

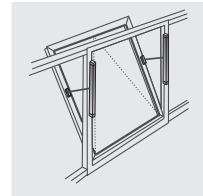
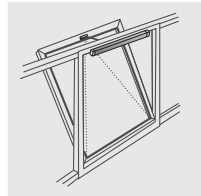
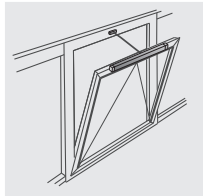
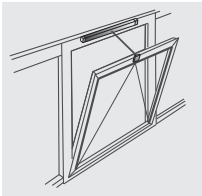
### PRODUCT FEATURES KS4

- For natural ventilation, smoke and heat exhausting systems and ferralux® NSHEV (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. 24V, 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

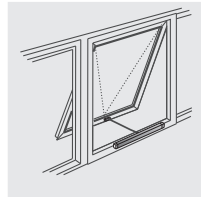
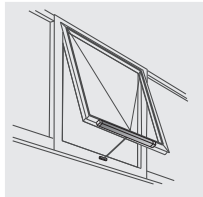
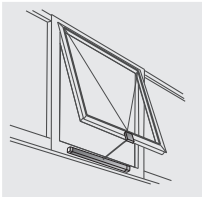
For this product series, a Type III Environmental Product Declaration (EPD) was issued according to ISO 14025 and EN 15804. The LCA results of the different product types are listed at the end of this product catalogue. The EPD documents can be viewed or downloaded from our homepage [www.aumueller-gmbh.de](http://www.aumueller-gmbh.de).

## FACADE

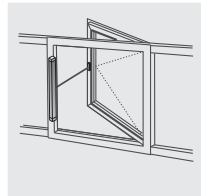
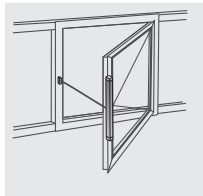
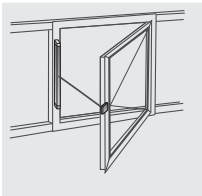
Bottom-hung



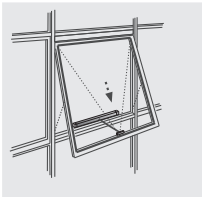
Top-hung



Side-hung



Friction hinged



Parallel outward opening



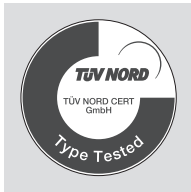


## ORDER DATA

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:					
AUMÜLLER-Click plug solution - 3 m – non-halogen, grey – 5 x 0,5 mm <sup>2</sup>		501251			
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.	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, SHEV, ferralux®-NSHEV
- Internal Intelligent Control Electronics S12
- Feedback limit position „CLOSE“ (max. 24 V, 500 mA)


#### Equipment

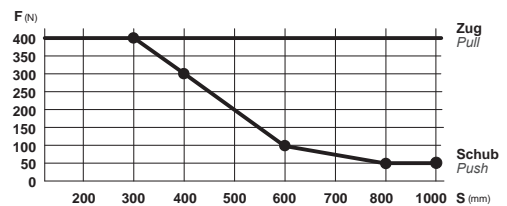
- Additional **AUMÜLLER-Click plug set** for multi-drive operation

