S12 24V L	E6/C-0	1	**520140**
500	665	KS4 500 S12 24V L	E6/C-0	1	**520150**
600	665	KS4 600 S12 24V L	E6/C-0	1	**520160**
800	755	KS4 800 S12 24V L	E6/C-0	1	**520180**
1000	868	KS4 1000 S12 24V L	E6/C-0	1	**520100**

OPTIONS

Special model	PU / pcs.	Part.-No.
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Plug solution:		
Wire Click - 3 m – non-halogen, grey – 5 x 0,5 mm²		**501251**
Wire Click - 5 m – non-halogen, grey – 5 x 0,5 mm²		**501252**
Wire Click - 10 m – non-halogen, grey – 5 x 0,5 mm²		**501253**
Microprocessor programming S12		
Electronic stroke reduction 24V S12		**524190**
Programming drives 24V / 230V S12		**524180**
Optional accessories	PU / pcs.	Part.-No.
M-COM® Click Configuration module for synchronised multi-drive systems	1	**524167**
M-COM Configuration module for synchronised multi-drive systems	1	**524177**







Attached assembly

- Flexible „side bow chain“ for narrow high windows
- Attached assembly with casement bracket F42
- Application: natural ventilation, RWA, ferralux®-NRWG
- Internal Intelligent Control Electronics S12
- Feedback limit position „CLOSE“ (max. 24 V, 500 mA)

Equipment

- Additional **Aumüller-Click plug set** for multi-drive operation

Options

- Programmable special functions
- Programmable feedback limit position „OPEN“ (max. 24 V, 500 mA)
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)

TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	0,9 A
I_A	Cut-off current	1,2 A
P_N	Rated power	22 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	200 N
F_A	Pushing force max.	200 N
F_H	Pullout force	1.800 N (fastening depended)
	Chain	Stainless steel, without protruding rivet heads. Simple connection to casement brackets. Small bending radii allow maximum opening angles of small windows.
	Connecting cable	non-halogen, grey 5 x 0,5 mm², ~ 2 m
v	Speed	Factory settings: 8,0 mm/s 8,0 mm/s Adjustment range: 5 - 14 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 400 mm
L	Length	see order data
	Feedback contact	limit position „CLOSE“ (max. 24 V, 500 mA)
	Sound pressure level	≤ 70 dB (A)

Aumüller chain drives have an integrated cable routing with connection sockets on both housing ends. This enables the following options:

- **Wire Click** with various cabel lengths
  Part.-No.: **501251** - 3 m cable length / **501252** - 5 m cable length / **501253** - 10 m cable length
- Series connection of several drives into multi drive systems
- Power supply from both sides

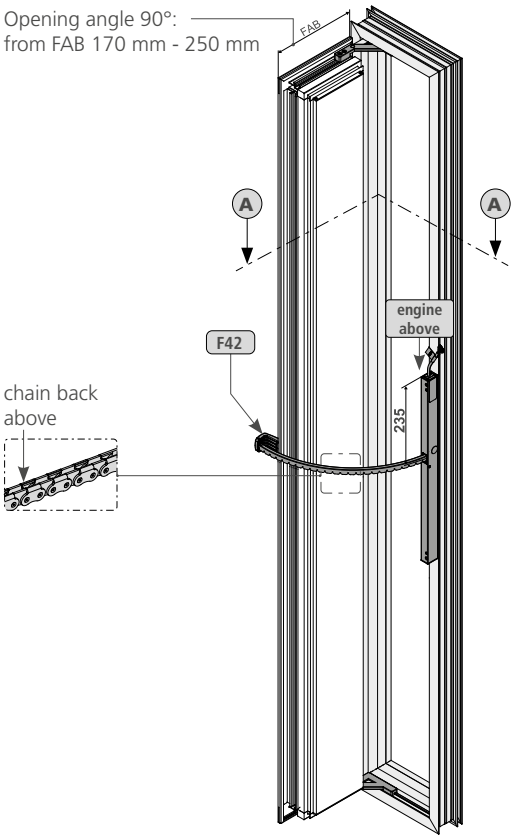
ORDER DATA

s [mm]	L [mm]	Version	Finish	PU / pcs.	Part.-No.
400	551	KS4 400 S12 24V L streched chain V1	E6/C-0	1	**522540**
400	551	KS4 400 S12 24V R streched chain V2	E6/C-0	1	**522440**

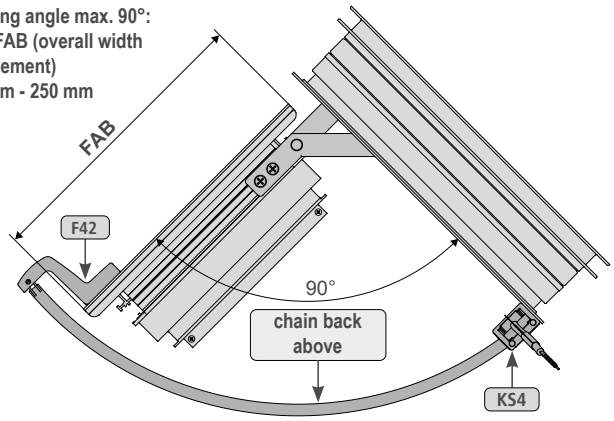
OPTIONS

Special model	PU / pcs.	Part.-No.
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Plug solution:		
Wire Click - 3 m – non-halogen, grey – 5 x 0,5 mm²		**501251**
Wire Click - 5 m – non-halogen, grey – 5 x 0,5 mm²		**501252**
Wire Click - 10 m – non-halogen, grey – 5 x 0,5 mm²		**501253**
Microprocessor programming S12		
Electronic stroke reduction 24V S12		**524190**
Programming drives 24V / 230V S12		**524180**
Optional accessories	PU / pcs.	Part.-No.
M-COM® Click Configuration module for synchronised multi-drive systems	1	**524167**
M-COM Configuration module for synchronised multi-drive systems	1	**524177**

Attached assembly

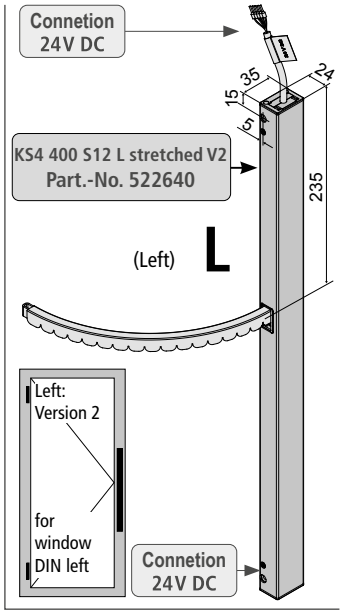


View / cut A – A



Stroke programming		
FAB	**Stroke**	**Opening angle approx.**
170	**280**	**90°**
180	**305**	**90°**
200	**330**	**90°**
225	**350**	**90°**
250	**375**	**90°**
275	**400**	**85°**
300	**400**	**80°**

The stroke is programmed: • according to the desired opening angle
• depending on the FAB



Concealed mounting inside profiles

- Flexible „side bow chain“ for narrow high windows
- Concealed mounting inside profiles with casement bracket F43 and frame bracket K133
- Application: natural ventilation, RWA, ferralux®-NRWG
- Internal Intelligent Control Electronics S12
- Feedback limit position „CLOSE“ (max. 24 V, 500 mA)

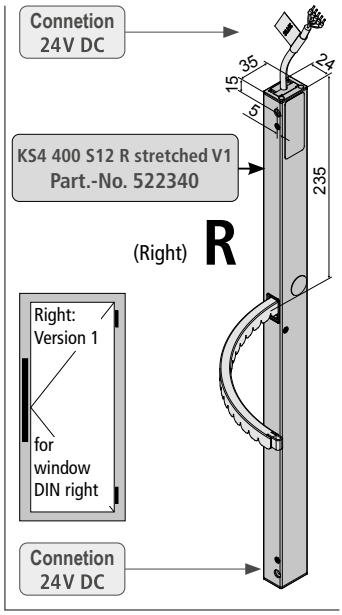
TÜV NORD CERT GmbH – Type Tested

Equipment

- Additional **Aumüller-Click plug set** for multi-drive operation

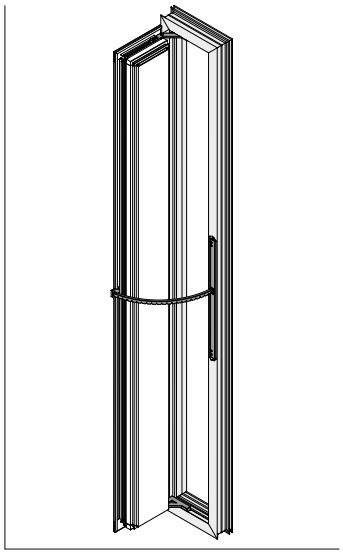
Options

- Programmable special functions
- Programmable feedback limit position „OPEN“ (max. 24 V, 500 mA)
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)



TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	0,9 A
I_A	Cut-off current	1,2 A
P_N	Rated power	22 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	200 N
F_A	Pushing force max.	200 N
F_H	Pullout force	1.800 N (fastening depended)
	Chain	Stainless steel, without protruding rivet heads. Simple connection to casement brackets. Small bending radii allow maximum opening angles of small windows.
	Connecting cable	non-halogen, grey 5 x 0,5 mm², ~ 2 m
v	Speed	Factory settings: 8,0 mm/s 8,0 mm/s Adjustment range: 5 - 14 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 400 mm
L	Length	see order data
	Feedback contact	limit position „CLOSE“ (max. 24 V, 500 mA)
	Sound pressure level	≤ 70 dB (A)



Aumüller chain drives have an integrated cable routing with connection sockets on both housing ends. This enables the following options:

- **Wire Click** with various cabel lengths
  Part.-No.: **501251** - 3 m cable length / **501252** - 5 m cable length / **501253** - 10 m cable length
- Series connection of several drives into multi drive systems
- Power supply from both sides

ORDER DATA

s [mm]	L [mm]	Version	Finish	PU / pcs.	Part.-No.
400	551	KS4 400 S12 24V L streched chain V2	E6/C-0	1	**522640**
400	551	KS4 400 S12 24V R streched chain V1	E6/C-0	1	**522340**

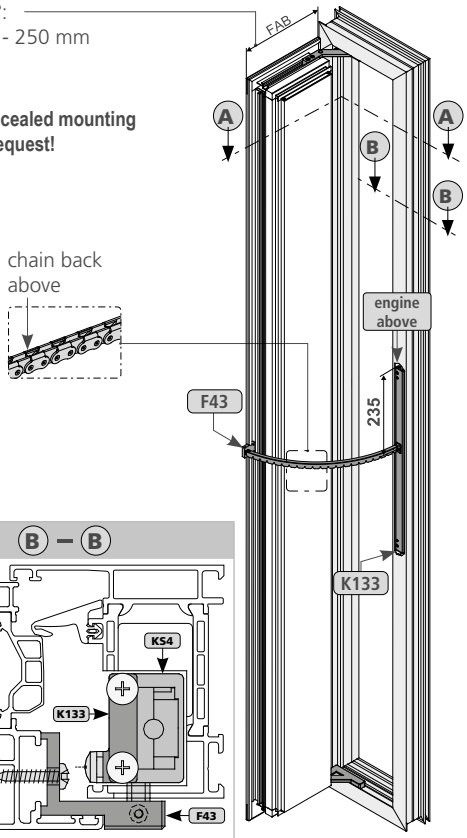
OPTIONS

Special model	PU / pcs.	Part.-No.
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Plug solution:		
Wire Click - 3 m – non-halogen, grey – 5 x 0,5 mm²		**501251**
Wire Click - 5 m – non-halogen, grey – 5 x 0,5 mm²		**501252**
Wire Click - 10 m – non-halogen, grey – 5 x 0,5 mm²		**501253**
Microprocessor programming S12		
Electronic stroke reduction 24V S12		**524190**
Programming drives 24V / 230V S12		**524180**
Optional accessories	PU / pcs.	Part.-No.
M-COM® Click Configuration module for synchronised multi-drive systems	1	**524167**
M-COM Configuration module for synchronised multi-drive systems	1	**524177**

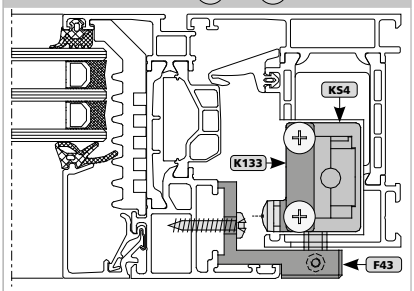
Concealed mounting inside profiles

Opening angle 90°:
from FAB 170 mm - 250 mm

Planning of the „concealed mounting inside profiles“ on request!

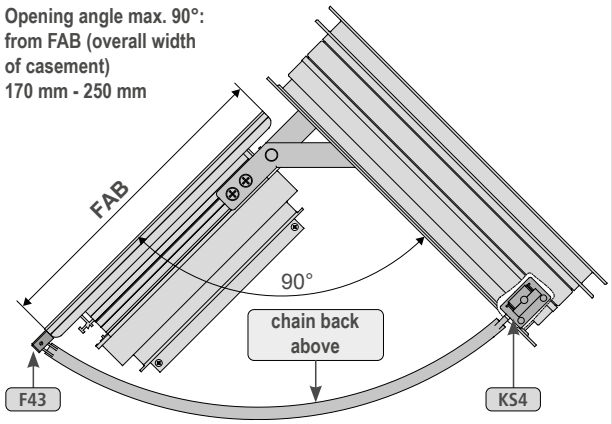


View / cut B – B



View / cut A – A

Opening angle max. 90°:
from FAB (overall width of casement)
170 mm - 250 mm



Stroke programming		
FAB	Stroke	Opening angle approx.
170	280	90°
180	305	90°
200	330	90°
225	350	90°
250	375	90°
275	400	85°
300	400	80°

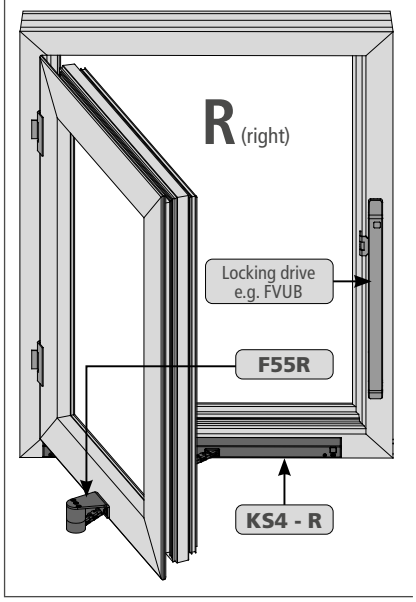
The stroke is programmed: • according to the desired opening angle
• depending on the FAB

- Kit for side-hung window with a casement **opening angle ~70°**.
- The KS4 drive is pre-programmed for a **stroke of 350 mm**.
- Application: natural ventilation, RWA, ferralux®-NRWG
- Internal Intelligent Control Electronics S12
- Feedback limit position „CLOSE“ (max. 24 V, 500 mA)

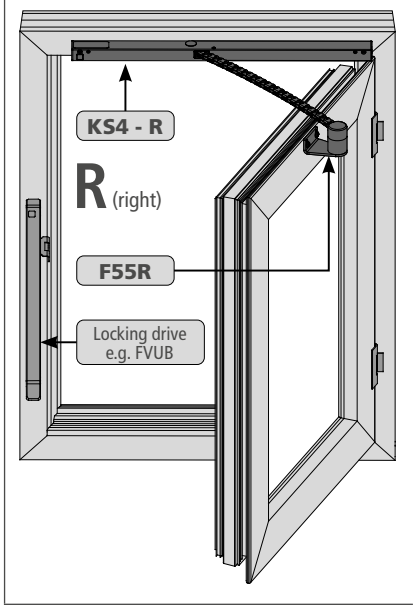
Equipment
- Additional **Aumüller-Click plug set** for multi-drive operation

Optionen
- Programmable special functions
- Programmable feedback limit position „OPEN“ (max. 24 V, 500 mA)
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)

Drehvolution Set 1 (KS4R and F55R) for side-hung window DIN left



Drehvolution Set 1 (KS4R and F55R) for side-hung window DIN right



TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	0,9 A
I_A	Cut-off current	1,2 A
P_N	Rated power	22 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	400 N
F_A	Pushing force max.	200 N
F_H	Pullout force	1.800 N (fastening depended)
	Chain	Stainless steel, without protruding rivet heads. Simple connection to casement brackets. Small bending radii allow maximum opening angles of small windows.
	Connecting cable	non-halogen, grey 5 x 0,5 mm², ~ 2 m
v	Speed	Factory settings: 8,0 mm/s 8,0 mm/s Adjustment range: 5 - 14 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 350 mm
L	Length	551 mm
	Feedback contact	limit position „CLOSE“ (max. 24 V, 500 mA)
	Sound pressure level	≤ 70 dB (A)

*) **FAB = to max. 1200 mm**
FAB ≤ 1000 mm use 1x Drehvolution
FAB > 1000 mm use 2x Drehvolution Set 1 + Set 2 (synchron operation)

Space requirement on the frame = 26 mm

These window sizes are only recommendations.
A stable side-hung window - with an additional locking drive - is required!

) **FAH = to max. 2000 mm
FAH ≤ 1200 mm use 1x Drehvolution
FAH > 1200 mm use 2x Drehvolution Set 1 + Set 2 (synchron operation)

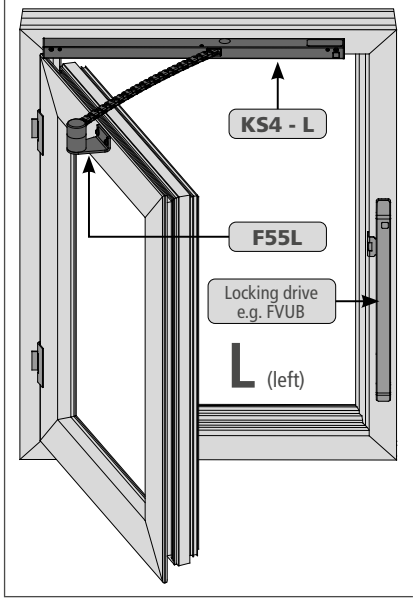
*) FAB = Overall width of casement
**) FAH = Overall height of casement

- Kit for side-hung window with a casement **opening angle ~70°**.
- The KS4 drive is pre-programmed for a **stroke of 350 mm**.
- Application: natural ventilation, RWA, ferralux®-NRWG
- Internal Intelligent Control Electronics S12
- Feedback limit position „CLOSE“ (max. 24 V, 500 mA)

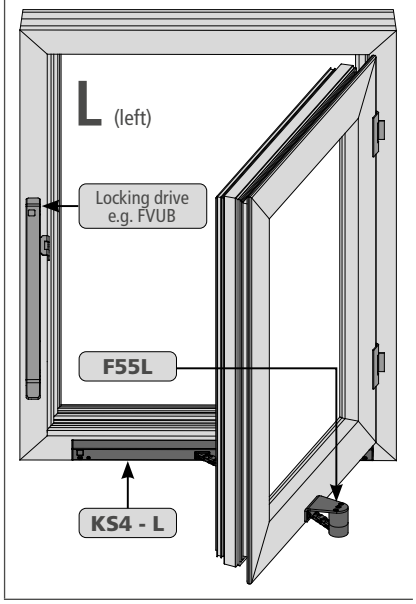
Equipment
- Additional **Aumüller-Click plug set** for multi-drive operation

Optionen
- Programmable special functions
- Programmable feedback limit position „OPEN“ (max. 24 V, 500 mA)
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)

Drehvolution Set 2 (KS4L and F55L) for side-hung window DIN left



Drehvolution Set 2 (KS4L and F55L) for side-hung window DIN right



TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	0,9 A
I_A	Cut-off current	1,2 A
P_N	Rated power	22 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	400 N
F_A	Pushing force max.	200 N
F_H	Pullout force	1.800 N (fastening depended)
	Chain	Stainless steel, without protruding rivet heads. Simple connection to casement brackets. Small bending radii allow maximum opening angles of small windows.
	Connecting cable	non-halogen, grey 5 x 0,5 mm², ~ 2 m
v	Speed	Factory settings: 8,0 mm/s 8,0 mm/s Adjustment range: 5 - 14 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 350 mm
L	Length	551 mm
	Feedback contact	limit position „CLOSE“ (max. 24 V, 500 mA)
	Sound pressure level	≤ 70 dB (A)

*) **FAB = to max. 1200 mm**
FAB ≤ 1000 mm use 1x Drehvolution
FAB > 1000 mm use 2x Drehvolution Set 1 + Set 2 (synchron operation)

Space requirement on the frame = 26 mm

These window sizes are only recommendations.
A stable side-hung window - with an additional locking drive - is required!

) **FAH = to max. 2000 mm
FAH ≤ 1200 mm use 1x Drehvolution
FAH > 1200 mm use 2x Drehvolution Set 1 + Set 2 (synchron operation)

*) FAB = Overall width of casement
**) FAH = Overall height of casement

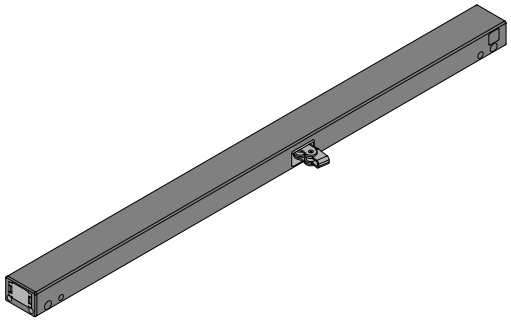
ORDER DATA

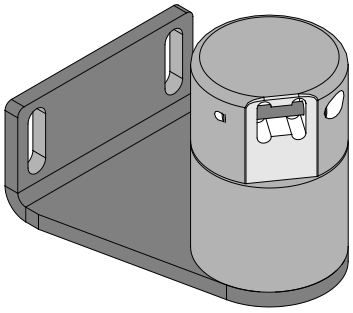
s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.
350	551	Drehvolution - KS4 - Set 1 (right)	E6/C-0	1	**522035**
350	551	Drehvolution - KS4 - Set 2 (left)	E6/C-0	1	**520035**

OPTIONS

Painting on request		
Plug solution:		
Wire Click - 3 m – non-halogen, grey – 5 x 0,5 mm²		**501251**
Wire Click - 5 m – non-halogen, grey – 5 x 0,5 mm²		**501252**
Wire Click - 10 m – non-halogen, grey – 5 x 0,5 mm²		**501253**
Microprocessor programming S12		
Electronic stroke reduction 24V S12		**524190**
Programming drives 24V / 230V S12		**524180**
Optionales Zubehör	PU/pcs.	**Part.-No.**
M-COM® Click Configuration module for synchronised multi-drive systems	1	**524167**
M-COM Configuration module for synchronised multi-drive systems	1	**524177**

Scope of delivery: Drehvolution - KS4





Chain drive:	**KS4** 400 S12 24V DC	**Casement bracket:**	**F55**
depending on the version:	L (left) R (right)	depending on the version:	L (left) R (right)
Connecting cable:	non-halogen, grey 5 x 0,5 mm², ~ 2 m		

OVERVIEW OF BRACKETS

Typical application						1	2	3	4	5
Frame bracket						K134	K132	No	K133	K135
Casement bracket						F41	F42	F42	F43	F19
Space requirement				min.	[mm]	20	28	27		
Overlap thickness (*1					[mm]	0 - 21	5 - 21	0 - 21		
Opening angle (*2				max.	[DEG]	45	60	40		
Casement weight (*3				max.	[Kg]	85	70	85		
Window material				Alu		●	●	●	●	●
				Wood		●	●	●	●	●
				PVC		●	●	●	●	●
Type of window and mounting	Bottom hung	inward	HSK	FM		●				
				RM			●	●		
			NSK	FM		●	●			
				RM				●		
		outward	HSK	RM		●	●			
				PR						
			NSK	RM		●	●			
				PR						
	Top hung	inward	HSK	FM		■	■			
				RM				■		
			NSK	FM		■	■			
				RM				■		
		outward	HSK	RM		■	●			
				PR						
			NSK	RM		■	■			
				PR						
	Side hung	inward	HSK	FM		●	●			
				RM				●		
			NSK	FM						
				RM						
	Roof	outward	HSK	RM		■	■			
				PR						
			NSK	RM						
				PR						
	PAF	outward		RM		●	●			
	Concealed								●	●
FAB (*4				Solo	[mm]	600 - 1200				
FAH (*4				Solo	[mm]	250 - 1500				

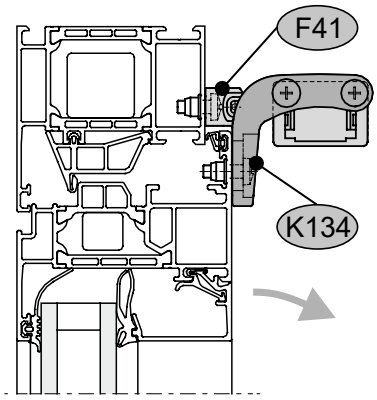
LEGEND

● suitable ■ not recommended

(*1 Window sizes and opening angles may be different.
(*2 Sample values of the opening angle evaluated on the basis of FAB/FAH for inward opening windows with drives mounted at the main closing edge.
For any other window heights, for outward opening windows and for windows with drives mounted at the side edges the opening angle will vary.
(*3 Please respect the individual geometry of the different windows. The listed max. casement weight refers to a single drive on button hung window with a max. opening angle.
(*4 Sample value of the casement dimensions for corner joints of 110 mm. The actuell casement dimensions depend on length of the corner joints, profi le dimensions, stroke and position of the drives. The values of FAB/FAH are to be used analogue for side hung windows.

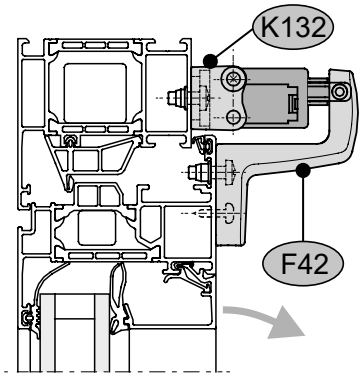
TYPICAL APPLICATIONS

1 FM, bottom hung
inward opening



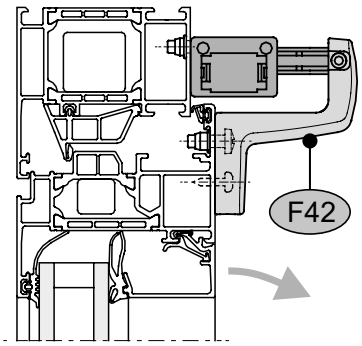
View on aluminium window

2 RM, bottom hung
inward opening



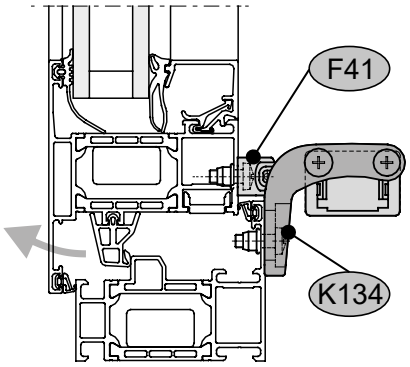
View on aluminium window

3 RM, bottom hung
inward opening



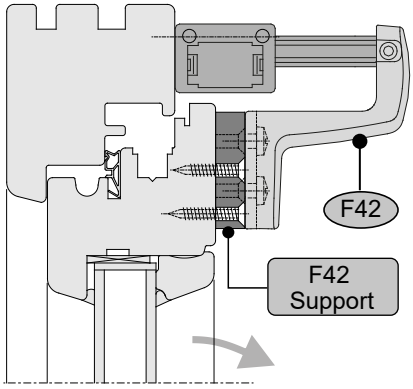
View on aluminium window

1 RM, top hung
outward opening



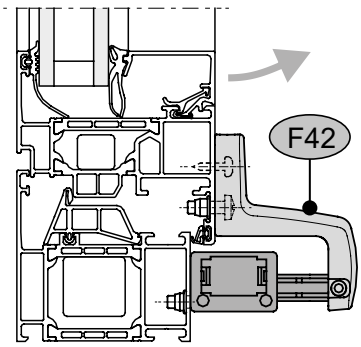
View on aluminium window

3 RM, bottom hung
inward opening



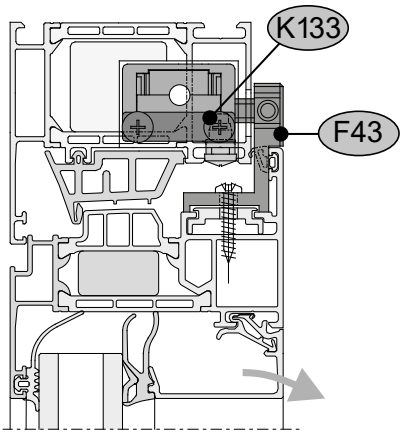
View on wood window

3 RM, top hung
inward opening



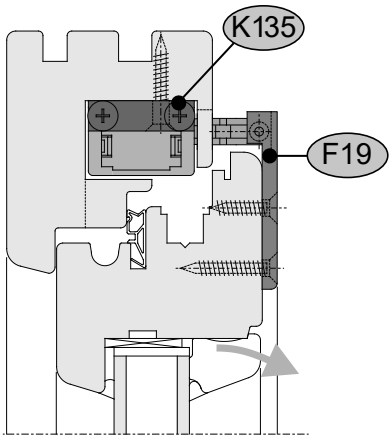
View on aluminium window

4 PE (profile installation) in the frame
bottom hung, inward opening



View on aluminium window

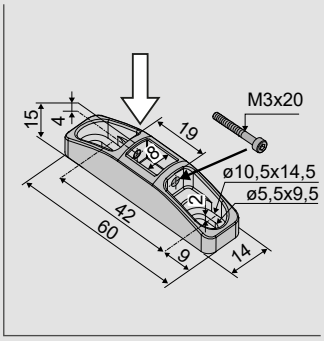
5 PE (profile installation) in the frame
bottom hung, inward opening



View on wood window

CASEMENT BRACKETS

F41



Application

Surface mounting on the casement profiles of inward opening windows, for **swivelling** fixing of drives **KS4** with **K132, K134**

Chain fixing in direction of the arrow

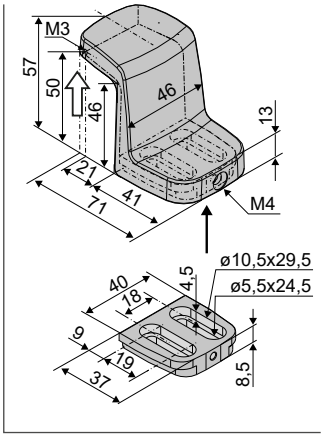
Part.-No. 151440

Material / Finish
Cast aluminum, bright chrome
Feature / Equipment
1x screw M3x20
1x Drilling template

Part.-No. 151445

Material / Finish
Cast aluminum, RAL 9006

F42



Application

Surface mounting on the casement profiles of inward opening windows, for surface mounted drives
KS4

Chain fixing in direction of the arrow

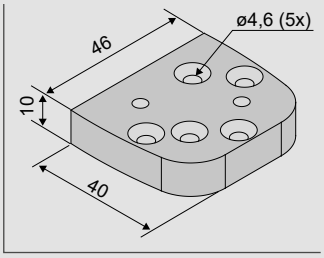
Part.-No. 151441

Material / Finish
Cast aluminum, bright chrome
Feature / Equipment
1x baseplate
1x countersunk screw M4x10
1x screw M3x25
1x Drilling template

Part.-No. 151446

Material / Finish
Cast aluminum, RAL 9006

F42-Support



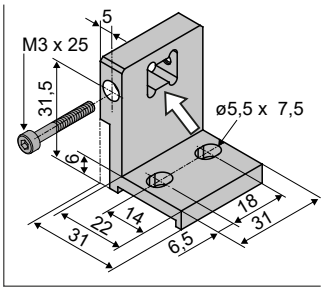
Application

F42-Support as a compensating plate when mounting on the wooden windows and plastic windows
t = 10 mm

Part.-No. 523961

Material / Finish
aluminum (E6/C-0)

F43



Application

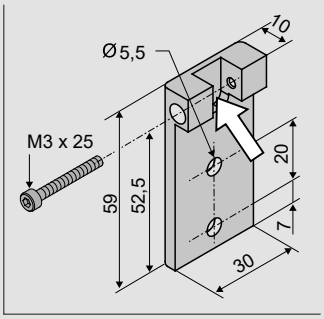
Surface mounting on the casement profiles of inward opening windows **Schüco AWS 75**, for the **profile-integrated installation** of drives **KS4** with **K133**.

Chain fixing in direction of the arrow

Part.-No. 151444

Material / Finish
Aluminum
Feature / Equipment
1x cylinder head screw M3x25

F19



Application

Surface mounting on the casement profiles of inward opening windows, for the **profile-integrated installation** of drives **KS4** with **K135**.

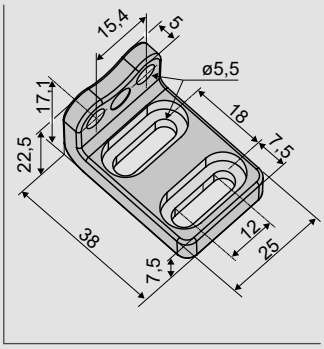
Chain fixing in direction of the arrow

Part.-No. 151419

Material / Finish
Aluminum
Feature / Equipment
1x cylinder head screw M3x25

FRAME BRACKETS

K132



Application

Surface mounting on the casement profi les of inward opening windows, for **swivelling** fixing of drives **KS4** with **F42**

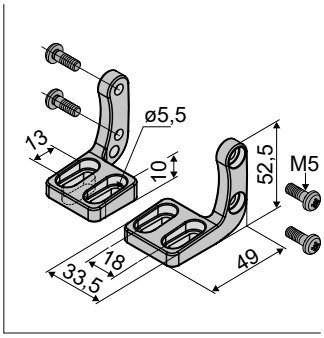
Part.-No. 522940

Material / Finish
Cast aluminum, bright chrome
Feature / Equipment
2x frame brackets
2x screws M5x16

Part.-No. 522947

Material / Finish
Cast aluminum, RAL 9006

K134



Application

Surface mounting on the casement / window frame profi les of in- / outward opening windows, for rigid or swivelling fixing of drives **KS4** with **F41**

Part.-No. 522941

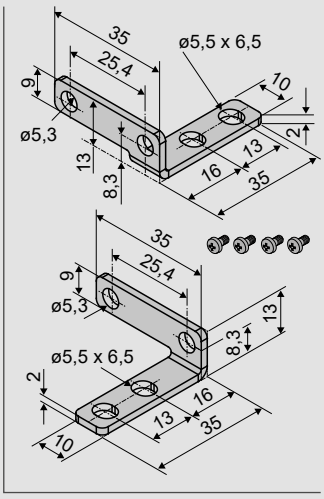
Material / Finish
Cast aluminum, bright chrome
Feature / Equipment
4x screw M5x10

Part.-No. 522948

Material / Finish
Cast aluminum, RAL 9006

PROFILE-INTEGRATED MOUNTING

K133



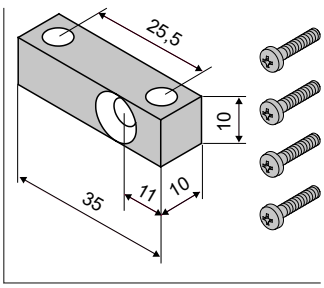
Application

Profil-integrated mounting in the casement profiles of inward opening windows, for **rigid** fixing of drives **KS4** with **F43**.

Part.-No. 522946

Material / Finish
Stainless steel
Feature / Equipment
2x frame brackets
4x screws M5x10

K135



Application

Profil-integrated mounting in the casement profiles of inward opening **wood windows**, for **rigid** fixing of drives **KS4** with **F19**.

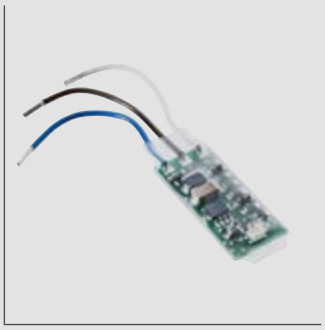
Part.-No. 522943

Material / Finish
Aluminium, vibratory grinding
Feature / Equipment
2x frame brackets
4x screws M5x16

OPTIONAL ACCESSORIES

Main control unit

M-COM



Application

Configuration module for automatic configuration and monitoring of max. 4 opening drives / 2 locking drives version S12 / S3 in synchronised multi-drive systems

Rated voltage:
24 V DC (19 V ... 28 V)
Current consumption: <12 mA
Drive type: S12
Protection rating
IP30 rubber envelope

Part.-No. 524177

Ambient temperature range:
0 °C ... + 70 °C
Dimensions
45 x 17 x 6 mm
Connecting wires
3 wires 0,5 mm² x 50 mm
Feature/Equipment
Printed circuit board with components and connection wires to be installed in connection box to be supplied on site

M-COM® Click



Application

Configuration module for automatic configuration and monitoring of max. 4 opening drives / 2 locking drives version S12 / S3 in synchronised multi-drive systems

Rated voltage:
24 V DC (19 V ... 28 V)
Current consumption: <12 mA
Drive type: S12
Protection rating: IP30

Part.-No. 524167

Ambient temperature range:
-5 °C ... +70 °C
Dimensions:
40 x 26 x 15 mm
Connection:
for **Aumüller** drives with
Wire Click
Equipment
Tongs for removing the M-COM® Click

Plug solution

Wire Click



Application

Wire Click:
Unitary plug-solution for **Aumüller** Click System.

Rated voltage:
24 V DC (19 V ... 28 V)

Connecting cable:
non-halogen, grey 5 x 0,5 mm²

Terminal: up to 1,5 mm²

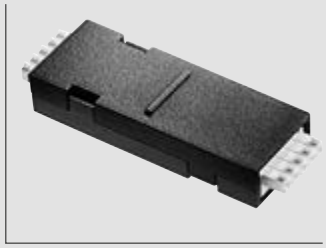
Feature/Equipment

- Flexible cable length
- Connect multiple drives in series connection
- Torsion-plug
- Locking hooks prevent withdrawal of the plug under tensile load
- Strain relief according DIN EN 60335-1 by screwing the housing halves

VARIANTEN: 24V - Silicone	
3 m cable length - 24V DC	Part.-No. 501251
5 m cable length - 24V DC	Part.-No. 501252
10 m cable length - 24V DC	Part.-No. 501253

Connection plug

Connect Click



Application

Connect Click is a connection plug for rigid mounting of two drives.

Rated voltage:
24 V DC (19 V ... 28 V)

Dimension:
70 x 26 x 13 mm

Part.-No. 524123

Feature/Equipment

- Torsion-plug
- Replaces disturbing cables
- Creates a visually con-sistent image on the window - without disturbing, visible cables.

CASEMENT BRACKETS AND FRAME BRACKETS

Special model	PU/pcs.	Part.-No.		
Casement brackets painted / powder coated in other RAL colours				
Lump sum for coating		**516030**		
Specify at order stage:	1 – 20	**516032**		
	21 – 50	**516032**		
	51 – 100	**516032**		
	from 101	**516032**		
Frame brackets painted / powder coated in other RAL colours				
Lump sum for coating		**516030**		
Specify at order stage:	1 – 20	**516031**		
	21 – 50	**516031**		
	51 – 100	**516031**		
	from 101	**516031**		



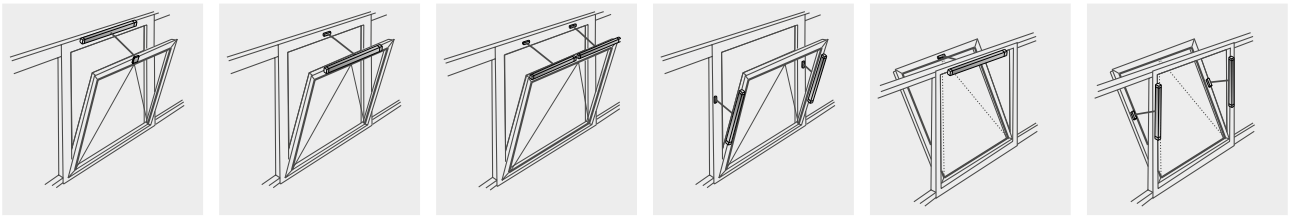
PRODUCT FEATURES KSA

- For natural ventilation, RWA und ferralux® NRWG nach EN12101-2
- TWIN versions with two chains and doubled force
- Adjustable chain tension
- Mechanical chain unlocking
- Aluminium housing anodized or optionally in RAL colors
- High-quality stainless steel roller chain
- Programmable parameters of Intelligent Control Electronics S12:
  - Synchronised multi-operation and sequence control without add. devices
  - Electronic soft-start, soft-close and soft-stop at end of stroke control
  - Stroke, force, speed
  - Rebate control
- Integrated plug solution
- Compatible with the plug-in configuration module M-COM® Click

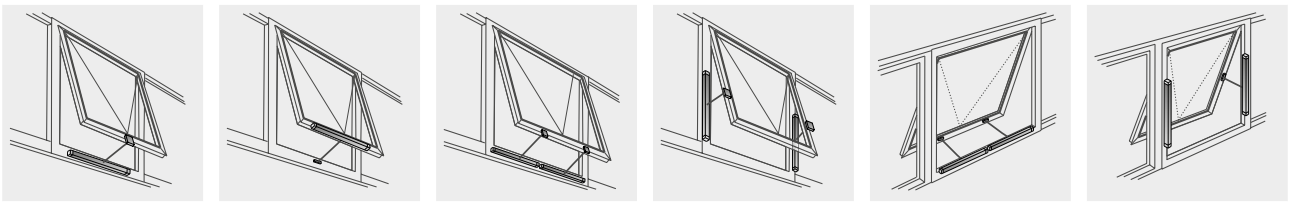
For this product series, a Type III Environmental Product Declaration (EPD) was issued according to ISO 14025 and EN 15804.
The LCA results of the different product types are listed at the end of this product catalogue.
The EPD documents can be viewed or downloaded from our homepage **www.aumueller-gmbh.de**.

FACADE

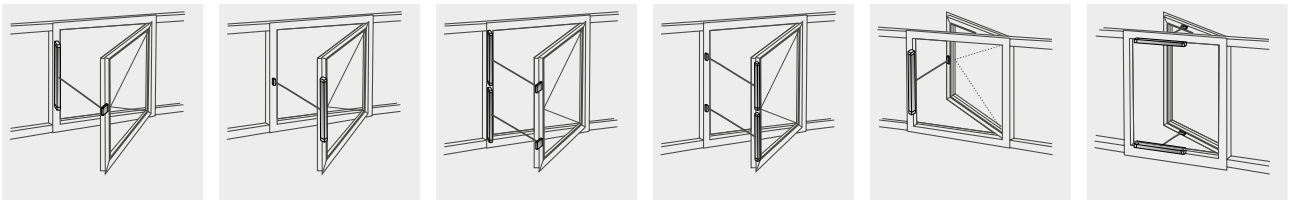
Bottom-hung



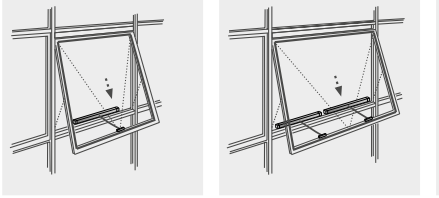
Top-hung



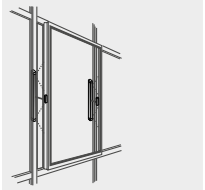
Side-hung



Friction hinged

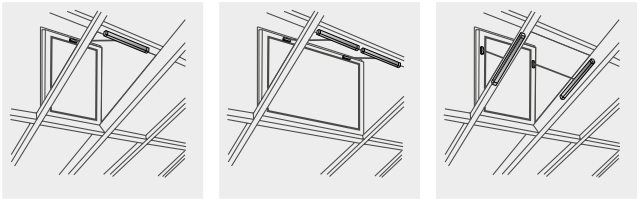


Parallel outward opening

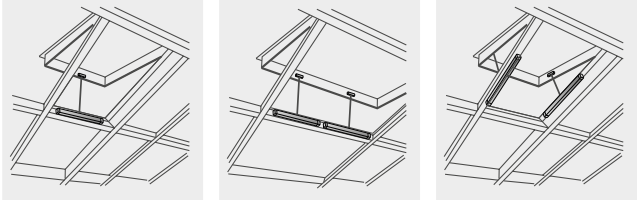


ROOF

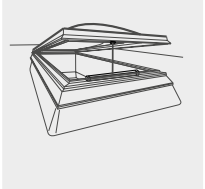
Bottom-hung



Top-hung



Sky light



Glass pyramid



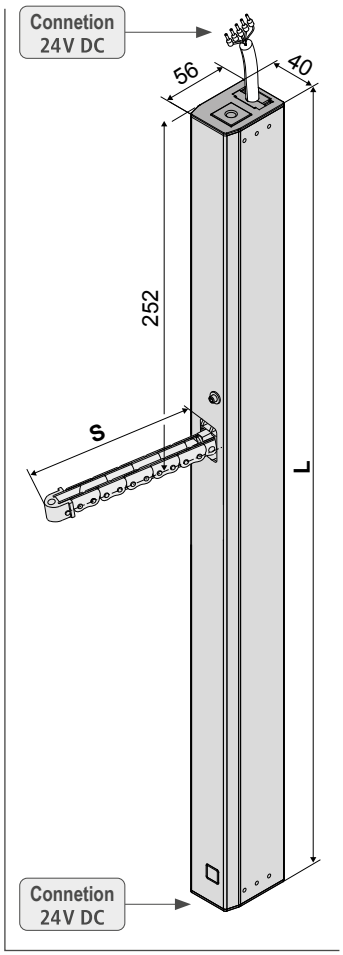
- Application: natural ventilation, RWA, ferralux®-NRWG
- Internal Intelligent Control Electronics S12
- Adjustable chain tension / Mechanical chain unlocking

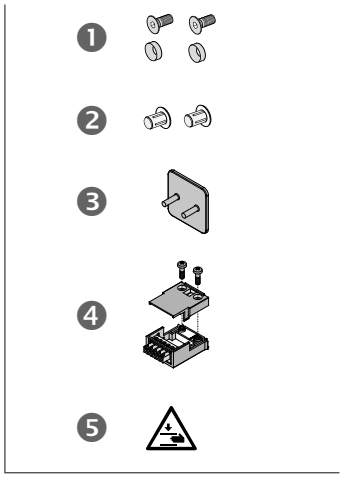
Equipment

- Additional **Aumüller-Click plug set** for multi-drive operation

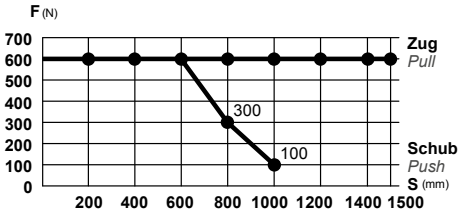
Options

- Programmable special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)





TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	0,9 A
I_A	Cut-off current	1,2 A
P	Rated power	22 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	600 N
F_A	Pushing force max.	 s > 800 mm only for pulling application
F_H	Pullout force	3.000 N (fastening depended)
	Chain	stainless steel
	Connecting cable	non-halogen, grey 5 x 0,5 mm², ~ 3 m
v	Speed	Factory settings: s ≤ 400 8,0 mm/s 8,0 mm/s s > 400 – 600 12,0 mm/s 8,0 mm/s s > 600 13,5 mm/s 8,0 mm/s Adjustment range: 5 - 14 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 1500 mm
L	Length	see order data
	Sound pressure level	≤ 70 dB (A)

In delivery

1	2x countersunk screws M8x16 and 2x Spacer ring (brass)
2	2x blind plug for unused cable entry
3	1x chain unlocking key
4	1x **Aumüller**-Click plug set (24V) for multi-drive operation
5	1x warning sign sticker „Risk of entrapment“

ORDER DATA

s [mm]	L [mm]	Version	Finish	PU / pcs.	Part.-No.
250	515	KSA 250 S12 24V	E6/C-0	1	**522725**
300	591	KSA 300 S12 24V	E6/C-0	1	**522730**
400	591	KSA 400 S12 24V	E6/C-0	1	**522740**
500	693	KSA 500 S12 24V	E6/C-0	1	**522750**
600	693	KSA 600 S12 24V	E6/C-0	1	**522760**
800	794	KSA 800 S12 24V	E6/C-0	1	**522780**
1000	896	KSA 1000 S12 24V	E6/C-0	1	**522810**
1200	998	KSA 1200 S12 24V	E6/C-0	1	**522812**
1500	1151	KSA 1500 S12 24V	E6/C-0	1	**522815**

OPTIONS

Special model	PU / pcs.	Part.-No.
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Plug solution:		
Wire Click - 5 m – non-halogen, grey – 5 x 0,5 mm²		**501252**
Wire Click - 10 m – non-halogen, grey – 5 x 0,5 mm²		**501253**
Microprocessor programming S12		
Electronic stroke reduction 24V S12		**524190**
Programming drives 24V / 230V S12		**524180**

Optional accessories	PU / pcs.	Part.-No.
M-COM® Click Configuration module for synchronised multi-drive systems	1	**524167**
M-COM Configuration module for synchronised multi-drive systems	1	**524177**

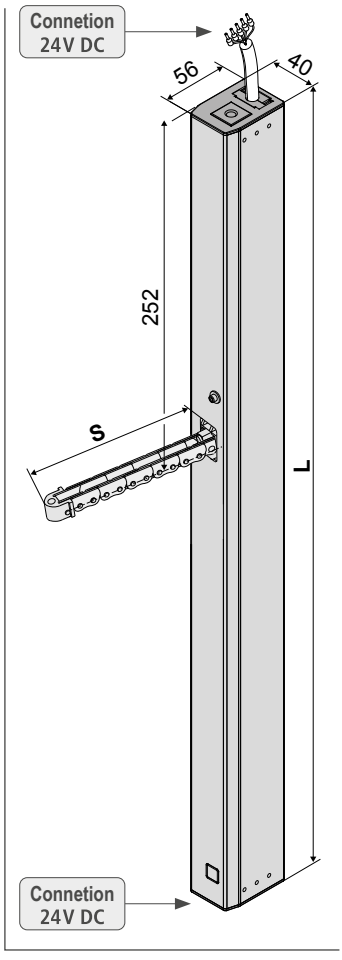
- Application: natural ventilation, RWA, ferralux®-NRWG
- Internal Intelligent Control Electronics S12
- Adjustable chain tension / Mechanical chain unlocking
- Programmable feedback limit position „OPEN“ and „CLOSE“ (max. 24 V, 500 mA)

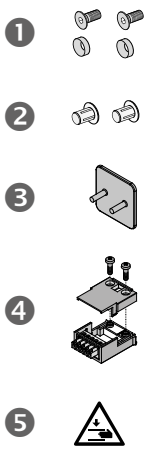
Equipment

- Additional **Aumüller-Click plug set** for multi-drive operation

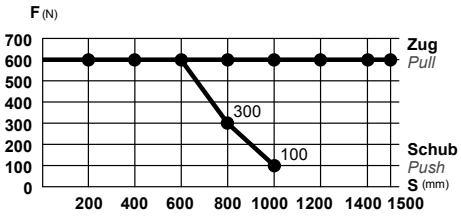
Options

- Programmable special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)





TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	0,9 A
I_A	Cut-off current	1,2 A
P	Rated power	22 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	600 N
F_A	Pushing force max.	
		s > 800 mm only for pulling application
F_H	Pullout force	3.000 N (fastening depended)
	Chain	stainless steel
	Connecting cable	non-halogen, grey 5 x 0,5 mm², ~ 3 m
v	Speed	Factory settings: s ≤ 400 8,0 mm/s 8,0 mm/s s > 400 – 600 12,0 mm/s 8,0 mm/s s > 600 13,5 mm/s 8,0 mm/s Adjustment range: 5 - 14 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 1500 mm
L	Length	see order data
	Sound pressure level	≤70 dB (A)

In delivery

1	2x countersunk screws M8x16 and 2x Spacer ring (brass)
2	2x blind plug for unused cable entry
3	1x chain unlocking key
4	1x Aumüller-Click plug set (24V) for multi-drive operation
5	1x warning sign sticker „Risk of entrapment“

ORDER DATA

s [mm]	L [mm]	Version	Finish	PU / pcs.	Part.-No.
250	515	KSA 250 S12 24V Z	E6/C-0	1	**522723**
300	591	KSA 300 S12 24V Z	E6/C-0	1	**522733**
400	591	KSA 400 S12 24V Z	E6/C-0	1	**522743**
500	693	KSA 500 S12 24V Z	E6/C-0	1	**522753**
600	693	KSA 600 S12 24V Z	E6/C-0	1	**522763**
800	794	KSA 800 S12 24V Z	E6/C-0	1	**522783**
1000	896	KSA 1000 S12 24V Z	E6/C-0	1	**522813**
1200	998	KSA 1200 S12 24V Z	E6/C-0	1	**522823**
1500	1151	KSA 1500 S12 24V Z	E6/C-0	1	**522853**

OPTIONS

Special model	PU / pcs.	Part.-No.
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Plug solution:		
Wire Click - 5 m – non-halogen, grey – 5 x 0,5 mm²		**501252**
Wire Click - 10 m – non-halogen, grey – 5 x 0,5 mm²		**501253**
Microprocessor programming S12		
Electronic stroke reduction 24V S12		**524190**
Programming drives 24V / 230V S12		**524180**

Optional accessories	PU / pcs.	Part.-No.
M-COM® Click Configuration module for synchronised multi-drive systems	1	**524167**
M-COM Configuration module for synchronised multi-drive systems	1	**524177**

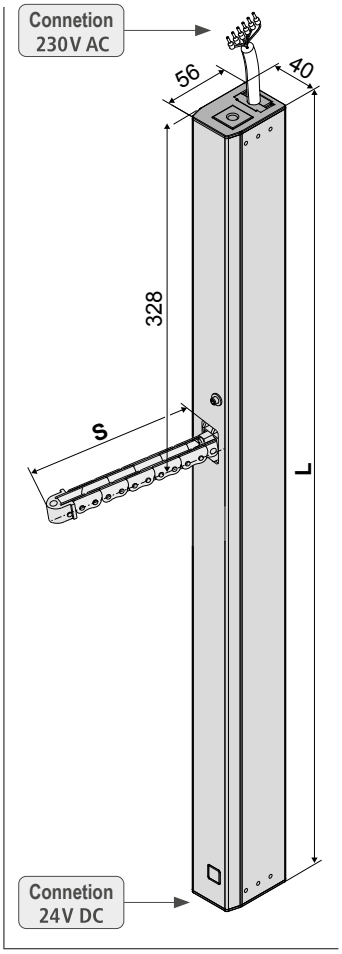
- Application: natural ventilation
- Internal Intelligent Control Electronics S12
- Adjustable chain tension / Mechanical chain unlocking
- Parallel connection up to 8 drives in one group
- Additional connection of a 24V drive possible (on the 24V side)

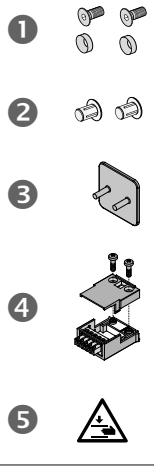
Equipment

- Additional **Aumüller-Click plug set** for multi-drive operation

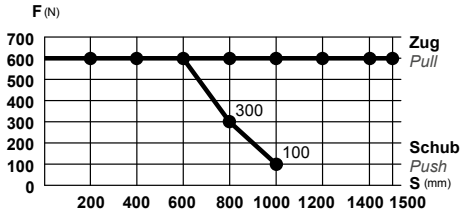
Options

- Programmable synchronised run (max. 4 drives) and special functions





TECHNICAL DATA

U_N	Rated voltage	230 V AC (50 Hz)
I_N	Rated current	0,2 A
I_A	Cut-off current	0,2 A
P_N	Rated power	46 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	600 N
F_A	Pushing force max.	
		s > 800 mm only for pulling application
F_H	Pullout force	3.000 N (fastening depended)
	Chain	stainless steel
	Connecting cable	non-halogen, grey 6 x 0,75 mm², ~ 3 m
v	Speed	Factory settings: 8,0 mm/s 8,0 mm/s Adjustment range: 5 - 14 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 1500 mm
L	Length	see order data
	Sound pressure level	≤70 dB (A)

In delivery

1	2x countersunk screws M8x16 and 2x Spacer ring (brass)
2	2x blind plug for unused cable entry
3	1x chain unlocking key
4	1x **Aumüller**-Click plug set (24V) for multi-drive operation
5	1x warning sign sticker „Risk of entrapment“

ORDER DATA

s [mm]	L [mm]	Version	Finish	PU / pcs.	Part.-No.
250	591	KSA 250 S12 230V	E6/C-0	1	**497025**
300	667	KSA 300 S12 230V	E6/C-0	1	**497030**
400	667	KSA 400 S12 230V	E6/C-0	1	**497040**
500	769	KSA 500 S12 230V	E6/C-0	1	**497050**
600	769	KSA 600 S12 230V	E6/C-0	1	**497060**
800	870	KSA 800 S12 230V	E6/C-0	1	**497080**
1000	972	KSA 1000 S12 230V	E6/C-0	1	**497110**
1200	1074	KSA 1200 S12 230V	E6/C-0	1	**497112**
1500	1227	KSA 1500 S12 230V	E6/C-0	1	**497115**

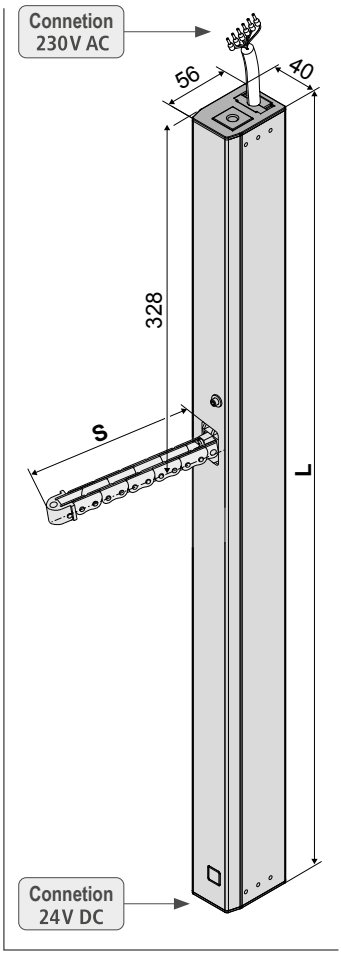
OPTIONS

Special model	PU / pcs.	Part.-No.
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Plug solution:		
Wire Click - 5 m – non-halogen, grey – 6 x 0,75 mm²		**501275**
Wire Click - 10 m – non-halogen, grey – 6 x 0,75 mm²		**501280**
Microprocessor programming S12		
Programming synchronised multi-drive systems 230V S12 (each drive)		**495588**
Electronic stroke reduction 230V S12		**495590**
Programming drives 24V / 230V S12		**524180**

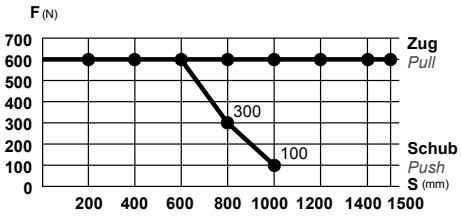
- Application: natural ventilation
- Internal Intelligent Control Electronics S12
- Adjustable chain tension / Mechanical chain unlocking
- Programmable feedback limit position „OPEN“ and „CLOSE“ (max. 24 V, 500 mA)
- Parallel connection up to 8 drives in one group
- Additional connection of a 24V drive possible (on the 24V side)

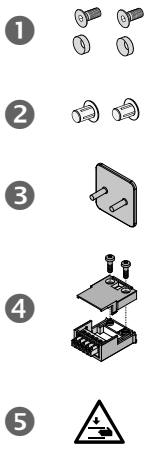
Equipment

- AAdditional **Aumüller-Click plug set** for multi-drive operation



TECHNICAL DATA

U_N	Rated voltage	230 V AC (50 Hz)
I_N	Rated current	0,2 A
I_A	Cut-off current	0,2 A
P_N	Rated power	46 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	600 N
F_A	Pushing force max.	
		s > 800 mm only for pulling application
F_H	Pullout force	3.000 N (fastening depended)
	Chain	stainless steel
	Connecting cable	non-halogen, grey 6 x 0,75 mm², ~ 3 m
v	Speed	Factory settings: 8,0 mm/s 8,0 mm/s Adjustment range: 5 - 14 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 1500 mm
L	Length	see order data
	Sound pressure level	≤70 dB (A)



In delivery

1	2x countersunk screws M8x16 and 2x Spacer ring (brass)
2	2x blind plug for unused cable entry
3	1x chain unlocking key
4	1x **Aumüller**-Click plug set (24V) for multi-drive operation
5	1x warning sign sticker „Risk of entrapment“

ORDER DATA

s [mm]	L [mm]	Version	Finish	PU / pcs.	Part.-No.
250	591	KSA 250 S12 230V Z	E6/C-0	1	**497023**
300	667	KSA 300 S12 230V Z	E6/C-0	1	**497033**
400	667	KSA 400 S12 230V Z	E6/C-0	1	**497043**
500	769	KSA 500 S12 230V Z	E6/C-0	1	**497053**
600	769	KSA 600 S12 230V Z	E6/C-0	1	**497063**
800	870	KSA 800 S12 230V Z	E6/C-0	1	**497083**
1000	972	KSA 1000 S12 230V Z	E6/C-0	1	**497113**
1200	1074	KSA 1200 S12 230V Z	E6/C-0	1	**497123**
1500	1227	KSA 1500 S12 230V Z	E6/C-0	1	**497153**

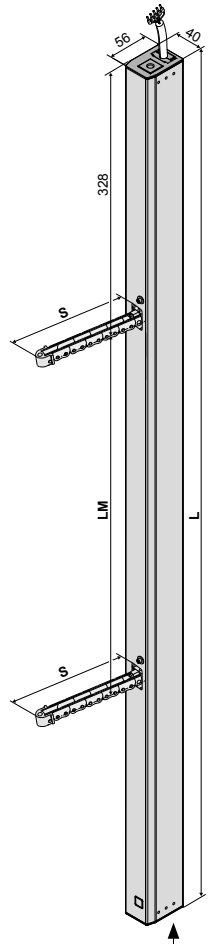
OPTIONS

Special model	PU / pcs.	Part.-No.
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Plug solution:		
Wire Click - 5 m – non-halogen, grey – 6 x 0,75 mm²		**501275**
Wire Click - 10 m – non-halogen, grey – 6 x 0,75 mm²		**501280**
Microprocessor programming S12		
Electronic stroke reduction 230V S12		**495590**
Programming drives 24V / 230V S12		**524180**

- Application: natural ventilation, RWA
- Internal Intelligent Control Electronics S12
- Adjustable chain tension / Mechanical chain unlocking

Options

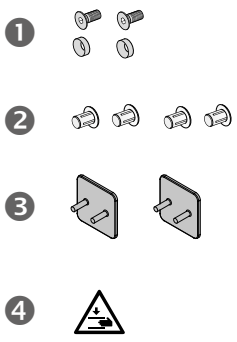
- Programmable special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)



No electrical connection possible

TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	1,8 A
I_A	Cut-off current	2,4 A
P_N	Rated power	43 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	1.200 N
F_A	Pushing force max.	1.200 N
F_H	Pullout force	2 x 2.500 N (fastening depended)
	Chain	stainless steel
	Connecting cable	non-halogen, grey 5 x 0,5 mm², ~ 3 m
v	Speed	Factory settings: s ≤ 400 8,0 mm/s 8,0 mm/s s > 400 – 600 12,0 mm/s 8,0 mm/s Adjustment range: 5 - 12 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 600 mm
L	Length	see order data
LM	Distance in between chains	see order data
	Sound pressure level	≤70 dB (A)



In delivery	
1	2x countersunk screws M8x16 and 2x Spacer ring (brass)
2	4x blind plug for unused cable entry
3	2x chain unlocking key
4	1x warning sign sticker „Risk of entrapment“

ORDER DATA

s [mm]	L [mm]	LM [mm]	Version	Finish	PU/pcs.	Part.-No.
400	1150	485	KSA TWIN 400 S12 24V	E6/C-0	1	**522745**
500	1353	587	KSA TWIN 500 S12 24V	E6/C-0	1	**522755**
600	1353	587	KSA TWIN 600 S12 24V	E6/C-0	1	**522765**

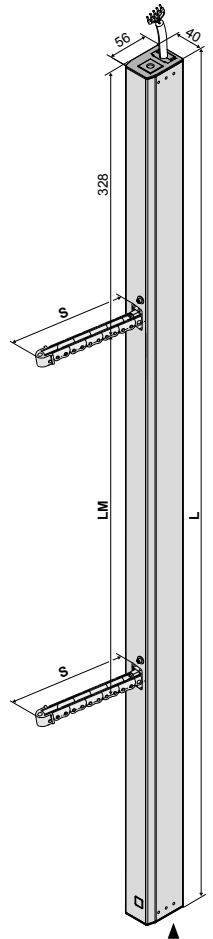
OPTIONS

Special model	PU/pcs.	Part.-No.
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Plug solution:		
Wire Click - 5 m – non-halogen, grey – 5 x 0,5 mm²		**501252**
Wire Click - 10 m – non-halogen, grey – 5 x 0,5 mm²		**501253**
Microprocessor programming S12		
Electronic stroke reduction 24V S12		**524190**
Programming drives 24V / 230V S12		**524180**
Optional accessories	PU/pcs.	Part.-No.
M-COM Configuration module for synchronised multi-drive systems	1	**524177**

- Application: natural ventilation, RWA
- Internal Intelligent Control Electronics S12
- Adjustable chain tension / Mechanical chain unlocking
- Programmable feedback limit position „OPEN“ and „CLOSE“ (max. 24 V, 500 mA)

Options

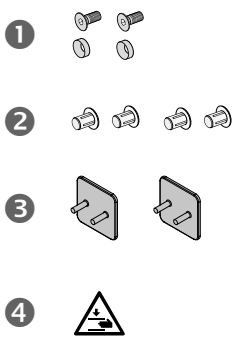
- Programmable special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)



No electrical connection possible

TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	1,8 A
I_A	Cut-off current	2,4 A
P_N	Rated power	43 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	1.200 N
F_A	Pushing force max.	1.200 N
F_H	Pullout force	2 x 2.500 N (fastening depended)
	Chain	stainless steel
	Connecting cable	non-halogen, grey 5 x 0,5 mm², ~ 3 m
v	Speed	Factory settings: s ≤ 400 8,0 mm/s 8,0 mm/s s > 400 – 600 12,0 mm/s 8,0 mm/s Adjustment range: 5 - 12 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 600 mm
L	Length	see order data
LM	Distance in between chains	see order data
	Sound pressure level	≤70 dB (A)



In delivery	
1	2x countersunk screws M8x16 and 2x Spacer ring (brass)
2	4x blind plug for unused cable entry
3	2x chain unlocking key
4	1x warning sign sticker „Risk of entrapment“

ORDER DATA

s [mm]	L [mm]	LM [mm]	Version	Finish	PU/pcs.	Part.-No.
400	1150	485	KSA TWIN 400 S12 24V Z	E6/C-0	1	**522747**
500	1353	587	KSA TWIN 500 S12 24V Z	E6/C-0	1	**522757**
600	1353	587	KSA TWIN 600 S12 24V Z	E6/C-0	1	**522767**

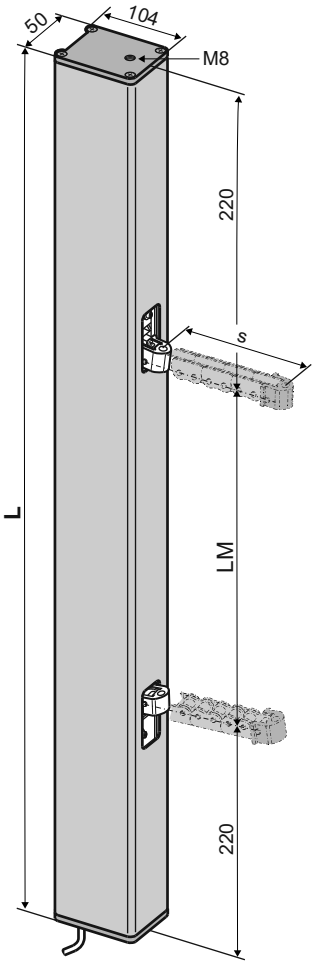
OPTIONS

Special model	PU/pcs.	Part.-No.
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Plug solution:		
Wire Click - 5 m – non-halogen, grey – 5 x 0,5 mm²		**501252**
Wire Click - 10 m – non-halogen, grey – 5 x 0,5 mm²		**501253**
Microprocessor programming S12		
Electronic stroke reduction 24V S12		**524190**
Programming drives 24V / 230V S12		**524180**
Optional accessories	PU/pcs.	Part.-No.
M-COM Configuration module for synchronised multi-drive systems	1	**524177**

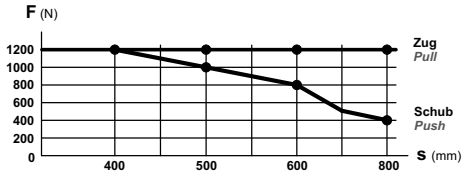
- Application: natural ventilation, RWA
- Internal Intelligent Control Electronics S12

Options

- Programmable special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)



TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	1,8 A
I_A	Cut-off current	2,4 A
P_N	Rated power	43 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	1.200 N
F_A	Pushing force max.	
F_H	Pullout force	2 x 2.500 N (fastening depended)
	Chain	Stainless steel
	Connecting cable	non-halogen, grey– 5 x 0,5 mm², ~ 5 m
v	Speed	Factory settings: s ≤ 400 8,0 mm/s 8,0 mm/s s > 400 – 600 12,0 mm/s 8,0 mm/s s > 600 13,5 mm/s 8,0 mm/s Adjustment range: 5 - 14 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 800 mm
L	Length	see order data
LM	Distance in between chains	see order data
	Sound pressure level	≤ 70 dB (A)

Components packed with drive

2x Countersunk-head screw M8x16, 2x Spacer ring (brass)

ORDER DATA

s [mm]	L [mm]	LM [mm]	Version	Finish	PU/pcs.	Part.-No.
400	737	297	KSA D 400 S12 24V	E6/C-0	1	**522140**
500	837	397	KSA D 500 S12 24V	E6/C-0	1	**522150**
600	837	397	KSA D 600 S12 24V	E6/C-0	1	**522160**
800	942	502	KSA D 800 S12 24V	E6/C-0	1	**522180**

OPTIONS

Special model	PU/pcs.	Part.-No.
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Extra length connecting cable:		
10 m – non-halogen, grey– 5 x 0,5 mm²		**501056**
Microprocessor programming S12		
Electronic stroke reduction 24V S12		**524190**
Programming drives 24V / 230V S12		**524180**
Optional accessories	PU/pcs.	Part.-No.
M-COM Configuration module for synchronised multi-drive systems	1	**524177**

OVERVIEW OF BRACKETS

Typical application						1	2	3	4	5
Frame bracket						K-A1	K84-1, K87, K-C3, K-E1, K-E2	K-B1	K-B2	K-D3
Casement bracket						F16, F49	F16, F16-1, F29-2, F33, F38, F39, F49	F16, F49		
Space requirement			min.		[mm]	35	65 – 90	45 – 55		45
Overlap thickness *1					[mm]	0 – 21	irrelevant	0 – 21		0 – 21
Opening angle *2			max.		[DEG]	20	60	50		40
Casement weight *3			max.		[Kg]	250	130	130		130
Window material			Alu			●	●	●	●	●
			Wood				●	●	●	●
			PVC			■		●	●	●
Type of window and mounting	Bottom hung	inward	HSK	FM		●		●	●	
				RM						●
			NSK	FM		●		●	●	
				RM						●
		outward	HSK	RM		●		●	●	
				PR			●			
			NSK	RM		●	●	●	●	
				PR			■			
	Top hung	inward	HSK	FM		●		●	●	
				RM						●
			NSK	FM		●		●	●	
				RM						●
		outward	HSK	RM		●	●	●	●	
				PR						
			NSK	RM		●		●	●	
				PR			●			
	Side hung	inward	HSK	FM		●		●	●	
				RM						●
			NSK	FM		●		●	●	
				RM						●
	Roof	outward	HSK	RM		■		■	■	
				PR			■			
			NSK	RM		■		■	■	
				PR			■			
	PAF	outward		RM		●		●	●	
	Concealed									
FAB*4			Solo		[mm]	700 – 1300				
			Sync2		[mm]	1250 – 2500				
FAH*4			Solo		[mm]	450 – 1500				
			Sync2		[mm]	250 – 2500				

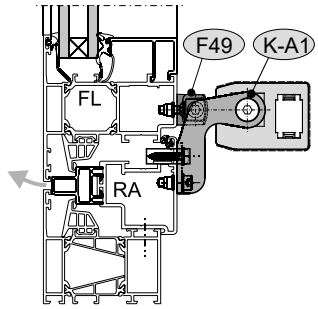
LEGEND

● suitable ■ not recommended

*1 Window sizes and opening angles may be different.
*2 Sample values of the opening angle evaluated on the basis of FAB/FAH for inward opening windows with drives mounted at the main closing edge.
For any other window heights, for outward opening windows and for windows with drives mounted at the side edges the opening angle will vary.
*3 Please respect the individual geometry of the different windows. The listed max. casement weight refers to a single drive on button hung window with a max. opening angle.
*4 Sample value of the casement dimensions for corner joints of 110 mm. The actuell casement dimensions depend on length of the corner joints, profile dimensions, stroke and position of the drives.
The values of FAB/FAH are to be used analogue for side hung windows.

