

#### **PRODUCT FEATURES KSA**

- For natural ventilation, RWA und ferralux<sup>®</sup> 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 modulel 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



Top-hung



Side-hung









Friction hinged







Parallel outward opening



### ROOF

Bottom-hung







Top-hung



Sky light





Glass pyramid











- TIV NORD
- 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

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

Connetion 24V DC	56
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Connetion	
24V DC	
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TECH	NICAL	DATA
U <sub>N</sub>	Rated v	oltage

U <sub>N</sub>	Rated voltage	24V DC (19V 28V)
I <sub>N</sub>	Rated current	0,9 A
I <sub>A</sub>	Cut-off current	1,2 A
Р	Rated power	22 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
1	Ambient temperature range	-5 °C +60 °C
F	Pulling force max.	600 N
F <sub>A</sub>	Pushing force max.	F(N) 700 500 500 500 500 500 500 500

Pullout force	3.000 N (fastening depended)					
Chain	stainless steel					
Connecting cable	non-halogen, grey 5 x 0,5 mm², ~ 3 m					
Speed	s ≤ 400 s > 400 - 600 s > 600 X = 12,0 mm/s X = 12,0 mm/s X = 13,5 mm/s X = 8,0 mm/s X = 8,0 mm/s X = 8,0 mm/s					
Stroke	250 – 1.500 mm					
Length	see order data					
Sound pressure level	$\leq$ 70 dB (A)					

In deliv	rery
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"

ORDEF	R DATA					
s [mm]	L [mm]	Version	Finish	PU / pcs.	PartNo.	
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.	PartNo.	
Drive housing painted/powder coated in other RAL colours			
Lump sum for coating		516030	
	1 - 20	516004	
Specify at order stage:	21 - 50	516004	
specify at order stage.	51 – 100	516004	
	from 101	516004	
Plug solution:			
Aumüller-Click plug solution - 5 m – non-halogen, grey – 5 x 0,5 mm <sup>2</sup>		501252	
Aumüller-Click plug solution - 10 m – non-halogen, grey – 5 x 0,5 mm <sup>2</sup>		501253	
Microprocessor programming S12			
Electronic stroke reduction 24V S12		524190	
Programming drives 24V / 230V S12		524180	
Optional accessories	PU / pcs.	PartNo.	
M-COM® Click Configuration module for synchronised multi-drive systems	1	524167	
M-COM Configuration module for synchronised multi-drive systems	1	524177	





- TUV NORD CERT GmbH Doe Tested
- 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. 24V, 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)



CHNICAL DATA	
Rated voltage	24V DC (19V 28V)
Rated current	0,9 A
Cut-off current	1,2 A
Rated power	22 W
Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
Protection rating	IP 32
Ambient temperature range	-5 °C +60 °C
Pulling force max.	600 N
Pushing force max.	F(N) 700 600 500 400 300 300 100 100 500 200 100 500 200 200 200 200 200 200 2
	0 200 400 600 800 1000 1200 1400 1500 s > 800 mm only for pulling application
Pullout force	200 400 600 800 1000 1200 1400 1500
Pullout force Chain	<b>200 400 600 800 1000 1200 1400 1500</b> s > 800 mm only for pulling application
	200 400 600 800 1000 1200 1400 1500 s > 800 mm only for pulling application 3.000 N (fastening depended)
Chain	200 400 600 800 1000 1200 1400 1500 s > 800 mm only for pulling application 3.000 N (fastening depended) stainless steel
Chain Connecting cable	200       400       600       800       1000       1200       1400       1500         s > 800 mm only for pulling application       3.000 N (fastening depended)         stainless steel       non-halogen, grey 5 x 0,5 mm², ~ 3 m         s < 400       X = 8.0 mm/s       8.0 mm/s
Chain Connecting cable Speed	200       400       600       800       1000       1200       1400       1500         s > 800 mm only for pulling application         3.000 N (fastening depended)         stainless steel         non-halogen, grey 5 x 0,5 mm², ~ 3 m $s \le 400$ $s > 400 - 600$ $x = 12,0$ mm/s $x = 8,0$ mm/s
Chain Connecting cable Speed Stroke	200       400       600       800       1000       1200       1400       1500         s > 800 mm only for pulling application       3.000 N (fastening depended)         stainless steel       non-halogen, grey 5 x 0,5 mm², ~ 3 m $s \le 400$ $x = 8,0$ mm/s $x = 8,0$ mm/s $s > 400 - 600$ $x = 12,0$ mm/s $x = 8,0$ mm/s $s > 600$ $x = 13,5$ mm/s $x = 8,0$ mm/s $250 - 1.500$ mm $x = 8,0$ mm $x = 8,0$ mm



