

M2 ACTUATORS 24 V

FOLDING ARM ACTUATORS

Folding Arm² for smoke vents

The Folding Arm² is a further development of our famous Folding Arm and therewith an extraordinary and innovative development of our house.

The actuator technology with power and style is unique in the market and offers lots of different applications.

Its advantages:

- Very wide opening angles possible
- Suitable for SHEV
- Opening durations in less than 60 sec.
(according to EN 12101-2 standards)
- Very resistant to changing load (i.e. from wind)
- Minimal space required, optical attractive by symmetrical design
- High-performance gear (>20,000 cycles)
- Available in tandem and synchronized versions
- Smart bracket system enables flexible installations in the middle and at the side of the closing edges
- Application programming interface (API)
- Low power consumption – high efficiency

Brackets to be ordered separately!



Technical Data:

Folding Arm ² Type EA-KL ² for smoke vents	
Nominal voltage (min./max.):	24 VDC (- 15 % / + 25 %)
Ripple:	max. 500 mV
Force:	500 N, 800 N, 1000 N
Nominal current:	1.4 A to 3.0 A
Stroke length:	530 / 710 mm
Connection cable:	Silicone 5 (6) x 0.75 mm ² , light grey, length 2 m
Weight:	Approx. 5.5 kg
Cut-Off:	Intelligent load-dependent cut off
Opening speed:	14 mm/s
Ingress protection:	IP 54 (higher protection available on request)
Switch on duration:	ED 30 %
Temperature range:	- 5° to + 75° C
Dimensions (LxWxH):	500 (or 408) x 58 x 130 or 210 mm (depending on bracket)

Article

Nominal force 500 N Opening speed 14 mm/s		
	Typ	Item number
	Smoke vent actuator EA-KL ² 50	M2 1471
	Attributes: 500 N Force / 710 mm Stroke length / 2.0 A current	
	Smoke vent actuator EA-KL ² -K 50	M2 1490
	Attributes: 500 N Force / 530 mm Stroke length / 1.4 A current	

Nominal force 800 N
Opening speed 14 mm/s

	Typ	Item number
	Smoke vent actuator EA-KL ² 80	M2 1470
	Attributes: 800 N Force / 710 mm Stroke length / 3.0 A current	
	Smoke vent actuator EA-KL ² -K 80	M2 1491
	Attributes: 800 N Force / 530 mm Stroke length / 2.0 A current	

Nominal force 1000 N / 3,0 A
Opening speed 14 mm/s

	Typ	Item number
	Smoke vent actuator EA-KL ² 100	M2 1472
	Attributes: 1000 N Force / 710 mm Stroke length	

Accessories	Item number
K-KL²-M for mounting at the main closing edge – outwards opening Technical Details	K2 1610
K-KL²-I for mounting – inwards opening Technical Details	K2 1611
K-KL²-S for mounting sideways – outwards opening Technical Details	K2 1612
K-KL²-M(S)-AW57RO for mounting at Schüco AW57RO profiles Technical Details	K2 1613
K-KL²-M(S)-RAICO105D for mounting at Raico 105D profiles Technical Details	K2 1616

Folding Arm² Roof Exit EA-KL²-L

The product range of Folding Arm² versions has been extended perfectly again with the EA-KL²-L.

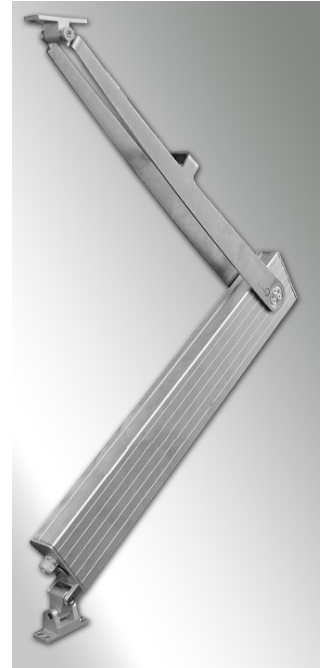
The EA-KL²-L is constructed and developed to replace the EA-KLL on base of the new Folding Arm². Due to the extension of the housing the result is a stroke length of about 1200 mm at a maximum force of 550 N. The EA-KL²-L closes therefore a gap in this special range.

The data of this Folding Arm² actuator are seductive varied and predestinated for e.g. roof exits, whereby a huge opening stroke is required. At once the EA-KL²-L needs a competition-less slight installation depth of beneath 165 mm and inserts itself creatively attractive into the overall image of the light dome.

With the integrated tandem function (up to four actuators in parallel) the maximum force reduplicates by use of two folding arm actuators at the side closing edges to 1100 N. Therefore also huge domes can be equipped and high snow loads can be handled.

The immediate follower of the EA-KLL is based on the actuator technology of the new Folding Arm². The Folding Arm² is compact and delivers a performance density, with those no other aggregate can compete. The high performance gear unit with gear wheels of high-strength steel was developed in cooperation with the Technical University Munich and is constructed for about 20.000 load changes.

With the new integrated application programming interface a row of settings for example stroke limit can be taken even directly on-site by the programming and analysis tool "Simon Link". The Folding Arm² is a quality product „Made in Bavaria“ with exceptional character.



Technical Data:

Folding Arm ² Roof Exit EA-KL ² -L	
Nominal voltage:	24 V DC
Ripple:	max. 500 mV
Nominal current:	3.0 A
Stroke length:	1200 mm
Force:	550 N
Cut-off:	Intelligent power cut-off with tandem function
Running speed:	20 mm/s
Opening time:	< 60s
Protection class:	IP 54
Switch on duration:	ED 50 %
Temperature range:	- 5 up to + 75 °C
Weight:	approximately 7.6 kg
Stability:	300 °C about 30 min.
Dimensions:	680 x 58 x 164 mm (LxWxH)
Brackets:	incl. mounting brackets

Article

Folding arm ² Roof exit for light dome		
	Typ	Item number
	Folding Arm ² Roof exit EA-KL ² -L-LI	M2 1485
	incl. mounting bracket left sided Attributes: 550 N Force/ 1200 mm Stroke	
	Folding Arm ² Roof exit EA-KL ² -L-RE	M2 1486
	incl. mounting bracket right sided Attributes: 550 N force / 1200 mm stroke	

Folding Arm² Roof exit for Schüco AWS 57 RO

	Typ	Item number
	Folding Arm ² Roof exit EA-KL ² -L-LI-57RO	M2 1487
	incl. brackets for Schüco AW57-ro profile Attributes: 1.200 mm stroke, 550 N force	
	Folding Arm ² Roof exit EA-KL ² -L-RE-57RO	M2 1488
	incl. brackets for Schüco AW57-ro profile Attributes: 1.200 mm stroke, 550 N force	

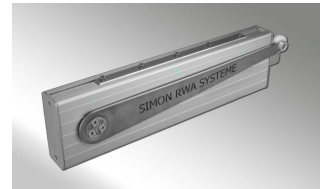
Folding Arm² Roof exit for Raico 105D

	Typ	Item number
	Folding Arm ² Roof exit EA-KL ² -L-LI-RAICO105D	M2 1483
	incl. bracket set for Raico 105 D Attributes: 1.200 mm stroke, 550 N force	
	Folding Arm ² Roof exit EA-KL ² -L-RE-RAICO105D	M2 1484
	incl. bracket set for Raico 105 D Attributes: 1.200 mm stroke, 550 N force	

Folding Arm² Door Opener EA-KL²-T

The new Folding Arm² Door Opener EA-KL²-T is a further development of our known door opener EA-KL-T now based on Folding Arm². This modified actuator can be used for opening of each door.

It is used mostly with doors which are installed for fresh air openings in the case of smoke and heat exhaust. For this kind of movement the body is fixed to the door frame meanwhile the arm, only part which is moving, is pushing the door in open direction. The door and the arm are not fixed together, the door is opened by the arm rolling over it. Opening the door by hand is not restricted in any way.



Technical Data:

Folding Arm ² Door Opener EA-KL ² -T	
Nominal Voltage:	24 VDC (-15 % / + 25 %)
Ripple:	max. 500 mV
Nominal Current:	1.3 A
Opening Angle:	125 °
OPEN force:	300 N
Speed:	approx. 32 Seconds
Housing (WxDxH):	Aluminium strand casting 500 x 58 x 115 mm
Protection class:	IP 54
Switch on Duration:	ED 30 %
Temperature range:	- 5 ° bis + 75 ° C
Connection cable:	Silicone 5 (6) x 0.75 mm ² , light grey, length 2 m
Weight:	approx. 5 kg
Accessoires:	incl. rolling plate for installation on the door

Article

	Typ	Item number
	EA-KL ² -T	M2 1475

Accessories	Item number
K-KL²-T-MP Mounting plate for installation on the wall or at the door frame.	K2 1621
K-KL²-T-MW Mounting angle for installation in the reveal.	K2 1620

SPINDLE ACTUATORS

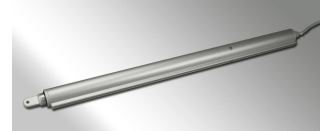
Linear actuator EA-L

This spindle actuator offers a multitude of application options.

In the range of standard actuators it is characterized by a couple of unique selling points which make application as easy as possible for you.

Its special aluminium profile tube with integrated multifunctional nut enables a flexible bracket system and a hidden cable running.

High temperature resistance and resistance under permanent load and further quality characteristics according to DIN EN 12101/2 are a matter of course.



EN version EA-L 1000/400 approved according to DIN EN 12101/2

Brackets to be ordered separately!

Technical Data:

Linear actuator Type EA-L	
Nominal voltage (min./max.):	24 VDC (- 10 % / + 25 %), ripple < 500 mV
Nominal current:	see individual item description
Stroke length:	300, 500, 750, 1.000 mm Optional stroke limit available
Force:	500, 750, 1.000 N
Cut-off:	<ul style="list-style-type: none"> ■ Integrated load dependent cut off and contact "F" for sequence controlling ■ Electronical end position cut off ■ Optional synchronization cut off ■ Integrated tandem cut off <ul style="list-style-type: none"> ■ up to four actuators can be connected in parallel
Speed:	500 N approx. 8.4 mm/sec, 750 N approx. 11 mm/sec, 1000 N approx. 6 mm/sec
Dimensions:	Aluminium profile tube, anodized E6/EV1 with integrated bracket fixture Length: 336 mm + stroke + 21 mm cable and connectors
Ingress protection:	IP 54
Switch on duration:	ED 30 %
Temperature range:	- 5° up to 75° C
Connection cable:	Silicone 3 x 0.75 mm ² , light grey (5 x 0.75 mm ² by tandem respectively synchronization version) The length of the connecting cable depends on the stroke length of the actuator: up to 500 mm stroke: 2 m, starting from 750 mm stroke: 3.5 m
Weight:	Approx. 3.0 kg
Special Features:	<ul style="list-style-type: none"> ■ Electronic torque balancing (current consumption / force progressing) for providing high quality in any operation step ■ Electronic retriggering blockade (avoids that the actuator starts running in direction of the already reached end position)
Temperature resistance:	300° C for 30 minutes (according to DIN EN 12101/2)

Article

Nominal force 1000 N/1.0 A ED 30 %
Tandemversion - Speed with nominal load 6 mm/sec

	Typ	Item number
	EA-L 1000/300-T	M2 1712 T
	Tandemversion: 1000 N Force / 300 mm Stroke	
	EA-L 1000/500-T	M2 1710 T
	Tandemversion: 1000 N Force / 500 mm Stroke	
	EA-L 1000/750-T	M2 1713 T
	Tandemversion: 1000 N Force / 750 mm Stroke	
	EA-L 1000/1000-T	M2 1711 T
	Tandemversion: 1000 N Force / 1000 mm Stroke	

Nominal force 500 N/1.0 A ED 30 %
Synchroversion - Linear actuator with synchronizer

Typ	Item number
EA-L 500/300-S	M2 1701 S
Synchroversion: The integrated synchronous run control is for the equal opening of big and instable flaps and windows. It controls the synchronous function for up to four electronic spindle or slit actuators. The number of rotations will be controlled. One connection wire between the actuators cuts off the actuators in case of overload of one of them.	
EA-L 500/500-S	M2 1702 S
Synchroversion: The integrated synchronous run control is for the equal opening of big and instable flaps and windows. It controls the synchronous function for up to four electronic spindle or slit actuators. The number of rotations will be controlled. One connection wire between the actuators cuts off the actuators in case of overload of one of them.	
EA-L 500/750-S	M2 1703 S
Synchroversion: The integrated synchronous run control is for the equal opening of big and instable flaps and windows. It controls the synchronous function for up to four electronic spindle or slit actuators. The number of rotations will be controlled. One connection wire between the actuators cuts off the actuators in case of overload of one of them.	
EA-L 500/1000-S	M2 1704 S
Synchroversion: The integrated synchronous run control is for the equal opening of big and instable flaps and windows. It controls the synchronous function for up to four electronic spindle or slit actuators. The number of rotations will be controlled. One connection wire between the actuators cuts off the actuators in case of overload of one of them.	

Nominal force 750 N/approx 1.2 A ED 30 %
Synchroversion - Linear actuator with synchronizer

Typ	Item number
EA-L 750/300-S	M2 1743 S
Synchroversion: The integrated synchronous run control is for the equal opening of big and instable flaps and windows. It controls the synchronous function for up to four electronic spindle or slit actuators. The number of rotations will be controlled. One connection wire between the actuators cuts off the actuators in case of overload of one of them.	
EA-L 750/500-S	M2 1744 S
Synchroversion: The integrated synchronous run control is for the equal opening of big and instable flaps and windows. It controls the synchronous function for up to four electronic spindle or slit actuators. The number of rotations will be controlled. One connection wire between the actuators cuts off the actuators in case of overload of one of them.	
EA-L 750/750-S	M2 1745 S
Synchroversion: The integrated synchronous run control is for the equal opening of big and instable flaps and windows. It controls the synchronous function for up to four electronic spindle or slit actuators. The number of rotations will be controlled. One connection wire between the actuators cuts off the actuators in case of overload of one of them.	
EA-L 750/1000-S	M2 1746 S
Synchroversion: The integrated synchronous run control is for the equal opening of big and instable flaps and windows. It controls the synchronous function for up to four electronic spindle or slit actuators. The number of rotations will be controlled. One connection wire between the actuators cuts off the actuators in case of overload of one of them.	

Nominal force 1000 N/1.0 A ED 30 %

Synchroversion - Linear actuator with synchronizer

Typ	Item number
EA-L 1000/300-S	M2 1712 S
Synchroversion: The integrated synchronous run control is for the equal opening of big and instable flaps and windows. It controls the synchronous function for up to four electronic spindle or slit actuators. The number of rotations will be controlled. One connection wire between the actuators cuts off the actuators in case of overload of one of them.	
EA-L 1000/1000-S	M2 1711 S
Synchroversion: The integrated synchronous run control is for the equal opening of big and instable flaps and windows. It controls the synchronous function for up to four electronic spindle or slit actuators. The number of rotations will be controlled. One connection wire between the actuators cuts off the actuators in case of overload of one of them.	
EA-L 1000/500-S	M2 1710 S
Synchroversion: The integrated synchronous run control is for the equal opening of big and instable flaps and windows. It controls the synchronous function for up to four electronic spindle or slit actuators. The number of rotations will be controlled. One connection wire between the actuators cuts off the actuators in case of overload of one of them.	
EA-L 1000/750-S	M2 1713 S
Synchroversion: The integrated synchronous run control is for the equal opening of big and instable flaps and windows. It controls the synchronous function for up to four electronic spindle or slit actuators. The number of rotations will be controlled. One connection wire between the actuators cuts off the actuators in case of overload of one of them.	

Nominal force 500 N/1.0 A ED 30 %

Standardversion - Speed with nominal load 8.4 mm/sec

	Typ	Item number
	EA-L-500/300-02	M2 1701
	Standardversion: 500 N Force/ 300 mm Stroke	
	EA-L-500/500-02	M2 1702
	Standardversion: 500 N Force / 500 mm Stroke	
	EA-L-500/750-02	M2 1703
	Standardversion: 500 N Force/ 750 mm Stroke	
	EA-L-500/1000-02	M2 1704
	Standardversion: 500 N Force/ 1000 mm Stroke	

Nominal force 750 N/approx 1.2 A ED 30 %
Standardversion - Speed with nominal load approx 11 mm/sec

	Typ	Item number
	EA-L-750/300-02	M2 1743
	Standardversion: 750 N Force/ 300 mm Stroke	
	EA-L-750/500-02	M2 1744
	Standardversion: 750N Force/ 500 mm Stroke	
	EA-L-750/750-02	M2 1745
	Standardversion : 750 N Force/ 750 mm Stroke	
	EA-L-750/1000-02	M2 1746
	Standardversion: 750 N Force/ 1000 mm Stroke	

Nominal force 1000 N/1.0 A ED 30 %
Standardversion - Speed with nominal load 6 mm/sec

	Typ	Item number
	EA-L-1000/300-02	M2 1712
	Standardversion: 1000 N Force/ 300 mm Stroke	
	EA-L-1000/500-02	M2 1710
	Standardversion: 1000 N Force/ 500 mm Stroke	
	EA-L-1000/750-02	M2 1713
	Standardversion: 1000 N Force/ 750 mm Stroke	
	EA-L-1000/1000-02	M2 1711
	Standardversion: 1000 N Force/ 1000 mm Stroke	

Nominal force 500 N/1.0 A ED 30 %
Tandemversion - Speed with nominal load 8.4 mm/sec

	Typ	Item number
	EA-L 500/300-T	M2 1701 T
	Tandemversion: 500 N Force / 300 mm Stroke	
	EA-L 500/500-T	M2 1702 T
	Tandemversion: 500 N Force / 500 mm Stroke	
	EA-L 500/750-T	M2 1703 T
	Tandemversion: 500 N Force / 750 mm Stroke	
	EA-L 500/1000-T	M2 1704 T
	Tandemversion: 500 N Force / 1000 mm Stroke	

Nominal force 750 N/approx 1.2 A ED 30 %
Tandemversion - Speed with nominal load approx 11 mm/sec

	Typ	Item number
	EA-L 750/300-T	M2 1743 T
	Tandemversion: 750 N Force / 300 mm Stroke	
	EA-L 750/500-T	M2 1744 T
	Tandemversion: 750 N Force / 500 mm Stroke	
	EA-L 750/750-T	M2 1745 T
	Tandemversion: 750 N Force / 750 mm Stroke	
	EA-L 750/1000-T	M2 1746 T
	Tandemversion: 750 N Force / 1000 mm Stroke	

EA-L 450 N Special actuator – Replacement for EA-ZAP
Special cutoff with 0.5 A current demand

	Typ	Item number
	EA-L-450/300	M2 1005
	Special cutoff with 0.5 A current demand	
	EA-L-450/500	M2 1006
	Special cutoff with 0.5 A current demand	
	EA-L-450/750	M2 1007
	Special cutoff with 0.5 A current demand	

Stroke limit

Stroke limit in 10 mm steps. In between lengths on request!

Accessories	Item number
HUB-EA-L	je Antrieb

U-Profil für EA-L, Typ UKU-740

For rear actuator mounting. Aluminium U-section 50 mm W x 50 mm H x 5 mm thickness x 740 mm L, incl. aluminium sliding piece, 2 stud bolts and nuts, anodized. Note: This U-section bracket is only applicable for actuators with 500 mm stroke! Actuators with other stroke lengths require a special U-section bracket!

Accessories	Item number
UKU-740	K2 1505 A

Mounting brackets for Raico Wing 105D

Accessories	Item number
K-L-RAICO105D-LI-9006 (left)	K2 1577
K-L-RAICO105D-RE-9006 (right)	K2 1576

Brackets for EA-ZAP

Display bracket, aluminium, eloxadized, with distance design (M6 x 25), stud bolt (M6 x 50), 2 pads and cutout design according to DIN 985. Display height 100, 150 and 250 mm. ...for outward opening window sash, with stud bolt (M6 x 60), 2 hex nuts M6, 2 pads and locking nut M6 according to DIN 985.

