24V SHEV systems for fire prevention

VELUX® Commercial

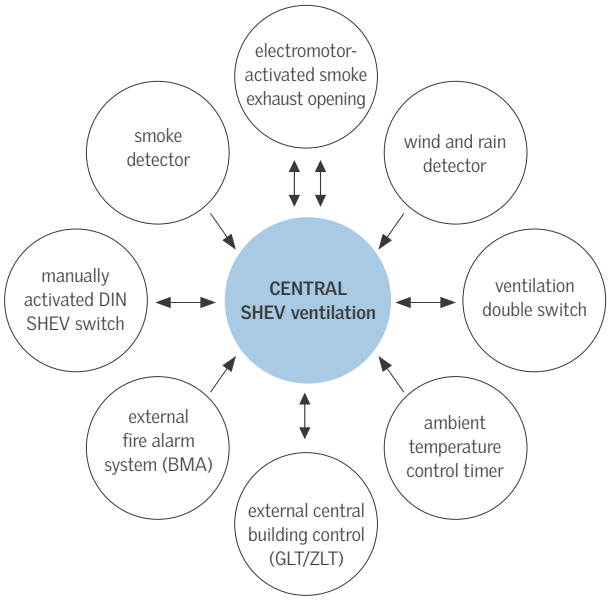
Optimally designed for various applications

24V SHEV systems

Advantages of the 24V technology
- standby current controlled system
- visual and acoustical alarm and fault indicator
- priority circuit for all alarm-open-commands
- economical control of actual state (open/close/ventilation position)
- only one drive system for all opening positions

Economic realization of all commands
- smoke detection/temperature detection
- alerting (internal/external)
- manual operation (alarm or ventilation)
- stepless ventilation
- wind and rain detector
- finishing time close-control
- connection to building management system (GLT/ZLT)

Possible functions
- electromotor-activated smoke exhaust opening
- smoke detector
- manually activated DIN SHEV switch
- external fire alarm system (BMA)
- external building managment system (GLT/ZLT)
- ambient temperature control timer
- ventilation double switch
- wind and rain detector



1.1.1 TOP-90
1.1.2 TOP-90 PLUS
1.1.3 TOP-90 sound reduction
3.5.2 TOP-90 comfort-S

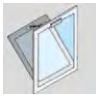
Smoke and heat exhaust systems are safety systems!

For fire prevention the question of functional reliability, from the planning stage to assembly and maintenance of the system, is of elementary importance. A specialist company certified by VdS can offer architects and building owners necessary assurance in this matter. The SHEV maintenance service guarantees optimum functional reliability nationwide.

Please ask for the maintenance contract!

The system smoke exhaust, ventilation and daylight in combination

Dome rooflight with 24V telescope spindle drive

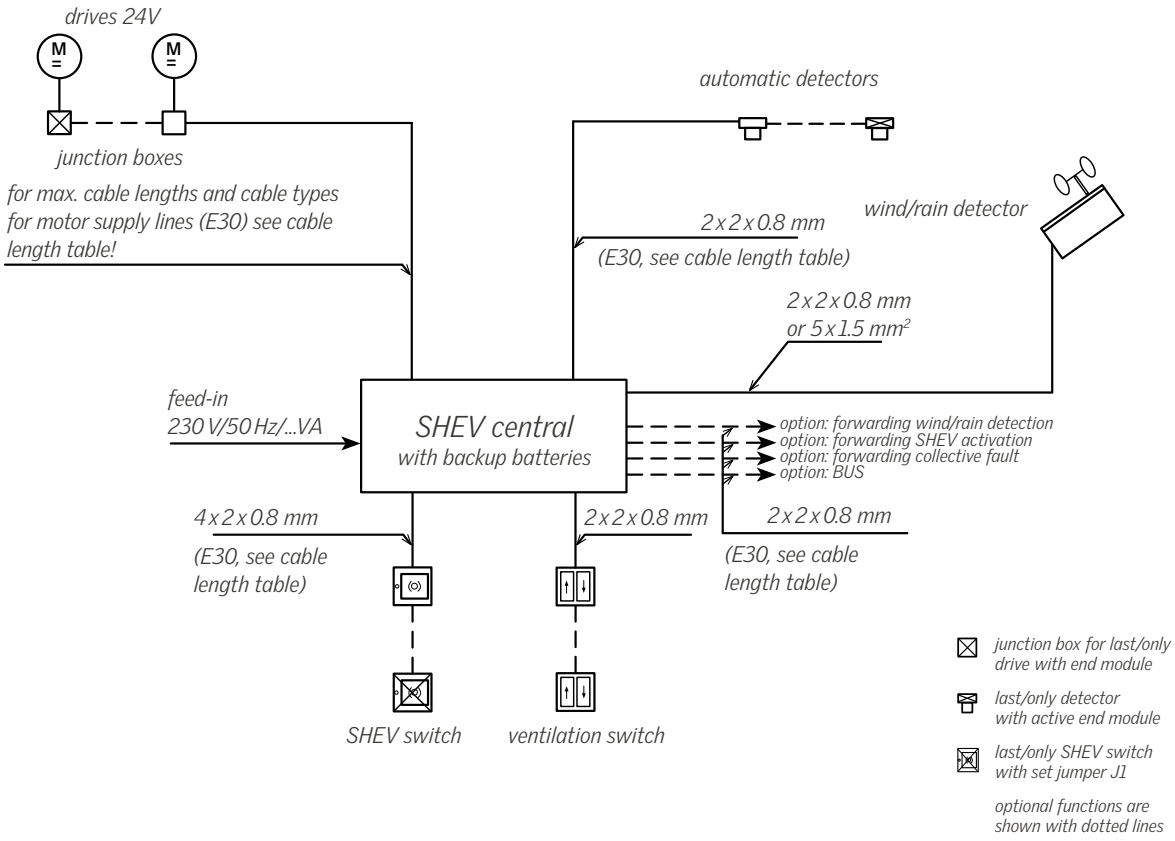
Application possibilities of the 24V SHEV motor opener				Type of drive
Roof			glass roof ventilation flap roof-top window	Z, S, R, K
			dome rooflight	Z, S, R
			continuous rooflight flap	Z, S, R
			flat glass rooflight	Z, S, R, K
			SMOKEJET® surface ventilator	Z, S, R
Wall/fFacade			tilt/rotor window opening to the inside	K
			pivoting window	K
			tilt window opening to the outside at the top or bottom	K

