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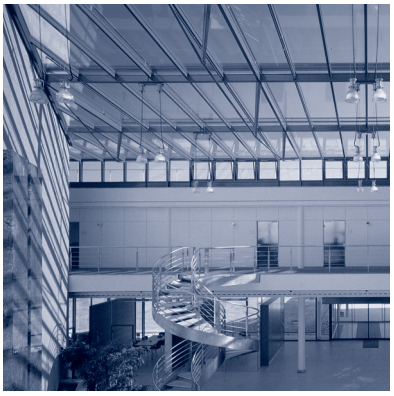
The Products



PRODUCT OVERVIEW CONTROL UNITS 08.2019

Valid from 01.08.2019

IMPORTANT NOTE

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By pasting this product list, previous editions become invalid.

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LIST OF ABBREVIATIONS

aP	Surface mounting
WxHxD	Width x Height x Depth
CAN	CAN-Bus
CM	Control Module
DIN	German Institute for Standardisation
DM	Drive Module
EN	European Standard
HS	Free space
LZ	Time of delivery
PG	Price group
PM	Power Module
net	Prices not discountable
RAL	Central European Colour Standard
RAS	Aspirating smoke detector
RM6	Relay Module
RWA	SHEV – smoke and heat exhaust ventilation
SM	Sensor Module
uP	Flash mounting
WM	Weather Module
WRG	Wind direction sensor

SCALE UNITS

°C	Degree Celsius
A	Amps
Ah	Amp-hours
Kg	Kilogram
m	Metres
min	Minutes
mm	Millimeters
N	Newtons
s	Seconds
Pcs.	Pieces
V	Volts
PU	Packaging Units
Vpp	Residual ripple (Voltage Peak-Peak)
W	Watts

FIGURES

€	Euro
AC	Alternating current (50Hz / 60Hz)
DC	Direct current
I	Electric current
L	Length
ME	Module space unit (1 ME = 23 mm)
NO	Normal open switch
NC	Normal close switch
P	Electric power
U	Electric voltage
Um	Change over switch

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1 SHEV – Compact Control Units

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SHEV – CONTROL UNITS EMB7300