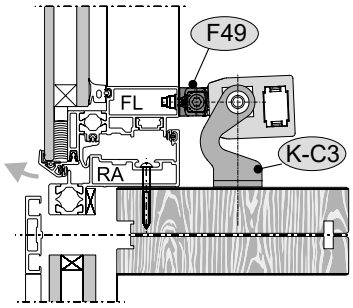
TYPICAL APPLICATIONS

1 RM, top hung, outward opening



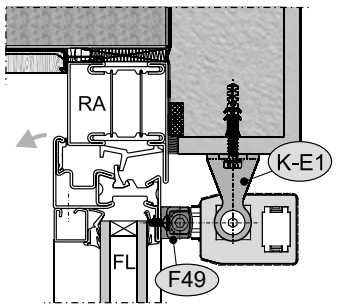
View on aluminium window

2 PR, top hung, outward opening



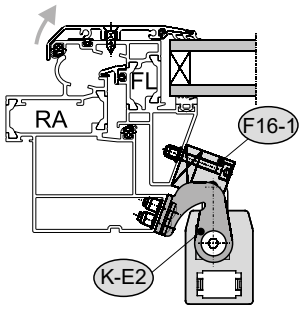
View on aluminium window

2 PR, bottom hung, outward opening



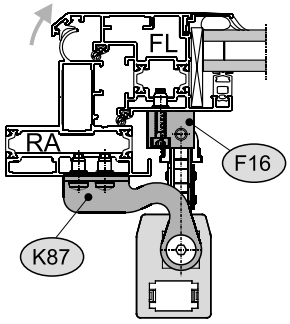
View on steel window

2 RM, roof



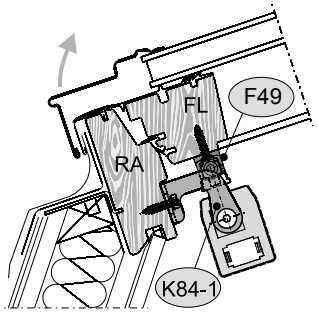
View on aluminium window

2 RM, roof



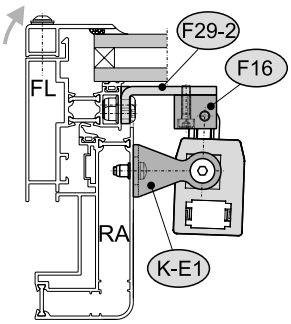
View on aluminium window

2 RM, roof



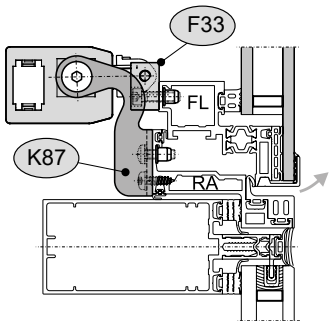
View on aluminium window

2 RM, roof



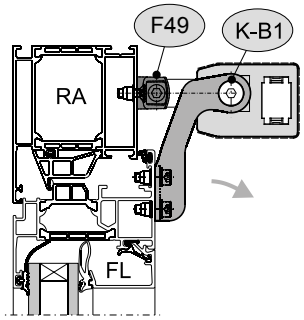
View on aluminium window

2 RM, top hung, outward opening



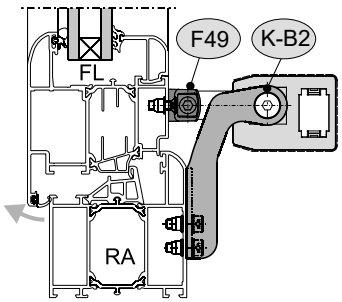
View on aluminium window

3 FM, bottom hung,inward opening



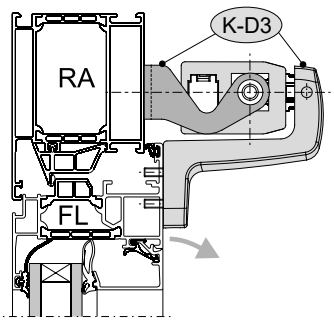
View on aluminium window

4 RM, top hung, outward opening



View on aluminium window

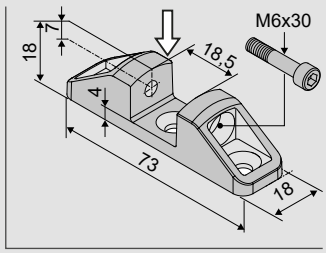
5 RM, bottom hung, inward opening



View on aluminium window

CASEMENT BRACKETS

F49



Application

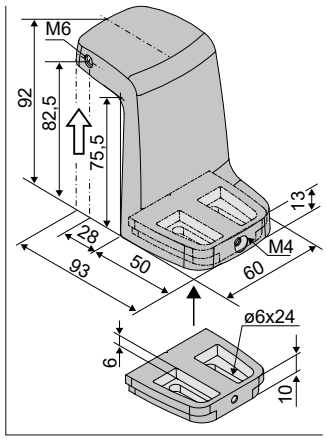
Surface mounting on the casement profiles of inward opening windows, for **swivelling** fixing of drives **KSA** with **K-A1, K-B1, K-B2, K-C3, K-E1, K-E2, K84-1, K125**

Chain fixing in direction of the arrow

Part.-No. 524299

Material / Finish
Cast aluminum, RAL 9006
Feature / Equipment
1x cylinder head screw M6x30

F44



Application

Surface mounting on the casement profiles of inward opening windows, for surface mounted drives **KSA** with **K-C3**

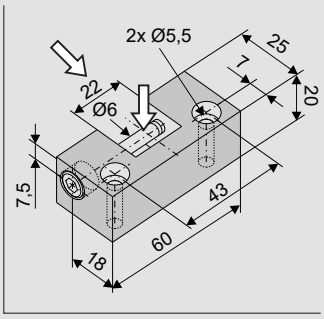
Chain fixing in direction of the arrow

Part.-No. 524297

Material / Finish
Cast aluminum, RAL 9006
Feature / Equipment
1x baseplate
1x countersunk screw M4x10
1x cylinder head screw M6x35

CASEMENT BRACKETS

F16



Application

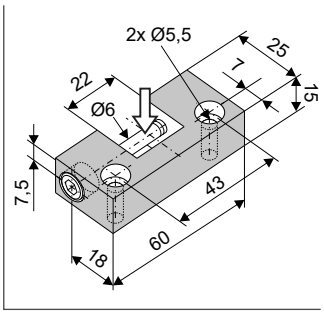
Surface mounting on the casement/window frame profiles of in-/outward opening windows (e.g. friction hinged or roof windows), for surface mounted drives **KSA** with
K-A1, K-B1, K-B2, K-C3, K-E1, K-E2, K84-1, K87

Chain fixing in direction of the arrow

Part.-No. 524204

Material/Finish
aluminium
(natural anodized)
Feature/Equipment
1x cylinder head screw M6x50

F33



Application

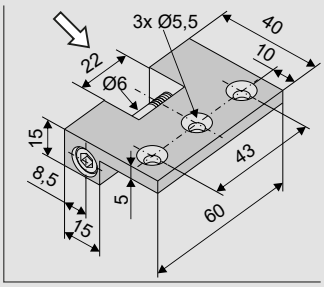
Surface mounting on the casement profile of outward opening windows (e.g. friction hinged or roof windows), for surface mounted drives
KSA with
K-A1, K-B1, K-B2, K-C3, K-E1, K84-1, K87

Chain fixing in direction of the arrow

Part.-No. 524203

Material/Finish
aluminium
(natural anodized)
Feature/Equipment
1x cylinder head screw M6x50

F38



Application

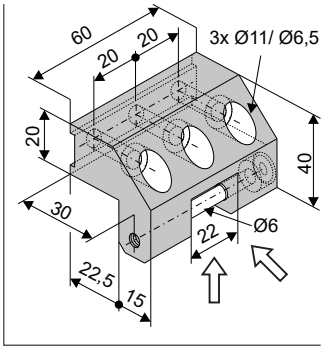
Surface mounting on the casement profile of outward opening friction hinged windows, for surface mounted drives
KSA with
K-A1, K-B1, K87

Chain fixing in direction of the arrow

Part.-No. 524199

Material/Finish
aluminium
(natural anodized)
Feature/Equipment
1x cylinder head screw M6x5

F39



Application

Surface mounting on the casement profile of outward opening roof windows, for surface mounted drives **KSA** with
K-A1, K-B1, K-B2, K-C3, K-E1, K-E2, K84-1

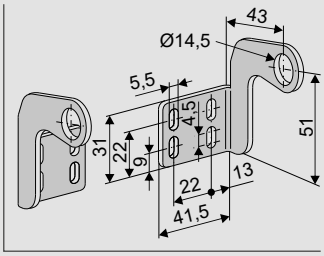
Chain fixing in direction of the arrow

Part.-No. 524295

Material/Finish
aluminium
(natural anodized)
Feature/Equipment
1x cylinder head screw M6x50

FRAME BRACKETS

K-A1



Application

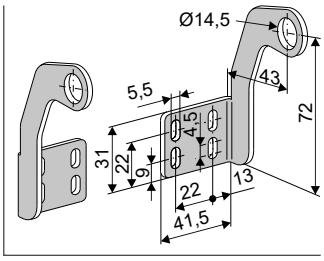
Surface mounting on the casement/window frame profiles of in-/outward opening windows, for swivelly fixing of drives **KSA** with **F16, F33, F38, F39, F49**

(Required space on frame profile **35 mm**)

Part.-No. 524057

Material/Finish
Stainless steel
Feature/Equipment
1x right,
1x left

K-B1



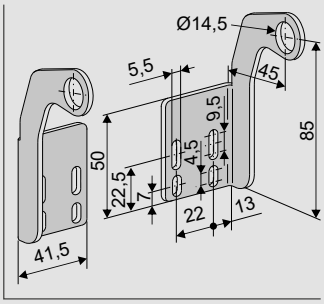
Application

Surface mounting on the casement/ window frame profiles of in-/outward opening windows, for swivelling fixing of drives **KSA** with **F16, F33, F38, F39, F49**
(Required space on frame profile **35 – 52 mm**)

Part.-No. 524053

Material/Finish
Stainless steel
Feature/Equipment
1x right,
1x left

K-B2



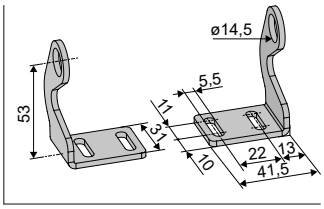
Application

Surface mounting on the casement/ window frame profiles of in-/outward opening (wooden) windows, for swivelling fixing of drives **KSA** with
F16, F33, F39, F49
(Required space on frame profile **35 – 52 mm**)

Part.-No. 524063

Material/Finish
Stainless steel
Feature/Equipment
1x right,
1x left

K-C3



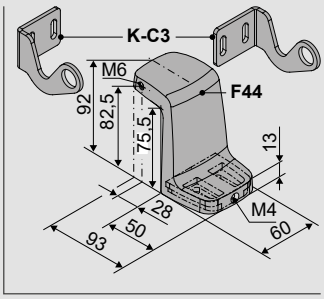
Application

Surface mounting on the casement/window frame profiles or on the mullion/transom of outward opening windows, for swivelling fixing of drives **KSA** with
F16, F33, F39, F49

Part.-No. 524067

Material/Finish
Stainless steel
Feature/Equipment
1x right,
1x left

K-D3



Application

Surface mounting on the casement and frame profile of inward opening windows, for swivelling fixing of drives **KSA** on the frame profile (required space **50 mm**)

Part.-No. 524068

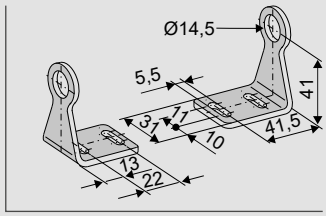
Material/Finish
Stainless steel (K-C3),
Aluminum casting (F44)
Feature/Equipment
1x K-C3,
1x F44

Accessories for

F44 Casement bracket „Z“ — **Part.-No. 524297**

FRAME BRACKETS

K-E1



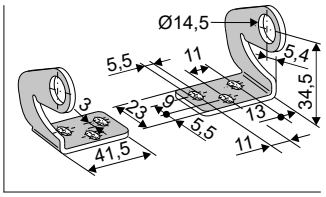
Application

Surface mounting on the mullion/transom of outward opening windows, for swivelling fixing of drives **KSA** with **F16, F33, F39, F49**

Part.-No. 524056

Material/Finish
Stainless steel
Feature/Equipment
1x right,
1x left

K-E2



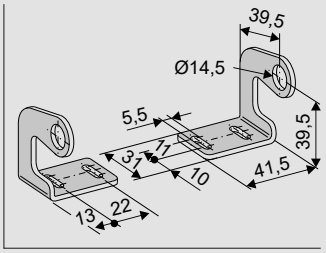
Application

Surface mounting on the window frame profiles or on the mullions/transoms of outward opening roof windows, for swivelling fixing of drives **KSA** with **F16, F16-1, F33, F39, F49**

Part.-No. 524066

Material/Finish
Stainless steel
Feature/Equipment
1x right,
1x left

K84-1



Application

Surface mounting on the window frame profiles or on the mullions/transoms of outward opening roof windows, for swivelling fixing of drives **KSA** with **F16, F33, F39, F49**

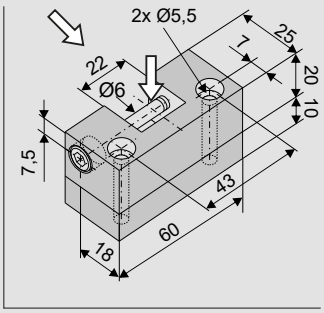
Part.-No. 524224

Material/Finish
Stainless steel
Feature/Equipment
1x right,
1x left

SPECIFIC APPLICATIONS

ROOF WINDOWS I SCHÜCO AWS 57RO

F16-1



Application

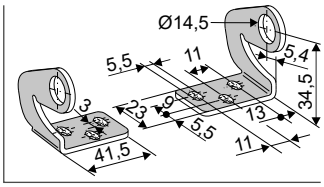
Surface mounting on the casement profile of outward opening roof windows series **Schüco AWS 57RO**, for fixing of drives **KSA**

Chain fixing in direction of the arrow

Part.-No. 155171

Material/Finish
aluminium
(natural anodized)
Feature/Equipment
1x cylinder head screw M6x50 with base plate

K-E2



Application

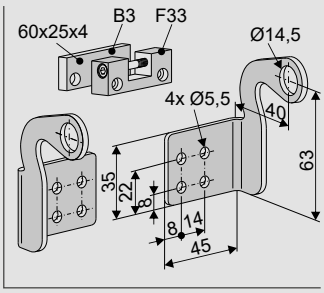
Surface mounting on the window frame profiles or on the mullions/transoms of outward opening roof windows, for swivelling fixing of drives **KSA** with **F16, F16-1, F33, F39, F49**

Part.-No. 524066

Material/Finish
Stainless steel
Feature/Equipment
1x right,
1x left

FRICTION HINGED WINDOWS I SCHÜCO FW50

K87



Application

Surface mounting on the window frame profiles of outward opening friction hinged windows **Schüco FW50+**, for swivelling fixing of drives **KSA** (Required space on frame profile **35 mm**)

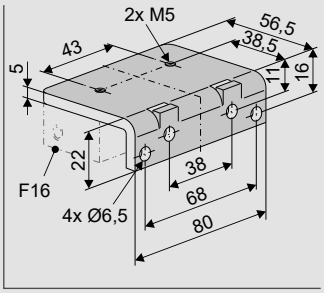
Part.-No. 524319

Material/Finish
Stainless steel
Feature/Equipment
1x right,
1x left,
incl. F33 + B3

SPECIFIC APPLICATIONS

ROOF WINDOWS I HEROAL 085 / 180

F29-2



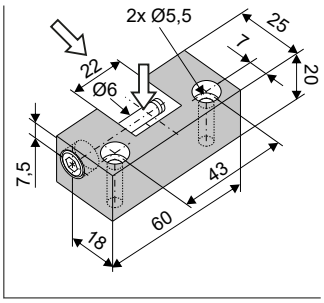
Application

Surface mounting on the casement profile of outward opening roof windows series **Heroal 085 / 180**, for fixing of drives **KSA** with **F16**

Part.-No. 155157

Material/Finish
Stainless steel
Feature/Equipment
2x cylinder head screw M6x20

F16



Application

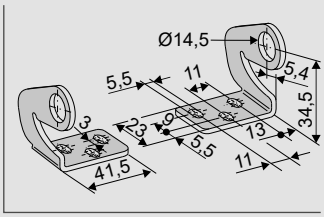
Surface mounting on the casement/window frame profiles of in-/outward opening windows (e.g. friction hinged or roof windows), for surface mounted drives **KSA** with **K-A1, K-B1, K-B2, K-C3, K-E1, K-E2, K84-1, K87**

Chain fixing in direction of the arrow

Part.-No. 524204

Material/Finish
aluminium
(natural anodized)
Feature/Equipment
1x cylinder head screw M6x50

K-E2



Application

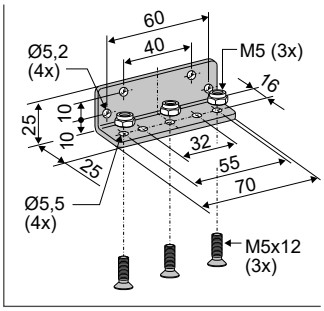
Surface mounting on the window frame profiles or on the mullions/transoms of outward opening roof windows, for swivelling fixing of drives **KSA** with **F16, F33, F39, F49**

Part.-No. 524066

Material/Finish
Stainless steel
Feature/Equipment
1x right,
1x left

SKYLIGHT DOME

B1



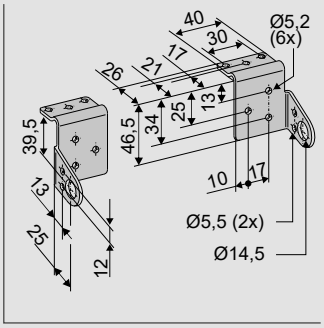
Application

Mounting angle for mounting of drives
KS2 with **F21** and
KSA with **F49** on skylight domes

Part.-No. 151422

Material/Finish
Stainless steel
Feature/Equipment
3x countersunk-head screw M5x12
3x nut M5

K125



Application

Surface mounting on the upstand of skylight domes for fixing of drives **KS2** and **KSA** with **B1**

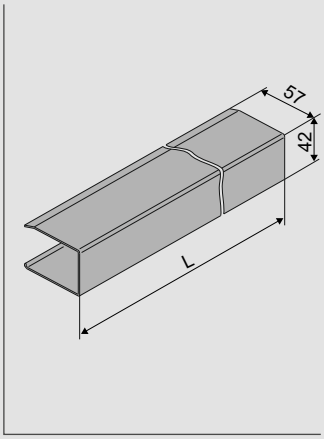
Part.-No. 523979

Material/Finish
Stainless steel
Feature/Equipment
4x screw M5x10

OPTIONAL ACCESSORIES

Cover-profile Set

AP-KSA



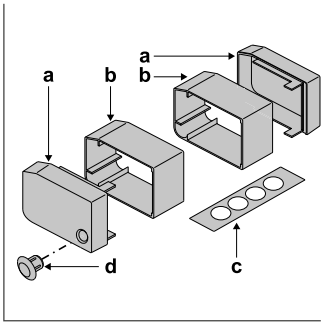
Application

Cover profile for surface mounted drives **KSA** with frame bracket sets **K-A1, K-B1, K-B2, K-E2, K84-1**. Profile length adjustable to the lenght of the drives or of the casement

Material/Finish
aluminium (natural anodized) + plastic (grey)
Feature/Equipment
incl. mounting aid for cover profile shortening on the job site + mounting set

L = 1,45 m (lenght w/o end caps)	**Part.-No. 524307** incl. end cap and mounting aid
L = 2,90 m (lenght w/o end caps)	**Part.-No. 524313** incl. end cap and mounting aid
L = customized (Price per metre)	**Part.-No. 524314** only profile

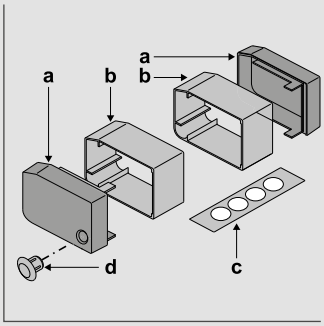
Assembly-set for cover profile (grey)



Part.-No. 524300

Material/Finish
aluminium, plastic (grey)
Feature/Equipment
a. 2x end cap
b. 2x spacer
c. 4x stickers
d. 1x dummy plug

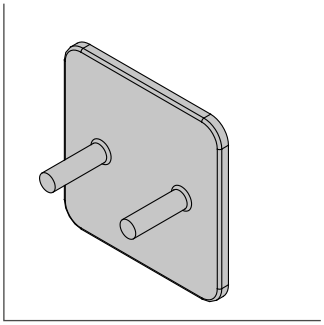
Assembly-set for cover profile (black)



Part.-No. 524303

Material/Finish
aluminium, plastic (black)
Feature/Equipment
a. 2x end cap
b. 2x spacer
c. 4x stickers
d. 1x dummy plug

Chain unlocking key



Application

Manual unlocking of the drive chain for mounting of drives KSA

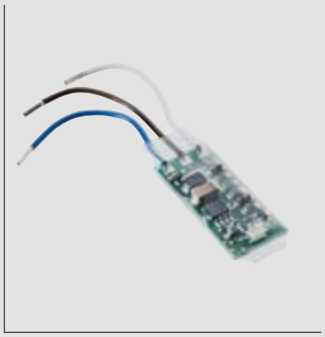
Part.-No. 524210

Material/Finish
plastic

OPTIONAL ACCESSORIES

Main control unit

M-COM



Application

Configuration module for automatic configuration and monitoring of max. 4 opening drives / 2 locking drives version S12 / S3 in synchronised multi-drive systems

Rated voltage:
24 V DC (19 V ... 28 V)
Current consumption: <12 mA
Drive type: S12
Protection rating
IP30 rubber envelope

Part.-No. 524177

Ambient temperature range:
0 °C ... + 70 °C
Dimensions
45 x 17 x 6 mm
Connecting wires
3 wires 0,5 mm² x 50 mm
Feature/Equipment
Printed circuit board with components and connection wires to be installed in connection box to be supplied on site

M-COM® Click



Application

Configuration module for automatic configuration and monitoring of max. 4 opening drives / 2 locking drives version S12 / S3 in synchronised multi-drive systems

Rated voltage:
24 V DC (19 V ... 28 V)
Current consumption: <12 mA
Drive type: S12
Protection rating: IP30

Part.-No. 524167

Ambient temperature range:
-5 °C ... +70 °C
Dimensions:
40 x 26 x 15 mm
Connection:
for Aumüller drives with
Wire Click
Equipment
Tongs for removing the M-COM® Click

Plug solution

Wire Click



Picture: 24V

Application

Wire Click:
Unitary plug-solution for Aumüller Click System.

Rated voltage:
24 V DC (19 V ... 28 V)
230 V AC (± 20 %), max. 2 Vpp
Connecting cable:
non-halogen, grey
5 x 0,5 mm² (24V)
6 x 0,75 mm² (230V)
Terminal: up to 1,5 mm²

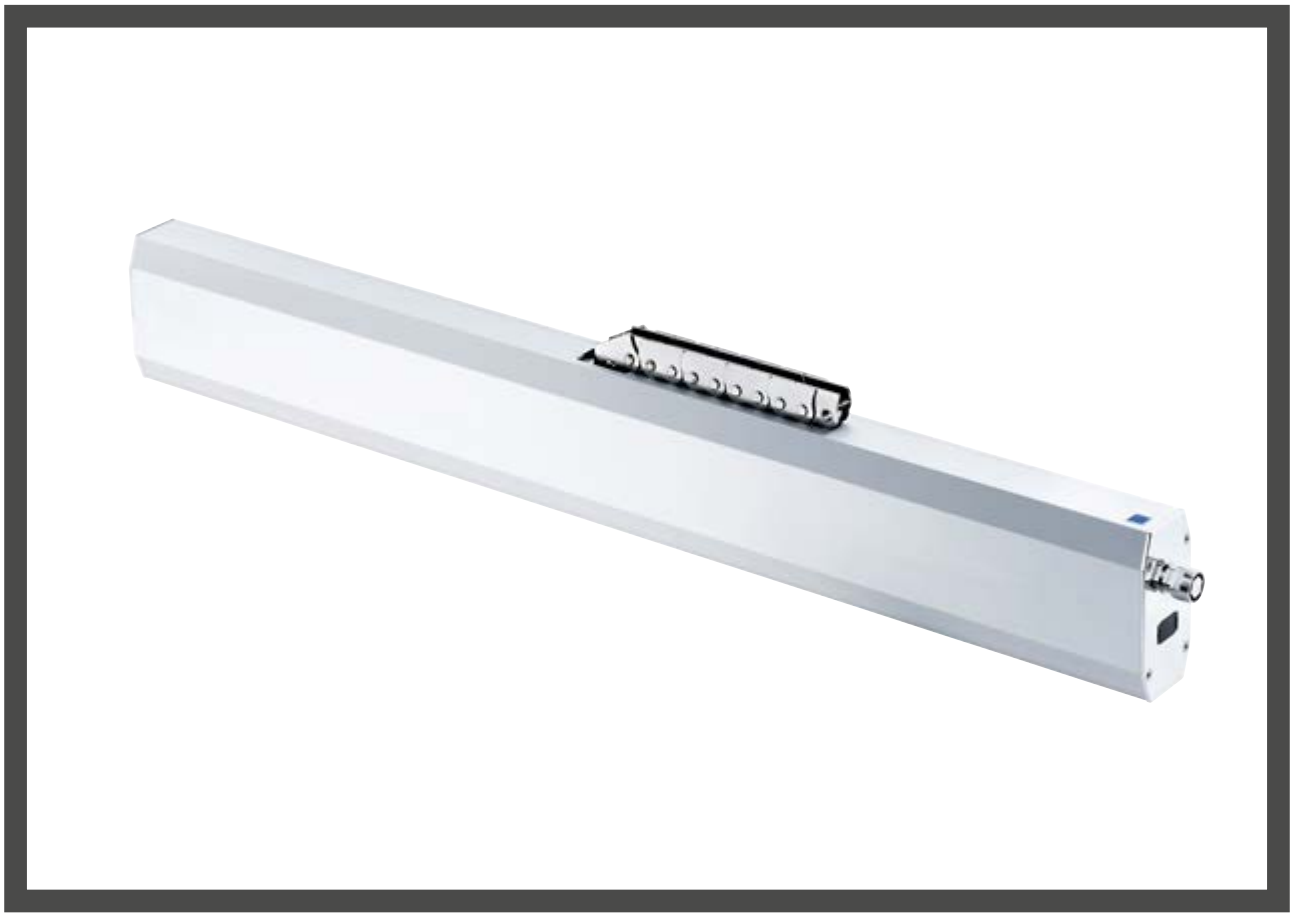
Feature/Equipment

- Flexible cable length
- Connect multiple drives in series connection
- Torsion-plug
- Locking hooks prevent withdrawal of the plug under tensile load
- Strain relief according DIN EN 60335-1 by screwing the housing halves

VARIANTEN: 24V - Silicone				
3 m cable length - 24V DC	**Part.-No. 501251**			
5 m cable length - 24V DC	**Part.-No. 501252**			
10 m cable length - 24V DC	**Part.-No. 501253**			
VARIANTEN: 230V - PVC				
3 m cable length - 230V AC	**Part.-No. 501273**			
5 m cable length - 230V AC	**Part.-No. 501275**			
10 m cable length - 230V AC	**Part.-No. 501280**			

CASEMENT BRACKETS AND FRAME BRACKETS

Special model	PU/pcs.	Part.-No.		
Casement brackets painted / powder coated in other RAL colours				
Lump sum for coating		**516030**		
Specify at order stage:	1 – 20	**516032**		
	21 – 50	**516032**		
	51 – 100	**516032**		
	from 101	**516032**		
Frame brackets painted / powder coated in other RAL colours				
Lump sum for coating		**516030**		
Specify at order stage:	1 – 20	**516031**		
	21 – 50	**516031**		
	51 – 100	**516031**		
	from 101	**516031**		



PRODUCT FEATURES KS15

- For natural ventilation, smoke and heat exhausting systems and ferralux® NRWG (EN12101-2)
- Aluminium housing anodized or optionally in RAL colors
- High-quality, robust and nickel-plated steel chain
- Symmetrical chain output
- Short design with 3-fold wound chain and especially quiet running
- Feedback limit position „CLOSE“ (max. 24 V, 500 mA)

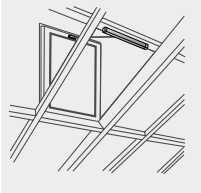
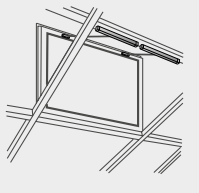
  Programmable parameters of Intelligent Control Electronics S12:
  - Feedback limit position „OPEN“ (max. 24 V, 500 mA)
  - Synchronised multi-operation and sequence control without add. devices
  - Electronic soft-start, soft-close and soft-stop at end of stroke control
  - Stroke, force, speed
  - Rebate control

  Integrated plug solution

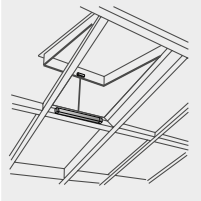
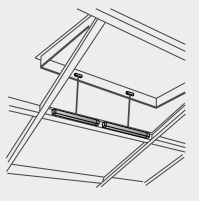
For this product series, a Type III Environmental Product Declaration (EPD) was issued according to ISO 14025 and EN 15804.
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ROOF

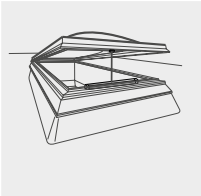
Bottom-hung

Top-hung

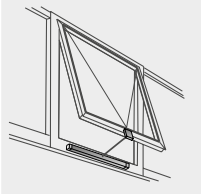
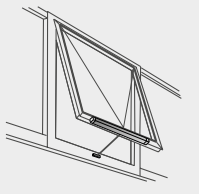
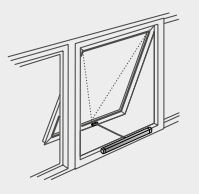



Sky light



FACADE

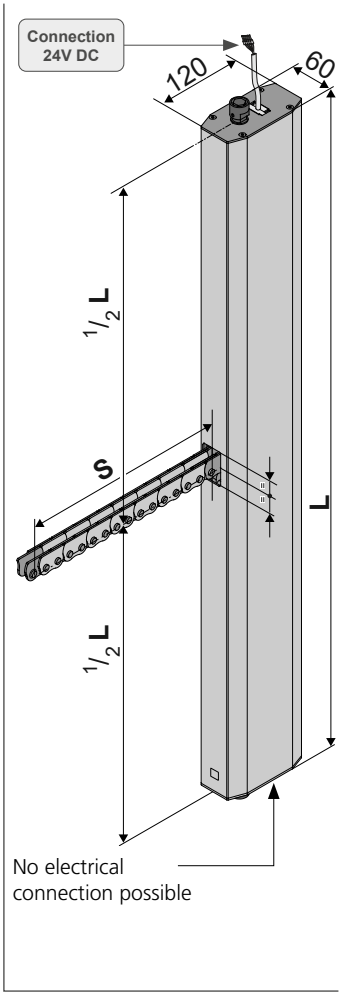
Top-hung

- Application: natural ventilation, RWA, ferralux® NRWG (EN12101-2)
- Symmetrical chain output
- Internal Intelligent Control Electronics S12
- Feedback limit position „CLOSE“ (max. 24 V, 500 mA)
- Integrated plug solution

Options

- Programmable special functions
- Programmable feedback limit position „OPEN“ (max. 24 V, 500 mA)
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)



TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	3,75 A
I_A	Cut-off current	5 A
P_N	Rated power	90 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 20
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	• 300 N to 1.500 N freely adjustable • preset 1.000 N, soft run 300 N
F_A	Pushing force max.	1.500 N, to 1.000 mm linear
F_H	Pullout force	5.000 N (fastening depended)
	Chain	High-quality, robust and nickel-plated steel chain
	Connecting cable	non-halogen, grey, Ø 9 mm, 5 x 1 mm², ~ 3 m
v	Speed	Factory settings: 17,0 mm/s 10,0 mm/s Adjustment range: 6 - 17 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 1000 mm
L	Length	see order data
	Feedback contact	limit position „CLOSE“ (max. 24 V, 500 mA)
	Sound pressure level	≤ 70 dB (A)

ORDER DATA

s [mm]	L [mm]	Version	Finish	PU / pcs.	Part.-No.
Drives					
800	800	KS15 800 S12 24V	E6/C-0	1	**525380**
1000	920	KS15 1000 S12 24V	E6/C-0	1	**525400**
Set: Frame bracket and casement bracket (kit)					
Set: Frame bracket unit KS15 Schüco AWS 57 RO			K153: Stainless steel, rolled F54: Aluminium, E6/C-0	1	**524080**
Set: Frame bracket unit KS15 Raico FRAME+100/120 RI			K154: Stainless steel, rolled F54: Aluminium, E6/C-0	1	**524085**

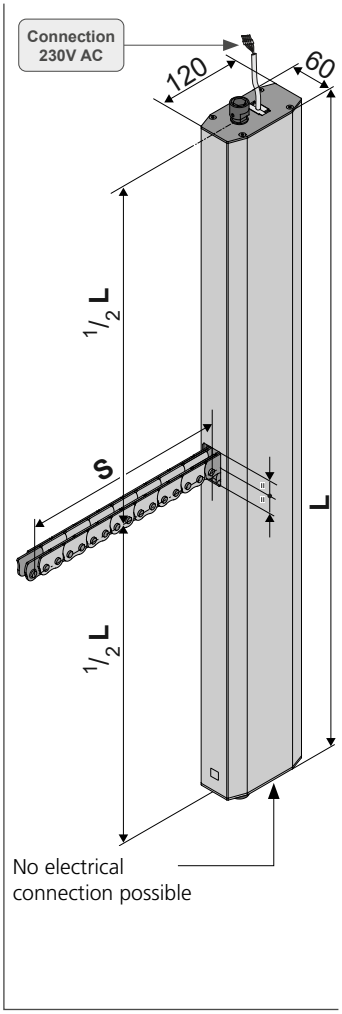
OPTIONEN

Special model	PU / pcs.	Part.-No.
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	ab 101	**516004**
Plug solution:		
Wire Click - 5 m – non-halogen, grey – 5 x 1,0 mm²		**501290**
Microprocessor programming S12		
Electronic stroke reduction 24V S12		**524190**
Programming drives 24V / 230V S12		**524180**
Optional accessories	PU / pcs.	Part.-No.
M-COM Configuration module for synchronised multi-drive systems	1	**524177**

- Application: natural ventilation, RWA, ferralux® NRWG (EN12101-2)
- Symmetrical chain output
- Internal Intelligent Control Electronics S12
- Parallel connection up to 8 drives in one group
- Integrated plug solution

Options

- Programmable synchronised run (max. 4 drives) and special functions
- Programmable feedback limit position „OPEN“ (max. 24 V, 500 mA)



TECHNICAL DATA

U_N	Rated voltage	230 V AC (50 Hz)
I_N	Rated current	0,45 A
I_A	Cut-off current	0,60 A
P_N	Rated power	103 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 20
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	• 300 N to 1.500 N freely adjustable • preset 1.000 N, soft run 300 N
F_A	Pushing force max.	1.500 N, to 1.000 mm linear
F_H	Pullout force	5.000 N (fastening depended)
	Chain	High-quality, robust and nickel-plated steel chain
	Connecting cable	non-halogen, grey, Ø 9 mm, 6 x 0,75 mm², ~ 3 m
v	Speed	Factory settings: 17,0 mm/s 10,0 mm/s Adjustment range: 6 - 17 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 1000 mm
L	Length	see order data
	Sound pressure level	≤ 70 dB (A)

ORDER DATA

s [mm]	L [mm]	Version	Finish	PU / pcs.	Part.-No.
Drives					
1000	920	KS15 1000 S12 230V	E6/C-0	1	**495170**
Set: Frame bracket and casement bracket (kit)					
Set: Frame bracket unit KS15 Schüco AWS 57 RO			K153: Stainless steel, rolled F54: Aluminium, E6/C-0	1	**524080**
Set: Frame bracket unit KS15 Raico FRAME+100/120 RI			K154: Stainless steel, rolled F54: Aluminium, E6/C-0	1	**524085**

OPTIONS

Special model	PU / pcs.	Part.-No.
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Plug solution:		
Wire Click - 5 m – silicone – non-halogen, grey – 6 x 0,75 mm²		**501292**
Microprocessor programming S12		
Programming synchronised multi-drive systems 230V S12 (each drive)		**495588**
Electronic stroke reduction 230V S12		**495590**
Programming drives 24V / 230V S12		**524180**

OVERVIEW OF BRACKETS

Typical application					1	2
Frame bracket					K153 Mounting in the roof	K154 Mounting in the roof
Casement bracket					F54	F54
Space requirement			min.	[mm]	49	49
Overlap thickness	(*1			[mm]	0 - 21	0 - 21
Opening angle	(*2		max.	[DEG]	60	60
Casement weight	(*3		max.	[Kg]	300	300
Window material			Alu		●	●
			Wood		●	●
			PVC		●	●
Type of window and mounting	Bottom hung	inward	HSK	FM	■	■
				RM		
			NSK	FM	■	■
				RM		
		outward	HSK	RM	●	●
				PR		
			NSK	RM	●	●
				PR		
	Top hung	outward	HSK	RM	●	
				PR		
	Dach	outward	HSK	RM	●	●
				PR		
	PAF	outward		RM	■	■
	Concealed					
FAB (*4			Solo	[mm]	600 - 1200	
FAH (*4			Solo	[mm]	250 - 1500	

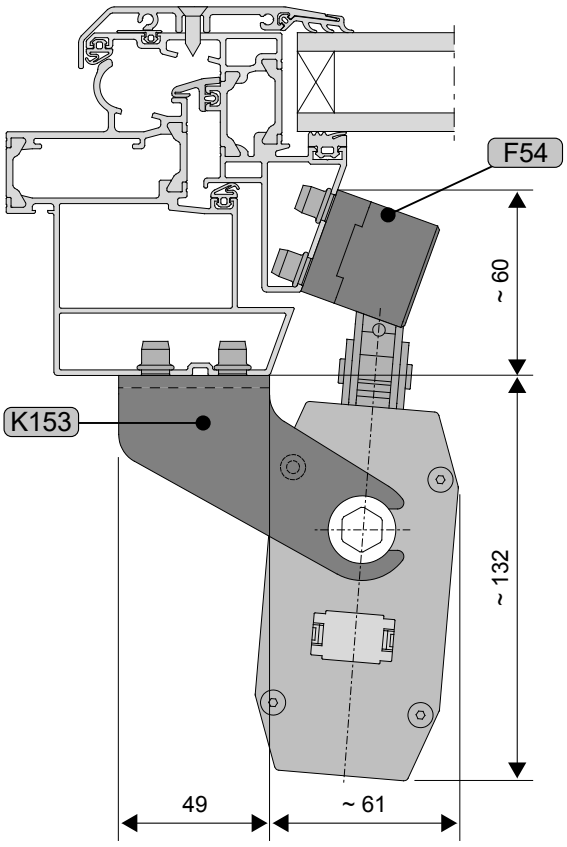
LEGEND

● suitable ■ not recommended

(*1 Window sizes and opening angles may be different.
(*2 Sample values of the opening angle evaluated on the basis of FAB/FAH for inward opening windows with drives mounted at the main closing edge. For any other window heights, for outward opening windows and for windows with drives mounted at the side edges the opening angle will vary.
(*3 Please respect the individual geometry of the different windows. The listed max. casement weight refers to a single drive on button hung window with a max. opening angle.
(*4 Sample value of the casement dimensions for corner joints of 110 mm. The actuell casement dimensions depend on length of the corner joints, profi le dimensions, stroke and position of the drives. The values of FAB/FAH are to be used analogue for side hung windows.

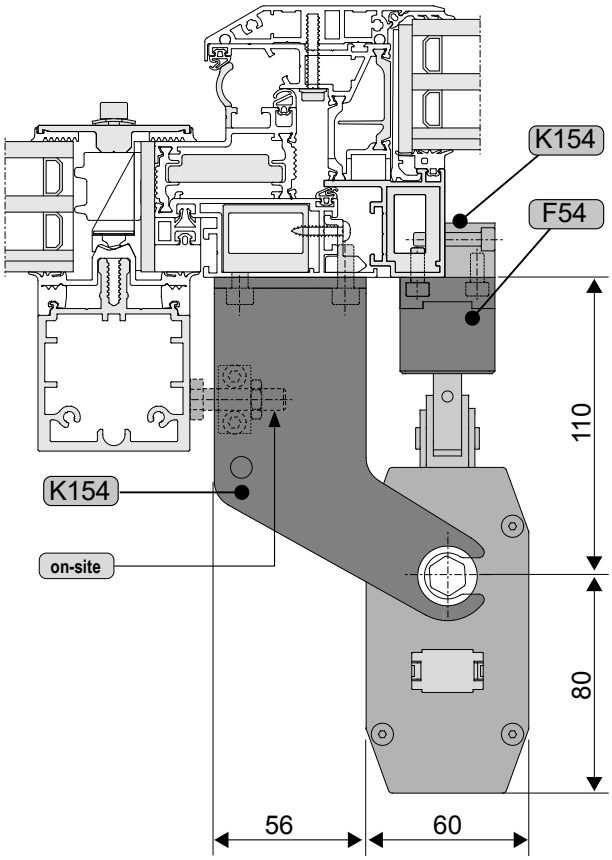
TYPICAL APPLICATIONS

1 RM, roof window, outward opening
Schüco AWS 57RO



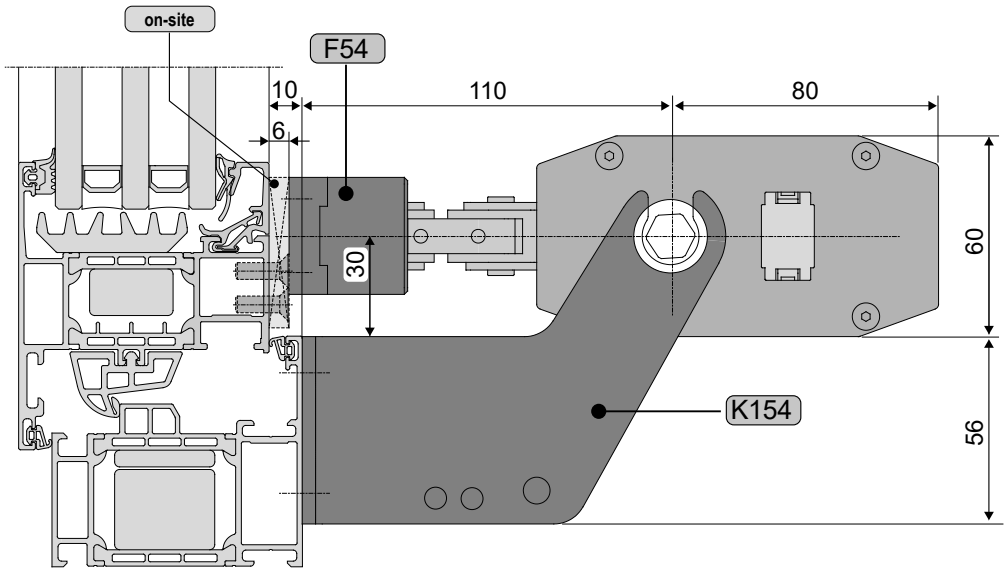
View on aluminium window

2 RM, roof window, outward opening
Raico FRAME+100/120RI



View on aluminium window

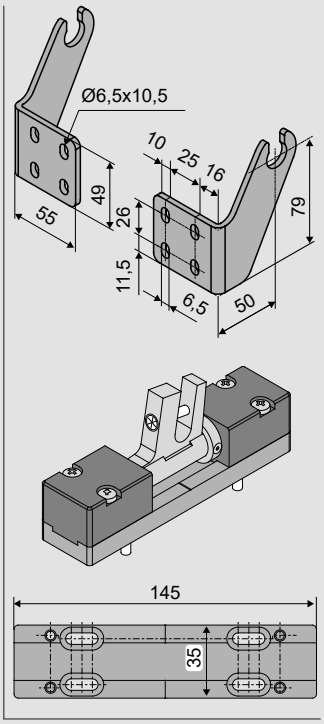
2 RM, top hung, outward opening (Mounting universal for facade)



View on aluminium window

CASEMENT BRACKETS AND FRAME BRACKET (SET)

K153
F54



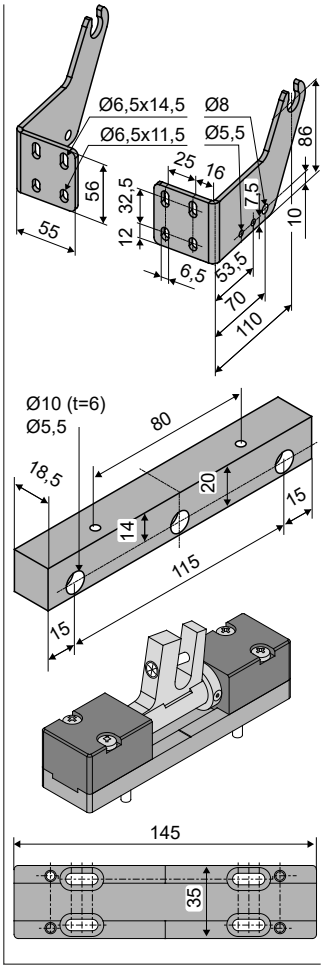
Application

Surface mounting on the frame profiles outward opening roof windows series **Schüco AWS 57RO**, for **swivelling** fixing of drives **KS15** with **F54**

Part.-No. 524080

Material / Finish
K153: stainless steel, vibratory grinding
F54: aluminium (E6/C-0)
Feature / Equipment
1x K153 frame bracket (left + right)
1x F54 casement bracket consisting of: baseplate, chain storing, screws M5x30

K154
F54



Application

Surface mounting on the frame profiles outward opening roof windows series **Raico FRAME+100/120RI**, for swivelling fixing of drives **KS15** with **F54**

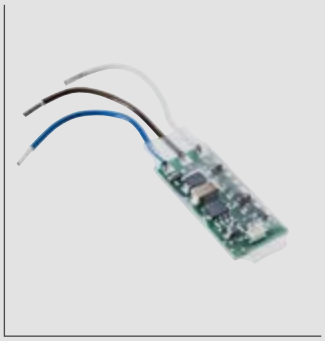
Part.-No. 524085

Material / Finish
K154: stainless steel, vibratory grinding
F54: aluminium (E6/C-0)
Feature / Equipment
1x K154 frame bracket (left + right) with mounting block
1x F54 casement bracket consisting of: baseplate, chain storing, screws M5x30

OPTIONAL ACCESSORIES

Main control unit

M-COM



Application

Configuration module for automatic configuration and monitoring of max. 4 opening drives / 2 locking drives version S12 / S3 in synchronised multi-drive systems

Rated voltage:
24 V DC (19 V ... 28 V)
Current consumption: <12 mA
Drive type: S12
Protection rating
IP30 rubber envelope

Part.-No. 524177

Ambient temperature range:
0 °C ... + 70 °C
Dimensions
45 x 17 x 6 mm
Connecting wires
3 wires 0,5 mm² x 50 mm
Feature/Equipment
Printed circuit board with components and connection wires to be installed in connection box to be supplied on site

Plug solution

Wire Click



Illustration: 24V

Application

Wire Click:
Unitary plug-solution for **Aumüller** Click System.

Rated voltage:
24 V DC (19 V ... 28 V)
230 V AC (± 20 %), max. 2 Vpp

Connecting cable:
non-halogen, grey
5 x 1,0 mm² (24V)
6 x 0,75 mm² (230V)

Terminal: up to 1,5 mm²

Feature/Equipment

- Flexible cable length
- Connect multiple drives in series connection
- Torsion-plug
- Locking hooks prevent withdrawal of the plug under tensile load
- Strain relief according DIN EN 60335-1 by screwing the housing halves

VARIANTS: 24V - Silicone	
5 m cable length - 24V DC	**Part.-No. 501290**
VARIANTS: 230V - Silicone	
5 m cable length - 230V AC	**Part.-No. 501292**

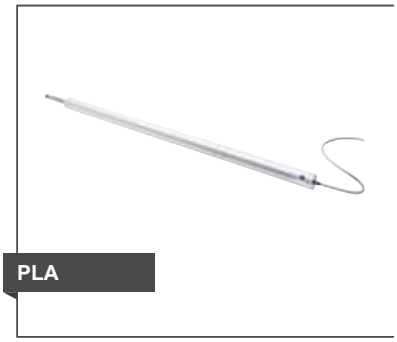
CASEMENT BRACKETS AND FRAME BRACKETS

Special model	PU/pcs.	Part.-No.
Casement brackets painted / powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516032**
	21 – 50	**516032**
	51 – 100	**516032**
	from 101	**516032**
Frame brackets painted / powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516031**
	21 – 50	**516031**
	51 – 100	**516031**
	from 101	**516031**

aumüller

2 Spindle drives

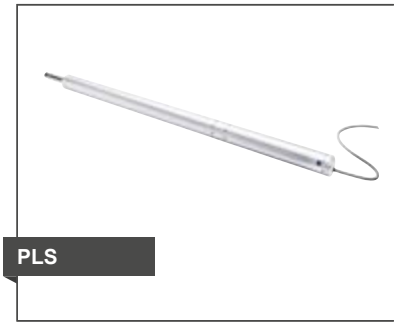
Product Overview



PLA SPINDLE DRIVES

Model	24V DC, S3 und S12
Pulling force	600 – 1600 N (type depending)
Stroke length	100 – 1000 mm (S3) 5 – 1000 mm (S12), programmable
Speed	4,0 – 12,5 mm/s (S12) (type depending)
Housing (DxL)	D=36 mm, length depends on stroke
Opening mechanism	stainless steel spindle tube
Versions	Solo, Tandem, Synchro
Protection rating	IP65

PLA



PLS SPINDLE DRIVES

Model	24V DC, S12
Pulling force	1500 – 5000 N
Stroke length	5 – 1200 mm, programmable
Speed	4,0 – 17,0 mm/s (type depending)
Housing (DxL)	D=50/(60) mm, length depends on stroke
Opening mechanism	stainless steel spindle tube
Versions	Solo, Tandem, Synchro
Protection rating	IP54

PLS



SP SPINDLE DRIVES

Model	24V DC, S2/230V AC, S2
Pulling force	800 N
Stroke length	100 – 750 mm – (24V DC) 300 – 750 mm – (230V AC)
Speed	7,0 mm/s
Housing (DxL)	43x76 mm, length depends on stroke
Opening mechanism	aluminium spindle tube
Versions	Solo, Z with feedback contact
Protection rating	IP54/IP65

SP

SPINDLE DRIVES

Type	Form	Model		Stroke (Factory setting)	Force		Speed (Factory setting)		Stroke in	Cut-off current	Use			Loca-tion		Functions		
		Type of cut-off	Rated voltage	Range	Pushing force	Pulling force	OPEN	CLOSE	60 s	Max.	Natural ventilation	RWA	NRWG	Facade	Roof	Run monitoring	Synchronised run	Sequence control
			[VDC]	[mm]	[N]	[N]	[mm/s]	[mm/s]	[mm]	[A]								
PLA	PLA6	S3	24	100 – 1000	600	600	6,0	6,0	350	0,8	●	●	●	■	●	●		●
		S12		100 – 1000	600	600	6,0	6,0	350	0,8	●	●	●	■	●	●	●	●
	PLA8	S3	24	100 – 1000	800	800	10,0	10,0	600	1,4	●	●	●	■	●	●		●
		S12		100 – 1000	800	800	10,0	10,0	600	1,4	●	●	●	■	●	●	●	●
	PLA10	S12	24	100 – 1000	1000	1000	12,6	12,6	750	2,5	●	●	●	■	●	●	●	●
	PLA101	S3	24	100 – 1000	1000	1000	4,6	4,6	250	1,0	●	●	●	■	●	●		●
		S12		100 – 1000	1000	1000	4,6	4,6	250	1,0	●	●	●	■	●	●	●	●
	PLA16	S12	24	100 – 1000	1600	1600	7,0	7,0	400	2,5	●	●	●	■	●	●	●	●
	PLA116	S3	24	100 – 750	1600	1600	4,0	4,0	240	1,2	●	●	●	■	●	●		●
		S12		100 – 750	1600	1600	4,0	4,0	240	1,2	●	●	●	■	●	●	●	●
PLS	PLS15	S12	24	300 – 1200	1500	1500	16,0	16,0	950	4,0	●	●	●	■	●	●	●	●
	PLS30	S12	24	300 – 1200	3000	2000	7,8	7,8	450	5,0	●	●	●	■	●	●	●	●
	PLS50	S12	24	200 – 750	5000	5000	4,0	4,0	240	4,2	●	●	●	■	●	●	●	●
SP	SP8	S2	24	100 – 750	800	800	7,0	7,0	400	1,0	●	●		■	●	○		○
		S2	230	300 – 750	800	800	7,0	7,0	400	0,2	●			■	●			

LEGEND

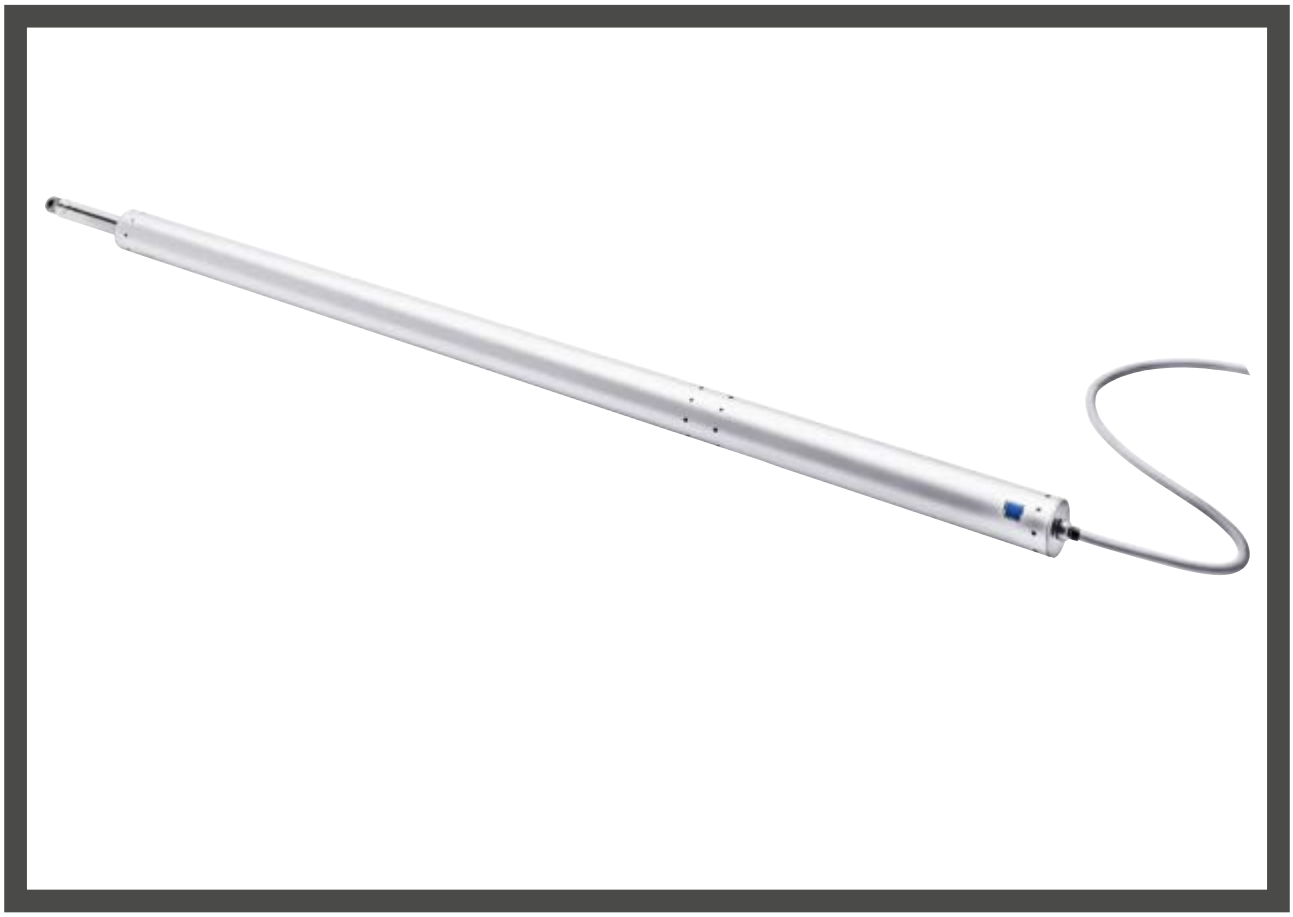
● suitable ■ not recommended

S2 internal load dependend cut-off switch

S3 internal load dependend cut-off switch, post cycle resistant, programmable for motion monitoring (up to 300 mm stroke) and sequence control

S12 internal Intelligent Control Electronics for synchronised run and programmable functions

○ only with external modules (cut-off switch system, synchronisation module, sequence control module)



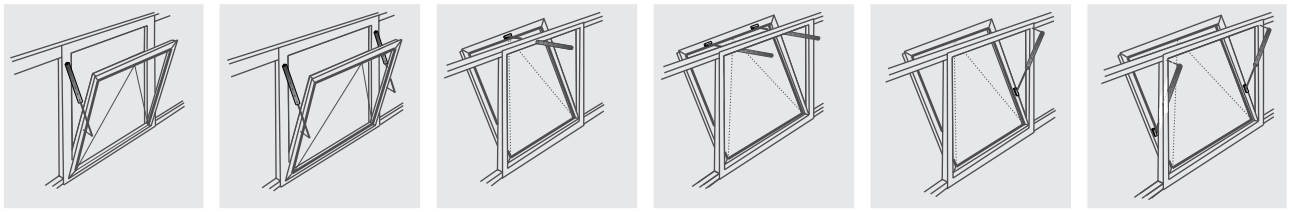
SPECIAL FEATURES PLA

- For natural ventilation, smoke and heat exhausting and ferralux® NRWG (EN12101-2)
- Robust corrosion-resistant design in a slim aluminium housing (D = 36 mm), optionally in RAL colors
- Easy installation due to adjustable clamp ring and rear suspension
- Spindle is ball beared with end position dampening
- Stainless steel spindle tube
- Programmable parameters of Intelligent Control Electronics S12
  - Synchronised multi-operation and sequence control without add. devices
  - Electronic soft-start, soft-close and soft-stop at end of stroke control
  - Stroke, force, speed
  - Rebate control
- Protection rating IP 65
- With GoreTex membrane
- Suitable for operation with M-COM for the automatic configuration of synchronised run of multi drive systems and sequence control

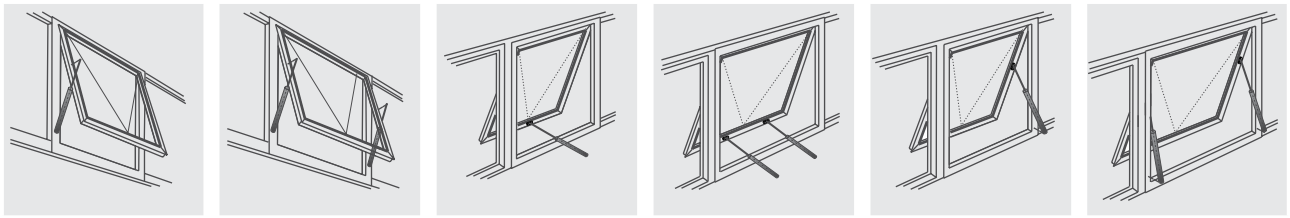
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The EPD documents can be viewed or downloaded from our homepage **www.aumueller-gmbh.de**.