Accessories	Item number
AW 100-6 (display height 90 mm)	K2 1506
AW 150-6 (display height 140 mm)	K2 1507 A
AW 250-6 (display height 240 mm)	K2 1519 A
AW 100-6-A (display height 90 mm)	K2 1506 A
AW 150-6-A (display height 140 mm)	K2 1507 B

Upper Brackets type OK for linear acuator EA-L

Wing guide block incl. stud bold d = 6 mm, zincked

Accessories	Item number
OK	K2 1501
DAS with rapid release	K2 1502
OK-1500 tightend	K2 1501 B

Lower Brackets type UK for linear actuator EA-L

Lateral clampable for movable bearing, allows variable positioning. Consisting of clamping piece and 1 U-profile (coated in RAL 9006).

Accessories	Item number
UK-L	K2 1562
UK-L1 B high	K2 1560 A
HK-L	K2 1539
K-L-KLR	K2 1582
K-L-UK-KLR	K2 1583
K-L-A-LI-AW57RO for sideway installation on Schüco AW 57 ro - left side	K2 1601
K-L-A-RE-AW57RO for sideway installation on Schüco AW 57 ro - right side	K2 1603
K-L-A-M-AW57RO-9006	K2 1602

Actuator and Bracket coating

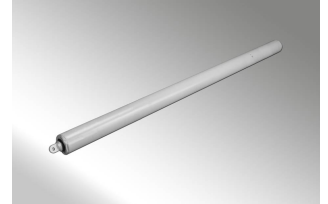
Note: Small parts as screws, nuts and sliding parts will not be coated!

Accessories	Item number
Coating in all RAL and DB colours Prices on request	

Linear actuator heavy lift EA-L-100-180

This spindle actuator offers a multitude of application options. With the EA-L 100-180 spindle actuator you will get an actuator who is developed for heavy loads over 1800 N. Still in compact housing (cross-section 52 mm) the actuator is strong enough for strokes up to 1000 mm. The aluminium tube is coated in RAL 9006 and can be installed variously with a special squeeze bracket. The maximum force is adjustable by needed current from 1000 N to 1800 N. High temperature resistance and resistance under permanent load and further quality characteristics according to DIN EN 12101/2 are a matter of course.

Brackets to be ordered separately!



Technical Data:

Linear actuator Type EA-L 100-180	
Nominal voltage (min./max.):	24 VDC (- 10 % / + 25 %), ripple < 500 mV
Nominal current:	2.2 A up to 4.0 A
Stroke length:	500, 600, 750, 1.000 mm
Force:	1000 N up to 1800 N
Cut-off:	<ul style="list-style-type: none"> ■ Integrated load dependent cut off and contact "F" for sequence controlling ■ Electronical end position cut off ■ Integrated tandem cut off <ul style="list-style-type: none"> ■ up to four actuators can be connected in parallel
Speed:	750 mm less than 60 seconds
Dimensions:	Aluminium profile tube, coated in RAL 9006 Length: 416 mm + stroke Cross-Section: 52 mm
Ingress protection:	IP 54
Switch on duration:	ED 30 %
Temperature range:	- 5° up to 75° C
Connection cable:	Silicone 5 x 0.75 mm ² , light grey The length of the connecting cable depends on the stroke length of the actuator: up to 500 mm stroke: 2 m, starting from 750 mm stroke: 3.5 m
Weight:	Approx. 6.6 kg
Special Features:	<ul style="list-style-type: none"> ■ Electronic torque balancing (current consumption / force progressing) for providing high quality in any operation step ■ Electronic retriggering blockade (avoids that the actuator starts running in direction of the already reached end position)
Temperature resistance:	300° C for 30 minutes (according to DIN EN 12101/2)

Article

Nominal force 1.800 N / 4,0 A ED 30% Force and current ajustable		
	Typ	Item number
	EA-L-100-180/500-T	M2 1756 T
	Attributes: Tandemversion Force: Up to 1800 N Stroke: 500 N	
	EA-L-100-180/600-T	M2 1757 T
	Attributes: Tandemversion Force: Up to 1800 N Stroke: 600 mm	
	EA-L-100-180/750-T	M2 1758 T
	Attributes: Tandemversion Force: Up to 1800 N Stroke: 750 mm	
	EA-L-100-180/1000-T	M2 1759 T
	Attributes: Tandemversion Force: Up to 1800 N Stroke: 1000 mm	

Upper Brackets type OK for linear actuator EA-L

Wing guide block incl. stud bolt d = 6 mm, zincked

Accessories	Item number
OK-1500 tightend	K2 1501 B

Lower Brackets type UK for linear actuator EA-L

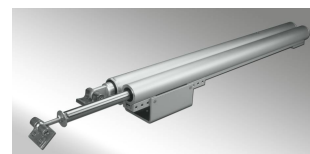
Lateral clampable for movable bearing, allows variable positioning. Consisting of clamping piece and 1 U-profile (coated in RAL 9006).

Accessories	Item number
K-L-100-KLR-MB Bracket with screws for 1800 N version	K2 1585

Linear centering system EA-LF-L

For lifting domes or pyramids safely without distortion due to side winds.

A 16 mm stainless steel guide tube running in a vertical bearing ensures the smooth operation of the opening light. Works in combination with a spindle actuator which should be ordered separately.



Technical Data:

Linear centering system Type EA-LF-L	
Bearing:	Linear ball bearing
Stroke length:	300, 500 mm Special strokes available on request
Shaft:	Hardened stainless steel 16 mm
Dimensions:	Aluminium, E6/EV1 anodized
Special Features:	<ul style="list-style-type: none"> ■ 16 mm centering pipe in stainless hardened steel ■ Dirt skimmer to protect the ball bearing against water ■ Synchronization up to 4 linear centering combinations possible (for synchronization a synchronous run regulator is required which should be ordered separately!)
Brackets (incl.):	2 rear and 1 upper mounting bracket for single application
Weight:	Approx. 3.0 kg

Article

EA-L-LF-L-Set-Combination

Linear centering system set Combination actuator + centering system composed of any linear actuator in synchro version with 300 or 500 mm stroke (type EA-L-S), 3 m silicone connecting cable, linear centering system (type EA-LF-L) and a premounted combi bracket set (type OK and UK-L-F).

	Typ	Item number
	Version 1: 300 mm stroke	M2 1608
	Version price + actuator price Attributes: Linear centering system set: Combination actuator + centering system	
	Version 2: 500 mm stroke	M2 1608
	Version price + actuator price Attributes: Linear centering system set: Combination actuator + centering system	

EA-L-LF-L-Set

Linear centering system without actuator composed of a linear centering system type LF-L with 300 mm or 500 mm stroke and a bracket set for single application (type OK and 2 x HK-L).

	Typ	Item number
	Version 1: 300 mm stroke	M2 1609
	Attributes: Linear centering system without actuator	
	Version 2: 500 mm stroke	M2 1609
	Attributes: Linear centering system without actuator	

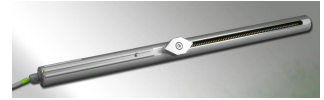
Actuator and Bracket coating

Note: Small parts as screws, nuts and sliding parts will not be coated!

Accessories	Item number
Coating in all RAL and DB colours Prices on request	

Slit actuator EA-L/S for inward opening wings

The unique slit actuator offers a discreet method of automating inward opening windows reliably and quietly with a high closing force for added security. The actuator has a short travel distance so does not protrude into the room. Especially suited to large and heavy sashes, e. g. in combination with an additional electric locking type ZVE-UNI, for both smoke control and daily ventilation.



Technical Data:

Slit actuator Type EA-L/S for inward opening wings	
Nominal voltage (min./max.):	24 V DC (- 10 % / + 25 %)
Nominal current:	< 1.2 A
Stroke length:	285 and 485 mm Optional stroke limit available
Force:	500 N
Cut-off:	<ul style="list-style-type: none"> ■ Integrated load dependent cut off and contact "F" for sequence controlling ■ Electronical end position cut off ■ Integrated tandem cut off <ul style="list-style-type: none"> ■ up to four actuators can be connected in parallel
Further features:	<ul style="list-style-type: none"> ■ Electronic torque balancing (current consumption / force progressing) for providing high quality in any operation step ■ Electronic retriggering blockade (avoids that the actuator starts running in direction of the already reached end position)
Speed:	Approx. 8.4 mm/sec
Dimensions:	Anodized aluminum pipe E6/EV1 with integrated bracket fixture length: 284 mm + stroke + 20 mm cable and connectors
Ingress protection:	IP 20
Switch on duration:	ED 30 %
Temperature range:	- 5° up to + 75° C
Temperature resistance:	300° C for 30 minutes (according to DIN EN 12101/2)
Connection cable:	Silicone 3 x 0.75 mm ² , light grey, length 2 m (5 x 0.75 mm ² by tandem and synchronization version)
Brackets (incl.):	Rear mounting bracket HK-L and angle bracket AW-80-S
Weight:	Approx. 3.0 kg

Article

Nominal force 500 N/approx 1.1 A
Standardversion - Speed with nominal load 8.4 mm/sec

	Typ	Item number
	EA-L/S-500/200-02	M2 1739
	Standard version: 500 N Force / 200 mm stroke	
	EA-L/S-500/300-02	M2 1735
	Standard version: 500 N Force/ 300 mm Stroke length	
	EA-L/S-500/500-02	M2 1736
	Standard version: 500 N Force/ 500 mm Stroke length	
	EA-L/S-500/750-02	M2 1742
	Standard version: 500 N Force/ 750 mm Stroke length	

Tandemversion

Speed with nominal load 8.4 mm/sec

	Typ	Item number
	EA-L/S-500/200-T (185 mm stroke)	M2 1739 T
	Tandemversion: 500 N Force/ 185 mm Stroke length	
	EA-L/S-500/300-T (285 mm stroke)	M2 1735 T
	Tandemversion: 500 N Force / 285 mm Stroke length	
	EA-L/S-500/500-T (485 mm stroke)	M2 1736 T
	Tandemversion: 500 N Force / 485 mm Stroke length	
	EA-L/S-500/750-T (735 mm stroke)	M2 1742 T
	Tandemversion: 500 N Force / 735 mm Stroke length	

Synchroversion
slit actuator with synchronizer

	Typ	Item number
	EA-L/S-500/300-S (285 mm stroke)	M2 1735 S
	Synchroversion: 500 N Force / 285 mm Stroke length	
	EA-L/S-500/500-S (485 mm stroke)	M2 1736 S
	Synchroversion: 500 N Force / 485 mm Stroke length	
	EA-L/S-500/750-S (735 mm stroke)	M2 1742 S
	Synchroversion: 500 N Force / 735 mm Stroke length	

Price for stroke limit

Stroke limit in 10 mm steps. In between lengths on request!

Accessories	Item number
HUB-EA-L/EA-L/S	each

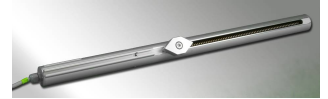
Actuator and Bracket coating

Note: Small parts as screws, nuts and sliding parts will not be coated!

Accessories	Item number
Coating in all RAL and DB colours Prices on request	

Slit actuator EA-L/S-A for outwards opening windows

The Slit Actuator with its moving mechanism being covered by patents sets new standards in the field of electrical operated inwards and now as well outwards opening wings. Even at low stroke lengths wide opening angles can be achieved. The integrated electronics cares about the load dependent cut-off as well as about the electronic torque balancing by comparison of current consumption to force progressing. The Slit Actuator provides a temperature resistance of 30 Minutes at 300 °C according to EN 12101-2.



With very less space requirements to inside (overall max. 120mm) very huge opening angles up to 60° or more can be achieved at side, top and bottom hung wings in solo, tandem or synchronous version. After technical approval the Slit Actuator is applicable for

- central pivot and
- center turn wings

Recommended is also the combination with an electrical locking mechanism type ZVE-UNI (Part No. B5 6101) to lock the window in closed position adequately.

Technical Data:

Slit actuator EA-L/S-A for outwards opening windows	
Nominal voltage (max./min.):	24 VDC (- 10 % / + 25 %)
Nominal current:	< 1.2 A
Stroke lengths:	185 / 285 mm
Max. Force:	500 N
Cut-Off:	<ul style="list-style-type: none"> ■ Integrated load dependent cut off and contact "F" for sequence controlling ■ Electronical end position cut off ■ Integrated tandem cut off <ul style="list-style-type: none"> ■ up to four actuators can be connected in parallel
Further features:	<ul style="list-style-type: none"> ■ Electronic torque balancing (current consumption / force progressing) for providing high quality in any operation step ■ Electronic retriggering blockade (avoids that the actuator starts running in direction of the already reached end position)
Speed:	approx. 8.4 mm/s
Housing:	Anodized aluminum pipe E6/EV1 with integrated bracket fixture length: 284 mm + stroke + 20 mm cable and connectors
Ingress protection:	IP 20
Switch on duration: :	ED 30 %
Temperature Range:	- 5° up to + 75° C
Temperature Resistance:	30 minutes at 300° C (according to EN 12101/2)
Connection cable:	Silicone 3 x 0.75 mm ² , light grey, length 2 m (5 x 0.75 mm ² by tandem and synchronization version)
Konsolen (inkl.):	Rear mounting bracket HK-L and angle bracket AW-80-S and fitted bracking for window frame
Weight:	approx. 3.0 kg

Article

Nominal Force 500 N/1,1 A

Standardversion - Speed with nominal load 8.4 mm/sec

	Typ	Item number
	EA-L/S-A-500/200-02	M2 1761
	Standardversion: 500 N Force / 200 mm Stroke	
	EA-L/S-A-500/300-02	M2 1760
	Standardversion: 500 N Force / 300 mm Hub	

Tandemversion

Speed with nominal load 8.4 mm/sec

	Typ	Item number
	EA-L/S-A-500/200-T (185 mm Hub)	M2 1761 T
	Tandemversion: 500 N Force / 185 mm Stroke	
	EA-L/S-A-500/300-T (285 mm Hub)	M2 1760 T
	Tandemversion: 500 N Force / 285 mm Stroke	

Synchroversion

slit actuator with synchronizer

	Typ	Item number
	EA-L/S-A-500/200-S (285 mm Hub)	M2 1761 S
	Synchroversion: 500 N Force / 185 mm Stroke	
	EA-L/S-A-500/300-S (485 mm Hub)	M2 1760 S
	Synchroversion: 500 N Force / 285 mm Stroke	

Price for stroke limit

Stroke limit in 10 mm steps. In between lengths on request!

Accessories	Item number
HUB-EA-L/EA-L/S	je Antrieb

Actuator and Bracket coating

Note: Small parts as screws, nuts and sliding parts will not be coated!

Accessories	Item number
Coating in all RAL and DB colours Prices on request	

Slit actuator for Louvre windows EA-L/S-1000/48

Reliable and secure smoke exhaustion with a glass louvre system fully tested to European Standard EN 12101-2.

Together with a glass louvre window this slit actuator is an ideal solution for smoke ventilation applications but equally suitable for all ventilation requirements.



Technical Data:

Slit actuator for Louvre windows Type EA-L/S-1000/48	
Nominal voltage (min./max.):	24 V DC (- 8 % / + 25 %), ripple < 500 mV
Nominal current:	1.0 A
Stroke length:	48 mm Stroke can vary depending on louvre construction
Force:	1.000 N
Cut-off:	<ul style="list-style-type: none"> ■ Integrated load dependent cut off and contact "F" for sequence controlling ■ Electronical end position cut off ■ Optional: Synchronization cut off ■ Integrated tandem cut off <ul style="list-style-type: none"> ■ up to four actuators can be connected in parallel
Further features:	<ul style="list-style-type: none"> ■ Electronic torque balancing (current consumption / force progressing) for providing high quality in any operation step ■ Electronic retriggering blockade (avoids that the actuator starts running in direction of the already reached end position)
Speed:	Approx. 6 mm/sec
Dimensions:	Aluminium pipe, E6/EV1 anodized Length: 351 mm + stroke, + 21 mm (cable and connectors)
Ingress protection:	IP 20, IP 52 attached
Switch on duration:	ED 30 %
Temperature range:	- 5° up to + 40° C (ventilation application)
Temperature resistance:	300° C for 30 minutes (according to DIN EN 12101/2)
Connection cable:	Temperature resistant silicone 3 x 0.75 mm ² , light grey, length 2 m, 5 x 0.75 mm ² by tandem and synchronization version
Brackets (incl.):	Fixing plate
Weight:	Approx. 2.5 kg

Article

Nominal force 1000 N/1.0 A Nominal operating time 6 mm/sec		
	Typ	Item number
	EA-L/S-1000/48-02	M2 1740
	Attributes: 1.000 N Force	
	EA-L/S-1000/48-S	M2 1740 S
	Attributes: 500 N Force Synchroversion	
	EA-L/S-1000/48-PS (with clamping protect system ProSense)	M2 1740 PS
	The Price trues for already known window geometry. For extra sizing, possibly more costs could incurre for validation. Please ask in case oft doubt your contact person in technical sales. Attributes: 500 N Force ProSense	

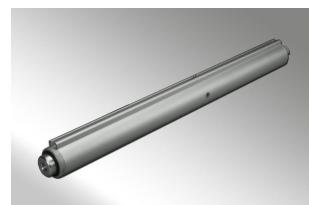
Actuator and Bracket coating

Note: Small parts as screws, nuts and sliding parts will not be coated!

Accessories	Item number
Coating in all RAL and DB colours Prices on request	

Linear actuator for louvre windows EA-L 120

Specifically modified linear actuator type EA-L 120 for controlling louvres efficiently. With this actuator you receive an optimum of aesthetics, functionality and reliability. Certainly this actuator meets all guidelines for smoke control.



Technical Data:

Linear actuator for louvre windows type EA-L 120	
Nominal voltage (min./max.):	24 V DC (- 10 % / + 25 %), ripple < 500 mV
Nominal current:	depending on version
Stroke length:	120 mm Optional stroke limit available
Force:	1.000 N
Cut-off:	<ul style="list-style-type: none"> ■ Integrated load dependent cut off and contact "F" for sequence controlling ■ Electronical end position cut off ■ Optional: Synchronization cut off ■ Integrated tandem cut off <ul style="list-style-type: none"> ■ up to four actuators can be connected in parallel
Further features:	<ul style="list-style-type: none"> ■ Electronic torque balancing (current consumption / force progressing) for providing high quality in any operation step ■ Electronic retriggering blockade (avoids that the actuator starts running in direction of the already reached end position)
Speed:	Approx. 6 mm/sec
Dimensions:	Aluminium profile tube, anodized E6/EV1 with integrated insertion for brackets, length: 405 mm + 20 mm cable and connectors Spindle with blind hole thread M10 for installation on site Silicone 3 x 0.75 mm ² , light grey, length 2 m
Ingress protection:	IP 54
Temperature range:	- 5° up to + 75° C
Switch on duration:	ED 30 %
Connection cable:	Silicone 3 x 0.75 mm ² , light grey, length 2 m Silicone 5 x 0.75 mm ² by tandem and synchronization version
Brackets (incl.):	Rear mounting bracket type HK-L with blind hole thread M10
Weight:	Approx. 3.0kg
Temperature resistance:	300° C for 30 minutes (according to DIN EN 12101/2)

Article

Nominal force 1000 N/1.35 A Speed with nominal load 3,5 mm/s		
	Typ	Item number
	EA-L 1000/120-T	M2 1434 T
	EA-L 1000/120-S	M2 1434 S
	EA-L 1000/120-02	M2 1434

Accessories for EA-L 120

Version with eye bolt

Accessories	Item number
KA-EA-L-***/**-S (for installation at side)	M2 1429 B
KA-EA-L-***/**-M (for installation at centre)	M2 1429 A

Waterproofing for EA-L

Version with higher protection class against wetness

Accessories	Item number
EA-L-sealing	each

Actuator and Bracket coating

Note: Small parts as screws, nuts and sliding parts will not be coated!

Accessories	Item number
Coating in all RAL and DB colours Prices on request	

CHAIN ACTUATORS 24 V

Chain actuator EA-K-50

Elegance meets power with an eye to the future

Often inconsiderable but it is the master of the actuator technology. With its tight and visually appealing construction it fits itself elegant in each facade and combines itself with the window.