Z: rack drive
S: thrust spindle drive
R: telescope spindle drive
K: chain thrust drive

The system: smoke exhaust, ventilation and daylight in combination

24V motor drives		24V SHEV centrals/switches/detectors/signaller	
 motor opener with thrust spindle type M2	Thrust spindle drive • standard drive for dome rooflights and continuous rooflight flaps • 500 N lifting force • integrated load shedding • thermal protection • potential-free contact for the open-indication	 SHEV central	• from the compact version for 2 drives up to large slide-in central unit for max. 48 drives and more • 72-hour backup power due to built in accumulators • motor, switch, BUS and smoke detector lines are standby current controlled
 telescope spindle drive type M8	Telescope spindle drive • for use in situations with high aesthetic requirements • with integrated electronical load shedding • 600 N or 900 N lifting force	 smoke exhaust switch	• lockable with glass panel for breaking in case of fire, available in orange, grey, yellow, blue and red • visual display for alarm and control • acoustic alarm and fault indicator
 telescope spindle drive type M8-S	Telescope spindle drive • for use in situations with high aesthetic requirements • with integrated electronic synchronous control • for the synchronous run of 2 drives • 900 N lifting force	 ventilation rotary switch	• ventilation rotary switch with touch and latching function (adjustable) • available in upon or under plaster version
 for smaller dimensions motor opener with rigid chain type M3	chain thrust drives • elegant alternative to the spindle drives • can also be installed on narrow window cover frames due to low installation height • nearly all window types can be opened electrically by the use of suitable consoles • stroke length from 100 up to 800 mm (depending on type of drive) • lifting force from 250 up to 1000 N (depending on type of drive) • with integrated electronic load shedding • application as solo, tandem or synchronous drive (depending on type of drive) • operating parameters programmable (depending on type of drive)	 wind/rain detector	• in case of wind and rain the system is closed automatically • as soon as ventilation is possible again the system can be opened manually • wind on-delay and wind/rain delayed release adjustable • wind sensitivity adjustable • rain sensor heated
 for medium dimensions motor opener with rigid chain type KA		 smoke detector	• building approval • VdS-approval no.: G200017 • smoke detection by scattered light principle • visual alarm display
 for larger dimensions and selected glass products motor opener KM13		various signallers for connection to the 24V SHEV	• flashlight for visual signalling after a SHEV release • alarm siren: warning with 115 dB (A) also suitable for outdoor installation • Piezo-buzzer: warning with 90 dB (A) • fire bell: warning with 86 dB (A)

Sample: Wiring diagram for SHEV centrals



Note:
Other SHEV central control units upon request

Attention:
In case of the motor supply line it is not allowed to use the protective conducting wire (green/yellow)! Please consider the VDE guidelines!

Maximum permitted cable lengths for the SHEV central control units in combination with standard drives taking into consideration the specified cable cross sections

Cross section drive current	3.0 x 1.5 mm²	5.0 x 1.5 mm²	3.0 x 2.5 mm²	5.0 x 2.5 mm²	3.0 x 4.0 mm²
1 A 2 A	84 m 42 m	168 m 84 m	140 m 70 m	280 m 140 m	224 m 112 m
3 A 4 A	28 m 21 m	56 m 42 m	47 m 35 m	93 m 70 m	75 m 56 m

Note:
Electrical wires must be laid according to the respective applicable version of the VDE guidelines in general.

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