FACADE

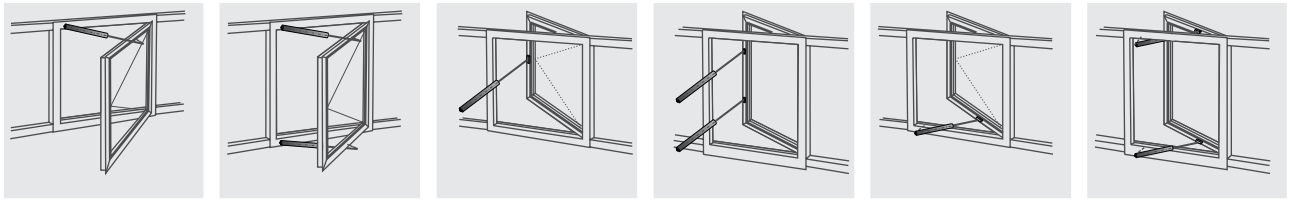
Bottom-hung



Top-hung

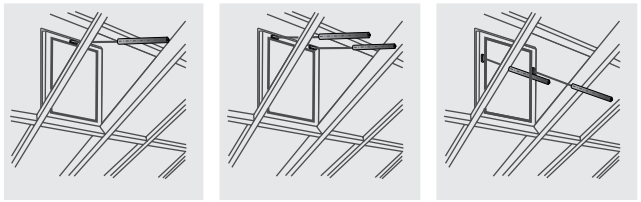


Side-hung

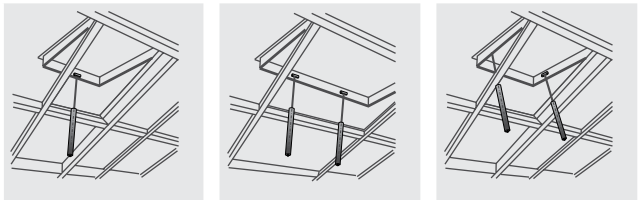


ROOF

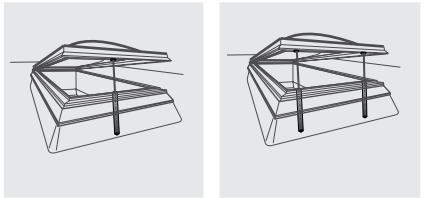
Bottom-hung



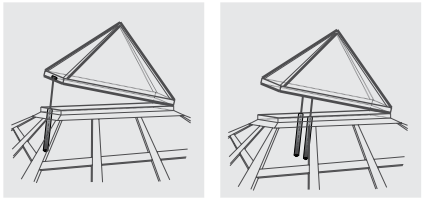
Top-hung

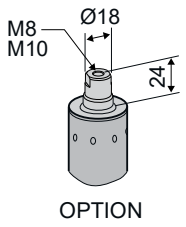


Sky light



Glass pyramid





OPTION

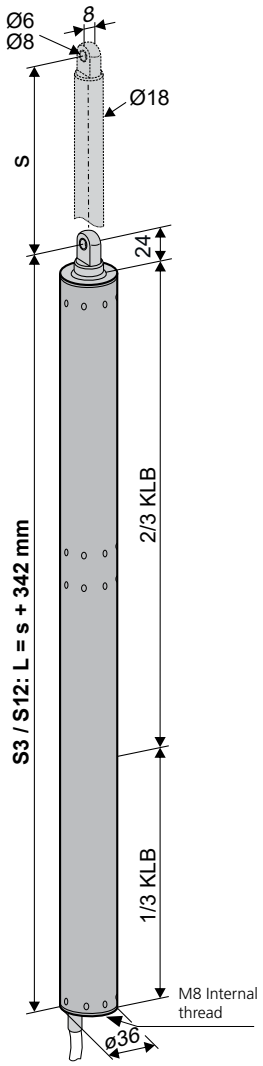
- Application: natural ventilation, RWA, ferralux®-NRWG

Options

- Spindle tube end with interior thread for clevis
- Eyebolt and clevis for rear suspention

S3

- Internal load dependend cut-off switch, post cycle resistant S3
- Programmable motion monitored run (up to 300 mm stroke)
- Programmable sequence control with Locking drives (S3 / S12)

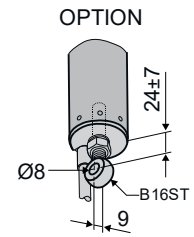


S12

- Internal Intelligent Control Electronics S12

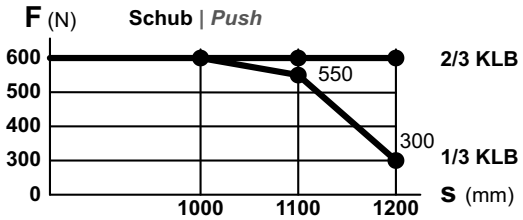
Options

- Programmable synchronised run (max. 4 drives) and special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)



OPTION

TECHNICAL DATA

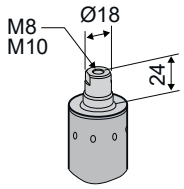
U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	0,6 A
I_A	Cut-off current	0,8 A
P_N	Rated power	15 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 65
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	600 N
F_A	Pushing force max.	
F_H	Pullout force	5000 N (fastening depended)
	Spindle tube	stainless steel
	Connecting cable	non-halogen, grey 3 x 1,0 mm², ~ 3 m
v	Speed	Factory settings: 6,0 mm/s 6,0 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 1000 mm (S12), programmable
L	Length	S3 / S12: s + 342 mm (see order data)
	Sound pressure level	≤ 70 dB (A)

ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.
100	442	PLA6 100 S3	E6/C-0	1	**564111**
	442	PLA6 100 S12		1	**546310**
200	542	PLA6 200 S3	E6/C-0	1	**564122**
	542	PLA6 200 S12		1	**546320**
300	642	PLA6 300 S3	E6/C-0	1	**564131**
	642	PLA6 300 S12		1	**546330**
400	742	PLA6 400 S3	E6/C-0	1	**564141**
	742	PLA6 400 S12		1	**546340**
500	842	PLA6 500 S3	E6/C-0	1	**564151**
	842	PLA6 500 S12		1	**546350**
600	942	PLA6 600 S3	E6/C-0	1	**564161**
	942	PLA6 600 S12		1	**546360**
750	1092	PLA6 750 S3	E6/C-0	1	**564176**
	1092	PLA6 750 S12		1	**546375**
1000	1342	PLA6 1000 S3	E6/C-0	1	**564201**
	1342	PLA6 1000 S12		1	**546400**

OPTIONS

Special model	PU/pcs.	Part.-No.
Front Fixing		
Spindle tube end with interior thread M8	1	**515061**
Spindle tube end with interior thread M10	1	**515060**
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Extra length connecting cable:		
5 m – non-halogen, grey – 3 x 1,0 mm²		**501037**
10 m – non-halogen, grey – 3 x 1,0 mm²		**501039**
Mechanic stroke reduction S3		
Stroke reduction without construction length - mechanically	1	**516000**
Accessories for front / rear suspension		
B16ST Eyebolt Ø8 mm, galvanized	1	**100044**
B16VA Eyebold Ø8 mm, stainless steel	1	**100144**
B27ST Clevis M8x16 mm, galvanized, thread M8x45 mm	1	**105510**
B28ST Clevis M10x20 mm, galvanized, thread M10x50 mm	1	**105520**
Microprocessor programming S3		
Motion monitored run / sequence control	1	**524181**
Microprocessor programming S12		
Electronic stroke reduction 24V S12	1	**524190**
Programming drives 24V / 230V S12	1	**524180**
Other lengths available on request		
Optional accessories	PU/pcs.	Part.-No.
M-COM Configuration module for synchronised multi-drive systems	1	**524177**



OPTION

- Application: natural ventilation, RWA, ferralux®-NRWG

Options

- Spindle tube end with interior thread for clevis
- Eyebolt and clevis for rear suspention

S3

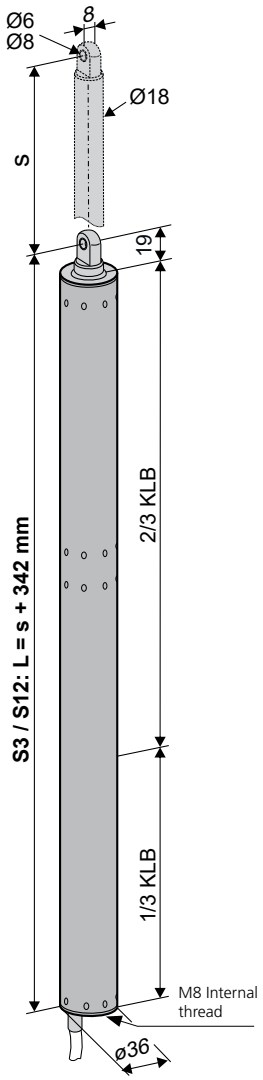
- Internal load dependend cut-off switch, post cycle resistant S3
- Programmable motion monitored run (up to 300 mm stroke)
- Programmable sequence control with locking drives (S3 / S12)

S12

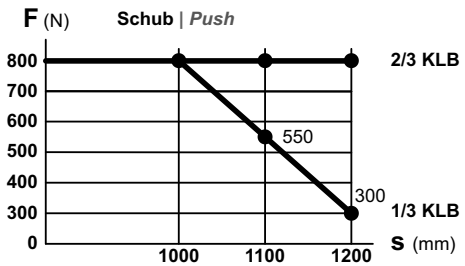
- Internal Intelligent Control Electronics S12

Options

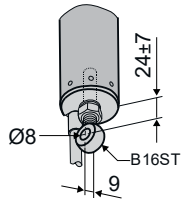
- Programmable synchronised run (max. 4 drives) and special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)



TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	1,0 A
I_A	Cut-off current	1,4 A
P_N	Rated power	24 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 65
	Ambient temperature range range	-5 °C ... +60 °C
F_Z	Pulling force max.	800 N
F_A	Pushing force max.	
F_H	Pullout force	5000 N (fastening depended)
	Spindle tube	stainless steel
	Connecting cable	non-halogen, grey 3 x 1,0 mm², ~ 3 m
v	Speed	Factory settings: 10,0 mm/s 10,0 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 1000 mm (S12), programmable
L	Length	S3 / S12: s + 342 mm (see order data)
	Sound pressure level	≤ 70 dB (A)

OPTION

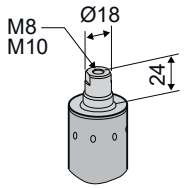


ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.
100	442	PLA8 100 S3	E6/C-0	1	**523711**
	442	PLA8 100 S12		1	**515210**
200	542	PLA8 200 S3	E6/C-0	1	**523721**
	542	PLA8 200 S12		1	**515220**
300	642	PLA8 300 S3	E6/C-0	1	**523731**
	642	PLA8 300 S12		1	**515230**
400	742	PLA8 400 S3	E6/C-0	1	**523741**
	742	PLA8 400 S12		1	**515240**
500	842	PLA8 500 S3	E6/C-0	1	**523751**
	842	PLA8 500 S12		1	**515250**
600	942	PLA8 600 S3	E6/C-0	1	**523761**
	942	PLA8 600 S12		1	**515260**
750	1092	PLA8 750 S3	E6/C-0	1	**523776**
	1092	PLA8 750 S12		1	**515275**
1000	1342	PLA8 1000 S3	E6/C-0	1	**523801**
	1342	PLA8 1000 S12		1	**515295**

OPTIONS

Special model	PU/pcs.	Part.-No.
Front Fixing		
Spindle tube end with interior thread M8	1	**515061**
Spindle tube end with interior thread M10	1	**515060**
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Extra length connecting cable:		
5 m – non-halogen, grey – 3 x 1,0 mm²		**501037**
10 m – non-halogen, grey – 3 x 1,0 mm²		**501039**
Mechanic stroke reduction S3		
Stroke reduction without construction length - mechanically	1	**516000**
Accessories for front / rear suspension		
B16ST Eyebolt Ø8 mm, galvanized	1	**100044**
B16VA Eyebold Ø8 mm, stainless steel	1	**100144**
B27ST Clevis M8x16 mm, galvanized, thread M8x45 mm	1	**105510**
B28ST Clevis M10x20 mm, galvanized, thread M10x50 mm	1	**105520**
Microprocessor programming S3		
Motion monitored run / sequence control	1	**524181**
Microprocessor programming S12		
Electronic stroke reduction 24V S12	1	**524190**
Programming drives 24V / 230V S12	1	**524180**
Other lengths available on request		
Optional accessories	PU/pcs.	**Part.-No.**
M-COM Configuration module for synchronised multi-drive systems	1	**524177**



OPTION

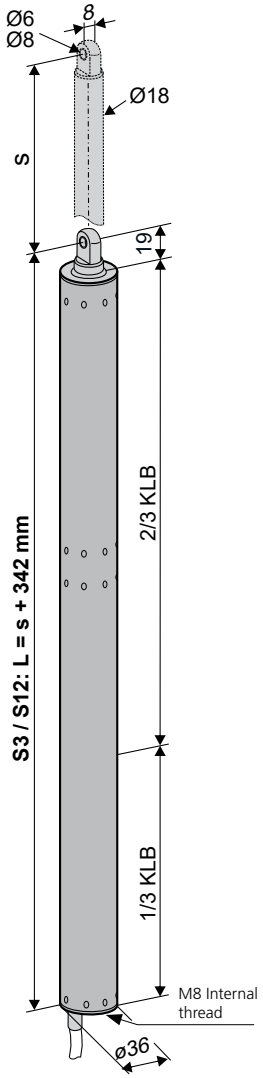
- Application: natural ventilation, RWA, ferralux®-NRWG

Options

- Spindle tube end with interior thread for clevis
- Eyebolt and clevis for rear suspention

S3

- Internal load dependend cut-off switch, post cycle resistant S3
- Programmable motion monitored run (up to 300 mm stroke)
- Programmable sequence control with locking drives (S3 / S12)

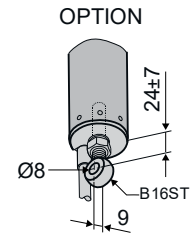


S12

- Internal Intelligent Control Electronics S12

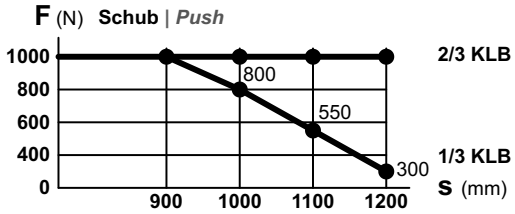
Options

- Programmable synchronised run (max. 4 drives) and special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)



OPTION

TECHNICAL DATA

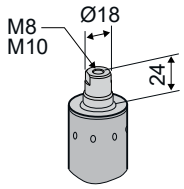
U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	0,8 A
I_A	Cut-off current	1,0 A
P_N	Rated power	19 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 65
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	1000 N
F_A	Pushing force max.	
F_H	Pullout force	5000 N (fastening depended)
	Spindle tube	stainless steel
	Connecting cable	non-halogen, grey 3 x 1,0 mm², ~ 3 m
v	Speed	Factory settings: 4,6 mm/s 4,6 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 1000 mm (S12), programmable
L	Length	S3 / S12: s + 342 mm (see order data)
	Sound pressure level	≤ 70 dB (A)

ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.
100	442	PLA101 100 S3	E6/C-0	1	**565111**
	442	PLA101 100 S12		1	**564910**
200	542	PLA101 200 S3	E6/C-0	1	**565121**
	542	PLA101 200 S12		1	**564922**
300	642	PLA101 300 S3	E6/C-0	1	**565131**
	642	PLA101 300 S12		1	**564930**
400	742	PLA 01 400 S3	E6/C-0	1	**565141**
	742	PLA101 400 S12		1	**564940**
500	842	PLA101 500 S3	E6/C-0	1	**565151**
	842	PLA101 500 S12		1	**564950**
600	942	PLA101 600 S3	E6/C-0	1	**565161**
	942	PLA101 600 S12		1	**564960**
750	1092	PLA101 750 S3	E6/C-0	1	**565176**
	1092	PLA101 750 S12		1	**564975**
1000	1342	PLA101 1000 S3	E6/C-0	1	**565201**
	1342	101 1000 S12		1	**565000**

OPTIONS

Special model	PU/pcs.	Part.-No.
Front Fixing		
Spindle tube end with interior thread M8	1	**515061**
Spindle tube end with interior thread M10	1	**515060**
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Extra length connecting cable:		
5 m – non-halogen, grey – 3 x 1,0 mm²		**501037**
10 m – non-halogen, grey – 3 x 1,0 mm²		**501039**
Mechanic stroke reduction S3		
Stroke reduction without construction length - mechanically	1	**516000**
Accessories for front / rear suspension		
B16ST Eyebolt Ø8 mm, galvanized	1	**100044**
B16VA Eyebold Ø8 mm, stainless steel	1	**100144**
B27ST Clevis M8x16 mm, galvanized, thread M8x45 mm	1	**105510**
B28ST Clevis M10x20 mm, galvanized, thread M10x50 mm	1	**105520**
Microprocessor programming S3		
Motion monitored run / sequence control	1	**524181**
Microprocessor programming S12		
Electronic stroke reduction 24V S12	1	**524190**
Programming drives 24V / 230V S12	1	**524180**
Other lengths available on request		
Optional accessories	PU/pcs.	Part.-No.
M-COM Configuration module for synchronised multi-drive systems	1	**524177**



OPTION

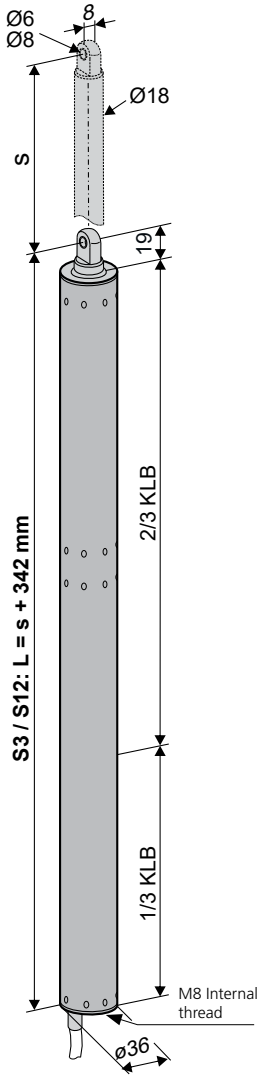
- Application: natural ventilation, RWA, ferralux®-NRWG

Options

- Spindle tube end with interior thread for clevis
- Eyebolt and clevis for rear suspention

S3

- Internal load dependend cut-off switch, post cycle resistant S3
- Programmable motion monitored run (up to 300 mm stroke)
- Programmable sequence control with locking drives (S3 / S12)



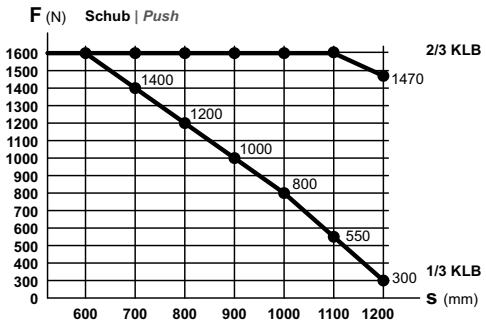
S12

- Internal Intelligent Control Electronics S12

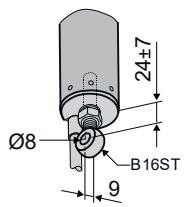
Options

- Programmable synchronised run (max. 4 drives) and special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)

TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	1,0 A
I_A	Cut-off current	1,2 A
P_N	Rated power	24 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 65
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	1600 N
F_A	Pushing force max.	
F_H	Pullout force	5000 N (fastening depended)
	Spindle tube	stainless steel
	Connecting cable	non-halogen, grey 3 x 1,0 mm², ~ 3 m
v	Speed	Factory settings: 4,0 mm/s 4,0 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 750 mm (S12), programmable
L	Length	S3 / S12: s + 342 mm (see order data)
	Sound pressure level	≤ 70 dB (A)

OPTION

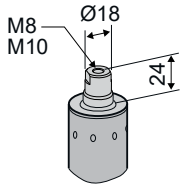


ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.
100	442	PLA116 100 S3	E6/C-0	1	**565312**
	442	PLA116 100 S12		1	**565510**
200	542	PLA116 200 S3	E6/C-0	1	**565321**
	542	PLA116 200 S12		1	**565520**
300	642	PLA116 300 S3	E6/C-0	1	**565331**
	642	PLA116 300 S12		1	**565530**
400	742	PLA116 400 S3	E6/C-0	1	**565341**
	742	PLA116 400 S12		1	**565540**
500	842	PLA116 500 S3	E6/C-0	1	**565351**
	842	PLA116 500 S12		1	**565550**
600	942	PLA116 600 S3	E6/C-0	1	**565361**
	942	PLA116 600 S12		1	**565560**
750	1092	PLA116 750 S3	E6/C-0	1	**565376**
	1092	PLA116 750 S12		1	**565575**

OPTIONS

Special model	PU/pcs.	Part.-No.
Front Fixing		
Spindle tube end with interior thread M8	1	**515061**
Spindle tube end with interior thread M10	1	**515060**
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Extra length connecting cable:		
5 m – non-halogen, grey – 3 x 1,0 mm²		**501037**
10 m – non-halogen, grey – 3 x 1,0 mm²		**501039**
Mechanic stroke reduction S3		
Stroke reduction without construction length - mechanically	1	**516000**
Accessories for front / rear suspension		
B16ST Eyebolt Ø8 mm, galvanized	1	**100044**
B16VA Eyebold Ø8 mm, stainless steel	1	**100144**
B27ST Clevis M8x16 mm, galvanized, thread M8x45 mm	1	**105510**
B28ST Clevis M10x20 mm, galvanized, thread M10x50 mm	1	**105520**
Microprocessor programming S3		
Motion monitored run / sequence control	1	**524181**
Microprocessor programming S12		
Electronic stroke reduction 24V S12	1	**524190**
Programming drives 24V / 230V S12	1	**524180**
Other lengths available on request		
Optional accessories	PU/pcs.	**Part.-No.**
M-COM Configuration module for synchronised multi-drive systems	1	**524177**

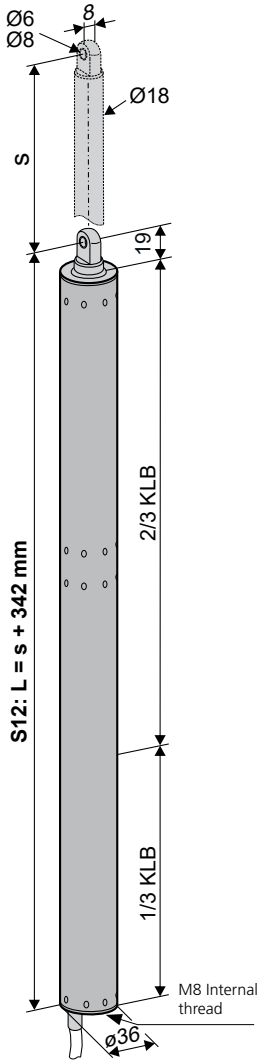


OPTION

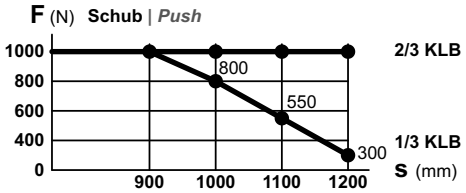
- Application: natural ventilation, RWA, ferralux®-NRWG
- Internal Intelligent Control Electronics S12

Options

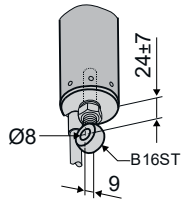
- Programmable synchronised run (max. 4 drives) and special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)
- Spindle tube end with interior thread for clevis
- Eyebolt and clevis for rear suspention



TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	1,9 A
I_A	Cut-off current	2,5 A
P_N	Rated power	45 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 65
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	1000 N
F_A	Pushing force max.	
F_H	Pullout force	5000 N (fastening depended)
	Spindle tube	stainless steel
	Connecting cable	non-halogen, grey 3 x 1,0 mm², ~ 3 m
v	Speed	Factory settings: 12,6 mm/s 12,6 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 1000 mm
L	Length	s + 342 mm (see order data)
	Sound pressure level	≤ 70 dB (A)

OPTION

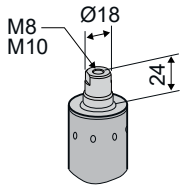


ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.
100	442	PLA10 100 S12	E6/C-0	1	**523610**
200	542	PLA10 200 S12	E6/C-0	1	**523620**
300	642	PLA10 300 S12	E6/C-0	1	**523630**
400	742	PLA10 400 S12	E6/C-0	1	**523640**
500	842	PLA10 500 S12	E6/C-0	1	**523650**
600	942	PLA10 600 S12	E6/C-0	1	**523660**
750	1092	PLA10 750 S12	E6/C-0	1	**523675**
1000	1342	PLA10 1000 S12	E6/C-0	1	**523700**

OPTIONS

Special model	PU/pcs.	Part.-No.
Front Fixing		
Spindle tube end with interior thread M8	1	**515061**
Spindle tube end with interior thread M10	1	**515060**
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Extra length connecting cable:		
5 m – non-halogen, grey – 3 x 1,0 mm²		**501037**
10 m – non-halogen, grey – 3 x 1,0 mm²		**501039**
Accessories for front / rear suspension		
B16ST Eyebolt Ø8 mm, galvanized	1	**100044**
B16VA Eyebold Ø8 mm, stainless steel	1	**100144**
B27ST Clevis M8x16 mm, galvanized, thread M8x45 mm	1	**105510**
B28ST Clevis M10x20 mm, galvanized, thread M10x50 mm	1	**105520**
Microprocessor programming S12		
Electronic stroke reduction 24V S12	1	**524190**
Programming drives 24V / 230V S12	1	**524180**
Other lengths available on request		
Optional accessories	PU/pcs.	Part.-No.
M-COM Configuration module for synchronised multi-drive systems	1	**524177**

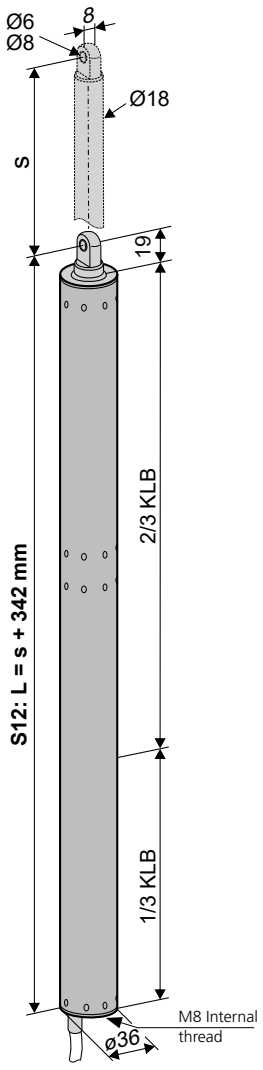


OPTION

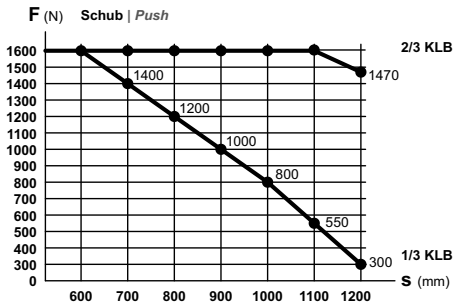
- Application: natural ventilation, RWA, ferralux®-NRWG
- Internal Intelligent Control Electronics S12

Options

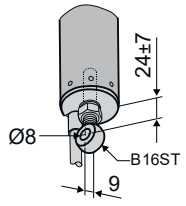
- Programmable synchronised run (max. 4 drives) and special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)
- Spindle tube end with interior thread for clevis
- Eyebolt and clevis for rear suspention



TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	1,9 A
I_A	Cut-off current	2,5 A
P_N	Rated power	45 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 65
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	1600 N
F_A	Pushing force max.	
F_H	Pullout force	5000 N (fastening depended)
	Spindle tube	stainless steel
	Connecting cable	non-halogen, grey 3 x 1,0 mm², ~ 3 m
v	Speed	Factory settings: 7,0 mm/s 7,0 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 1000 mm
L	Length	s + 342 mm (see order data)
	Sound pressure level	≤ 70 dB (A)

OPTION



ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.
100	442	PLA16 100 S12	E6/C-0	1	**565710**
200	542	PLA16 200 S12	E6/C-0	1	**565720**
300	642	PLA16 300 S12	E6/C-0	1	**565730**
400	742	PLA16 400 S12	E6/C-0	1	**565740**
500	842	PLA16 500 S12	E6/C-0	1	**565750**
600	942	PLA16 600 S12	E6/C-0	1	**565760**
750	1092	PLA16 750 S12	E6/C-0	1	**565775**
1000	1342	PLA16 1000 S12	E6/C-0	1	**565800**

OPTIONS

Special model	PU/pcs.	Part.-No.
Front Fixing		
Spindle tube end with interior thread M8	1	**515061**
Spindle tube end with interior thread M10	1	**515060**
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Extra length connecting cable:		
5 m – non-halogen, grey – 3 x 1,0 mm²		**501037**
10 m – non-halogen, grey – 3 x 1,0 mm²		**501039**
Accessories for front / rear suspension		
B16ST Eyebolt Ø8 mm, galvanized	1	**100044**
B16VA Eyebold Ø8 mm, stainless steel	1	**100144**
B27ST Clevis M8x16 mm, galvanized, thread M8x45 mm	1	**105510**
B28ST Clevis M10x20 mm, galvanized, thread M10x50 mm	1	**105520**
Microprocessor programming S12		
Electronic stroke reduction 24V S12	1	**524190**
Programming drives 24V / 230V S12	1	**524180**
Other lengths available on request		
Optional accessories	PU/pcs.	Part.-No.
M-COM Configuration module for synchronised multi-drive systems	1	**524177**

OVERVIEW OF BRACKETS

Typical applications						❶	❷	❸	❹	❺	❻	❼	❽
Frame bracket						K5	K5	K5	K17	K82	K127	K122-1	K7
Mounting aid								K21					
Bracket accessories						clamping ring B4 (36 mm-G1/8)							
Casement bracket						F29-1	F1, F1V, F1.1, F10.6, F10.8S, F11, F13, F40				F11	F36	F12
Special application						Heroal 085D					Wing 105D	AWS 57RO	Sky light Essmann
Space requirement				min.	[mm]	50	50	40 – 50	70	45	35	68	120
Window material				Alu		●	●	●	●	●	●	●	
				Wood			●	●	●	●			
				PVC			●	●	●	●			●
Type of window and mounting	Bottom hung	inward	HSK	FM				■		■			
				RM									
			NSK	FM									
				RM									
		outward	HSK	RM				●		●			
				PR			●		●				
			NSK	RM									
				PR									
	Top hung	inward	HSK	FM				■		■			
				RM									
			NSK	FM									
				RM									
		outward	HSK	RM				●		●			
				PR			●		●				
			NSK	RM									
				PR									
	Side hung	inward	HSK	FM				■		■			
				RM									
			NSK	FM									
				RM									
	Roof	outward	HSK	RM		●		●		●			
				PR			●		●				
			NSK	RM				●			●	●	
				PR			●		●				
	Skylight	outward	HSK	RM			●		●	●			●
			NSK	RM									
FAB(*1			Solo	[mm]		450 – 1300							600 – 1200
			Sync2	[mm]		1200 – 2400							1200 – 2400
FAH(*1			Solo	[mm]		450 – 1500							600 – 1200
			Sync2	[mm]		450 – 2500							1200 – 1500

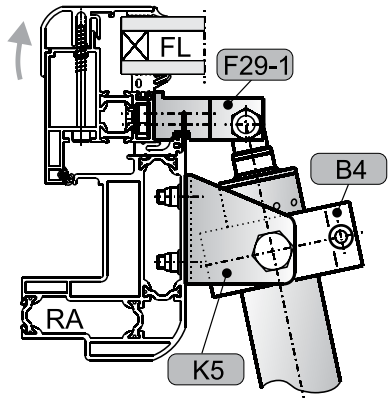
LEGEND

● suitable ■ not reccomended

(*1 Sample value of the casement dimensions. The actuell casement dimensions depend on the stroke and the position of the drives to the hinges. The values of FAB/FAH are to be used analogue for side hung windows.

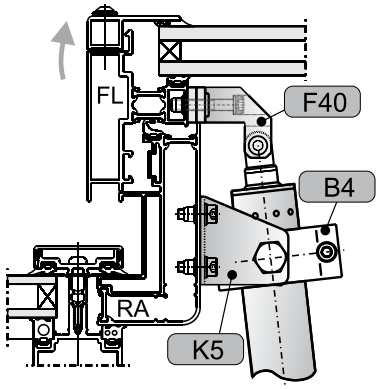
TYPICAL APPLICATIONS

1 RM, HSK, roof outward opening



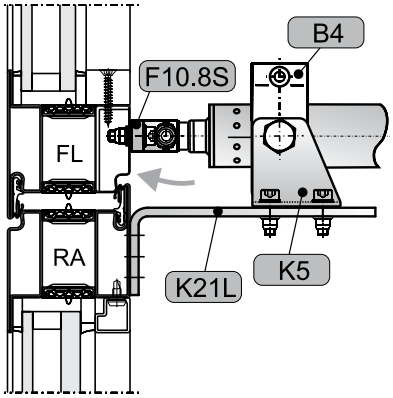
View on aluminium window

2 RM, HSK, roof outward opening



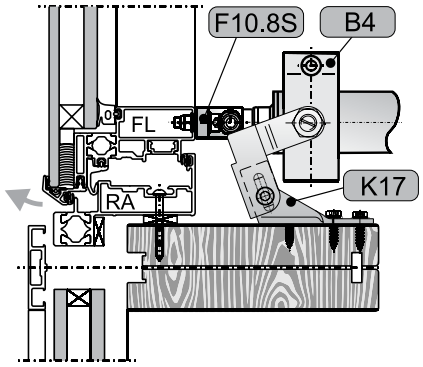
View on aluminium window

3 RM, HSK, top hung outward opening



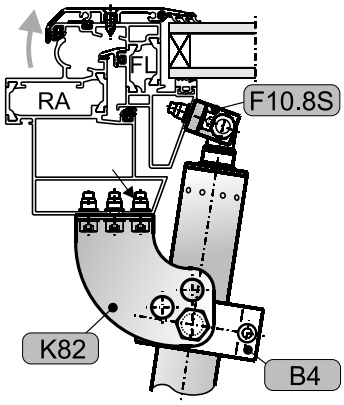
View on steel window

4 RM, HSK, top hung outward opening



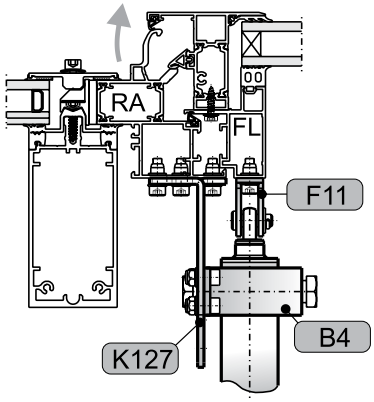
View on aluminium window

5 RM, HSK, roof outward opening



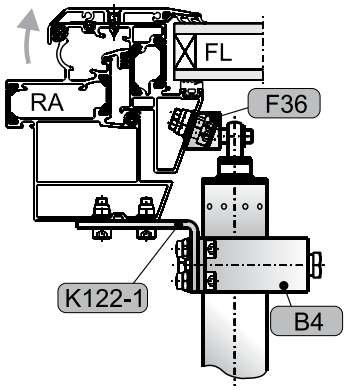
View on aluminium window

6 RM, NSK, roof outward opening



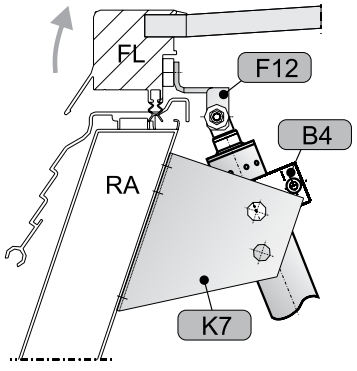
View on aluminium window

7 RM, NSK, roof outward opening



View on aluminium window

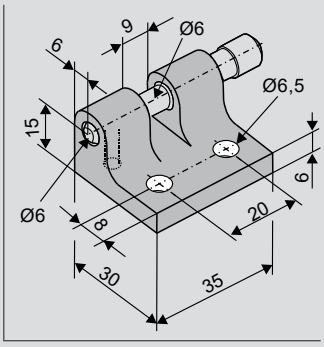
8 RM, HSK, sky-light



View on sky light

CASEMENT BRACKETS

F1



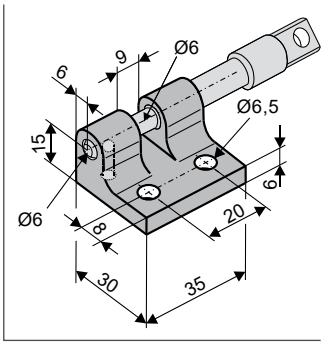
Application

Surface mounting on the **main closing edge** of casement profiles of outward opening windows or skylights, for drives with **front or rear suspension** with bore **Ø6 mm**, manual removal of drive possible

Part.-No. 150102

Material/Finish
aluminium, diecast
Feature/Equipment
1x locking bolt Ø6 mm
Load
max. 1000 N

F1.1



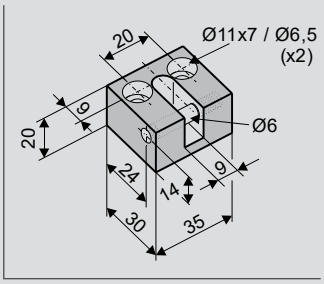
Application

Surface mounting on the **main closing edge** of casement profiles of outward opening windows or skylights, for drives with **front or rear suspension** with bore **Ø6 mm**, manual removal of drive possible

Part.-No. 150110

Material/Finish
aluminium, diecast
Feature/Equipment
1x locking spring bolt Ø6 mm
Load
max. 600 N

F1V



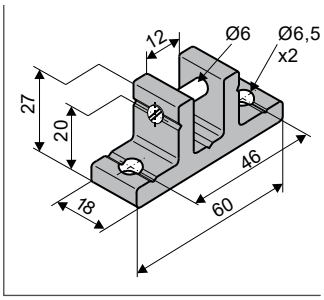
Application

Surface mounting on the **main closing edge** of casement profiles of outward opening windows or skylights, for drives with **front or rear suspension** with bore **Ø6 mm**

Part.-No. 150101

Material/Finish
aluminium
Feature/Equipment
1x grubscrew Ø6 mm
Load
max. 1600 N

F10.6



Application

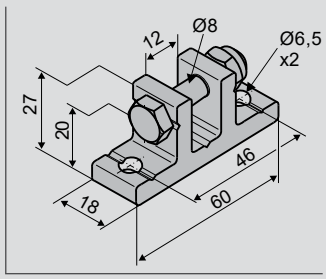
Surface mounting on **main closing edge** of casement profiles of outward opening windows or skylights, for drives with **front or rear suspension** with bore **Ø6 mm**, threaded stud bolt

Part.-No. 151000

Material/Finish
aluminium
Feature/Equipment
1x stud bolt Ø6 mm
Load
max. 1600 N

CASEMENT BRACKETS

F10.8S



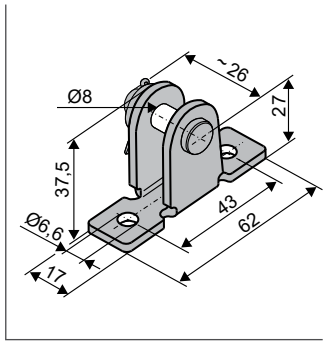
Application

Surface mounting on the **main closing edge** of casement profiles of outward opening windows, for drives with **front or rear suspension** with bore **Ø8 mm**

Part.-No. 151105

Material/Finish
aluminium
Feature/Equipment
1x nut M8,
1x screw M8x35
Load
max. 3000 N

F11ST



Application

Surface mounting on the **side closing edge** of casement/ window frame profiles of in-/outward opening windows or on skylights, for drives with front or rear suspension with bore **Ø8 mm**, mounting holes aligned with central axis of drive

Part.-No. 151400

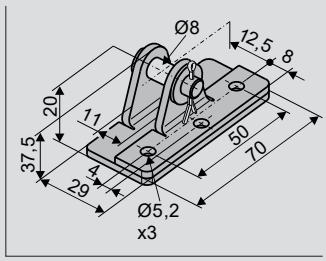
Material/Finish
steel galvanized
Feature/Equipment
1x bolt Ø8 mm,
1x washer,
1x cotter pin
Load
max. 3000 N

F11VA

Part.-No. 151401

Material/Finish
stainless steel

F13



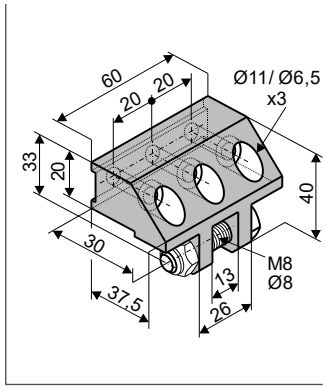
Application

Surface mounting on the **side closing edge** of casement/ window frame profiles of in-/outward opening windows or on skylights, for drives with front or rear suspension with bore **Ø8 mm**, mounting holes not alignet with the central axis of drive

Part.-No. 151405

Material/Finish
steel galvanized
Feature/Equipment
1x bolt Ø8 mm,
1x washer,
1x cotter pin
Load
max. 1600 N

F40



Application

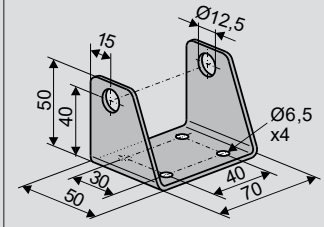
Surface mounting on the **main closing edge** of the casement profiles of outward opening roof windows, for drives with **front or rear suspension** with bore **Ø8 mm**

Part.-No. 155172

Material/Finish
aluminium
Feature/Equipment
1x screw M8x35,
1x nut M8

FRAME BRACKETS

K5



Application

Surface mounting on the **main closing edge** of window frame profiles or on the mullion/transom of outward opening (roof-)windows, for **swivelling suspension** of drives
PLA with **B4**,
SP8 with **B13,**
LKS with **B7**

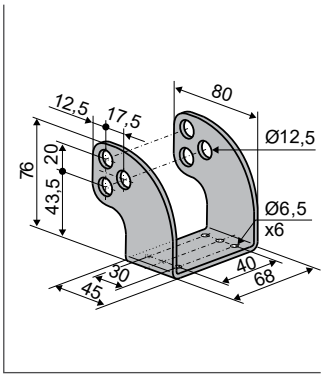
Part.-No. 155800

Material/Finish
stainless steel
Feature/Equipment
drilled holes Ø12,5 mm

Accessories

B4 clamp ring PLA (Ø36 mm, G1/8)	**Part.-No. 515900**
K21K Frame bracket	**Part.-No. 159900**
K21L Frame bracket	**Part.-No. 159905**

K82



Application

Surface mounting on the **main closing edge** of window frame profiles or on the mullion/transom of outward opening (roof-)windows, for **swivelling suspension** of drives
PLA with **B4**,
SP8 with **B13,**
LKS with **B7**

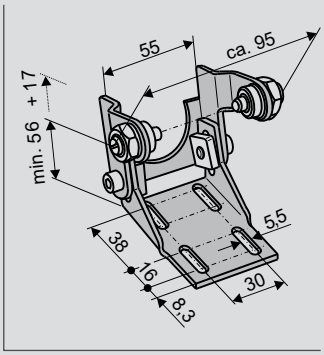
Part.-No. 151320

Material/Finish
stainless steel
Feature/Equipment
drilled holes Ø12,5 mm

Accessories

B4 clamp ring PLA (Ø36 mm, G1/8)	**Part.-No. 515900**

K17



Application

Surface mounting on the **main closing edge** of window frame profiles or on the mullion/transom of outward opening (roof-)windows, for **swivelling suspension** of drives
PLA with **B5**,
SP with **B12**

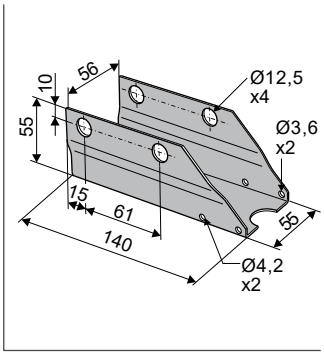
Part.-No. 159200

Material/Finish
steel galvanized
Feature/Equipment
adjustable height

Accessories

B5 clamp ring PLA (Ø36 mm, Ø8 mm)	**Part.-No. 515825**

K4-L



Application

Surface mounting on the **main closing edge** of the upstand of skylight domes **Eternit** for swivelling suspension of drives
PLA with **B4**,
SP with **B11,**

Part.-No. 155610

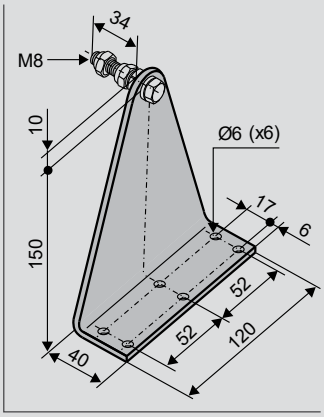
Material/Finish
steel galvanized
Feature/Equipment
2x screw Taptite M4x10,
1x nut M4,
1x screw M4x65

Accessories

B4 clamp ring PLA (Ø36 mm, G1/8)	**Part.-No. 515900**

FRAME BRACKETS

K15



Application

Surface mounting on the **side closing edge** of window frame profiles of in-/outward opening windows, by obliquely arranged drives with **rear suspension** with bore **Ø8 mm**
Required space on the frame **40 mm**

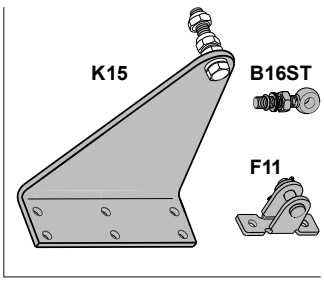
Part.-No. 307000

Material/Finish
steel galvanized
Feature/Equipment
H=150 mm, t=4 mm

Optional accessories

B16ST Eyebolt (Ø8 x 40 mm ST)	**Part.-No. 100044**
B16VA Eyebolt (Ø8 x 40 mm VA)	**Part.-No. 100144**

K15-Set



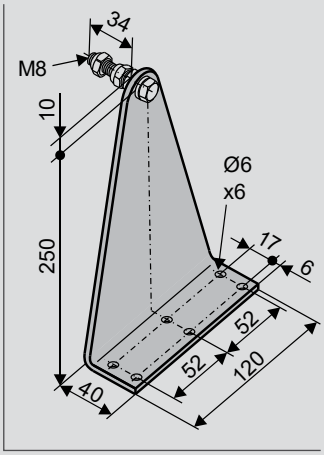
Application

Surface mounting on the **side closing edge** like RWA-1000/1100 hardware sets
Required space on the frame **40 mm**

Part.-No. 517590

Material/Finish
steel galvanized
Feature/Equipment
Set:
1x K15
1x F11ST
1x B16ST

K37



Application

Surface mounting on the **side closing edge** of window frame profiles of in-/outward opening windows, by obliquely arranged drives with rear suspension with bore **Ø8 mm**
Required space on the frame **40 mm**

Part.-No. 307500

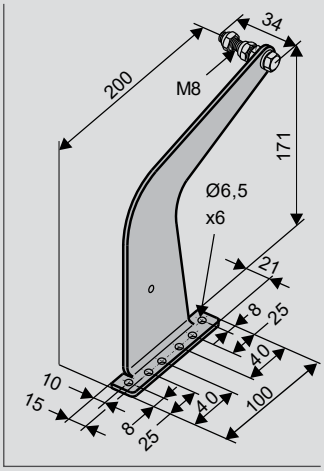
Material/Finish
steel galvanized
Feature/Equipment
H=250 mm, t=5 mm

Optional accessories

B16ST Eyebolt (Ø8 x 40 mm ST)	**Part.-No. 100044**
B16VA Eyebolt (Ø8 x 40 mm VA)	**Part.-No. 100144**

FRAME BRACKETS

K97L



Application

Surface mounting on the **side closing edge** of window frame profiles of inward opening side hung windows, by obliquely arranged drives with **rear suspension** with bore **Ø8 mm. Required space on the frame 20 mm**

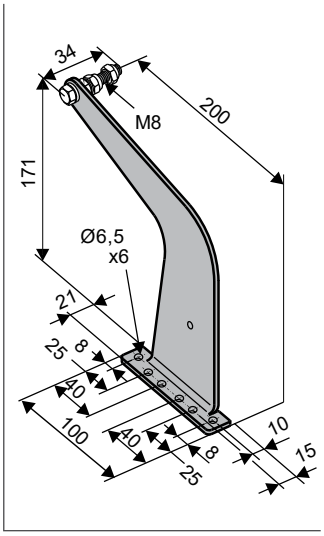
Part.-No. 160938

Material/Finish
stainless steel, vibratory grinding
Feature/Equipment
left hand

Optional accessories

B16ST Eyebolt (Ø8 x 40 mm ST)	**Part.-No. 100044**
B16VA Eyebolt (Ø8 x 40 mm VA)	**Part.-No. 100144**

K97R



Application

Surface mounting on the **side closing edge** of window frame profiles of inward opening side hung windows, by obliquely arranged drives with **rear suspension** with bore **Ø8 mm. Required space on the frame 20 mm**

Part.-No. 160939

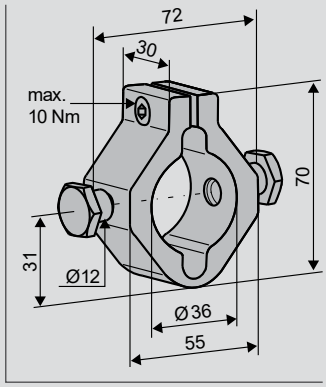
Material/Finish
stainless steel, vibratory grinding
Feature/Equipment
right hand

Accessories

B16ST Eyebolt (Ø 8 x 40 mm ST)	**Part.-No. 100044**
B16VA Eyebolt (Ø8 x 40 mm VA)	**Part.-No. 100144**

OPTIONAL ACCESSORIES

B4



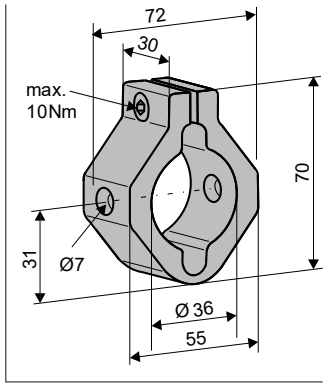
Application

Adjustable clamping of the **PLA** drive housing, for surface mounting with **swivelling suspension** on **K5, K7, K82, K22, K22-1, K127** (preferably on outward opening windows)

Part.-No. 515900

Material/Finish
aluminium (antreated), stainless steel
Feature/Equipment
2x B8 collar screw Ø12mm, G1/8
1x cylinder head screw M6x16

B5



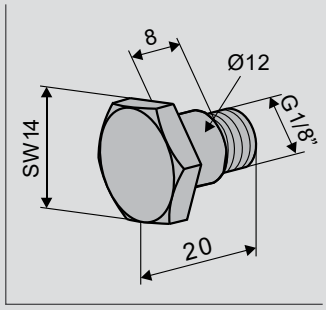
Application

Adjustable clamping of the **PLA** drive housing, for surface mounting with **swivelling suspension** on **K17** (preferably on outward opening windows)

Part.-No. 515825

Material/Finish
aluminium (antreated), stainless steel
Feature/Equipment
2x holes Ø7 mm
1x cylinder head screw M6x16

B8



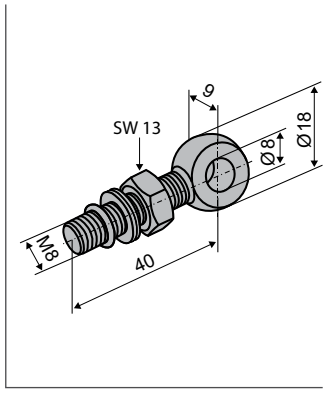
Application

Swivelling suspensin of the clamp rings
B4 for **PLA**
B7 for **LKS**
or of the clamping blocks
B11, **B13** for **SP**
for U-shaped frame brackets with bore **Ø12,5 mm**

Part.-No. 172800

Material/Finish
stainless steel
Feature/Equipment
Collar Ø12 mm, G1/8“

B16ST



Application

Eye bolt for **rear or front suspension** of spindle drives with **M8** thread in the rear base cap or in the spindle tube

Part.-No. 100044

Material/Finish
steel galvanized
Feature/Equipment
M8x40 (Eye Ø8 mm),
1 x nut M8 + Nordlock-safety-washer + O-ring
max. screw-in depth in the drive 25 mm

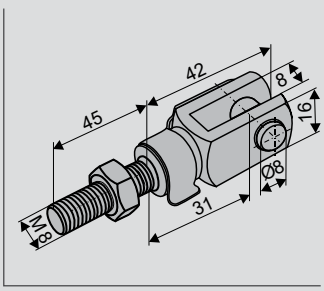
B16VA

Part.-No. 100144

Material/Finish
stainless steel (V2A)

OPTIONAL ACCESSORIES

B27ST



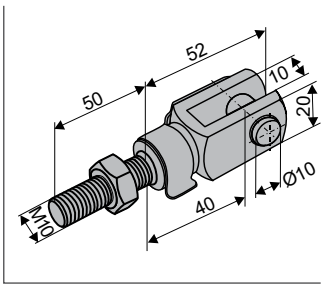
Application

Clevis for **rear or front suspension** of spindle drives with **M8** thread in the rear base cap or in the spindle tube

Part.-No. 105510

Material/Finish
steel galvanized
Feature/Equipment
Clevis M8 x 40 mm with spring bolt Ø8 mm and thread M8 x 45 mm
1x nut M10 + Nordlock-safety-washer + O-ring, max. screw-in depth in the drive 25 mm

B28ST



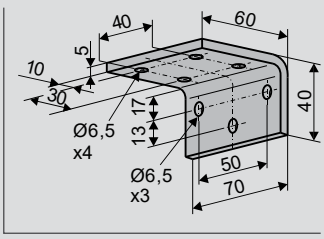
Application

Clevis for **rear or front suspension** of spindle drives with **M10** thread in the rear base cap or in the spindle tube

Part.-No. 105520

Material/Finish
steel galvanized
Feature/Equipment
Clevis M10 x 40 mm with spring bolt Ø10 mm and thread M10 x 50 mm
1x nut M10 + Nordlock-safety-washer + O-ring, max. screw-in depth in the drive 25 mm

K21K



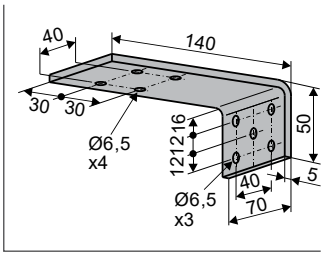
Application

Shift the fastening level of the frame brackets **K5, K29** from the horizontal to the vertical position of the **main closing edge** of window frame profiles

Part.-No. 159900

Material/Finish
steel galvanized

K21L



Application

Shift the fastening level of the frame brackets **K5, K29** from the horizontal to the vertical position of the **main closing edge** of window frame profiles

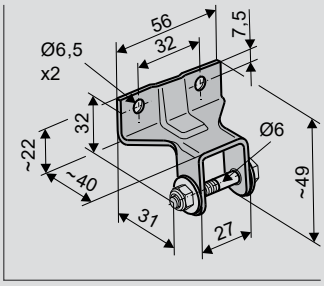
Part.-No. 159905

Material/Finish
steel galvanized

SPECIFIC APPLICATIONS

SKY-LIGHT ESSMANN TYP 810

F12



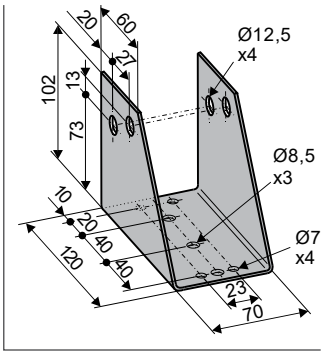
Application

Surface mounting on the **main closing edge** of the casement profiles of skylight domes **Essmann 810** for drives with **front suspension** with bore **Ø6 mm**

Part.-No. 151500

Material/Finish
steel galvanized
Feature/Equipment
1x screw M6,
1x washer,
1x nut
Load
max. 800 N

K7



Application

Surface mounting on the **main closing edge** of the upstand of skylight domes **Essmann 810** for **swivelling suspension** of drives **PLA** with **B4**, **SP** with **B13,** **LKS** with **B7**

Part.-No. 157500

Material/Finish
steel galvanized
Feature/Equipment
drilled holes Ø12,5 mm

Accessories

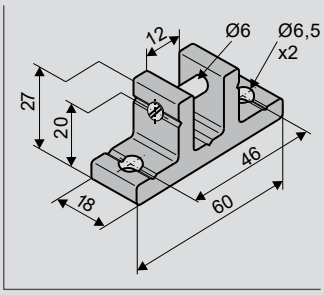
B4 clamp ring PLA (Ø36 mm, G1/8)

Part.-No. 515900

SPECIFIC APPLICATIONS

SCHÜCO AWS 57RO, WICONA WICTEC 50, RAICO WING 105D – HSK

F10.8S



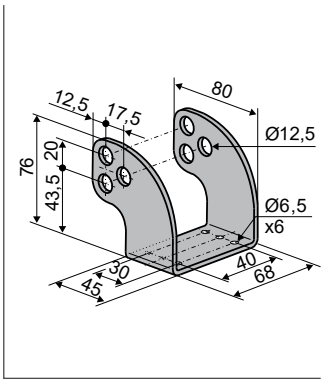
Application

Surface mounting on the **main closing edge** of casement profiles of outward opening windows, for drives with **front or rear suspension** with bore **Ø8 mm**

Part.-No. 151105

Material/Finish
aluminium
Feature/Equipment
1x nut M8,
1x screw M8x35
Load
max. 3000 N

K82



Application

Surface mounting on the **main closing edge** of window frame profiles or on the mullion/transom of outward opening (roof-)windows, for **swivelling suspension** of drives
PLA with **B4**,
SP8 with **B13,**
LKS with **B7**

Part.-No. 151320

Material/Finish
stainless steel
Feature/Equipment
drilled holes Ø12,5 mm

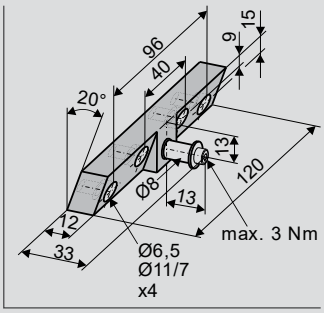
Accessories

B4 clamp ring PLA
(Ø36 mm, G1/8)

Part.-No. 515900

SCHÜCO AWS 57R – NSK

F36



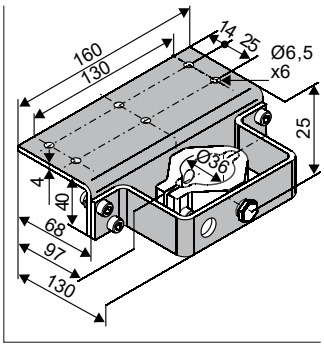
Application

Surface mounting on the **side closing edge** of outward opening casement profiles of roof windows **Schüco AWS 57RO**, for drives with **front suspension** with bore **Ø8 mm**

Part.-No. 155170

Material/Finish
aluminium,
stainless steel
Feature/Equipment
1x bolt Ø8 mm,
1x screw M4,
1x washer A4,3

K122-1



Application

Surface mounting on the **side closing edge** of window frame profiles of outward opening roof windows Schüco **AWS 57RO**, **Wicona Wictec 50** for **swivelling suspension** of drives
PLA with **B4**

Part.-No. 155116

Material/Finish
stainless steel
Feature/Equipment
without clamping ring B4

Accessories

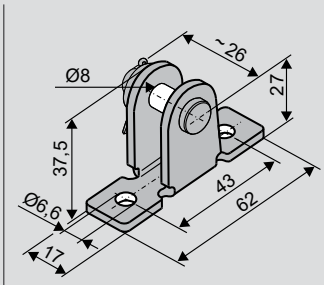
B4 clamp ring PLA
(Ø 36 mm, G1/8)

Part.-No. 515900

SPECIFIC APPLICATIONS

RAICO WING 105D – NSK

F11ST



Application

Surface mounting on the **side closing edge** of casement/ window frame profiles of in-/outward opening windows or on skylights, for drives with **front or rear suspension** with bore **Ø8 mm**, mounting holes aligned with central axis of drive

Part.-No. 151400

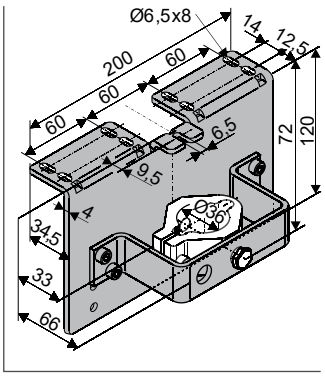
Material/Finish
steel galvanized
Feature/Equipment
1x bolt Ø8 mm,
1x washer,
1x cotter pin
Load
max. 3000 N

F11VA

Part.-No. 151401

Material/Finish
stainless steel

K127



Application

Surface mounting on the **side closing edge** of window frame profiles of outward opening roof windows **Raico Wing 105D** for **swivelling suspension** of drives **PLA** with **B4**

Part.-No. 155119

Material/Finish
stainless steel
Feature/Equipment
without clamping ring B4

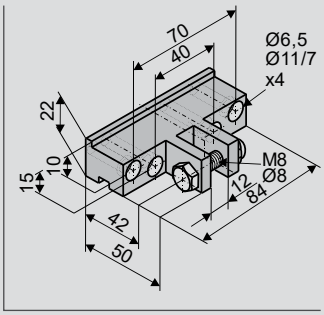
Accessories

B4 clamp ring PLA
(Ø36 mm, G1/8)

Part.-No. 515900

HEROAL 085D – HSK

F29-1



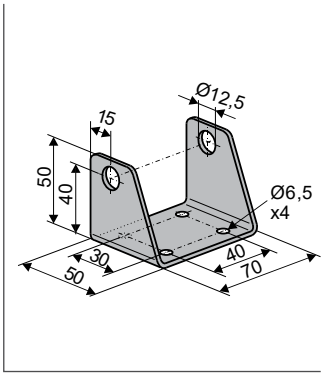
Application

Surface mounting on the **main closing edge** of casement profiles of roof windows **Heroal 085D** for drives with **front suspension** with bore **Ø8 mm**

Part.-No. 155158

Material/Finish
aluminium
(natural anodized),
stainless steel
Feature/Equipment
1x screw M8x35,
1x nut M8

K5



Application

Surface mounting on the **main closing edge** of window frame profiles or on the mullion/transom of outward opening (roof-)windows, for **swivelling suspension** of drives
PLA with **B4**,
SP5 with **B13,**
LKS with **B7**

Part.-No. 155800

Material/Finish
stainless steel
Feature/Equipment
drilled holes Ø12,5 mm

Accessories

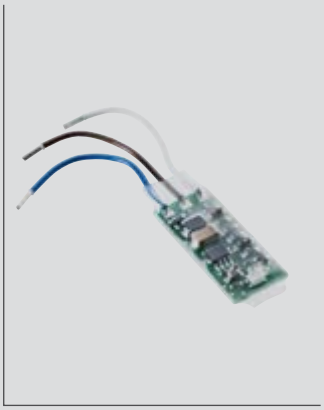
B4 clamp ring PLA
(Ø36 mm, G1/8)

Part.-No. 515900

OPTIONAL ACCESSORIES

Main control unit

M-COM



Application

Configuration module for automatic configuration and monitoring of max. 4 opening drives / 2 locking drives version S12 / S3 in synchronised multi-drive systems

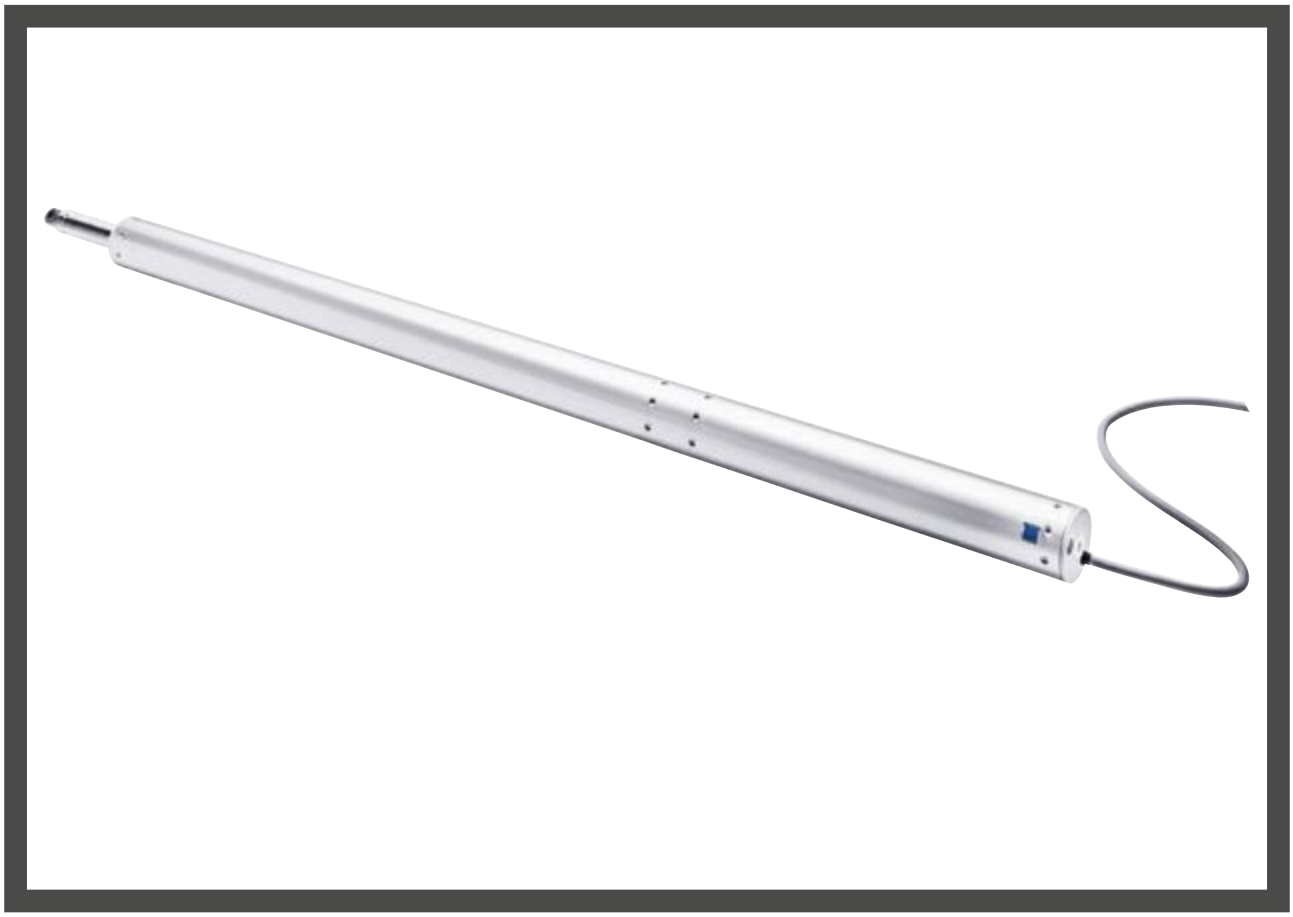
Rated voltage:
24 V DC (19 V ... 28 V)
Current consumption:
<12 mA
Drive type: S12

Part.-No. 524177

Protection rating
IP30 rubber envelope
Ambient temperature range
0 °C ... + 70 °C
Dimensions
45 x 17 x 6 mm
Connecting wires
3 wires 0,5 mm² x 50 mm
Feature/Equipment
Printed circuit board with components and connection wires to be installed in connection box to be supplied on site.