#### In delivery

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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"

ORDEF	R DATA					
s [mm]	L [mm]	Version	Finish	PU / pcs.	PartNo.	
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.	PartNo.	
Drive housing painted/powder coated in other RAL colours			
Lump sum for coating		516030	
	1 - 20	516004	
Specify at order stage:	21 - 50	516004	
Specify at order stage.	51 - 100	516004	
	from 101	516004	
Plug solution:			
<b>Аимüller</b> -Click plug solution - 5 m – non-halogen, grey – 5 x 0,5 mm <sup>2</sup>		501252	
Aumüller-Click plug solution - 10 m – non-halogen, grey – 5 x 0,5 mm <sup>2</sup>		501253	
Microprocessor programming S12			
Electronic stroke reduction 24V S12		524190	
Programming drives 24V / 230V S12		524180	
Optional accessories	PU / pcs.	PartNo.	
M-COM® Click Configuration module for synchronised multi-drive systems	1	524167	
M-COM Configuration module for synchronised multi-drive systems	1	524177	

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Chain drives

- 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



In de	livery
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"

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ORDEF	ORDER DATA								
s [mm]	L [mm]	Version	Finish	PU / pcs.	PartNo.				
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.	PartNo.	
Drive housing painted/powder coated in other RAL colours			
Lump sum for coating		516030	
	1 - 20	516004	
Specify at order stage:	21 - 50	516004	
Specify at order stage.	51 – 100	516004	
	from 101	516004	
Plug solution:			
Aumüller-Click plug solution - 5 m – non-halogen, grey – 6 x 0,75 mm <sup>2</sup>		501275	
Aumüller-Click plug solution - 10 m – non-halogen, grey – 6 x 0,75 mm <sup>2</sup>		501280	
Microprocessor programming S12			
Programming synchronised multi-drive systems 230V S12		495588	
Electronic stroke reduction 230V S12		495590	
Programming drives 24V / 230V S12		524180	
Optional accessories	PU / pcs.	PartNo.	
$M\text{-}COM \circledast Click \ Configuration \ module \ for \ synchronised \ multi-drive \ systems$	1	524167	
M-COM Configuration module for synchronised multi-drive systems	1	524177	

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





### In delivery

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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"					

ORDE	ORDER DATA								
s [mm]	L [mm]	Version	Finish	PU / pcs.	PartNo.				
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.	PartNo.				
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:						
Аимüller-Click plug solution - 5 m – non-halogen, grey – 6 x 0,75 mm <sup>2</sup>		501275				
Aumüller-Click plug solution - 10 m – non-halogen, grey – 6 x 0,75 mm <sup>2</sup>		501280				
Microprocessor programming S12						
Electronic stroke reduction 230V S12		495590				
Programming drives 24V / 230V S12		524180				
Optional accessories	PU / pcs.	PartNo.				
M-COM® Click Configuration module for synchronised multi-drive systems	1	524167				
M-COM Configuration module for synchronised multi-drive systems	1	524177				



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- 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)



