



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 (1000 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 outward opening windows
- Opening drives PL6 S1 (600 N) / PL10 S1 (1000 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 (1000 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	Length		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						
																						[mm]	[mm]	[Kg]	[mm]	[mm]	[Kg]
1000	24	FV3	1 (*1)	450	PL6	K15	F11	500	600	50	600	500	90	40	●	●	●	●	■	■							
					PL10					(B20-1)	90		- 1500		150	●	●	●	●	■	■						
		OFV	(*2)	PL6	K15					F11	- 1200		- 1500		50	500	90	●	●	●	●	■	■				
				PL10											90	- 1500	150	●	●	●	●	■	■				
1000-TE	24	FV1	2; 3	1200	2x PL6	USKM	2x K15	2x F11	1250	600	90	600	1250	40	●	●	●	●	■	■							
					2x PL10						(B20-2)		160		- 2400	200	●	●	●	●	■	■					
			3	2000	2x PL6						USKM		2x K15		2x F11	2050	- 2000	90	- 1500	2050	130	●	●	●	●	■	■
					2x PL10													(B20-3)		160	- 2400	200	●	●	●	●	■
		OFV	(*2)	2x PL6	USKM	2x K15	2x F11	500	600	50	500	500	90	●	●	●	●	■	■								
				2x PL10						90		- 1500	- 2400	150	●	●	●	●	■	■							
1100	24	FV3 (*2)	1 (*1)	450	PL6	B21-1	K15 (K37)	F11	500	800	70	600	500	40	●	●	●	■	●	■							
					PL10						120		- 1500		- 2400	150	●	●	●	■	●	■					
1100-TE	24	FV1 (*2)	2; 3	1200	2x PL6	USKM (B20-2)	2x K15 (2x K37)	2x F11	1250	800	130	600	1250	40	●	●	●	■	●	■							
					2x PL10						200		- 2400		200	●	●	●	■	●	■						
			3	2000	2x PL6						USKM (B20-3)		2x K15 (2x K37)		2x F11	2050	- 2000	130	- 1500	2050	130	●	●	●	■	●	■
					2x PL10													200		- 2400	200	●	●	●	■	●	■
1050	24	FV3 (*2)	(*2)	450	PL6	K97 (re/li)	F11	500	500	550	- 1250	- 1500	90	22	●	●	●	●	■	■							
					PL10								130		●	●	●	●	■	■							
		OFV			PL6								90		●	●	●	●	■	■							
					PL10								130		●	●	●	●	■	■							
1050-TE	24	FV1	(*1)	450	2x PL6	USKM	K97 R+L	2x F11	500	- 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		Stroke in	Cut-off current	Use			Location		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	●	●	●	●		○		○