CASEMENT BRACKETS AND FRAME BRACKETS

Special model	PU/pcs.	Part.-No.
Casement brackets painted / powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516032**
	21 – 50	**516032**
	51 – 100	**516032**
	from 101	**516032**
Frame brackets painted / powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516031**
	21 – 50	**516031**
	51 – 100	**516031**
	from 101	**516031**



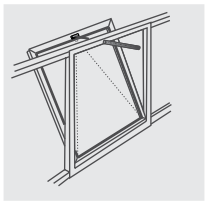
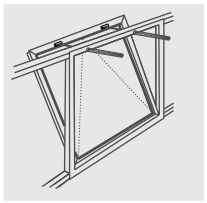
SPECIAL FEATURES PLS

- For natural ventilation, smoke and heat exhausting and ferralux® NRWG (EN12101-2)
- Powerful heavy duty drives for loads up to 5000 N
- Robust corrosion-resistant design in aluminium housing (D = 50 mm), optionally in RAL colors
- Easy installation due to adjustable clamp ring (Rear suspension on request)
- Spindle is ball beared with end position dampening and gentle soft-start and soft-stop mode
- Stainless steel spindle tube
- Programmable parameters of Intelligent Control Electronics S12
  - Synchronised multi-operation and sequence control without add. devices
  - Electronic soft-start, soft-close and soft-stop at end of stroke control
  - Stroke, force, speed
  - Rebate control
- With GoreTex membrane
- Suitable for operation with M-COM for the automatic configuration of synchronised run of multi drive systems and sequence control

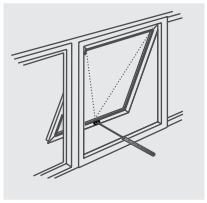
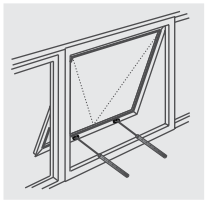
For this product series, a Type III Environmental Product Declaration (EPD) was issued according to ISO 14025 and EN 15804.
The LCA results of the different product types are listed at the end of this product catalogue.
The EPD documents can be viewed or downloaded from our homepage **www.aumueller-gmbh.de**.

FACADE

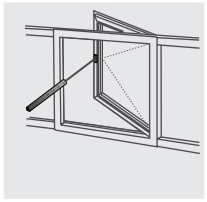
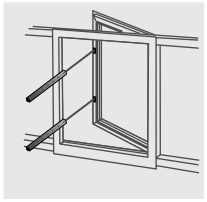
Bottom-hung

Top-hung

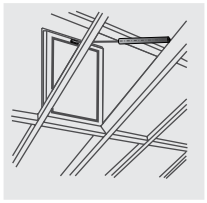
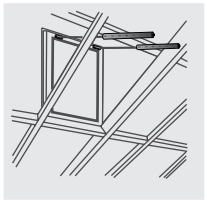
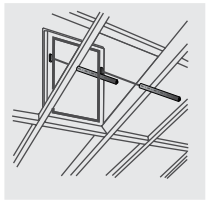



Side-hung

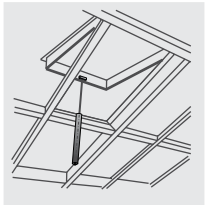
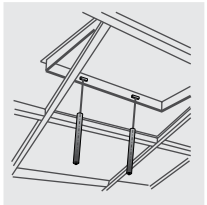
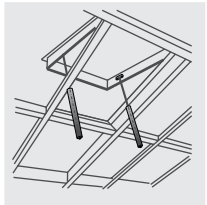



ROOF

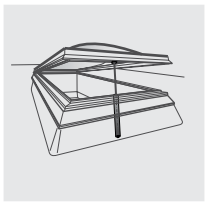
Bottom-hung

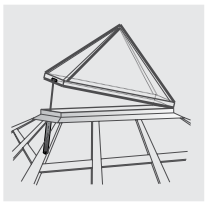
Top-hung

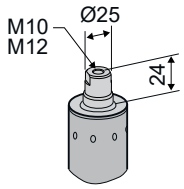




Skylight




Glass pyramid



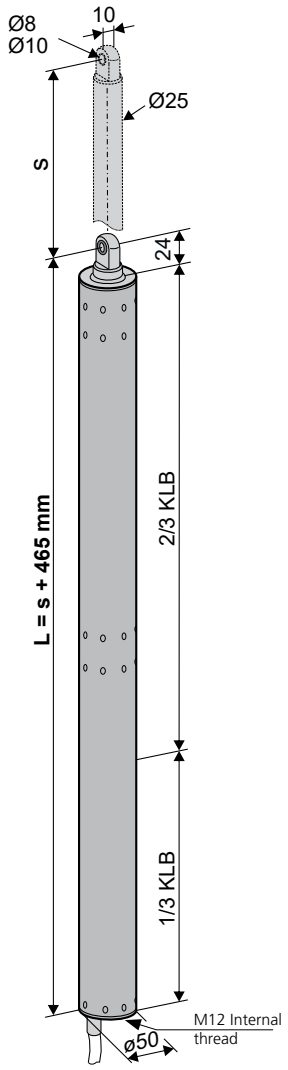



OPTION

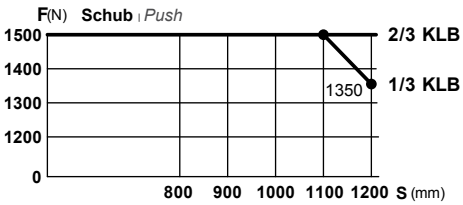
- Application: natural ventilation, RWA, ferralux®-NRWG
- Internal Intelligent Control Electronics S12

Options

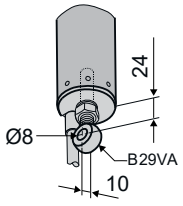
- Programmable synchronised run (max. 4 drives) and special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)
- Spindle tube end with interior thread for clevis
- Eyebolt and clevis for rear suspention



TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	3,0 A
I_A	Cut-off current	4,0 A
P_N	Rated power	72 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 54
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	1500 N
F_A	Pushing force max.	
F_H	Pullout force	25000 N (fastening depended)
	Spindle tube	stainless steel
	Connecting cable	non-halogen, grey 3 x 1,0 mm², ~ 3 m
v	Speed	Factory settings: 16,0 mm/s 16,0 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 1200 mm
L	Length	s + 465 mm (see order data)
	Sound pressure level	≤ 70 dB (A)

OPTION

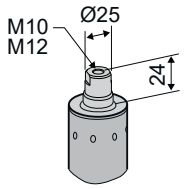


ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.
300	765	PLS15 300 S12	E6/C-0	1	**576830**
400	865	PLS15 400 S12	E6/C-0	1	**576840**
500	965	PLS15 500 S12	E6/C-0	1	**576850**
600	1065	PLS15 600 S12	E6/C-0	1	**576860**
750	1215	PLS15 750 S12	E6/C-0	1	**576875**
1000	1465	PLS15 1000 S12	E6/C-0	1	**576800**
1200	1665	PLS15 1200 S12	E6/C-0	1	**576812**

OPTIONS

Special model	PU/pcs.	Part.-No.
Front Fixing		
Spindle tube end with interior thread M10	1	**515062**
Spindle tube end with interior thread M12	1	**515063**
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Extra length connecting cable:		
5 m – non-halogen, grey – 3 x 1,0 mm²		**501037**
10 m – non-halogen, grey – 3 x 1,0 mm²		**501039**
Accessories for front / rear suspension		
B29VA Eyebolt M12x40mm, Ø8 mm, stainless steel	1	**105430**
B28ST Clevis M10x20 mm, galvanized, thread M10x50 mm	1	**105520**
Microprocessor programming S12		
Electronic stroke reduction 24V S12	1	**524190**
Programming drives 24V / 230V S12	1	**524180**
Other lengths available on request		
Optional accessories	PU/pcs.	Part.-No.
M-COM Configuration module for synchronised multi-drive systems	1	**524177**

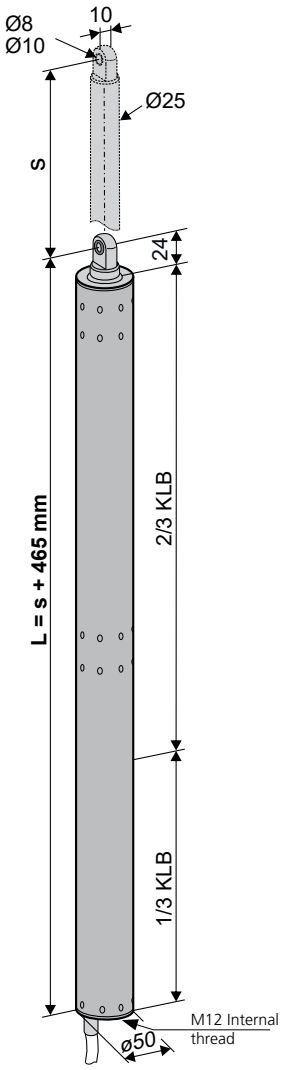


OPTION

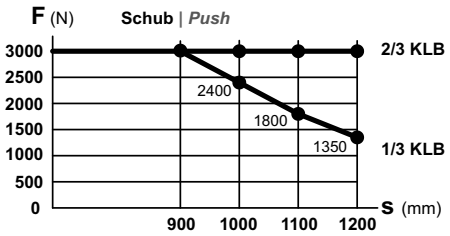
- Application: natural ventilation, RWA, ferralux®-NRWG
- Internal Intelligent Control Electronics S12

Options

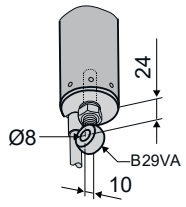
- Programmable synchronised run (max. 4 drives) and special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)
- Spindle tube end with interior thread for clevis
- Eyebolt and clevis for rear suspention



TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	3,8 A
I_A	Cut-off current	5,0 A
P_N	Rated power	91 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 54
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	3000 N
F_A	Pushing force max.	
F_H	Pullout force	25000 N (fastening depended)
	Spindle tube	stainless steel
	Connecting cable	non-halogen, grey 3 x 1,0 mm², ~ 3 m
v	Speed	Factory settings: 7,8 mm/s 7,8 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 1200 mm
L	Length	s + 465 mm (see order data)
	Sound pressure level	≤ 70 dB (A)

OPTION

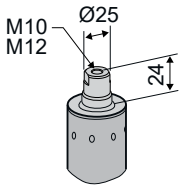


ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.
300	765	PLS30 300 S12	E6/C-0	1	**577530**
400	865	PLS30 400 S12	E6/C-0	1	**577540**
500	965	PLS30 500 S12	E6/C-0	1	**577550**
600	1065	PLS30 600 S12	E6/C-0	1	**577560**
750	1215	PLS30 750 S12	E6/C-0	1	**577575**
1000	1465	PLS30 1000 S12	E6/C-0	1	**577500**
1200	1665	PLS30 1200 S12	E6/C-0	1	**577512**

OPTIONS

Special model	PU/pcs.	Part.-No.
Front Fixing		
Spindle tube end with interior thread M10	1	**515062**
Spindle tube end with interior thread M12	1	**515063**
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Extra length connecting cable:		
5 m – non-halogen, grey – 3 x 1,0 mm²		**501037**
10 m – non-halogen, grey – 3 x 1,0 mm²		**501039**
Accessories for front / rear suspension		
B29VA Eyebolt M12x40mm, Ø8 mm, stainless steel	1	**105430**
B28ST Clevis M10x20 mm, galvanized, thread M10x50 mm	1	**105520**
Microprocessor programming S12		
Electronic stroke reduction 24V S12	1	**524190**
Programming drives 24V / 230V S12	1	**524180**
Other lengths available on request		
Optional accessories	PU/pcs.	Part.-No.
M-COM Configuration module for synchronised multi-drive systems	1	**524177**

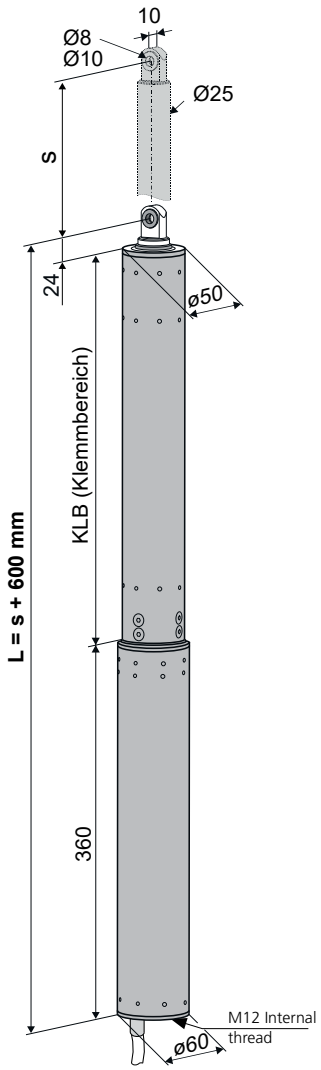


OPTION

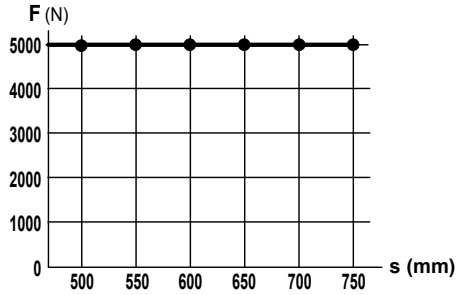
- Application: natural ventilation, RWA
- Internal Intelligent Control Electronics S12

Options

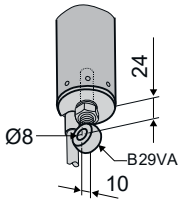
- Programmable synchronised run (max. 4 drives) and special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)
- Spindle tube end with interior thread for clevis
- Eyebolt and clevis for rear suspention



TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	3,0 A
I_A	Cut-off current	4,2 A
P_N	Rated power	72 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 54
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	5000 N
F_A	Pushing force max.	
F_H	Pullout force	25000 N (fastening depended)
	Spindle tube	stainless steel
	Connecting cable	non-halogen, grey 3 x 1,0 mm², ~ 3 m
v	Speed	Factory settings: 4,0 mm/s 4,0 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 5 – 750 mm
L	Length	s + 600 mm (see order data)
	Sound pressure level	≤ 70 dB (A)

OPTION



ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.
200	800	PLS50 200 S12	E6/C-0	1	**577620**
300	900	PLS50 300 S12	E6/C-0	1	**577630**
400	1000	PLS50 400 S12	E6/C-0	1	**577640**
500	1100	PLS50 500 S12	E6/C-0	1	**577650**
600	1200	PLS50 600 S12	E6/C-0	1	**577660**
750	1350	PLS50 750 S12	E6/C-0	1	**577675**

OPTIONS

Special model	PU/pcs.	Part.-No.
Front Fixing		
Spindle tube end with interior thread M10	1	**515062**
Spindle tube end with interior thread M12	1	**515063**
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Extra length connecting cable:		
5 m – non-halogen, grey – 3 x 1,0 mm²		**501037**
10 m – non-halogen, grey – 3 x 1,0 mm²		**501039**
Accessories for front / rear suspension		
B29VA Eyebolt M12x40mm, Ø8 mm, stainless steel	1	**105430**
B28ST Clevis M10x20 mm, galvanized, thread M10x50 mm	1	**105520**
Microprocessor programming S12		
Electronic stroke reduction 24V S12	1	**524190**
Programming drives 24V / 230V S12	1	**524180**
Other lengths available on request		
Optional accessories	PU/pcs.	Part.-No.
M-COM Configuration module for synchronised multi-drive systems	1	**524177**

OVERVIEW OF BRACKETS

Typical applications					1	2	3	4
Frame bracket					K70	K82-1	K127-1	K121-1
Mounting aid								
Bracket accessories					clamping ring B6 (50 mm-G1/8)			
Casement bracket					F28-1, F10.8S, F10.10		F10.11	F36
Special application					Wictec 50, Wing 105 D	AWS 57RO, Wing 105D	roof window	Schüco AWS 57RO
Space requirement			min.	[mm]	120	50	35	50
Window material			Alu		●	●	●	●
			Wood		●	●		
			PVC		●	●		
Type of window and mounting	Bottom hung	inward	HSK	FM				
				RM				
			NSK	FM				
				RM				
		outward	HSK	RM		●		
				PR				
			NSK	RM				
				PR				
	Top hung	inward	HSK	FM				
				RM				
			NSK	FM				
				RM				
		outward	HSK	RM		●		
				PR				
			NSK	RM				
				PR				
	Side hung	inward	HSK	FM				
				RM				
			NSK	FM				
				RM				
	Roof	outward	HSK	RM	●	●		
				PR				
			NSK	RM			●	●
				PR				
	Sky-light	outward	HSK	RM	●	●		
			NSK	RM				
FAB(*1			Solo	[mm]	450 – 1300			
			Sync2	[mm]	1200 – 2500			
FAH(*1			Solo	[mm]	450 – 1500			
			Sync2	[mm]	450 – 2500			

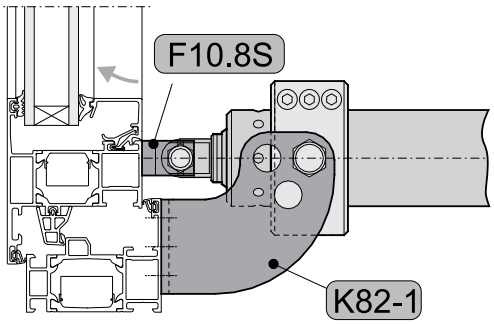
LEGEND

● suitable ■ not recommended

(*1 Sample value of the casement dimensions. The actuell casement dimensions depend on the stroke and the position of the drives to the hinges. The values of FAB/FAH are to be used analogue for side hung windows.

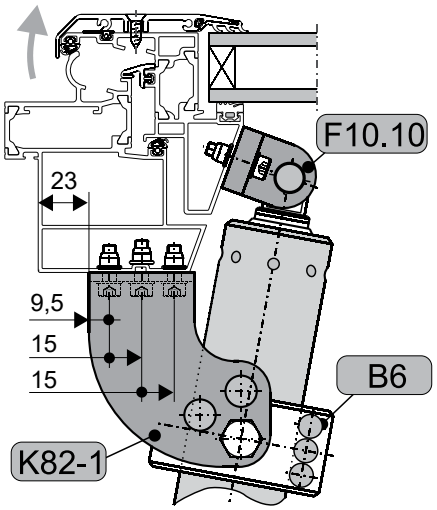
TYPICAL APPLICATIONS

1 RM, HSK, top-hung outward opening



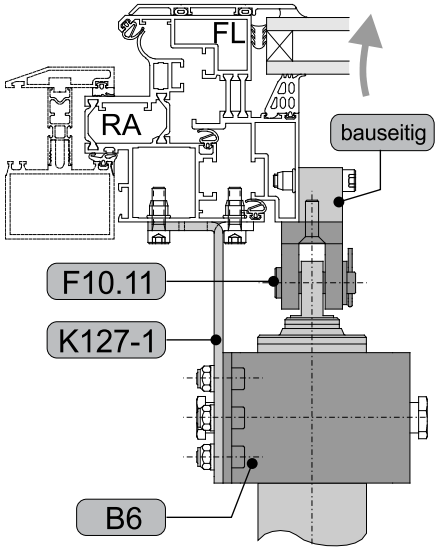
View on steel window

2 RM, HSK, roof outward opening



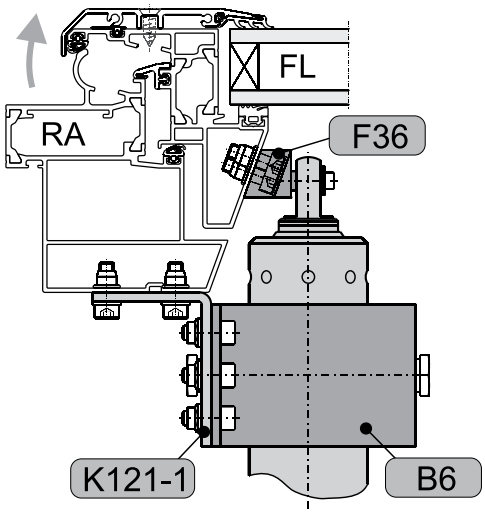
View on aluminium window

3 RM, NSK, roof outward opening



View on aluminium window

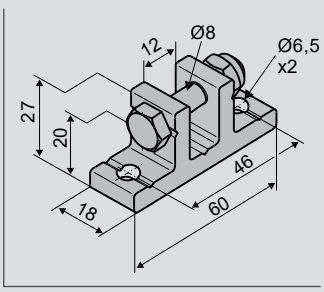
4 RM, NSK, roof outward opening



View on aluminium window

CASEMENT BRACKETS

F10.8S



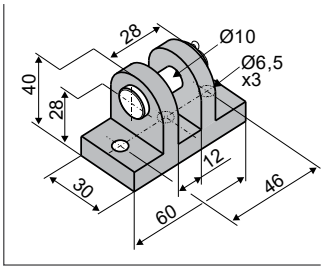
Application

Surface mounting on the **main closing edge** of casement profiles of outward opening windows, for drives with **front or rear suspension** with bore **Ø8 mm**

Part.-No. 151105

Material/Finish
aluminium
Feature/Equipment
1x nut M8,
1x screw M8x35
Load
max. 3000 N

F10.10



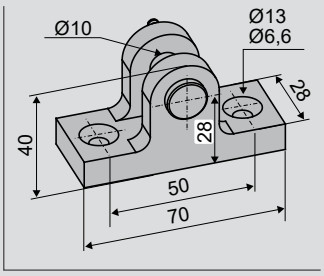
Application

Surface mounting on the **main closing edge** of the casement profiles of outward opening windows, for drives with **front or rear suspension** with bore **Ø10 mm**

Part.-No. 151201

Material/Finish
aluminium, stainless steel
Feature/Equipment
1x bolt Ø10 mm,
1x washer,
1x split pin
Load
max. 5000 N

F10.11



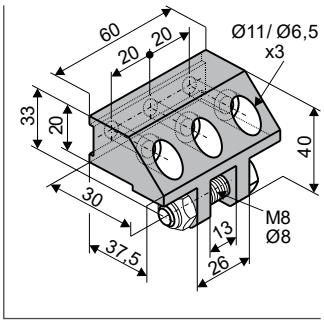
Application

Surface mounting on the **side closing edge** of casement/ window frame profiles of in-/outward opening windows or on skylights, for drives with **front or rear suspension** with bore **Ø10 mm**, mounting holes aligned with central axis of drive

Part.-No. 151202

Material/Finish
aluminium, stainless steel
Feature/Equipment
1x bolt Ø10 mm,
1x washer,
1x cotter pin
Load
max. 5000 N

F40



Application

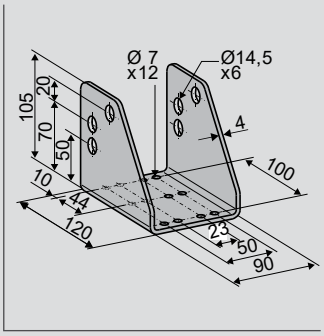
Surface mounting on the **main closing edge** of the casement profiles of outward opening roof windows, for drives with **front or rear suspension** with bore **Ø8 mm**

Part.-No. 155172

Material/Finish
aluminium
Feature/Equipment
1x screw M8x35,
1x nut M8
Load
max. 3000 N

FRAME BRACKETS

K70



Application

Surface mounting on the **main closing egde** of window frame profiles or on the mullion/ transom of outward opening (roof-)windows, for **swivelling suspension** of drives **PLS** with **B6**

Part.-No. 155002

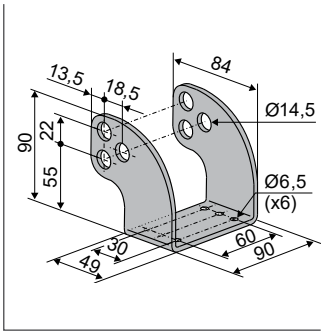
Material/Finish
steel galvanized
Feature/Equipment
drilled holes Ø14,5 mm

Accessories

B6 clamp ring PLS (Ø50mm, G1/8)

Part.-No. 576001

K82-1



Application

Surface mounting on the **main closing egde** of window frame profiles or on the mullion/ transom of outward opening (roof-)windows, for **swivelling suspension** of drives **PLS** with **B6**

Part.-No. 151321

Material/Finish
stainless steel
Feature/Equipment
drilled holes Ø14,5 mm

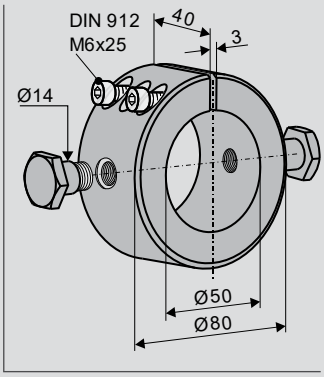
Accessories

B6 clamp ring PLS (Ø50mm, G1/8)

Part.-No. 576001

OPTIONAL ACCESSORIES

B6



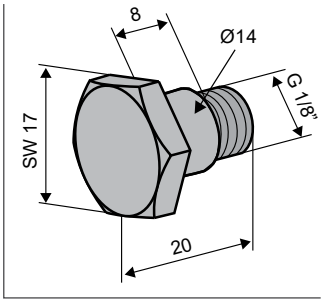
Application

Adjustable clamping of the **PLS** drive housing, for surface mounting with **swivelling suspension** on **K70, K82-1, K121, K 21-1, K127-1** (preferably on outward opening windows.)

Part.-No. 576001

Material/Finish
aluminium (antreated), stainless steel
Feature/Equipment
2x B9 collar screw Ø14mm, G1/8, 2x cylinder head screw M6x25

B9



Application

Swivelling suspensin of the clamp ring **B6** for **PLS** for U-shaped frame brackets with bore **Ø14,5 mm**

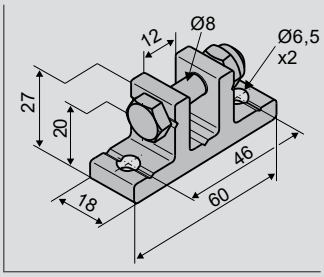
Part.-No. 172900

Material/Finish
stainless steel
Feature/Equipment
Collar Ø14 mm, G1/8“

SPECIFIC APPLICATIONS

SCHÜCO AWS 57RO, WICONA WICTEC 50, RAICO WING 105D – HSK

F10.8S



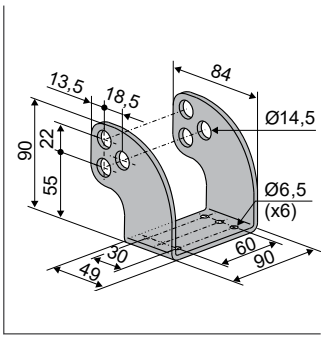
Application

Surface mounting on the **main closing edge** of casement profiles of outward opening windows, for drives with **front or rear suspension** with bore **Ø8 mm**

Part.-No. 151105

Material/Finish
aluminium
Feature/Equipment
1x nut M8,
1x screw M8x35
Load
max. 3000 N

K82-1



Application

Surface mounting on the **main closing egde** of window frame profiles or on the mullion / transom of outward opening (roof-)windows, for **swivelling suspension** of drives **PLS** with **B6**

Part.-No. 151321

Material/Finish
stainless steel
Feature/Equipment
drilled holes Ø14,5 mm

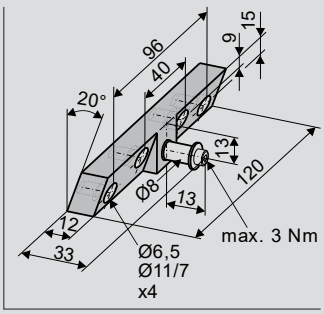
Accessories

B6 Clamp ring PLS
(Ø50 mm, G1/8)

Part.-No. 576001

SCHÜCO AWS 57RO – NSK

F36



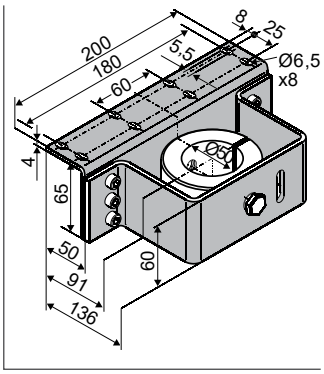
Application

Surface mounting on the **side closing edge** of outward opening casement profiles of roof windows **Schüco AWS 57RO**, for drives with **front suspension** with bore **Ø8 mm**

Part.-No. 155170

Material/Finish
aluminium
(natural anodized),
stainless steel
Feature/Equipment
1x bolt Ø8 mm,
1x screw M4,
1x washer A4,3

K121-1



Application

Surface mounting on the **side closing edge** of window frame profiles of outward opening roof windows **Schüco AWS 57RO**, **Wicona Wictec 50**, **Metra** for **swivelling suspension** of drives **PLS** with **B6**

Part.-No. 155117

Material/Finish
stainless steel
Feature/Equipment
without clamp ring B6

Accessories

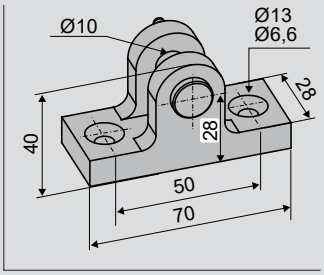
B6 Clamp ring PLS
(Ø50 mm, G1/8)

Part.-No. 576001

SPECIFIC APPLICATIONS

Roof window – NSK

F10.11



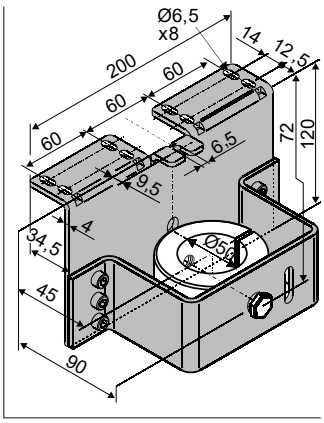
Application

Surface mounting on the **side closing edge** of casement/ window frame profiles of in-/outward opening windows or on skylights, for drives with **front or rear suspension** with bore **Ø10 mm**, mounting holes aligned with central axis of drive

Part.-No. 151202

Material/Finish
aluminium, stainless steel
Feature/Equipment
1x bolt Ø10 mm,
1x washer,
1x cotter pin
Load
max. 5000 N

K127-1



Application

Surface mounting on the **side closing edge** of window frame profiles of outward opening roof windows for **swivelling suspension** of drives
PLS with **B6**

Part.-No. 155118

Material/Finish
stainless steel
Feature/Equipment
without clamp ring B6

Accessories

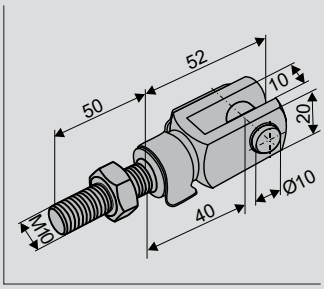
B6 Clamp ring PLS (Ø50 mm, G1/8)

Part.-No. 576001

OPTIONAL ACCESSORIES

Clevis

B28ST



Application

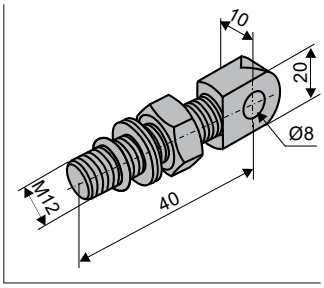
Clevis for rear or front suspension of spindle drives with **M10** thread in the rear base cap or in the spindle tube

Part.-No. 105520

Material/Finish
steel galvanized
Feature/Equipment
Clevis M10 x 50 mm with spring bolt Ø10 mm and thread M10x 50 mm
1x nut M10 + Nordlock-safety-washer + O-ring, max. screw-in depth in the drive 25 mm

Eyebolt

B29VA



Application

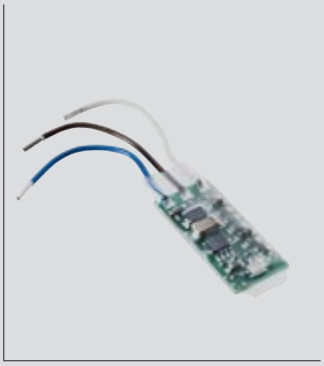
Eyebolt for rear or front suspension of spindle drives with **M12** thread in the rear base cap or in the spindle tube

Part.-No. 105430

Material/Finish
stainless steel
Feature/Equipment
M12x 40 (eye Ø8,2 mm),
1x nut M12 + Nordlock-safety-washer + o-ring,
minimum depth drive 25 mm

Main control unit

M-COM



Application

Configuration module for automatic configuration and monitoring of max. 4 opening drives / 2 locking drives version S12 / S3 in synchronised multi-drive systems

Rated voltage:
24 V DC (19 V ... 28 V)
Current consumption:
<12 mA
Drive type: S12

Part.-No. 524177

Protection rating
IP30 rubber envelope
Ambient temperature range
0 °C ... + 70 °C
Dimensions
45 x 17 x 6 mm
Connecting wires
3 wires 0,5 mm² x 50 mm
Feature/Equipment
Printed circuit board with components and connection wires to be installed in connection box to be supplied on site

CASEMENT BRACKETS AND FRAME BRACKETS

Special model	PU/pcs.	Part.-No.
Casement brackets painted / powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516032**
	21 – 50	**516032**
	51 – 100	**516032**
	from 101	**516032**
Frame brackets painted / powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516031**
	21 – 50	**516031**
	51 – 100	**516031**
	from 101	**516031**



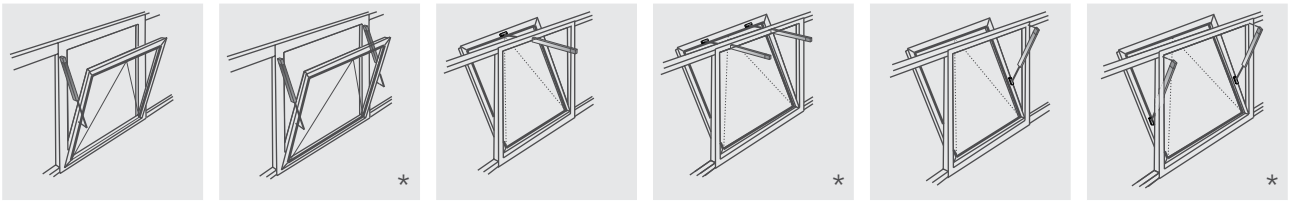
SPECIAL FEATURES SP

- For natural ventilation, smoke and heat exhausting systems
- Robust corrosion-resistant design
- Aluminium housing anodized finish or optionally in RAL colors - with plastic end caps
- Easy installation due to lateral dovetail guidence
- Phosphated steel spindle, aluminium spindle tube anodised finisch, damped end positions
- Available in 24V DC and 230V AC
- Limit switch to protect against overload

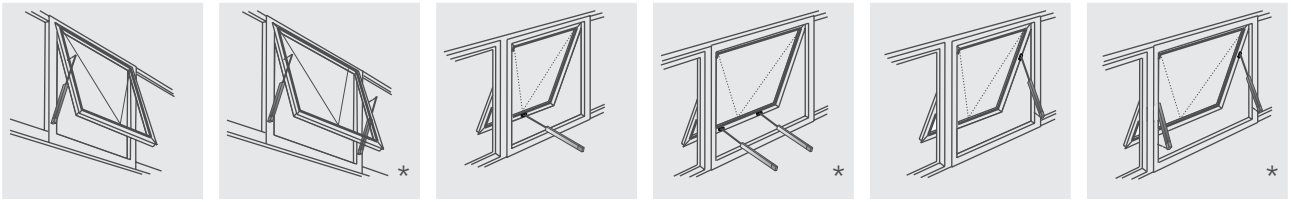
For this product series, a Type III Environmental Product Declaration (EPD) was issued according to ISO 14025 and EN 15804.
The LCA results of the different product types are listed at the end of this product catalogue.
The EPD documents can be viewed or downloaded from our homepage **www.aumueller-gmbh.de**.

FACADE

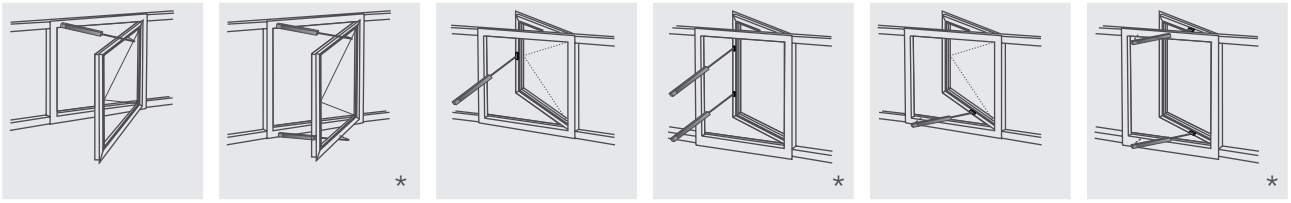
Bottom-hung



Top-hung

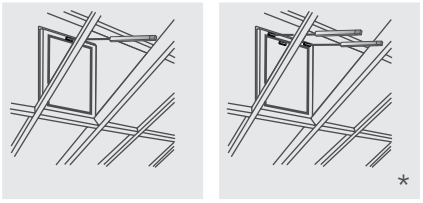


Side-hung

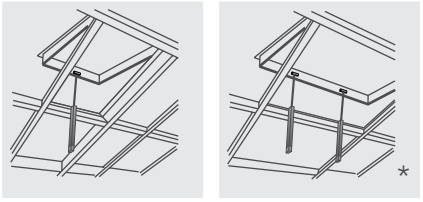


ROOF

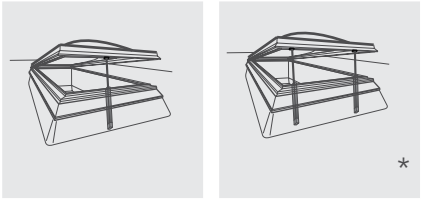
Bottom-hung



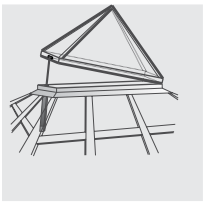
Top-hung



Skylight



Glass pyramid

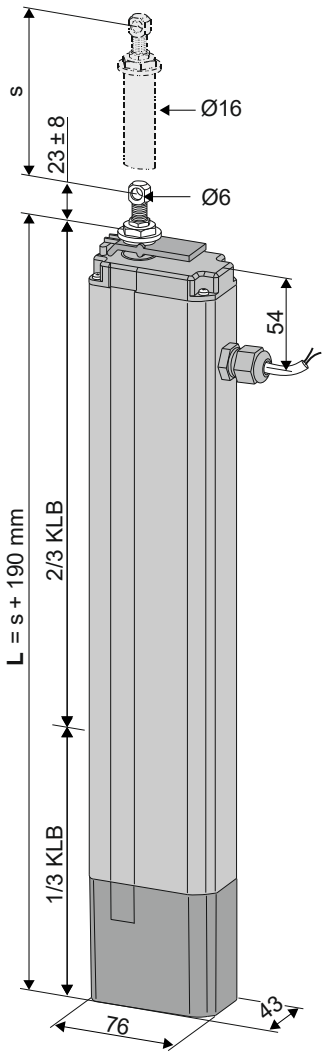


* Monitored motion run up to s = 300 mm with USKM (Controll modul Part.-No.: 512140)

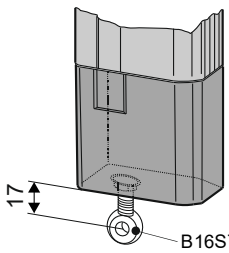
- Application: natural ventilation and RWA
- Cut-off via limit switch
- „Z"-Version: Potential free NC contact for closed end position feedback (max. 24 V, 500 mA)
- Preferably application for skylight domes

Options

- Rear suspension (only to 500 mm stroke)
- Stroke reduction
- Protection rating IP65

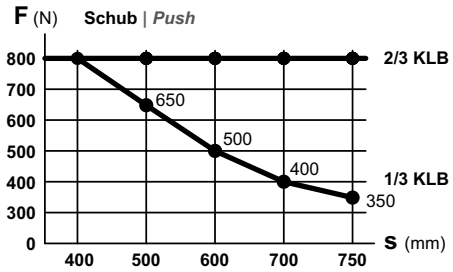


OPTION



The **rear suspension** is fitted at the **factory**.
Only up to 500 mm stroke possible!

TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	0,8 A
I_A	Cut-off current	1,0 A
P_N	Rated power	20 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 54
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	800 N
F_A	Pushing force max.	
F_H	Pullout force	3000 N (fastening depended)
	Spindle tube	aluminium
	Connecting cable	non-halogen, grey SP8: 2 x 0,75 mm², ~ 1 m SP8-Z: 4 x 0,75 mm², ~ 1 m
v	Speed (unchangeable)	7,0 mm/s 7,0 mm/s
s	Stroke	see order data
L	Length	s + 190 mm (see order data)
	Sound pressure level	≤ 70 dB (A)

ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.		
100	290	SP8 100 S2 24V	E6/C-0	1	**514110**		
		SP8-Z 100 S2 24V		1	**514310**		
200	390	SP8 200 S2 24V	E6/C-0	1	**514120**		
		SP8-Z 200 S2 24V		1	**514320**		
300	490	SP8 300 S2 24V	E6/C-0	1	**514130**		
		SP8-Z 300 S2 24V		1	**514330**		
400	590	SP8 400 S2 24V	E6/C-0	1	**514140**		
		SP8-Z 400 S2 24V		1	**514340**		
500	690	SP8 500 S2 24V	E6/C-0	1	**514150**		
		SP8-Z 500 S2 24V		1	**514350**		
600	790	SP8 600 S2 24V	E6/C-0	1	**514160**		
		SP8-Z 600 S2 24V		1	**514360**		
750	940	SP8 750 S2 24V	E6/C-0	1	**514175**		
		SP8-Z 750 S2 24V		1	**514375**		

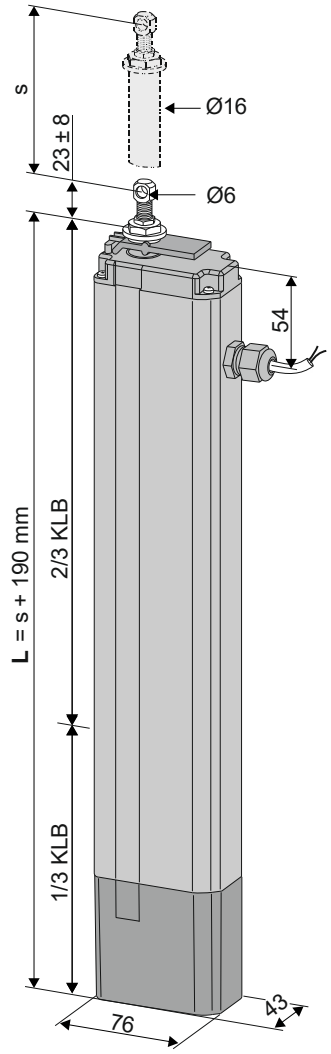
OPTIONS

Special model	PU/pcs.	Part.-No.		
Rear Suspension				
Cape for rear suspension (only to 500 mm stroke) incl. eyebolt B16ST M8 x 40 mm, bore Ø8 mm	1	**512002**		
Protection rating IP65				
Drive with additional gaskets for IP65		**512005**		
Mechanical stroke reduction				
Stroke reduction without construction length - mechanically		**516000**		
Drive housing painted/powder coated in other RAL colours				
Lump sum for coating		**516030**		
Specify at order stage:	1 – 20	**516004**		
	21 – 50	**516004**		
	51 – 100	**516004**		
	from 101	**516004**		
Extra length connecting cable:				
3 m – non-halogen, grey – 2 x 0,75 mm²		**501023**		
5 m – non-halogen, grey – 2 x 0,75 mm²		**501024**		
10 m – non-halogen, grey – 2 x 0,75 mm²		**501026**		
5 m – non-halogen, grey – 4 x 0,75 mm² („Z"-Version)		**501044**		
10 m – non-halogen, grey – 4 x 0,75 mm² („Z"-Version)		**501046**		

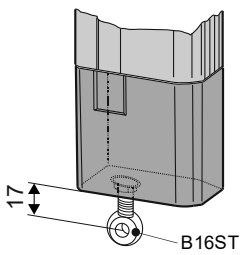
- Application: natural ventilation as single-drive
- Cut-off via limit switch
- Potential free NC contact for closed end position feedback (max. 24 V, 500 mA)
- Parallel connection up to 8 drives in one group
- Preferably application for skylight domes
- Minimum basic lenght of housing for stroke s = 300 mm

Options

- Stroke reduction (for s < 300 mm)
- Rear suspension (only to 500 mm stroke)
- Protection rating IP65

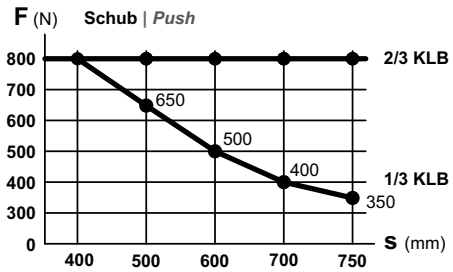


OPTION



The **rear suspension** is fitted at the **factory**.
Only up to 500 mm stroke possible!

TECHNICAL DATA

U_N	Rated voltage	230 V AC (50 Hz)
I_N	Rated current	0,12 A
I_A	Cut-off current	0,2 A
P_N	Rated power	30 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 54
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	800 N
F_A	Pushing force max.	
F_H	Pullout force	3000 N (fastening depended)
	Spindle tube	aluminium
	Connecting cable	non-halogen, grey – 6 x 0,75 mm², ~ 1 m
v	Speed (unchangeable)	7,0 mm/s 7,0 mm/s
s	Stroke	see order data
L	Length	s + 190 mm (see order data)
	Minimum lenght of housing	490 mm (s 300 mm)
	Sound pressure level	≤ 70 dB (A)

ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.
300	490	SP8-Z 300 S2 230V	E6/C-0	1	**496231**
400	590	SP8-Z 400 S2 230V	E6/C-0	1	**496241**
500	690	SP8-Z 500 S2 230V	E6/C-0	1	**496251**
600	790	SP8-Z 600 S2 230V	E6/C-0	1	**496261**
750	940	SP8-Z 750 S2 230V	E6/C-0	1	**496276**

OPTIONS

Special model	PU/pcs.	Part.-No.
Rear Suspension		
Cape for rear suspension (only to 500 mm stroke) incl. eyebolt B16ST M8 x 40 mm, bore Ø8 mm	1	**512002**
Protection rating IP65		
Drive with additional gaskets for IP65		**512005**
Mechanical stroke reduction		
Stroke reduction without construction length - mechanically		**516000**
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Extra length connecting cable:		
3 m – non-halogen, grey – 6 x 0,75 mm²		**501163**
5 m – non-halogen, grey – 6 x 0,75 mm²		**501167**

OVERVIEW OF BRACKETS

Typical applications					1	2	3	4	5	6
Frame bracket					K7	K57, K57.2, K57.3	K59	K57, K57.2, K57.3, K59	K92	K82
Mounting aid								K9		
Bracket accessories					B13	B10 inkl.				B13
Casement bracket					F12	F1, F1V, F1.1, F10.6				
Special application					Sky light Essmann				Sky light Lamilux	
Space requirement			min.	[mm]	120	40	35	50	60	45
Window material			Alu			●	●	●	●	●
			Wood			●	●	●	●	●
			PVC		●	●	●	●	●	●
Type of window and mounting	Bottom hung	inward	HSK	FM				■		■
				RM						
			NSK	FM						
				RM						
		outward	HSK	RM				●		●
				PR		●	●		●	
			NSK	RM						
				PR						
	Top hung	inward	HSK	FM				■		■
				RM						
			NSK	FM						
				RM						
		outward	HSK	RM				●		●
				PR		●	●		●	
			NSK	RM						
				PR						
	Side hung	inward	HSK	FM				■		■
				RM						
			NSK	FM						
				RM						
	Roof	outward	HSK	RM				●		●
				PR		●	●		●	
			NSK	RM						
				PR		●	●		●	
	Sky-light	outward	HSK	RM	●	●	●		●	●
			NSK	RM						
FAB(*1			Solo	[mm]	1200	450 – 1300				
FAH(*1			Solo	[mm]	1200	450 – 1500				

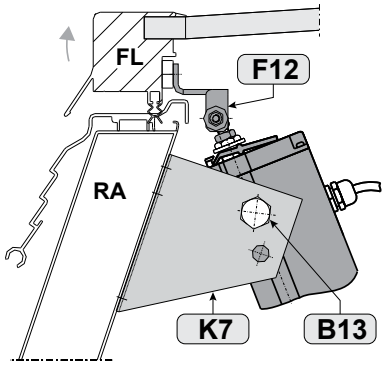
LEGEND

● suitable ■ not recommended

(*1 Sample value of the casement dimensions. The actuell casement dimensions depend on the stroke and the position of the drives to the hinges. The values of FAB/FAH are to be used analogue for side hung windows.