TECH	TECHNICAL DATA								
U <sub>N</sub>	Rated voltage	24V DC (19V 28V)							
I <sub>N</sub>	Rated current	1,8 A							
I <sub>A</sub>	Cut-off current	2,4 A							
$\mathbf{P}_{_{\mathrm{N}}}$	Rated power	43 W							
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)							
	Protection rating	IP 32							
x	Ambient temperature range	-5 °C +60 °C							
Fz	Pulling force max.	1.200 N							
$\mathbf{F}_{\mathbf{A}}$	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 mm <sup>2</sup> , ~ 3 m							
v	Speed	s ≤ 400 $X_{\pm}$ 8,0 mm/s $A_{\pm}$ 8,0 mm/s s > 400 - 600 $X_{\pm}$ 12,0 mm/s $A_{\pm}$ 8,0 mm/s							
s	Stroke	400 – 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"					

ORDEF	ORDER DATA								
s [mm]	L [mm]	LM [mm]	Version	Finish	PU/pcs.	PartNo.			
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.	PartNo.	
Drive housing painted/powder coated in other RAL colours			
Lump sum for coating		516030	
	1 - 20	516004	
Specify at order stage:	21 - 50	516004	
Specify at order stage: Plug solution:	51 – 100	516004	
	from 101	516004	
Plug solution:			
Aumüller-Click plug solution - 5 m – non-halogen, grey – 5 x 0,5 mm <sup>2</sup>		501252	
Aumüller-Click plug solution - 10 m – non-halogen, grey – 5 x 0,5 mm <sup>2</sup>		501253	
Microprocessor programming S12			
Electronic stroke reduction 24V S12		524190	
Programming drives 24V / 230V S12		524180	
Optional accessories	PU/pcs.	PartNo.	
M-COM Configuration module for synchronised multi-drive systems	1	524177	





Chain drives

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



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TECH	INICAL DATA	
U <sub>N</sub>	Rated voltage	24V DC (19V 28V)
I <sub>N</sub>	Rated current	1,8 A
I <sub>A</sub>	Cut-off current	2,4 A
P <sub>N</sub>	Rated power	43 W
DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
	Protection rating	IP 32
X	Ambient temperature range	-5 °C +60 °C
Fz	Pulling force max.	1.200 N
$\mathbf{F}_{\mathbf{A}}$	Pushing force max.	1.200 N
F <sub>H</sub>	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	s ≤ 400 $X_{\pm}$ 8,0 mm/s $A_{\pm}$ 8,0 mm/s s > 400 - 600 $X_{\pm}$ 12,0 mm/s $A_{\pm}$ 8,0 mm/s
s	Stroke	400 – 600 mm
L	Length	see order data
LM	Distance in between chains	see order data
	Sound pressure level	≤70 dB (A)

n) n)	<b>1</b>		
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t)	te)	1	2x countersunk screws M8x16 and 2x Spacer ring (brass)
		2	4x blind plug for unused cable entry
A		3	2x chain unlocking key
		4	1x warning sign sticker "Risk of entrapment"

#### KSA TWIN S12 24V DC Z

ORDER	ORDER DATA									
s [mm]	L [mm]	LM [mm]	Version	Finish	PU/pcs.	PartNo.				
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.	PartNo.			
Drive housing painted/powder coated in other RAL colours	Drive housing painted/powder coated in other RAL colours				
Lump sum for coating		516030			
	1 - 20	516004			
Specify at order stage:	21 - 50	516004			
specify at order stage.	51 – 100	516004			
	from 101	516004			
Plug solution:					
<b>Аимüller</b> -Click plug solution - 5 m – non-halogen, grey – 5 x 0,5 mm <sup>2</sup>		501252			
<b>Аимüller</b> -Click plug solution - 10 m – non-halogen, grey – 5 x 0,5 mm <sup>2</sup>		501253			
Microprocessor programming S12					
Electronic stroke reduction 24V S12		524190			
Programming drives 24V / 230V S12		524180			
Optional accessories	PU/pcs.	PartNo.			
M-COM Configuration module for synchronised multi-drive systems	1	524177			





- TUY NORD TUY NORD CERT Combin 'yobe Tested
- 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)