The chain actuator EA-K-50 sets its own standards for modern actuator technology for smoke vents and daily natural ventilation. Nearly soundless and very powerful it opens and closes reliable windows and flaps in all buildings.

The chain actuator EA-K-50 follows on seamlessly the high developed technology of the Folding Arm² motor. Because of a special developed motor-gear-unity the EA-K-50 reaches despite of small dimensions high push forces. The cut-off is based on a microcontroller. Parameters like stroke length and force can be adjusted by SimonLink® easily on-site.



Technical Data:

Chain actuator EA-K-50	
Nominal voltage::	24 V DC +/- 15%
Nominal current::	1.4 A
Stroke length::	500/600/750/1000 mm
Force::	500 N
Cut-off::	Integrated, electronic power cut-off
Further features::	<ul style="list-style-type: none"> ■ Choice for voltage or dry contact ■ Soft start ■ Soft Close for the last 75 mm ■ Integrated tandem function for overload ■ Programmable by SimonLink
Speed::	10 mm/s
Ingress protection::	IP 32
Switch on duration::	ED 30 %
Temperature range::	0 °C to + 75 °C
Connection cable::	Silicone 3 (6) x 0.75 mm ² (Length 3.000 mm)
Housing:	Aluminium EV1 anodized
Weight::	approx. 2.5 kg
Dimensions LxWxH:	640(-890) x 50 x 41 mm

Article

Nominal force 500 N

Standard version with F-Contact

	Typ	Item number
	EA-K-50/500	M2 5310
	Attributes: 500 N Force / 500 mm Stroke	
	EA-K-50/600	M2 5311
	Attributes: 500 N Force / 600 mm Stroke	
	EA-K-50/750	M2 5312
	Attributes: 500 N Force / 750 mm Stroke	
	EA-K-50/1000	M2 5313
	Attributes: 500 N Force / 1000 mm Stroke	

Nominal force 500 N - Tandem
Tandem version with signal contact

	Typ	Item number
	EA-K-50/500-T	M2 5310 T
	Attributes: 500 N Force / 500 mm Stroke Tandem version	
	EA-K-50/600-T	M2 5311 T
	Attributes: 500 N Force / 600 mm Stroke Tandem version	
	EA-K-50/750-T	M2 5312 T
	Attributes: 500 N Force / 750 mm Stroke Tandem version	
	EA-K-50/1000-T	M2 5313 T
	Attributes: 500 N Force / 1000 mm Stroke Tandem version	

Accessories	Item number
K-K 50-A for outwards opening or rotating (two clamps), stainless steel	K2 5086
K-K 50-K for inwards opening (without SKI, two clamps) stainless steel	K2 5087
K-K 50-SKI wing bracket (Z- bracket), adjustable, aluminium	K2 5088
K-K 50-OK as replacement (included in standard-delivery of the actuator)	K2 5089

Chain actuator EA-KS-24/300/500

This slimline chain actuator is an attractive solution for automating windows for both smoke control and daily ventilation.

Featuring a tough, high grade steel chain, this actuator can be used in most environments, particularly schools, offices and apartments.

Up to four actuators can be connected in parallel and will commonly switch off in case of overload - ideal for large windows.



Brackets to be ordered separately!

Technical Data:

Chain actuator Type EA-KS-24/300/500	
Nominal voltage (min./max.):	24 V DC (- 10 % / + 25 %), Ripple < 500 mV
Nominal current:	1.0 A
Stroke length:	480 mm Optional stroke limit available
Force:	300 N
Cut-off:	<ul style="list-style-type: none"> ■ Integrated load dependent cut off and contact "F" for sequence controlling ■ Electronical end position cut off ■ Integrated tandem cut off <ul style="list-style-type: none"> ■ up to four actuators can be connected in parallel
Further features:	<ul style="list-style-type: none"> ■ Electronic torque balancing (current consumption / force progressing) for providing high quality in any operation step ■ Acoustic signal while running into close direction ■ Electronic retriggering blockade (avoids that the actuator starts running in direction of the already reached end position)
Optional features (on request):	<ul style="list-style-type: none"> ■ Soft closing system ensuring a smooth closing of the window ■ Electronic stroke limit
Speed:	13 mm/s
Dimensions:	Die cast aluminium coated in RAL 9006 677 x 47 x 32 mm
Ingress protection:	IP 20
Switch on duration:	ED 30 %
Temperature range:	- 5° up to + 40° C
Connection cable:	Silicone 4 x 0.75 mm ² , light grey, length 2 m
Weight:	ca. 2.5 kg
Temperature resistance:	300° C for 30 minutes (according to DIN EN 12101/2)

Article

Nominal force 300 N/1.0 A Speed with nominal load 13 mm/sec		
	Typ	Item number
	EA-KS-24/300/500	M2 5301
	Attributes: 300 N Force/ 500 mm Stroke length	

Brackets Type K-KS

Bracket type K-KS-D32 Consisting of 2 sliding pieces with stud bolts, 2 fixing brackets and 1 movable mounting angle, powder coated in RAL 9006. Bracket type K-KS-D80 Consisting of 2 sliding pieces with stud bolts, 2 fixing brackets, powder coated in RAL 9006. Bracket set type K-KS-D15 Pivotal mounting bracket consisting of 2 fixing brackets incl. stud bolts and nuts, Width 15 mm, colour RAL 9006.

Accessories	Item number
K-KS-D15 Length 15 mm	K2 5073
K-KS-D32 Length 32 mm	K2 5071
K-KS-D80 Length 80 mm	K2 5072
K-KS-SKI-V5 Mounting angle for inward opening windows	K2 5076

Extra charge for Flex chain

Accessories	Item number
EA-KS-Flexchain-500, Hub 500 mm	S2 1562

Price for stroke limit

Stroke limit in 10 mm steps. In between lengths on request!

Accessories	Item number
HUB-EA-KS	each

Actuator and Bracket coating

Note: Small parts as screws, nuts and sliding parts will not be coated!

Accessories	Item number
Coating in all RAL and DB colours Prices on request	

Chain Actuator EA-KS-24/300/600(750/1000)

This enhancement of our EA-KS slimline chain actuator enables big opening widths for bottom and side hinged windows.

The tough, high grade steel chain ensures the window opens and closes safely even at opening widths of up to 1000 mm.

The innovative mounting brackets are simple to install and can be used to automate a wide range of window sizes and types.



Brackets to be ordered separately!

Technical Data:

Chain Actuator Type EA-KS-24/300/600(750/1000)	
Nominal voltage (min./max.):	24 V DC (- 10 % / + 25 %), Ripple < 500 mV
Nominal current:	1.0 A
Stroke length:	600, 750, 1.000 mm Optional stroke limit available
Force:	300 N
Cut-off:	<ul style="list-style-type: none"> ■ Integrated load dependent cut off and contact "F" for sequence controlling ■ Electronical end position cut off ■ Integrated tandem cut off <ul style="list-style-type: none"> ■ up to four actuators can be connected in parallel
Further features:	<ul style="list-style-type: none"> ■ Electronic torque balancing (current consumption / force progressing) for providing high quality in any operation step ■ Acoustic signal while running into close direction ■ Electronic retriggering blockade (avoids that the actuator starts running in direction of the already reached end position)
Optional features (on request):	<ul style="list-style-type: none"> ■ Soft closing system ensuring a smooth closing of the window ■ Electronic stroke limit
Speed:	13 mm/s
Dimensions (LxWxH):	Die cast aluminium powder coated in RAL 9006 1027 x 70 x 35 mm (1000 mm stroke version)
Ingress protection:	IP 20
Switch on duration:	ED 30 %
Temperature range:	- 5° bis + 40° C
Temperature resistance:	300° C for 30 minutes (according to DIN EN 12101/2)
Connection cable:	Silicone 4 x 0.75 mm ² , light grey, length 2 m
Weight:	Approx. 4.5 kg

Article

Pull force 300 N/ Push force 200 N/ 1.0 A
Speed with nominal load approx 12 mm/sec

	Typ	Item number
	EA-KS-24/300/600	M2 5308
Attributes:	300 N Force/ 600 mm Stroke length	

Pull force 300 N/ Push force 150 N/ 1.0 A
Speed with nominal load approx 13 mm/sec

	Typ	Item number
	EA-KS-24/300/750	M2 5306
Attributes:	300 N Force/ 750 mm Stroke length	

Pull force 300 N / Push force 100 N / 1.0 A
Speed with nominal load approx 14 mm/sec

	Typ	Item number
	EA-KS-24/300/1000	M2 5307
Attributes:	300 N Force/ 1000 mm Stroke length	

Brackets Type K-KS-**-L

Accessories	Item number
K-KS-D32-L length 32 mm	K2 5079
K-KS-D80-DUO(L) length 80 mm	K2 5078

Brackets Type K-KS

Bracket type K-KS-D32 Consisting of 2 sliding pieces with stud bolts, 2 fixing brackets and 1 movable mounting angle, powder coated in RAL 9006. Bracket type K-KS-D80 Consisting of 2 sliding pieces with stud bolts, 2 fixing brackets, powder coated in RAL 9006. Bracket set type K-KS-D15 Pivotal mounting bracket consisting of 2 fixing brackets incl. stud bolts and nuts, Width 15 mm, colour RAL 9006.

Accessories	Item number
K-KS-SKI-V5 Mounting angle for inward opening windows	K2 5076
K-KS-D25	K2 5081
K-KSV-D55	K2 5082

Extra charge for Flex chain

Accessories	Item number
EA-KS-24/300/750	S2 1563
EA-KS-24/300/1000	S2 1564

Price for stroke limit

Stroke limit in 10 mm steps. In between lengths on request!

Accessories	Item number
HUB-EA-KS	each

Actuator and Bracket coating

Note: Small parts as screws, nuts and sliding parts will not be coated!

Accessories	Item number
Coating in all RAL and DB colours Prices on request	

Chain actuator EA-KS-24/600/500-DUO

The EA-KS-DUO actuator is equipped with two drive units and two chains. Particularly at big windows it ensures a safe opening and a tight closing. Furthermore it distinguishes by latest actuator and cut off technology and a slim and attractive design.

Brackets to be ordered separately!



Technical Data:

Chain actuator Type EA-KS-24/600/500-DUO	
Nominal voltage (min./max.):	24 V DC (- 10 % / + 25 %), Ripple < 500 mV
Nominal current:	2.0 A
Stroke length:	480 mm Optional stroke limit or longer stroke lengths available
Force:	720 mm
Cut-off:	<ul style="list-style-type: none"> ■ Integrated load dependent cut off and contact "F" for sequence controlling ■ Electronical end position cut off ■ Integrated tandem cut off <ul style="list-style-type: none"> ■ two actuators can be connected in parallel
Further features:	<ul style="list-style-type: none"> ■ Electronic torque balancing (current consumption / force progressing) for providing high quality in any operation step ■ Acoustic signal while running into close direction ■ Electronic retriggering blockade (avoids that the actuator starts running in direction of the already reached end position)
Optional features (on request):	<ul style="list-style-type: none"> ■ Soft closing system ensuring a smooth closing of the window ■ Electronic stroke limit
Speed:	13 mm/s
Dimensions (LxWxH):	Aluminium, EV 1 anodized 1485 x 69 x 37 mm
Ingress protection:	IP 20
Switch on duration:	ED 30 %
Temperature range:	- 5° up to + 40° C
Connection cable:	Integrated terminals, optional with silicone cable 4 x 0.75 mm ² , light grey, length at customers' option, connected left or right hand
Weight:	Approx. 6.0 kg

Article

Nominal force 600 N/2.0 A

Speed with nominal load approx 13 mm/sec

	Typ	Item number
	EA-KS-24/600/500-DUO without cable	M2 5205
Attributes:	600 N Force/ 500 mm Stroke length DUO	

EA-KS-DUO with cable connected left or right hand

	Typ	Item number
	EA-KS-24/600/500*-DUO	M2 5205
	with 4 m silicone cable, 4 x 0,75 mm ² Attributes: 600 N Force/ 500 mm Stroke length DUO	
	Price for every further running meter cable	
	per running meter	

Brackets Type K-KS-**-DUO

Accessories	Item number
K-KS-D32-DUO length 32 mm	K2 5077
K-KS-D80-DUO(L) length 80 mm	K2 5078

Brackets Type K-KS

Bracket type K-KS-D32 Consisting of 2 sliding pieces with stud bolts, 2 fixing brackets and 1 movable mounting angle, powder coated in RAL 9006. Bracket type K-KS-D80 Consisting of 2 sliding pieces with stud bolts, 2 fixing brackets, powder coated in RAL 9006. Bracket set type K-KS-D15 Pivotal mounting bracket consisting of 2 fixing brackets incl. stud bolts and nuts, Width 15 mm, colour RAL 9006.

Accessories	Item number
K-KS-SKI-V5 Mounting angle for inward opening windows	K2 5076
K-KS-D25	K2 5081
K-KSV-D55	K2 5082

Price for stroke limit

Stroke limit in 10 mm steps. In between lengths on request!

Accessories	Item number
HUB-EA-KS-DUO	each

Actuator and Bracket coating

Note: Small parts as screws, nuts and sliding parts will not be coated!

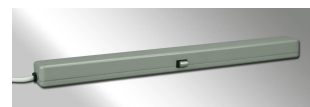
Accessories	Item number
Coating in all RAL and DB colours Prices on request	

Chain Actuator EA-KSV-24/250/300

This modern 24 V chain actuator offers all comfort for a remote controlled operation of windows.

The compact housing in shapely design and the progressive technology are outstanding characteristics for ventilation applications.

The actuator has a practical and user friendly mounting bracket that is simple to install. Also available in 230 V version (see 230 V actuators).



Brackets to be ordered separately!

Technical Data:

Chain actuator Type EA-KSV-24/250/300	
Nominal voltage (min./max.):	24 VDC (± 10 %)
Nominal current:	0.7 A
Stroke length:	300 mm
Force:	250 N
Cut-off:	Electrical
Speed:	9 mm/s
Dimensions (LxWxH):	Capsuled aluminium-diecast box, powder-coated RAL 9006 450 x 45 x 32 mm
Ingress protection:	IP 30
Switch on duration:	ED 50 %
Temperature range:	- 5° up to + 65° C
Connection cable:	Synthetic cable, white, length 1.5 m
Weight:	Approx. 1.4 kg

Article

Nominal force 250 N/0.7 A Speed with nominal load 9 mm/sec		
	Typ	Item number
	EA-KSV-24/250/300	M2 5011
	Attributes: 250 N Force/ 300 mm Stroke length	

Brackets Type K-KS

Bracket type K-KS-D32 Consisting of 2 sliding pieces with stud bolts, 2 fixing brackets and 1 movable mounting angle, powder coated in RAL 9006. Bracket type K-KS-D80 Consisting of 2 sliding pieces with stud bolts, 2 fixing brackets, powder coated in RAL 9006. Bracket set type K-KS-D15 Pivotal mounting bracket consisting of 2 fixing brackets incl. stud bolts and nuts, Width 15 mm, colour RAL 9006.

Accessories	Item number
K-KS-D15 Length 15 mm	K2 5073
K-KS-D32 Length 32 mm	K2 5071
K-KS-D80 Length 80 mm	K2 5072
K-KS-SKI-V5 Mounting angle for inward opening windows	K2 5076
K-KSV-D55	K2 5082

Chain Actuator EA-KN-24/300/400

This modern 24 V chain actuator offers all comfort for a remote controlled operation of windows.

The compact housing in shapely design and the progressive technology are outstanding characteristics for ventilation applications.

The actuator has a practical and user friendly mounting bracket that is simple to install. Also available in 230 V version (separate sheet).



Technical Data:

Chain actuator Type EA-KN-24/300/400	
Nominal voltage (min./max.):	24 VDC (± 10 %)
Nominal current:	1.0 A
Stroke length:	110, 205, 295, 390 mm Stroke adjustments with DIP switch
Force:	200 - 300 N The nominal force depends on the selected stroke length - see force diagram below!
Cut-off:	Limit switch
Speed:	8.8 mm/s
Dimensions (LxWxH):	Plastic, similar to RAL 9006, 387 x 59 x 38 mm
Ingress protection:	IP 20
Switch on duration:	ED 30 %
Temperature range:	- 5° up to + 65° C
Brackets (incl.):	Standard mounting brackets
Weight:	Approx. 1.0 kg
Connecting cable:	Plastic, white, length 2.000 mm

Article

Nominal force 300 N/1.0 A Speed with nominal load 8.8 mm/sec		
	Typ	Item number
	EA-KN-24/300/400	M2 5010
	Attributes: 300 N Force/ 400 mm Stroke length	

Chain Actuator EA-K 24 E-L

This chain actuator is ideal for operating small and light windows of all kinds. The stroke length of 260 or 380 mm can be easily adjusted by DIP-switch. A quick release coupling enables the sash to be fully opened for cleaning. Also available in 230 V version (type EA-K 2000/230).



Technical Data:

Chain actuator Type EA-K 24 E-L	
Nominal voltage (max./min.):	24 V DC
Nominal current:	1.0 A
Stroke length:	260, 380 mm Optional stroke limit available
Pull Force:	300 N
Cut-off:	Integrated electronic overload cut off, limit switch, thermal cut off
Speed:	20 mm/s
Dimensions:	Aluminium EV1 anodized, 234 x 83 x 50 mm
Ingress protection:	IP 50
Switch on duration:	ED 20 %
Brackets (incl.):	Standard Bracket sets
Weight:	Approx. 1.5 kg
Push Force :	150 N with 260 mm stroke 100 N with 380 mm stroke

Article

Pull force 300 N/Push force 100 (150)N/1.0 A
Speed with nominal load 20 mm/s

	Typ	Item number
	EA-K 24 E-L	M2 5006

Brackets Type SKI

Mounting angle bracket Aluminium, EV1 anodized or plastic, fixed or moveable, required to fix the actuator at the wing frame.

Accessories	Item number
SKI/K Plastic, not coatable	K2 5051
SKI/A Aluminium	K2 5052
SKI/V1 Actuator depth + 30 mm up to + 120 mm	K2 5055
SKI/V2 Actuator depth - 0 mm bis - 30 mm	K2 5056

Tilting brackets Type KIKO

Suitable at wing heights double stroke, aluminium, EV1 anodized

Accessories	Item number
KIKO/G/UNI for inwards or outwards opening windows	K2 5066
KIKO/G/F stabilized by elastic force	K2 5068

Stroke limit

Stroke limit in 10 mm steps. In between lengths on request!

Accessories	Item number
EA-K-HUB	per actuator

Actuator and Bracket coating

Note: Small parts as screws, nuts and sliding parts will not be coated!

Accessories	Item number
Coating in all RAL and DB colours Prices on request	

Chain Actuator EA-K-24/400(120)

This heavy duty chain actuator is with 400 N push and pull force particularly suitable for application to heavy windows in the facade or roof area.

With a long stroke of 800 mm and a high speed it is possible to achieve large opening areas for smoke clearance within a short time.

Also available in 230 V version (separate sheet).