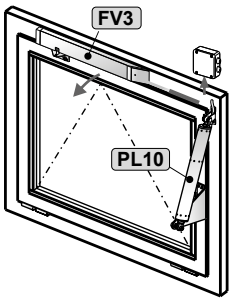
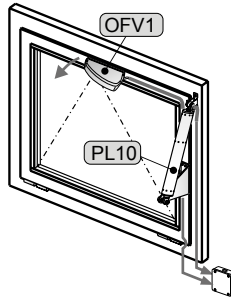
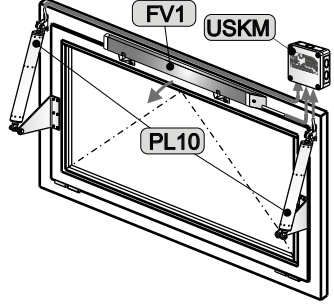
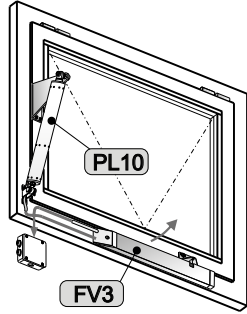
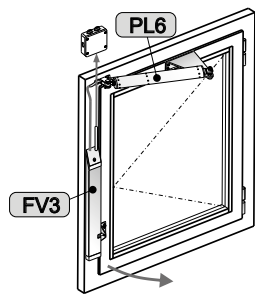
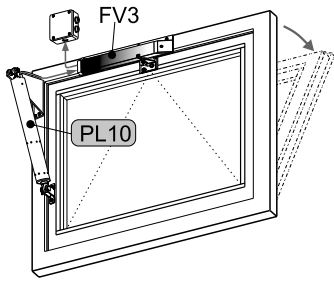
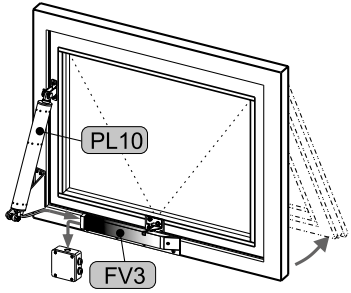
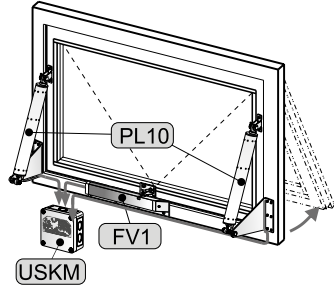
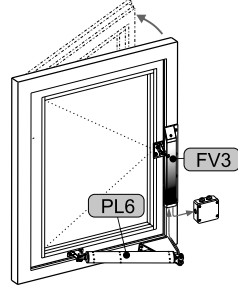
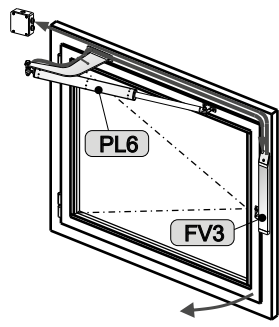
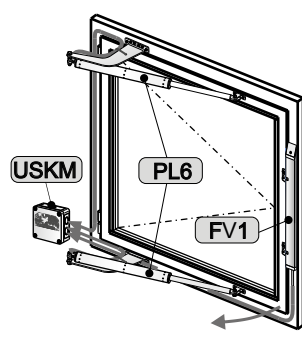
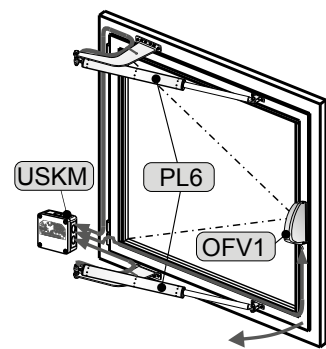
OVERVIEW OF LOCKING DRIVES																		
Locking drives	Locking stroke (Rotating angle)	Rated voltage	Force (Torque)		Runtime	Close circuit current	Opening drives		Use			Location		Functions				
			Pulling/Pushing force	Initial force (torque)			Model	Cut-off current	Natural ventilation	RWA	NRWG	Facade	Roof	Run monitoring	Synchronised run	Sequence control		
	[mm]	[VDC]	[N]	[Nm]	[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	●	●	●	●						●

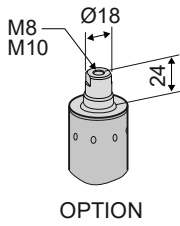
LEGEND

● 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

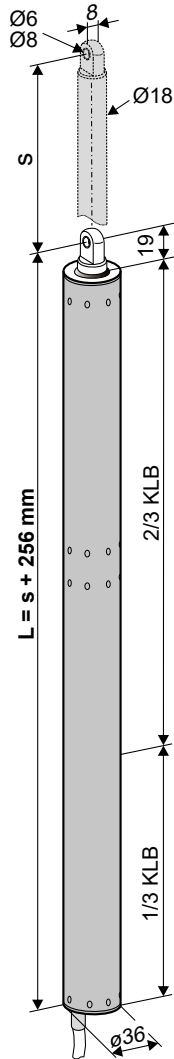
TYPICAL APPLICATION		
<p>RWA1000 – inward opening</p>  <p>View on bottom-hung window</p>	<p>RWA1000 – inward opening</p>  <p>View on bottom-hung window</p>	<p>RWA1000 TE – inward opening</p>  <p>View on bottom-hung window</p>
<p>RWA1000 – inward opening</p>  <p>View on top-hung window</p>	<p>RWA1000 – inward opening</p>  <p>View on side-hung window</p>	<p>RWA1100 – outward opening</p>  <p>View on bottom-hung window</p>
<p>RWA1100 – outward opening</p>  <p>View on top-hung window</p>	<p>RWA1100 TE – outward opening</p>  <p>View on top-hung window</p>	<p>RWA1100 – outward opening</p>  <p>View on side-hung window</p>
<p>RWA1050 – inward opening</p>  <p>View on side-hung window</p>	<p>RWA1050 TE – inward opening</p>  <p>View on side-hung window</p>	<p>RWA1050 TE – inward opening</p>  <p>View on side-hung window</p>