	TEC	HNICAL DATA	
	U <sub>N</sub>	Rated voltage	24V DC (19V 28V)
50× 104	I <sub>N</sub>	Rated current	1,8 A
MB	I <sub>A</sub>	Cut-off current	2,4 A
	P <sub>N</sub>	Rated power	43 W
	DC	Duty cycle	5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.)
520		Protection rating	IP 32
	X	Ambient temperature range	-5 °C +60 °C
	Fz	Pulling force max.	1.200 N
	F <sub>A</sub>	Pushing force max.	F (N) 1200 1000
Z	F <sub>H</sub>	Pullout force	2 x 2.500 N (fastening depended)
		Chain	Stainless steel
		Connecting cable	non-halogen, grey– 5 x 0,5 mm², ~ 5 m
<b>B</b>	v	Speed	$s \le 400$ X       8,0 mm/s $3$ 8,0 mm/s $s > 400 - 600$ X       12,0 mm/s $3$ 8,0 mm/s $s > 600$ X       13,5 mm/s $3$ 8,0 mm/s
520	s	Stroke	400 – 800 mm
	L	Length	see order data
	LM	Distance in between chains	see order data
		Sound pressure level	$\leq$ 70 dB (A)
	Comp	oonents packed with drive	
		2x Countersunk-head screw M8x10	6, 2x Spacer ring (brass)
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ORDE	R DATA						
s [mm]	L [mm]	LM [mm]	Version	Finish	PU/pcs.	PartNo.	
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.	PartNo.	
Drive housing painted/powder coated in other RAL colours			
Lump sum for coating		516030	
	1 - 20	516004	
Creatify at and a stars	21 - 50	516004	
Specify at order stage:	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.	PartNo.	
M-COM Configuration module for synchronised multi-drive systems	1	524177	