Technical Data:

Chain actuator Type EA-K-24/400(120)	
Nominal voltage (min./max.):	24 V DC (± 10 %)
Nominal current:	2.0 A
Stroke length:	450, 600, 800 mm Optional stroke limit available
Force:	Pull 400 N Push 400 N (120 N with 800 mm stroke)
Cut-off:	Integrated, electronic overload cut off, with sequence controlling via end switch and stepless adjustable end position switch off
Speed:	30 mm/s
Dimensions(LxWxH):	Aluminium EV1 anodized 595, 670 or 785 mm (depending on stroke length) x 80 x 50 mm
Ingress protection:	IP 20
Switch on duration:	ED 50 %
Temperature resistance:	300° C for 30 minutes (according to DIN EN 12101/2)
Connection cable:	Silicone 3 x 0.75 mm ² , white, length 2 m (3 m with 800 mm stroke)
Brackets (incl.):	Standard bracket set
Weight:	Approx. 3.0-4.0 kg depending on version

Article

Nominal force 400 N/2.0 A Speed with nominal load 30 mm/sec		
	Typ	Item number
	EA-K-24/400/450	M2 5009
	(L x W x H) 595 x 80 x 50 mm Attributes: 400 N Force/ 450 mm Stroke length	
	EA-K-24/400/600	M2 5007
	(L x W x H) 670 x 80 x 50 mm Attributes: 400 N Force / 600 mm Stroke length	

Pull force 400 N, Push force 120 N/2.0 A

Speed with nominal load 30 mm/sec (incl. 3 m cable)

	Typ	Item number
	EA-K-24/120/800	M2 5008
	(L x W x H) 785 x 80 x 50 mm Attributes: 120 N Force/ 800 mm Stroke length	

Turn brackets Type DK

Accessories	Item number
EA-K/DK-600 for moveable positioning	K2 5070
EA-K/DK-VELUX for Velux roof windows	K2 1550

Tilting brackets Type KIKO

Suitable at wing heights double stroke, aluminium, EV1 anodized

Accessories	Item number
KIKO/G/UNI for inwards or outwards opening windows	K2 5066
KIKO/G/F stabilized by elastic force	K2 5068

Brackets Type SKS und SKI

Mounting brackets Moveable aluminium mounting bracket, EV1 anodized

Accessories	Item number
SKS 400/**	K2 5053 A
SKI/V3 33 - 83 mm excess length	K2 5067
SKI/V4 up to 33 mm excess length, adjustable	K2 5069

Stroke limit

Stroke limit in 10 mm steps. In between lengths on request!

Accessories	Item number
EA-K-HUB	per actuator

Actuator and Bracket coating

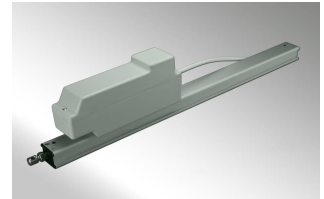
Note: Small parts as screws, nuts and sliding parts will not be coated!

Accessories	Item number
Coating in all RAL and DB colours Prices on request	

RACK AND PINION ACTUATOR

Rack and Pinion Actuator

This rack and pinion actuator is unbeatable with applications in the industrial area. It is equipped with all characteristics that can be expected of a modern actuator and shines with low current consumption and an effective power utilization. This actuator is quiet in operation and can be linked by a rod to control a slave mechanical drive. This makes it ideal for applications with heavy duty windows or large skylights. Also available in 230 V version (separate sheet).



Technical Data:

Rack and pinion actuator Type EA-SZ	
Nominal voltage:	24 VDC (- 15 % / + 25 %)
Nominal current:	1.0 A
Stroke lengths:	350, 550, 750, 1.000 mm
Max force:	800 N
Cut off:	Integrated electronic overload cut off and contact "F" for sequence controlling
Speed:	9 mm/sec
Housing (LxWxH):	Rack housing: anodized aluminium E6/EV1, grey Motor housing: plastic Stroke + 220 mm x 54 x 120 mm
Protection class:	IP 55
Switch on duration:	ED 20 %
Temperature resistance:	300° C for 30 minutes according to EN 12101/2
Connecting cable:	Silicone 3 x 0.75 mm ² , light grey, length 1.5 m
Brackets:	Upper and lower bracket / steppless adjustable in single application
Weight:	ca. 3.0 kg

Article

Nominal force 500 N - I 1.0 A		
	Typ	Item number
	EA-SZ-24/50/550-LO	M2 1095
	Attributes: 500 N Force / 550 mm Stroke	
	EA-SZ-24/50/750-LO	M2 1096
	Attributes: 500 N Force / 750 mm Stroke	
	EA-SZ-24/50/1000-LO	M2 1097
	Attributes: 500 N Force / 1000 mm Stroke	

Nominal force 800 N - I 1.0 A
Speed with nominal load 9 mm/sec

	Typ	Item number
	EA-SZ 24/80/350	M2 1080
	Attributes: 800 N Force / 350 mm Stroke	
	EA-SZ 24/80/550	M2 1081
	Attributes: 800 N Force / 550 mm Stroke	
	EA-SZ 24/80/750	M2 1082
	Attributes: 800 N Force / 750 mm Stroke	
	EA-SZ 24/80/1000	M2 1090
	Attributes: 800 N Force / 1000 mm Stroke	

Connecting rod to link SZ and SZ-M

Aluminium tube, Note: No other lengths available!

Accessories	Item number
EA-SZ-VERBIND-1 (Length 960 mm)	M2 1083 A
EA-SZ-VERBIND-2 (Length 1.960 mm)	M2 1083 B

Slave mechanical drive type EA-SZ-M

with eye bolt d = 6 mm Housing (L x W x H): anodized aluminium E6/EV1, grey (Stroke + 220 mm x 40 x 30 mm) Stroke lengths: 350, 550, 750, 1000 mm Weight: Approx 2 kg incl. Brackets: Upper and lower bracket (Note! Brackets for SZ and SZ-M are different) Bearing point of brackets is not adjustable

Accessories	Item number
EA-SZ-M-350	M2 1083
EA-SZ-M-550	M2 1084
EA-SZ-M-750	M2 1089
EA-SZ-M-1000	M2 1091

DOMELIFT

DomeLift® - Light Dome Fitting

DomeLift® is a cross-beam system for light domes. It can be configured for the use in light domes with roof light sizes of 120 cm, 140 cm or 150 cm together with a variable width. DomeLift® is used in conjunction with a 24 V linear actuator. Depending on the size of the dome there are different forces from 1000 N up to 2000 N. A secure opening is assured at snow loads up to 500 N/m² and also at bigger light dome sizes. The opening mechanism is designed in a way that no additional hinges at the dome itself are needed. Similarly DomeLift® needs no locking mechanism and for daily ventilation it is stoppable at any opening position. DomeLift® opens light domes up to the minimum opening angle of 140° as it is required by the European standards.



DomeLift® is mountable in almost all major curbs. Whether you have stock light domes in restructuring case, set up new systems or you want to install them in tandem version - cause of the very flexible structure the system can be used in many aspects.

Technical Data:

DomeLift® - Light Dome Fitting	
Roof light size 120 cm:	<ul style="list-style-type: none"> ■ Mounting dimensions: 100 cm ■ Necessary stroke: 600 mm
Roof light size 140 cm:	<ul style="list-style-type: none"> ■ Mounting dimensions: 120 cm ■ Necessary stroke: 705 mm
Roof light size 150 cm:	<ul style="list-style-type: none"> ■ Mounting dimensions: 130 cm ■ Necessary stroke: 750 mm
Cross-beam system:	<ul style="list-style-type: none"> ■ Material: Galvanised Steel ■ Weight: approx. 17 kg
Linear Actuator:	<ul style="list-style-type: none"> ■ Nominal Voltage: 24 V DC ■ Nominal Current: 1.2 bis 4.0 A ■ Force: up to 2000 N ■ Cut-Off: electrical cut-off system ■ Operating temperature: -5 °C to +75 °C

Article

	Typ	Item number
	DomeLift®	M2 1800
	Cross-Beam System for Light Domes (without actuator)	
	EA-L-200/600-DL-T	M2 1754 T
	for light dome size 120 cm	
	Technical Details: Please contact your responsible sales	
	EA-L-200/750-DL-T	M2 1755 T
	for light dome sizes 140 & 150 cm	
	Technical Details: Please contact your responsible sales	

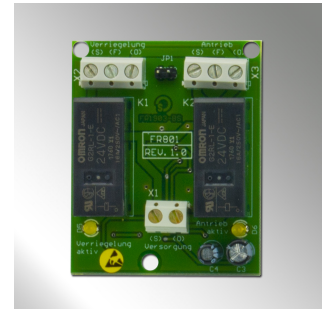
OPTIONS AND ACCESSORIES

Sequence Controller Module FR-801

The sequence controller module type FR-801 with programmed cut off is designed to control electromechanical 24 V actuators in a fixed sequence.

This might be necessary for example at applications at french casement windows when the actuators shall open the window in a certain order and close it in reverse order.

Note: Only suitable for actuators providing a contact "F" for sequence controlling



Technical Data:

Sequence Controller Module Typ FR-801	
Nominal voltage (min./max.):	24 VDC (- 25 % / + 50 %)
Max. switching current:	5 A per actuator, ripple < 10 %
Current consumption:	12 mA in stand by mode 35 mA in operation mode
Pulse duration of follow up control operation (Switch over time):	Approx. 2 seconds Note! During this time no actuator will be triggered
Operating time of actuator when resting in end position:	Approx. 2 seconds
LED display yellow:	When locking active / actuator active
Cable connection:	Terminal strips for connecting control signals 0.08 - 0.75 mm ²
Temperature range:	- 5° up to + 40° C
Dimensions:	Grey plastic on wall housing 90 x 90 x 45 mm
Ingress protection:	IP 54

Article

Sequence controlling module		
	Typ	Item number
	FR-801	ST4 3520

Contact Strip Module AM-600

This safety cut off module for contact strips evaluates the signals coming from a safety component like contact strip SecuSwitch® providing an open contact.

The module AM-600 causes an immediate stop of all connected actuators running into close direction, as soon as a signal is triggered via a safety contact or if the cable line is interrupted. Integrated end resistors guarantee a monitored closed current mode.



Technical Data:

Contact strip module Type AM-600	
Nominal voltage (min./max.):	24 VDC (- 20 % / + 25 %)
Max. switching current:	5 A, Ripple < 10 %
Current consumption:	22 mA in stand by mode / after cut off 10 mA in operation mode
Triggering current of safety contact:	45µA < I > 5,25 mA
Cable connection:	Terminal strips for connecting control signals 0.08 - 0.75 mm ²
Temperature range:	- 5° up to + 40° C
Dimensions (BxHxT):	Plastic, grey, for on wall mounting 90 x 90 x 45 mm
Ingress protection:	IP 54

Article

Cut off module for contact strips		
	Typ	Item number
	AM-600	M2 3140

Electric Contact Strip SecuSwitch®

The electric contact strip is an optimal supplement to electric operated window elements and is suitable for smoke control and environmental ventilation. Areas of application are wings located within reach (up to 2.5 m above floor level) and which are therefore constituting a possible threat.

Note:

- All other components, necessary for operation (as actuator, power supply for control panels and cut off module AM-600) need to be ordered separately!
- Confectioning has to be done on site
- Optional mounting profiles on request

Technical Data:

Contact strip Type SecuSwitch®	
Max. switching voltage:	48 VDC
Max. switching current:	100 mA
Contact:	Single pole normally open
Response time:	< 20 ms
Opening time:	< 20 ms
Bending radius:	5 mm, max. 180°
Operating travel:	1 mm
Installation dimension:	13.5 mm x 4 mm
Length:	max. 250 m
Ingress protection:	IP 67
Temperature range:	- 20° C up to + 70° C
Material:	Insulation: polyolefin plastic Contact area: stainless high grade steel
Included in delivery:	Duct tape, foldback clips, end caps, end resistors

Article

Contact strip Type SecuSwitch®		
	Typ	Item number
	K-Leiste (price per running meter)	M2 40001

M2 ACTUATORS 230 V

CHAIN ACTUATORS 230 V

Chain actuator EA-KS-230/300/500

This slimline chain actuator is an attractive solution for automating windows for daily ventilation.

Featuring a tough, high grade steel chain, this actuator can be used in most environments, particularly schools, offices and apartments.

Also available in 24 V version (separate sheet).



Brackets to be ordered separately!

Technical Data:

Chain actuator Type EA-KS-230/300/500	
Nominal voltage (min./max.):	230 V AC (50 Hz +/- 10 %)
Nominal current:	0.2 A
Stroke length:	500 mm Optional stroke limit available
Force:	300 N
Cut-off:	- Integrated electronic overload cut off
Speed:	13 mm/s
Dimensions (LxWxH):	Die cast aluminium coated in RAL 9006 677 x 47 x 32 mm
Ingress protection:	IP 20
Switch on duration:	ED 30 %
Connection cable:	Plastic cable 4 x 0.75 mm ² , white, length 2 m
Weight:	Approx. 3.0 kg

Article

Nominal force 300 N/0.2 A Laufzeit unter Nennlast 13 mm/s		
	Typ	Item number
	EA-KS-230/300/500	M2 5108
	Attributes: 300 N Force / 500 mm Stroke length	

Brackets Type K-KS

Bracket type K-KS-D32 Consisting of 2 sliding pieces with stud bolts, 2 fixing brackets and 1 movable mounting angle, powder coated in RAL 9006. Bracket type K-KS-D80 Consisting of 2 sliding pieces with stud bolts, 2 fixing brackets, powder coated in RAL 9006. Bracket set type K-KS-D15 Pivotal mounting bracket consisting of 2 fixing brackets incl. stud bolts and nuts, Width 15 mm, colour RAL 9006.

Accessories	Item number
K-KS-D15 Length 15 mm	K2 5073
K-KS-D32 Length 32 mm	K2 5071
K-KS-D80 Length 80 mm	K2 5072
K-KS-SKI-V5 Mounting angle for inward opening windows	K2 5076

Extra charge for Flex chain

Accessories	Item number
EA-KS-Flexchain-500, Stroke length 500 mm	S2 1562

Price for stroke limit

Stroke limit in 10 mm steps. In between lengths on request!

Accessories	Item number
HUB-EA-KS	each

Actuator and Bracket coating

Note: Small parts as screws, nuts and sliding parts will not be coated!

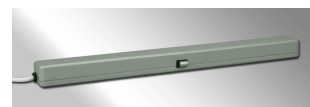
Accessories	Item number
Coating in all RAL and DB colours Prices on request	

Chain Actuator EA-KSV-230/250/300

This modern 230 V chain actuator offers all comfort for a remote controlled operation of windows.

The compact housing in shapely design and the progressive technology are outstanding characteristics for ventilation applications. The actuator has a practical and user friendly mounting bracket that is simple to install.

Also available in 24 V version (see 24 V actuators).



Technical Data:

Chain actuator Type EA-KSV-230/250/300	
Nominal voltage:	100 - 240 VAC
Nominal current:	0.15-0.3 A
Stroke length:	300 mm
Force:	250 N
Cut-off:	Electrical
Speed:	9 mm/s
Dimensions (LxWxH):	capsuled aluminium-diecast box, powder-coated RAL 9006 450 x 45 x 32 mm
Ingress protection:	IP 30
Switch on duration:	ED 30 %
Temperature range:	- 5° up to + 65° C
Connection cable:	synthetic cable, white, length 1,5 m
Weight:	Approx. 1.45 kg

Article

Pull and Push force 250 N/0,15 A
speed with nominal load 9 mm/s

	Typ	Item number
	EA-KSV-230/250/300	M2 5117
Attributes:	250 N Force / 300 mm Stroke length	

Brackets Type K-KS

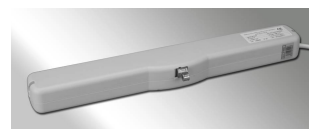
Bracket type K-KS-D32 Consisting of 2 sliding pieces with stud bolts, 2 fixing brackets and 1 movable mounting angle, powder coated in RAL 9006. Bracket type K-KS-D80 Consisting of 2 sliding pieces with stud bolts, 2 fixing brackets, powder coated in RAL 9006. Bracket set type K-KS-D15 Pivotal mounting bracket consisting of 2 fixing brackets incl. stud bolts and nuts, Width 15 mm, colour RAL 9006.

Accessories	Item number
K-KS-D15 Length 15 mm	K2 5073
K-KS-D32 Length 32 mm	K2 5071
K-KS-D80 Length 80 mm	K2 5072
K-KS-SKI-V5 Mounting angle for inward opening windows	K2 5076
K-KSV-D55	K2 5082

Chain Actuator EA-KN-230/300/400

The ideal solution for venting winter gardens!

This modern 24 V chain actuator offers all comfort for a remote controlled operation of windows. The compact housing in shapely design and the progressive technology are outstanding characteristics for ventilation applications. The actuator has a practical and user friendly mounting bracket that is simple to install. Also available in 24 V version (separate sheet).



Technical Data:

Chain actuator Type EA-KN-230/300/400	
Nominal voltage:	230 V AC
Nominal current:	0.2 A
Stroke length:	110, 205, 295, 390 mm
Force:	200 - 300 N
Cut-off:	Integrierter Endschalter, Thermoschutz
Speed:	9,3 mm/s
Dimensions:	Plastic, similar to RAL 9006, 387 x 59 x 38 mm
Ingress protection:	IP 20
Switch on duration:	ED 30 %
Connection cable:	Plastic, white, length 2.0 m
Brackets (incl.):	Standard mounting brackets
Weight:	Approx. 1.0 kg

Article

Nominal force 300 N/0.2 A

Speed with nominal load 9,3 mm/sec, incl. 2 m plastic cable, white

	Typ	Item number
	EA-KN-230/300/400	M2 5113
	EA-KN-230/300/400 as single actuator Attributes: Force 300 N / 400 mm Stroke length	

Nominal force 300 N/0.2 A

Speed with nominal load 8 mm/sec, incl. 2.5 m plastic cable, black

	Typ	Item number
	EA-KN-230/300/400-GE	M2 5114, Configuration Slave
	<p>EA-KN-230/300/400 in synchronized version</p> <p>Attributes: Force 300 N / 400 mm Stroke length This chain actuator with synchronization sensor can be applied together with a second actuator (master/slave principle) for operating big windows.</p> <p>No additional external control unit is required as the actuators synchronize automatically.</p>	
	EA-KN-230/300/400-GE	M2 5114, Configuration Master
	<p>EA-KN-230/300/400 in synchronized version</p> <p>Attributes: Force 300 N / 400 mm Stroke length This chain actuator with synchronization sensor can be applied together with a second actuator (master/slave principle) for operating big windows.</p> <p>No additional external control unit is required as the actuators synchronize automatically.</p>	

Chain actuator EA-KNA 230/300/500

The chain actuator EA-KNA 230/300/500 is a high quality actuator, that stands out due to its intelligent electronic and great efficiency.

Further essential prejudices are the compact aluminium housing as well as the big stroke length.



Technical Data:

Chain actuator Type EA-KNA 230/300/500	
Nominal voltage:	110 - 230 VAC
Nominal current:	0.16 A
Stroke length:	200, 300, 400, 500 mm (adjustable by DIP-switches)
Force:	300 N
Cut-off:	- Electronically regulated cut off at the opening process - Load-dependent cut off at the closing process
Speed:	7,2 mm/s
Dimensions:	Aluminium powder coated, 456 x 60 x 43 mm
Ingress protection:	IP 32
Switch on duration:	ED 30 %
Brackets (incl.):	Standard mounting brackets
Connection cable:	
Weight:	2.25 kg

Article

Pull and Push force 300 N/0,16 A speed with nominal load 7,2 mm/s		
	Typ	Item number
	EA-KNA 230/300/500	M2 5116
	Attributes: Force 300 N / 500 mm Stroke length	

Accessories for EA-KNA-230/300/500

Mounting angle bracket Aluminium coated alike RAL 9006, required to fix the actuator at inwards opening wings.

Accessories	Item number
Brackets Type K-KNA-SKI Aluminium	K2 5063

Chain Actuator EA-K 2000/230

This chain actuator is ideal for operating small and light windows of all kinds. The stroke length of 260 or 380 mm can be easily adjusted by DIP-switch. A quick release coupling enables the sash to be fully opened for cleaning. Also available in 24 V version (type EA-K 24 E-L).



Technical Data:

Chain actuator Type EA-K 2000/230	
Nominal voltage:	230 V AC / 50 Hz
Nominal current:	0.65 A
Stroke length:	250, 380 mm
Force:	Max. pull Force: 300 N, Max. push Force: 150 N with 260 mm stroke 100 N with 380 mm stroke
Cut-off:	Limit switch, Thermal cut off
Speed:	37 mm/s
Dimensions:	Aluminium EV1 anodized, 284 x 83 x 50 mm
Ingress protection:	IP 50
Switch on duration:	ED 20 %
Connection cable:	Connection plug, loose
Brackets (incl.):	Standard mounting brackets
Weight:	Approx. 1.75 kg

Article

Pull force 300 N/Push force 100(150)N/0.65 A
Speed with nominal load 37 mm/sec

	Typ	Item number
	EA-K 2000/230	M2 5103

Brackets Type SKI

Mounting angle bracket Aluminium, EV1 anodized or plastic, fixed or moveable, required to fix the actuator at the wing frame.