#### Options







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

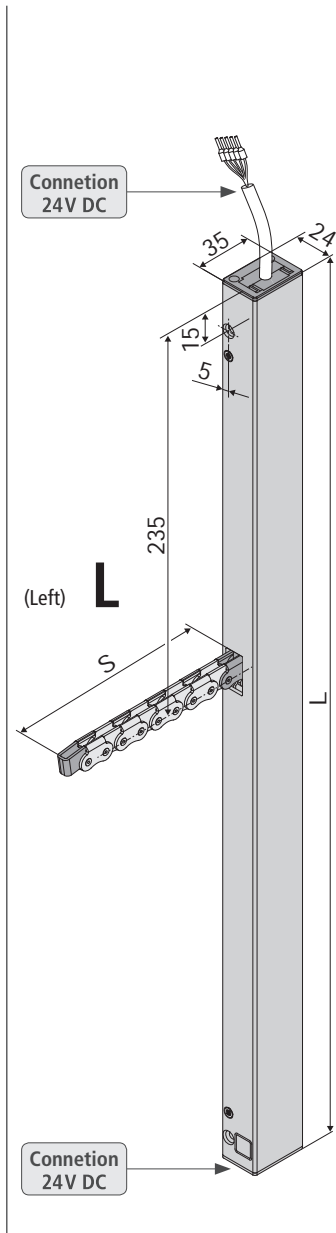
### TECHNICAL DATA

$U_N$	Rated voltage	24V 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
<b>DC</b>	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.	

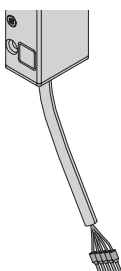


$s > 600$  mm only for pulling application

$F_H$	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 mm <sup>2</sup> , ~ 2 m
$v$	Speed	$s < 400$  8,0 mm/s  8,0 mm/s $s 500 - 600$  12,0 mm/s  8,0 mm/s $s > 600$  13,5 mm/s  8,0 mm/s
$s$	Stroke	50 – 1000 mm
$L$	Length	see order data
	Feedback contact	limit position „CLOSE“ (max. 24V, 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:

- **AUMÜLLER-Click plug solution** with various cable 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

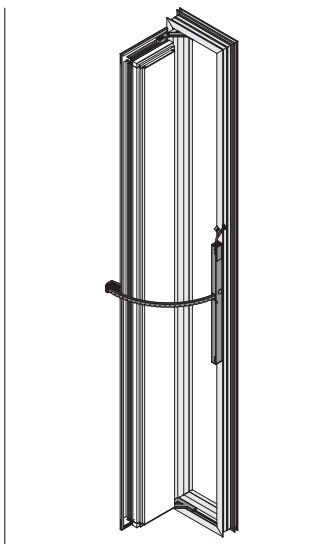
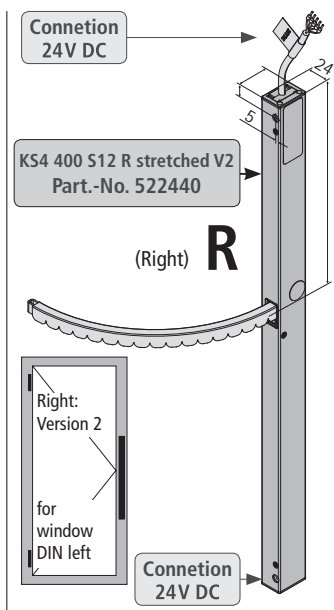
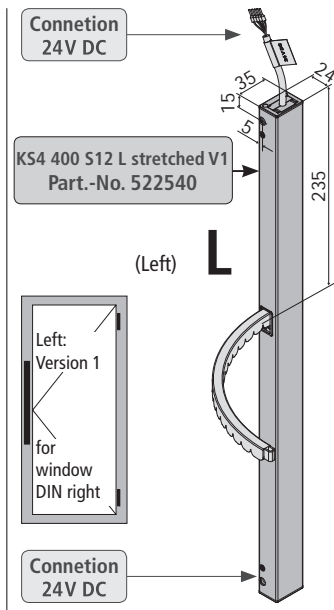
## ORDER DATA

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:					
AUMÜLLER-Click plug solution - 3 m – non-halogen, grey – 5 x 0,5 mm <sup>2</sup>		501251			
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.	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, SHEV, ferralux®-NSHEV
- 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. 24V, 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	24V DC (19 V ... 28 V)
$I_N$	Rated current	0,6 A
$I_A$	Cut-off current	0,8 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 mm <sup>2</sup> , ~ 2 m
$v$	Speed	$s < 400$  8,0 mm/s  8,0 mm/s
$s$	Stroke max.	400 mm
$L$	Length	see order data
	Feedback contact	limit position „CLOSE“ (max. 24V, 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:

- **AUMÜLLER-Click plug** solution with various cable 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