- Application: natural ventilation, RWA, ferralux®-NRWG
- Force: PL6 = 600 N / PL10 = 1000 N
- Without internal cut-off switch – external cut-off switch required! (control module USKM or locking drive FV3 / OFV1)

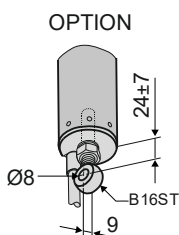
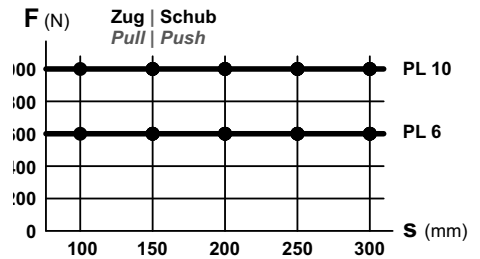
Options

- Rear eye bolt, spindle 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 = 1000 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 mm ² , ~ 3 m
v	Speed	PL6 5,8 mm/s 5,8 mm/s PL10 2,6 mm/s 2,6 mm/s
s	Stroke	100 – 300 mm
L	Length	s + 256 mm see order data
	Sound pressure level	≤ 70 dB (A)



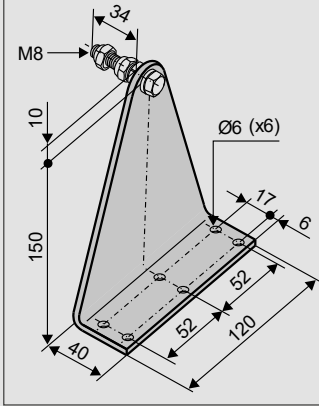
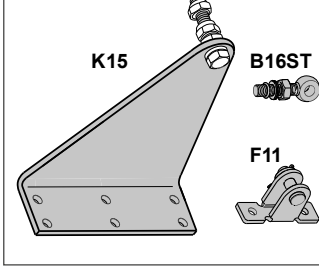
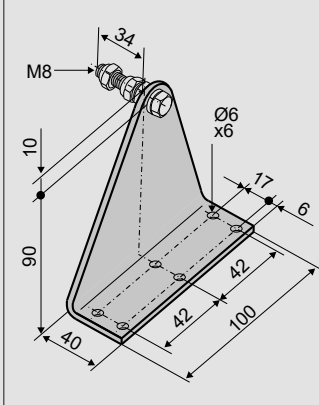
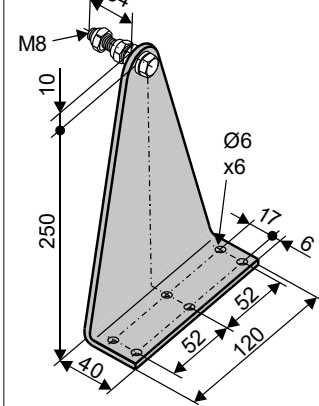
ORDER DATA						
s [mm]	L [mm]	Version	Finish	PU/pcs.	Part.-No.	
100	356	PL6 100 S1	E6/C-0	1	562010	
		PL10 100 S1		1	565010	
150	406	PL6 150 S1	E6/C-0	1	562015	
		PL10 150 S1		1	565015	
200	456	PL6 200 S1	E6/C-0	1	562020	
		PL10 200 S1		1	565020	
250	506	PL6 250 S1	E6/C-0	1	562025	
		PL10 250 S1		1	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 mm ²					501024	
10 m – non-halogen, grey – 2 x 0,75 mm ²					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

<p>F11ST</p>		<p>Application Surface mounting on the side closing edge of case-ment/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</p>	<p>Part.-No. 151400 Material/Finish steel galvanized Feature/Equipment 1x bolt Ø8 mm, washer, cotter pin Load max. 3000 N</p>			
<p>F11VA</p>			<p>Part.-No. 151401 Material/Finish stainless steel</p>			
<p>F13</p>		<p>Application Surface mounting on the side closing edge of case-ment/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</p>	<p>Part.-No. 151405 Material/Finish steel galvanized Feature/Equipment 1x bolt Ø8 mm, washer, cotter pin Load max. 1600 N</p>			