Accessories	Item number
SKI/K Plastic, not coatable	K2 5051
SKI/A Aluminium	K2 5052
SKI/V1 Actuator depth + 30 mm up to + 120 mm	K2 5055
SKI/V2 Actuator depth - 0 mm bis - 30 mm	K2 5056

Tilting brackets Type KIKO

Suitable at wing heights double stroke, aluminium, EV1 anodized

Accessories	Item number
KIKO/G/UNI for inwards or outwards opening windows	K2 5066
KIKO/G/F stabilized by elastic force	K2 5068

Stroke limit

Stroke limit in 10 mm steps. In between lengths on request!

Accessories	Item number
EA-K-HUB	per actuator

Actuator and Bracket coating

Note: Small parts as screws, nuts and sliding parts will not be coated!

Accessories	Item number
Coating in all RAL and DB colours Prices on request	

Chain Acuator EA-K-230/400(120)

This heavy duty chain actuator is with 400 N push and pull force particularly suitable for application to heavy windows in the facade or roof area.

With a long stroke of 800 mm and a high speed it is possible to achieve large opening areas for smoke clearance within a short time.

Also available in 24 V version (separate sheet).



Technical Data:

Chain actuator Type EA-K-230/400(120)	
Nominal voltage (min./max.):	230 V AC / 50 Hz(10 %)
Nominal current:	0.65 A
Stroke length:	450, 600, 800 mm
Force:	Pull 400 N Push 400 N (120 N with 800 mm stroke)
Cut-off:	Thermal cut off
Speed:	24 mm/s
Dimensions:	Aluminium EV1 anodized, 595, 670 or 785 mm depending on stroke length x 80 x 50 mm
Ingress protection:	IP 20
Switch on duration:	ED 20 %
Connection cable:	Plastic 4 x 0,75 mm ² , white, Length 2.0 m (3 m with 800 mm stroke)
Brackets (incl.):	Standard brackets
Weight:	Approx. 3.0-4.0 kg depending on version

Article

Nominal force 400 N/0.65 A Speed with nominal load 24 mm/sec		
	Typ	Item number
	EA-K-230/400/450	M2 5107
	(L x W x H) 595 x 80 x 50 mm Attributes: Force 400 N / 450 mm Stroke length	
	EA-K-230/400/600	M2 5106
	(L x W x H) 670 x 80 x 50 mm Attributes: Force 400 N / 600 mm Stroke length	

Pull force 400 N, Push force 120 N/0.65 A
Speed with nominal load 24 mm/s (incl. 3 m cable)

	Typ	Item number
	EA-K-230/120/800	M2 5110
	(L x W x H) 785 x 80 x 50 mm Attributes: Force 120 N / 800 mm Stroke length	

Turn brackets Type DK

Accessories	Item number
EA-K/DK-600 for moveable positioning	K2 5070
EA-K/DK-VELUX for Velux roof windows	K2 1550

Tilting brackets Type KIKO

Suitable at wing heights double stroke, aluminium, EV1 anodized

Accessories	Item number
KIKO/G/UNI for inwards or outwards opening windows	K2 5066
KIKO/G/F stabilized by elastic force	K2 5068

Brackets Type SKS und SKI

Mounting brackets Moveable aluminium mounting bracket, EV1 anodized

Accessories	Item number
SKS 400/***	K2 5053 A
SKI/V3 33 - 83 mm excess length	K2 5067
SKI/V4 up to 33 mm excess length, adjustable	K2 5069

Stroke limit

Stroke limit in 10 mm steps. In between lengths on request!

Accessories	Item number
EA-K-HUB	per actuator

Actuator and Bracket coating

Note: Small parts as screws, nuts and sliding parts will not be coated!

Accessories	Item number
Coating in all RAL and DB colours Prices on request	

Chain Acuator EA-KSN-230/300/400

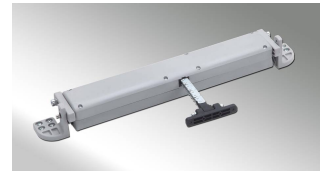
Easy and flexible are not only buzzwords, but also the incentive that the chain actuator EA-KSN 230/300/400 has in use at natural ventilation.

With its stroke length of 400 mm and the maximum force of 300 N it is applicable ideally for small and big windows, for top, bottom or pivot hung.

Beside the non-electric glass strengthened nylon housing the double electric insulation provides a higher safety (no electric connection to earth is needed). The chain actuator EA-KSN will be delivered without connection cable. With the included adapter the actuator can be installed and the wiring will be done later. The connection is three-pole for neutral lead and power for OPEN and CLOSE direction. The scope of delivery includes a various bracket system for manifold

installation of the actuator. For bottom hung windows inwards opening the Z-angle K2 5084 is additionally necessary. The bracket design is made for easy and fast unmount in case of window cleaning.

The cut-off in end position is done by microswitches. Furthermore the EA-KSN includes thermal sensors for a safety stop in case of an overloaded actuator.



Technical Data:

Chain actuator Type EA-KSN-230/300/400	
Nominal voltage (min./max.):	230 V AC / 50/60 Hz
Nominal current:	0.8 A
Stroke length:	400 mm
Force:	Pull 300 N Push 300 N
Cut-off:	Micro switches
Speed:	20 mm/s
Dimensions (LxWxH):	404 x 65 x 50 mm, glass strengthened nylon casing grey (black and white on request)
Ingress protection:	IP 20
Connection :	With connector w/o cable
Security Stop:	Thermal cut-off
Temperature :	-10 up to + 60°C

Article

	Typ	Item number
	EA-KSN-230/300/400 with standard brackets	M2 5120
	Attributes: 300 N Force 400 mm Stroke	

Brackets Type SKS und SKI

Mounting brackets Moveable aluminium mounting bracket, EV1 anodized

Accessories	Item number
SKI/K-KSN Z-angle for hung windows inwards opening	K2 5084

SPINDLE ACTUATOR

Spindle actuator EA-SU-230/300

Universal application options due to moveable mounting brackets, almost noiseless run, robust against environmental influences, cut off in both end positions by integrated limit switches, appealing design - just to mention a few of the outstanding characteristics of the modern 230 V actuator.



Technical Data:

Spindle actuator Type EA-SU-230/300	
Nominal voltage:	230 V AC / 50 Hz
Nominal current:	0.7 A
Stroke length:	300, 500 mm
Force:	300 N
Cut-off:	Integrated limit switches, Thermal cut off
Speed:	20 mm/s
Dimensions:	Aluminium, RAL 9010, 413 (613 mm with 500 mm stroke) x 74 x 85 mm
Ingress protection:	IP 65
Switch on duration:	ED 10 %
Connection cable:	Plastic (4-core), black, length 1.0 m
Brackets (incl.):	Standard mounting brackets
Weight:	Approx. 3.0 kg

Article

Nominal force 300 N/0.7 A Speed with nominal load 20 mm/sec		
	Typ	Item number
	EA-SU-230/300/300	M2 1220
	Attributes: Force 300 N / 300 mm Stroke length	
	EA-SU-230/300/500	M2 1221
	Attributes: Force 300 N / 500 mm Stroke length	

Actuator and Bracket coating

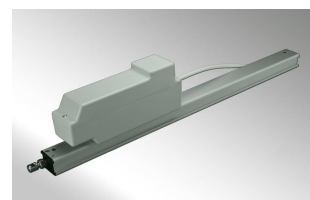
Note: Small parts as screws, nuts and sliding parts will not be coated!

Accessories	Item number
Coating in all RAL and DB colours Prices on request	

RACK AND PINION ACTUATOR

Rack and Pinion Actuator 230 V

This rack and pinion actuator is unbeatable with applications in the industrial area. It is equipped with all characteristics that can be expected of a modern actuator and shines with low current consumption and an effective power utilization. This actuator is quiet in operation and can be linked by a rod to control a slave mechanical drive. This makes it ideal for applications with heavy duty windows or large skylights.



Technical Data:

Rack and pinion actuator type EA-SZ	
Nominal voltage:	230 V AC
Nominal current:	0,22 A
Stroke lengths:	350, 550, 750, 1.000 mm
Max force:	650 N
Cut off:	Integrated electronic overload cut off and contact "F" for sequence controlling
Speed:	9 mm/sec
Housing (L x W x H):	Rack housing: anodized aluminium E6/EV1, grey Motor housing: plastic Stroke + 220 mm x 54 x 120 mm
Protection class:	IP 55
Switch on duration:	ED 20 %
Connecting cable:	Silicone 4 x 0.75 mm ² , white, length 1.5 m
Brackets:	Upper and lower bracket / stepless adjustable in single application
Weight:	ca. 3 kg

Article

Nominal Force 650 N - I 0,22 A
Speed with nominal load 9 mm/sec

	Typ	Item number
	EA-SZ 230/65/350	M2 1080 A
Characteristics:	650 N Force / 350 mm Stroke	
	EA-SZ 230/65/550	M2 1081 A
Characteristics:	650 N Force / 550 mm Stroke	
	EA-SZ 230/65/750	M2 1082 A
Characteristics:	650 N Force / 750 mm Stroke	
	EA-SZ 230/65/1000	M2 1090 A
Characteristics:	650 N Force / 1000 mm Stroke	

Connecting rod to link SZ and SZ-M

Aluminium tube, Note: No other lengths available!

Accessories	Item number
EA-SZ-VERBIND-1 (Length 960 mm)	M2 1083 A
EA-SZ-VERBIND-2 (Length 1.960 mm)	M2 1083 B

Slave mechanical drive type EA-SZ-M

with eye bolt d = 6 mm Housing (L x W x H): anodized aluminium E6/EV1, grey (Stroke + 220 mm x 40 x 30 mm) Stroke lengths: 350, 550, 750, 1000 mm Weight: Approx 2 kg incl. Brackets: Upper and lower bracket (Note! Brackets for SZ and SZ-M are different) Bearing point of brackets is not adjustable

Accessories	Item number
EA-SZ-M-350	M2 1083
EA-SZ-M-550	M2 1084
EA-SZ-M-750	M2 1089
EA-SZ-M-1000	M2 1091

A3 TRIGGERING UNITS

TRIGGERING UNITS: SMOKE- AND HEAT EXHAUST

Emergency Override Switches

The main and slave override switches types HE 075, HE 076 and HE 080 according to DIN 12101/9 are the ideal user interface for smoke control systems, particularly stairwell and lobby ventilators. The HE 080 has got additionally a buzzer for acoustic warning.

The version of HE-080 includes a built-in buzzer for an acoustic signal in the case of alarm and fault. The mute button can reset it. Optionally the main control switch without buzzer is offered as HE-082 (replaces HE-075).

For the other triggering places you should use the off-site unit HE-081 (one LED: RWA - replaces HE-076) without buzzer.



Technical Data:

Electrical Emergency override switches	
Voltage:	24 V DC
Max. Current:	10 mA
Type of switch:	“Open” button (transfer contact) “Close” button (close contact) reset button (hidden)
LED sign:	Red = alarm (open) Yellow = defect Green = ready
Dimensions:	Plastic housing (surface) according to DIN 14655 / EN 12101/9 125 x 125 x 35 mm with side hinged door, including break glass pane and key. (Optional available in housing for in-wall mounting)
Colours:	Orange (RAL 2011) according to VdS 2592 / EN 12101/9 Grey (RAL 7035) Yellow (RAL 1004) Blue (RAL 5009)
Weight:	Approx. 0.25 kg

Article

Main control switches type HE 082

The circuit board is populated with 3 LED indicators.

	Typ	Item number
	HE 082 Orange RAL 2011	A3 2150
	according to VdS guideline 2592	
	HE 082 Yellow RAL 1004	A3 2151
	HE 082 Blue RAL 5009	A3 2153
	HE 082 Grey RAL 7035	A3 2152

Off site switches type HE 081

The circuit board is populated with 1 LED indicator: red = alarm (open)

	Typ	Item number
	HE 081 Orange RAL 2011	A3 2140
	according to VdS guideline 2592	
	HE 081 Yellow RAL 1004	A3 2141
	HE 081 Blue RAL 5009	A3 2143
	HE 081 Grey RAL 7035	A3 2142

Main control switches type HE-080

The circuit board is populated with 3 LED indicators and a buzzer for acoustics warning.

	Typ	Item number
	HE 080 Orange RAL 2011	A3 2130
	according to VdS guideline 2592	
	HE 080 Grey RAL 7035	A3 2131
	HE 080 Yellow RAL 1004	A3 2132
	HE 080 Blau RAL 5009	A3 2133

Curcuit boards for HE/FTZ

Accessories	Item number
HE 080 board	A3 10035
HE 081 board	A3 10045
HE 082 board	A3 10055

Housing for HE and FTZ

Plastic or aluminium incl. break glass pane and key

Accessories	Item number
HE 07X/-08X Orange RAL 2011 according to VdS guideline 2592 Plastic housing	A3 2005 A
HE 07X/-08X Yellow RAL 1004 Plastic housing	A3 2001 A
HE 07X/-08X Blue RAL 5009 Plastic housing	A3 2002 A
HE 07X/-08X Grey RAL 7035 Plastic housing	A3 2003 A
HE-UP-VA Unterputzgehäuse, Typ HE-UP-VA f.elekt. Handansteuereinrichtung, Typ HE**/DIN FTZ	A3 2106
HE/ALU-LG-Orange for HE-07X/-08X Aluminium-housing	A3 2042 A
HE/ALU-LG-Yellow for HE-07X/-08X Aluminium-housing	A3 2031 A
HE/ALU-LG-Blue for HE-07X/-08X Aluminium-housing	A3 2032 A
HE/ALU-LG-Grey for HE-07X/-08X Aluminium-housing	A3 2033 A

Spare key

Accessories	Item number
DINSCHL made of steel fitting for HE and FTZ	E 10019

Spare parts

Accessories	Item number
DINS 80 x 80 x 1 mm fitting for HE and FTZ	E 10014
DINS 80 x 80 x 1 mm fitting for HE and FTZ (20 Pieces)	E 10014
SCHEIBE/RUND fitting for FTZ/UP, D = 60 mm	E 10017

Optical Smoke detector RM-3000

Life safer and damage limiter

In case of fire the most important thing is a fast and reliable detection of the fire source. When it comes to saving lives every second counts.

Thus it is highly recommended and in many cases even required, to apply an automatic triggering device like a smoke detector with smoke and heat exhaust vent systems.

The optical smoke detector type RM-3000 represents a smoke detector family manufactured at the highest stage.



Technical Data:

Smoke detector type RM-3000	
Voltage range:	9 - 33 V DC
Alarm operating current at 30 V:	20 mA
Quiescent operating current at 30 V:	100 µA
Alarm indicator:	Red = Alarm
Dimensions:	Plastic, RAL 9010 (white) 100 x 44 mm Detector incl. mounting socket
Ingress protection:	IP 43
Triggering:	when 3 % smoke mass according to DIN EN 54-7
Standards and approvals:	CEN-EN 54-7, VdS-guidelines VdS approval no G203036
Weight:	Approx. 0.1 kg

Article

Optical smoke detector type RM-3000

The light emitter and light sensor are arranged in the sensing chamber in such a way that light from the emitter cannot strike the sensor directly. Only the light scattered by smoke particles reaches the sensor and is converted into an electrical signal. If this reaches the alarm value (3 % smoke mass), an alarm is automatically sent to the control panel. The optical smoke detector is designed to meet the European norm CEN-EN54-7.

	Typ	Item number
	RM-3000 incl. mounting socket	A3 2062

Test gas

Accessories	Item number
PG for types RM 130/as, RM-521	A3 2058
PG/RM 2860 for type RM 2860	A3 2058 A
PG/RM 3000 for type RM 3000	A3 2058 B

Protection basket

Accessories	Item number
RM/SCHUTZ suitable for typ RM-3000	A3 2057

Relay socket

Accessories	Item number
RMS-3000	A3 2063

Heat Detector TH-4860

Modern technique for protecting human lifes

The heat detector type TH-4860 monitors whole building areas, detects fire at an early stage by means of two heat sensors and triggers the connected smoke control system in no time in case of emergency.



Technical Data:

Heat Detector type TH-4860	
Voltage:	9 - 33 VDC
Alarm operating current at 20 V:	40 mA
Quiescent operating current at 20 V:	45 µA
LED:	Red = Alarm
Housing (Ø x H):	Plastic, white, 100 x 58 mm Detector incl. mounting socket
Protection class:	IP 43
Activation temperature:	at 75 °C
Standards and approvals:	CEN-EN 54 (BS 5445), VdS guideline UL-Standard, VdS approval no G 200060
Weight:	approx. 0.5 kg

Article

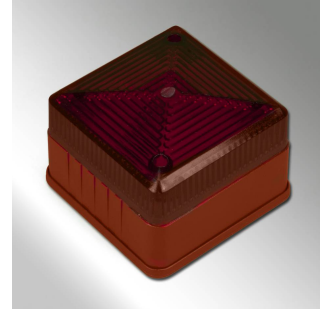
Heat Detector type TH-4860

It is equipped with two thermal sensors, one enclosed in the housing and the other exposed to the adjacent atmosphere. Under normal conditions both sensors indicate the same temperature. In the event of a fire, the outer sensor detects the change in temperature considerably faster, so that the sensors register different temperatures. This causes an alarm to be registered and triggers the connected smoke control system. Transfer Contact max. 1A. The product conforms to the EN54 (BS5445) norm.

	Typ	Item number
	TH-4860 incl. relay socket	A3 2080

Acoustic and Optic Alarm Indicators Types S-24 and BI-24

The multiple sound siren type S-24 as well as the flash light type BI-24 are acoustic or optic alarm indicators for SHEV systems. In case of emergency these assistant devices call attention to the danger so that evacuating people from the building can start in time. Applying these indicators especially make sense in buildings where a lot of people gather like in shopping malls, schools or hospitals.



Technical Data:

Acoustic and Optic Alarm Indicators Types S-24 and BI-24

Article

Acoustic alarm indicator type S-24		
	Typ	Item number
	S-24-ROT	A3 2082
	Voltage range: 10 - 32 V DC Current consumption: 42 - 102 mA Indicator version: as acustic signal transmitter Signal strength: 92 - 105 dB Housing: Plastic in red Alarm: at SHEV triggering Standards and approvals: VdS approval no G 201040 Weight: approx. 0.5 kg	
	S-24-WEISS	A3 2083
	Voltage: 10 - 32 V DC Current consumption: 42 - 102 mA Indicator version: acoustic signal transmitter Signal strength: 92 - 105 dB Housing: Plastic in White Alarm: at SHEV triggering Standards and approvals: VdS approval no G 201040 Weight: approx. 0.5 kg	

Optic alarm indicator type BI-24

Typ		Item number
BI-24		A3 2084
Voltage:	10 - 24 V DC	
Current consumption:	250 - 320 mA	
Indicator version:	optic signal transmitter	
Signal strength:	3 - 8 Ws	
Housing:	Plastic in red	
Alarm:	at SHEV triggering	
at SHEV triggering:	VdS G 201071 approval no	
Weight:	approx. 0,5 kg	

TRIGGERING UNITS: VENTILATION

Manual Ventilation Triggerings

Manual buttons and switches for daily operation of ventilation systems.



Technical Data:

Manual Ventilation Triggerings

Article

Push button type DT

Applicable for SHEV and vent control panels, single-pole, white, two buttons, two close contacts, don't lock each other.

	Typ	Item number
	DT/UP for in-wall mounting	A3 4501
	DT/UP/LED with indicator "open"	A3 4508
	DT/AP/S for surface mounting	A3 4514

Waterproof push button
Single-pole, grey, two buttons, two close contacts, do lock each other, for surface mounting, IP 44.

	Typ	Item number
	DT/AP/W waterproof	A3 4503

Key operated switch type ST

Applicable for SHEV and vent control panels, single-pole, two close contacts, white, with profile half cylinder, incl. three keys.