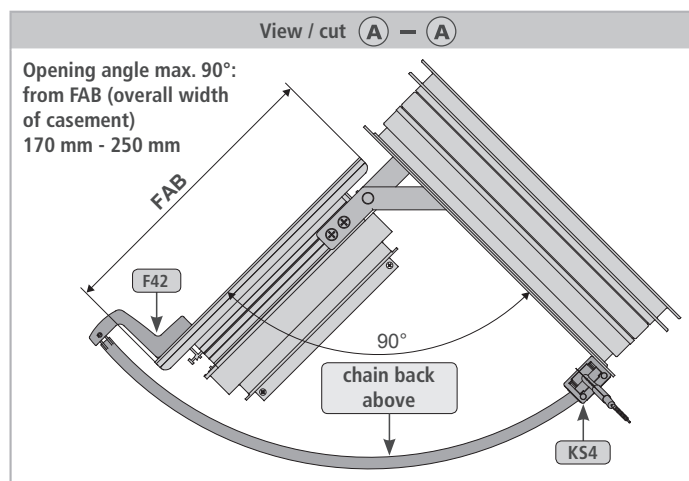
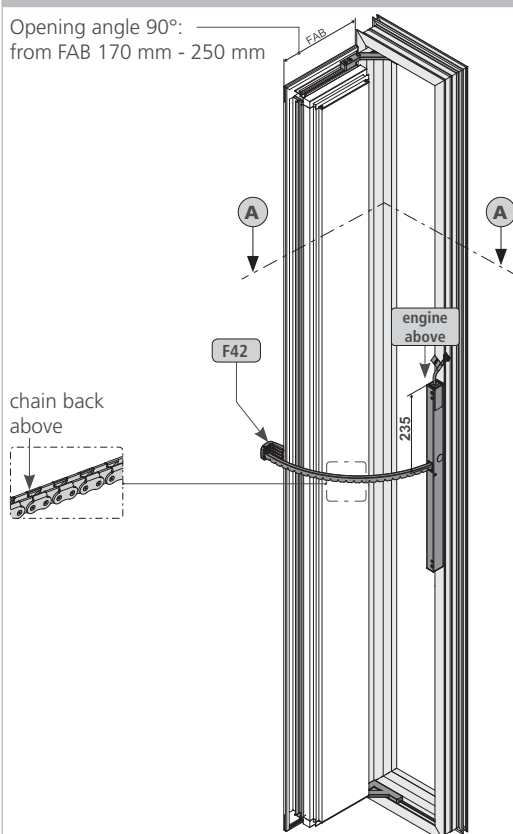
s [mm]	L [mm]	Version	Finish	PU / pcs.	Part.-No.			
400	551	KS4 400 S12 24V L stretched chain V1	E6/C-0	1	522540			
400	551	KS4 400 S12 24V R stretched chain V2	E6/C-0	1	522440			

## OPTIONS

Special model	PU / pcs.	Part.-No.			
<b>Drive housing painted/powder coated in other RAL colours</b>					
<b>Lump sum for coating</b>		516030			
Specify at order stage:	1 – 20	516004			
	21 – 50	516004			
	51 – 100	516004			
	from 101	516004			
<b>Plug solution:</b>					
AUMÜLLER-Click plug solution - 3 m – non-halogen, grey – 5 x 0,5 mm <sup>2</sup>		501251			
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			
<b>Microprocessor programming S12</b>					
Electronic stroke reduction 24V S12		524190			
Programming drives 24V / 230V S12		524180			
<b>Optional accessories</b>	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