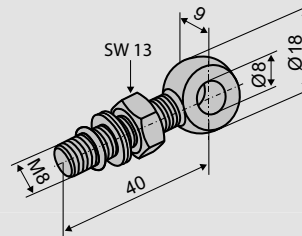
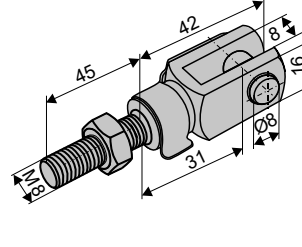
CASEMENT BRACKETS

<p>K15</p> 	<p>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</p>	<p>Part.-No. 307000 Material/Finish steel galvanized Feature/Equipment H=150 mm, t=4 mm</p>		
Optional accessories				
<p>B16ST Eyebolt (Ø8 x 40 mm ST)</p>		<p>Part.-No. 100044</p>		
<p>B16VA Eyebolt (Ø8 x 40 mm VA)</p>		<p>Part.-No. 100144</p>		
<p>K15-Set</p> 	<p>Application Surface mounting on the side closing edge like RWA-1000/1100 hardware sets. Required space on the frame 40 mm</p>	<p>Part.-No. 517590 Material/Finish steel galvanized Feature/Equipment Set: 1x K15 1x F11ST 1x B16ST</p>		
<p>K16</p> 	<p>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</p>	<p>Part.-No. 307200 Material/Finish steel galvanized Feature/Equipment H=90 mm, t=4 mm</p>		
Optional accessories				
<p>B16ST Eyebolt (Ø8 x 40 mm ST)</p>		<p>Part.-No. 100044</p>		
<p>B16VA Eyebolt (Ø8 x 40 mm VA)</p>		<p>Part.-No. 100144</p>		
<p>K37</p> 	<p>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</p>	<p>Part.-No. 307500 Material/Finish steel galvanized Feature/Equipment H=250 mm, t=5 mm</p>		
Optional accessories				
<p>B16ST Eyebolt (Ø8 x 40 mm ST)</p>		<p>Part.-No. 100044</p>		
<p>B16VA Eyebolt (Ø8 x 40 mm VA)</p>		<p>Part.-No. 100144</p>		

CASEMENT BRACKETS

K97L		<p>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</p>	<p>Part.-No. 160938 Material/Finish stainless steel, vibratory grinding Feature/Equipment left hand</p>			
		<p>Optional accessories</p>				
		<p>B16ST Eyebolt (Ø8 x 40 mm ST)</p>	<p>Part.-No. 100044</p>			
		<p>B16VA Eye bolt (Ø8 x 40 mm VA)</p>	<p>Part.-No. 100144</p>			
K97R		<p>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</p>	<p>Part.-No. 160939 Material/Finish stainless steel, vibratory grinding Feature/Equipment right hand</p>			
		<p>Accessories</p>				
		<p>B16ST Eyebolt (Ø 8 x 40 mm ST)</p>	<p>Part.-No. 100044</p>			
		<p>B16VA Eyebolt (Ø 8 x 40 mm VA)</p>	<p>Part.-No. 100144</p>			
K1050-L		<p>Application Surface mounting of drives on the side closing edge like RWA-1050 hardware system. Required space on the frame 22 mm</p>	<p>Part.-No. 307050 Feature/Equipment Set: 1x K97L 1x F11 1x B16ST</p>			
K1050-R		<p>Application Surface mounting of drives on the side closing edge like RWA-1050 hardware system. Required space on the frame 22 mm</p>	<p>Part.-No. 307051 Feature/Equipment Set: 1x K97R 1x F11 1x B16ST</p>			

ACCESSORIES

B16ST		Application Rear or front suspension of spindle drives with M8 thread in the rear base piece 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

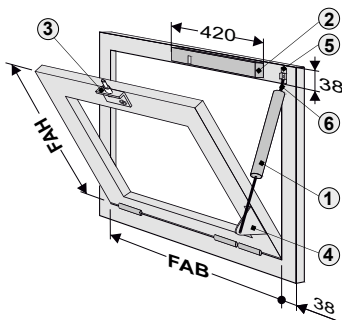
- For natural ventilation, smoke and heat exhausting and ferralux® NRWG (EN12101-2)
- Suitable for inwards opening bottom/top/side-hung windows
- Large opening angles realized with short strokes and opening times due to the mounting of the spindle drives at an acute angle to the side closing edge
- Maximum 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 casement length 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	NSK	HSK		
				PL6	PL10						PL6	PL10					mm	
			[DEG]	[N]	[N]	[mm]	[mm]	[DEG]	[mm]	[DEG]	[N]	[N]	[Kg]	[Kg]				
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 weights 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