	Typ	Item number
	ST/UP for in-wall mounting	A3 4506
	ST/UP/STOP three close contacts with additional stop button	A3 4510

Waterproof key operated switch

Single-pole, grey aluminium die-cast housing, with profile half cylinder, for surface mounting, IP 44

	Typ	Item number
	ST/AP/W waterproof	A3 4507

Automatic Vent Triggering: Wind & Rain Detector

Available as a combined unit or as stand alone rain detector. The unit is used to automate natural ventilation systems to ensure they are not inadvertently left open in high winds or rainy conditions.

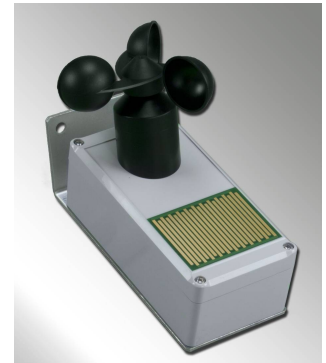
Functional Description

The anemometer measures wind speed and when it exceeds a pre-set condition it sends a signal to the control panel.

Similarly the rain detector senses rain falling on the collection plate and also sends a signal to the control panel. When acceptable conditions return the sensor will cancel the close signal automatically. The whole evaluation unit is integrated in the housing.

For smoke and heat exhaust vent systems the “close” signal can be overridden by a fire condition. The wind strength limit value is adjustable from 1 to 12 Beaufort (factory aligned 4 bft). Also the raising delay of the wind detector can be adjusted from 0 to 4 seconds for bridging e.g. squalls (factory aligned 6 seconds).

The detector offers a dry contact for evaluation and can be mounted on a mast or directly at the wall.



Technical Data:

Wind & Rain Detector WTS - Rain Detector WS	
Operation voltage range:	20 - 30 V DC / AC
Nominal voltage:	24 V DC / AC
Current consumption (resting):	70 mA
Current consumption (triggering):	110 mA
Protection class:	IP 65
Operation temperature:	- 20° up to + 85° C
Load capacity:	30 V / 1 A transfer contact
Housing (L x W x H):	See details
Mounting accessories:	Aluminium mounting angle, zincked mast clamp, Inside diameter 52 mm for max 2" pipe
Weight:	approx. 0,5 kg

Article

	Typ	Item number
	WTS-892 Wind & Rain Detector	A3 4568
	Housing: Plastic, light grey similar to RAL 7035, 190 x 100 x 150 mm (L x W x H)	
	WS-890 Rain Detector	A3 4566
	Housing: Plastic, light grey similar to RAL 7035, 190 x 80 x 62 mm (L x W x H)	

Accessories	Item number
Spare mast clamp for wind-/rain detector Mast clamp for mounting the detector to a 2"-pipe	A3 4569

Automatic Vent Triggering: Thermo- & Hygrostats

Devices for automatic triggering smoke and heat exhaust systems and daily ventilation.



Technical Data:

Automatic Vent Triggering: Thermo- & Hygrostats

Article

Thermostat type TH 0/**

For inside temperature based automatic triggering for daily ventilation at SHEV systems. Single point regulator, adjustable temperature range from 0 to 30° respectively 60° C, temperature difference approx 3° K. (Electronical thermostat with remote sensor available on request!)

	Typ	Item number
	TH 0/30 Temperature range 0 - 30° C	A3 4551
	TH 0/30 S with "ON" and "OFF" switch	A3 4552
	TH 0/60 Temperature range 0 - 60° C	A3 4554

Hygrostat type HYG**

For humidity based automatic triggering for daily ventilation at SHEV systems. Single point regulator, adjustable range of triggering humidity from 35 - 100%

	Typ	Item number
	HYG 35-100%	A3 4571

ST4 CONTROL UNITS SHE

COMPACT CONTROL UNITS

Compact Control Unit SHEV®

Safety on state of the art offers this compact SHEV® control. It's developed according to DIN EN 12101 part 9 and 10. Via the SHEV® stairwell plants are primarily equipped. It contains power supply, emergency power supply and the whole electronic to operate with 24 VDC actuators for window and smoke vent. The SHEV® controls the connected actuators in the case of fire as well as for the daily ventilation.



Technical Data:

Electrical control unit type SHEV®	
Input voltage:	230 V AC / 50 Hz
Output voltage:	24 V DC smoothed, stabilized
Max current load:	3.0 A / 6.0 A / 10.0 A
Emergency supply:	Lead storage battery 2.3 Ah or 7.2 Ah
Housing:	Plastic (RAL 7035), steel panel (RAL 9010) or in-wall-mounting housing
Power supply:	According to EN 12101-10
Protection class:	depending on housing! Plastic housing is IP66 by use of IP66 cable inlets
Power failing bridging:	at least 72h
LED signs:	Ready, Defect, Alarm
Operation temperature range:	- 5° up to + 40° C
Cable monitoring:	Actuators, emergency switches, smoke detectors and dry contact for fire alarm system
Connections:	Emergency switches: 1 main and max 7 off site units (type HE-075, HE-076), vent switches (type DT, ST), heat detector (type TH 70 Ö, TH 4860), smoke detector (type RM-3000, RM-2860), wind & rain detector (type WTS-892, WT-890), fire alarm signal
Signaling Contacts:	SHEV® 3/6: 2 potential-free change-over-contacts programmable over DIP-switch, maximal 30 VDC, 2 A

Article

Load Current max. 3 A Compact control unit SHEV® with load current max. 3 A		
Typ		Item number
SHEV® 3		ST4 3140
Full time power: 50 W Housing: Plastic, grey (W x H x D): 254 x 180 x 111 mm Fuses: Power input: 1.25 A slow Output actuators: 3.15 A slow Number of Groups: 1 SHE 1 Ventilation Weight: approx. 4.4 kg		
SHEV® 3 AP		ST4 3146
Full time power: 50 W Housing: Steel panel, RAL 9010 (W x H x D): (320 x 300 x 85 mm) Fuses: Power input: 1.25 A slow Output actuators: 3.15 A slow Number of Groups: 1 SHE 1 Ventilation Weight: approx. 6.5 kg		
SHEV® 3 UP		ST4 3143
Full time power: 50 W Housing: Steel panel, in-wall-mounting housing (W x H x D): (302 x 400 x 105 mm) (hole dimensions: 270 x 380 x 80 mm) Fuses: Power input: 1.25 A slow Output actuators: 3.15 A slow Number of Groups: 1 SHE 1 Ventilation Weight: approx. 7.0 kg		

Load Current max. 6 A

Compact control unit SHEV® with load current max. 6 A

Typ	Item number
SHEV® 6	ST4 3141
Full time power: 100 W Housing: Plastic, grey (W x H x D): (361 x 254 x 111 mm) Fuses: Power input: 1.25 A slow Output actuators: 3.15 A slow Number of Groups: 1 RWA 1 Ventilation Weight: approx. 6.4 kg	
SHEV® 6 AP	ST4 3151
Full time power: 100 W Housing: Steel panel, RAL 9010 (W x H x D): (361 x 254 x 111 mm) Cutouts: Power input: 1.25 A slow Output actuators: 3.15 A slow Number of Groups: 1 SHE 1 Ventilation Weight: approx. 7 kg	
SHEV® 602	ST4 3153
Full time power: 100 W Housing: Steel Panel, grau (W x H x D): 400 x 400 x 200 mm Number of Groups: 1 SHE 1 Ventilation Weight: approx. 10 kg	

Load Current max. 10 A

Compact control unit SHEV® with load current max. 10 A

	Typ	Item number
	SHEV® 10 AP	ST4 3407
	<p>Properties: power supply (switching power supply 10A, battery charging board LB 120, central vent module type WS-100, lead storage battery 7.2 Ah) furthermore of the module devices central relay module type ZL-100 and vent group module type MR-100</p> <p>Housing: Steel Panel in RAL 9010, Dimensions W x H x D 406 x 444 x 170 mm</p> <p>Number of 1 SHE</p> <p>Groups: 1 Ventilation</p> <p>Others: IP 54, mounting plate with top hat rail for optional terminals</p>	

Clamping Magnet Control Unit

Compact Control Unit SHEV for clamping magnets with current load 2 A

	Typ	Item number
	SHEV-2-HM	ST4 3166
	Information: Smoke and heat exhaust ventilation system 24 V DC, Output current 2 A, with battery power for 30 minutes Housing: In plastic housing: 254 x 180 x 111 mm	

Spare storage batteries

Spare storage batteries for current and previous compact control units

Accessories	Item number
SHEV-3(6)-Akkupack-2,3Ah auf Trägerplatte SHEV® 3/6 Spare Storage Battery for panel in Plastic or in-wall-mounting housing	ST4 10130
SHEV-3-AP-Akkupack-2,3Ah SHEV® 3 AP - Spare storage battery for steel panel housing	ST4 10131
SHEV-6-AP-Akkupack-2,3Ah SHEV® 6 AP - Spare storage battery for steel panel housing	ST4 10132
NC-2406 portrait format NiCad storage batteries, 24 V / 0,6 Ah, bulk, for control panels before 1994	ST4 10105
NC-2406-TK for control panels in transport box housing NiCad storage batteries, 24 V / 0,6 Ah, bulk, for control panels type ES 3/1, RZ 4/1, ES 6/1 and all ESM 6 Amp.	ST4 10104
NC-2406-LÖ with solid loops for self assembly NiCad storage batteries, 24 V / 0,6 Ah, bulk, with solid loops for self assembly in control panels type RZ 040, RZ 140, RZ 272, ES 251, ES 601	ST4 10104 A
NC-2412 NiCad storage batteries, 24 V / 1,2 Ah, bulk, for control panels type ESM 12 Amp, ESV 251	ST4 10106
Accessories	Item number
SHEV-USB-100 USB Connecting Cable for SHEV® 3 and 6 for error analysis with PC	ST4 3365

ESM MODULAR CONTROL UNIT

Electrical Control Unit ESM

A modern control panel for smoke and heat exhaust vent systems (SHEV) should not only be reliable and durable but it should also be flexible anyway. This basic principle shapes our ambition for an optional extendable and at anytime reprogrammable control logic.

The result of these development is a system that puts desires of the user at the first rank.

Developed in dependence on the latest European guidelines naturally all requirements for electrical control units for SHEV systems are met.

With this control unit type ESM from SIMON RWA Systeme you receive a modular designed control technology combining innovative and flexible technique with a maximum of safety.



Technical Data:

Electrical control unit type ESM	
Input voltage:	230 V AC / 50 Hz
Pre-fusing:	16 A / characteristics C
Protection class:	IP 54
Power failing bridging:	at least 72 h
LED signs on battery charging board:	1. Green LED "Battery" = OK Battery available and charged 2. Grüne LED "Mains" = Mains mode
Further LED signs:	On the particular modules
Cable monitoring:	Closed current: Emergency switches, smoke detectors, connection fire alarm system Cable break: Cables of actuators Cable break and short circuit: Cables of detectors
Operation temperature range:	- 5° up to + 40° C
Housing (W x H x D):	Sheet steel housing, RAL 7035 (Dependant on version)
Max nominal current:	10, 24, 48 or 72 A (more on request)
Output voltage:	24 V DC (Ripple < 500 mV, < 5 %)
Power Supply:	Switching power supply VDE 0805/DIN EN 60950
Storage battery:	Lead battery 24 V, 7 / 12 / 17 / 24 Ah

Article

ESM control unit with 10 A current

max. current load 10 A/3 min, permanent load 8 A, lead storage battery 7.2 Ah

	Typ	Item number
	ESM-10	ST4 3408
	Housing: 400 x 600 x 200 mm Components: Basic unit (Housing, switching power supply, charging circuit, Akku, central relay modul) without SHE- and motor modul (ZL-100, MR-100,...)	
	ESM-10-XL	ST4 3409
	Housing: 600 x 600 x 200 mm Components: Basic unit (Housing, switching power supply, charging circuit, Akku, central relay modul) without SHE- and motor modul (ZL-100, MR-100,...)	

ESM control unit with 24 A current

max. current load 24 A / 3 min, permanent load 20 A, lead storage battery 12 Ah

	Typ	Item number
	ESM-24	ST4 3414
	Housing: 400 x 600 x 200 mm Components: Basic unit (Housing, switching power supply, charging circuit, Akku, central relay modul) without SHE- and motor modul (ZL-100, MR-100,..)	
	ESM-24-XL	ST4 3415
	Housing: 600 x 600 x 200 mm Components: Basic unit (Housing, switching power supply, charging circuit, Akku, central relay modul) without SHE- and motor modul (ZL-100, MR-100,..)	

ESM control unit 48 A current

max. current load 48 A / 3 min, permanent load 40 A, lead storage battery 17 Ah

Typ	Item number
ESM-48	ST4 3416
Housing:: 600 x 600 x 200 mm Components: Basic unit (Housing, switching power supply, charging circuit, Akku, central relay modul) without SHE- and motor modul (ZL-100, MR-100,..)	
ESM-48-XL	ST4 3417
Housing:: 600 x 800 x 250 mm Components: Basic unit (Housing, switching power supply, charging circuit, Akku, central relay modul) without SHE- and motor modul (ZL-100, MR-100,..)	

ESM control unit with 72 A current

max. current load 72 A / 3 min, permanent load 60 A, lead storage battery 24 Ah

	Typ	Item number
	ESM-72	ST4 3418
	Housing:: 800 x 800 x 250 mm Components: Basic unit (Housing, switching power supply, charging circuit, Akku, central relay modul) without SHE- and motor modul (ZL-100, MR-100,..)	
	ESM-72-XL	ST4 3419
	Housing: 800 x 1.000 x 250 mm Components: Basic unit (Housing, switching power supply, charging circuit, Akku, central relay modul) without SHE- and motor modul (ZL-100, MR-100,..)	

Charge Accessoires for Modular Control Units

Charging Cards and Lead Storage Batteries for Modular Control Units

Accessories	Item number
Pb-AKKU-7,2Ah for ESM 6, 10, 12 A Lead storage batteries, loose for emergency power supply, 24 V DC, VdS approved.	ST4 10120
Pb-AKKU-12Ah for ESM 24 A Lead storage batteries, loose for emergency power supply, 24 V DC, VdS approved.	ST4 10121
Pb-AKKU-17Ah for ESM 48 A Lead storage batteries, loose for emergency power supply, 24 V DC, VdS approved.	ST4 10122
Pb-AKKU-24Ah for ESM 72 A Lead storage batteries, loose for emergency power supply, 24 V DC, VdS approved.	ST4 10123
Pb-AKKU-38Ah for special applications Lead storage batteries, loose for emergency power supply, 24 V DC, VdS approved.	ST4 10124
Battery charging board type LB-101 For storage battery type Pb-AKKU-7.2Ah (in 6 A control panels - old version with transformer)	ST4 3337
Battery charging board type LB-102 For storage battery type Pb-AKKU-7.2Ah (in 12 A control panels - old version with transformer)	ST4 3338
Battery charging electronics type LB-120-SNT-124 For storage batteries type Pb-AKKU-7,2Ah (in 10 A control panels with switching power supply)	ST4 3367
Battery charging electronics type LB-120 For storage batteries type Pb-AKKU-12Ah (in 24 A control panels with switching power supply)	ST4 3361
Battery charging electronics type LB-140 For storage batteries type Pb-AKKU-17Ah (in 48 A control panels with switching power supply)	ST4 3362
Battery charging electronics type LB-160 For storage batteries type Pb-AKKU-24Ah (in 72 A control panels with switching power supply)	ST4 3363

Housing Accessoires for Modular Control Units

Accessories	Item number
Flange plate with pre stamping - 345-130 - Plastic for (W x H x D) 400 x 400 x 200 mm / 400 x 600 x 200 mm / 800 x 800 x 250 mm (2x required)	N-49-075
Flange plate with pre stamping - 345-130 - Gummed for (W x H x D) 400 x 400 x 200 mm / 400 x 600 x 200 mm / 800 x 800 x 250 mm (2x required)	N-49-104
Flange plate with pre stamping - 545-130 - Plastic for (W x H x D) 600 x 600 x 200 mm / 600 x 800 x 250 mm each with 2 pieces	N-49-076
Flange plate with pre stamping - 545-130 - Gummed for (W x H x D) 600 x 600 x 200 mm / 600 x 800 x 250 mm each with 2 pieces	N-49-105

Accessories for modular control panel

With our modular control unit you have the possibility to combine lots of different modules, depending on the aim of the panel.

Accessories	Item number
SHEV-groups module type ZL-100 One ZL-100 is required for each SHEV group.	ST4 3312
Ventilation group module type MR-100 Minimum one MR-100 is required for each vent group.	ST4 3313
Auxiliary relay module type HR-195 With dry transfer contact (max 1 A / 60 V for signals e. g. to the building control system or fire alarm system). Optional programmable signals: "OPEN", "CLOSE", "alarm", "mains failure", "defect", "wind- rain".	ST4 3340
Priority module type HR-110	ST4 3347
Relay module type HR-120 With this plug in module, programmable by DIP-switch in application with an external time different functions can be triggered successively. This enables for example operating a shading.	ST4 3348
Relay module type HR-130 Alarm triggering with following RESET with just one switching contact is possible by means of this relay module. When the contact is closed smoke control alarm is reset and ventilatio is released. When the contact is open smoke control alarm is triggered	ST4 3349
Maintenance module type WM-100 The maintenance module offers a low-cost and expediate method of administrating the maintenance intervals. After approximately 18 months it blocks the ventilation function and reminds you that the next maintenance is due.	ST4 3104
Retriggering module type WA-100 In case of blockade this module effects a retriggering of a SHEV opening in regular intervals (every other minute).	ST4 3105
Time module type ZR-100 For application as ventilation module with automatic close function after an adjusted time period.	ST4 3352
Output relay for 230 V actuators with STOP One for each vent groups (space required 2 units)	ST4 3344
Output relay for 230 V actuators without STOP One for each vent group (space required 3 units)	ST4 3345
GLT-Module type GLT-100 Ventilation control module 0-10 V for ESM control panels, allows stepless control of actuators. (space required 3 units)	ST4 3355
Multifunction module type MF-100 This module is used for different comfort vent functions (e. g. connection of temperature sensor). (space required 3 units)	ST4 3357

LIFT SMOKE CONTROL

Air Sense ESM-10-XL/2-2

The control system Typ ESM-10-XL/2-2 with integrated component Air Sense was especially developed for a quick and save detection of fume in a elevator shaft. According to the principle of the constantly air control, the aspirated air is controlled by the smoke aspirate system concerning the smoke gas concentration. To this the relation of the smoke particle to a certain air capacity is detected. In case of a burning the alarm is activated immediately.

The smoke allowance opening in the head of the shaft of the elevator is opened by an electromotive actuation, so that the smoke can deduct.

Additionally the alarm signal activates a start of the elevator in the first evacuation floor. In the primary evacuation floor 1 the elevator forecourt is controlled on smoke gases by a typical smoke detector.

If the smoke detector activates a automatic start in the evacuation floor 2 will start.

For aeration purposes and for specific heat abstraction, the smoke allowance opening can be controlled according to individual demands e.g. with a timer or an accordant sensor system.