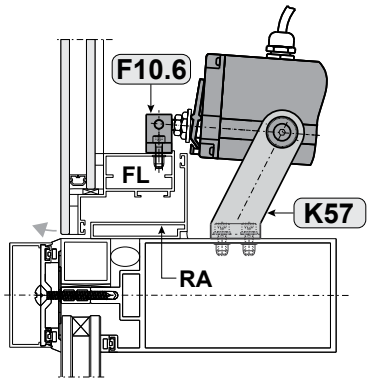
TYPICAL APPLICATIONS

1 RM, HSK, sky light



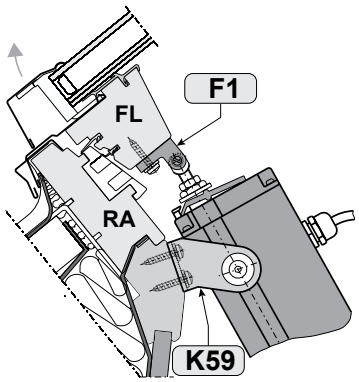
View on sky light Essmann

2 RM, HSK, top hung outward opening



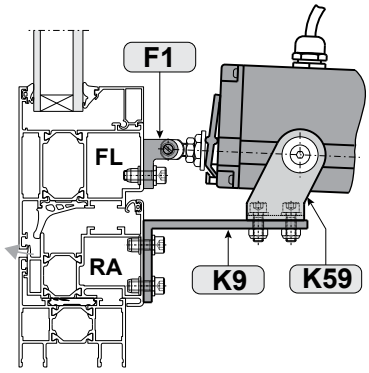
View on aluminium window

3 RM, HSK, roof



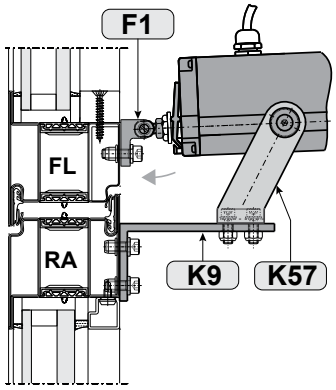
View on wooden window

4 RM, HSK, top hung outward opening



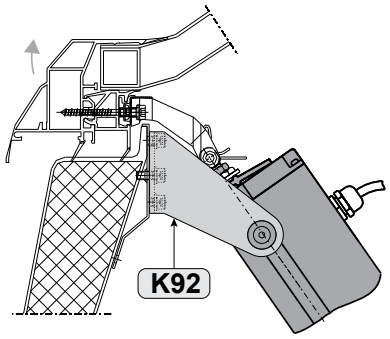
View on aluminium window

4 RM, HSK, top hung outward opening



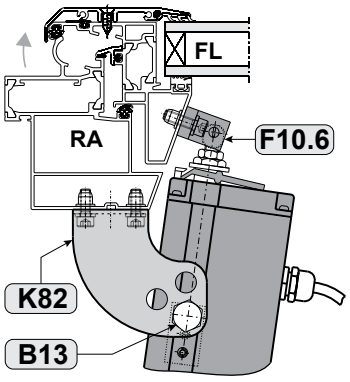
View on steel window

5 RM, HSK, sky light



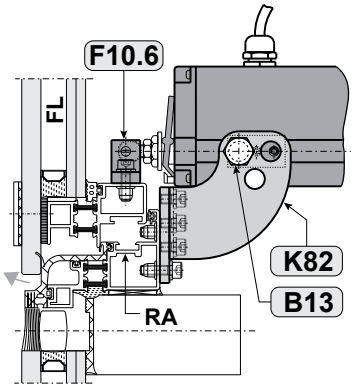
View on sky light Lamilux

6 RM, HSK, roof



View on aluminium window

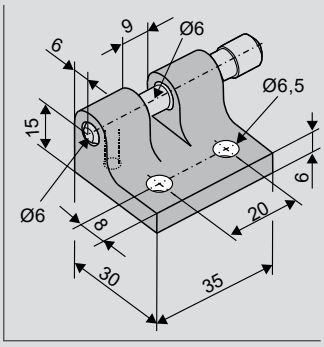
6 RM, HSK, top hung outward opening



View on aluminium window

CASEMENT BRACKETS

F1



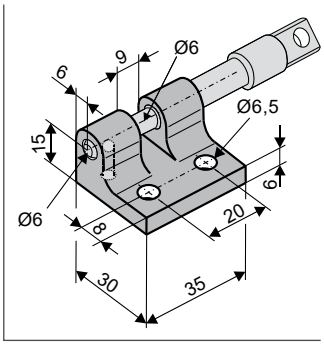
Application

Surface mounting on the **main closing edge** of casement profiles of outward opening windows or skylights, for drives with **front or rear suspension** with bore **Ø6 mm**, manual removal of the drive is possible

Part.-No. 150102

Material/Finish
aluminium, diecast
Feature/Equipment
1x locking bolt Ø6 mm
Load
max. 1000 N

F1.1



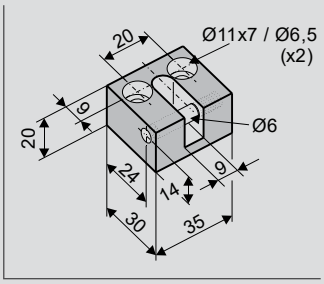
Application

Surface mounting on the **main closing edge** of casement profiles of outward opening windows or skylights, for drives with **front or rear suspension** with bore **Ø6 mm**, manual removal of the drive is possible

Part.-No. 150110

Material/Finish
aluminium, diecast
Feature/Equipment
1x locking spring bolt Ø6 mm
Load
max. 600 N

F1V



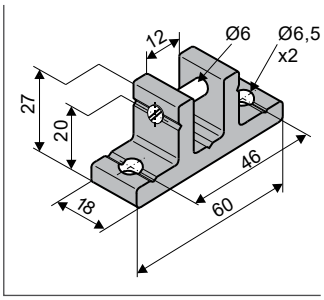
Application

Surface mounting on the **main closing edge** of casement profiles of outward opening windows or skylights, for drives with **front or rear suspension** with bore **Ø6 mm**

Part.-No. 150101

Material/Finish
aluminium
Feature/Equipment
1x grubscrew Ø6 mm
Load
max. 1600 N

F10.6



Application

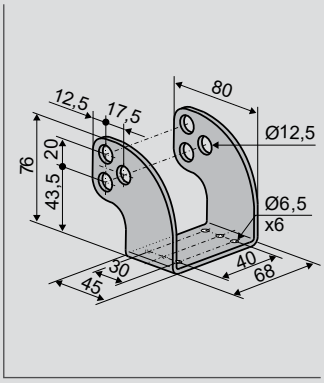
Surface mounting on **main closing edge** of casement profiles of outward opening windows or skylights, for drives with **front or rear suspension** with bore **Ø6 mm**, threaded stud bolt

Part.-No. 151000

Material/Finish
aluminium
Feature/Equipment
1x stud bolt Ø6 mm
Load
max. 1600 N

FRAME BRACKETS

K82



Application

Surface mounting on the **main closing edge** of window frame profiles or on the mullion/transom of outward opening (roof-)windows, for **swivelling suspension** of drives
PLA with **B4**,
SP with **B13,**
LKS with **B7**

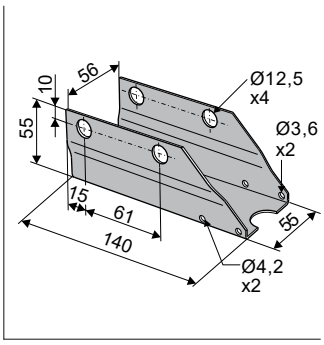
Part.-No. 151320

Material/Finish
stainless steel
Feature/Equipment
drilled holes Ø12,5 mm

Accessories

B13 clamp block SP (12 mm, G1/8) thick	**Part.-No. 513901**

K4-L



Application

Surface mounting on the **main closing edge** of the upstand of skylight domes **Eternit** for swivelling suspension of drives
PLA with **B4**,
SP with **B11,**

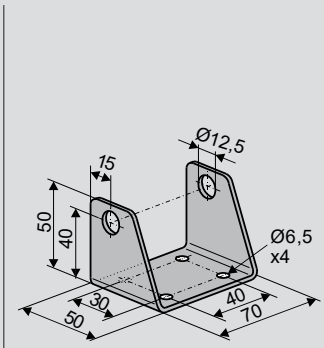
Part.-No. 155610

Material/Finish
steel galvanized
Feature/Equipment
2x screw Taptite M4x10,
1x nut M4,
1x screw M4x65

Accessories

B11 clamp block SP (G1/8)	**Part.-No. 513902**

K5



Application

Surface mounting on the **main closing edge** of window frame profiles or on the mullion/transom of outward opening (roof-)windows, for **swivelling suspension** of drives
PLA with **B4**,
SP8 with **B13,**
LKS with **B7**

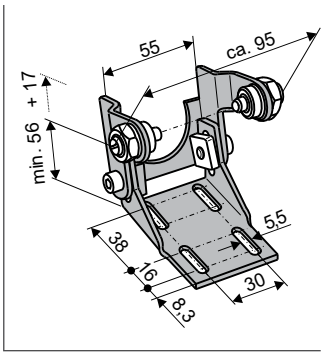
Part.-No. 155800

Material/Finish
stainless steel
Feature/Equipment
drilled holes Ø12,5 mm

Accessories

B13 clamp block SP (12 mm, G1/8)	**Part.-No. 513901**
K21K Frame bracket	**Part.-No. 159900**
K21L Frame bracket	**Part.-No. 159905**

K17



Application

Surface mounting on the **main closing edge** of window frame profiles or on the mullion/transom of outward opening (roof-)windows, for **swivelling suspension** of drives
PLA with **B5**,
SP with **B12**

Part.-No. 159200

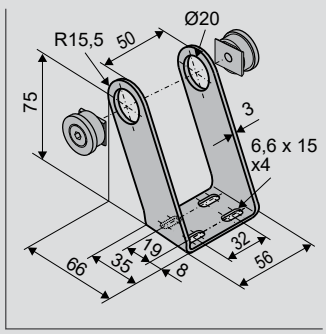
Material/Finish
steel galvanized
Feature/Equipment
adjustable height

Accessories

B12 clamp block SP (7,0 mm thick, Ø8 mm)	**Part.-No. 513903**

FRAME BRACKETS

K57



Application

Surface mounting on the **main closing edge** of the window frame of outward opening roof windows or skylight domes for **swivelling suspension** of drives **SP**, Space in between clamp axis and fixing level **75 mm**

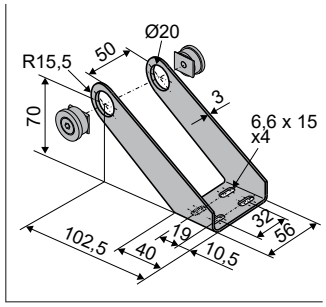
Part.-No. 160930

Material/Finish
steel galvanized
Feature/Equipment
2x B10 clamping bolts

Accessories

K9 Frame bracket — **Part.-No. 158501**

K57.2



Application

Surface mounting on the **main closing edge** of the window frame of outward opening roof windows or skylight domes for **swivelling suspension** of drives **SP**, Space in between clamp axis and fixing plane **70 mm**

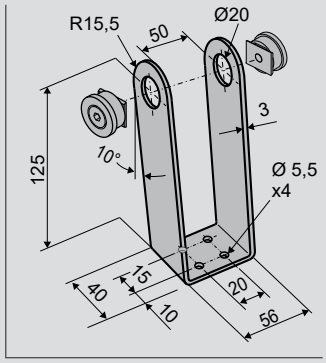
Part.-No. 160931

Material/Finish
steel galvanized
Feature/Equipment
2x B10 clamping bolts

Accessories

K9 Frame bracket — **Part.-No. 158501**

K57.3



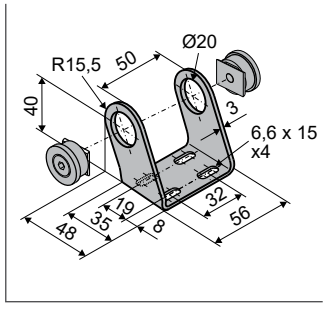
Application

Surface mounting on the **main closing edge** of the window frame of outward opening roof windows or skylight domes for **swivelling suspension** of drives **SP**, Space in between clamp axis and fixing plane **125 mm**

Part.-No. 160935

Material/Finish
steel galvanized
Feature/Equipment
2x B10 clamping bolts

K59



Application

Surface mounting on the **main closing edge** of the window frame of outward opening roof windows or skylight domes for **swivelling suspension** of drives **SP**, Space in between clamp axis and fixing plane **40 mm**

Part.-No. 160934

Material/Finish
steel, powdercoated (RAL 9006-silver)
Feature/Equipment
2x B10 clamping bolts

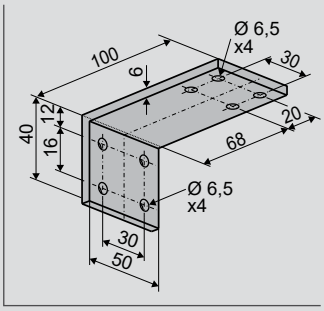
Accessories

K9 Frame bracket — **Part.-No. 158501**

OPTIONAL ACCESSORIES

Window console

K9



Application

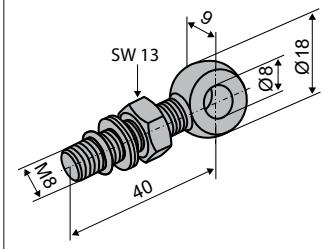
Shift the fastening level of the frame brackets **K57, K57.2** and **K59** from the horizontal to the vertical side of the **main closing edge** of window frames

Part.-No. 158501

Material/Finish
aluminium

Eyebolt

B16ST



Application

Eye bolt for **rear or front suspension** of spindle drives with **M8** thread in the rear base cap or in the spindle tube

Part.-No. 100044

Material/Finish
steel galvanized
Feature/Equipment
M8x40 (Eye Ø8 mm),
1x nut M8,
1x Nordlock-safety-washer,
1x O-ring
max. screw-in depth in the drive 25 mm

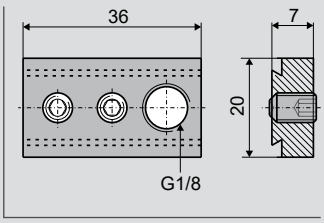
B16VA

Part.-No. 100144

Material/Finish
stainless steel (V2A)

Clamp blocks

B11



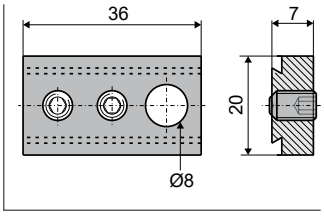
Application

Swivelling suspensin of drives **SP8** on frame brackets **K4-L** with collar screw **B8**

Part.-No. 513902

Material/Finish
aluminium
Feature/Equipment
7,0 mm thick, thread G1/8“,
incl. 2 collar screws B8, Ø12 mm

B12



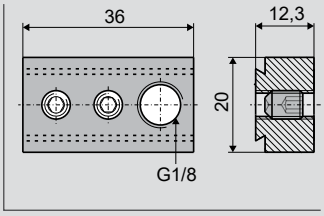
Application

Swivelling suspensin of drives **SP8** on frame brackets **K17**

Part.-No. 513903

Material/Finish
aluminium
Feature/Equipment
7,0 mm thick, bore Ø8,2 mm
2 pieces

B13



Application

Swivelling suspensin of drives **SP8** on frame brackets **K5, K7, K82** with collar screw **B8**

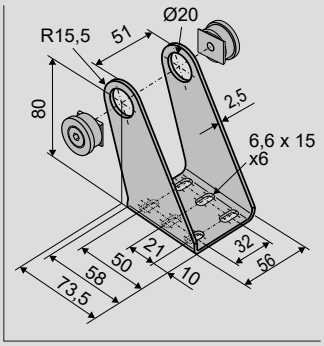
Part.-No. 513901

Material/Finish
aluminium
Feature/Equipment
12,3 mm thick, thread G1/8“,
incl. 2 collar screws B8, Ø12 mm

SPECIFIC APPLICATIONS

SKY-LIGHT LAMILUX

K92



Application

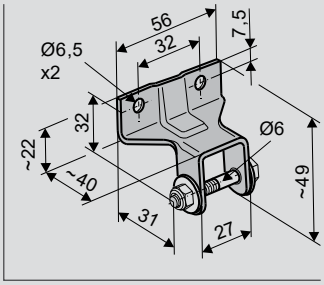
Surface mounting on the **main closing edge** of the upstand of skylight domes **Lamilux** for **swivelling suspension** of drives **SP**. For the front suspension the original casment bracket of Lamilux is used

Part.-No. 160937

Material/Finish
steel, powder coated (RAL 9010 white)
Feature/Equipment
2x B10 clamping bolts

SKY-LIGHT ESSMANN TYP 810

F12



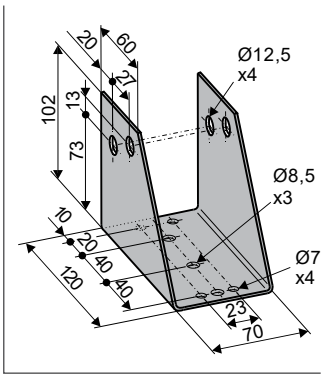
Application

Surface mounting on the **main closing edge** of the casement profiles of skylight domes **Essmann 810** for drives with **front suspension** with bore **Ø6 mm**

Part.-No. 151500

Material/Finish
steel galvanized
Feature/Equipment
1x screw M6,
1x washer,
1x nut
Load
max. 800 N

K7



Application

Surface mounting on the **main closing edge** of the upstand of skylight domes **Essmann 810** for **swivelling suspension** of drives **PLA** with **B4**, **SP** with **B13,** **LKS** with **B7**

Part.-No. 157500

Material/Finish
steel galvanized
Feature/Equipment
drilled holes Ø12,5 mm

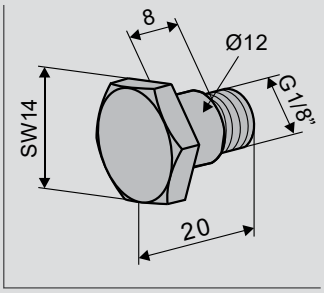
Accessories

B13 clamp block SP (12 mm, G1/8)

Part.-No. 513901

OPTIONAL ACCESSORIES

B8



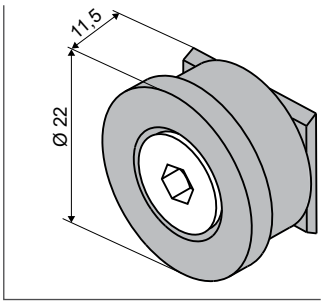
Application

Swivelling suspensin of the clamp rings
B4 for **PLA**
B7 for **LKS**
or of the clamping blocks
B11, **B13** for **SP**
for U-shaped frame brackets
with bore **Ø12,5 mm**

Part.-No. 172800

Material/Finish
stainless steel
Feature/Equipment
collar Ø12 mm, G1/8"

B10



Application

Swivelling suspensin of drives **SP8** on frame brackets **K57, K57.2, K57.3, K59, K92**

Part.-No. 155010

Material/Finish
cast steel, nickel plated
Feature/Equipment
2 pieces
(for drilled holes Ø20 mm)

CASEMENT BRACKETS AND FRAME BRACKETS

Special accessories

Special model	PU/pcs.	Part.-No.
Casement brackets painted / powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516032**
	21 – 50	**516032**
	51 – 100	**516032**
	from 101	**516032**
Frame brackets painted / powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516031**
	21 – 50	**516031**
	51 – 100	**516031**
	from 101	**516031**

aumüller

3 Rack and pinion drives

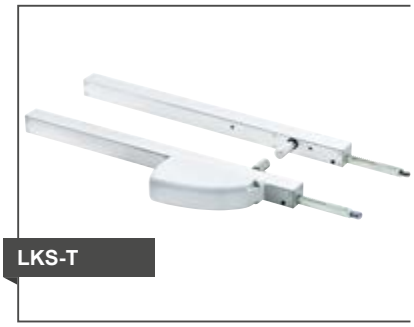
Product Overview



LKS RACK AND PINION DRIVES

Model	24V DC, S2
Pulling/Pushing force	550 N
Stroke length	100 – 1000 mm
Speed	6,0 mm/s
Housing (WxH)	30 x 30 mm x length depending on stroke
Motor-gear-unit	40 x 113 x 156 mm
Opening mechanism	Chromated stainless steel rack
Version	Solo
Protection rating	IP54

LKS



LKS-T RACK AND PINION DRIVES

Model	24V DC, S2
Pulling/Pushing force	550 N
Stroke length	300 – 1000 mm
Speed	6,0 mm/s
Housing (WxH)	30 x 30 mm x length depending on stroke
Opening mechanism	Chromated stainless steel rack
Version	Solo with follower and connection shaft
Protection rating	IP54

LKS T



LKS-TV RACK AND PINION DRIVES

Model	24V DC, S2
Pulling/Pushing force	1100 N
Stroke length	300 – 1000 mm
Speed	6,0 mm/s
Housing (WxH)	30 x 30 mm x length depending on stroke
Opening mechanism	Chromated stainless steel rack
Version	Tandem with connection shaft
Protection rating	IP54

LKS TV

RACK AND PINION DRIVES

Type	Form	Model		Stroke (Factory setting)	Force		Speed (Factory setting)		Stroke in	Cut-off current	Use			Loca-tion		Functions		
		Type of cut-off	Rated voltage	Range	Pushing force	Pulling force	OPEN	CLOSE	60 s	Max.	Natural ventilation	RWA	NRWG	Facade	Roof	Run monitoring	Synchronised run	Sequence control
			[VDC]	[mm]	[N]	[N]	[mm/s]	[mm/s]	[mm]	[A]								
LKS	LKS (SOLO)	S2	24	100–1000	550	550	6,0	6,0	350	0,8	●	●		●	●	○		○
	LKS-T			300–1000	550	550				0,8	●	●		■	●		●	○
	LKS-TV			300–1000	1100	1100				1,6	●	●		■	●		●	○

LEGEND

● suitable

■ not recommended

S2 internal load dependend cut-off switch

○ only with external control module USKM



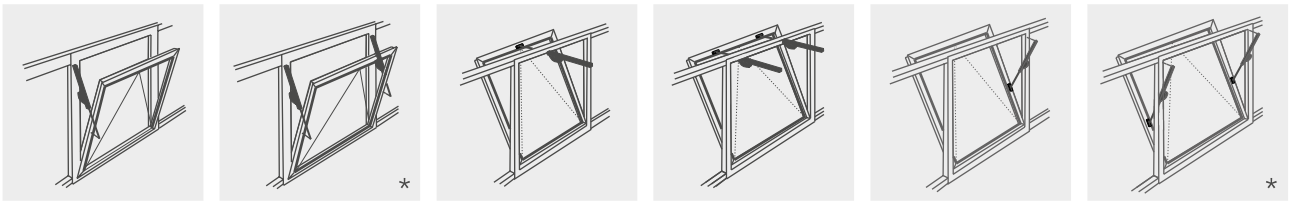
SPECIAL FEATURES LKS

- For natural ventilation and smoke and heat exhausting
- Robust corrosion-resistant design
- Slim natural anodysed aluminium housing (30 x 30 mm)
- Grey plastic housing for motor-gear unit
- Easy installation due to adjustuple clamp ring as well as front and rear suspension
- Chromated stainless steel rack with end position dampening

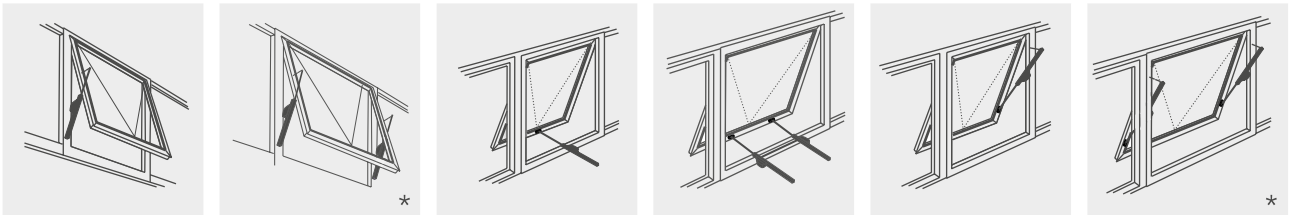
For this product series, a Type III Environmental Product Declaration (EPD) was issued according to ISO 14025 and EN 15804.
The LCA results of the different product types are listed at the end of this product catalogue.
The EPD documents can be viewed or downloaded from our homepage **www.aumueller-gmbh.de**.

FACADE

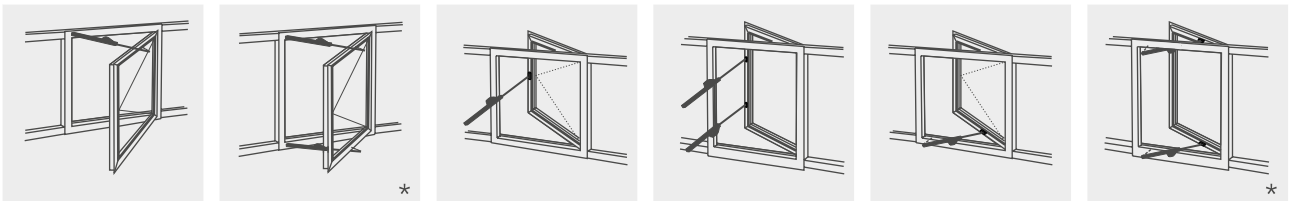
Bottom-hung



Top-hung

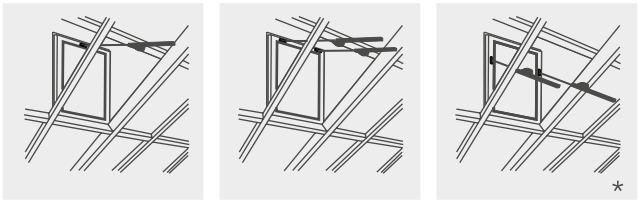


Side-hung

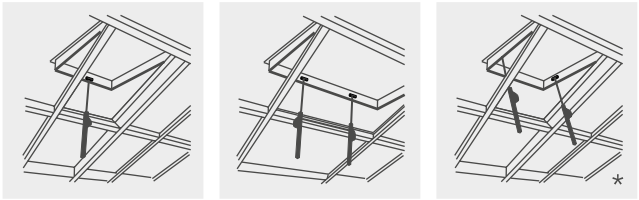


ROOF

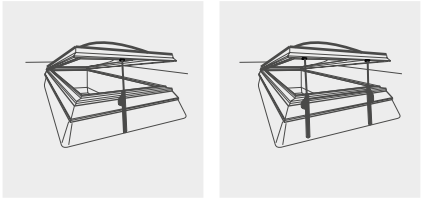
Bottom-hung



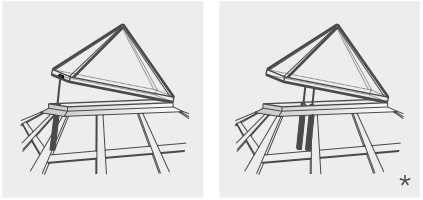
Top-hung



Sky light



Glass pyramid

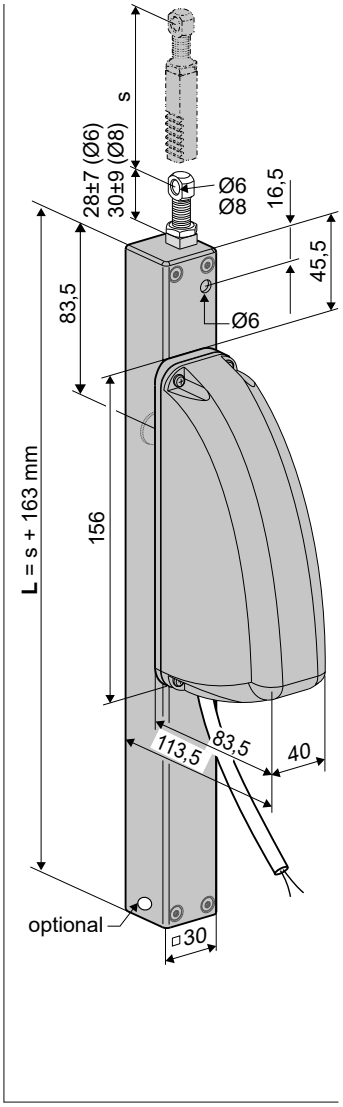


*Monitored motion run up to s = 300 mm with USKM (Controll modul Part.-No.: 512140)

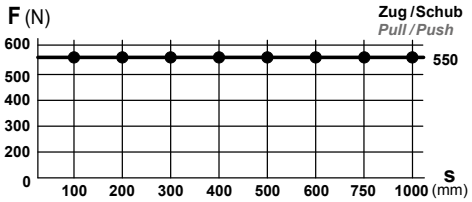
- Application: natural ventilation and RWA as single-drive
- Internal load dependend cut-off switch S2

Options

- Drillings for front / rear suspension
- Monitored motion run of 2 drives up to s = 300 mm via USKM



TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	0,6 A
I_A	Cut-off current	0,8 A
P_N	Rated power	15 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 54
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	550 N
F_A	Pushing force max.	
F_H	Pullout force	1.800 N (fastening depended)
	Rack	stainless steel
	Connecting cable	non-halogen, grey 2 x 0,75 mm², ~ 1 m
v	Speed	6,0 mm/s 6,0 mm/s
s	Stroke	see order data
L	Length	s + 163 mm (see order data)
	Sound pressure level	≤ 70 dB (A)

ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.
100	263	LKS 100 S2	E6/C-0	1	**513100.N**
200	363	LKS 200 S2	E6/C-0	1	**513200.N**
300	463	LKS 300 S2	E6/C-0	1	**513300.N**
400	563	LKS 400 S2	E6/C-0	1	**513400.N**
500	663	LKS 500 S2	E6/C-0	1	**513500.N**
600	763	LKS 600 S2	E6/C-0	1	**513600.N**
750	913	LKS 750 S2	E6/C-0	1	**513800.N**
1000	1163	LKS 1000 S2	E6/C-0	1	**513805.N**

OPTIONS

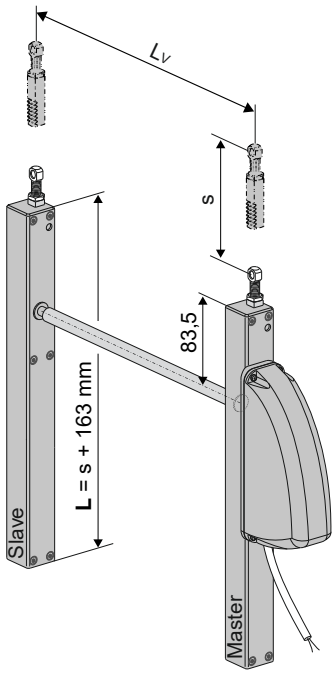
Special model	PU/pcs.	Part.-No.
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Extra length connecting cable:		
3 m – non-halogen, grey – 2 x 0,75 mm²		**501023**
5 m – non-halogen, grey – 2 x 0,75 mm²		**501024**
10 m – non-halogen, grey – 2 x 0,75 mm²		**501026**
Accessories for fron / rear suspension		
2 additional holes Ø6 mm in the bottom of of housing for rear suspension with K28, K29	1	**520901**
Mechanic stroke reduction		
Stroke reduction without construction length - mechanically	1	**516000**
Other lengths available on request		

Tandem control with or without sequence control	PU/pcs.	Part.-No.
Connection shaft		
USKM (s ≤ 300mm)	1	**512140**

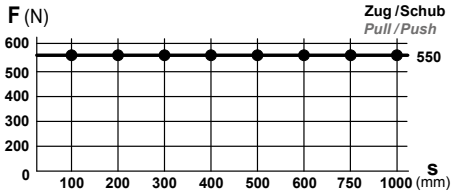
- Application: natural ventilation and RWA as single-drive
- Internal load dependend cut-off switch S2
- Drive with follower operated by the connection shaft to divide the force on 2 points

Options

- Drillings for front / rear suspension
- Connection shaft with different lengths



TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	0,6 A
I_A	Cut-off current	0,8 A
P_N	Rated power	15 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 54
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	550 N
F_A	Pushing force max.	
F_H	Pullout force	1.800 N (fastening depended)
	Rack	stainless steel
	Connecting cable	non-halogen, grey 2 x 0,75 mm², ~ 1 m
v	Speed	6,0 mm/s 6,0 mm/s
s	Stroke	see order data
L	Length	s + 163 mm (see order data)
L_V	Connection shaft	Standard length see order data
	Sound pressure level	≤ 70 dB (A)

ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.
300	463	LKS T 300 S2	E6/C-0	1	**513300.T**
500	563	LKS T 500 S2	E6/C-0	1	**513500.T**
600	663	LKS T 600 S2	E6/C-0	1	**513600.T**
750	913	LKS T 750 S2	E6/C-0	1	**513800.T**
1000	1163	LKS T 1000 S2	E6/C-0	1	**513805.T**

OPTIONS

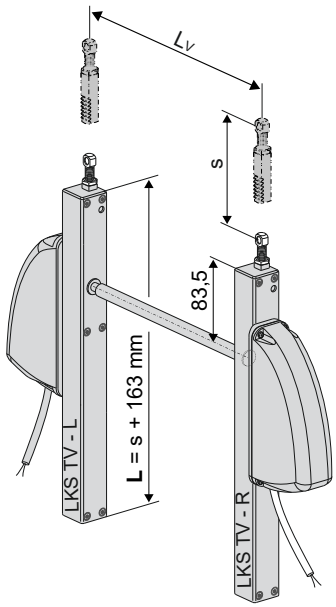
Special model		PU/pcs.	Part.-No.
Drive housing painted/powder coated in other RAL colours			
Lump sum for coating			**516030**
Specify at order stage:		1 – 20	**516004**
		21 – 50	**516004**
		51 – 100	**516004**
		from 101	**516004**
Extra length connecting cable:			
3 m – non-halogen, grey – 2 x 0,75 mm²			**501023**
5 m – non-halogen, grey – 2 x 0,75 mm²			**501024**
10 m – non-halogen, grey – 2 x 0,75 mm²			**501026**
Accessories for fron / rear suspension			
2 additional holes Ø6 mm in the bottom of of housing for rear suspension with K28, K29		1	**520901**
Mechanic stroke reduction			
Stroke reduction without construction length - mechanically		1	**516000**
Other lengths available on request			

Accessories	Lv [mm]	PU/pcs.	Part.-No.
Connection shaft			
B17-1	1000	1	**513050**
B17-2	1500	1	**513052**

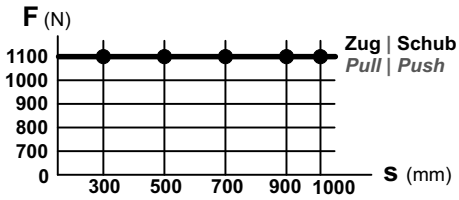
- Application: natural ventilation and RWA as single-drive
- Internal load dependend cut-off switch S2
- 2 drives mechanical sinchronised by the connection shaft

Options

- Drillings for front / rear suspension
- Connection shaft with different lengths



TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	1,2 A
I_A	Cut-off current	2 x 0,8 A
P_N	Rated power	30 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 54
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	1100 N
F_A	Pushing force max.	
F_H	Pullout force	2 x 1.500 N (fastening depended)
	Rack	stainless steel
	Connecting cable	non-halogen, grey 2 x 0,75 mm², ~ 1 m
v	Speed	6,0 mm/s 6,0 mm/s
s	Stroke	see order data
L	Length	s + 163 mm (see order data)
L_V	Connection shaft	Standard length see order data
	Sound pressure level	≤ 70 dB (A)

ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.
300	463	LKS TV 300 S2	E6/C-0	1	**513300.TV**
500	563	LKS TV 500 S2	E6/C-0	1	**513500.TV**
600	463	LKS TV 600 S2	E6/C-0	1	**513600.TV**
750	913	LKS TV 750 S2	E6/C-0	1	**513800.TV**
1000	1163	LKS TV 1000 S2	E6/C-0	1	**513805.TV**

OPTIONS

Special model		PU/pcs.	Part.-No.
Drive housing painted/powder coated in other RAL colours			
Lump sum for coating			**516030**
Specify at order stage:		1 – 20	**516004**
		21 – 50	**516004**
		51 – 100	**516004**
		from 101	**516004**
Extra length connecting cable:			
3 m – non-halogen, grey – 2 x 0,75 mm²			**501023**
5 m – non-halogen, grey – 2 x 0,75 mm²			**501024**
10 m – non-halogen, grey – 2 x 0,75 mm²			**501026**
Accessories for fron / rear suspension			
2 additional holes Ø6 mm in the bottom of of housing for rear suspension with K28, K29		1	**520901**
Mechanic stroke reduction			
Stroke reduction without construction length - mechanically		1	**516000**
Other lengths available on request			

Accessories	Lv [mm]	PU/pcs.	Part.-No.
Connection shaft			
B17-1	1000	1	**513050**
B17-2	1500	1	**513052**

OVERVIEW OF BRACKETS

					1	2	3	4	5	6
Typical applications										
Frame bracket					K5, K82	K5	K28	K29	K29	K41
Mounting aid						K21	K15, K16		K21	
Bracket accessories					B7		Rear holes	Front holes	Front holes	Front holes
Casement bracket					F1, F1V, F1.1, F2.1, F10.6		F1, F1V, F2.1, F10.6			F12
Special use										Sky light Essmann
Space requirement			min.	[mm]	50	40 – 50	40	40	40 – 50	90
Window material			Alu		●	●	●	●	●	
			Wood		●	●	●	●	●	
			PVC		●	●	●	●	●	●
Type of window and mounting	Bottom hung	inward	HSK	FM		■			■	
				RM						
			NSK	FM			●			
				RM						
		outward	HSK	RM		●			●	
				PR	●			●		
			NSK	RM			●			
				PR						
	Top hung	inward	HSK	FM		■			■	
				RM						
			NSK	FM						
				RM			●			
		outward	HSK	RM		●			●	
				PR	●			●		
			NSK	RM			●			
				PR						
	Side hung	inward	HSK	FM		■			■	
				RM						
			NSK	FM			●			
				RM						
	Roof	outward	HSK	RM		●			●	
				PR	●			●		
			NSK	RM		●			●	
				PR	●			●		
	Skylight	outward	HSK	RM	●			●		●
			NSK	RM						
FAB*1			Solo	[mm]	700 – 1300					
			Sync2	[mm]	1200 – 2500					
FAH*1			Solo	[mm]	450 – 1500					
			Sync2	[mm]	450 – 2500					

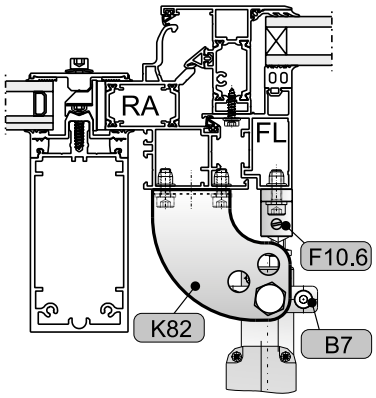
LEGEND

● suitable ■ not recommended

*1 Sample value of the casement dimensions. The actuell casement dimensions depend on the stroke and the position of the drives to the hinges. The values of FAB/FAH are to be used analogue for side hung windows.

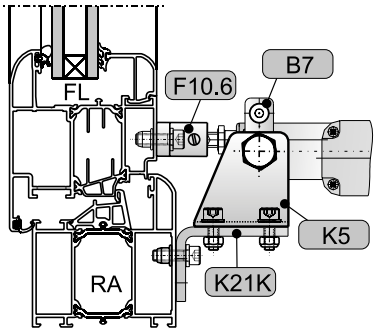
TYPICAL APPLICATIONSE

1 RM, HSK, roof



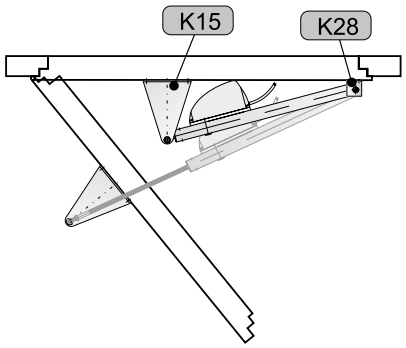
View on aluminium window

2 RM, HSK, top-hung outward opening



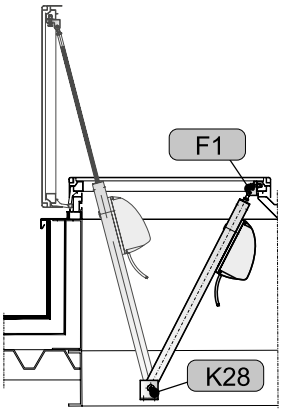
View on PVC-window

2 RM, NSK, side-hung inward opening



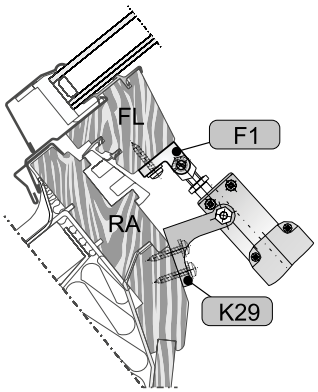
View for example

3 RM, HSK, roof



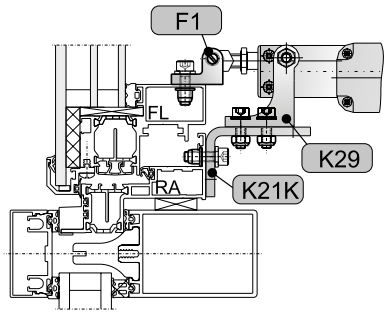
View on roof window

4 RM, HSK, roof



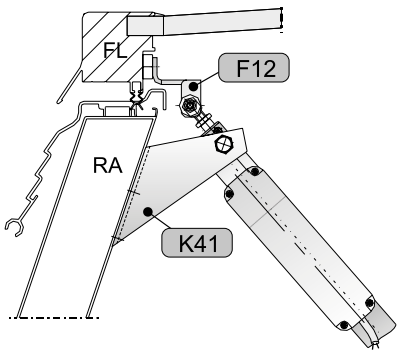
View on wooden window

5 RM, HSK, top-hung outward opening



View on aluminium window

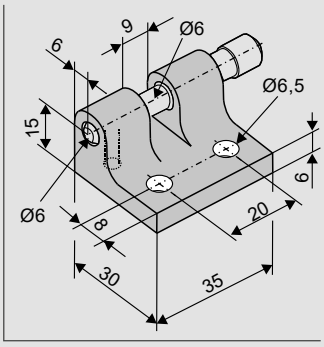
6 RM, HSK, sky light



View on sky light Essmann

CASEMENT BRACKETS

F1



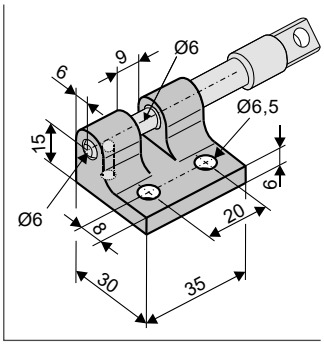
Application

Surface mounting on the **main closing edge** of casement profiles of outward opening windows or skylights, for drives with **front or rear suspension** with bore **Ø6 mm**, manual removal of the drive is possible

Part.-No. 150102

Material/Finish
aluminium, diecast
Feature/Equipment
1x Locking bolt Ø6 mm
Load
max. 1.000 N

F1.1



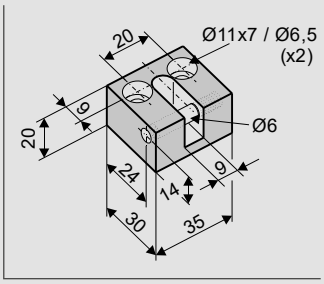
Application

Surface mounting on the **main closing edge** of casement profiles of outward opening windows or skylights, for drives with **front or rear suspension** with bore **Ø6 mm**, manual removal of the drive is possible

Part.-No. 150110

Material/Finish
aluminium, diecast
Feature/Equipment
1x Locking spring bolt Ø6 mm
Load
max. 600 N

F1V



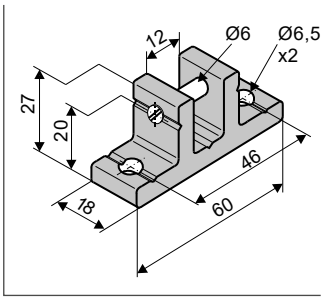
Application

Surface mounting on the **main closing edge** of casement profiles of outward opening windows or skylights, for drives with **front or rear suspension** with bore **Ø6 mm**

Part.-No. 150101

Material/Finish
aluminium
Feature/Equipment
1x grubscrew Ø 6 mm
Load
max. 1600 N

F10.6



Application

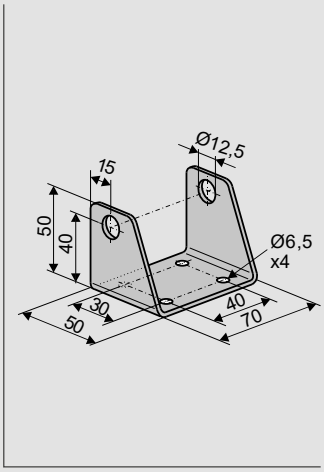
Surface mounting on **main closing edge** of casement profiles of outward opening windows or skylights, for drives with **front or rear suspension** with bore **Ø6 mm**, threaded stud bolt

Part.-No. 151000

Material/Finish
aluminium
Feature/Equipment
1x stud bolt Ø6 mm
Load
max. 1600 N

CASEMENT BRACKETS

K5



Application

Surface mounting on the **main closing edge** of window frame profiles or on the mullion/transom of outward opening (roof-)windows, for **swivelling suspension** of drives
PLA with **B4**,
SP with **B13,**
LKS with **B7**

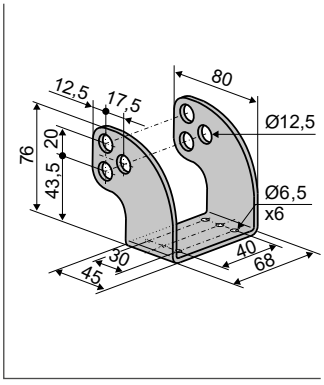
Part.-No. 155800

Material/Finish
stainless steel
Feature/Equipment
bore holes Ø12,5 mm

Accessories

B7 clamp ring LKS (30 x 30 mm, G1/8)	**Part.-No. 513900**
K21K Frame bracket	**Part.-No. 159900**
K21L Frame bracket	**Part.-No. 159905**

K82



Application

Surface mounting on the **main closing edge** of window frame profiles or on the mullion/transom of outward opening (roof-)windows, for **swivelling suspension** of drives
PLA with **B4**,
SP with **B13,**
LKS with **B7**

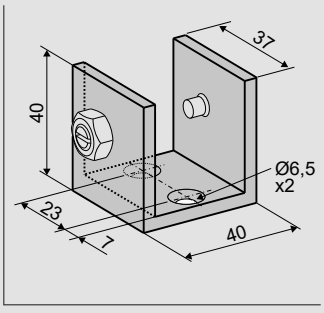
Part.-No. 151320

Material/Finish
stainless steel
Feature/Equipment
bore holes Ø12,5 mm

Accessories

B7 clamp ring LKS (30 x 30 mm, G1/8)	**Part.-No. 513900**

K28



Application

Surface mounting on the **main closing egde** of window frame profiles (or on the mullion/transom) of outward opening (roof-) windows, for **swivelling suspension** of drives **LKS** with **front or rear** bore **Ø6,0 mm**

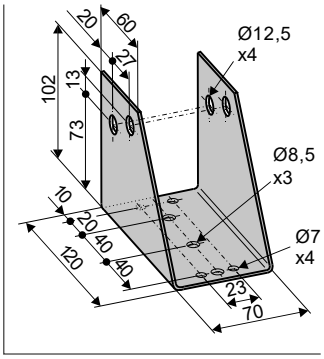
Part.-No. 160800

Material/Finish
aluminium, nature
Feature/Equipment
2x grubscrew M8,
2x nut M8
Load
max. 600 N

Accessories

2 rear holes Ø6 mm	**Part.-No. 520901**

K7



Application

Surface mounting on the **main closing edge** of the upstand of skylight domes **Essmann 810** for **swivelling suspension** of drives
PLA with **B4**,
SP with **B13,**
LKS with **B7**

Part.-No. 157500

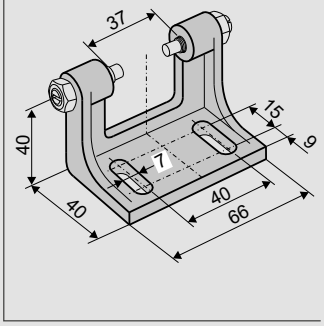
Material/Finish
steel galvanized
Feature/Equipment
drilled holes Ø12,5 mm

Accessories

B7 clamp ring LKS (30 x 30 mm, G1/8)	**Part.-No. 513900**

CASEMENT BRACKETS

K29



Application

Surface mounting on the **main closing egde** of window frame profiles (or on the mullion/transom) of outward opening (roof-) windows, for **swivelling suspension** of drives **LKS** with **front or rear** bore **Ø6,0 mm**

Part.-No. 160900

Material/Finish
aluminium, nature
Feature/Equipment
2x grubscrew M8,
2x nut M8
Load
max. 600 N

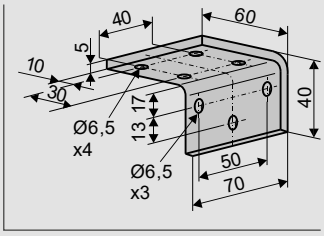
Accessories

2 rear holes Ø 6 mm	**Part.-No. 520901**
K21K Frame bracket	**Part.-No. 159900**
K21L Frame bracket	**Part.-No. 159905**

ACCESSORIES

Frame bracket

K21K



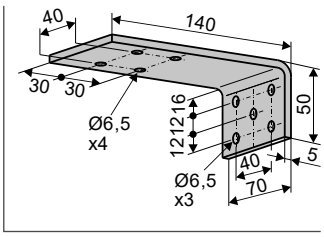
Application

Shift the fastening level of the frame brackets **K5, K29** from the horizontal to the vertical position of the **main closing edge** of window frame profiles

Part.-No. 159900

Material/Finish
steel, galvanized

K21L



Application

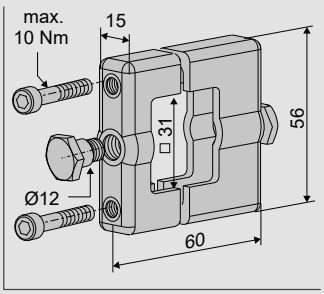
Shift the fastening level of the frame brackets **K5, K29** from the horizontal to the vertical position of the **main closing edge** of window frame profiles

Part.-No. 159905

Material/Finish
steel, galvanized

Clamp ring

B7



Application

Adjustable clamping of the **LKS** drive housing, for surface mounting with **swivelling suspension** on **K5, K7, K82**, (preferuply on outward opening windows)

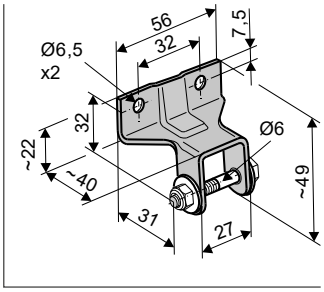
Part.-No. 513900

Material/Finish
aluminium (E6/C-0),
stainless steel
Feature/Equipment
2x B8 collar screw Ø12mm, G1/8
2x cylinder head screw M6x50

SPECIFIC APPLICATIONS

SKY-LIGHT ESSMANN TYP 810

F12



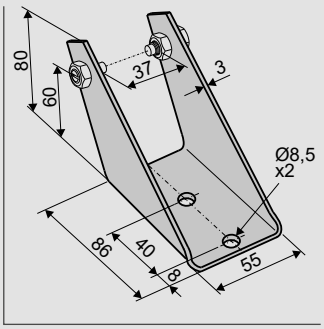
Application

Surface mounting on the **main closing edge** of the casement profiles of skylight domes **Essmann 810** for drives with **front suspension** with bore **Ø6 mm**

Part.-No. 151500

Material/Finish
steel, galvanized
Feature/Equipment
1x screw M6,
1x washer,
1x nut
Load
max. 800 N

K41



Application

Finish mounting on the main closing edge **(HSK)** of the upstand of skylight domes **Essmann 810** for **swivelling suspension** of drives **LKS**

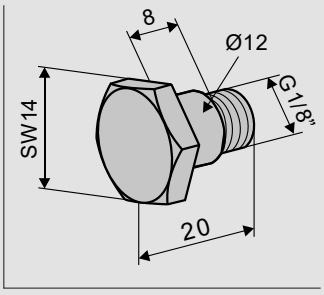
Part.-No. 160910

Material/Finish
steel, galvanized
Feature/Equipment
2x grubscrew M8,
2x nut M8

OPTIONAL ACCESSORIES

Collar screw

B8



Application

Swivelling suspensin
of the clamp rings
B4 for **PLA**
B7 for **LKS**
or of the clamping blocks
B11, **B13** for **SP**
for U-shaped frame brackets
with bore **Ø12 mm**

Part.-No. 172800

Material/Finish
stainless steel (1.4305)
Feature/Equipment
collar Ø12 mm, G1/8"

Special model	PU/pcs.	Part.-No.
Casement brackets painted / powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516032**
	21 – 50	**516032**
	51 – 100	**516032**
	from 101	**516032**
Frame brackets painted / powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516031**
	21 – 50	**516031**
	51 – 100	**516031**
	from 101	**516031**

aumüller

4 Folding arm drives

Product Overview



FTA600 R

FTA600 R FOLDING ARM DRIVES

Model	24V DC, S12
Pulling/Pushing force	215 Nm / 215 Nm
Opening angle (lever)	5 – 93 Degree, programmable
Speed	1,5 - 2,5 Degree/s, programmable
Housing (WxH)	40 x 56 x 421 mm, aluminuim
Opening mechanism	Lever arm 20 x 30 x 405 mm, aluminuim
Version	Solo with roller for air inlets
Protection rating	IP32

FTA600 R



FTA600 DF

FTA600 DF FOLDING ARM DRIVES

Model	24V DC, S12
Pulling/Pushing force	215 Nm / 215 Nm
Opening angle (lever)	5 – 93 Degree, programmable
Speed	1,5 - 2,5 Degree/s, programmable
Housing (WxH)	40 x 56 x 421 mm, aluminuim
Opening mechanism	Lever arm 20 x 30 x 381 mm, aluminuim
Version	Solo with knuckle joint for side-hung inward opening windows
Protection rating	IP32

FTA600 DF



FTA600 GF

FTA600 GF FOLDING ARM DRIVES

Model	24V DC, S12
Pulling/Pushing force	215 Nm / 215 Nm
Opening angle (lever)	5 – 93 Degree, programmable
Speed	1,5 - 2,5 Degree/s, programmable
Housing (WxH)	40 x 56 x 421 mm, aluminuim
Opening mechanism	Lever arm 20 x 30 x 444 mm, aluminuim
Version	Solo with slide rail for side hung outward opening windows
Protection rating	IP32

FTA600 GF

FOLDING ARM DRIVES

Type	Form	Model		Opening angle (Factory setting)	Torque		Speed (Factory setting)		Cut-off current	Use			Location	Functions		
		Type of cut-off	Rated voltage	Range	Opening torque	Closing torque	OPEN	CLOSE	Max.	Natural ventilation	RWA	NRWG	Facade	Run monitoring	Synchronised run	Sequence control
			[VDC]	[°]	[Nm]	[Nm]	[°/s]	[°/s]	[A]							
FTA	FTA R	S12	24	93	215	215	2,0	2,0	1,4	●	●	●	●	●	●	●
	FTA DF					215				●	●	●	●	●	●	●
	FTA GF					215				●	●	●	●	●	●	●

LEGEND

● suitable ■ not recommended

S12 internal intelligent cut-off switch for synchronised run and programmable functions



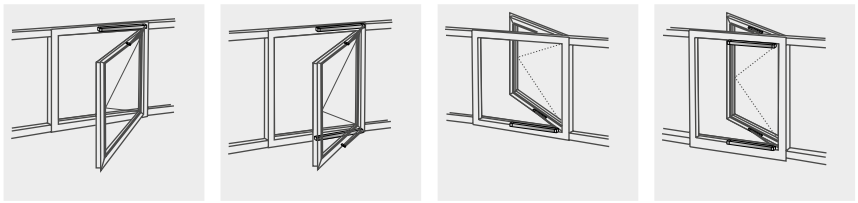
SPECIAL FEATURES FTA600

- For natural ventilation, smoke and heat exhausting systems and ferralux® NRWG (EN12101-2)
- Type:
  - R – with role: The folding arm opens via role for air inlets at 90°
  - DF – with knuckle-joint for opening/closing of side hung inward opening windows at 90°
  - GF – with slide rail for openeing/closing of side hung outward opening windows at 90°
- Opening time of 45 s for 90° opening angle
- Programmable voltage free contact
- Robust corrosion-resistant design
- Easy installation due to holes in the end caps of housing
- Programmable parameters of Internal Intelligent Control Electronics S12
  - Synchronised multi-operation and sequence control without add. devices
  - Electronic soft-start, soft-close and soft-stop at end of stroke control
  - Stroke, force, speed
  - Rebate control
- Integrated plug solution
- Suitable for M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives

For this product series, a Type III Environmental Product Declaration (EPD) was issued according to ISO 14025 and EN 15804.
The LCA results of the different product types are listed at the end of this product catalogue.
The EPD documents can be viewed or downloaded from our homepage **www.aumueller-gmbh.de**.

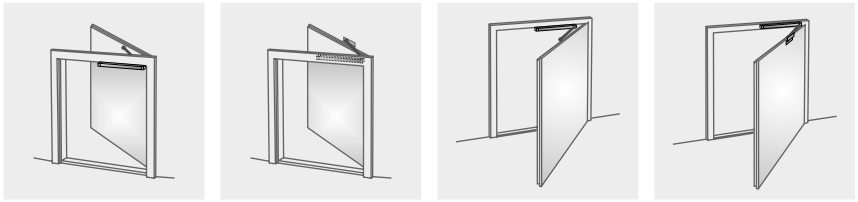
FACADE

Side-hung (FTA600 DF/GF)



INLET AIR

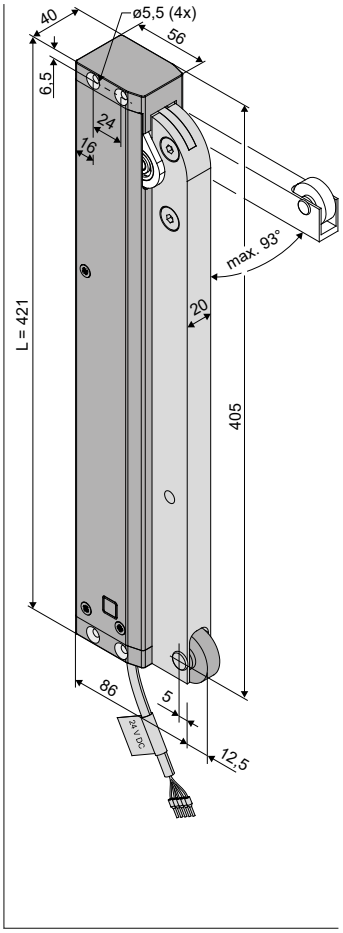
Floor-to-ceiling windows (FTA600 R)



- Application: natural ventilation, RWA
- Mainly for supply air openings
- Internal Intelligent Control Electronics S12
- Programmable contact for opener
- Unitary plug-solution for Aumüller Click System

Options

- Programmable special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)
- Various customised programmings on request



TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	1,0 A
I_A	Cut-off current	1,4 A
P_N	Rated power	24 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +60 °C
M_A	Force (Torque) OPEN (max.)	600 N (~ 215 Nm)
M_Z	Force (Torque) CLOSE (max.)	600 N (~ 215 Nm)
F_H	Pullout force	3.000 N (fastening depended)
	Lever arm	aluminium (RAL9006)
	Connecting cable	non-halogen, grey 5 x 0,5 mm², ~ 3 m
v	Speed (constant at 2/3 load)	Factory settings: 2,0°/s (45 s for 0° - 90°) / 2,0°/s (45 s for 0° - 90°) Adjustment range: 1,5 - 2,5 °/s
s	Stroke length (lever)	Factory settings: 93° (± 5%) Adjustment range: 5 - 93°
L	Length	421 mm
	Potential free contact	max. 24 VDC / 0,5A, programmable
	Sound pressure level	≤ 70 dB (A)

ORDER DATA

s [DEG]	L [mm]	Version	Finish	PU/pcs.	Part.-No.
0° – 93°	421	FTA600 R S12 24V	E6/C-0	1	**524144**

Accessories	PU/pcs.	Part.-No.
K88 Casement bracket FTA600 R	1	**524156**

OPTIONS

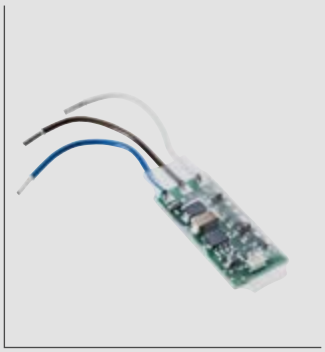
Special model	PU/pcs.	Part.-No.
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Microprocessor programming S12		
Electronic stroke reduction 24V S12	1	**524190**
Programming drives 24V / 230V S12		**524180**

Optional accessories	PU/pcs.	Part.-No.
Configuration module for synchronised multi-drive systems	1	**524177**

OPTIONAL ACCESSORIES

Main control unit and plug solution

M-COM



Application

Configuration module for automatic configuration and monitoring of max. 4 opening drives / 2 locking drives version S12 / S3 in synchronised multi-drive systems

Rated voltage:
24 V DC (19 V ... 28 V)
Current consumption: <12 mA
Drive type: S12
Protection rating
IP30 rubber envelope

Part.-No. 524177

Ambient temperature range
0 °C ... + 70 °C
Dimensions
45 x 17 x 6 mm
Connecting wires
3 wires 0,5 mm² x 50 mm
Feature/Equipment
Printed circuit board with components and connection wires to be installed in connection box to be supplied on site

Wire Click



Wire Click:
Unitary plug-solution for Aumüller Click System.

Rated voltage:
24 V DC (19 V ... 28 V)
Connecting cable:
non-halogen, grey 5 x 0,5 mm²

Terminal: up to 1,5 mm²

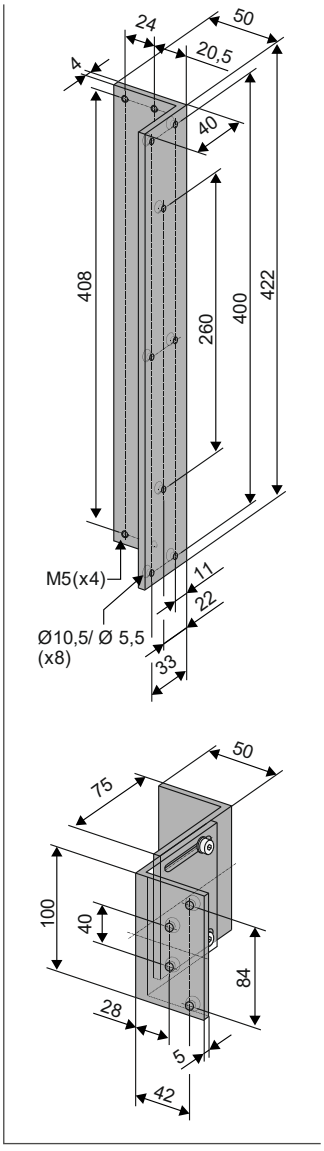
Feature/Equipment
- Flexible cable length
- Connect multiple drives in series connection
- Torsion-plug
- Locking hooks prevent withdrawal of the plug under tensile load
- Strain relief according DIN EN 60335-1 by screwing the housing halves

VARIANTS: 24V - Silicone	
3 m cable length - 24V DC	**Part.-No. 501251**
5 m cable length - 24V DC	**Part.-No. 501252**
10 m cable length - 24V DC	**Part.-No. 501253**

OPTIONAL ACCESSORIES

Casement bracket

K88



Application

Surface mounting on the **side closing edge** of frame profiles of inward opening floor-to-ceiling windows as air inlets.
Angle bracket **422 mm** for mounting of FTA600-R on the frame profile.
Two angle brackets 100 mm for mounting on the floor-to-ceiling windows as sliding guidance of the carrier role, adjustable for compensation of the overlap.

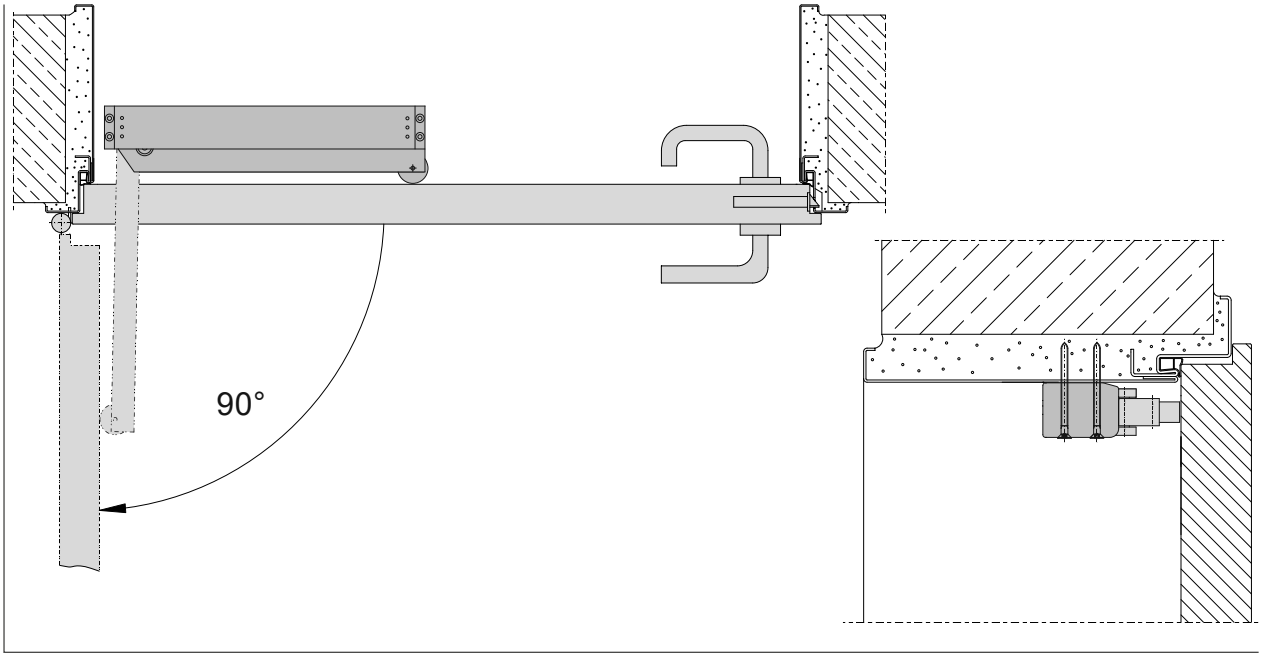
Part.-No. 524156

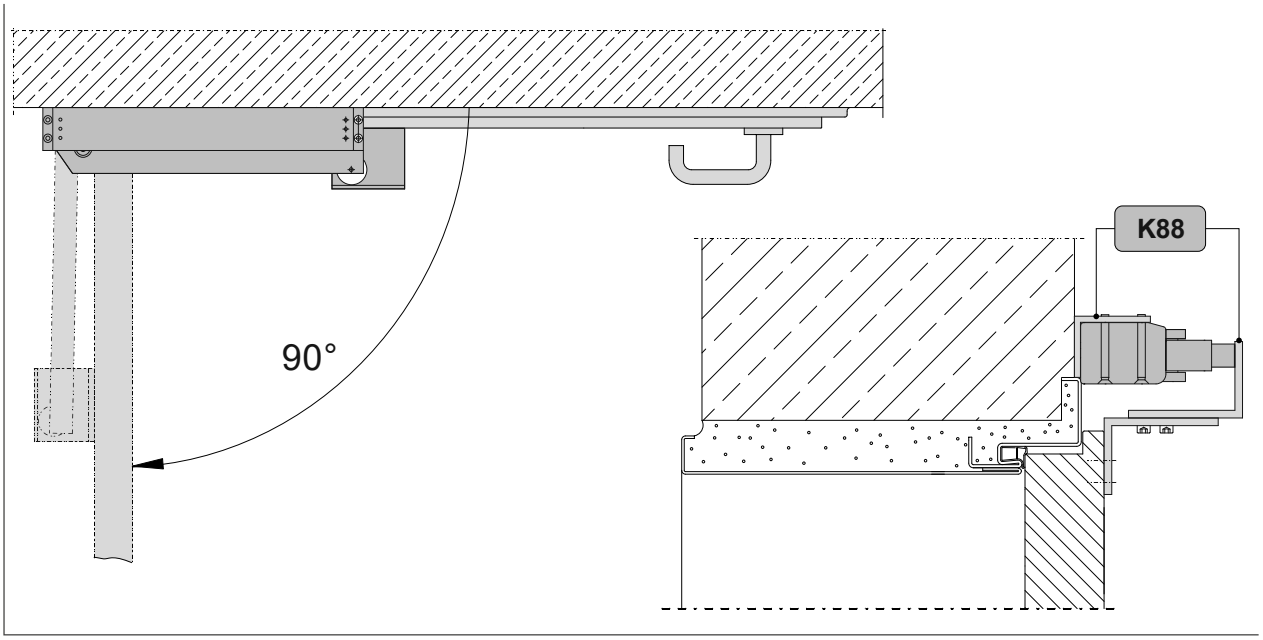
Material/Finish
aluminium
Feature/Equipment
1x angle 50 x 40 x 422 (t = 4) mm
2x angles 50 x 75 x 100 (t = 5) mm
fixing screws and nuts
Load
max. 600 N

FRAME BRACKETS

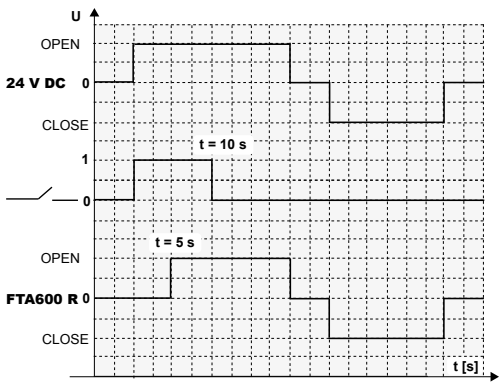
Special model	PU/pcs.	Part.-No.		
Frame brackets painted / powder coated in other RAL colours				
Lump sum for coating		**516030**		
Specify at order stage:	1 – 20	**516031**		
	21 – 50	**516031**		
	51 – 100	**516031**		
	from 101	**516031**		

Typical applications





Contact diagramm



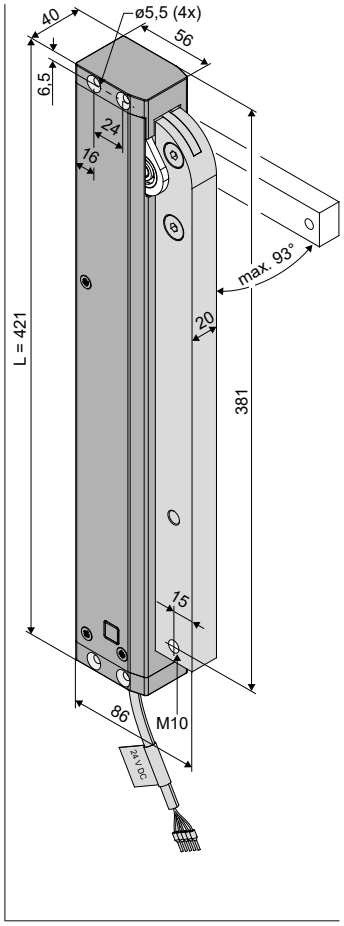
After application of the voltage, the floor-to-ceiling windows lock contact is activated for 10 seconds. With a delay of about 5 seconds, the drive arm of the folding arm drives **FTA600 R** starts moving and opens to an angle of max. 93°.

During the **closing operation**, the floor-to-ceiling window lock contact is not activated.

- Application: natural ventilation, RWA
- Mainly for opening and closing of side-hung inward opening windows
- Internal Intelligent Control Electronics S12
- Programmable contact for feedback
- Unitary plug-solution for Aumüller Click System

Options

- Programmable special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)
- Various customised programmings on request



TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	1,0 A
I_A	Cut-off current	1,4 A
P_N	Rated power	20 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +60 °C
M_A	Force (Torque) OPEN (max.)	600 N (~ 215 Nm)
M_Z	Force (Torque) CLOSE (max.)	600 N (~ 215 Nm)
F_H	Pullout force	3.000 N (fastening depended)
	Lever arm	aluminium (RAL9006)
	Connecting cable	non-halogen, grey 5 x 0,5 mm², ~ 3 m
v	Speed (constant at 2/3 load)	Factory settings: 2,0°/s (45 s for 0° - 90°) / 2,0°/s (45 s for 0° - 90°) Adjustment range: 1,5 - 2,5 °/s
s	Stroke length (lever)	Factory settings: 93° (± 5%) Adjustment range: 5 - 93°
L	Length	421 mm
	Potential free contact	max. 24 VDC / 0,5A, programmable
	Sound pressure level	≤ 70 dB (A)

ORDER DATA

s [DEG]	L [mm]	Version	Finish	PU/pcs.	Part.-No.
0° – 93°	421	FTA600 DF S12 24V	E6/C-0	1	**524145**

Accessories	PU/pcs.	Part.-No.
K103 Casement bracket FTA600 DF	1	**524172**

OPTIONS

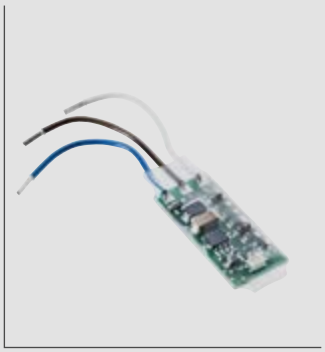
Special model	PU/pcs.	Part.-No.
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Microprocessor programming S12		
Electronic stroke reduction 24V S12	1	**524190**
Programming drives 24V / 230V S12		**524180**

Optional accessories	PU/pcs.	Part.-No.
Configuration module for synchronised multi-drive systems	1	**524177**

OPTIONAL ACCESSORIES

Main control unit and plug solution

M-COM



Application

Configuration module for automatic configuration and monitoring of max. 4 opening drives / 2 locking drives version S12 / S3 in synchronised multi-drive systems

Rated voltage:
24 V DC (19 V ... 28 V)
Current consumption: <12 mA
Drive type: S12
Protection rating
IP30 rubber envelope

Part.-No. 524177

Ambient temperature range
0 °C ... + 70 °C
Dimensions
45 x 17 x 6 mm
Connecting wires
3 wires 0,5 mm² x 50 mm
Feature/Equipment
Printed circuit board with components and connection wires to be installed in connection box to be supplied on site

Wire Click



Wire Click:
Unitary plug-solution for Aumüller Click System.