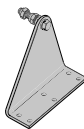


③ incl. **B18**



1 x **K15-Set:**

④ 1x **K15**



⑤ 1x **F11**



⑥ 1x **B16ST** (8x40)

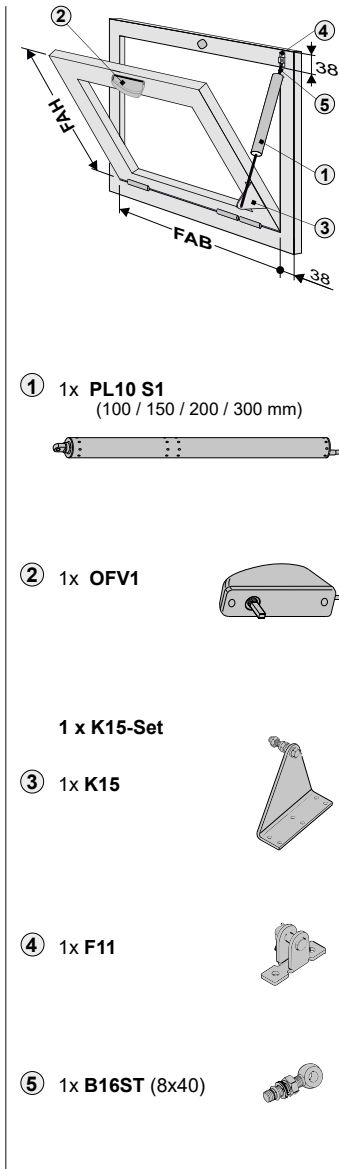


ORDER DATA

	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 length (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/m ²
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

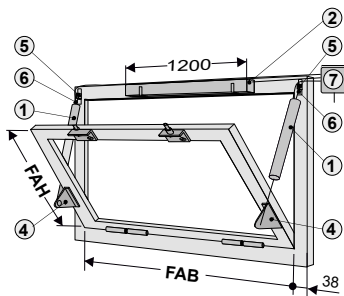


ORDER DATA

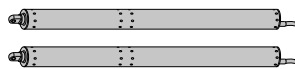
	Part.-No.		
Components			
1x PL10 S1			
PL10-100 (FAH min. 550 mm)	565010		
PL10-150 (FAH min. 600 mm)	565015		
PL10-200 (FAH min. 700 mm)	565020		
PL10-300 (FAH min. 1000 mm)	565030		
1x OFV1			
OFV1 (FAB min. 450 mm)	513850		
1x Frame bracket set			
K15 Set	517590		

Installation requirements

Opening direction	inward
Drive length (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/m ²
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



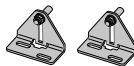
① 2x **PL 10 S1**
(100 / 150 / 200 / 300 mm)



② 1x **FV1** (2x) L= 1200 mm

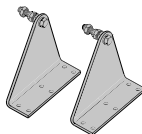


③ incl. 2x **B18**

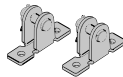


2x **K15-Set**

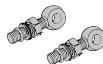
④ 2x **K15**



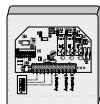
⑤ 2x **F11**



⑥ 2x **B16ST** (8x40)



⑦ 1x **USKM**

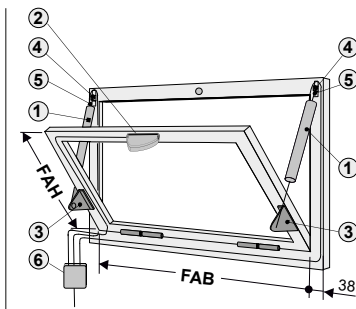


ORDER DATA

	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 length (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/m ²
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)

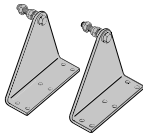


② 1x **OFV1**

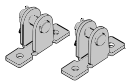


2 x **K15-Set**

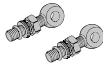
③ 2x **K15**



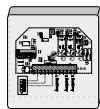
④ 2x **F11**



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 length (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/m ²
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)
- Suitable for outward opening bottom/top/side-hung windows
- Large opening angles realized 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 length if using K15
 - app. 1/3 of the casement length 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 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	NSK	HSK		
				[DEG]	PL6						PL10	[N]					[N]	
RWA 1100 (*3)	K15	100	19	194	324	400	800	26	365	67	554	923	55	92	40	40		
						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					
	250	12	127	211	1050	1600	23	638	67	552	921	72	121	40	40			
					600	1200	44	907	85	598	996	60	100					
					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					
	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						