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

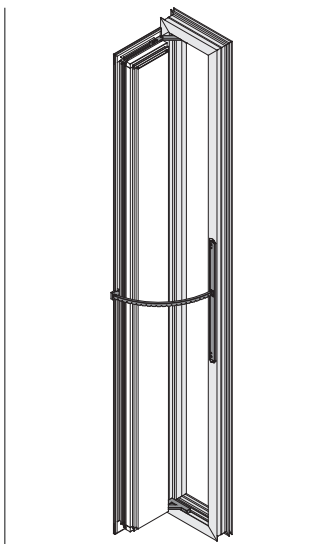
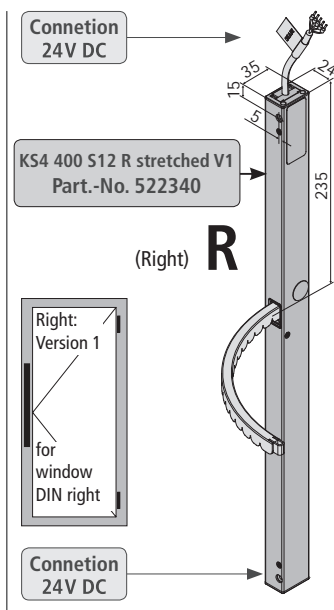
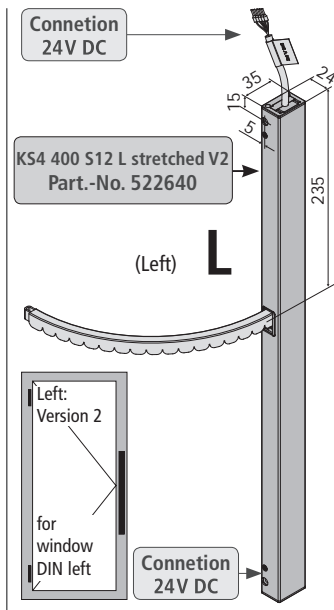


## Stroke programming

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

## 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, SHEV, ferralux®-NSHEV
- 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. 24V, 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	24V DC (19 V ... 28 V)
$I_N$	Rated current	0,6 A
$I_A$	Cut-off current	0,8 A
$P_N$	Rated power	22 W
<b>DC</b>	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 mm <sup>2</sup> , ~ 2 m
$v$	Speed	$s < 400$  8,0 mm/s  8,0 mm/s
$s$	Stroke max.	400 mm
$L$	Length	see order data
	Feedback contact	limit position „CLOSE“ (max. 24V, 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:

- **AUMÜLLER-Click plug** solution with various cable 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 stretched chain V2	E6/C-0	1	522640			
400	551	KS4 400 S12 24V R stretched chain V1	E6/C-0	1	522340			

## OPTIONS

Special model	PU / pcs.	Part.-No.			
<b>Drive housing painted/powder coated in other RAL colours</b>					
<b>Lump sum for coating</b>		516030			
Specify at order stage:	1 – 20	516004			
	21 – 50	516004			
	51 – 100	516004			
	from 101	516004			
<b>Plug solution:</b>					
AUMÜLLER-Click plug solution - 3 m – non-halogen, grey – 5 x 0,5 mm <sup>2</sup>		501251			
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			
<b>Microprocessor programming S12</b>					
Electronic stroke reduction 24V S12		524190			
Programming drives 24V / 230V S12		524180			
<b>Optional accessories</b>	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!

chain back  
above

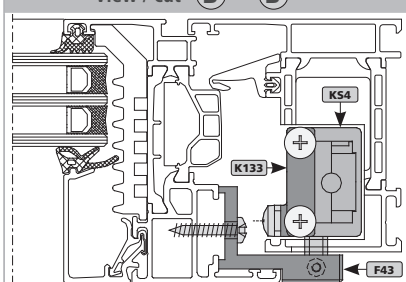
engine  
above

F43

235

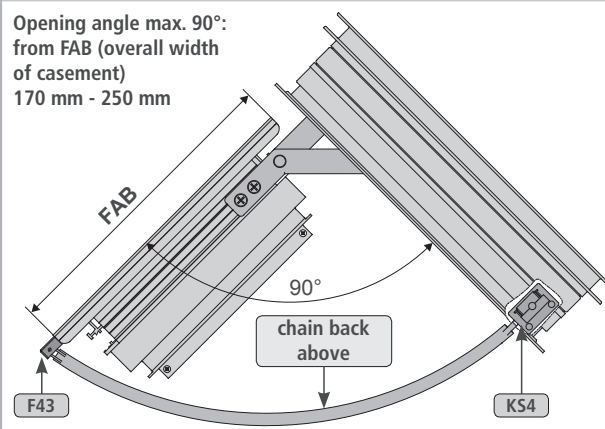
K133

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

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.