Typical applicationTerms backetSet of the set of the	OVERVIEW	OF BRA	CKETS								
Frame bracket     Vieward     K-81     K841, K841, K84, K84, K84, K84, K84, K84, K84, K84	Typical application	ו				1	2	3	4	5	
Space requirement         min         min         35         65 - 90         45 - 57         45           Overlag thicknes *1         max         [DeG]         20         fod         50         0-21         modent         0-21         modent         0-21         modent         0-21         0-01         0-01         0-21         0-01         0-21         0-01         0-21         0-01         0-01         0-21         0-01	Frame bracket					K-A1	K84-1, K87, K-C3, K-E1,	-	_		
Oreing and Concent region Conserved version Conserved version 	Casement bracke	Casement bracket				F16, F49	F29-2, F33,	F16, F49			
Opening noise Casement weight *3*2max. max.[DEG] [Kg]20605040Casement weight *3*3max. max.[Kg]20100100100Window material wordow and mounting and mounting and mounting and mountingNot max.Not max.Not max.100000Ippe of wordow and mounting and mounting and mountingNot max.FM RM00000Ippe of wordow and mounting and mounting and mountingNot max.FM RM000000Ippe of wordow and mounting and mountingBottom max.HSK RMFM RM00<				min.							
Casement weight *3max.[Kg]250130130130130Window materialNNNNNNNNNNWindow materialNNN											
Window material         Alu         Nu											
Wood         PVC         Image         I	_		_		[Kg]	_					
window and mounting (New particular)     hung NSK     FM     0     0     0     0       outward     HSK     FM     0     0     0     0       NSK     RM     0     0     0     0       RM     0     0     0     0     0       NSK	Window material			Wood			•	•	•	•	
and mounting         Inscription         FM         Inscription         Inscrinterability         Inscription			inward	HSK	FM	•		•	•		
NSK         FM         O         O         O         O           outward         HSK         RM         O         O         O         O           NSK         RM         O         O         O         O         O         O           NSK         RM         O         O         O         O         O         O           NSK         RM         O         O         O         O         O         O           Top         Inward         HSK         RM         O         O         O         O           NSK         FM         PR         O         O         O         O         O           NSK         FM         PR         O         O         O         O         O           NSK         FM         PR         O         O         O         O         O         O         O           NSK         FM         PR         O         O         O         O         O         O         O         O         O           NSK         FM         PR         O         O         O         O         O         O         O         O		hung	hung		RM					•	
Normal         HSK         RM         •         •         •         •           NSK         RM         •         •         •         •         •           NSK         RM         •         •         •         •         •           Top         inward         HSK         FM         •         •         •           NSK         FM         • <td>and mounting</td> <td rowspan="5"></td> <td></td> <td></td> <td>NSK</td> <td>FM</td> <td>•</td> <td></td> <td>•</td> <td>•</td> <td></td>	and mounting				NSK	FM	•		•	•	
FAB*4     PR     0     0     0     0       PR     PR     0     0     0     0       NSK     RM     PR     0     0     0       PR     PR     0     0     0     0       PR     PR     0     0     0     0       NSK     FM     0     0     0     0       NSK     RM     0     0     0     0       NSK     RM     0     0     0     0       NSK     RM     0     0     0     0       NSK     FM     0     0     0     0       NSK     RM     0     0     0     0       NSK     FM     0     0     0     0       NSK     FM     0     0     0     0       NSK     FM     0     0     0     0       RM     0     0     0     0     0       NSK     FM     0     0     0     0					RM					•	
NSK         RM         Image         Imag				outward	HSK	RM	•		•	•	
Image         Image <t< td=""><td rowspan="3"></td><td></td><td></td><td>PR</td><td></td><td>•</td><td></td><td></td><td></td></t<>					PR		•				
Top hung         inward         HSK         FM         Image				NSK	RM	•	•	•	•		
hung         Image         Image <th< td=""><td></td><td></td><td></td><td>PR</td><td></td><td></td><td></td><td></td><td></td></th<>					PR						
Note         Note         FM         Image: Contract of the second seco				HSK	FM	•		•	•		
Normal Mark         RM         Image		hung			RM					•	
NSK         RM         O         O         O           Side         inward         HSK         RM         O         O         O           Side         inward         HSK         RM         O         O         O         O           Side         inward         HSK         FM         O         O         O         O           Side         inward         HSK         FM         O         O         O         O           NSK         FM         PR         O         O         O         O         O         O         O           NSK         FM         PR         O					NSK	FM	•		•	•	
PR         Image         PR         Image					RM					•	
Normal Action         PR         Image         PR         Image         PR         Image			outward	HSK		•	•	•	•		
Normal Action         PR         Image         PR         Image         PR         Image				NSK	RM	•		•	•		
hung         RM         Image         RM         Image         Image <thimage< th="">         Image         Image<!--</td--><td></td><td></td><td></td><td></td><td></td><td></td><td>•</td><td></td><td></td><td></td></thimage<>							•				
hung         RM         Image         RM         Image         Image <thimage< th="">         Image         Image<!--</td--><td></td><td>Side</td><td>inward</td><td>HSK</td><td>FM</td><td>•</td><td></td><td>•</td><td>•</td><td></td></thimage<>		Side	inward	HSK	FM	•		•	•		
Roof         outward         HSK         RM         Image: Constraint of the second					RM					•	
Roof         outward         HSK         RM         Image: Constraint of the state of the				NSK	FM	•		•	•		
PR         PR<					RM					•	
NSK         RM         Image: Concession of the concession of		Roof	outward	HSK	RM						
PAF         outward         PR         Image: Concealed         I					PR						
PAF         outward         RM         Image: Concealed         Image: Conconconcea				NSK	RM						
Concealed         Solo         [mm]         700 – 1300           FAB*4         Solo         [mm]         1250 – 2500           FAH*4         Solo         [mm]         450 – 1500					PR						
FAB*4         Solo         [mm]         700 – 1300           Sync2         [mm]         1250 – 2500           FAH*4         Solo         [mm]         450 – 1500		PAF	outward		RM	•		•	•		
FAB*4         Solo         [mm]         700 – 1300           Sync2         [mm]         1250 – 2500           FAH*4         Solo         [mm]         450 – 1500		Concealed	b								
FAB*4         Sync2         [mm]         1250 – 2500           FAH*4         Solo         [mm]         450 – 1500				Solo	[mm]			700 – 1300			
EA H*4 Solo [mm] 450 - 1500	FAB*4										
	FAH*4			Sync2	[mm]						

LEGEND

• suitable not recommended

\*1 Window sizes and opening angles may be different.