Technical Data:

Air Sense Type ESM-10-XL/2-2	
Input voltage:	230 V AC / 50 Hz
Prefusing:	16 A / Characteristics C
Output voltage:	24 V DC (abraded, ripple < 500 mV)
Max. current load:	10 A
Ingress protection:	IP 54
Emergency current power:	Lead accumulator 24 V, 7.2 Ah
Emergency running time:	30 min, after automatic activation
LED signs (at the load card):	1. green LED "Battery" = OK Battery available and charged will be loaded 2. green LED "Mains" = Mains operation
Further LED signs:	On the particular moduls
Fuses:	Transformer: 5 A, delayed (charging card, LB 120) Emergency current accumulation: 5 A, delayed (charging card, LB 120) Control for actuation: 5 A, delayed (Modul, MR-100)
Cable monitoring:	Cable current: Emergency switches, smoke detectors, connection fire alarm system Cable break: Cables of actuators Cable break and short curcurit: Cables of detectors
Signal:	Elevator control dry contact (evacuation floor 1 and 2)
Temperature range:	- 5° up to + 40° C
Dimensions (BxHxT):	Sheet steel housing, RAL 7035, (400 x 600 x 200 mm)

Article

Elevator shaft control unit		
	Typ	Item number
	ESM-10-XL/2-2 Air Sense	ST4 3411

Accessories Air-Sense

Accessories	Item number
STR-duct-1/2 STRATOS-ABS-pipe 1/2" Length: 2.500 mm	AIR 70101
STR-bow-90-1/2 STRATOS-ABS-bow 90° 1/2" material ABS red	AIR 70102
STR-T-piece-1/2 STRATOS-T-piece	AIR 70103
STR-bush-1/2 STRATOS-Bush	AIR 70104
AirSense-Siffonunit-1/2 STRATOS-Siffon incl. water on-catch pipe, 5 piece 90° bows, 1 T-piece, 5 connection pieces, 1 piece end connection with end sheet	AIR 70200
STR-bow-45-1/2 STRATOS-ABS-bow 45° 1/2" material ABS red	AIR 70108
STR-end cap-1/2 STRATOS-end cap 1/2" material ABS red	AIR 70115
AirSense-service unit-1/2 STRATOS-Set service unit this set is for cleaning the duct with air pressure	AIR 70201
STR-Clippbell-1/2 STRATOS-ABS-Clippbell 1/2" distance among each other < 60 cm, material ABS red	AIR 70109
ABS-glue 650 ml	AIR 70113
STR-WA STRATOS-warning signes (PU = 100 pieces) for designation of the opening of the pipe	AIR 70114

SDC CONTROL UNIT

Smoke Differential Pressure Control Unit (SDC)

When you have special accounts on escape routes , e.g. on escape routes in the staircase of a high rise building or in internal stairs , it is frequently necessary to adopt a pressure-air ventilation-construction. These air pressure system blows with the aid of ventilators air in those scopes , which has to be protected. Thereby the pressure in this areas is increased adverse in the surrounding units and anticipates that smoke breaks into the escape routes. This pressure difference must not exceed 50 Pa. Therefore it is needful to check the settlement with an opening. This opening is primary used for an activation for "purging" the escape route in case that there is already smoke in it.



Technical Data:

Smoke Differential Pressure Control Unit (SDC) type ESM	
Input voltage:	230 V AC / 50 Hz
Output voltage:	24 V DC (Ripple < 500 mV)
Output current max.:	10 A
Power supply:	Transformer, EN VDE 0805/ EN 60950
Prefusing:	16 A / characteristic C
Protection class:	IP 54
Marks failure:	min. 72 h
LED-signs on charging card:	1. Green LED "Battery" = OK (Battery is connected is going to be charged) 2. Green LED "Mains" = Netzbetrieb
Further LED-signs:	attached on each additional module
Cable monitoring:	Cable current: Emergency switches, smoke detectors, connection fire alarm system Cable break: Actuators Cable break and shortcut: contact lines
Temperature range:	- 5° to + 40° C
Emergency power supply:	Lead-battery 24 V, 7.2 Ah
Housing:	Sheet steel housing RAL 7035

Article

Basic system for SDC

For keeping staircases and other escape routes free, with connection for actuation by pressure regulation damper, 24 V DC, max. 10 A, max. 72 h emergency current supplied, connection for pressure sensor, activation by electrical emergency override switch, automatical release device or contact provided by the customer, they are controlled by closed current.

Typ	Item number
ESM-10/1-1-RDA	ST4 3411
Output current: max. Current 10 A / 3 Min., whole time current 8 A Housing: 400 x 600 x 200 mm Fuses: Transformer: 5 A, delay fuse (Charging Board, LB 120) Emergency battery: 5 A, delay fuse (Charging Board, LB 120) Output fuse for actuators: 5 A, delay fuse (Module, MR-100)	
Connection onsite ventilators: RDA-230	ST4 3205
230 V AC, Ventilator current max. 16 A	
Connection onsite ventilators: RDA-400	ST4 3206
400 V AC, motor contactor up to 5,5 kW	

2-Point-Regulation

For information please download product information in right column.

	Typ	Item number
	Pressure sensor, Type DDS-10/50	ST4 3210
	Technical For pressure regulation of a RDA-installation, potential free transfer contact, Details: pressure range temporary 20-200 Pa, adjusted control range. Dimensions: 103 x 88 x 90 mm	

Continuous Regulation

Only project-planned production. For information please download product information in right column.

	Typ	Item number
	GLT-100	ST4 3355
	Ventilation control 0-10 V for ESM, GLT-Module necessary for programming actuator position	
	GLT-110	ST4 3356
	Module for position control	
	Differential-pressure-sensor	

ST4 CONTROL UNITS FOR VENTILATION

24 V VENTILATION CONTROL UNIT

Ventilation control unit LZM

These electrical modular ventilation control units are designed for operating actuators for ventilation applications.

The vent command can be triggered manually via a vent switch or automatically via an automatic vent device like e. g. a wind- / rain detector in application with the appropriate vent accessories of our product range.

A vent control unit is composed of a power supply unit (switching power supply and central vent module) and of at least one vent group module.



Technical Data:

Ventilation control unit Type LZM in modular design	
Input voltage:	230 V AC / 50 Hz
Prefusing:	16 A / Charakteristik C
Output voltage:	24 V DC (Ripple < 500 mV, < 5 %)
Ingress protection:	IP 54
Switching power supply (SNT):	EN VDE 0805 / EN 60950
Dimensions:	Sheet steel housing, RAL 7035 dependant on version
Operation temperature range:	- 5° up to + 40° C
Weight:	Depending on version

Article

Ventilation control unit LZM compact		
	Typ	Item number
	LZM-51-AP (Power supply in standard housing 301 x 323 x 85 mm)	ST4 3436
	<p>Power 24 V / 5 A, in RAL 9010</p> <p>Info: The 24V vent control unit LZM-51-AP presents itself in modular design and is set up in a chic exposed steel sheet housing (RAL 9010). The housing dimensions are known from the staircase compact control unit SHEV® 3 AP and thus also offers an optional lock cylinder. The control unit consists of a 24V/5A power supply and is supplied with 230V. The motor control is executed with a central vent module WS-100 and a vent group module MR-100 in the same way as known from the ESM unit. Thus it can be connected together with a triggering ventilation switch, wind/rain sensor and a thermostat.</p>	

Basic devices for LZM-10

max current load 10 A / 3 min, permanent load 8 A

	Typ	Item number
	EV-L-10 (Power supply in standard housing (W x H x D) 300 x 400 x 150 mm)	ST4 3431
	<p>Short time load (3 min): 10 A; Permanent load (30%): 8 A</p> <p>Modular control panel 10 A: Composed of power supply (switching power supply SPS-105 respectively SPS-110, central vent module type WS-100 for connecting wind- / rain detectors and central vent switches) and of the ventilation group module(s) type MR-100 installed in a sheet steel housing coloured in RAL 7035, housing dimensions 300 mm W x 400 mm H x 200 mm D, IP 54, mounting plate with top hat rail for terminals. The housing size is depends on the power supply, the quantity of the modules (quantity of groups) and their space requirement (units). The required space for the power supply is automatically reserved within the different sizes of available housings.</p>	
	MR-100 (Vent group module)	ST4 3313
	<p>Space required 2 units</p> <p>Modular control unit 12 A: Composed of power supply (switching power supply SPS-105 respectively SPS-110, central vent module type WS-100 for connecting wind- / rain detectors and central vent switches) and of the ventilation group module(s) type MR-100 installed in a sheet steel housing coloured in RAL 7035, housing dimensions 300 mm W x 400 mm H x 200 mm D, IP 54, mounting plate with top hat rail for terminals. The housing size is depends on the power supply, the quantity of the modules (quantity of groups) and their space requirement (units). The required space for the power supply is automatically reserved within the different sizes of available housings.</p>	

Basic devices for LZM-24

max current load 24 A / 3 min, permanent load 20 A

	Typ	Item number
	EV-L-24 (Power supply in standard housing (W x H x D) 400 x 600 x 150 mm)	ST4 3432
	<p>Short time load (3 min): 24 A; Permanent load (30%): 20 A</p> <p>Modular control unit 24 V: Composed of power supply (1 or 2 switching power supplies SPS-120, central vent module type WS-100 for connecting wind- / rain detectors and central vent switches) and of the ventilation group module(s) type MR-100 installed in a sheet steel housing coloured in RAL 7035, housing dimensions 400 mm (resp 600 mm) W x 600 mm H x 200 mm D, IP 54, mounting plate with top hat rail for terminals. The housing size is depends on the power supply, the quantity of the modules (quantity of groups) and their space requirement (units). The required space for the power supply is automatically reserved within the different sizes of available housings.</p>	
	MR-100 (Vent group module)	ST4 3313
	<p>Space required 2 units</p> <p>Modular control unit 24 A: Composed of power supply (1 or 2 switching power supplies SPS-120, central vent module type WS-100 for connecting wind- / rain detectors and central vent switches) and of the ventilation group module(s) type MR-100 installed in a sheet steel housing coloured in RAL 7035, housing dimensions 400 mm (resp 600 mm) W x 600 mm H x 200 mm D, IP 54, mounting plate with top hat rail for terminals. The housing size is depends on the power supply, the quantity of the modules (quantity of groups) and their space requirement (units). The required space for the power supply is automatically reserved within the different sizes of available housings.</p>	

Basic devices for LZM-48

max current load 48 A / 3 min, permanent load 40 A

	Typ	Item number
	EV-L-48 (Power supply in standard housing (W x H x D) 600 x 600 x 200 mm)	ST4 3433
	<p>Short time load (3 min): 48 A; Permanent load (30%): 40 A</p> <p>Modular control unit 48 A: Composed of power supply (1 or 2 switching power supplies SPS-120, central vent module type WS-100 for connecting wind- / rain detectors and central vent switches) and of the ventilation group module(s) type MR-100 installed in a sheet steel housing coloured in RAL 7035, housing dimensions 400 mm (resp 600 mm) W x 600 mm H x 200 mm D, IP 54, mounting plate with top hat rail for terminals. The housing size is depends on the power supply, the quantity of the modules (quantity of groups) and their space requirement (units). The required space for the power supply is automatically reserved within the different sizes of available housings.</p>	
	MR-100 (Vent group module)	ST4 3313
	<p>Space required 2 units</p> <p>Modular control unit 48 A: Composed of power supply (1 or 2 switching power supplies SPS-120, central vent module type WS-100 for connecting wind- / rain detectors and central vent switches) and of the ventilation group module(s) type MR-100 installed in a sheet steel housing coloured in RAL 7035, housing dimensions 400 mm (resp 600 mm) W x 600 mm H x 200 mm D, IP 54, mounting plate with top hat rail for terminals. The housing size is depends on the power supply, the quantity of the modules (quantity of groups) and their space requirement (units). The required space for the power supply is automatically reserved within the different sizes of available housings.</p>	

Extension modules

Accessories	Item number
HR-820-MS with Stop Output relay for 230 V actuators One for each vent groups Space required 2 units	ST4 3344
HR-820-OS without Stop Output relay for 230 V actuators One for each vent groups Space required 1 unit	ST4 3345
ZR-100 (time module) For application as ventilation module with automatic close function after an adjusted time period.	ST4 3352
MF-100 (ESM/LZM) (Multifunction module) This module is used for different comfort vent functions (e. g. connection of temperature sensor). Space required 3 units	ST4 3357
HR-195 (Auxiliary relay module) With dry transfer contact (max 1 A / 60 V for signals e. g. to the building control system or fire alarm system. Optional programmable signals: "OPEN", "CLOSE", "alarm", "mains failure", "defect", "wind- rain". This small module establishes the communication to other devices. You can choose which of the diagnosed signals shall be transfered via dry contact to the building control system - anytime easily adjustable per DIP switch. Even several signals can be linked reasonably - optical indication inclusive.	ST4 3340

Extracharge for Dimension extension

Accessories	Item number
For LZM-6 and LZM-12 size 400 x 400 x 200 mm	
For LZM-24 size 600 x 600 x 200 mm	
For LZM-48 size 600 x 800 x 250 mm	

230 V VENTILATION CONTROL UNIT

Ventilation Control Unit VENT-61

This electrical ventilation control unit is a compact device in a sealed enclosure containing transformer, and especially conceived for the application in 230 Volt ventilation control systems.

It contains switching power supply, control and regulation electronics, output relays and fuses for operating 230 V AC actuators for ventilation applications.

The operation of the actuators can occur by ventilation button, central ventilation button, thermostat, timer and wind/rain detector.

Ventilation groups can be advanced with a complete assembly.

Control features like Tip- Stop, deadman, gap ventilation open-close and thermostat open-close give the user a multifaceted and priorities-dependend control possibility for the actuators.



Technical Data:

Ventilation Control Unit Type VENT-61 Compact design	
Input voltage:	230 V AC / 50 Hz
Max prefuse:	16 A / Charakteristik C
Output voltage:	230 V AC
Total max. output current:	6 A
Ingress protection:	IP 54
Number of groups:	1
Dimensions:	Plastic housing, grey 180 x 180 x 60 mm
Weight:	Approx. 0.75 kg

Article

Ventilation control unit, Type VENT-61

1 output 230 V AC, maximum 6 A for 230 V actuators, 1 ventilation group in plastic housing 180x180x60 mm, connection possibility of local ventilation button, timer (priority 2) and wind/rain detector (priority 1), group extension is possible with a complete assembly. Local ventilation button with control features Tip-Stop or deadman and gap ventilation open-close is adjustable.

	Typ	Item number
	VENT-61	ST4 4029

B5 LOCKING MECHANISM

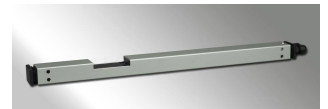
ELECTRICAL

Supplementary Electric Locking ZVE-UNI

This supplementary electric locking increases the clamping force of high and wide windows and provides mechanical locking.

This locking unit is universal applicable together with an electro mechanical actuator of our product range at inwards or outwards opening, left or right wings for both smoke control and environmental ventilation.

The ZVE-UNI is protected by a registered design.



Technical Data:

Supplementary Electric Locking Type ZVE-UNI	
Nominal voltage (min./max.):	24 VDC (+ 20 % / - 10 %)
Nominal current:	85 mA
Cut off current at blockade:	120 mA
Clamping force:	200 N
Locking force:	750 N
Max opening / closing time:	Ca. 30 Sekunden
Cut off electronic:	Overload protection: Electronic Max current of each following actuator: 5 A, ripple < 10 % Delay time of sequence controlling: Approx. 2 seconds. Note: during this time no actuator can be triggered
Dimensions:	Aluminium EV1, anodized 465 x 25 x 49 mm
Ingress protection:	IP 40
Switch on duration:	ED 30 %
Temperature range:	- 5° C up to + 75° C
Weight:	Approx. 1.0 kg

Article

Supplementary electric locking type ZVE-UNI

for inwards or outward opening, left or right wings, on plastic or wooden windows, including mounting accessories.

	Typ	Item number
	ZVE-UNI	B5 6101
	<p>Eigenschaften:</p> <p>Locking housing, basic plate and locking angles are made of aluminium EV1 anodized. End caps, cable inlet and locking area are made of plastic, black, with integrated sequence controller.</p> <p>ATTENTION!</p> <ul style="list-style-type: none"> - Only to use together with actuators of SIMON RWA Systeme GmbH with feedback signal! - Max load capacity 3.0 A = max total current consumption of actuators! - Consider capacity of storage batteries in the control panels 	

Actuator and Bracket coating

Note: Small parts as screws, nuts and sliding parts will not be coated!

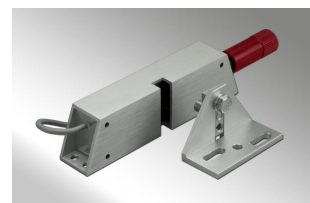
Accessories	Item number
Coating in all RAL and DB colours Prices on request	

Locking Mechanism EAP/HM

Electrical magnetic lock - Release when the power supply drops

A space saving and shapely solution for every kind of wing. Single or multiple locking is possible anytime. It keeps the wing tight closed and releases it for smoke and heat exhaustion in event of emergency. Unlocking occurs by an external manual or automatic triggering. Gas springs of our make open the window.

The magnetic locking is permanently closed-current monitored and does not need to be maintained. By a snap-in mechanism the wing can be closed and locked manually after polarizing the magnet. The clamping force can be adjusted easily and safely at most kinds of windows by an installation friendly locking bolt.



Technical Data:

Locking mechanism Type EAP/HM with 24 V electromagnets	
Voltage:	24 V DC
Current:	0.125 A
Clamping force:	350 N
Locking pressure:	650 N
Dimensions:	Aluminium, E6/EV1 anodized 180 x 25 x 35 mm
Connection cable:	2 x 0,5 mm ² , grey, length 300 mm
Weight:	Approx. 0.5 kg

Article

Electromagnetic locking unit

for inwards or outwards opening wings, self-locking with adjustable locking element, closed current monitored.
Triggering via external emergency switch, max allowed wing overlap 21 mm.

	Typ	Item number
	EAP/HM	B5 6005
	Triggering via external emergency switch	
	EAP/HM/TH	B5 6006
	(L x W x H) 25 x 35 x 220 mm With automatic thermal triggering at 70° C	

Accessories Locking mechanism EAP/H - EAP/HM

Accessories	Item number
EAP/H/ADAPTERPLATTE Adapter plate - For mounting to outward opening windows. Dimensions: 134 mm L x 25 mm W x 5 mm H.	B5 6001 H
VT Locking element (adjustable) - Max. allowed wing overlap 21 mm with threefold adjustable locking bolt.	B5 6008
GL 8/70 Triggering temperature 70° C, red Glass heat trigger - For automatic thermal triggering, triggering temperature 70° or 90° C, D = 8 mm	B5 6012
GL 8/90 Triggering temperature 90° C, green Glass heat trigger - For automatic thermal triggering, triggering temperature 70° or 90° C, D = 8 mm	B5 6013
Accessories	Item number
SHEV® 2 HM The compact control unit SHEV® 2 HM is made especially for the control of electrical magnetic locks. In total there can be connected magnets with together maximum current of 2 A. The backup battery is for 30 minutes. More Details	ST4 3166

Locking mechanism EAP/H

Thermal triggered locking unit - Release by too high temperature

The locking mechanism type EAP/H is suitable for all inside or outside opening windows. Due to the different triggering variants this locking unit is individually applicable. Its small dimensions allow for a smooth mounting even if the space is very limited. Remote triggering is possible pneumatically and electrically. For automatic thermal triggerings the triggering temperature can be optionally selected between 70° and 90° C. After a triggering the locking unit locks independently by a snap-in mechanism after the window has been closed manually. The adjustable locking bolt guarantees a simple mounting and an exact adjustment of the wing clamping force.



Technical Data:

Locking mechanism Type EAP/H for single open systems	
Locking pressure:	500 N
Dimensions:	Aluminium, EV1 anodized 180 x 25 x 35 mm
Triggering:	Manual, additionally electrical, pneumatical or thermal depending on version
Weight:	Approx. 0.5 kg

Article

Locking mechanism for single open systems

For inwards or outwards opening wings, self-locking, with adjustable locking part, max allowed wing overlap 21 mm.