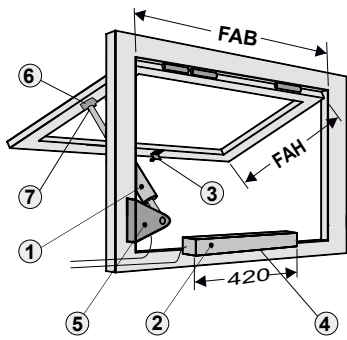
Depends of the used locking drive (*4)

(*1 Mounting measure „X“ = distance **F11** to **hinge side** (≥ 1/3 FAH)

(*2 Other mounting measure and wing heights on request.

(*3 For the tandem sets RWA1100TE the drive forces and the max. window weights 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.

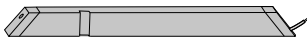
(*4 FV1 – 1x = 450 mm
FV1 – 2x = 1200 or 2000 mm
FV1 – 3x = 2000 mm



① 1x **PL10 S1**
(100 / 150 / 200 / 300 mm)



② 1x **FV3-R (1x) L = 420 mm**



③ incl. **B18**

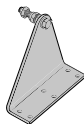


④ 1x **B20-1 (420 mm)**



1 x **K15-Set**

⑤ 1x **K15**



⑥ 1x **F11**



⑦ 1x **B16ST (8x40)**

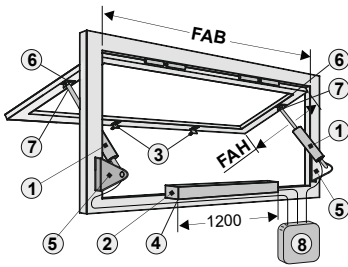


ORDER DATA

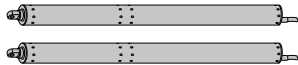
	Part.-No.		
Components			
1x PL10 S1			
PL10-100 (FAH min. 550 mm)	565010		
PL10-150 (FAH min. 600 mm)	565015		
PL10-200 (FAH min. 700 mm)	565020		
PL10-300 (FAH min. 1000 mm)	565030		
1x FV3-R L= 420 mm			
FV3-R (1x) (FAB min. 450 mm)	515102		
1x Mounting plate			
B20-1 L = 420 mm	515191		
1x Frame 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 length (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/m ²
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



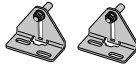
① 2x **PL 10 S1**
(100 / 150 / 200 / 300 mm)



② 1x **FV1** (2x) L= 1200 mm



③ incl. 2x **B18**

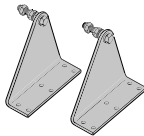


④ 1x **B20-2** (L= 1200 mm)

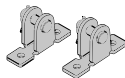


2x **K15-Set**

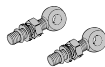
⑤ 2x **K15**



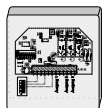
⑥ 2x **F11**



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 length (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/m ²
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)
- Suitable for inward opening side-hung windows
- Opening angles of 90° realized 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.

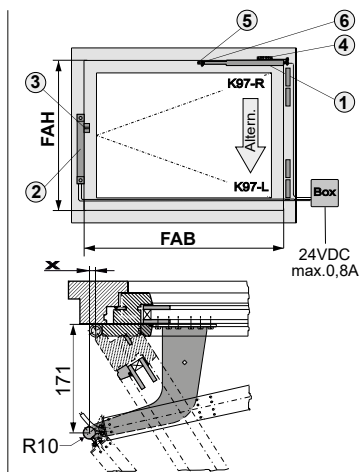
The LCA results of the different product types are listed at the end of this product catalogue.

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

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					
			[DEG]	[N]	[N]	[mm]					[mm]	[DEG]	[mm]	[DEG]					
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 weights will be correspondingly higher.