\*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.



#### CASEMENT BRACKETS

F16	2x Ø5,5 206 3 3 4 4 4 5 6 6 6 6 7 6 6 7 7 7 7 7 7 7 7 7 7 7 7	Application Surface mounting on the casement/window frame profiles of in-/outward opening windows (e.g. friction hinged or roof win- dows), 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	PartNo. 524204 Material/Finish aluminium (natural anodized) Feature/Equipment 1x cylinder head screw M6x50		
F33	2x Ø5,5 72 06 15 15 15 15 15 15 15 15 15 15	Application Surface mounting on the case- ment 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	PartNo. 524203 Material/Finish aluminium (natural anodized) Feature/Equipment 1x cylinder head screw M6x50		
F38	3x 05,5 20 20 06 	Application Surface mounting on the case- ment profile of outward ope- ning friction hinged windows, for surface mounted drives KSA with K-A1, K-B1, K87 Chain fixing in direction of the arrow	PartNo. 524199 Material/Finish aluminium (natural anodized) Feature/Equipment 1x cylinder head screw M6x5		
F39	80 20 3x Ø11/Ø6,5 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Application Surface mounting on the case- ment profile of outward opening roof windows, for surface moun- ted drives KSA with K-A1, K-B1, K-B2, K-C3, K-E1, K-E2, K84-1 Chain fixing in direction of the arrow Optional accessories	PartNo. 524295 Material/Finish aluminium (natural anodized) Feature/Equipment 1x cylinder head screw M6x50		
		B2 Base Plate F39	PartNo. 155173		
				. I.	1

Chain drives

#### **CASEMENT BRACKETS**



04/2021

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#### FRAME BRACKETS

K-A1	Ø14,5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5 5	Application Surface mounting on the case- ment/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)	PartNo. 524057 Material/Finish Stainless steel Feature/Equipment 1x right, 1x left		
K-B1	014,5 5,5 5,5 5,5 5,5 5,5 5,5 5,5 5,5 5,5	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)	PartNo. 524053 Material/Finish Stainless steel Feature/Equipment 1x right, 1x left		
K-B2	Ø14,5 014,5 014,5 00 00 00 00 00 00 00 00 00 0	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)	PartNo. 524063 Material/Finish Stainless steel Feature/Equipment 1x right, 1x left		
К-СЗ	8 8 8 8 8 8 8 8 8 8 8 8 8 8	Application Surface mounting on the case- ment/window frame profiles or on the mullion/transom of outward opening windows, for swivelling fixing of drives KSA with F16, F33, F39, F49	PartNo. 524067 Material/Finish Stainless steel Feature/Equipment 1x right, 1x left		
K-D3	K-C3 K-C3 F44 K-C3	Application Surface mounting on the case- ment and frame profile of inward opening windows, for swivelling fixing of drives KSA on the frame profile (required space 50 mm)	PartNo. 524068 Material/Finish Stainless steel (K-C3), Aluminum casting (F44) Feature/Equipment 1x K-C3, 1x F44		
	P3 50 0 60 +	Accessories for			
L	~	F44 Casement bracket "Z"	PartNo. 524297		