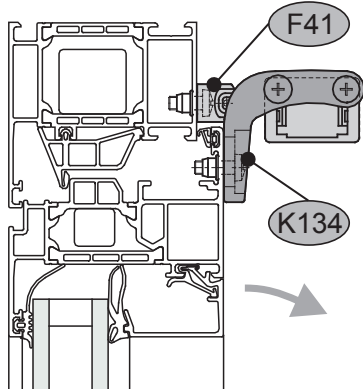
(\*2) Sample values of the opening angle evaluated on the basis of FAB/FAH for inward opening windows with drives mounted at the main closing edge. For any other window heights, for outward opening windows and for windows with drives mounted at the side edges the opening angle will vary.

(\*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 actual 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.

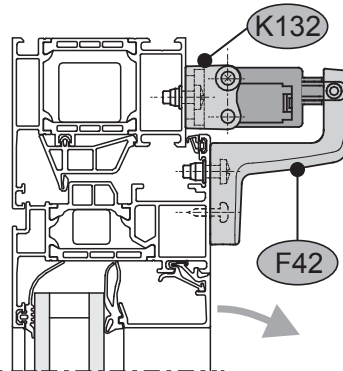
## TYPICAL APPLICATIONS

- 1 FM, bottom hung inward opening



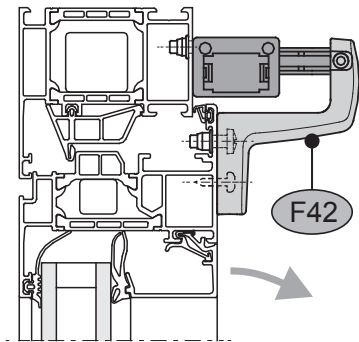
View on aluminium window

- 2 RM, bottom hung inward opening



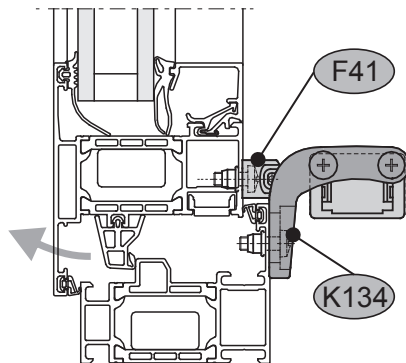
View on aluminium window

- 3 RM, bottom hung inward opening



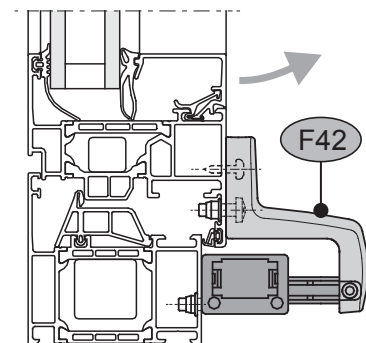
View on aluminium window

- 1 RM, top hung outward opening



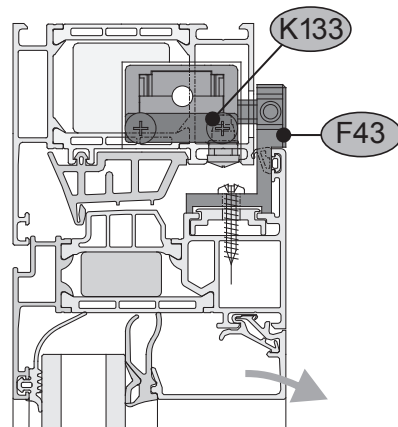
View on aluminium window

- 3 RM, top hung inward opening



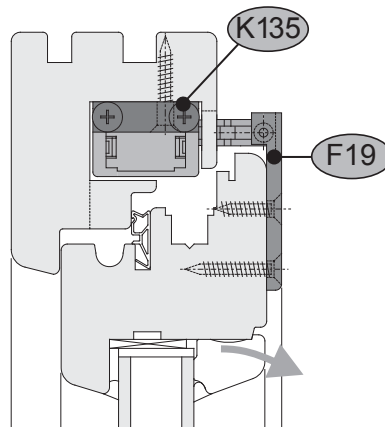
View on aluminium window

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



View on Schüco AWS 57RO

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



View on wood window

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## FRAME BRACKETS

<p><b>K132</b></p>	<p><b>Application</b></p> <p><b>Surface mounting</b> on the casement profiles of inward opening windows, for swivelling fixing of drives <b>KS4 with F42</b></p>	<p><b>Part.-No.</b> 522940</p> <p><b>Material / Finish</b> Cast aluminum, bright chrome</p> <p><b>Feature / Equipment</b> 2x frame brackets 2x screws M5x16</p>		
<p><b>K134</b></p>	<p><b>Application</b></p> <p><b>Surface mounting</b> on the casement / window frame profiles of in- / outward opening windows, for rigid or swivelling fixing of drives <b>KS4 with F41, F42</b></p>	<p><b>Part.-No.</b> 522941</p> <p><b>Material / Finish</b> Cast aluminum, bright chrome</p> <p><b>Feature / Equipment</b> 4x screw M5x10</p> <hr/> <p><b>Part.-No.</b> 522948</p> <p><b>Material / Finish</b> Cast aluminum, RAL 9006</p>		

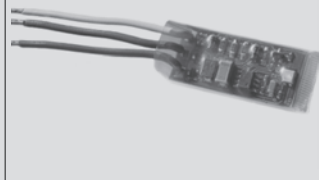