	Typ	Item number
	EAP/H	B5 6001
	Manual triggering only	

Versions with additional triggering options

Typ	Item number
EAP/H/PN	B5 7060
With manual and pneumatic triggering, pipe connection 6 mm	
EAP/H/DG	B5 6003
With manual and electric triggering, via a pressure gas generator	
EAP/H/TH	B5 6002
With manual and automatic thermal triggering, 70° or 90° C (selectable)	
EAP/H/DG/TH	B5 6004
With manual, electric and automatic thermal triggering	
EAP/H/TH/PN	B5 7061
With manual, automatic thermal and pneumatic triggering	

Accessories Locking mechanism EAP/H - EAP/HM

Accessories	Item number
EAP/H/ADAPTERPLATTE Adapter plate - For mounting to outward opening windows. Dimensions: 134 mm L x 25 mm W x 5 mm H.	B5 6001 H
VT Locking element (adjustable) - Max. allowed wing overlap 21 mm with threefold adjustable locking bolt.	B5 6008
EAP/H-KUGELKNOPF Ball button (black) - For manual triggering	B5 6001 A
DG 1/8 Pressure gas generator with connection thread 1/8	B5 6010
GL 8/70 Triggering temperature 70° C, red Glass heat trigger - For automatic thermal triggering, triggering temperature 70° or 90° C, D = 8 mm	B5 6012
GL 8/90 Triggering temperature 90° C, green Glass heat trigger - For automatic thermal triggering, triggering temperature 70° or 90° C, D = 8 mm	B5 6013

MECHANICAL

Supplementary Electric locking Helimatic

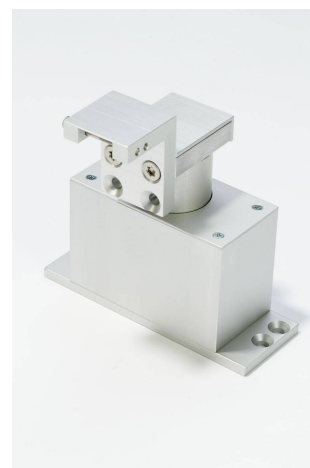
An innovation that enthusiasts!

The locking mechanism for inwards opening windows and doors.

Helimatic works with existing window bolt system to provide secure locking for automatic windows. The helimatic lock is installed in tandem with a chain actuator of our make and automatically engages and disengages the window bolt system as the actuator opens and closes the window.

Helimatic is purely mechanical and requires no power supplies or batteries to operate. Ideal for applications where security is paramount for example schools, hospitals, offices and houses.

Actuators to be ordered separately!



Technical Data:

Supplementary electric locking type Helimatic	
Version:	Capped locking mechanism mounted on a basic plate
Window locking force stabilized by elastic force:	160 N
Temperature resistance:	300° C for 30 minutes according to DIN EN 12101/2
Dimensions:	Aluminium, EV1 anodized 138 x 50 x 116 mm (without brackets)
Connection to window:	Square 7 x 7 mm
Weight:	Approx. 1.0 kg

Article

Helimatic for DIN - right - wings, locking bolt locks rotating rightwards		
	Typ	Item number
	HELIMATIC-RE	B5 6090
	<p>Attributes: For application at on-site locking fittings of inside opening windows. The mechanism directly affects the square of a circular locking strip of a window wing. The linear close motion of an actuator is converted into a 90° clockwise rotating that locks or unlocks the window.</p> <p>Tandem application together with a chain actuator type EA-K 24(230)/400/600 or type EA-KS 24(230)/300/500 and all necessary mounting brackets. Actuator and brackets to be ordered separately!</p>	

Helimatic for DIN - left - wings, locking bolt locks rotating leftwards

	Typ	Item number
	HELMATIC-LI	B5 6091
	<p>Attributes: For application at on-site locking fittings of inside opening windows. The mechanism directly affects the square of a circular locking strip of a window wing. The linear close motion of an actuator is converted into a 90° clockwise rotating that locks or unlocks the window.</p> <p>Tandem application together with a chain actuator type EA-K 24(230)/400/600 or type EA-KS 24(230)/300/500 and all necessary mounting brackets. Actuator and brackets to be ordered separately!</p>	

Gas spring GF

The gas spring can be applied for opening several kinds of wings.
It is also suitable for operating roof exit flaps.
Together with our lock fitting type EAP it can be used to automate facade or roof windows for both smoke control and daily ventilation applications.
Besides of the standard forces and stroke lengths listed below in almost all variants a special customized version can be realized.
Depending on application option the rod.



Depending on force ration between gas spring and wing weight and in consideration of the position.

Brackets to be ordered separately!

Technical Data:

Gas spring Type GF	
Stroke length:	150 mm with 100 N only, 200 mm, 300 mm, 400 mm with 150 N only
Force:	100, 150, 200, 300 N
Dimensions:	black with eye bolt at the tube and angle joint M8 at the rod respectively M5 at GF 100/150
Tube:	D = 19 mm respectively 16 mm at GF 100/150
Weight:	Approx 0.2 to 0.6 kg dependant on stroke length

Article

Gas spring Type GF		
	Typ	Item number
	GF 100/150	B5 6050
	Length retracted: 200 mm; Length extended: 350 mm Eigenschaften: Please use gas spring bearing bracket GFLS Item no 6065! Gas spring bracket available on request! GFK B5 6060 to B5 6061 A do not fit!	
	GF 100/200	B5 6051
	Length retracted: 290 mm; Length extended: 490 mm	
	GF 100/300	B5 6052
	Length retracted: 440 mm; Length extended: 740 mm	
	GF 150/200	B5 6054
	Length retracted: 290 mm; Length extended: 440 mm	
	GF 150/300	B5 6055
	Length retracted: 440 mm; Length extended: 740 mm	
	GF 150/400	B5 6059
	Length retracted: 485 mm; Length extended: 890 mm	
	GF 200/200	B5 6056
	Length retracted: 340 mm; Length extended: 540 mm	
	GF 200/300	B5 6057
	Length retracted: 440 mm; Length extended: 740 mm	
	GF 300/300	B5 6058
	Length retracted: 440 mm; Length extended: 740 mm	

Brackets for gas springs (outwards)

Brackets for mounting to an outwards opening window Gas spring version: cylinder + rod = eye bolt

Accessories	Item number
GFL Gas spring bearing bracket for front bearing (rod D = 19 mm), mounted to the wing frame, zincked, with bolt, washer and cotter, width = 18 mm.	K2 6062
GFK 100 A opening distance 90 mm Bracket for rear bearing (rod), mounted to the blind frame, connecting thread 8 mm, with M8 safety nut, aluminium anodized, width = 50 mm.	K2 6060 A
GFK 150 A opening distance 140 mm Bracket for rear bearing (rod), mounted to the blind frame, connecting thread 8 mm, with M8 safety nut, aluminium anodized, width = 50 mm.	K2 6061 B

Brackets for gas springs (inwards)

Brackets for mounting to an inwards opening window Gas spring version: cylinder = eye bolt, rod = angle joint

Accessories	Item number
GFLS Rear bearing bracket for GF 100/150 (rod D = 16 mm) with screw.	K2 6065
GFL Gas spring bearing bracket for rear bearing (rod D = 19 mm), mounted to the blind frame, zincked, with bolt, washer and cotter, width = 18 mm.	K2 6062
GFK 100 opening distance 90 mm Bracket for front bearing (rod), mounted to the wing frame, connecting thread 8 mm, with M8 safety nut, aluminium anodized, width = 50 mm.	K2 6060
GFK 150 opening distance 140 mm Bracket for front bearing (rod), mounted to the wing frame, connecting thread 8 mm, with M8 safety nut, aluminium anodized, width = 50 mm.	K2 6061
GFK 250 opening distance 240 mm Bracket for front bearing (rod), mounted to the wing frame, connecting thread 8 mm, with M8 safety nut, aluminium anodized, width = 50 mm.	K2 6061 A

Spare parts for gas springs

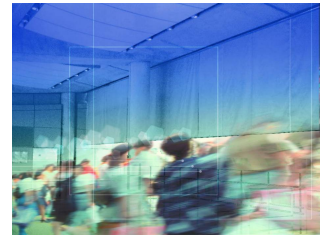
Accessories	Item number
GFAS Eye bolt mounted on the rod, connecting thread M8	B5 6063
GFWG Angle joint mounted on the rod, connecting thread M8	B5 6064

SMOKE AND FIRE CURTAINS

SMOKE PROTEC® SMOKE CURTAIN

Smoke PROtec® - smoke curtain / smoke barrier

The legal regulations in Europe demands that buildings are to be located, built, modified or maintained in a way that prevents fires from starting or fire and smoke from spreading while making it possible to rescue people and animals as well as enabling effective firefighting. It's not fire that kills – it's smoke! This is why smoke curtains are an important component of current fire protection plans to control smoke gasses, prevent them from spreading and therefore keeping escape and rescue routes clear of smoke. These systems set new standards for creative freedom in building design. Automatic smoke curtains are used especially in strongly frequented buildings.



We use the latest manufacturing technology in the area of sheet metal forming to guarantee top quality and complete stability. Any visible steel plating is powder-coated and therefore given a perfect surface for visible use. The box's parts are connected invisibly by spot welding respectively welding studs on the inside of the box.

Smoke PROtec® smoke curtains are exclusively made from high-quality, tear-resistant glass fabrics. Fabric panels are stitched together vertically with tear-resistant stainless steel thread. Fabrics are smoke-proof according to DIN EN 1634-3 and heat-resistant according to DIN EN 12101-1 at 600 degrees Celsius for up to 120 minutes. Mass per unit area for the one-side PU-coated glass fabric is 590 g/m². It is non-inflammable according to DIN 4102-1, building material class A2.

The smoke curtain Smoke PROtec®'s system features reach ASB 3 D120 classification and can therefore also be used for personal security (securing escape and rescue routes).

Simon Smoke PROtec systems are tested according to DIN EN 12101-1. Optional use of special side guides helps to avoid small openings and smoke curtain displacement. Fabric is smoke-proof tested according to the test procedures in accordance with DIN EN 1634-3. Long-term function > 1,000 cycles proven successfully.

Technical Data:

Smoke PROtec® smoke curtain	
Fabric:	One-side PU-coated glass fabric 590 g/m ² , colour: grey, non-inflammable according to DIN 4102-1, A2, smoke-proof tested according to the test procedures in accordance with DIN EN 1634-3.
Unwind:	descending by gravity (gravity fail safe)
Wind up:	planet drive, 24 VDC, 3 A with electric load breaking; maximum turning moment 4 Nm, roll shaft-integrated.
Installation:	Ceiling or wall mounted with appropriate approved mounting material
Maximum size:	width = 30 m, drop length = 6 m
Head Box (W x H):	Steel plate 1.2 mm powder-coated, RAL 7035 Single curtain (up to 6 m width) 150 x 180 mm or 180 x 210 mm for drop length > 3 m Multiple curtains (over about 6 m width) 150 x 300 mm or 180 x 360 mm for drop length > 3 m / shafts next to each other 280 x 180 mm or 340 x 210 mm for drop length > 3 m / shafts next to each other
Bottom Bar:	Steel plate powder-coated, RAL 7035 with integrated round steel in fabric bag for energy free dropping
Classification:	EN 12101-1, ASB 3, D120 (fail-safe)
Fire resistance duration:	2 hours at 600°C (according to DIN EN 12101-1)

Article

	Typ	Item number
	Smoke PROtec® smoke curtain	RSV 52010

Additional parts for curtain systems

The control unit of smoke and fire curtains can be combined with many components.

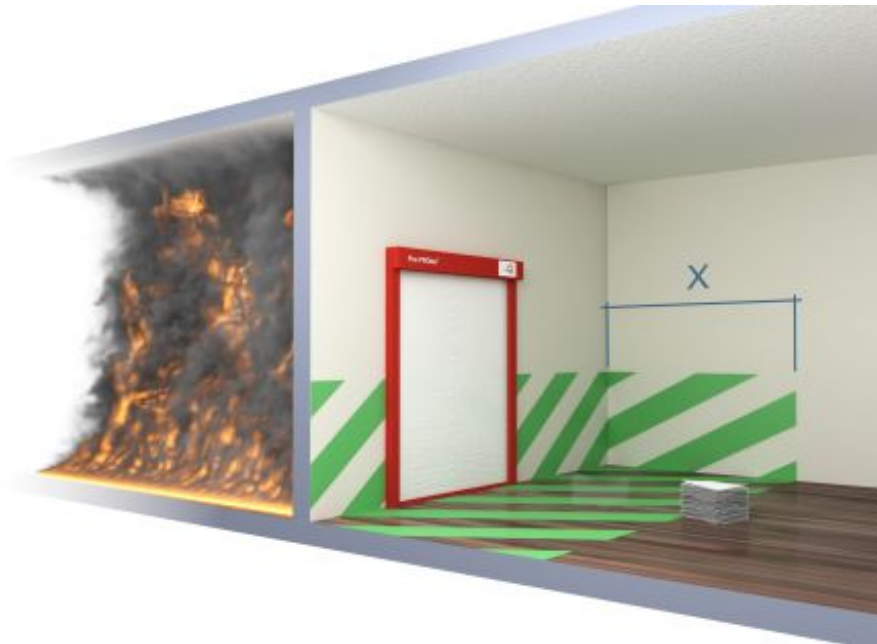
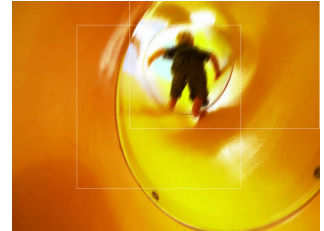
Accessories	Item number
Motor control module AM-830 Controls the roller unit directly at the headbox: <ul style="list-style-type: none"> ■ Current Limit in case of turning ■ DIP-switches for settings ■ Stroke limit programming ■ Tandem mode in synchron run ■ Low voltage realization in tandem mode ■ Turn-switch for hold current ■ Soft-start ■ Dry contact ■ Programming connection ■ Service button ■ Counter ■ Speed sensor failure monitoring ■ Provide hold current in battery mode 	M2 3330
SHEV® 3 RSV Known SHEV® 3 compact control unit updated to functionality for fire and smoke curtains. Without retriggering and longer power supply in battery mode. For one roller unit. Productdetails: SHEV 3	ST4 3170
SHEV® 6 RSV Known SHEV® 6 compact control unit updated to functionality for fire and smoke curtains. Without retriggering and longer power supply in battery mode. For two curtains. Productdetails: SHEV 6	ST4 3171
Modular control unit ESM RSV Known ESM modular control unit updated to functionality for fire and smoke curtains. Without retriggering and longer power supply in battery mode. For each 3 A you can control one roller. Productdetails: ESM	ST4 3421
RSV/FSV-ST Service button with unwind position generator	SD1 8550

FIRE PROTEC® - FIRE CURTAIN

Fire PROtec® - Fire Curtain

The legal regulations in Europe demands that buildings are to be located, built, modified or maintained in a way that prevents fires from starting or fire and smoke from spreading while making it possible to rescue people and animals as well as enabling effective firefighting.

Fire curtains are an important component in current fire protection plans to prevent fires from spreading in buildings as well as for securing escape and rescue routes. By using these mobile systems new standards are set for creative freedom in building design. Automatic fire curtains are used especially in strongly frequented buildings such as shopping malls, underground parking and public facilities.



Fire protection: Highest material and production quality

We use the latest manufacturing technology in the area of sheet metal forming to guarantee top quality and complete stability. The building structure is not affected, because head boxes and side guides can be integrated in the building. Even where steel plating remains visible for civil engineering reasons, high quality powder coating is available in all RAL-colours for a first-class surface.

Fire PROtec® fire curtains are made from high-quality, tear-resistant glass fabrics. Fabrics reinforced with stainless steel are vertically sewn with tear-resistant stainless steel thread. Fabrics are smoke-proof according to DIN EN 1634-3 and heat resistant according to STC (see graph) for up to 120 minutes. Rooms are closed off for 90 minutes. Additionally in the first 20 minutes of a blazing fire the system takes care of a

reduced thermal radiation ($< 15 \text{ kW/m}^2$). Thus a safe passing of the ways along the Fire Curtain system is ensured. The complete Fire PROtec® system is classified by DIN EN 13501-2 E90 EW20 C2.

When the Fire Curtain is installed on the inside of buildings, one-side coated glass fabric according to DIN 4102-1, A2.

Simon Fire PROtec systems are tested according to EN 1634-1, classification E 90 EW 20 C2*, DIN EN13501-2 requirements.

Further tests:

- Fabric is fire-proof according to DIN 4102-1, A2, and smoke-proof according to DIN EN 1634-3
- Long-term function tested according to DIN EN 1191, 10,000 cycles
- Weatherproof for outdoor use

* E90: Closes off rooms for 90 minutes | EW20: Limitation of thermal radiation for 20 minutes | C2: Self-closing, tested in 10,000 cycles

Technical Data:

Fire PROtec® Fire Curtain	
Fabric:	One-side fluorocarbon-coated glass fabric, about 680 g/m ² , A2 according to DIN 4102-1, colour: grey
Unwind:	descending by gravity (fail safe)
Wind up:	planet drive, 24 V DC, 3 A with electric load breaking; maximum turning moment 4 Nm, roll shaft-integrated.
Installation:	Ceiling / wall with appropriate approved mounting material
Maximum size:	Width = 6 m, drop length = 6 m
Head box (W x H):	Steel plate 1.2 mm powder-coated, RAL 7035 (standard colours), 150 x 180 mm or 180 x 210 mm for drop over 3 m
Side guides (W x H):	Steel plate 1.2 mm powder-coated, RAL 7035 (50 x 100 mm)
Bottom Bar:	Steel plate powder-coated, RAL 7035 with integrated round steel in fabric bag
Classification:	E 90 EW 20 C2 according to DIN EN 13501-2
Fire resistance duration:	90 minutes

Article

	Typ	Item number
	Fire PROtec® Fire Curtain	FSV 53011

Additional parts for curtain systems

The control unit of smoke and fire curtains can be combined with many components.

Accessories	Item number
Motor control module AM-830 Controls the roller unit directly at the headbox: <ul style="list-style-type: none"> ■ Current Limit in case of turning ■ DIP-switches for settings ■ Stroke limit programming ■ Tandem mode in synchron run ■ Low voltage realization in tandem mode ■ Turn-switch for hold current ■ Soft-start ■ Dry contact ■ Programming connection ■ Service button ■ Counter ■ Speed sensor failure monitoring ■ Provide hold current in battery mode 	M2 3330
SHEV® 3 RSV Known SHEV® 3 compact control unit updated to functionality for fire and smoke curtains. Without retriggering and longer power supply in battery mode. For one roller unit. Productdetails: SHEV 3	ST4 3170
SHEV® 6 RSV Known SHEV® 6 compact control unit updated to functionality for fire and smoke curtains. Without retriggering and longer power supply in battery mode. For two curtains. Productdetails: SHEV 6	ST4 3171
Modular control unit ESM RSV Known ESM modular control unit updated to functionality for fire and smoke curtains. Without retriggering and longer power supply in battery mode. For each 3 A you can control one roller. Productdetails: ESM	ST4 3421
RSV/FSV-ST Service button with unwind position generator	SD1 8550

SIMON LINK®

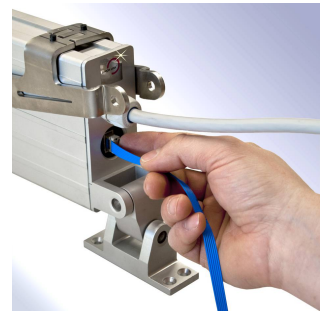
SIMON LINK®

Simon Link® - a multifunctional Software Interface

Simon Link® stands for a comprehensive parameterization and diagnosis software, which allows the user to visualize SIMON RWA® products for diagnosis and maintenance, but also to change specific product features in need. The software needs therefore only a Windows®-based PC-System with an USB-interface and the Simon RWA® USB-200-connection cable.

Authorized Simon RWA® partner receive the software in package with the connection cable USB-200 and one for them created licence key. This one is valid for one year and can be extended on request.

Simon Link® is available for many new delivered products (SHEV® diagnosis works also for older versions). These products are provided with the Simon Link® hologram sticker. Just with it a proper communication with the software can be guaranteed.



Technical Data:

Simon Link®	
Operating System:	Windows (minimum XP)
Necessary connections:	Free USB connection
Supported Products:	<ul style="list-style-type: none"> ■ Folding Arm² EA-KL²-50 ■ Folding Arm² EA-KL²-80 ■ Folding Arm² EA-KL²-100 ■ Folding Arm² EA-KL²-L ■ Folding Arm² EA-KL²-T ■ SHEV® 3/6/RSV/HM Monitoring ■ SHEV® 3/6 settings ■ SHEV® 3/6 RSV settings ■ SHEV® 2 HM settings

Article

	Typ	Item number
	Simon Link® Package	SD1 8500
	Software inkl. USB-200 cable	
	Simon Link® License Extension	SD1 8520
	for 365 days	