#### FRAME BRACKETS

K-E1	Ø14,5 5.5 5.5 70 70 70 41.5 70 41.5	Application Surface mounting on the mullion/transom of outward opening windows, for swivel- ling fixing of drives KSA with F16, F33, F39, F49	PartNo. 524056 Material/Finish Stainless steel Feature/Equipment 1x right, 1x left		
K-E2	Ø14,5 5.5 11 5.5 11 5.5 11 5.5 11 5.5 11 5.5 11	Application Surface mounting on the window frame profiles or on the mullions/transoms of outward opening roof windows, for swivel- ling fixing of drives KSA with F16, F16-1, F33, F39, F49	PartNo. 524066 Material/Finish Stainless steel Feature/Equipment 1x right, 1x left		
K84-1	39,5 Ø14,5 9,5,5 9,5,5 9,7 9,7 7 0 41,5 9,6 9,6 9,6 9,6 9,6 9,6 9,6 9,6 9,6 9,6	Application Surface mounting on the window frame profiles or on the mullions/transoms of outward opening roof windows, for swivel- ling fixing of drives KSA with F16, F33, F39, F49	PartNo. 524224 Material/Finish Stainless steel Feature/Equipment 1x right, 1x left		

#### SPECIFIC APPLICATIONS

ROOF W	INDOWS I SCHÜCO AWS 57RO				
F16-1	2x Ø5,5 2x Ø5,5 06 06 00 00 00 00 00 00 00 00	Application Surface mounting on the case- ment profile of outward opening roof windows series Schüco AWS 57RO, for fixing of drives KSA Chain fixing in direction of the arrow	PartNo. 155171 Material/Finish aluminium (natural anodized) Feature/Equipment 1x cylinder head screw M6x50 with base plate		
K-E2	Ø14,5 5,5 11 5,5 11 5,5 11 5,7 12 5,7 13 5,7 13 5,7 13 5,7 13 5,7 13 5,7 13 5,7 14 5,7 14 5,7 15 14 5,7 15 14 5,7 15 14 5,7 15 14 5,7 15 15 15 14 5,7 15 15 15 15 15 15 15 15 15 15	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	PartNo. 524066 Material/Finish Stainless steel Feature/Equipment 1x right, 1x left		
FRICTION	N HINGED WINDOWS I SCHÜCO	FW50			
K87	60x25x4 B3 F33 0 0 0 4x 05,5 40 60x25x4 40 60x25x4 4x 05,5 40 60x25x4 40 60x25x4 40 60x25x4 40 60x25x4 40 60x25x4 40 60x25x4 40 60x25x4 40 60x25x4 40 60x25x4 40 60x25x4 40 60x25x4 40 60x25x4 40 60x25x4 40 60x25x4 40 60x25x4 40 60x25x4 40x2 60x25x4 60x55x4 60x55x55x4 60x55x55x55x55x55x55x55x	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)	PartNo. 524319 Material/Finish Stainless steel Feature/Equipment 1x right, 1x left, incl. F33 + B3		

#### SPECIFIC APPLICATIONS

<b>ROOF WI</b>	NDOWS I HEROAL 085 / 180				
F29-2	2x M5 56,5 38,5 F16 4x Ø6,5 80	Application Surface mounting on the casement profile of outward opening roof windows series Heroal 085 / 180, for fixing of drives KSA with F16	PartNo. 155157 Material/Finish Stainless steel Feature/Equipment 2x cylinder head screw M6x20		
F16	2x Ø5.5 20 06 43 70 60 43	Application Surface mounting on the casement/window frame profiles of in-/outward opening windows (e.g. friction hinged or roof win- dows), 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	PartNo. 524204 Material/Finish aluminium (natural anodized) Feature/Equipment 1x cylinder head screw M6x50		
K-E2 SKYLIGH	014,5 55 11 55 12 13 13 13 13 13 13 13 13 13 11 10 11 10 10 10 10 10 10 10 10 10 10	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	PartNo. 524066 Material/Finish Stainless steel Feature/Equipment 1x right, 1x left		
		A 11 41			
B1	Ø5.2 (4x) (4x) (4x) (4x) (4x) (4x) (4x) (4x)	Application Mounting angle for mounting of drives KS2 with F21 and KSA with F49 on skylight domes	PartNo. 151422 Material/Finish Stainless steel Feature/Equipment 3x countersunk-head screw M5x12, 3x nut M5		
K125	40 30 6x 6x 6x 6x 6x 6x 6x 6x 6x 6x	Application Surface mounting on the upstand of skylight domes for fixing of drives KS2 and KSA with B1	PartNo. 523979 Material/Finish Stainless steel Feature/Equipment 4x screw M5x10		