## PROFILE-INTEGRATED MOUNTING

<p><b>K133</b></p>	<p><b>Application</b></p> <p>Profil-integrated mounting in the casement profiles of inward opening windows, for <b>rigid</b> fixing of drives <b>KS4</b> with <b>F43</b>.</p>	<p><b>Part-No. 522946</b></p> <p><b>Material / Finish</b> Stainless steel</p> <p><b>Feature / Equipment</b> 2x frame brackets 4x screws M5x10</p>	
<p><b>K135</b></p>	<p><b>Application</b></p> <p>Profil-integrated mounting in the casement profiles of inward opening <b>wood windows</b>, for <b>rigid</b> fixing of drives <b>KS4</b> with <b>F19</b>.</p>	<p><b>Part-No. 522943</b></p> <p><b>Material / Finish</b> Aluminium, vibratory grinding</p> <p><b>Feature / Equipment</b> 2x frame brackets 4x screws M5x16</p>	

### OPTIONAL ACCESSORIES

#### Main control unit

##### M-COM



##### Application

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

##### Rated voltage:

24V DC (19V ... 28V)

##### 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

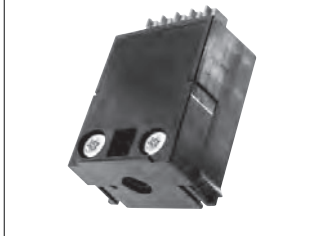
##### Connecting wires

3 wires 0,5 mm<sup>2</sup> 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 surveillance of max. 4 opening drives / 2 locking drives version S12 / S3 in synchronised multi-drive systems

##### Rated voltage:

24V DC (19V ... 28V)

##### 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** chain drives with **AUMÜLLER-Click plug solution**

##### Equipment

Tongs for removing the M-COM® Click

#### Plug solution

##### AUMÜLLER-Click plug solution



##### Application

**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>

##### Terminal:

to 1,5 mm<sup>2</sup>

##### 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:

3 m cable length - 24 V DC

Part-No. 501251

5 m cable length - 24 V DC

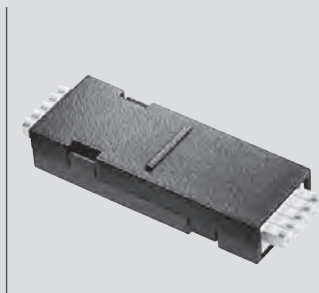
Part-No. 501252

10 m cable length - 24 V DC

Part-No. 501253

#### Connection plug

##### AUMÜLLER-Click KS4 Connection plug



##### Application

**Connection plug** for rigid mounting of two drives with mirrored chain outlet.

##### Rated voltage:

24V DC (19V ... 28V)

##### 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.

## 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			