Rated voltage:
24 V DC (19 V ... 28 V)
Connecting cable:
non-halogen, grey 5 x 0,5 mm²

Terminal: up to 1,5 mm²

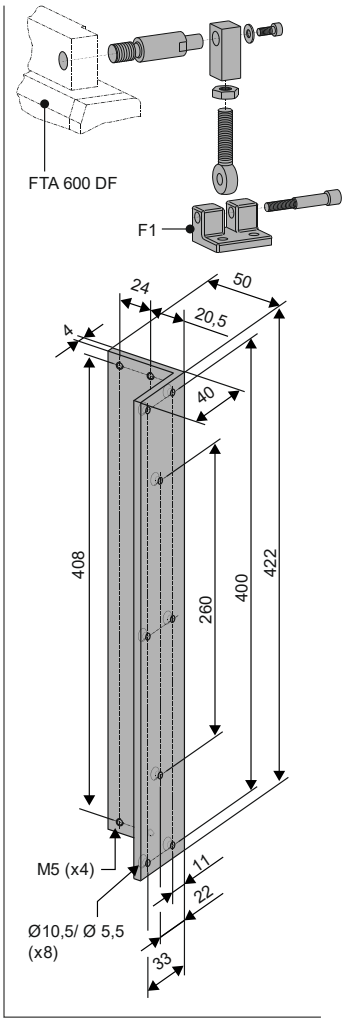
Feature/Equipment
- Flexible cable length
- Connect multiple drives in series connection
- Torsion-plug
- Locking hooks prevent withdrawal of the plug under tensile load
- Strain relief according DIN EN 60335-1 by screwing the housing halves

VARIANTS: 24V - Silicone	
3 m cable length - 24V DC	**Part.-No. 501251**
5 m cable length - 24V DC	**Part.-No. 501252**
10 m cable length - 24V DC	**Part.-No. 501253**

ACCESSORIES

Casement bracket

K103



Application

Surface mounting on the **side closing edge** of window frame profiles of **inward opening side-hung** windows.
Angle bracket **422 mm** for mounting of FTA600-DF on the window frame profile.
F1 for mounting on the casement profile and for the fixing with the knuckle joint, adjustable for compensation of the overlap.

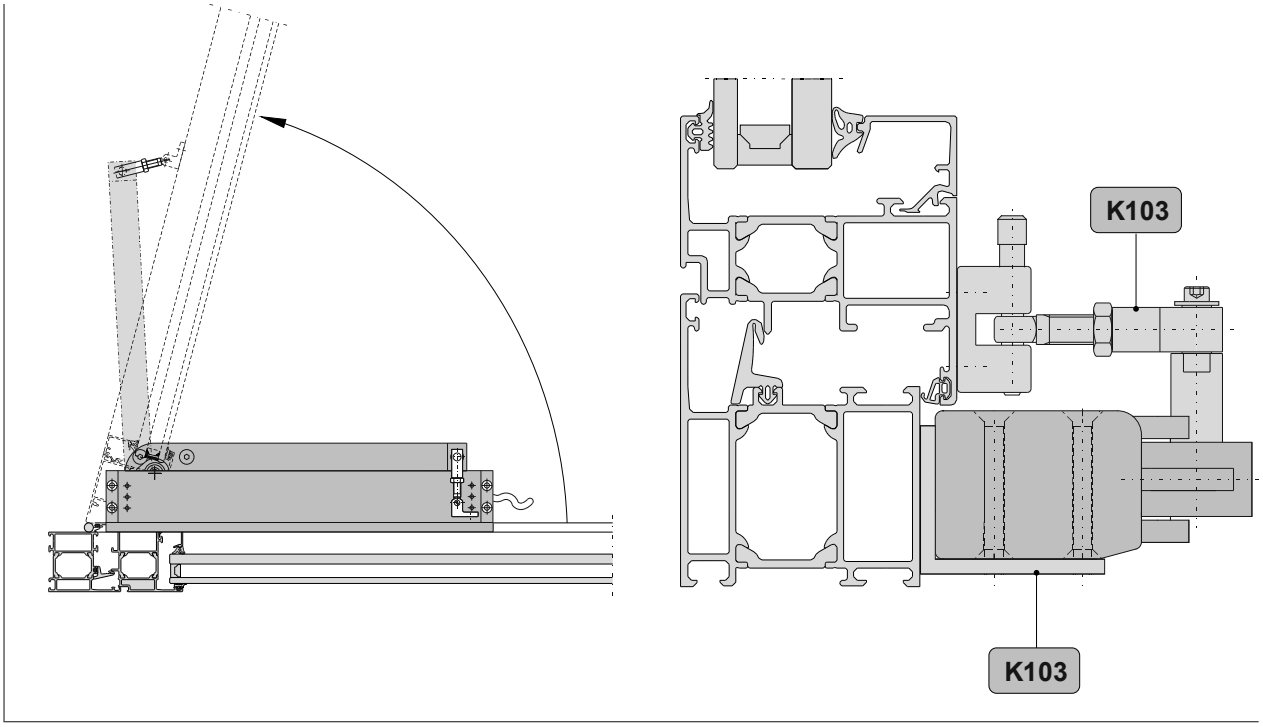
Part.-No. 524172

Material/Finish
aluminium
Feature/Equipment
1x angle 50 x 40 x 422 (t = 4) mm
1x casement bracket F1
1x fixing accesories
Load
max. 600 N

FRAME BRACKETS

Special model	PU/pcs.	Part.-No.		
Frame brackets painted / powder coated in other RAL colours				
Lump sum for coating		**516030**		
Specify at order stage:	1 – 20	**516031**		
	21 – 50	**516031**		
	51 – 100	**516031**		
	from 101	**516031**		

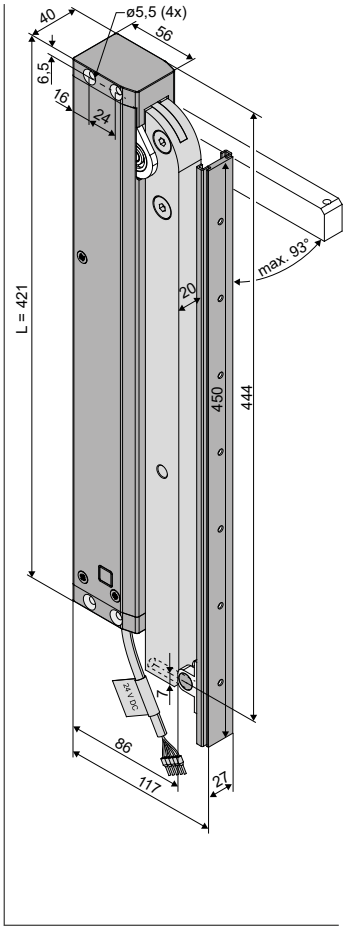
Typical applications



- Application: natural ventilation, RWA
- Mainly for opening and closing of side-hung outward opening windows
- Internal Intelligent Control Electronics S12
- Programmable contact for feedback
- Unitary plug-solution for Aumüller Click System

Options

- Programmable special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)
- Various customised programmings on request



TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	1,0 A
I_A	Cut-off current	1,4 A
P_N	Rated power	20 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +60 °C
M_A	Force (Torque) OPEN (max.)	600 N (~215 Nm)
M_Z	Force (Torque) CLOSE (max.)	600 N (~215 Nm)
F_H	Pullout force	3.000 N (fastening depended)
	Lever arm	aluminium (RAL9006)
	Connecting cable	non-halogen, grey 5 x 0,5 mm², ~ 3 m
v	Speed (constant at 2/3 load)	Factory settings: 2,0°/s (45 s for 0° - 90°) 2,0°/s (45 s for 0° - 90°) Adjustment range: 1,5 - 2,5 °/s
s	Stroke length (lever)	Factory settings: 93° (± 5%) Adjustment range: 5 - 93°
L	Length	455 mm
	Potential free contact	max. 24 VDC / 0,5A, programmable
	Sound pressure level	≤ 70 dB (A)

ORDER DATA

s [DEG]	L [mm]	Version	Finish	PU/pcs.	Part.-No.
0° – 93°	455	FTA600 GF S12 24V	E6/C-0	1	**524146**

Accessories	PU/pcs.	Part.-No.
K104 Casement bracket FTA600 GF	1	**524173**

OPTIONS

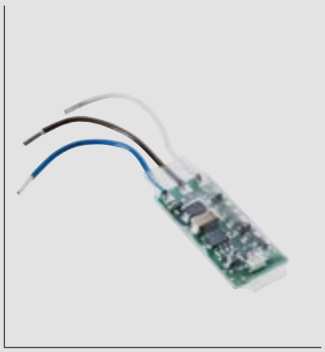
Special model	PU/pcs.	Part.-No.
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Microprocessor programming S12		
Electronic stroke reduction 24V S12	1	**524190**
Programming drives 24V / 230V S12		**524180**

Optional accessories	PU/pcs.	Part.-No.
Configuration module for synchronised multi-drive systems	1	**524177**

OPTIONAL ACCESSORIES

Main control unit and plug solution

M-COM



Application

Configuration module for automatic configuration and monitoring of max. 4 opening drives / 2 locking drives version S12 / S3 in synchronised multi-drive systems

Rated voltage:
24 V DC (19 V ... 28 V)
Current consumption: <12 mA
Drive type: S12
Protection rating
IP30 rubber envelope

Part.-No. 524177

Ambient temperature range
0 °C ... + 70 °C
Dimensions
45 x 17 x 6 mm
Connecting wires
3 wires 0,5 mm² x 50 mm
Feature/Equipment
Printed circuit board with components and connection wires to be installed in connection box to be supplied on site

Wire Click



Wire Click:
Unitary plug-solution for Aumüller Click System.

Rated voltage:
24 V DC (19 V ... 28 V)
Connecting cable:
non-halogen, grey 5 x 0,5 mm²

Terminal: up to 1,5 mm²

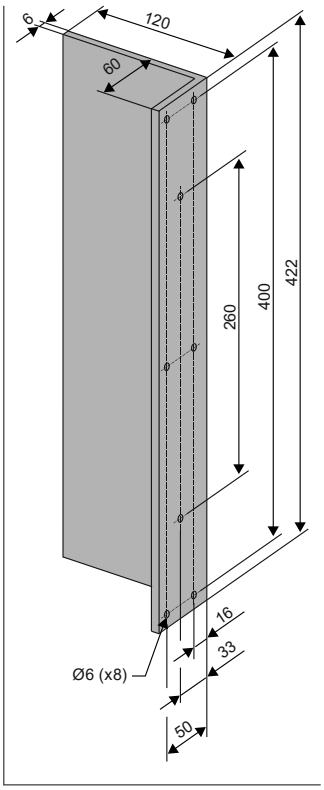
Feature/Equipment
- Flexible cable length
- Connect multiple drives in series connection
- Torsion-plug
- Locking hooks prevent withdrawal of the plug under tensile load
- Strain relief according DIN EN 60335-1 by screwing the housing halves

VARIANTS: 24V - Silicone	
3 m cable length - 24V DC	**Part.-No. 501251**
5 m cable length - 24V DC	**Part.-No. 501252**
10 m cable length - 24V DC	**Part.-No. 501253**

ACCESSORIES

Casement bracket

K104



Application

Surface mounting on the **side closing edge** of window frame profiles of **outward opening side-hung** windows.
Angle bracket **422 mm** for mounting of FTA600-GF on the window frame profile.
The slide rail of has to be mounted on the casement profile.

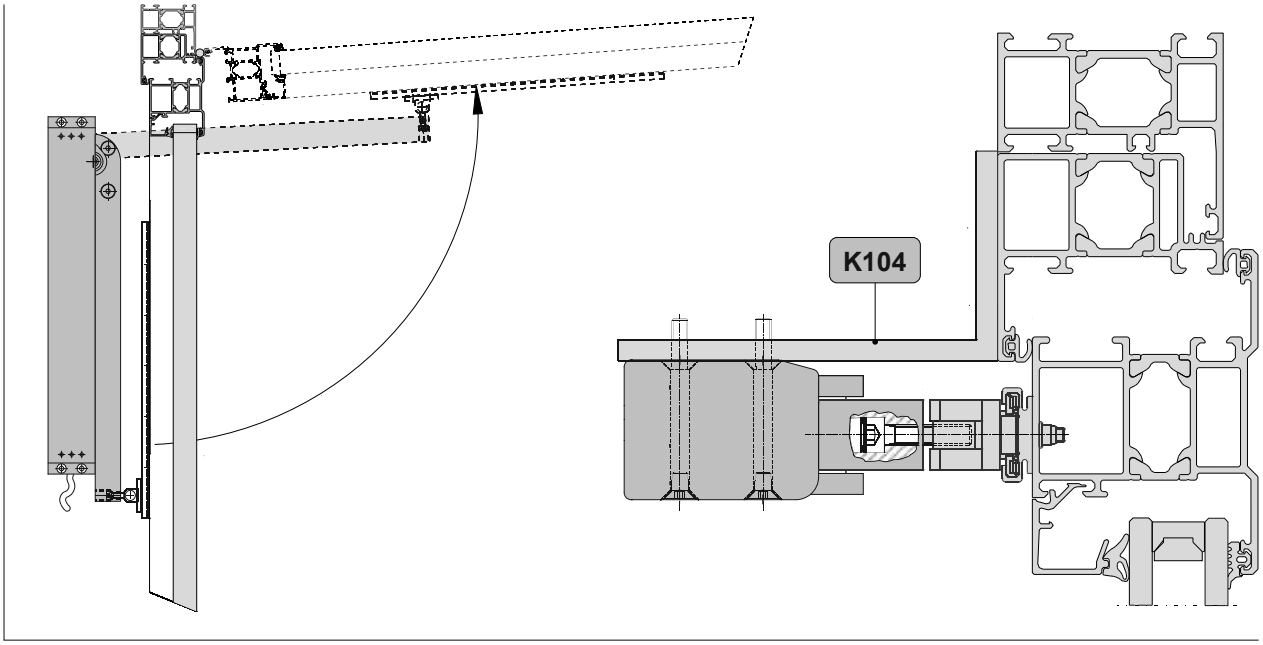
Part.-No. 524173

Material/Finish
aluminium
Feature/Equipment
1x angle 120 x 60 x 422 (t = 6) mm
4x countersunk screws, M5x45 mm
Load
max. 600 N

FRAME BRACKETS

Special model	PU/pcs.	Part.-No.
Frame brackets painted / powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516031**
	21 – 50	**516031**
	51 – 100	**516031**
	from 101	**516031**

Typical applications



aumüller

5 Louvre drives

Product Overview



LLA10 LOUVRE DRIVES

- Model: 24V DC, S12
- Pulling / Pushing force: 1.000 N / 1.000 N
- Stroke length: 10 – 200 mm, programmable
- Speed: 1,5 - 4 mm/s, programmable
- Housing (WxH): 35 x 35 mm, length depends on stroke
- Coupling adapter: PA6 with milled groove (W x L x D): 13,8 x 19 x 8 mm
- Version: Solo
- Protection rating: IP40

LLA10



LLA16 LOUVRE DRIVES

- Model: 24V DC, S12
- Pulling/Pushing force: 1600 N / 1600 N
- Stroke length: 10 – 200 mm, programmable
- Speed: 1,5 - 4 mm/s, programmable
- Housing (WxH): 35 x 35 mm, length depends on stroke
- Coupling adapter: PA6 with milled groove (W x L x D): 13,8 x 19 x 8 mm
- Version: Solo
- Protection rating: IP40

LLA16

LOUVRE DRIVES

Type	Form	Model		Stroke (Factory setting)	Force		Speed (Factory setting)		Stroke in	Cut-off current	Use			Loca-tion		Functions		
		Type of cut-off	Rated voltage	Range	Pushing force	Pulling force	OPEN	CLOSE	60 s	Max.	Natural ventilation	RWA	NRWG	Facade	Roof	Run monitoring	Synchronised run	Sequence control
			[VDC]	[mm]	[N]	[N]	[mm/s]	[mm/s]	[mm]	[A]								
LLA	LLA10	S12	24	60 – 200	1000	1000	4,0	4,0	200	1,0	●	●	●	●		■	●	●
	LLA16			60 – 200	1600	1600				1,2	●	●	●	●		■	●	●

LEGEND

● suitable ■ not recommended

S12 Internal Intelligent Control Electronics for synchronised run and programmable functions



SPECIAL FEATURES LLA

- For smoke and heat exhausting, natural ventilation and ferralux® NRWG (EN12101-2)
- Push button for the selection of the running direction
- Robust corrosion-resistant design
- Easy installation by concealed holes below the oblique end caps
- Coupling adapter with milling groove Ø13,3 x 9,2 mm
- Programmable parameters of Internal Intelligent Control Electronics S12
- Synchronised multi-operation and sequence control without add. devices
- Electronic soft-start, soft-close and soft-stop at end of stroke control
  - Stroke, force, speed
  - Rebate control

For this product series, a Type III Environmental Product Declaration (EPD) was issued according to ISO 14025 and EN 15804.
The LCA results of the different product types are listed at the end of this product catalogue.
The EPD documents can be viewed or downloaded from our homepage **www.aumueller-gmbh.de**.

Typical applications

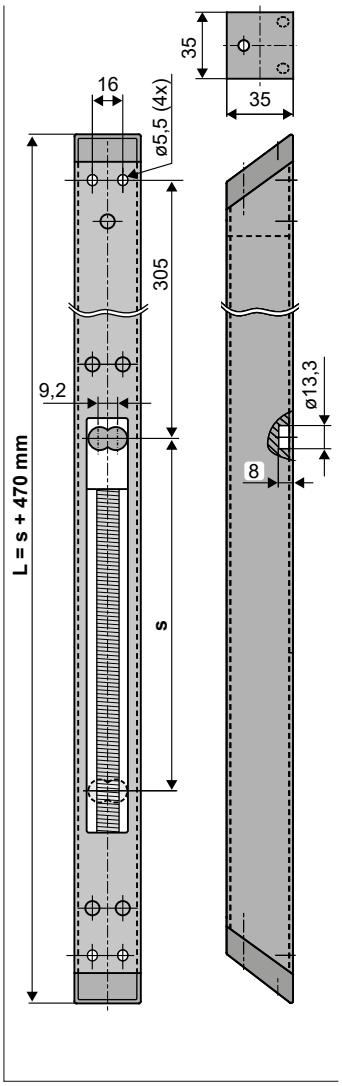




- Application: natural ventilation, RWA, ferralux®-NRWG
- Internal Intelligent Control Electronics S12
- Coupling adapter with double slot groove Ø13,3 x 9,2 mm

Options

- Programmable synchronised run (max. 4 drives) and special functions
- Programmable sequence control with locking drives (S3 / S12)
- Customized stroke and coupling adapter on request



TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	LLA10: 0,6 A LLA16: 0,9 A
I_A	Cut-off current	LLA10: 1,0 A LLA16: 1,2 A
P_N	Rated power	LLA10: 15 W LLA16: 22 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 40
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	LLA10: 1.000 N LLA16: 1.600 N
F_A	Pushing force	LLA10: 1.000 N LLA16: 1.600 N
F_H	Pullout force	5000 N (fastening depended)
	Coupling adapter	Polyamid PA6 with groove 13 x 22 x 8 mm
	Connecting cable	non-halogen, grey 3 x 0,5 mm², ~ 3 m
v	Speed	Factory settings: 4,0 mm/s 4,0 mm/s Adjustment range: 1,5 – 4,0 mm/s
s	Stroke	Factory settings: see order data Adjustment range: 10 – 200 mm
L	Length	s + 470 mm (see order data)
	Sound pressure level	≤ 70 dB (A)

ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.		
60	530	LLA10 60 S12	E6/C-0	1	**520306**		
120	590	LLA10 120 S12	E6/C-0	1	**520312**		
200	670	LLA10 200 S12	E6/C-0	1	**520343**		
60	530	LLA16 60 S12	E6/C-0	1	**520406**		
120	590	LLA16 120 S12	E6/C-0	1	**520412**		
200	670	LLA16 200 S12	E6/C-0	1	**520423**		

OPTIONS

Special model	PU/pcs.	Part.-No.		
Drive housing painted/powder coated in other RAL colours				
Lump sum for coating		**516030**		
Specify at order stage:	1 – 20	**516004**		
	21 – 50	**516004**		
	51 – 100	**516004**		
	from 101	**516004**		
Extra length connecting cable:				
5 m – non-halogen, grey – 3 x 0,5 mm²		**501034**		
10 m – non-halogen, grey – 3 x 0,5 mm²		**501036**		
Microprocessor programming S12				
Programming drives 24V / 230V S12	1	**524180**		
Electronic stroke reduction 24V S12	1	**524190**		
Programming synchronised multi-drive systems 24V S3 / S12 (each drive)	1	**524182**		

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6 Locking drives

Product Overview



FV CLICK LOCKING DRIVES

Model	24V DC
Force	600 N
Stroke	18 mm
Runtime	4,5 s
Housing (WxHxL)	aluminium 24 x 35 x 376 mm
Coupling adapter	Locking angle
Protection rating	IP32

FV Click









FVU LOCKING DRIVES

Model	24V DC
Force	600 N
Stroke	18 mm
Runtime	5 s
Housing (WxHxL)	aluminium 26 x 26 mm, length depending on type
Coupling adapter	Locking plate (for FVUI) Locking angle (for FVUB and FVUR and FVUE)
Versions	FVUI, FVUB R, FVUB L, FVUR, FVUE
Protection rating	IP 32

FVUI

FVUR

FVUB

FVUE



FV LOCKING DRIVES

Model	24V DC
Force	600 N
Stroke	15 mm
Runtime	5 s
Housing (WxHxL)	aluminium 35 x 35 mm, length depending on type
Coupling adapter	Locking angle
Versions	FV1, FV3, FV4 with 1 – 3 locking points
Protection rating	IP32

FV



OFV LOCKING DRIVES

Model	24V DC, S3
Torquet	10 Nm
Rotation angle	90° / 180°
Runtime	4,5 s / 9 s
Housing (WxHxL)	aluminium/ABS 40 x 156 x 83 mm, grey
Coupling adapter	squered shaft for the chamber gearboxes
Protection rating	IP32

OFV

LOCKING DRIVES FV

Type	Form	Rated voltage	Locking stroke	Force		Speed (Factory setting)	Opening drives		Use			Location		Functions		
				Pulling / Pushing force	Initial force		Type	Breaking current	Natural ventilation	RWA	NRWG	Facade	Roof	Run monitoring	Synchronised run	Sequence control
		[VDC]	[mm]	[N]	[N]	[s]		[A]								
FV Click	FV Click	24	18	600	1000	4,5	S3/S12	0,9	●	●		●	■		●	●
FVUx	FVUI	24	18	600	1000	5,0	S3/S12	0,8	●	●	●	●	■		●	●
	FVUB	24	18	600	1000	5,0	S3/S12	0,8	●	●	●	●	■		●	●
	FVUR	24	18	600	1000	5,0	S3/S12	0,8	●	●	●	●	■		●	●
	FVUE	24	18	600	1000	5,0	S3/S12	0,8	●	●	●	●	■		●	●
FV	FV1	24		600	1000	5,0	○	○	●	●	●	●	■			●
	FV3						S1	0,8	●	●	●	●	■			●
	FV4						S2/S3/S12		●	●	●	●	■		●	●
OFV	OFV	24	0° – 180°	10 Nm	22 Nm	4,5 / 9,0	S1	0,9	●	●	●	●	■			●
							S2/S3/S12		●	●	●	●	■		●	●

LEGEND

● suitable ■ not recommended

S1	without internal cut-off switch for operation with RWA1000-, RWA1100-, RWA1050-systems
S2	internal load dependend cut-off switch
S3	internal load dependend cut-off switch, post cycle resistant, programmable for motion monitored run (up to 300 mm stroke) and sequence control
S4	without internal cut-off switch, with pulse generator for operation with external load cut-off-switch or synchronisation controller
S12	internal Intelligent Control Electronics S12 for synchronised run and programmable functions
○	only with external control module USKM



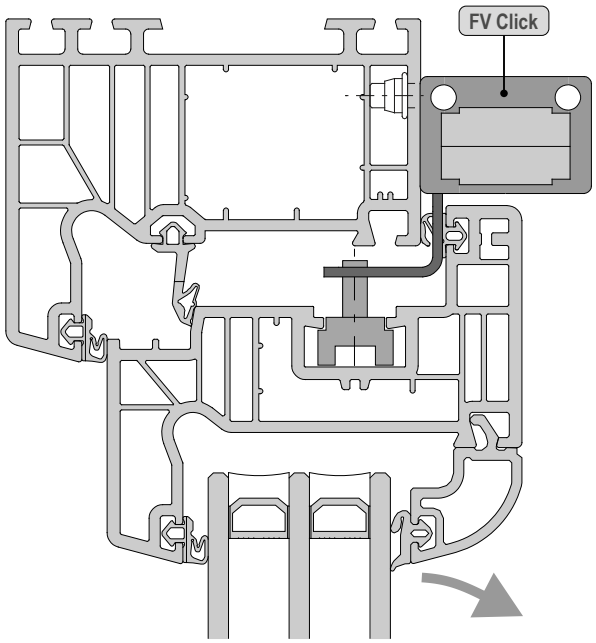
SPECIAL FEATURES FV CLICK

- For natural ventilation, smoke and heat exhausting
- with M-COM suitable internal load dependent cut-off switch and sequence control for drives S3 / S12 (star wiring, drive current does not run over FV Click - sequence control via communication wire)
- Mounting on the window frame profiles of inward opening windows
- Coupling adapter activates the multi-point locking systems of the windows via additional locking roller
- Robust corrosion-resistant design in a aluminium housing (376 x 24 x 35 mm) or optionally in RAL colors
- Specific attachment variant for **AUMÜLLER** KS4 using Connect Click
- Coupling adapter customizable for project-/profile-specific demands

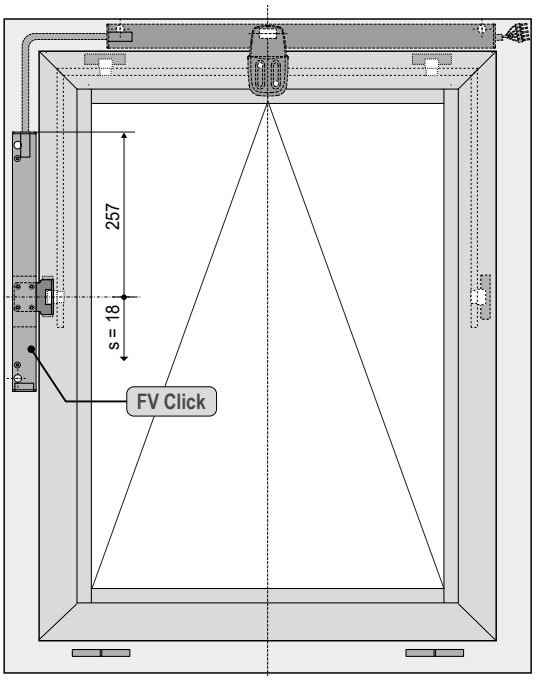
For this product series, a Type III Environmental Product Declaration (EPD) was issued according to ISO 14025 and EN 15804.
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TYPICAL APPLICATIONS

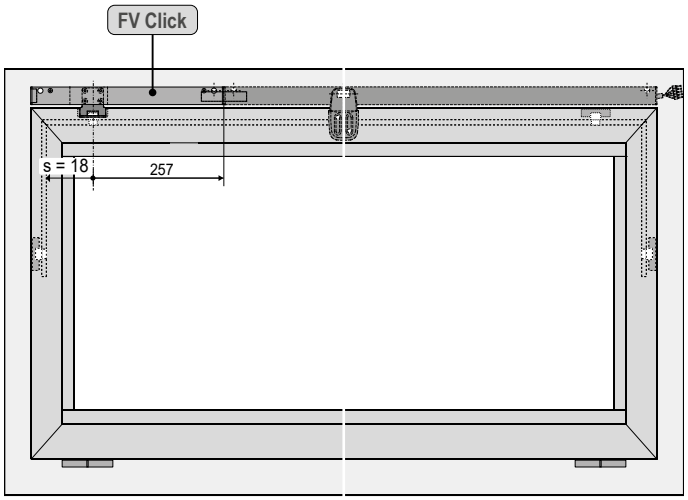
1 RM, inward opening window
View on PVC-window



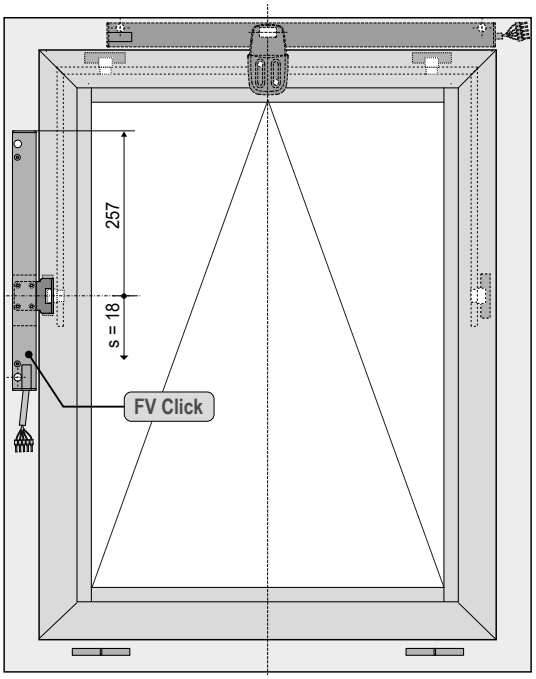
RM, inward opening window - NSK
Universal attachment variant for **AUMÜLLER** drives
using a connection cable - option 1



RM, inward opening window - HSK
Specific attachment variant for **AUMÜLLER** KS4
using Connect Click

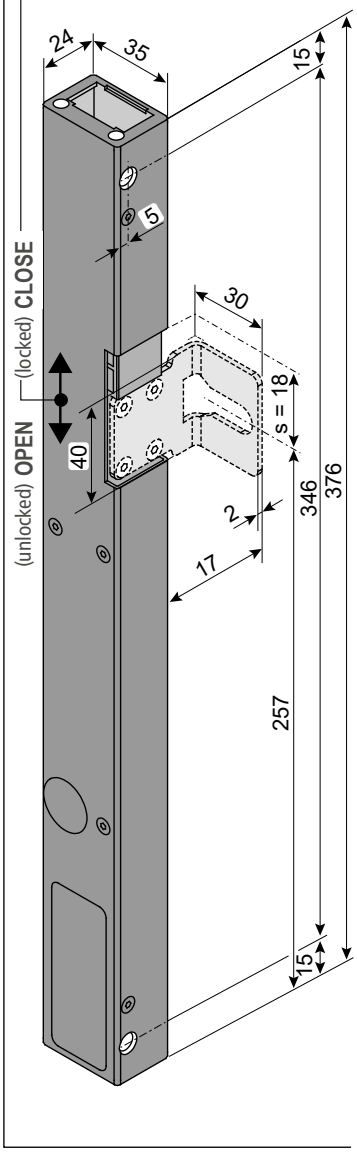


RM, inward opening window - NSK
Universal attachment variant for **AUMÜLLER** drives
using a connection cable - option 2



Factory settings

NEW



- Application: natural ventilation, RWA
- Surface mounting on the on the main / side closing edge (HSK / NSK) of the window frame profiles (RM) of inward opening windows
- Required mounting space 26 mm

Options

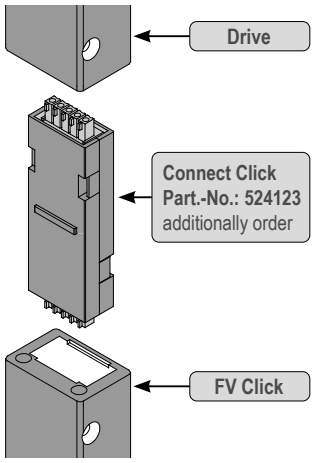
- Coupling adapter customizable for project-/profile-specific demands

- M-COM suitable internal Control Electronics and sequence control for drives S3 / S12
- Star wiring
- Current of the drives does not run over FV Click
- Sequence control via communication wire

TECHNICAL DATA

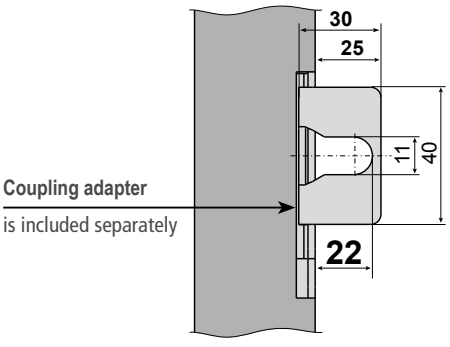
U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	0,8 A
I_A	Cut-off current	0,9 A
P_N	Rated power	19 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +60 °C
F_A	Pushing force max.	~ 600 N
F_L	Breakout force max.	1.000 N
F_H	Pullout force max.	1.500 N
t	Running time	4,5 s
s	Stroke	18 mm
	Coupling adapter	stainless steel
	Housing	aluminium (E6/C-O)
L, (WxH)	Dimensions	L = 376 mm, 24 x 35 mm (B x H)
	Sound pressure level	≤ 70 dB (A)

OPTION

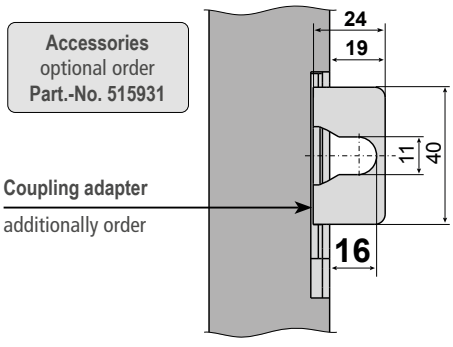


MOUNTED POSSIBILITIES OF THE COUPLING ADAPTER

Coupling adapter is included separately



Accessories: Coupling adapter (separate order)



ORDER DATA

s [mm]	L [mm]	Version	Finish	PU / pcs.	Part.-No.
18	376	FV Click	E6/C-0	1	**515945**

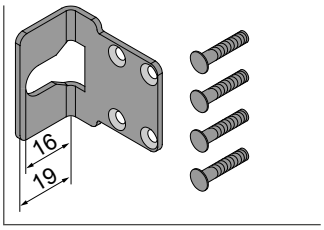
OPTIONS

Special model	PU / pcs.	Part.-No.
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	ab 101	**516004**
Optional accessories	PU / pcs.	Part.-No.
Plug solution:		
Wire Click - 3 m – non-halogen, grey – 5 x 0,5 mm²	1	**501251**
Wire Click - 5 m – non-halogen, grey – 5 x 0,5 mm²	1	**501252**
Wire Click - 10 m – non-halogen, grey – 5 x 0,5 mm²	1	**501253**
M-COM® Click Configuration module for synchronised multi-drive systems	1	**524167**
M-COM Configuration module for synchronised multi-drive systems	1	**524177**

ACCESSORIES

Coupling adapter

FV -16mm



Application

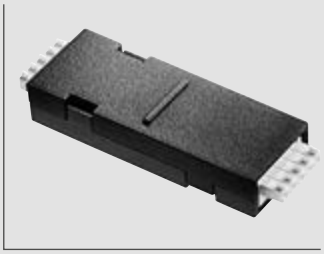
Coupling adapter-16 mm for locking pin in the FV Click (coupling adapter length is 19 mm). As an alternative to the coupling adapter-22 mm (coupling adapter length is 25 mm).

Part.-No. 515931

Material / Finish
stainless steel
Feature / Equipment
1x coupling adapter,
4x screws

Connection plug

Connect Click



Application

Connect Click is a connection plug for rigid mounting of two drives.

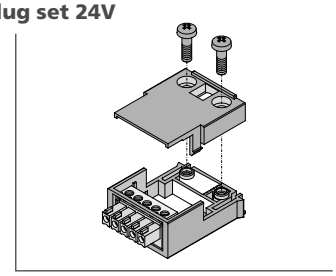
Rated voltage:
24 V DC (19 V ... 28 V)

Dimension:
70 x 26 x 13 mm

Part.-No. 524123

Feature / Equipment
- Torsion-plug
- Replaces disturbing cables
- Creates a visually consistent image on the window without disturbing, visible cables.

Click plug set 24V



Application

Click plug set 24V is an additional connector head for Wire Click to connect multiple drives.

Terminal:
up to 1,5 mm²

NEW

Part.-No. 533999

Feature / Equipment
- Torsion-plug
- Locking hooks prevent withdrawal of the plug under tensile load
- Strain relief according DIN EN 60335-1 by screwing the housing halves



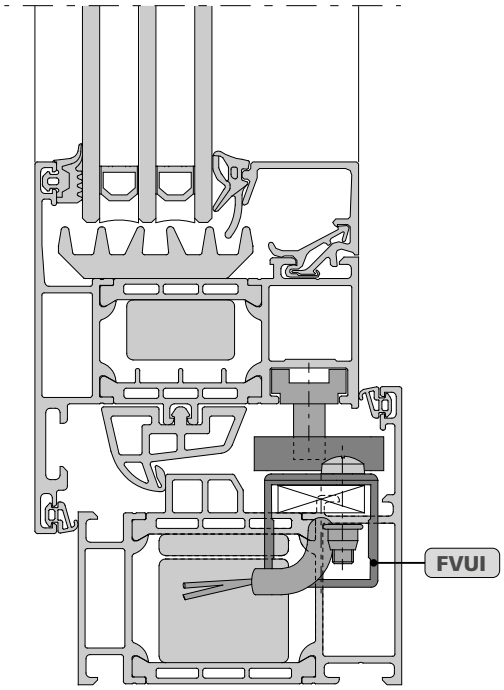
SPECIAL FEATURES FVUI

- For natural ventilation, smoke and heat exhausting and ferralux® NRWG (EN12101-2)
- With M-COM suitable internal load dependent cut-off switch and sequence control for drives (star wiring, drive current does not run over FVUx - sequence control via communication wire)
- Suitable for concealed mounting inside profiles
- Locking plate activates the multi-point locking systems of the windows via additional locking roller, it can be mounted on both sides and can be rotated with 180°
- Manual unlocking mechanism
- Robust corrosion-resistant design in a aluminium housing (415 x 26 x 26 mm)
- Concealed cable terminals and internal push button for setting the running direction

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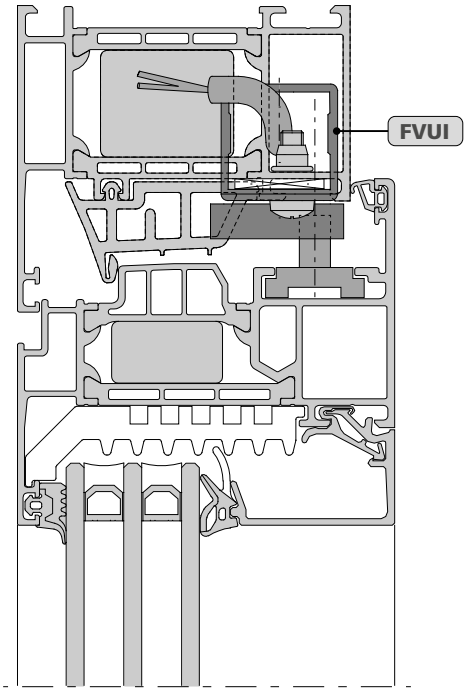
TYPICAL APPLICATIONS

1 Concealed mounting
outward opening



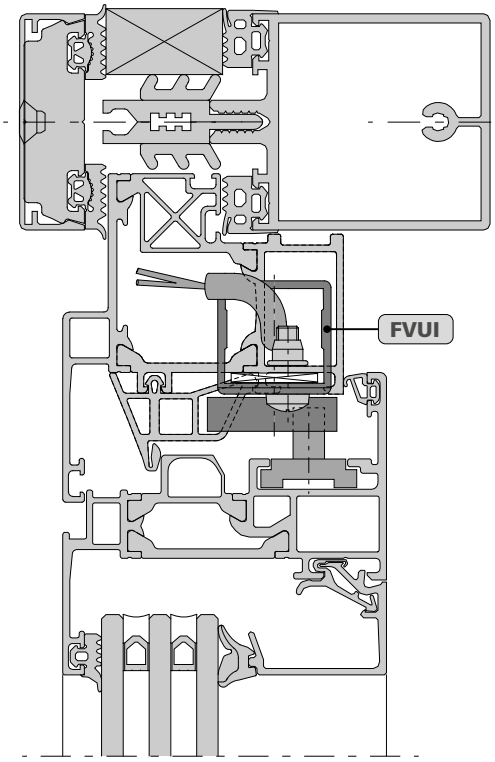
View on Alu window

2 Concealed mounting
inward opening



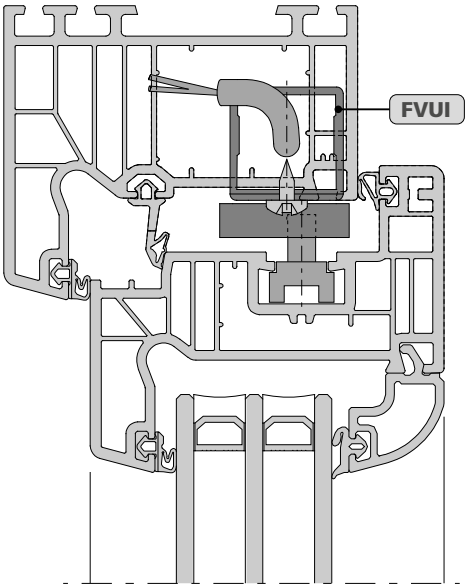
View on Alu window

3 Concealed mounting
inward opening



View on Alu window

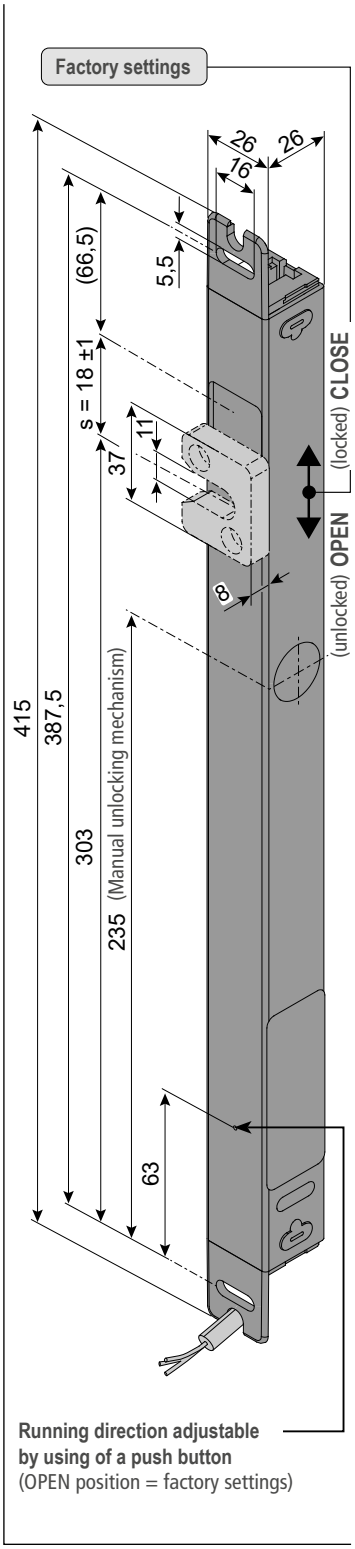
4 Concealed mounting
inward opening



View on PVC window

- Application: natural ventilation, RWA, ferralux®-NRWG
- Surface or concealed mounting inside profiles
- Locking plate (8 mm) or optional locking plate (6 mm)
- Locking position selectable
- Manual unlocking mechanism
- Running direction adjustable

Options
- Special functions programmable



- M-COM suitable internal Control Electronics and sequence control for drives S3 / S12
- Star wiring
- Current of the drives does not run over FVUI
- Sequence control via communication wire

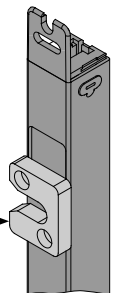
TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	0,6 A
I_A	Cut-off current	~ 1,0 A
P_N	Rated power	15 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +60 °C
F_A	Pushing force max.	~ 600 N
F_L	Breakout force max.	~ 1.000 N
F_H	Pullout force max.	1.500 N
t	Running time	~ 5,0 s
s	Stroke	~ 18 mm (± 1)
	Connecting cable	non-halogen, grey ø 6,2 mm, 3 x 0,5 mm², ~ 3 m
	Coupling adapter	die-cast zinc
	Housing	aluminium (E6/C-O)
L, (WxH)	Dimensions	L = 415 mm, 26 x 26 mm (B x H)
	Sound pressure level	≤70 dB (A)

MOUNTING POSSIBILITIES OF THE LOCKING PLATE

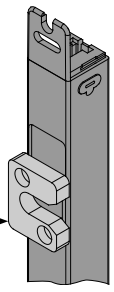
Locking plate is included separately (optional installation possible)

Mounting example "Version - 1"



Locking plate
is included separately

Mounting example "Version - 2"



Locking plate
is included separately

ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.
18	415	FVUI	E6/C-0	1	**515910**

OPTIONS

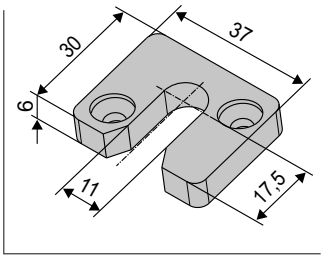
Special model	PU/pcs.	Part.-No.
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Extra length connecting cable:		
5m – non-halogen, grey – 3 x 0,5 mm²		**501034**
10 m – non-halogen, grey – 3 x 0,5 mm²		**501036**
Microprocessor programming S12		
Programming drives 24V / 230V S12		**524180**

Optional accessories	PU/pcs.	Part.-No.
M-COM Configuration module for synchronised multi-drive systems	1	**524177**

ACCESSORIES

Locking plate

B31



Application

Locking plate 6 mm alternative to the locking plate 8 mm due to limited rebate space

Part.-No. 515911

Material/Finish
die-cast zinc
Feature/Equipment
37 x 30 x 6 mm



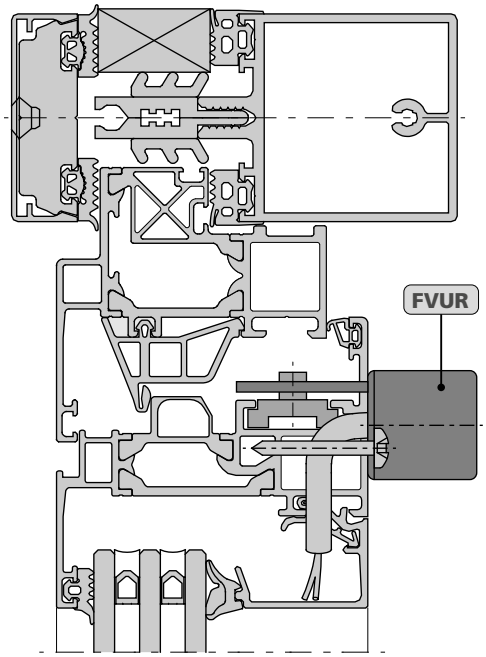
SPECIAL FEATURES FVUR

- For natural ventilation, smoke and heat exhausting and ferralux® NRWG (EN12101-2)
- with M-COM suitable internal load dependent cut-off switch and sequence control for drives S3 / S12 (star wiring, drive current does not run over FVUx - sequence control via communication wire)
- Mounting on the window frame profiles of outward opening windows or on casement profiles of inward opening windows
- Coupling adapter activates the multi-point locking systems of the windows via additional locking roller
- Robust corrosion-resistant design in a aluminium housing (415 x 26 x 26 mm) or optionally in RAL colors
- Concealed cable terminals and internal push button for setting the running direction
- Coupling adapter customizable for project-/profile-specific demands

For this product series, a Type III Environmental Product Declaration (EPD) was issued according to ISO 14025 and EN 15804.
The LCA results of the different product types are listed at the end of this product catalogue.
The EPD documents can be viewed or downloaded from our homepage **www.aumueller-gmbh.de**.

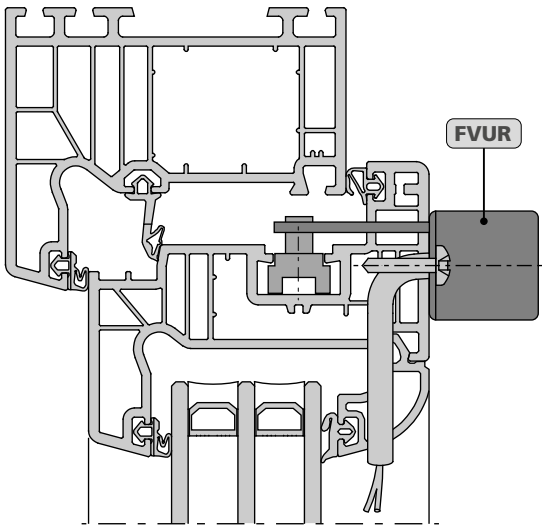
TYPICAL APPLICATIONS

1 FM, inward opening window



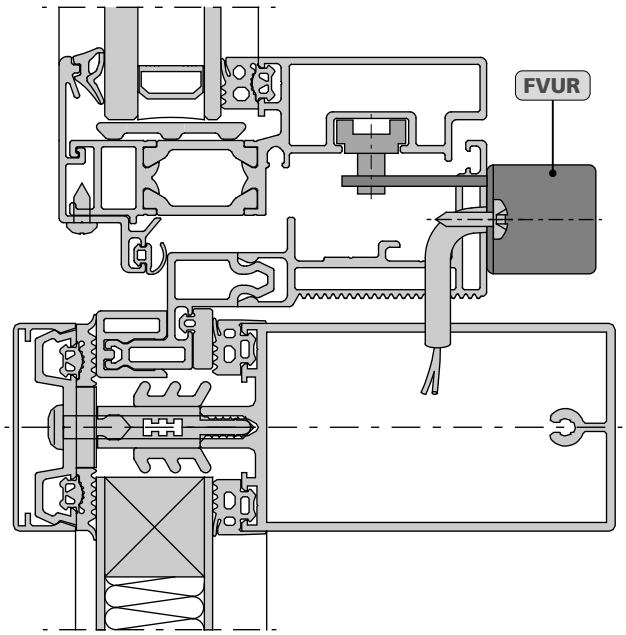
View on Alu window

2 FM, inward opening window



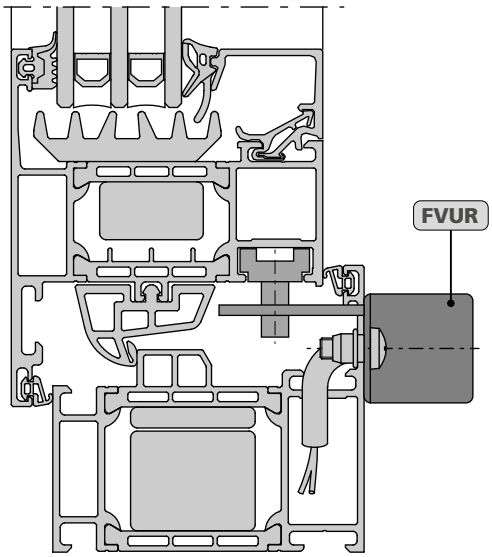
View on PVC window

3 RM, outward opening window



View on Alu window

4 RM, outward opening window



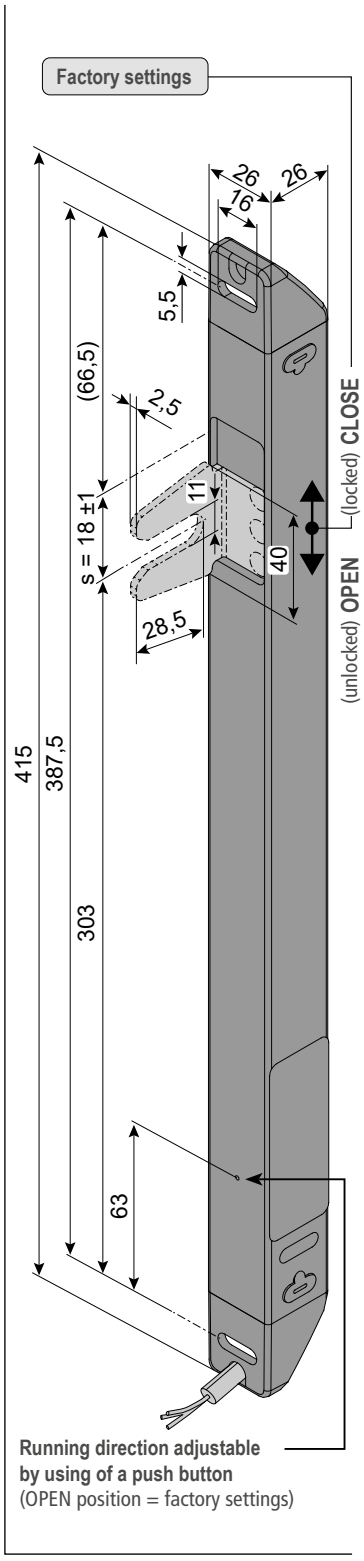
View on Alu window

- Application: natural ventilation, RWA, ferralux®-NRWG
- Surface mounting on the on the main / side closing edge (HSK / NSK) of the window frame profiles (RM) of inward opening windows
- Required mounting space 26 mm
- Locking drives for existing locking bar
- Running direction adjustable

Options

- Coupling adapter customizable for project-/profile-specific demands

- M-COM suitable internal Control Electronics and sequence control for drives S3 / S12
- Star wiring
- Current of the drives does not run over FVUR
- Sequence control via communication wire



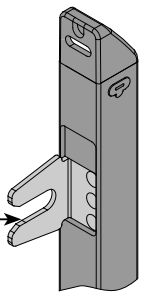
TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	0,6 A
I_A	Cut-off current	~ 1,0 A
P_N	Rated power	15 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +60 °C
F_A	Pushing force max.	~ 600 N
F_L	Breakout force max.	~ 1.000 N
F_H	Pullout force max.	1.500 N
t	Running time	~ 5,0 s
s	Stroke	~ 18 mm (± 1)
	Connecting cable	non-halogen, grey ø 6,2 mm, 3 x 0,5 mm², ~ 3 m
	Coupling adapter	stainless steel
	Housing	aluminium (E6/C-O)
L, (WxH)	Dimensions	L = 415 mm, 26 x 26 mm (B x H)
	Sound pressure level	≤70 dB (A)

MOUNTED POSSIBILITIES OF THE COUPLING ADAPTER

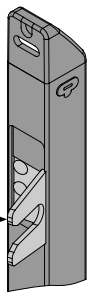
Coupling adapter is included separately (optional installation possible)

Mounting example "Version - 1"



Coupling adapter
is included separately

Mounting example "Version - 2"



Coupling adapter
is included separately

ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.
18	415	FVUR	E6/C-0	1	**515920**

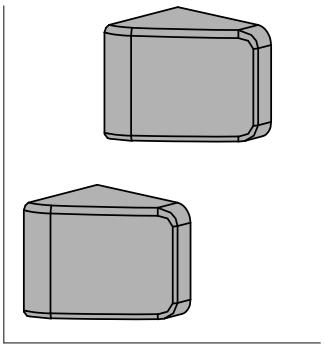
OPTIONS

Special model	PU/pcs.	Part.-No.
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Extra length connecting cable:		
5m – non-halogen, grey – 3 x 0,5 mm²		**501034**
10 m – non-halogen, grey – 3 x 0,5 mm²		**501036**
Microprocessor programming S12		
Programming drives 24V / 230V S12		**524180**

Optional accessories	PU/pcs.	Part.-No.
M-COM Configuration module for synchronised multi-drive systems	1	**524177**

ACCESSORIES

Cover cap



Application

Cover cap for FVUB and FVUR and FVUE (replacement part).

Part.-No. 515921

Material/Finish
plastic,
RAL 7035 (light gray)
Feature/Equipment
2 pieces

Part.-No. 515923

Material/Finish
plastic,
RAL 9004 (black)
Feature/Equipment
2 pieces



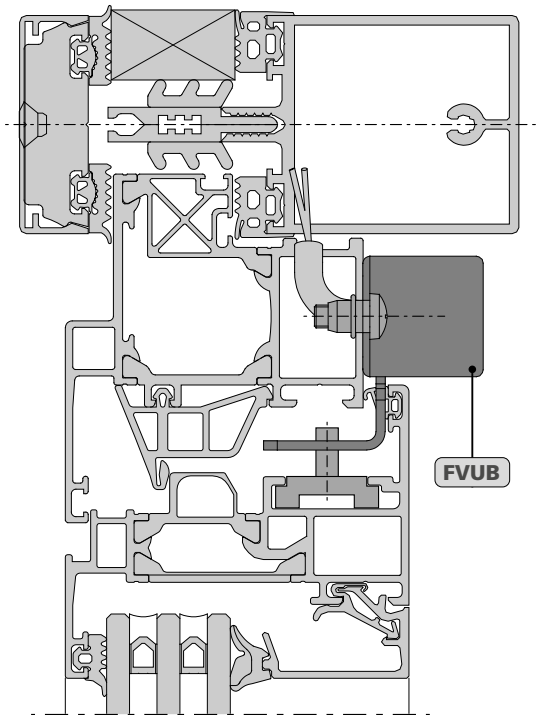
SPECIAL FEATURES FVUB

- For natural ventilation, smoke and heat exhausting and ferralux® NRWG (EN12101-2)
- With M-COM suitable internal load dependent cut-off switch and sequence control for drives (star wiring, drive current does not run over FVUx - sequence control via communication wire)
- Mounting on the window frame profiles of inward opening windows
- Coupling adapter activates the multi-point locking systems of the windows via additional locking roller
- Robust corrosion-resistant design in a aluminium housing (415 x 26 x 26 mm) or optionally in RAL colors
- Concealed cable terminals and internal push button for setting the running direction
- Coupling adapter customizable for project-/profile-specific demands

For this product series, a Type III Environmental Product Declaration (EPD) was issued according to ISO 14025 and EN 15804.
The LCA results of the different product types are listed at the end of this product catalogue.
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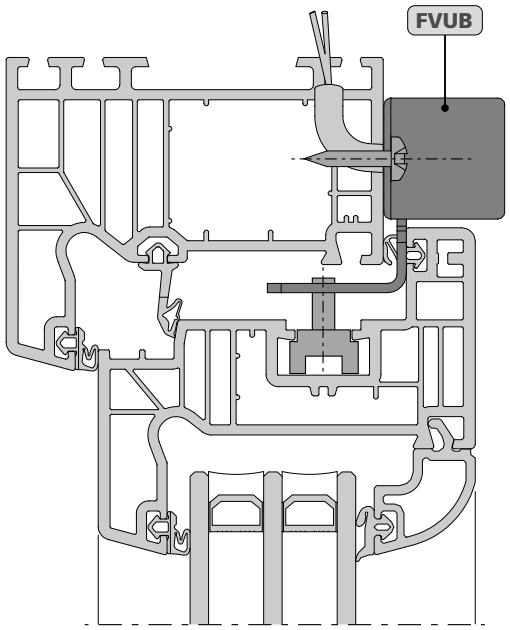
TYPICAL APPLICATIONS

1 RM, inward opening window



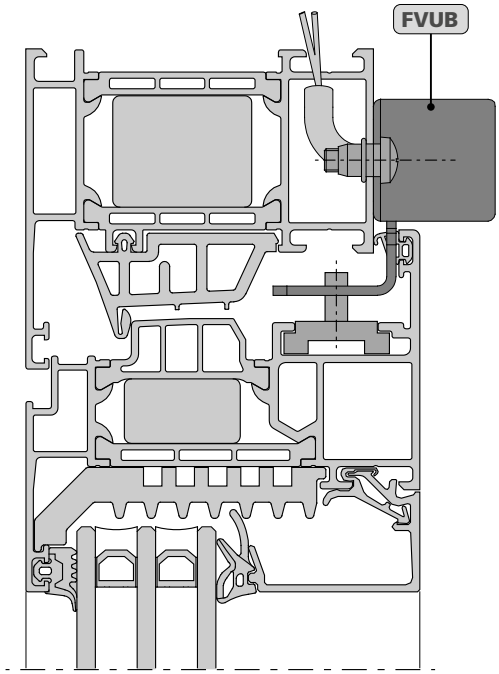
View on Alu window

2 RM, inward opening window



View on PVC window

3 RM, inward opening window



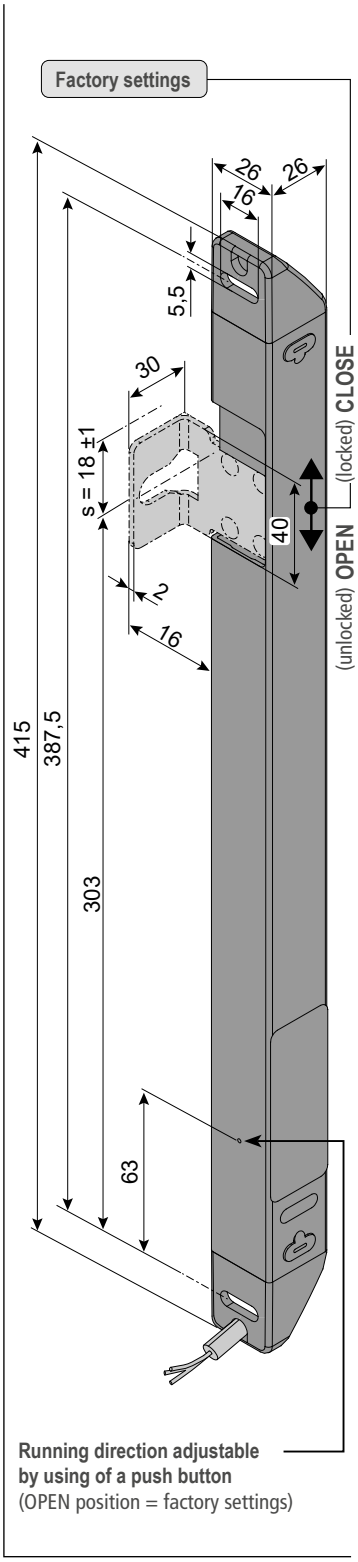
View on Alu window

(right)

- Application: natural ventilation, RWA, ferralux®-NRWG
- Surface mounting on the on the main / side closing edge (HSK / NSK) of the window frame profiles (RM) of inward opening windows
- Required mounting space 28 mm
- Locking drives for existing locking bar
- Running direction adjustable

Options

- Coupling adapter customizable for project-/profile-specific demands



- M-COM suitable internal Control Electronics and sequence control for drives S3 / S12
- Star wiring
- Current of the drives does not run over FVUB
- Sequence control via communication wire

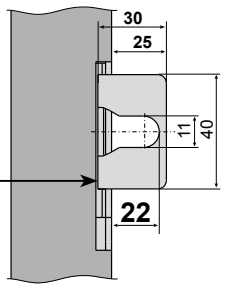
TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	0,6 A
I_A	Cut-off current	~ 1,0 A
P_N	Rated power	15 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +60 °C
F_A	Pushing force max.	~ 600 N
F_L	Breakout force max.	~ 1.000 N
F_H	Pullout force max.	1.500 N
t	Running time	~ 5,0 s
s	Stroke	~ 18 mm (± 1)
	Connecting cable	non-halogen, grey ø 6,2 mm, 3 x 0,5 mm², ~ 3 m
	Coupling adapter	stainless steel
	Housing	aluminium (E6/C-O)
L, (WxH)	Dimensions	L = 415 mm, 26 x 26 mm (B x H)
	Sound pressure level	≤70 dB (A)

MOUNTED POSSIBILITIES OF THE COUPLING ADAPTER

Coupling adapter is included separately

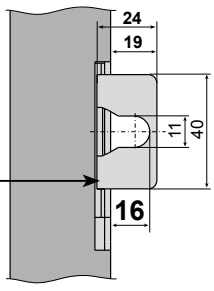
Coupling adapter
is included separately



Accessories: Coupling adapter (separate order)

Accessories
optional order
Part.-No. 515931

Coupling adapter
additionally order



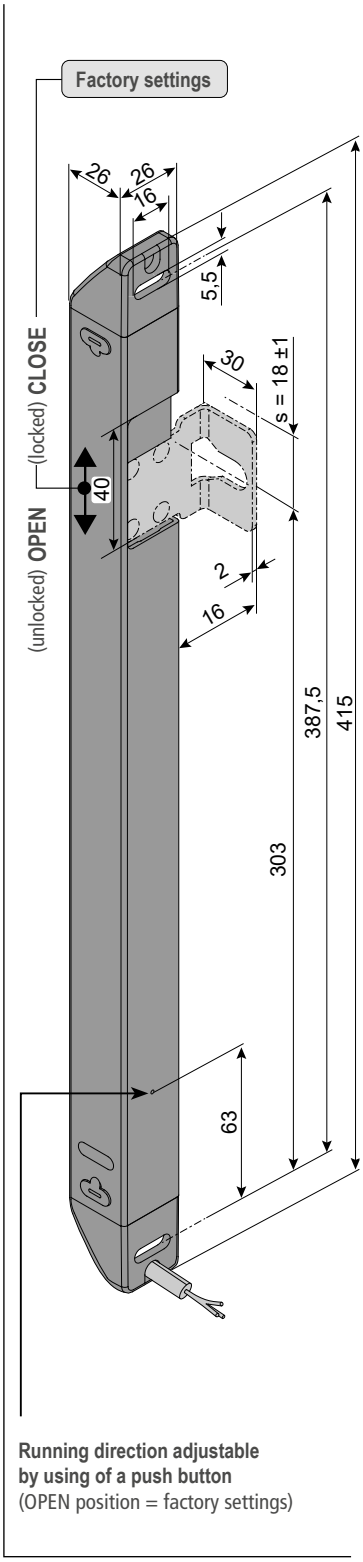
- Application: natural ventilation, RWA, ferralux®-NRWG
- Surface mounting on the on the main / side closing edge (HSK / NSK) of the window frame profiles (RM) of inward opening windows
- Required mounting space 28 mm
- Locking drives for existing locking bar
- Running direction adjustable

Options

- Coupling adapter customizable for project-/profile-specific demands

(left)

- M-COM suitable internal Control Electronics and sequence control for drives S3 / S12
- Star wiring
- Current of the drives does not run over FVUB
- Sequence control via communication wire



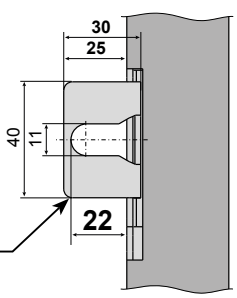
Running direction adjustable by using of a push button
(OPEN position = factory settings)

TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	0,6 A
I_A	Cut-off current	~ 1,0 A
P_N	Rated power	15 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +60 °C
F_A	Pushing force max.	~ 600 N
F_L	Breakout force max.	~ 1.000 N
F_H	Pullout force max.	1.500 N
t	Running time	~ 5,0 s
s	Stroke	~ 18 mm (± 1)
	Connecting cable	non-halogen, grey ø 6,2 mm, 3 x 0,5 mm², ~ 3 m
	Coupling adapter	stainless steel
	Housing	aluminium (E6/C-O)
L, (WxH)	Dimensions	L = 415 mm, 26 x 26 mm (B x H)
	Sound pressure level	≤70 dB (A)

MOUNTED POSSIBILITIES OF THE COUPLING ADAPTER

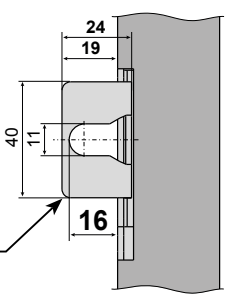
Coupling adapter is included separately



Coupling adapter
is included separately

Accessories: Coupling adapter (separate order)

Accessories
optional order
Part.-No. 515931



Coupling adapter
additionally order

ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.
18	415	FVUB R	E6/C-0	1	**515930**
18	415	FVUB L	E6/C-0	1	**515940**

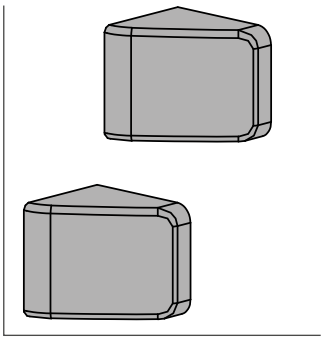
OPTIONS

Special model	PU/pcs.	Part.-No.
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Extra length connecting cable:		
5m – non-halogen, grey – 3 x 0,5 mm²		**501034**
10 m – non-halogen, grey – 3 x 0,5 mm²		**501036**
Microprocessor programming S12		
Programming drives 24V / 230V S12		**524180**

Optional accessories	PU/pcs.	Part.-No.
M-COM Configuration module for synchronised multi-drive systems	1	**524177**

ACCESSORIES

Cover cap



Application

Cover cap for FVUB and FVUR and FVUE (replacement part).