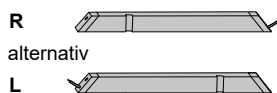
(*2 Depends on FAB



① 1x PL6 S1
(100 / 150 / 200 / 250 mm)



② 1x FV3 (1x) L = 420 mm

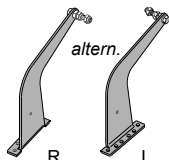


③ inkl. B18



1x K1050-R *altern.* K1050-L

④ 1x K97



⑤ 1x F11



⑥ 1x B16ST (8x40)

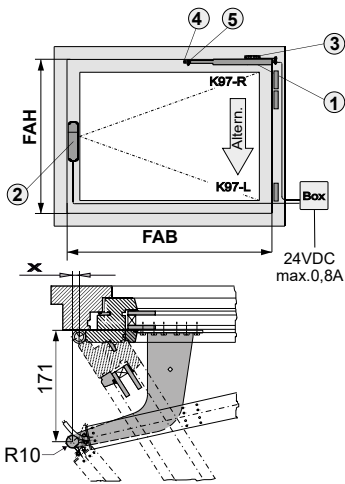


ORDER DATA

	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 length (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/m ²
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)

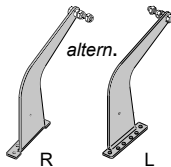


② 1x OFV1



1x K1050-R altern. K1050-L

③ 1x K97



④ 1x F11



⑤ 1x B16ST (8x40)

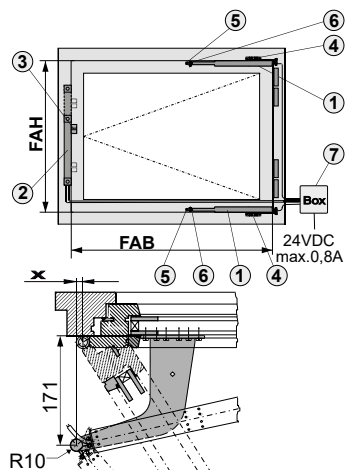


ORDER DATA

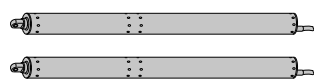
	Part.-No.		
Components			
1x PL6 S1			
PL6-100 (FAB min. 510 mm)	562010		
PL6-150 (FAB min. 600 mm)	562015		
PL6-200 (FAB min. 680 mm)	562020		
PL6-250 (FAB min. 740 mm)	562025		
1x OFV1			
OFV1 (FAH min. 450 mm)	513850		
1x Frame bracket set			
K1050-R Set	307051		
Alternativ 1x			
K1050-L Set	307050		
Optional accessories			
B22 base plate for B18 glazing bead	301599		

Installation requirements

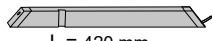
Opening direction	inward
Drive lenght (eye bolt – eye bolt)	280 ± 7 mm + Stroke
Required mounting space OFV (on the casemnet profile)	min. 40 mm
Required mounting space PL (on the window frame profile)	min. 20 mm
Weight of the casement	max. 30 kg/m ²
Width of the casement (FAB)	1200 – 2500 mm
Min. height 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)**

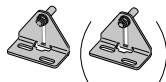


altern.

1x **FV1-R (2x)**

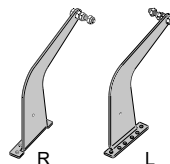
L = 1200 mm

④ incl. **B18**

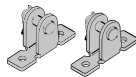


2x **K1050 (1x R + 1x L)**

⑤ 2x **K97**



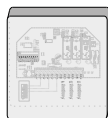
⑥ 2x **F11**



⑦ 2x **B16ST (8x40)**



⑧ 1x **USKM**

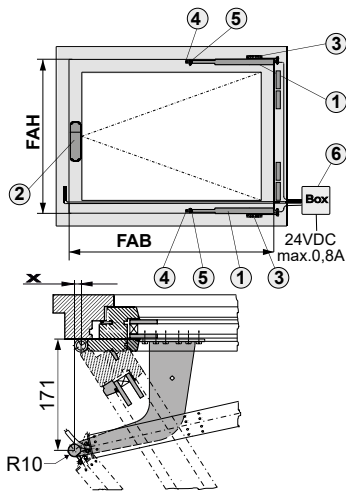


ORDER DATA

	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 length (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/m ²
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)

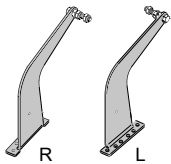


② 1x **OFV1**

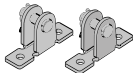


2 **K1050 (1x R + 1x L)**

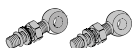
③ 2x **K97**



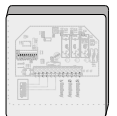
④ 2x **F11**



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 length (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/m ²
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