#### **OPTIONAL ACCESSORIES**

#### Base Plate F39



#### Application

Ø6,5 Support for F39 as packing plate for mounting on the casement profiles of outward opening roof windows

#### Part.-No. 155173

Material/Finish aluminium (natural anodized) Feature/Equipment 60 x 20 x 5 mm



#### **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 adjus- table 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)	PartNo. 524307 incl. end cap and mounting aid	
	L = 2,90 m (lenght w/o end caps)	PartNo. 524313 incl. end cap and mounting aid	
	L = customized (Price per metre)	PartNo. 524314 only profile	
Assembly-set for cover profile (grey)			
		PartNo. 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)			
		PartNo. 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			
	<b>Application</b> Manual unlocking of the drive chain for mounting of drives KSA	PartNo. 524210 Material/Finish plastic	

#### **OPTIONAL ACCESSORIES**

Main control unit				
м-сом	Application Configuration module for auto- matic configuration and surveil- lance of max. 4 opening drives / 2 locking drives version S12 / S3 in synchronised multi-drive systems Rated voltage: 24V DC (19 V 28 V) Current consumption: <12 mA Drive type: S12 Protection rating IP30 rubber envelope	PartNo. 524177 Ambient temperature range: 0 °C + 70 °C Dimensions 45 x 17 x 6 mm Connecting wires 3 wires 0,5 mm <sup>2</sup> x 50 mm Feature/Equipment Printed circuit board with components and connection wires to be installed in con- nection box to be supplied on site		
M-COM® Click	Application	PartNo. 524167		
010	Configuration module for auto- matic configuration and surveil- lance of max. 4 opening drives / 2 locking drives version S12 / S3 in synchronised multi-drive systems Rated voltage: 24V DC (19 V 28 V) Current consumption: <12 mA Drive type: S12 Protection rating: IP30	Ambient temperature range: -5 °C +70 °C Dimensions: 40 x 26 x 15 mm Connection: for AumüLLER chain drives with AumüLLER chain drives with AumüLLER chain drives with AumüLLER chain drives with AumüLLER chain drives mith AumüLLER chain drives with AumüLLER chain drives solution		
Plug solution				
Aumüller-Click plug solution	Application			
AUMÜLLER-Click plug solution	AumüLLER-Click plug solution: Unified plug solution for all AumüLLER chain drives and AumüLLER folding arm drives. Rated voltage: 24V DC (19V 28V) Connecting cable: non-halogen, grey 5 x 0,5 mm <sup>2</sup> (24V) 6 x 0,75 mm <sup>2</sup> (230V) Terminal: to 1,5 mm <sup>2</sup>	<ul> <li>Feature/Equipment</li> <li>Flexible cable length</li> <li>Connect multiple drives in series connection</li> <li>Torsion-plug</li> <li>Locking hooks prevent withdrawal of the plug under tensile load</li> <li>Strain relief according DIN EN 60335-1 by screwing the housing halves</li> </ul>		
	VARIANTEN: 24V			
~ 0	3 m cable length - 24 V DC	PartNo. 501251		
	5 m cable length - 24 V DC	PartNo. 501252		
	10 m cable length - 24 V DC	PartNo. 501252		
	VARIANTEN: 230V			
	3 m cable length - 230 V AC	PartNo. 501273		
	5 m cable length - 230 V AC	PartNo. 501275		
Picture: 24V	10 m cable length - 230 V AC	PartNo. 501280		

#### CASEMENT BRACKETS AND FRAME BRACKETS

Special model	PU/pcs.	PartNo.	
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	