Part.-No. 515921

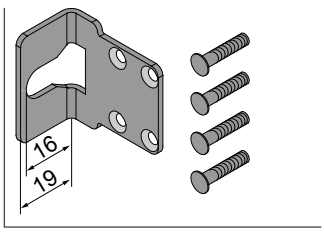
Material/Finish
plastic,
RAL 7035 (light gray)
Feature/Equipment
2 pieces

Part.-No. 515923

Material/Finish
plastic,
RAL 9004 (black)
Feature/Equipment
2 pieces

Coupling adapter

FVUB -16mm



Application

Coupling adapter-16 mm for locking pin in the FVUB (coupling adapter length is 19 mm).
As an alternative to the coupling adapter-22 mm (coupling adapter length is 25 mm).

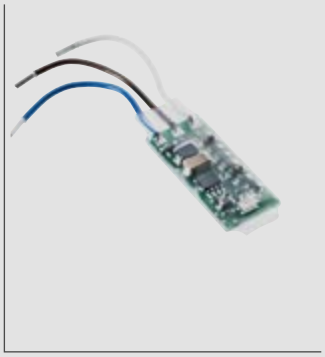
Part.-No. 515931

Material/Finish
stainless steel
Feature/Equipment
1x coupling adapter,
4x screws

OPTIONAL ACCESSORIES

Main control unit

M-COM



Application

Configuration module for automatic configuration and monitoring of max. 4 opening drives / 2 locking drives version S12 / S3 in synchronised multi-drive systems

Rated voltage:
24 V DC (19 V ... 28 V)
Current consumption: <12 mA
Drive type: S12

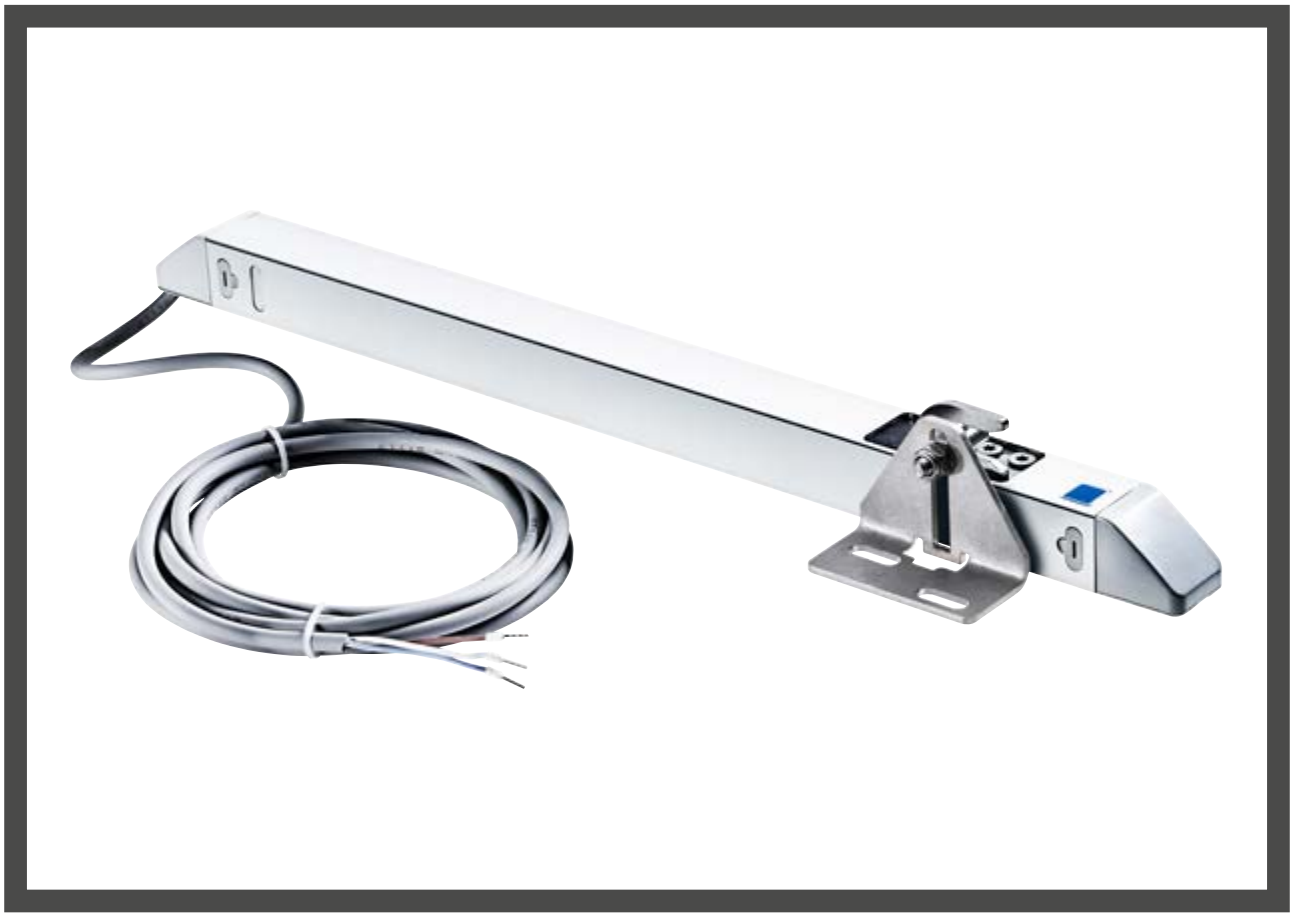
Part.-No. 524177

Protection rating
IP30 rubber coated
Ambient temperature range
0 °C ... + 70 °C
Dimensions
45 x 17 x 6 mm
Connecting wires
3 wires 0,5 mm² x 50 mm
Feature/Equipment
Printed circuit board with components and connection wires to be installed in connection box to be supplied on site

OPTIONS

Special model	PU/pcs.	Part.-No.
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Extra length connecting cable:		
5m – non-halogen, grey – 3 x 0,5 mm²		**501034**
10 m – non-halogen, grey – 3 x 0,5 mm²		**501036**
Microprocessor programming S12		
Programming drives 24V / 230V S12		**524180**

Optional accessories	PU/pcs.	Part.-No.
M-COM Configuration module for synchronised multi-drive systems	1	**524177**



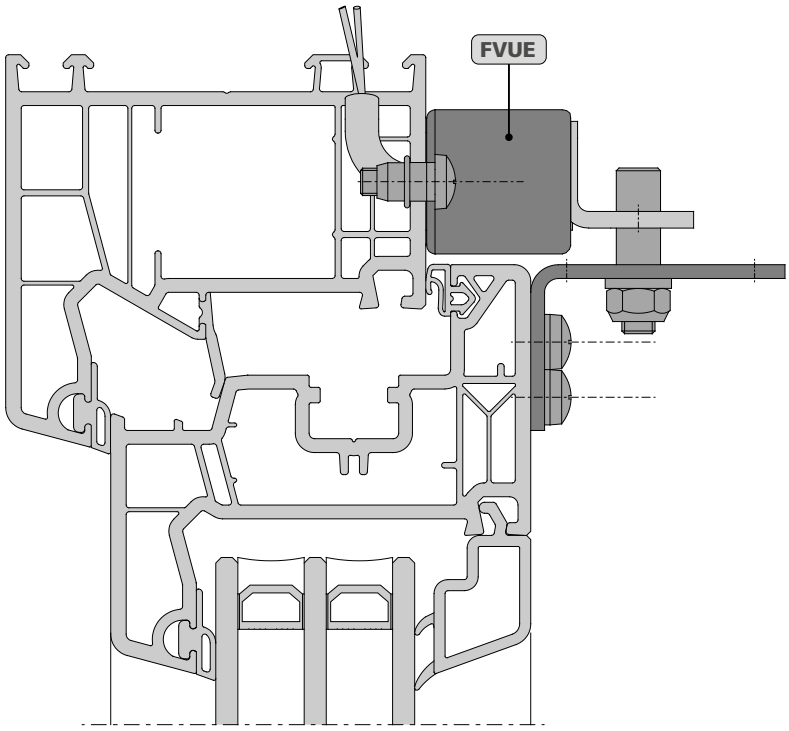
SPECIAL FEATURES FVUE

- For natural ventilation, smoke and heat exhausting and ferralux® NRWG (EN12101-2)
- with M-COM suitable internal load dependent cut-off switch and sequence control for drives S3 / S12 (star wiring, drive current does not run over FVUx - sequence control via communication wire)
- Mounting on the window frame profiles of inward opening windows
- The Coupling adapter engages in the locking bolt attached to the sash
- Robust corrosion-resistant design in a aluminium housing (415 x 26 x 26 mm) or optionally in RAL colors
- Concealed cable terminals and internal push button for setting the running direction
- Coupling adapter customizable for project-/profile-specific demands

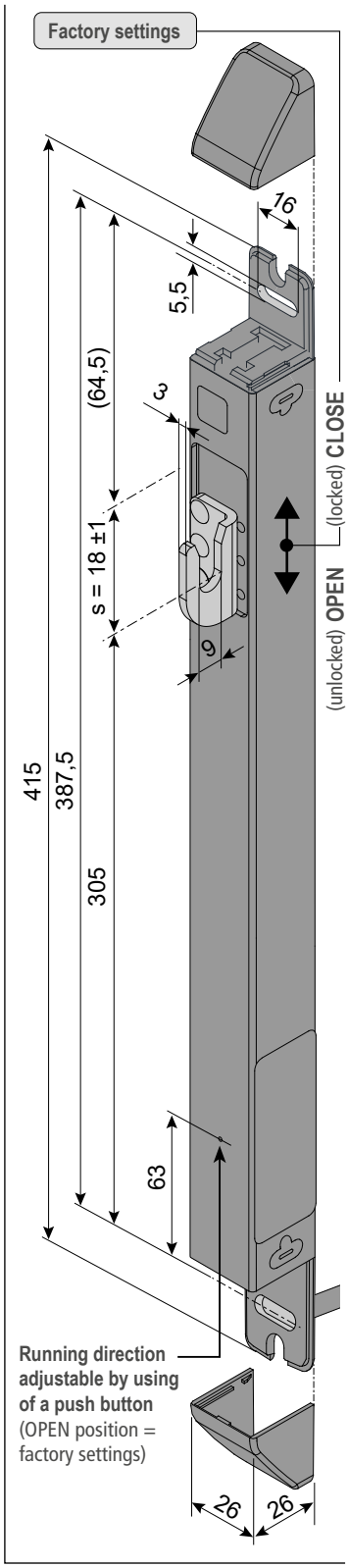
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TYPICAL APPLICATIONS

1 RM, inward opening window



View on PVC window



- Application: natural ventilation, RWA, ferralux®-NRWG
- Surface mounting on the on the main / side closing edge (HSK / NSK) of the window frame profiles (RM) of inward opening windows
- Required mounting space 28 mm
- Locking drives for applications without locking bar
- Running direction adjustable

Options

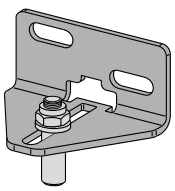
- Coupling adapter customizable for project-/profile-specific demands

- M-COM suitable internal Control Electronics and sequence control for drives S3 / S12
- Star wiring
- Current of the drives does not run over FVUE
- Sequence control via communication wire

TECHNICAL DATA

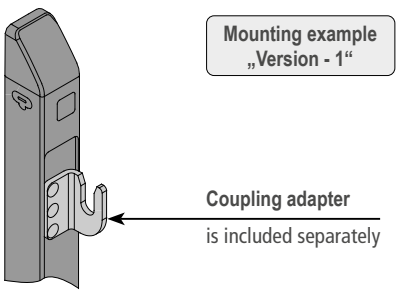
U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	0,6 A
I_A	Cut-off current	~ 1,0 A
P_N	Rated power	15 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... +60 °C
F_A	Pushing force max.	~ 600 N
t	Running time	~ 5,0 s
s	Stroke	~ 18 mm (± 1)
	Connecting cable	non-halogen, grey ø 6,2 mm, 3 x 0,5 mm², ~ 3 m
	Coupling adapter	stainless steel
	Housing	aluminium (E6/C-O)
L, (WxH)	Dimensions	L = 415 mm, 26 x 26 mm (B x H)
	Sound pressure level	≤ 70 dB (A)

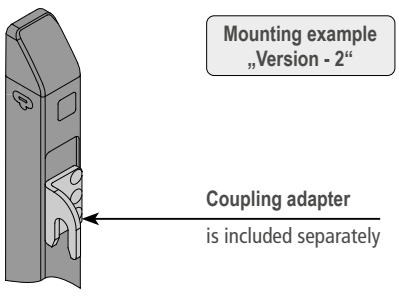
Locking angle B18
(included)



MOUNTED POSSIBILITIES OF THE COUPLING ADAPTER

Coupling adapter is included separately (optional installation possible)





ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.
18	415	FVUE	E6/C-0	1	**515915**

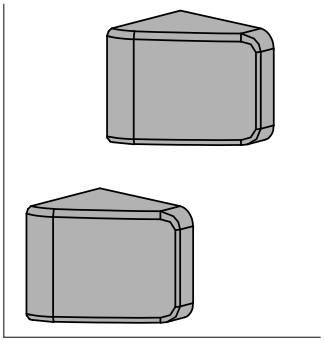
OPTIONS

Special model	PU/pcs.	Part.-No.
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Extra length connecting cable:		
5m – non-halogen, grey – 3 x 0,5 mm²		**501034**
10 m – non-halogen, grey – 3 x 0,5 mm²		**501036**
Microprocessor programming S12		
Programming drives 24V / 230V S12		**524180**

Optional accessories	PU/pcs.	Part.-No.
M-COM Configuration module for synchronised multi-drive systems	1	**524177**

ACCESSORIES

Cover cap



Application

Cover cap for FVUB and FVUR and FVUE (replacement part).

Part.-No. 515921

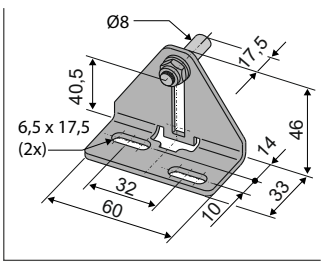
Material/Finish
plastic,
RAL 7035 (light gray)
Feature/Equipment
2 pieces

Part.-No. 515923

Material/Finish
plastic,
RAL 9004 (black)
Feature/Equipment
2 pieces

Locking angle

B18



Application

Angle with adjustable locking bolt at **surface mounting** for compensation of the **profile overlap FÜ <10 mm**.
Required mounting space **35 mm**.

Part.-No. 301595

Material/Finish
stainless steel
Feature/Equipment
1x locking pin Ø 8x30,
1x nut M6,
1x washer A6,4



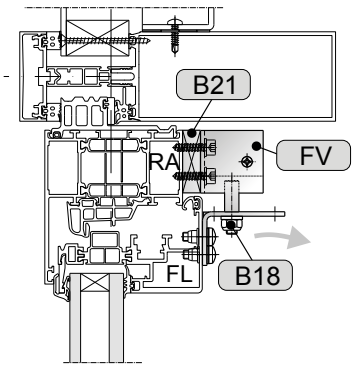
SPECIAL FEATURES FV1 / FV3 / FV4

- For natural ventilation, smoke and heat exhausting and ferralux® NRWG (EN12101-2)
- Versions:
  - FV1 – without internal cut-off switch and sequence control, for use in RWA hardware systems with USKM module
  - FV3 – with internal load dependent cut-off switch and sequence control for drives PL6 S1 / PL10 S1
  - FV4 – Version with M-COM suitable internal load dependent cut-off switch and sequence control for drives S3 /S12 (star wiring, drive current does not run over FV4, sequence control via communication wire)
- Number of locking points (VP)
  - 1 VP – Housing 420 mm as right or left handed version
  - 2 VP – Housing 1200 mm or 2000 mm
  - 3 VP – Housing 2000 mm
- Small locking bracket for 18 mm mounting space on window frame profile
- Robust corrosion-resistant design in a slim aluminium housing (Lx35x35 mm) or optionally in RAL colors
- Easy installation due to concealed holes below the oblique end caps
- Cable connection terminals below the end cap (in FV3 and FV4)

For this product series, a Type III Environmental Product Declaration (EPD) was issued according to ISO 14025 and EN 15804.
The LCA results of the different product types are listed at the end of this product catalogue.
The EPD documents can be viewed or downloaded from our homepage **www.aumueller-gmbh.de**.

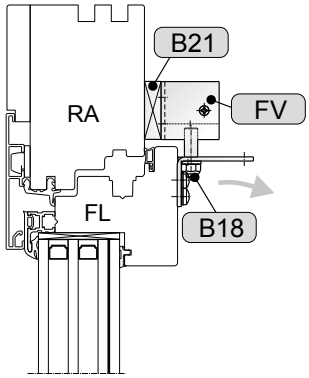
TYPICAL APPLICATIONS

1 RM, inward opening window



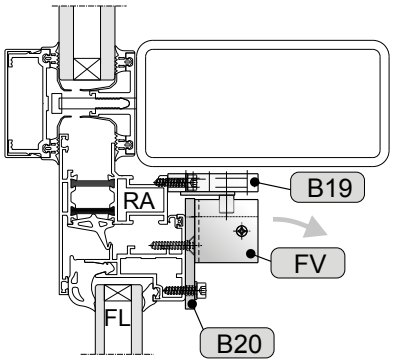
View on aluminium window

2 RM, inward opening window



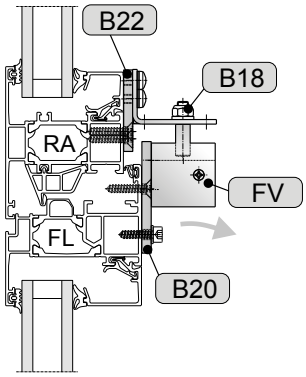
View on wooden window

3 FM, inward opening window



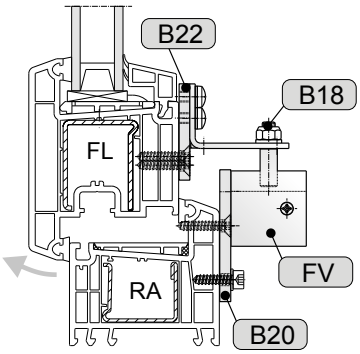
View on aluminium window

4 FM, inward opening window



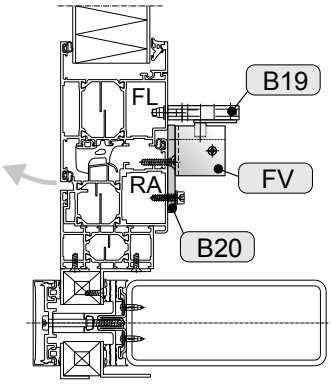
View on aluminium window

5 RM, outward opening window



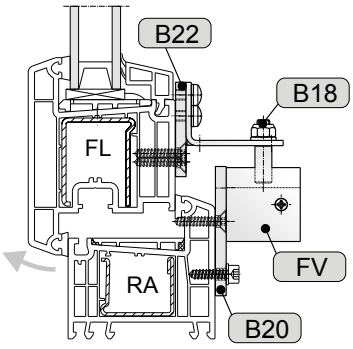
View on PVC-window

6 RM, outward opening window

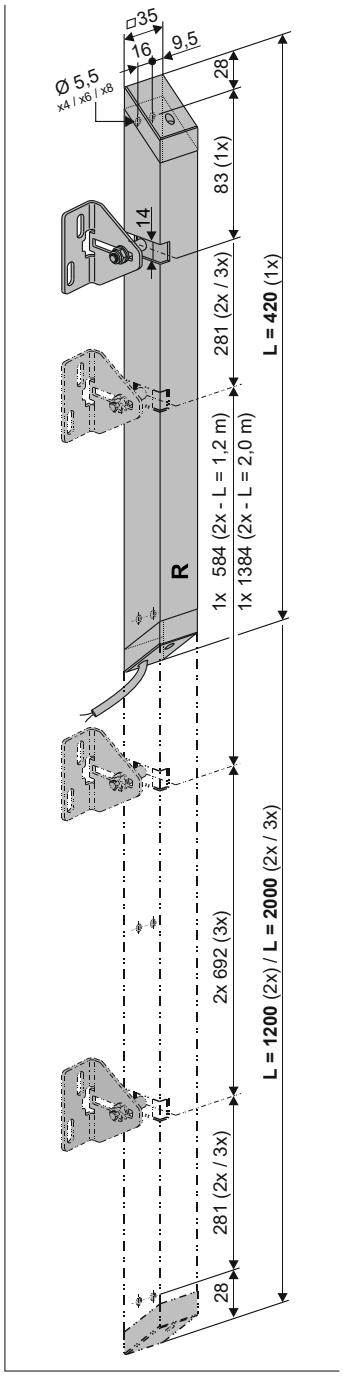


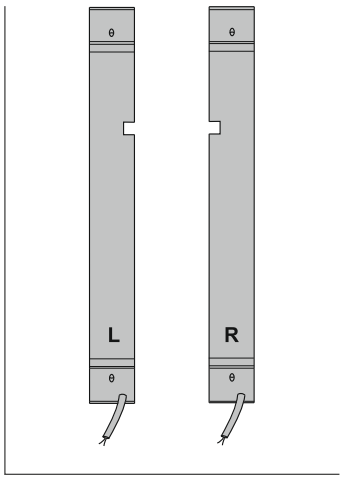
View on aluminium window

7 RM, outward opening window



View on aluminium window





- Application: natural ventilation, RWA, ferralux®-NRWG
- Surface mounting on the window frame/casement profiles of the main/side closing edge (HSK/NSK) of in-/outward opening windows. Locking bracket mounted on the casement
- Required mounting space 35 mm
- Can be installed without locking bar

Options

- Mounting plate for installation on the window frame profile (RM) of outward opening windows or on the casement profile (FM) of inward opening windows
- Slim locking bracket 18 mm for small mounting space on the window frame profiles

FV1

- Without internal cut-off switch and sequence control, for use in RWA hardware systems with USKM module

FV3

- With internal load dependent cut-off switch and sequence control for drives PL6 S1 / PL10 S1 (I = 0.8A)

FV4

- M-COM suitable internal load dependent cut-off switch and sequence control for drives S3 /S12
- Star wiring
- Current of the drives does not run over FV4
- Sequence control via communication wire

TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	0,6 A
I_0	Quiescent current	~ 300 mA
P_N	Rated power	20 W
I_D	Current of connected drives	FV1: USKM FV3: 0,8 A (PL 6/10 S1) FV4: S3 / S12 non relevant
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... + 60 °C
F	Pushing / Pulling force max.	~ 600 N
t	Runtime	~ 5,0 s
	Connecting cable	FV1: non-halogen, grey 2 x 0,75 mm², ~ 3 m FV3: non-halogen, grey 2 x 0,75 mm², ~ 3 m FV4: non-halogen, grey 3 x 0,50 mm², ~ 3 m
	Housing	aluminium 35 x 35 mm
L	Length	see order data
	Versions	FV1: 1x R/L, 2x R, 3x R FV3: 1x R/L, 2x R, 3x R FV4: 1x R/L, 2x R, 3x R
	Version name	1x = 1 locking point 2x = 2 locking point 3x = 3 locking point R = right hand version L = left hand version
	Sound pressure level	≤ 70 dB (A)

Brackets FV1 / FV3 / FV4
Overview Locking Drives

ORDER DATA

Type	L [mm]	Version	Finish	PU/pcs.	Part.-No.
Single right hand	420	FV1 R (1x)	E6/C-0	1	**515103**
		FV3 R (1x)		1	**515102**
		FV4 R (1x)		1	**515129**
Single left hand	420	FV1 L (1x)	E6/C-0	1	**515106**
		FV3 L (1x)		1	**515105**
		FV4 L (1x)		1	**515130**
Double right hand	1200	FV1 R (2x)	E6/C-0	1	**515111**
		FV3 R (2x)		1	**515110**
		FV4 R (2x)		1	**515131**
Double right hand	2000	FV1 R (2x)	E6/C-0	1	**515113**
		FV3 R (2x)		1	**515112**
		FV4 R (2x)		1	**515132**
Triple right hand	2000	FV1 R (3x)	E6/C-0	1	**515116**
		FV3 R (3x)		1	**515114**
		FV4 R (3x)		1	**515136**
Triple left hand	2000	FV1 L (3x)	E6/C-0	1	**515118**

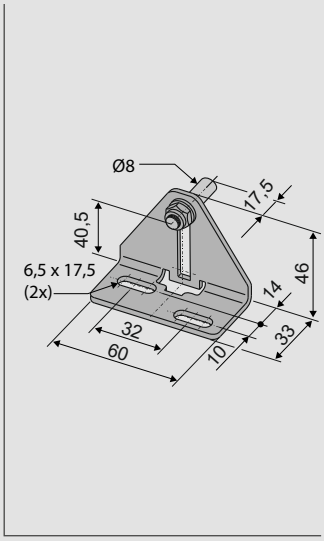
Special model	PU/pcs.	Part.-No.
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Extra length connecting cable:		
5 m –non-halogen grey – 2 x 0,75 mm²		**501021**
10 m –non-halogen, grey – 2 x 0,75 mm²		**501027**
5 m –non-halogen, grey – 3 x 0,50 mm²		**501034**
10 m –non-halogen, grey – 3 x 0,50 mm²		**501036**
Microprocessor programming S12		
Programming drives 24V / 230V S12		**524180**

Optional accessories	PU/pcs.	Part.-No.
M-COM Configuration module for synchronised multi-drive systems (for FV4)	1	**524177**

ACCESSORIES

Locking angle

B18



Application

Surface mounting on the **main/side closing edge** of window frame profiles/casement profiles of **in-/outward opening** windows. Adjustable locking bolt for compensation of the profile overlap **FÜ<10 mm**. Required mounting space **35 mm**

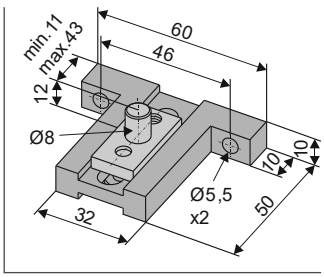
Part.-No. 301595

Material/Finish
stainless steel (1.4301)
Feature/Equipment
1x locking pin Ø 8x30,
1x nut M6,
1x washer A6,4

Accessories

B21-1 base plate for FÜ>10 mm FV L = 420	**Part.-No. 515181**
B21-2 base plate for for FÜ>10 mm FV L = 1200	**Part.-No. 515183**
B21-3 base plate for for FÜ>10 mm FV L = 2000	**Part.-No. 515185**
B22 base plate for glazing bead	**Part.-No. 301599**

B19



Application

Surface mounting on the **main/side closing edge** of window frame profiles/casement profiles of **in-/outward opening** windows. Adjustable locking bolt for compensation of the profile overlap **FÜ<10 mm**. Required mounting space **15 mm**

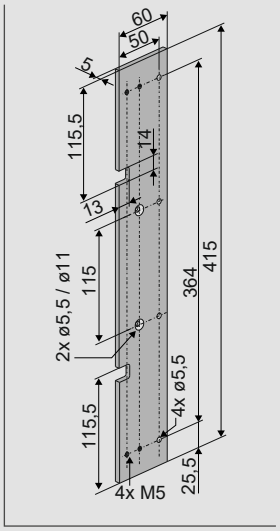
Part.-No. 301597

Material/Finish
aluminium
Feature/Equipment
1x locking pin Ø 8x10,
1x hex head screw M6x10,
1x washer A6,4

ACCESSORIES

Mounting plate

B20-1



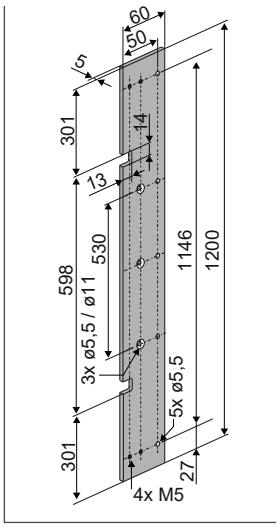
Application

Mounting of FV1/FV3/FV4
L = 420 mm as right or left hand version on the window frame profiles of outward opening windows or on the casement profile of inward openingcasements, e.g. **RWA1100** hardware systems

Part.-No. 515191

Material/Finish
aluminium
Feature/Equipment
415 x 60 x 5 mm

B20-2



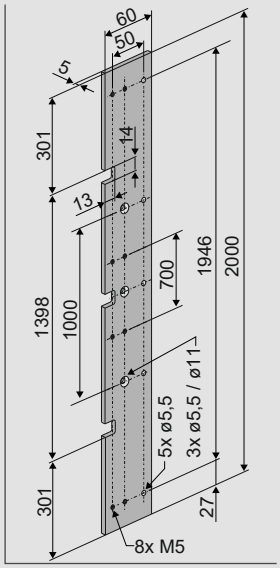
Application

Mounting of FV1/FV3/FV4
L = 1200 mm on the window frame profiles of outward opening windows or on the casement profiles of inward opening casements, e.g. **RWA1100** hardware system

Part.-No. 515193

Material/Finish
aluminium
Feature/Equipment
1200 x 60 x 5 mm

B20-3



Application

Mounting of FV1/FV3/FV4
L = 2000 mm on the window frame profiles of outward opening windows or on the casement profiles of inward opening casements, e.g. **RWA1100** hardware system

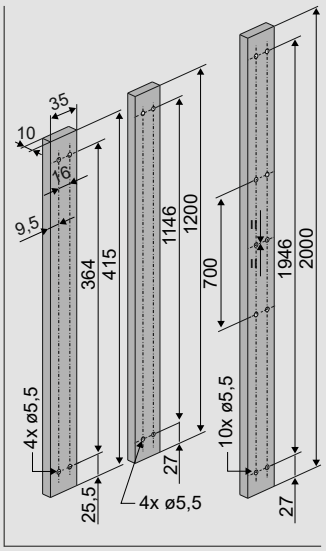
Part.-No. 515197

Material/Finish
aluminium
Feature/Equipment
2000 x 360 x 5 mm

OPTIONAL ACCESSORIES

Base plate

B21



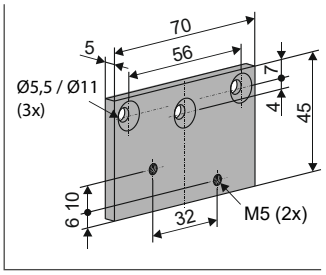
B21-1 FV L = 420	**Part.-No. 515181**
B21-2 FV L = 1200	**Part.-No. 515183**
B21-3 FV L = 2000	**Part.-No. 515185**

Application

Compensation of the **profile overlapp FÜ>10 mm** for FV1/FV3/FV4 mounted on the window frame profiles (RM) of **inward opening** windows
1x for FÜ > 10 mm
2x fpr FÜ > 20 mm

Material/Finish
aluminium
Feature/Equipment
L x 35 x 10 mm
(L = 415, 1200, 2000) mm

B22



Application

Adapter plate for relocation of the mounting holes of the locking bracket **B18** outside the glasing bead of **outward opening** windows

Part.-No. 301599

Material/Finish
aluminium (E6/C-0)
Feature/Equipment
for locking angle B18
2x screw M5x8,
2x washer A5,3

CASEMENT BRACKETS AND FRAME BRACKETS

Special accessories				
Special model	PU/pcs.	Part.-No.		
Casement brackets painted / powder coated in other RAL colours				
Lump sum for coating		**516030**		
Specify at order stage:	1 – 20	**516032**		
	21 – 50	**516032**		
	51 – 100	**516032**		
	from 101	**516032**		
Frame brackets painted / powder coated in other RAL colours				
Lump sum for coating		**516030**		
Specify at order stage:	1 – 20	**516031**		
	21 – 50	**516031**		
	51 – 100	**516031**		
	from 101	**516031**		

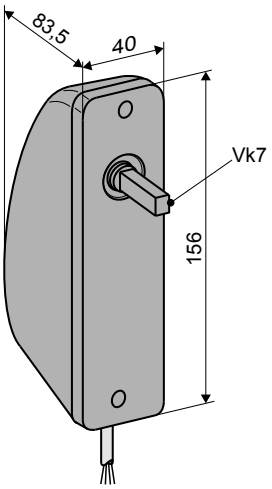


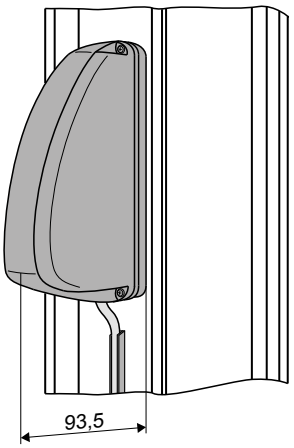
SPECIAL FEATURES OFV1 / OFV1 M-COM

- For natural ventilation, smoke and heat exhausting and ferralux® NRWG (EN12101-2)
- Distinguishing marks:
  - Internal load dependent cut-off switch and sequence control for drives PL6 S1 / PL10 S1 as well as for drives type S2 / S3 / S12
  - Version **OFV1 M-COM** with M-COM suitable internal load dependent cut-off switch and sequence control for drives S3 /S12 (star wiring, drive current does not run over OFV1 (SW-V2 M-COM), sequence control via communication wire)
  - Rotating angle adjustable to 90° / 180°
  - Opening direction sectable to right / left turning
- Mounting on the gear of window handl of inward opening casements instead of the manual handl
- Square shaft activates the window multi-point locking systems via gear of the window handl
- Robust corrosion-resistant design in a plastic housing
- Easy installation due to concealed holes
- Concealed cable connection terminals and DIP-switches for settings

For this product series, a Type III Environmental Product Declaration (EPD) was issued according to ISO 14025 and EN 15804.
The LCA results of the different product types are listed at the end of this product catalogue.
The EPD documents can be viewed or downloaded from our homepage **www.aumueller-gmbh.de**.

- With Internal Intelligent Control Electronics and sequence control for drives PL6 S1 / PL10 S1 as well as for drives type S2 / S3 / S12
  (I max. 3 A, drive current runs over OVF1 – undercurrent detection)
- Two adjustable rotation angles: 90° / 180°
- Opening direction selectable: right / left turning
- Square shaft adapter 7x55 mm



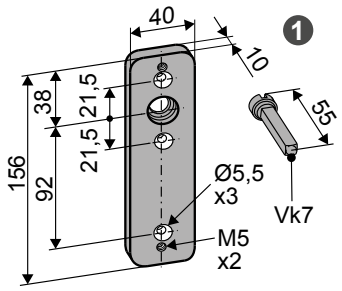


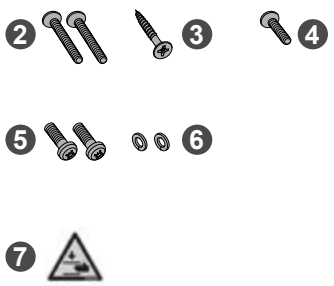
ORDER DATA

Version	PU/pcs.	Part.-No.		
OFV1	1	**513850**		

TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	0,8 A
I_A	Cut-off current	1,1 A
I_0	Quiescent current	< 28 mA (10 Nm)
I_D	Current of connected drives	S1: max. 0,9 A
P_N	Rated power	19 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... + 60 °C
M	Torque max.	10 Nm
F_H	Initial torque	22 Nm
	Rotating angle direction	yes (self-learning)
	Rotating angle	90 ° / 180° (right / left)
t	Runtime	90° - 4,5 s; 180° - 9,0 s
s	Connecting cable	non-halogen, grey 4 x 0,75 mm², ~ 3 m
	Housing	ABS, greywhite
L	Dimensions (B x H x T)	40 x 156 x 83,5 mm
	Sound pressure level	≤ 70 dB (A)

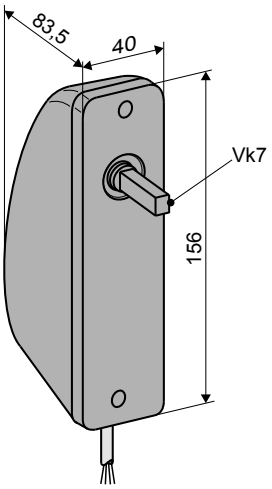


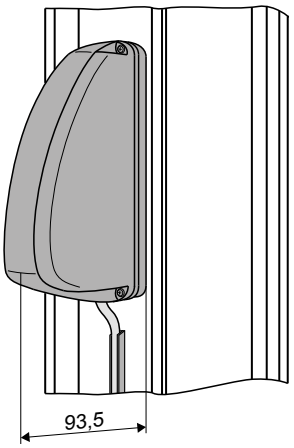


In delivery	
1	1x Mounting plate with Vk7x55
2	2x Countersunk screw M5x40
3	1x Spax-Countersunk screw 4,5x30
4	1x Countersunk screw M5x16
5	2x Head screw M 5 x 16
6	2x Spring rings
7	1x Warning label

- With Internal Intelligent Control Electronics and sequence control for drives type S3 / S12
- Two adjustable rotation angles: 90° / 180°
- Opening direction selectable: right / left turning
- Square shaft adapter 7x55 mm

- M-COM suitable internal Control Electronics and sequence control for drives S3 / S12
- Star wiring
- Current of the drives does not run over OFV1 (SW-V2 M-COM)
- Sequence control via communication wire



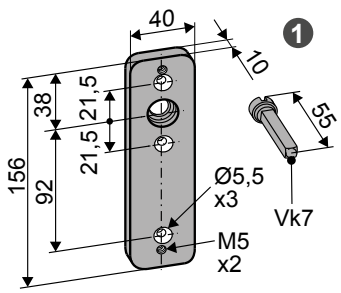


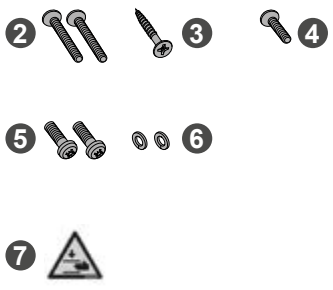
ORDER DATA

Version	PU/pcs.	Part.-No.		
OFV1 M-COM	1	**513860**		

TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	0,8 A
I_A	Cut-off current	1,1 A
I_0	Quiescent current	< 28 mA (10 Nm)
	Connected drives (Opener drive)	with S3 / S12
P_N	Rated power	19 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
	Ambient temperature range	-5 °C ... + 60 °C
M	Torque max.	10 Nm
F_H	Initial torque	22 Nm
	Rotating angle direction	yes (self-learning)
	Rotating angle	90 ° / 180° (right / left)
t	Runtime	90° - 4,5 s; 180° - 9,0 s
s	Connecting cable	non-halogen, grey 3 x 0,5 mm², ~ 3 m
	Housing	ABS, greywhite
L	Dimensions (B x H x T)	40 x 156 x 83,5 mm
	Sound pressure level	≤ 70 dB (A)



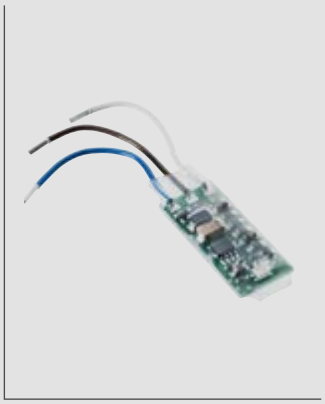


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4	1x Countersunk screw M5x16
5	2x Head screw M 5 x 16
6	2x Spring rings
7	1x Warning label

OPTIONAL ACCESSORIES

Main control unit

M-COM



Application

Configuration module for automatic configuration and monitoring of max. 4 opening drives / 2 locking drives version S12 / S3 in synchronised multi-drive systems

Rated voltage:
24 V DC (19 V ... 28 V)
Current consumption: <12 mA
Drive type: S12

Part.-No. 524177

Protection rating
IP30 rubber coated
Ambient temperature range
0 °C ... + 70 °C
Dimensions
45 x 17 x 6 mm
Connecting wires
3 wires 0,5 mm² x 50 mm
Feature/Equipment
Printed circuit board with components and connection wires to be installed in connection box to be supplied on site

aumüller

7 Hardware sets

Product Overview


RWA 1000

RWA 1000

Model	24V DC
Application	Bottom-hung / Top-hung / Side-hung inward opening windows
Opening drives	PL6 S1 (600 N) / PL10 S1 (1.000 N) on the side closing edeg (NSK)
Locking drives	FV3 / OFV / (FV1 with USKM) on the main closing edge (HSK)
Frame brackets	K15 (H = 150 mm), B20 für FV3 (FM)
Casement brackets	F11
Version	Opening drives Solo / TE = Tandem (with USKM)
Protection rating	IP32

RWA 1000


RWA 1100

RWA 1100

Model	24V DC
Application	Bottom-hung / Top-hung / Side-hung ourward opening windows
Opening drives	PL6 S1 (600 N) / PL10 S1 (1.000 N) on the side closing edeg (NSK)
Locking drives	FV3 / (FV1 with USKM) on the main closing edge (HSK)
Frame brackets	K15 (H = 150 mm) / K37 (H = 250 mm) / B20
Casement brackets	F11
Version	Opening drives Solo / TE = Tandem (with USKM)
Protection rating	IP32

RWA 1100


RWA 1050

RWA 1050

Model	24V DC
Application	Side-hung inward opening windows
Opening drives	PL6 S1 (600 N) / PL10 S1 (1.000 N) on the side closing edeg (NSK)
Locking drives	FV3 / OFV / (FV1 with USKM) on the main closing edge (HSK)
Frame brackets	K97 right hand / left hand
Casement brackets	F11
Version	Opening drives Solo / TE = Tandem (with USKM)
Protection rating	IP32

RWA 1050

RWA HARDWARE SYSTEMS

RWA hardware system	Rated voltage	Locking drive			Opening drives	Accessories			Casement dimensions						Required mounting space	Use			Location	
		Type	Number of VP	Lenght		Control modules Accessories	Frame bracket	Casement bracket	Bottom-/top-hung			Side-hung				Natural ventilation	RWA	NRWG	Facade	Roof
									FAB	FAH	max. weight	FAB	FAH	max. weight					inward	outward
	[VDC]			[mm]		[A]			[mm]	[mm]	[Kg]	[mm]	[mm]	[Kg]	[mm]					
1000	24	FV3	1 (*1	450	PL6	(B20-1)	K15	F11	500 – 1200	600 – 1500	50	600 – 1500	500 – 2400	90	40	●	●	●	●	■
					PL10						90			150		●	●	●	●	■
		OFV	(*2		PL6						50	500 – 1500		90		●	●	●	●	■
					PL10						90			150		●	●	●	●	■
1000-TE	24	FV1	2; 3	1200	2x PL6	USKM	2x K15	2x F11	1250 – 2400	600 – 2000	90	600 – 1500	1250 – 2400	130	40	●	●	●	●	■
					2x PL10						160			200		●	●	●	●	■
			3	2000	2x PL6	USKM			2050 – 2400		90		2050 – 2400	130		●	●	●	●	■
					2x PL10						160			200		●	●	●	●	■
		OFV	(*2		2x PL6	USKM			500 – 1200	600 – 1500	50	500 – 1500	500 – 2400	90		●	●	●	●	■
					2x PL10						90			150		●	●	●	●	■
1100	24	FV3 (*2	1 (*1	450	PL6	B21-1	K15 (K37)	F11	500 – 1200	800 – 1600	70	600 – 1500	500 – 2400	90	40	●	●	●	■	●
					PL10						120			150		●	●	●	■	●
1100-TE	24	FV1 (*2	2; 3	1200	2x PL6	USKM (B20-2)	2x K15 (2x K37)	2x F11	1250 – 2400	800 – 2000	130	600 – 1500	1250 – 2400	130	40	●	●	●	■	●
					2x PL10						200			200		●	●	●	■	●
			3	2000	2x PL6	USKM (B20-3)			2050 – 2400		130		2050 – 2400	130		●	●	●	■	●
					2x PL10						200			200		●	●	●	■	●
1050	24	FV3 (*2			PL6		K97 (re/li)	F11				550 – 1250	500 – 1500	90	22	●	●	●	●	■
					PL10									130		●	●	●	●	■
		OFV	(*2		PL6									90		●	●	●	●	■
					PL10									130		●	●	●	●	■
1050-TE	24	FV1	(*1		2x PL6	USKM	K97 R+L	2x F11				550 – 1500	500 – 2400	130	22	●	●	●	●	■
					2x PL10									150		●	●	●	●	■
		OFV	(*2		2x PL6	USKM								130		●	●	●	●	■
					2x PL10									150		●	●	●	●	■

LEGEND

● suitable ■ not recommended

(*1 On the main closing edge of side -hung windows use of FV with 2 or 3 locking points (VP) is possible
(*2 Window specific multi-locking system

OVERVIEW OF SPINDLE DRIVES

Opening drives	Version		Stroke	Force		Speed		Stro-ke in	Cut-off current	Use			Loca-tion		Function		
	Cut-off switch	Rated voltage	up – to	Pulling force	Pushing force	OPEN	ZU	60 s	Max.	Natural ventilation	RWA	NRWG	Facade	Roof	Run monitoring	Synchronised run	Sequence control
		[VDC]	[mm]	[N]	[N]			[mm]	[A]								
PL6	S1	24	100 – 300	600	600	5,8	5,8	350	0,8	●	●	●	●		○		○
PL10	S1	24	100 – 300	1000	1000	2,6	2,6	150	0,8	●	●	●	●		○		○

OVERVIEW OF LOCKING DRIVES

Locking drives	Locking stroke (Rotating angle)	Rated voltage	Force (Torque)		Runtime	Close circuit current	Opening drives		Use			Loca-tion		Functions		
			Pulling/Pushing force	Initial force (torque)			Model	Cut-off current	Natural ventilation	RWA	NRWG	Facade	Roof	Run monitoring	Synchronised run	Sequence control
	[mm]	[VDC]	[N]	[N]	[s]	[A]		[A]								
FV1		24	600	1000	5,0	0,3	○	○	●	●	●	●				○
FV3		24	600	1000	5,0	0,3	S1	0,8	●	●	●	●				●
OFV	90° – 180°	24	10 Nm	22 Nm	4,5/9,0	0,3	S1	0,9 – 3,0	●	●	●	●				●

LEGEND

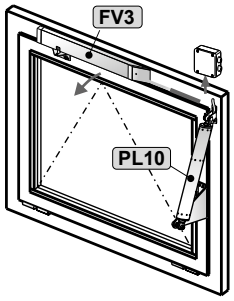
● suitable ■ not recommended

S1 without internal cut-off switch for operation with RWA1000-, RWA1100-, RWA1050-systems

○ only with external cut-off switch or control module USKM

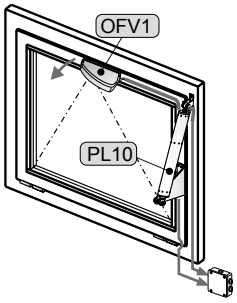
TYPICAL APPLICATION

RWA1000 – inward opening



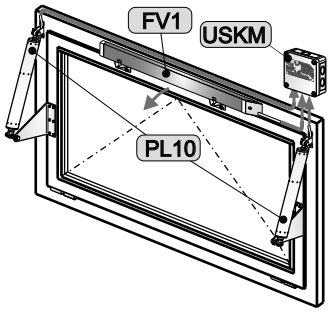
View on bottom-hung window

RWA1000 – inward opening



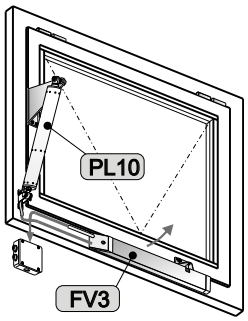
View on bottom-hung window

RWA1000 TE – inward opening



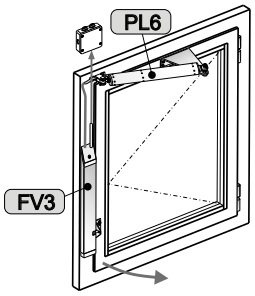
View on bottom-hung window

RWA1000 – inward opening



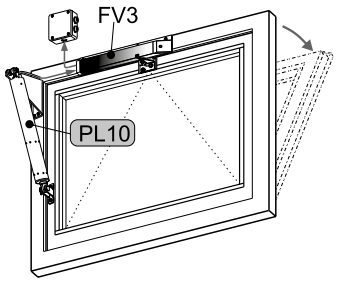
View on top-hung window

RWA1000 – inward opening



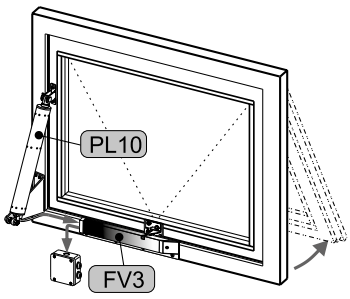
View on side-hung window

RWA1100 – outward opening



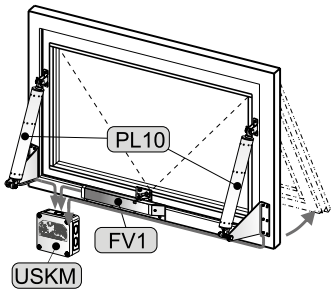
View on bottom-hung window

RWA1100 – outward opening



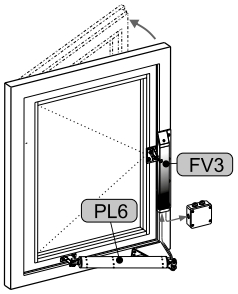
View on top-hung window

RWA1100 TE – outward opening



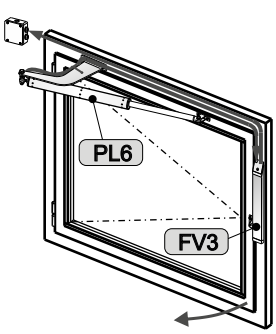
View on top-hung window

RWA1100 – outward opening



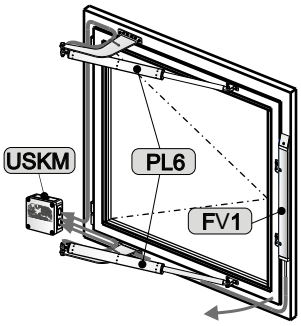
View on side-hung window

RWA1050 – inward opening



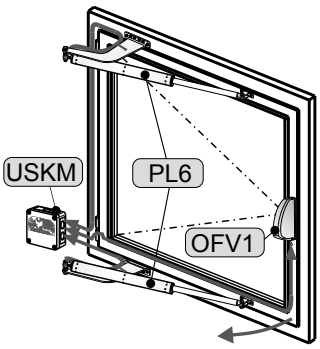
View on side-hung window

RWA1050 TE – inward opening

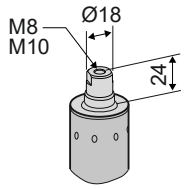


View on side-hung window

RWA1050 TE – inward opening



View on side-hung window

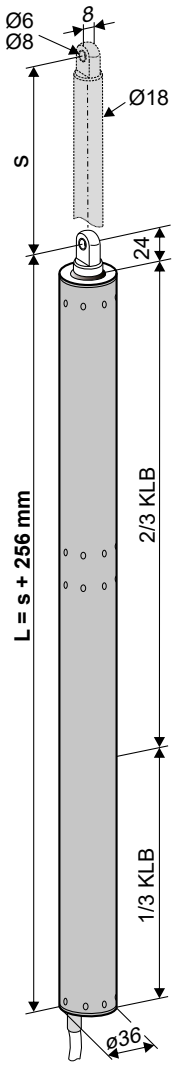


OPTION

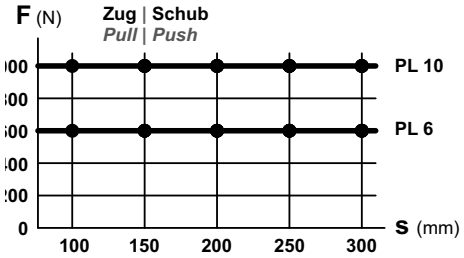
- Application: natural ventilation, RWA, ferralux®-NRWG
- Force: PL6 = 600 N / PL10 = 1.000 N
- Without internal cutt-off switch – external cutt-off switch required! (control module USKM or locking drive FV3 / OFV1)

Options

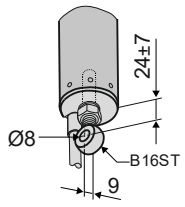
- Rear eye bolt, spindel tube with interior thread for clevis



TECHNICAL DATA

U_N	Rated voltage	24 V DC (19 V ... 28 V)
I_N	Rated current	0,6 A
I_A	Cut-off current	0,8 A
P_N	Rated power	15 W
DC	Duty cycle	5 cycles (ED 20% - ON: 2 min. / OFF: 8 min.)
	Protection rating	IP 65
	Ambient temperature range	-5 °C ... +60 °C
F_Z	Pulling force max.	PL6 = 600 N PL10 = 1.000 N
F_A	Pushing force max.	
F_H	Pullout force	5000 N (fastening depended)
	Spindle tube	stainless steel
	Connecting cable	non-halogen, grey 2 x 0,75 mm², ~ 3 m
v	Speed	PL6 5,8 mm/s 5,8 mm/s PL10 2,6 mm/s 2,6 mm/s
s	Stroke	see order data
L	Length	s + 256 mm (see order data)
	Sound pressure level	≤ 70 dB (A)

OPTION



ORDER DATA

s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.
100	356	PL6 100 S1	E6/C-0	1	**562010**
		PL10 100 S1		1	**565010**
150	406	PL6 150 S1	E6/C-0	1	**562015**
		PL10 150 S1		1	**565015**
200	456	PL6 200 S1	E6/C-0	1	**562020**
		PL10 200 S1		1	**565020**
250	506	PL6 250 S1	E6/C-0	1	**562025**
		PL10 250 S1		1	**565025**
300	556	PL6 300 S1	E6/C-0	1	**562030**
		PL10 300 S1		1	**565030**

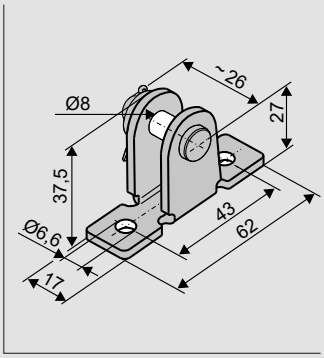
OPTIONS

Special model	PU/pcs.	Part.-No.
Front suspension		
Pushing rod end with interior thread M8	1	**515061**
Pushing rod end with interior thread M10	1	**515060**
Drive housing painted/powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**
Extra length connecting cable:		
5 m – non-halogen, grey – 2 x 0,75 mm²		**501024**
10 m – non-halogen, grey – 2 x 0,75 mm²		**501026**

Accessories for fron / rear suspension	PU/pcs.	Part.-No.
Rear Suspension		
B16ST Eyebolt Ø8 mm, galvanized	1	**100044**
B16VA Eyebolt Ø8 mm, stainless steel	1	**100144**
B27ST clevis M8x16 mm, galvanized, Grubscrew M8x45 mm	1	**105510**
External cutt-off switch		
Control module USKM (up to max. s 300 mm)	1	**512140**

FRAME BRACKETS

F11ST



Application

Surface mounting on the **side closing edge** of casement/window frame profiles of in-/outward opening windows or on skylights, for drives with **front or rear suspension** with bore **Ø8 mm**, mounting holes aligned with central axis of drive

Part.-No. 151400

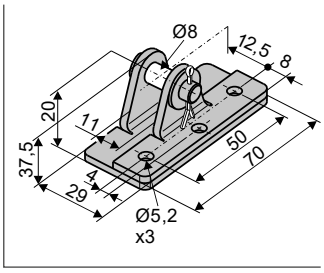
Material/Finish
steel galvanized
Feature/Equipment
1x bolt Ø8 mm,
1x washer,
1x cotter pin
Load
max. 3.000 N

F11VA

Part.-No. 151401

Material/Finish
stainless steel

F13



Application

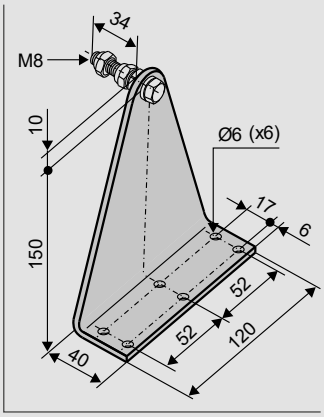
Surface mounting on the **side closing edge** of casement/window frame profiles of in-/outward opening windows or on skylights, for drives with **front or rear suspension** with bore **Ø8 mm**, mounting holes not alignet with the central axis of drive

Part.-No. 151405

Material/Finish
steel galvanized
Feature/Equipment
1x bolt Ø8 mm,
1x washer,
1x cotter pin
Load
max. 1600 N

CASEMENT BRACKETS

K15



Application

Surface mounting on the **side closing edge** of window frame profiles of in-/outward opening windows, by obliquely arranged drives with **rear suspension** with bore **Ø8 mm.**
Required space on the frame **40 mm**

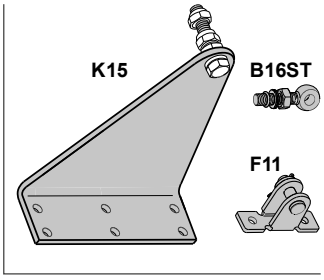
Part.-No. 307000

Material/Finish
steel galvanized
Feature/Equipment
H=150 mm, t=4 mm

Optional accessories

B16ST Eyebolt (Ø8 x 40 mm ST)	**Part.-No. 100044**
B16VA Eyebolt (Ø8 x 40 mm VA)	**Part.-No. 100144**

K15-Set



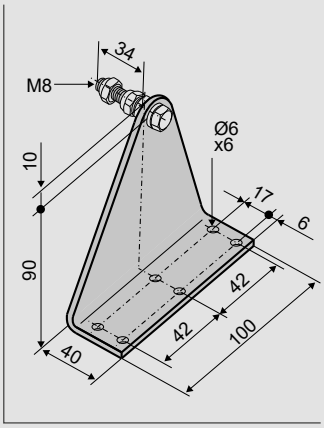
Application

Surface mounting on the **side closing edge** like RWA-1000/1100 hardware sets.
Required space on the frame **40 mm**

Part.-No. 517590

Material/Finish
steel galvanized
Feature/Equipment
Set:
1x K15
1x F11ST
1x B16ST

K16



Application

Surface mounting on the **side closing edge** of window frame profiles of in-/outward opening windows, by obliquely arranged drives with **rear suspension** with bore **Ø8 mm.**
Required space on the frame 40 mm

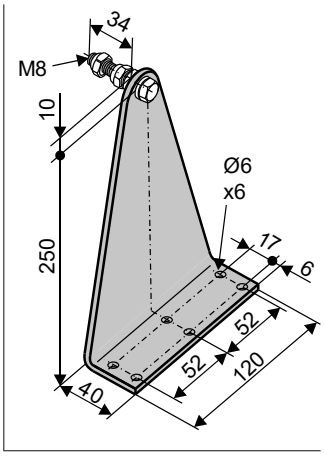
Part.-No. 307200

Material/Finish
steel galvanized
Feature/Equipment
H=90 mm, t=4 mm

Optional accessories

B16ST Eyebolt (Ø8 x 40 mm ST)	**Part.-No. 100044**
B16VA Eyebolt (Ø8 x 40 mm VA)	**Part.-No. 100144**

K37



Application

Surface mounting on the **side closing edge** of window frame profiles of in-/outward opening windows, by obliquely arranged drives with rear suspension with bore **D = 8 mm.**
Required space on the frame **40 mm**

Part.-No. 307500

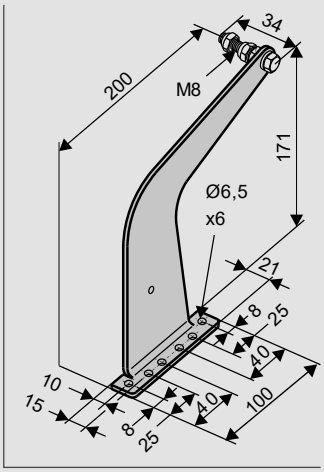
Material/Finish
steel galvanized
Feature/Equipment
H=250 mm, t=5 mm

Optional accessories

B16ST Eyebolt (Ø8 x 40 mm ST)	**Part.-No. 100044**
B16VA Eyebolt (Ø8 x 40 mm VA)	**Part.-No. 100144**

CASEMENT BRACKETS

K97L



Application

Surface mounting on the **side closing edge** of window frame profiles of inward opening side hung windows, by obliquely arranged drives with **rear suspension** with bore **Ø8 mm.** **Required space** on the frame **22 mm**

Part.-No. 160938

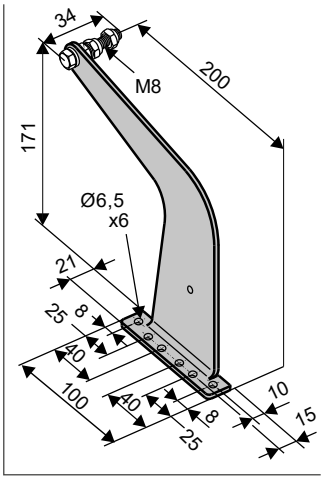
Material/Finish
stainless steel, vibratory grinding
Feature/Equipment
left hand

Optional accessories

B16ST Eyebolt (Ø8 x 40 mm ST) — **Part.-No. 100044**

B16VA Eye bolt (Ø8 x 40 mm VA) — **Part.-No. 100144**

K97R



Application

Surface mounting on the **side closing edge** of window frame profiles of inward opening side hung windows, by obliquely arranged drives with **rear suspension with** bore **Ø8 mm.** **Required space** on the frame **22 mm**

Part.-No. 160939

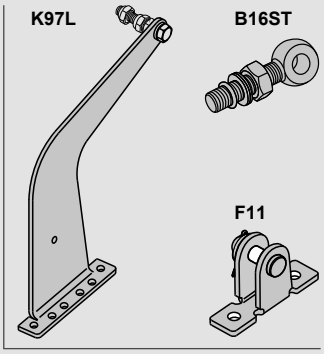
Material/Finish
stainless steel, vibratory grinding
Feature/Equipment
right hand

Accessories

B16ST Eyebolt (Ø 8 x 40 mm ST) — **Part.-No. 100044**

B16VA Eyebolt (Ø 8 x 40 mm VA) — **Part.-No. 100144**

K1050-L



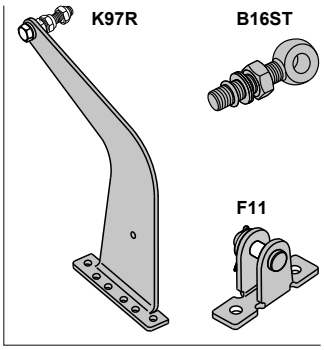
Application

Surface mounting of drives on the **side closing edge** like RWA-1050 hardware system. **Required space** on the frame **22 mm**

Part.-No. 307050

Feature/Equipment
Set:
1x K97L
1x F11
1x B16ST

K1050-R



Application

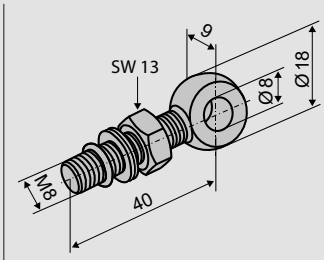
Surface mounting of drives on the **side closing edge** like RWA-1050 hardware system. **Required space** on the frame **22 mm**

Part.-No. 307051

Feature/Equipment
Set:
1x K97R
1x F11
1x B16ST

ACCESSORIES

B16ST



Application

Rear or front suspension of spindle drives with **M8 thread** in the rear base pice or in the spindle tube

Part.-No. 100044

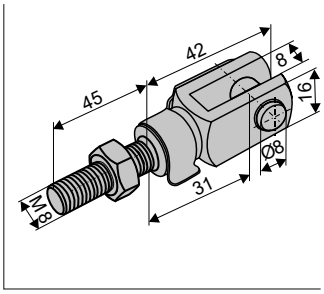
Material/Finish
steel, galvanized
Feature/Equipment
M8x40 (Eye Ø8 mm),
1x nut M8 + Nordlock-safety-washer + o-ring
max. screw-in depth in the drive 25 mm

B16VA

Part.-No. 100144

Material/Finish
stainless steel (V2A)

B27ST



Application

Rear or front suspension of spindle drives with **M8** thread in the rear base cap or in the spindle tube

Part.-No. 105510

Material/Finish
steel, galvanized
Feature/Equipment
Clevis M10 x 40 mm with spring bolt Ø8 mm and thread M8 x 45 mm
1x nut M10 + Nordlock-safety-washer + O-ring,
max. screw-in depth in the drive 25 mm

Special model	PU/pcs.	Part.-No.
Casement brackets painted / powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	**1 – 20**	**516032**
	21 – 50	**516032**
	51 – 100	**516032**
	from 101	**516032**
Frame brackets painted / powder coated in other RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	**1 – 20**	**516031**
	21 – 50	**516031**
	51 – 100	**516031**
	from 101	**516031**



SPECIAL FEATURES RWA1000

- For natural ventilation, smoke and heat exhausting and ferralux® NRWG (EN12101-2)
- Siutable for inwards opening bottom/top/side-hung windows
- Large opening angles relized with short strokes and opening times due to the mounting of the spindle drives at an acute angle to the side closing edge
- Maximum opening angles and balanced force-stroke ratio with K15 mounted on the side closing edge of the casement profile at app. 1/3 of the casemnet lenght related to the hinge side
- Other combinations of various spindle drives in SOLO or TANDEM arrangements with locking actuators for actuating of window profile-specific hardware systems on request

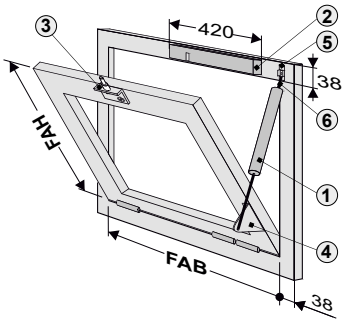
For this product series, a Type III Environmental Product Declaration (EPD) was issued according to ISO 14025 and EN 15804.
The LCA results of the different product types are listed at the end of this product catalogue.
The EPD documents can be viewed or downloaded from our homepage **www.aumueller-gmbh.de**.

MOUNTING DIMENSIONS OF RWA1000 FOR BOTTOM-/TOP-HUNG INWARD OPENING WINDOWS

Hardware set	Frame bracket	Stroke of the opening drive	CASEMENT CLOSED			Mounting dimension „X" (*1 (*2	FAH (NSK) (side closing edge)	Opening angle	Opening width	CASEMENT OPEN			Weight of the casement (max.)		Required space on the window frame		FAB (HSK)
			Angle of the drive force application	Applied force at the drive fixing point						Angle of the drive force application	Applied force at the drive fixing point						
				PL6	PL10						PL6	PL10	PL6	PL10	NSK	HSK	
			[DEG]	[N]	[N]	[mm]	[mm]	[DEG]	[mm]	[DEG]	[N]	[N]	[Kg]	[Kg]	[mm]	[mm]	
RWA 1000 (*3	K15	100	19	195	326	200	560	25	242	48	447	745	32	53	40	40	Depends of the used locking drive (*4
						250	610	22	233	47	442	736	36	60			
						300	660	20	229	47	437	729	40	66			
						400	760	17	225	46	430	717	45	75			
						500	860	15	225	47	442	736	51	86			
						600	960	13	217	45	422	703	53	88			
		150	16	165	276	225	645	34	377	57	503	838	35	58	40	40	
						275	695	30	360	55	490	817	39	65			
						325	745	28	360	54	487	811	42	71			
						450	870	23	347	52	474	790	49	82			
						550	970	20	337	51	467	778	53	88			
						650	1070	18	335	50	462	769	56	93			
		200	15	155	259	250	720	42	516	64	541	902	38	63	40	40	
						300	770	38	501	62	531	885	41	69			
						350	820	35	493	61	523	872	45	74			
						400	870	32	480	59	516	861	47	79			
						500	970	27	453	57	503	839	52	86			
						600	1070	24	445	56	497	829	56	93			
						700	1170	22	446	55	491	818	59	98			
						800	1270	20	441	54	486	810	61	102			
		250	13	135	225	275	795	50	672	71	567	945	39	65	40	40	
						325	845	45	647	68	557	928	43	71			
						375	895	41	627	66	549	915	46	77			
						425	945	38	615	65	544	906	49	81			
						550	1070	31	572	62	528	880	54	90			
						650	1170	28	566	60	519	865	58	96			
						750	1270	25	550	59	513	854	61	101			
						850	1370	23	546	58	507	844	63	105			
		300	12	125	208	300	870	56	817	77	584	973	40	67	40	40	
						350	920	51	792	74	576	959	44	73			
						400	970	46	758	71	569	948	47	78			
						450	1020	43	748	69	561	935	50	83			
						500	1070	40	732	68	555	925	52	86			
						600	1170	35	704	65	544	907	56	93			
						700	1270	31	679	63	536	893	59	98			
						800	1370	28	663	62	529	882	62	103			
						900	1470	26	661	61	523	872	64	107			
						1000	1570	24	653	60	519	864	66	110			

(*1 Mounting measure „**X**" = distance **K15** to **hinge side** (≥ 1/3 FAH)
(*2 Other mounting measure and wing heights on request

(*3 For RWA1000TE (tandem) the drive forces and the max. window weigths are doubled!
(*4 FV1 – 1x = 450 mm
FV1 – 2x = 1200 or 2000 mm
FV1 – 3x = 2000 mm



① 1x **PL10 S1**
(100 / 150 / 200 / 300 mm)



② 1x **FV3-R** (1x) L = 420 mm)

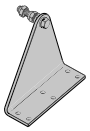


③ incl. **B18**



1 x K15-Set:

④ 1x **K15**



⑤ 1x **F11**



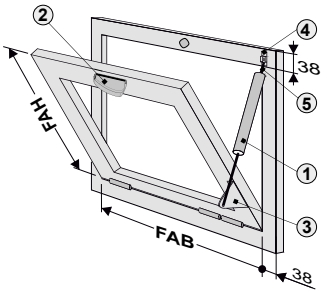
⑥ 1x **B16ST** (8x40)



ORDER DATA

	Part.-No.
Components	
1x PL10 S1	
PL10-100 (FAH min. 550 mm)	**565010**
PL10-150 (FAH min. 600 mm)	**565015**
PL10-200 (FAH min. 700 mm)	**565020**
PL10-300 (FAH min. 1000 mm)	**565030**
1x FV3-R L= 420 mm	
FV3-R (1x) FAB min. 450 mm	**515102**
1x Frame bracket set	
K15 Set	**517590**
Optional accessories	
B21-1 base plate FV L = 420; FÜ>10 mm	**515181**
B22 base plate for B18 glazing bead	**301599**

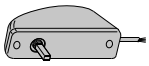
Installation requirements	
Opening direction	inward
Drive lenght (eye bolt – eye bolt)	280 ± 7 mm + Stroke
Required mounting space FV (on the window frame profile)	min. 38 mm
Required mounting space PL (on the window frame profile)	min. 38 mm
Weight of the casement	max. 30 kg/m²
Width of the casement (FAB)	450 – 1300 mm
Min. height of the casement (FAH)	see mounting dimensions
Rated voltage	24 V DC (19 V ... 28 V)
Cut-off current	0,8 A
Rated power	15 W



① 1x **PL10 S1**
(100 / 150 / 200 / 300 mm)

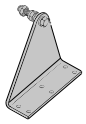


② 1x **OFV1**



1 x K15-Set

③ 1x **K15**



④ 1x **F11**



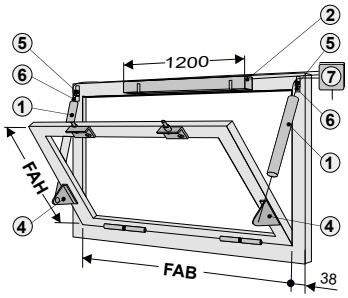
⑤ 1x **B16ST** (8x40)



ORDER DATA

	Part.-No.
Components	
1x PL10 S1	
PL10-100 (FAH min. 550 mm)	**565010**
PL10-150 (FAH min. 600 mm)	**565015**
PL10-200 (FAH min. 700 mm)	**565020**
PL10-300 (FAH min. 1000 mm)	**565030**
1x OFV1	
OFV1 (FAB min. 450 mm)	**513850**
1x Frame bracket set	
K15 Set	**517590**

Installation requirements	
Opening direction	inward
Drive lenght (eye bolt – eye bolt)	280 ± 7 mm + Stroke
Required mounting space OFV (on the casemnet profile)	min. 40 mm
Required mounting space PL (on the window frame profile)	min. 38 mm
Weight of the casement	max. 30 kg/m²
Width of the casement (FAB)	450 – 1300 mm
Min. height of the casement (FAH)	see mounting dimensions
Rated voltage	24 V DC (19 V ... 28 V)
Cut-off current	1,1 A
Rated power	26 W



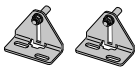
① 2x **PL 10 S1**
(100 / 150 / 200 / 300 mm)



② 1x **FV1** (2x) L= 1200 mm

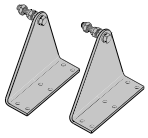


③ incl. 2x **B18**

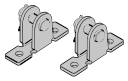


2x K15-Set

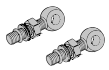
④ 2x **K15**



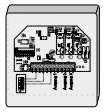
⑤ 2x **F11**



⑥ 2x **B16ST** (8x40)



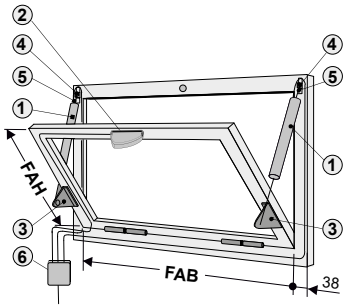
⑦ 1x **USKM**



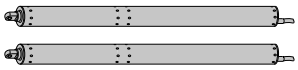
ORDER DATA

	Part.-No.
Components	
2x PL10 S1 (price per drive)	
PL10-100 (FAH min. 550 mm)	**565010**
PL10-150 (FAH min. 600 mm)	**565015**
PL10-200 (FAH min. 700 mm)	**565020**
PL10-300 (FAH min. 1000 mm)	**565030**
1x FV1-R L= 1200 mm	
FV1-R (2x) (FAB min. 1200 mm)	**515111**
2x Frame bracket set (price per frame bracket set)	
K15 Set	**517590**
1x Control module	
USKM	**512140**
Optional accessories	
B21-2 base plate FV L = 1200; FÜ>10 mm	**515183**
B22 base plate for B18 glazing bead	**301599**

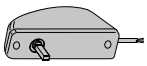
Installation requirements	
Opening direction	inward
Drive lenght (eye bolt – eye bolt)	280 ± 7 mm + Stroke
Required mounting space FV (on the window frame profile)	min. 38 mm
Required mounting space PL (on the window frame profile)	min. 38 mm
Weight of the casement	max. 30 kg/m²
Width of the casement (FAB)	1200 – 2500 mm
Min. height of the casement (FAH)	see mounting dimensions
Rated voltage	24 V DC (19 V ... 28 V)
Cut-off current	1,6 A
Rated power	30 W



① 2x **PL10 S1**
(100 / 150 / 200 / 300 mm)

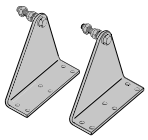


② 1x **OFV1**

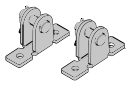


2 x K15-Set

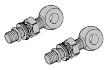
③ 2x **K15**



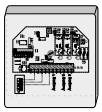
④ 2x **F11**



⑤ 2x **B16ST (8x40)**



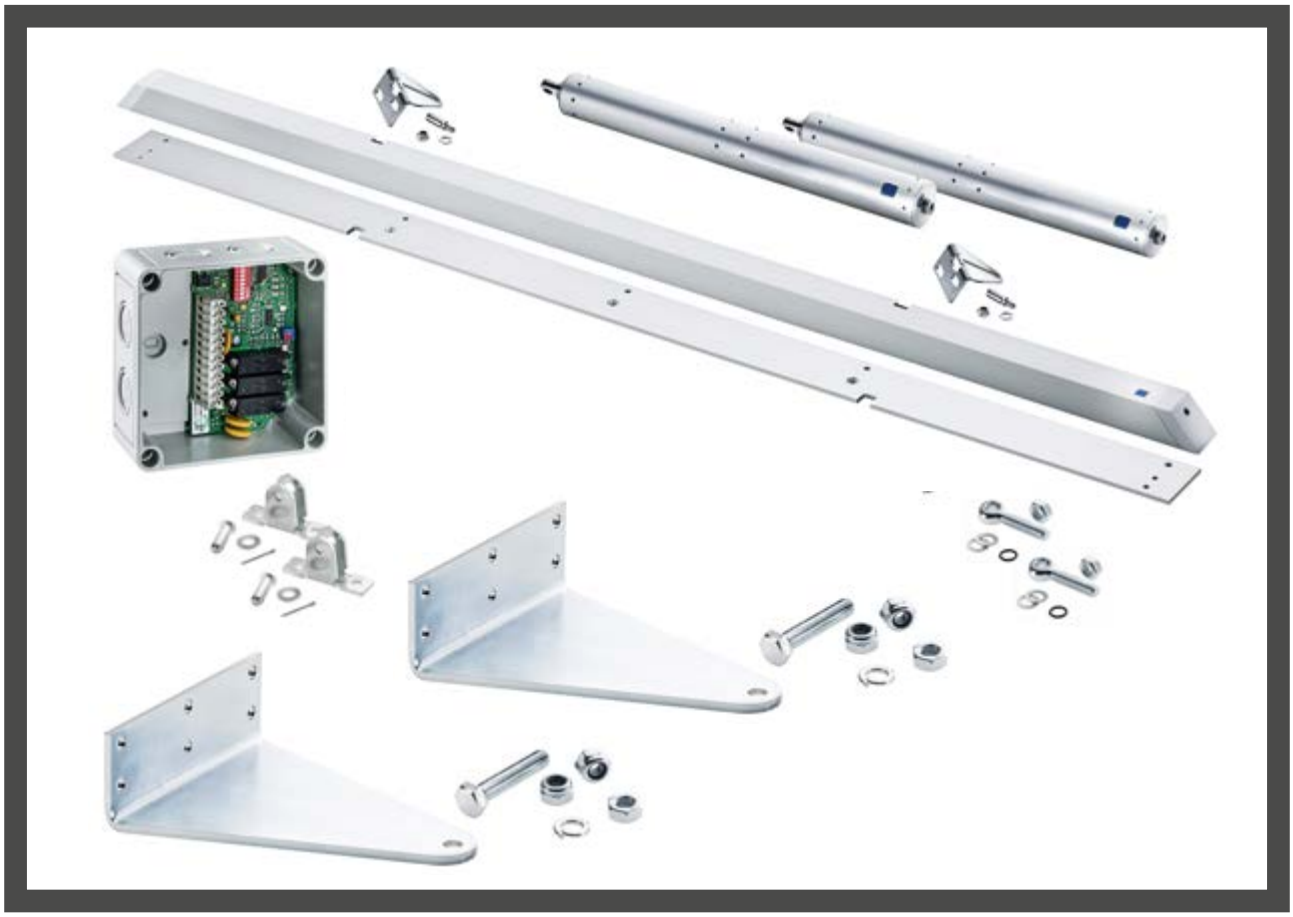
⑥ 1x **USKM**



ORDER DATA

	Part.-No.
Components	
2x PL10 S1 (price per drive)	
PL10-100 (FAH min. 550 mm)	**565010**
PL10-150 (FAH min. 600 mm)	**565015**
PL10-200 (FAH min. 700 mm)	**565020**
PL10-300 (FAH min. 1000 mm)	**565030**
1x OFV1	
OFV1 (FAB min. 450 mm)	**513850**
2x Frame bracket set (price per frame bracket set)	
K15 Set	**517590**
1x Control module	
USKM	**512140**

Installation requirements	
Opening direction	inward
Drive lenght (eye bolt – eye bolt)	280 ± 7 mm + Stroke
Required mounting space OFV (on the casemnet profile)	min. 40 mm
Required mounting space PL (On the window frame profile)	min. 38 mm
Weight of the casement	max. 30 kg/m²
Width of the casement (FAB)	450 – 1300 mm
Min. height of the casement (FAH)	see mounting dimensions
Rated voltage	24 V DC (19 V ... 28 V)
Cut-off current	1,6 A
Rated power	30 W



SPECIAL FEATURES RWA1100

- For natural ventilation, smoke and heat exhausting and ferralux® NRWG (EN12101-2)
- Siutable for outward opening bottom/top/side-hung windows
- Large opening angles relized with short strokes and opening times due to the mounting of the spindle drives at an acute angle to the side closing edge
- Maximum opening angle and balanced force-stroke ratio with casement bracket F11 mounted on the side closing edge of the casement profile at
  - app. 1/2 of the casement lenght if using K15
  - app. 1/3 of the casemnet lenght related to the hinge side if using K37
- Other combinations of various spindle drives in SOLO or TANDEM arrangements with locking actuators for actuating of window profile-specific hardware systems on request
- Use for skylights on request

For this product series, a Type III Environmental Product Declaration (EPD) was issued according to ISO 14025 and EN 15804.
The LCA results of the different product types are listed at the end of this product catalogue.
The EPD documents can be viewed or downloaded from our homepage **www.aumueller-gmbh.de**.

MOUNTING DIMENSION OF RWA1100 FOR BOTTOM-/TOP-HUNG OUTWARD OPENING WINDOWS

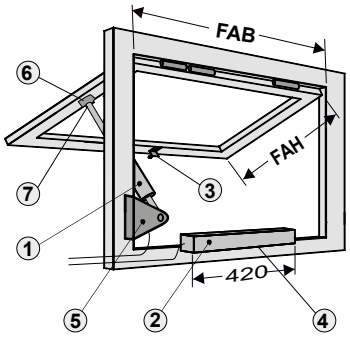
Hardware set	Frame bracket	Stroke of the opening drive	CASEMENT CLOSED			Mounting dimension „X" (*1 (*2	FAH (NSK) (side closing edge)	Opening angle	Opening width	CASEMENT OPEN			Weight of the casement (max.)		Required spaceon the window frame		FAB (HSK)
			Angle of the drive force application	Applied force at the drive fixing point						Angle of the drive force application	Applied force at the drive fixing point						
				PL6	PL10						PL6	PL10	PL6	PL10	NSK	HSK	
			[DEG]	[N]	[N]	[mm]	[mm]	[DEG]	[mm]	[DEG]	[N]	[N]	[Kg]	[Kg]	[mm]	[mm]	[mm]
RWA 1100 (*3	K15	100	19	194	324	400	800	26	365	67	554	923	55	92	40	40	Depends of the used locking drive (*4
						500	900	23	360	64	537	896	60	100			
						600	1000	18	320	60	519	865	62	104			
		150	17	171	286	450	900	33	516	75	580	966	58	97		40	
						550	1000	28	479	69	559	932	61	103			
						650	1100	24	450	66	549	914	65	108			
						750	1200	21	429	63	536	894	67	112			
		200	15	153	255	500	1000	38	648	79	590	983	59	98	40	40	
						600	1100	32	608	74	577	962	63	105			
						700	1200	28	577	71	566	943	66	110			
						800	1300	25	554	88	600	999	74	123			
						900	1400	22	534	66	546	910	70	117			
		250	13	139	232	550	1100	41	778	82	595	991	60	99	40	40	
						650	1200	36	736	78	586	976	63	106			
						750	1300	31	704	74	576	961	66	111			
						850	1400	28	684	72	571	952	69	116			
						950	1500	25	657	69	559	932	71	118			
						1050	1600	23	638	67	552	921	72	121			
		250	12	127	211	600	1200	44	907	85	598	996	60	100	40	40	
						700	1300	39	861	80	591	985	64	106			
						800	1400	34	828	77	584	973	67	111			
						900	1500	31	799	74	576	960	69	115			
						1000	1600	28	777	72	569	948	71	119			
						1100	1700	26	756	70	563	938	73	121			
						1200	1800	24	742	68	557	928	74	124			
	K37	100	36	352	586	200	600	42	425	94	599	998	40	67	40	40	
						300	700	28	342	80	591	985	51	84			
						400	800	21	296	73	573	955	57	96			
		150	31	312	520	250	650	42	527	97	595	992	46	76	40	40	
						350	750	35	452	85	598	996	56	93			
						450	850	28	407	78	586	976	62	103			
						550	950	23	376	73	573	955	66	111			
		200	28	279	465	300	750	52	659	99	593	988	47	79	40	40	
						400	850	40	583	88	600	999	56	94			
						500	950	24	390	81	593	988	62	104			
						600	1050	28	499	76	583	972	67	111			
						800	1150	24	474	73	573	956	70	116			
		250	25	253	421	350	850	55	786	100	591	984	49	81	40	40	
						450	950	44	712	90	600	1000	57	95			
						550	1050	37	661	84	596	994	62	104			
						650	1150	31	622	79	589	982	67	111			
						750	1250	28	594	76	581	969	70	116			
						850	1350	25	573	73	573	956	72	120			
		300	23	231	384	400	1000	58	962	101	589	982	47	79	40	40	
						500	1100	47	879	92	600	999	55	91			
						600	1200	40	821	86	598	997	60	100			
						700	1300	35	775	81	593	988	64	106			
						800	1400	31	741	78	587	978	67	112			
						900	1500	28	713	75	580	967	70	116			
						1000	1600	25	693	73	574	957	72	120			

(*1 Mounting meaurse „**X**" = distance **F11** to **hinge side** (≥ 1/3 FAH)

(*2 Other mounting meaurse and wing heights on request.

(*3 For the tandem sets RWA1100TE the drive forces and the max. window weigths will be correspondingly higher. At outward opening windows the opening drives force axis needs to pass the hinge axis on its outward side with min. 25 mm. The above indicated mounting dimensions are valid for profile depths <75 mm.

(*4 FV1 – 1x = 450 mm
FV1 – 2x = 1200 or 2000 mm
FV1 – 3x = 2000 mm



① 1x **PL10 S1**
(100 / 150 / 200 / 300 mm)



② 1x **FV3-R** (1x) L = 420 mm)



③ incl. **B18**

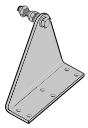


④ 1x **B20-1** (420 mm)



1 x K15-Set

⑤ 1x **K15**



⑥ 1x **F11**



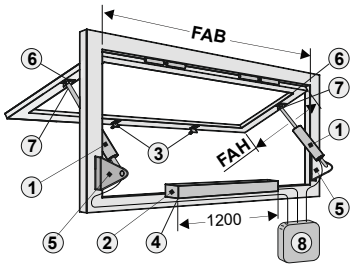
⑦ 1x **B16ST** (8x40)



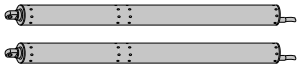
ORDER DATA

	Part.-No.
Components	
1x PL10 S1	
PL10-100 (FAH min. 550 mm)	**565010**
PL10-150 (FAH min. 600 mm)	**565015**
PL10-200 (FAH min. 700 mm)	**565020**
PL10-300 (FAH min. 1000 mm)	**565030**
1x FV3-R L= 420 mm	
FV3-R (1x) (FAB min. 450 mm)	**515102**
1x Mounting plate	
B20-1 L = 420 mm	**515191**
1x Frame bracket set	
K15 Set	**517590**
Optional 1x	
1x K37	**307500**
1x F11	**151400**
1x B16ST	**100044**
Optional accessories	
B22 base plate for B18 glazing bead	**301599**

Installation requirements	
Opening direction	outward
Drive lenght (eye bolt – eye bolt)	280 ± 7 mm + Stroke
Required mounting space FV (on the window frame profile)	min. 38 mm
Required mounting space PL (on the window frame profile)	min. 38 mm
Weight of the casement	max. 30 kg/m²
Width of the casement (FAB)	450 – 1300 mm
Min. height of the casement (FAH)	see mounting dimensions
Rated voltage	24 V DC (19 V ... 28 V)
Cut-off current	0,8 A
Rated power	15 W



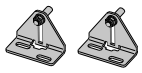
① 2x **PL 10 S1**
(100 / 150 / 200 / 300 mm)



② 1x **FV1** (2x) L= 1200 mm



③ incl. 2x **B18**

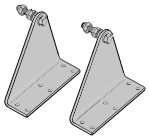


④ 1x **B20-2** (L= 1200 mm)

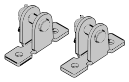


2x K15-Set

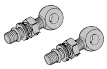
⑤ 2x **K15**



⑥ 2x **F11**



⑦ 2x **B16ST** (8x40)



⑧ 1x **USKM**



ORDER DATA

	Part.-No.
Components	
2x PL10 S1 (price per drive)	
PL10-100 (FAH min. 550 mm)	**565010**
PL10-150 (FAH min. 600 mm)	**565015**
PL10-200 (FAH min. 700 mm)	**565020**
PL10-300 (FAH min. 1000 mm)	**565030**
1x FV1-R L = 1200 mm	
FV1-R (2x) (FAB min. 1200 mm)	**515111**
1x Mounting plate	
B20-2 L = 1200 mm	**515193**
2x Frame bracket set (price per frame bracket set)	
K15 Set	**517590**
Optional 2x	
K37	**307500**
F11	**151400**
B16ST	**100044**
1x Control module	
USKM	**512140**
Optional accessories	
B22 base plate for B18 glazing bead	**301599**

Installation requirements	
Opening direction	outward
Drive lenght (eye bolt – eye bolt)	280 ± 7 mm + Stroke
Required mounting space FV (on the window frame profile)	min. 40 mm
Required mounting space PL (on the window frame profile)	min. 38 mm
Weight of the casement	max. 30 kg/m²
Width of the casement (FAB)	1200 – 2500 mm
Min. height of the casement (FAH)	see mounting dimensions
Rated voltage	24 V DC (19 V ... 28 V)
Cut-off current	1,6 A
Rated power	30 W



SPECIAL FEATURES RWA1050

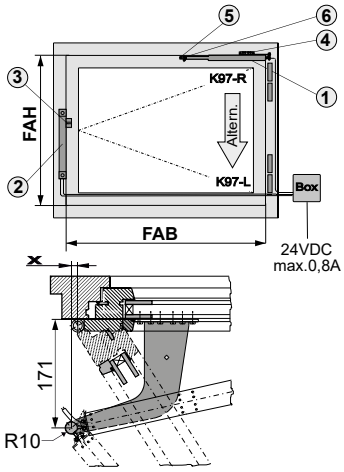
- For natural ventilation, smoke and heat exhausting and ferralux® NRWG (EN12101-2)
- Siutable for inward opening side-hung windows
- Opening angles of 90° relized with short strokes and opening times due to the mounting of the spindle drives at an acute angle to the side closing edge and due to the displacement of the pivoted point of the frame bracket behind the mullion/transom construction
- Required space of only 22 mm for the mounting of the frame bracket on the side closing edge of the window frame profile
- Other combinations of various spindle drives in SOLO or TANDEM arrangements with locking actuators for actuating of window profile-specific hardware systems on request

For this product series, a Type III Environmental Product Declaration (EPD) was issued according to ISO 14025 and EN 15804.
The LCA results of the different product types are listed at the end of this product catalogue.
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MOUNTING DIMENSION OF RWA1050 FOR SIDE-HUNG INWARD OPENING WINDOWS

hardware set	Frame bracket	Stroke of the opening drive	CASEMENT CLOSED			Mounting dimension „X"	min. FAB (NSK) (side closing edge)	Opening angle	Opening width	CASEMENT OPEN			Weight of the casement (max.)		Required space on the frame		FAH (HSK)
			Angle of the drive force application	Applied force at the drive fixing point						Angle of the drive force application	Applied force at the drive fixing point						
				PL6	PL10						PL6	PL10	PL6	PL10	Hinge	NSK	
			[DEG]	[N]	[N]	[mm]	[mm]	[DEG]	[mm]	[DEG]	[N]	[N]	[Kg]	[Kg]	[mm]	[mm]	[mm]
RWA 1050 (*1	K97	100	19	167	279	0	510	35	(*2	16	163	272	90	130	10	22	500 – 1500
		150	13	139	232	20	600	55		11	112	187	90	130	30	22	
		200	11	119	198	40	680	75		6	60	100	90	130	50	22	
		250	10	103	172	80	740	85		6	60	100	90	130	90	22	

(*1 For the tandem sets RWA1100TE the drive forces and the max. window weigths will be correspondingly higher.
(*2 Depends on FAB



① 1x PL6 S1
(100 / 150 / **200 / 250 mm)**



② 1x **FV3** (1x) L = 420 mm)

R



alternativ

L

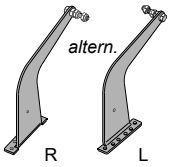


③ inkl. **B18**



1x K1050-R altern. **K1050-L**

④ 1x **K97**



⑤ 1x **F11**



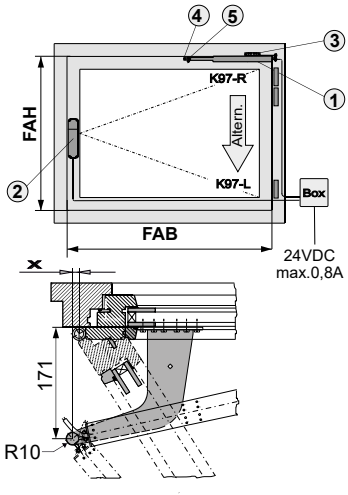
⑥ 1x **B16ST** (8x40)



ORDER DATA

	Part.-No.
Components	
1x PL6 S1	
PL6-100 (FAB min. 510 mm)	**562010**
PL6-150 (FAB min. 600 mm)	**562015**
PL6-200 (FAB min. 680 mm)	**562020**
PL6-250 (FAB min. 740 mm)	**562025**
1x FV3-R L= 420 mm	
FV3-R (1x) (FAB min. 450 mm)	**515102**
1x Frame bracket set	
K1050-R Set	**307051**
Alternativ 1x	
K1050-L Set	**307050**
Optional accessories	
B22 base plate for B18 glazing bead	**301599**

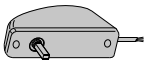
Installation requirements	
Opening direction	inward
Drive lenght (eye bolt – eye bolt)	280 ± 7 mm + Stroke
Required mounting space FV (on the window frame profile)	min. 38 mm
Required mounting space PL (on the window frame profile)	min. 20 mm
Weight of the casement	max. 30 kg/m²
Width of the casement (FAB)	450 – 1300 mm
Min. height of the casement (FAH)	see mounting dimensions
Rated voltage	24 V DC (19 V ... 28 V)
Cut-off current	0,8 A
Rated power	15 W



① 1x PL6 S1
(100 / 150 / **200 / 250 mm)**

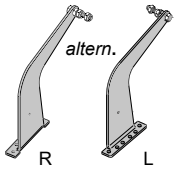


② 1x **OFV1**



1x K1050-R altern. **K1050-L**

③ 1x **K97**



④ 1x **F11**



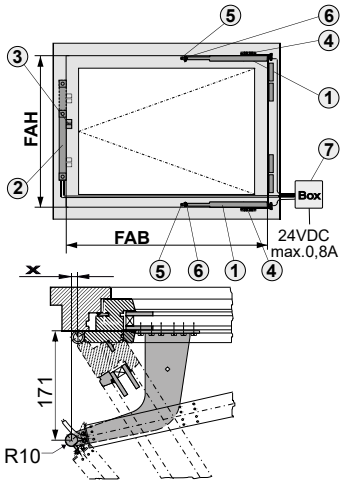
⑤ 1x **B16ST** (8x40)



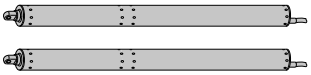
ORDER DATA

	Part.-No.
Components	
1x PL6 S1	
PL6-100 (FAB min. 510 mm)	**562010**
PL6-150 (FAB min. 600 mm)	**562015**
PL6-200 (FAB min. 680 mm)	**562020**
PL6-250 (FAB min. 740 mm)	**562025**
1x OFV1	
OFV1 (FAH min. 450 mm)	**513850**
1x Frame bracket set	
K1050-R Set	**307051**
Alternativ 1x	
K1050-L Set	**307050**
Optional accessories	
B22 base plate for B18 glazing bead	**301599**

Installation requirements	
Opening direction	inward
Drive lenght (eye bolt – eye bolt)	280 ± 7 mm + Stroke
Required mounting space OFV (on the casemnet profile)	min. 40 mm
Required mounting space PL (on the window frame profile)	min. 20 mm
Weight of the casement	max. 30 kg/m²
Width of the casement (FAB)	1200 – 2500 mm
Min. height of the casement (FAH)	see mounting dimensions
Rated voltage	24 V DC (19 V ... 28 V)
Cut-off current	1,6 A
Rated power	30 W



① 2x **PL6 S1**
(100 / 150 / 200 / 250 mm)



② 1x **FV1-R (1x)** altern. **FV1-L (1x)**

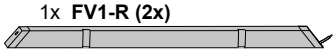


L = 420 mm

③ **1x B20-1 (L= 420 mm)**

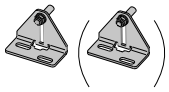


altern.
1x **FV1-R (2x)**



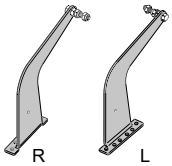
L = 1200 mm

④ incl. **B18**

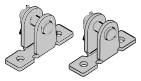


2x K1050 (1x R + 1x L)

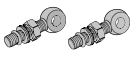
⑤ 2x **K97**



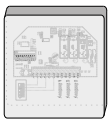
⑥ 2x **F11**



⑦ 2x **B16ST** (8x40)



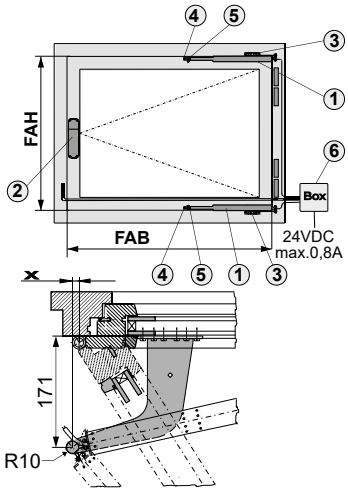
⑧ 1x **USKM**



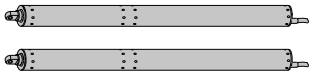
ORDER DATA

	Part.-No.
Components	
2x PL6 S1 (price per drive)	
PL6-100 (FAB min. 510 mm)	**562010**
PL6-150 (FAB min. 600 mm)	**562015**
PL6-200 (FAB min. 680 mm)	**562020**
PL6-250 (FAB min. 740 mm)	**562025**
1x FV1-R L= 420 mm	
FV1-R (1x) (FAB min. 450 mm)	**515103**
1x Mounting plate	
B21-1 base plate FV L = 420; FÜ>10 mm	**515181**
B21-2 base plate FV L = 1200; FÜ>10 mm	**515183**
2x Frame bracket set	
K1050-R Set	**307051**
K1050-L Set	**307050**
1x Control module	
USKM	**512140**
Optional accessories	
B22 base plate for B18 glazing bead	**301599**

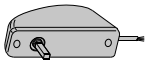
Installation requirements	
Opening direction	inward
Drive lenght (eye bolt – eye bolt)	280 ± 7 mm + Stroke
Required mounting space FV (on the window frame profile)	min. 38 mm
Required mounting space PL (on the window frame profile)	min. 20 mm
Weight of the casement	max. 30 kg/m²
Width of the casement (FAB)	450 – 1300 mm
Min. height of the casement (FAH)	see mounting dimensions
Rated voltage	24 V DC (19 V ... 28 V)
Cut-off current	0,8 A
Rated power	15 W



① 2x **PL6 S1**
(100 / 150 / 200 / 250 mm)

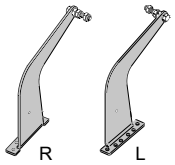


② 1x **OFV1**

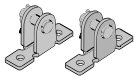


2 K1050 (1x R + 1x L)

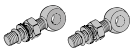
③ 2x **K97**



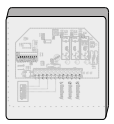
④ 2x **F11**



⑤ 2x **B16ST (8x40)**



⑥ 1x **USKM**



ORDER DATA

	Part.-No.
Components	
2x PL6 S1 (price per drive)	
PL6-100 (FAB min. 510 mm)	**562010**
PL6-150 (FAB min. 600 mm)	**562015**
PL6-200 (FAB min. 680 mm)	**562020**
PL6-250 (FAB min. 740 mm)	**562025**
1x OFV1	
OFV1 (FAH min. 450 mm)	**513850**
2x Frame bracket set	
K1050-R Set	**307051**
K1050-L Set	**307050**
1x Control module	
USKM	**512140**
Optional accessories	
B22 base plate for B18 glazing bead	**301599**

Installation requirements	
Opening direction	inward
Drive lenght (eye bolt – eye bolt)	280 ± 7 mm + Stroke
Required mounting space OFV (on the casemnet profile)	min. 40 mm
Required mounting space PL (on the window frame profile)	min. 20 mm
Weight of the casement	max. 30 kg/m²
Width of the casement (FAB)	1200 – 2500 mm
Min. height of the casement (FAH)	see mounting dimensions
Rated voltage	24 V DC (19 V ... 28 V)
Cut-off current	1,6 A
Rated power	30 W

aumüller

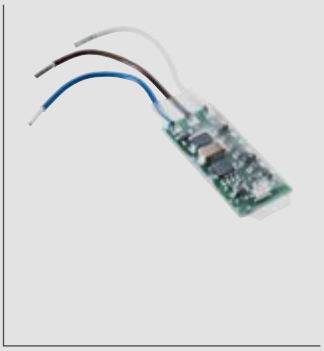
8 Accessories drives

Product Overview

ACCESSORIES

Main control unit

M-COM



Application

Configuration module for automatic configuration and monitoring of max. 4 opening drives / 2 locking drives version S12/ S3 in synchronised multi-drive systems

Rated voltage:
24 V DC (19 V ... 28 V)
Current consumption: <12 mA
Drive type: S12

Part.-No. 524177

Protection rating
IP30 rubber envelope
Ambient temperature range
0 °C ... + 70 °C
Dimensions
45 x 17 x 6 mm
Connecting wires
3 wires 0,5 mm² x 50 mm
Feature/Equipment
Printed circuit board with components and connection wires to be installed in connection box to be supplied on site

M-COM® Click



Application

Configuration module for automatic configuration and monitoring of max. 4 opening drives / 2 locking drives version S12/ S3 in synchronised multi-drive systems

Rated voltage:
24 V DC (19 V ... 28 V)
Current consumption: <12 mA
Drive type: S12

Part.-No. 524167

Protection rating
IP30
Ambient temperature range:
-5 °C ... +70 °C
Dimensions:
40 x 26 x 15 mm
Connection:
for **Aumüller** drives with **Wire Click**
Equipment
Tongs for removing the M-COM® Click

Plug solution

Wire Click



View: 24V

Wire Click:
Unitary plug-solution for **Aumüller** Click System.

Rated voltage:
24 V DC (19 V ... 28 V)
230 V AC (± 20 %), max. 2 Vpp
Connecting cable:
non-halogen, grey
5 x 0,5 mm² (24V)
6 x 0,75 mm² (230V)

Terminal: up to 1,5 mm²

Feature/Equipment
- Flexible cable length
- Connect multiple drives in series connection
- Torsion-plug
- Locking hooks prevent withdrawal of the plug under tensile load
- Strain relief according DIN EN 60335-1 by screwing the housing halves

VARIANTS: 24V - Silicone	
3 m cable length - 24V DC	**Part.-No. 501251**
5 m cable length - 24V DC	**Part.-No. 501252**
10 m cable length - 24V DC	**Part.-No. 501253**
VARIANTS: 230V - PVC	
3 m cable length - 230V AC	**Part.-No. 501273**
5 m cable length - 230V AC	**Part.-No. 501275**
10 m cable length - 230V AC	**Part.-No. 501280**

ACCESSORIES

Feedback module

RM-E



Application

Control module for feedback signal of end positions OPEN/ CLOSE from one ore more drives type S3/S12 via a potential-free changeover contact. Connection and power supply into/by the drive line

Rated voltage:
24V DC (19 V ... 28 V)
Current consumption: < 5 mA
Drive type: S3, S12

Part.-No. 500158

Protection rating
IP 54
Ambient temperature range
0 °C ... + 70 °C
Surf. mount. plastic housing
94 x 94 x 42 mm
Feature/Equipment
Evaluation of end positions due to the communication wire of drives type S3/S12

RM

NEW



Application

Control module (Relay feedback module) for feedback of signals (max. 30V, 1A) from **AUMÜLLER** drives 24 V DC - S12.

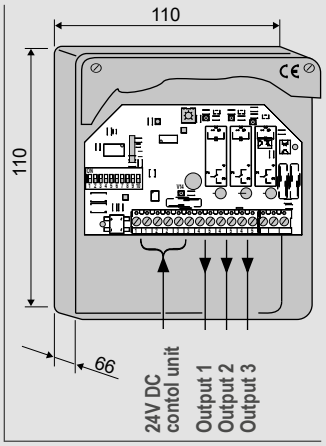
Rated voltage:
24 V DC (19 V ... 28 V)
Drive type:
S12
Protection rating:
IP 20
Ambient temperature range:
-5 °C ... +40 °C
Plastic housing:
40,5 x 48,5 x 28,3 mm

Part.-No. 500159

Connection:
1x drive group
2x Feedback relay for signal (adjustable))
Feature / Equipment
The signal for the respective feed-back relay can be set using two rotary switches REL1 and REL2.
Connection terminals:
9x spring terminals, max. 1,5 mm²

Control module

USKM



Application

Control module with 3 outputs and individual settuble cut-off current, monitored motion run, delayed sequence control.
Functions: Motion-monitoring up to 3 drives, 2 sequential controls

Rated voltage:
24V DC (19 V ... 28 V)
Close circiut current : < 50 mA
Connections:
max. 3 drives; s < 300 mm

Part.-No. 512140

Rated current per drive
max. 2,5 A
Drive type
S1, S2, S3, S12, FV1, OFV1
Protection rating
IP 54
Ambient temperature range
0 °C ... + 70 °C
Surf. mount. plastic housing
110 x 110 x 66 mm
Feature/Equipment
DIP-Switches for settings, connection terminals:
2,5 mm²

ACCESSORIES

Relay Interface

TRM



Application

Realy interface for connection of 230V AC drives to a 24V DC motor line. Control by changing the polarity of the 24V DC power supply

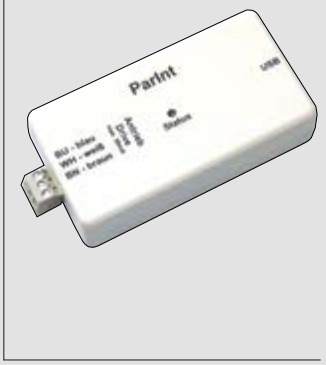
Rated voltage:
24V DC (19 V ... 28 V)
Close circuit current: < 100 mA
Connections:
1 drive group

Part.-No. 670071

Current per drive group
230V AC max. 3,0 A
Drive type
S2, S3, S12, MP
Protection rating
IP 54
Ambient temperature range
0 °C ... + 70 °C
Surf. mount. plastic housing
98 x 98 x 58 mm
Feature/Equipment
Connection terminals 4 mm²

Relay Interface

Parameterisation-Interface



Application

Hardware interface for parameterisation of **Aumüller** drives with the **Aumüller** software DCT.

Rated voltage:
24 V DC +/-20 %
Configurable drives:
24 V DC in version S12, S3
230 V AC in version S12
Connections:
3x Pluggable screw terminals 1,0 mm²
1x USB port
Scope of delivery:
1x Interface
1x USB cable
1x Connection cable
Note:
Power supply 24V DC not included!

Part.-No. 524178

Minimum system requirements:
CPU:
1 GHz or higher
Operating systems:
Microsoft® Windows 10 64bit or higher
MacOS 13 Ventura or higher
Memory:
Min. 1 GB RAM
Hard disk:
At least 200 MB free memory space
Accessories:
USB connection for connection between computer and control unit, internet connection for system installation and updates

Click module

Audio Click
Main control unit

New



Application

Click module with acoustic signal for the implementation of anti-pinch protection solutions. And integrated main control unit for automatic configuration and monitoring of max. 4 opening drives and 2 locking drives in version S12 / S3 synchronised multi-drive systems.

Rated voltage:
24 V DC +/- 20%, (max. 2 Vss)
Current consumption:
< 12 mA
Control type:
S12

Part.-No. 524122

Protection rating:
IP 30
Ambient temperature range:
-5 °C ... +70 °C
Dimensions:
40 x 26 x 15 mm
Connection:
Aumüller Click
Equipment:
Tongs for removing the Audio Click

ACCESSORIES

Externes Netzteil

NT Click
Externes Netzteil

NEW



Application

External power supply unit for power supply and control of 24 V DC window drives in ventilation mode.

Rated voltage:
230 V AC (50 Hz)
Rated power consumption:
60 W
Output voltage:
24 V DC
Output current:
max. 2,5 A
Duty cycle:
5 cycles (ED 30 % - ON: 3 min. / OFF: 7 min.)

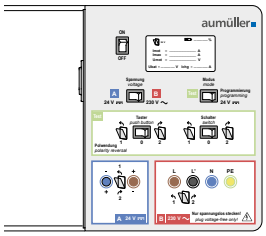
Part.-No. 495151

Protection class:
IP 32
Ambient temperature range:
-5 °C ... +40 °C
Housing:
anodized aluminum
Dimensions:
326 x 24 x 35 mm
Connection type:
AUMÜLLER Click
Connection cable:
halogen-free,
grey 6 x 0,75 mm²,
3 meters

Test kit for drives

IK





Application

Test kit to test the running behavior and to support the commissioning of 24 V DC or 230 V AC window drives.

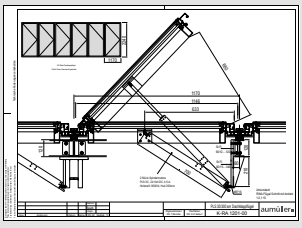
Supply voltage:
230 V AC
Drive types:
24 V DC / 230 V AC
Drive current:
max. 5,0 A

Part.-No. 533984

TFT display, colored
drive current,
battery charging
Ambient temperature range
-15 °C ... + 40 °C
Plastic housing
400 x 300 x 168 mm
Weight
ca. 5,3 kg
Ambient temperature range
-15 °C ... + 40 °C
Plastic housing
400 x 300 x 168 mm
Control elements
3x switches
2x push buttons
Scope of delivery
1x test kit
1x mains plug
4x safety banana plugs
1x operating manual
(German, English)

Wiring diagramm

DL240



Application

Providing of customized installation and wiring diagrams. Price per ventlation/RWA line

Part.-No. 240

DL241

Application

Providing of customized installation drawings for drives – Draw in of drives in customers' drawings

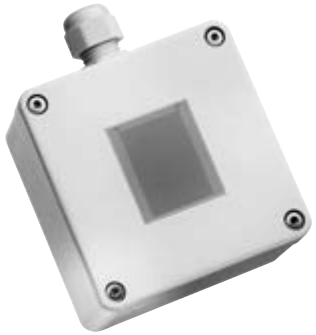
Part.-No. 241

Beginning of the chapter

ACCESSORIES

Vent Radio System

VRS RainSens



NEW

Application

VRS RainSens is used to report rain to an evaluation unit.
It is integrated into the system via radio.

Dimensions (LxWxH):
280 x 80 x 57 mm
(without PG screw connection)
Weight:
250 g
Material:
Polycarbonat
Colour:
RAL 7001

Part.-No. 660202
VRS RainSens 24V

External energy supply:
24 V DC +/- 10 %
Power consumption:
4 Watt

Part.-No. 660203
VRS RainSens 230V

External energy supply:
110 - 230 V AC
Power consumption:
5 Watt
Fuse:
200 mA (permanently installed)
Operation:
Only on residual current circuit breaker

VRS Click



NEW

Application

VRS Click is used for radio communication between **AUMÜLLER** drives and **VRS Remote**.

Operating voltage:
24 V DC +/- 20%, (max. 2 Vss)
Connector solution:
AUMÜLLER-Click

Dimensions (LxWxH):
40 x 26 x 15 mm

Part.-No. 660200

Frequency band:
434 MHz, Frequency hopping
Control type:
S12-drives with **AUMÜLLER-Click**
Protection rating (EN 60529)**:**
IP 40
Power consumption:
<12 mA

VRS Remote



NEW

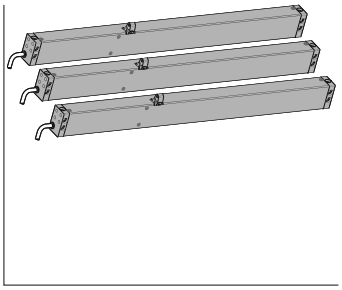
Application

VRS Remote with LED and four seasaw-switches, is used to control the drives with **VRS Click**.

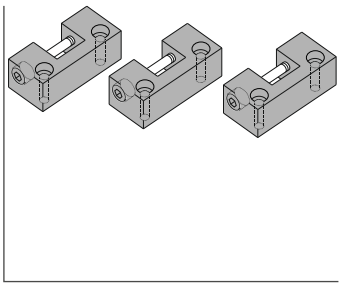
Power supply:
2x AA batteries
Protection rating:
IP22

Part.-No. 660201

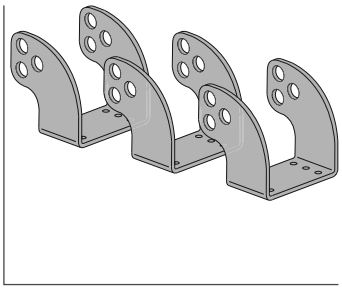
Frequency band:
434 MHz, Frequency hopping
Dimensions (LxWxH):
144 x 41 x 18 mm



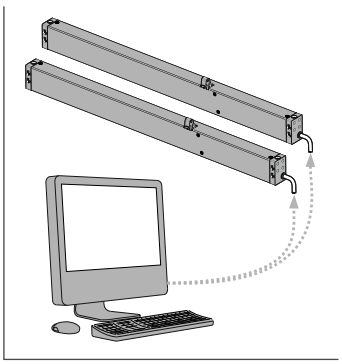
Special model	PU/pcs.	Part.-No.
Drive housing painted / powder coated in RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516004**
	21 – 50	**516004**
	51 – 100	**516004**
	from 101	**516004**



Special model	PU/pcs.	Part.-No.
Casement brackets painted/powder coated in RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516032**
	21 – 50	**516032**
	51 – 100	**516032**
	from 101	**516032**



Special model	PU/pcs.	Part.-No.
Frame brackets painted/powder coated in RAL colours		
Lump sum for coating		**516030**
Specify at order stage:	1 – 20	**516031**
	21 – 50	**516031**
	51 – 100	**516031**
	from 101	**516031**



Special model	PU/pcs.	Part.-No.
Microprocessor programming S12		
Programming synchronised multi-drive systems 24V S3 / S12 (each drive)	1	**524182**
Programming synchronised multi-drive systems 230V S12 (each drive)	1	**495588**
Electronic stroke reduction 24V S12	1	**524190**
Electronic stroke reduction 230V S12	1	**495590**
Programming drives 24V / 230V S12	1	**524180**

Special model	PU/pcs.	Part.-No.
Mechanic stroke reduction PLA S3		
Stroke reduction without construction length - mechanically	1	**516000**

NRWG						
Product	**System**	**Profiles**	**Opening**	**Scope**	**ITT**	**CoCoP**
Ferralux NRWG 011	Schüco AWS	AWS 50	inw/outw	Facade	11-002647-PR01 (PP-04)	0757-CPR-288-6032781-2-4
		AWS 60	inw/outw			
		AWS 65	inw/outw			
		AWS 70	inw/outw			
		AWS 75	inw/outw			
		AWS 57RO	outw			
		AWS 57RO	outw	Roof	11-002647-PR01 (PP-04)	0757-CPR-288-6032781-8-2
Ferralux NRWG 050	Forster	Unico	inw/outw	Facade	12-001670-PR01 (PB-03)	0757-CPR-288-0632781-3-4
Ferralux NRWG 070	Raico	Frame+ 65W	inw/outw	Facade	15-001142-PR02 (PP-02)	0757-CPR-288-6032781-4-4
		Frame+ 75WE	inw/outw			
		Frame+ 75WA	inw/outw			
		Wing 105D	outw			
		Wing 105D	outw	Roof	15-001142-PR02 (PP-02)	0757-CPR-288-6032781-7-2
Ferralux NRWG 080	Hueck	Lambda WS 075	inw	Facade	16-002717-PR10 (PP-01)	0757-CPR-288-6032781-9-1
		Lambda WS 075 IS	inw			
		Lambda WS 075 CD/RD	inw			
		Lambda WS 075 OU	outw			
		Lambda duo90	inw			
		Lambda duo90 IF	inw			
Ferralux NRWG 100	Aliplast	Imperial IP 75	inw/outw	Facade	16-004337-PR12 (PP-02)	0757-CPR-288-6032781-10-1
		Superial SP 85	inw/outw			
		Ecofutural EF75	inw/outw			
		Star GT 90	inw/outw			

LEGEND:
ITT: Product / system pass
CoCP: Certificate of constancy of performances

Since the publication of the harmonized EN 12101-2:2003 „Smoke and heat control systems" – Part 2: „Specification for Natural Smoke and Heat Exhaust Ventilators" the NRWGs belongs to those construction products which may be labeled with a „CE"mark in accordance with the Construction Products Regulation (CPR) if their performance matches the Declaration of Performance (DoP) issued by the manufacturer. On this basis they may be used to the purpose designated by the manufacturer in the DoP if they are required by the construction law as part of smoke and heat exhaust systems.

NRWGs are multi-part complex construction products which are assembled from parts of various contractors of handcraft or industrial services. They basically are manufactured from a casement and a window frame for façade, wall or roof mounting and an electric opening drive, which will ensure the window opening for smoke and heat exhaust in case of fire.

The windows itself are also regulated construction products. Their desig and manufacturing have to fulfil the provisions for weathertightness, environmental protection or energy saving measures. Die provisions of EN 14351 (windows and doors), EN 13830 (curtain wall facades) and EN 14963 (rooflights) shall be noted.

Window only may be declared as NRWG if opening and locking drives with frame and casement brackets are installed. They must then in addition meet the technical demands and performance classes of EN 12101-2, which only regulates the status of a NRWG as component of a smoke and heat exhaust system not as a part of the facade or roof.

As a result, NRWG must meet all relevant standards for the building envelope, for smoke and heat exhaust systems and possibly the Machinery Directive for power operated windows and doors if the dual purpose for ventilation is used. Deviations from national standard should be noted in the design stage.

Aumüller has tested various representative samples, has established a factory production control system and has got the Declarations of Conformity in accordance with annex ZA to EN 12101-2:2003 from the notified product certification body ift-Rosenheim. Therefore **Aumüller** is a system provider as well as a certified manufacturer of NRWGs.

Prices for licenses, manufacturing and project-specific design of NRWGs on request.

Drives	GWP (green-house potential)	Ozone depletion potential	Acidifi-cation potential	Eutrophi-cation potential	Photo-chemical oxidation potential	Abiotic depletion - elements	Abiotic depletion - fossil	Primary energy not renewable	Primary energy renewable	Freshwater consump-tion
	(GWP 100)	(ODP)	(AP)	(EP)	(POCP)	($ADP_{el.}$)	(ADP_{fos})	($PE_{n\ reg}$)	(PE_{reg})	(H_2O)
	kg CO_2-equivalent	kg R11-equivalent	kg SO_2-equivalent	kg PO_4^{3-}	kg C_2H_4-equivalent	kg Sb-equivalent	MJ	MJ	MJ	m^3
KS2 S2 24	9,20E+00	4,27E-08	3,28E-02	2,50E-03	-2,68E-03	1,23E-03	5,40E+03	1,09E+02	4,03E+01	4,74E+01
KS2 S12 24	1,30E+01	6,05E-08	4,65E-02	3,53E-03	-3,80E-03	1,74E-03	7,65E+03	1,54E+02	5,71E+01	6,72E+01
KS2 TWIN	2,61E+01	1,21E-07	9,29E-02	7,07E-03	-7,59E-03	3,47E-03	1,53E+04	3,09E+02	1,14E+02	1,34E+02
KS2 Set	2,68E+01	1,25E-07	9,57E-02	7,28E-03	-7,82E-03	3,58E-03	1,57E+04	3,18E+02	1,18E+02	1,38E+02
KS2 230	2,30E+01	1,07E-07	8,20E-02	6,24E-03	-6,70E-03	3,06E-03	1,35E+04	2,73E+02	1,01E+02	1,19E+02
KSA 24	1,69E+01	7,83E-08	6,01E-02	4,57E-03	-4,91E-03	2,25E-03	9,90E+03	2,00E+02	7,39E+01	8,69E+01
KSA 230	3,53E+01	1,64E-07	1,26E-01	9,56E-03	-1,03E-02	4,70E-03	2,07E+04	4,18E+02	1,55E+02	1,82E+02
KSA TWIN/D	3,30E+01	1,53E-07	1,18E-01	8,94E-03	-9,60E-03	4,39E-03	1,93E+04	3,91E+02	1,44E+02	1,70E+02
KS15	6,90E+01	3,20E-07	2,46E-01	1,87E-02	-2,01E-02	9,19E-03	4,05E+04	8,18E+02	3,02E+02	3,56E+02
PLA6	1,15E+01	5,34E-08	4,10E-02	3,12E-03	-3,35E-03	1,53E-03	6,75E+03	1,36E+02	5,04E+01	5,93E+01
PLA8	1,84E+01	8,54E-08	6,56E-02	4,99E-03	-5,36E-03	2,45E-03	1,08E+04	2,18E+02	8,06E+01	9,48E+01
PLA101	1,46E+01	6,76E-08	5,19E-02	3,95E-03	-4,24E-03	1,94E-03	8,55E+03	1,73E+02	6,38E+01	7,51E+01
PLA116	1,84E+01	8,54E-08	6,56E-02	4,99E-03	-5,36E-03	2,45E-03	1,08E+04	2,18E+02	8,06E+01	9,48E+01
PLA10	3,45E+01	1,60E-07	1,23E-01	9,36E-03	-1,01E-02	4,60E-03	2,02E+04	4,09E+02	1,51E+02	1,78E+02
PLA16	3,45E+01	1,60E-07	1,23E-01	9,36E-03	-1,01E-02	4,60E-03	2,02E+04	4,09E+02	1,51E+02	1,78E+02
PLS15	5,52E+01	2,56E-07	1,97E-01	1,50E-02	-1,61E-02	7,35E-03	3,24E+04	6,54E+02	2,42E+02	2,84E+02
PLS30	6,98E+01	3,24E-07	2,49E-01	1,89E-02	-2,03E-02	9,30E-03	4,09E+04	8,27E+02	3,06E+02	3,60E+02
PLS50	5,52E+01	2,56E-07	1,97E-01	1,50E-02	-1,61E-02	7,35E-03	3,24E+04	6,54E+02	2,42E+02	2,84E+02
SP8 24	1,53E+01	7,12E-08	5,47E-02	4,16E-03	-4,47E-03	2,04E-03	9,00E+03	1,82E+02	6,72E+01	7,90E+01
SP8 230	3,83E+00	1,78E-08	1,37E-02	1,04E-03	-1,12E-03	5,11E-04	2,25E+03	4,54E+01	1,68E+01	1,98E+01
LKS (-T)	1,15E+01	5,34E-08	4,10E-02	3,12E-03	-3,35E-03	1,53E-03	6,75E+03	1,36E+02	5,04E+01	5,93E+01
LKS-TV	2,30E+01	1,07E-07	8,20E-02	6,24E-03	-6,70E-03	3,06E-03	1,35E+04	2,73E+02	1,01E+02	1,19E+02
FTA R	1,84E+01	8,54E-08	6,56E-02	4,99E-03	-5,36E-03	2,45E-03	1,08E+04	2,18E+02	8,06E+01	9,48E+01
LLA10	1,15E+01	5,34E-08	4,10E-02	3,12E-03	-3,35E-03	1,53E-03	6,75E+03	1,36E+02	5,04E+01	5,93E+01
LLA16	1,69E+01	7,83E-08	6,01E-02	4,57E-03	-4,91E-03	2,25E-03	9,90E+03	2,00E+02	7,39E+01	8,69E+01
FVUx	1,15E+01	5,34E-08	4,10E-02	3,12E-03	-3,35E-03	1,53E-03	6,75E+03	1,36E+02	5,04E+01	5,93E+01
OFV	1,46E+01	6,76E-08	5,19E-02	3,95E-03	-4,24E-03	1,94E-03	8,55E+03	1,73E+02	6,38E+01	7,51E+01
FV	1,53E+01	7,12E-08	5,47E-02	4,16E-03	-4,47E-03	2,04E-03	9,00E+03	1,82E+02	6,72E+01	7,90E+01
PL6 / PL10	1,15E+01	1,89E-06	1,18E+02	1,07E+01	7,52E+00	1,64E-02	1,43E+02	1,36E+02	3,56E+01	5,93E+01

Declaration code: **M-EPD-AZR-101**
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The declaration is based on the PCR (Product Category Rules) document „Building Components for Smoke and Heat Control Systems" No. PCR-RW-1.1:2013.

LCA calculations were based on the „cradle to grave" life cycle including all upstream processes (e.g. raw material extraction, etc.).

The reference service life has been specified to 25 years. The calculation of the life cycle scenarios is based on a service life of **50 years** per electrical device.

The life cycle was modelled using the sustainability software tool „GaBi6" for the development of Life Cycle Assessments. For the consideration of the impact categories the characterisation factors of the ELCD (European Reference Life Cycle Database) were used.

In accordance with the REACH candidate list, no substances of very high concern are contained.

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