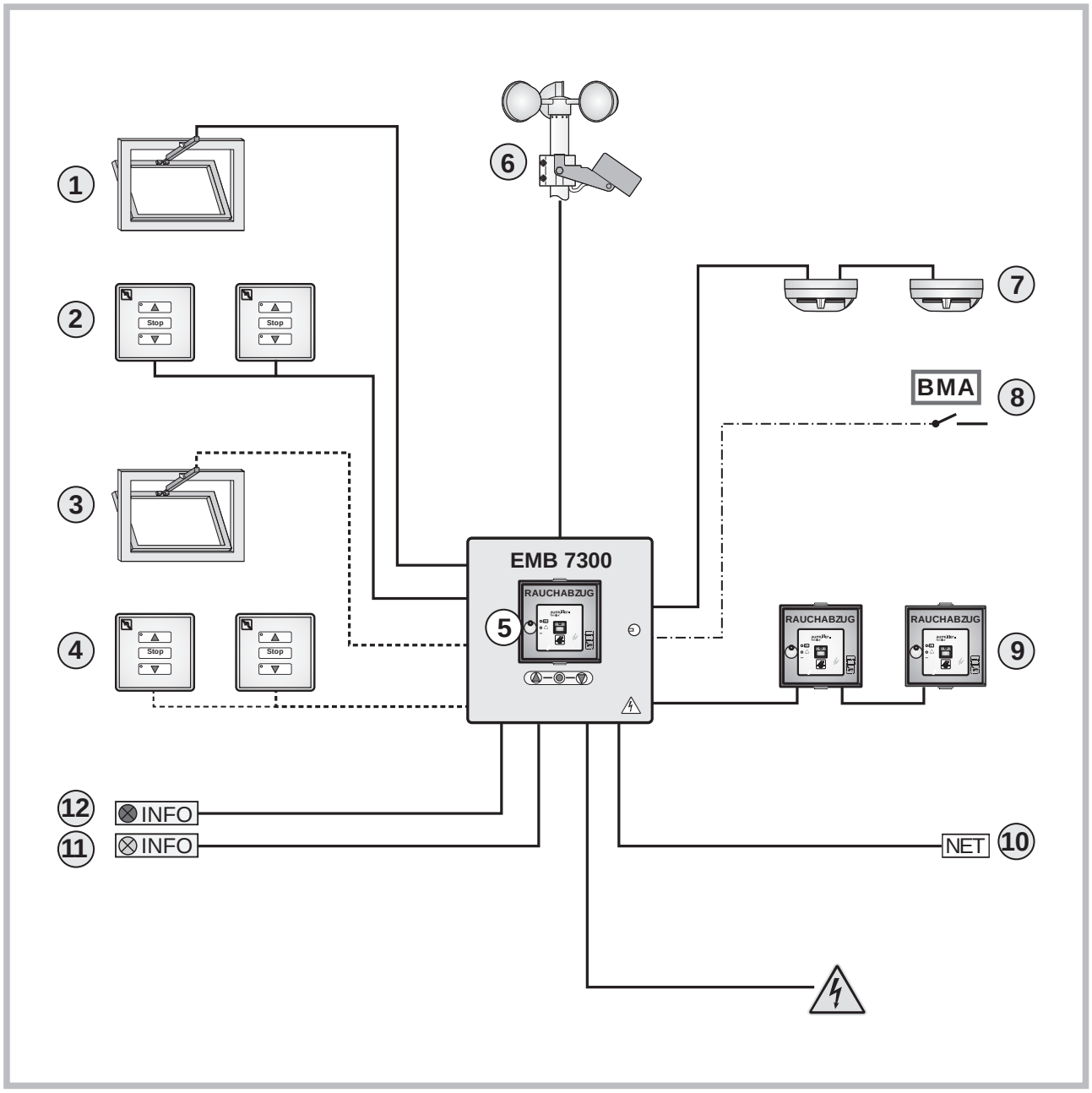
PRODUCT FEATURES EMB7300

- Controls 24 V DC drives for smoke and heat exhaust in case of fire and for natural ventilation
- Control panel compliant with prEN 12101-9
- Power supply compliant with EN 12101-10
- Low ripple voltage output (< 2 Vpp) - compatible with all common drives
- 1 SHEV-Group output with 1 (optional 2) monitored ventilation line(s)
- Removable terminals for easy connection of signal lines
- Connection of electric motors, compressed gas generator and retention magnets
- 2 detector line inputs with line monitoring to connect:
  - Manual break-glass units (HSE)
  - Automatic smoke and heat detectors
- 1 Ventilation line input (optionally 2) with OPEN-STOP-CLOSE function
- 2 Plug-in-Module slots for signal monitoring and transduction (emergency open, fault)
- 1 Network port for connection and integration in building management systems (LON, KNX)
- Direct connection input for wind and rain sensors
- Clear operating and display elements
- Extensive setting options of basic functions via „EMB compact“ software
- Housing (optional) with integrated break-glass unit and ventilation button (2,5 A / 5 A)
- Lead frame usable for flash mounting (2,5 A / 5 A)
- Cable entry from above, below or behind of the housing
- Prepared for connection of backup batteries (72 hours)
- VdS certification no.: G 514001

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

SOFTWARE FUNCTIONS

Functions	Standard	License
Set ventilation inputs from dead-man to jog-switch mode (in OPEN and/or CLOSE direction)	✓	✓
Set failures of drive line monitoring as alarm signal	✓	✓
Disable alarm function caused by failures of detector line monitoring	✓	✓
Adjust switching threshold of wind sensor	✓	✓
Set drive run time and opening stroke limit for ventilation purpose	✓	✓
Enable and set automatic time-controlled drive line closing mode for ventilation purpose	✓	✓
Enable drive line closing mode on primary power loss	✓	✓
Set accoustic or optical warning signals (additional hardware required)	✓	✓
Display, save and print the status of the system	✓	✓
Firmware update	✓	✓
Set emergency close button from jog-switch mode to dead-man mode	✓	✓
Set next service and maintenance date (password protected)	--	✓
Set switch-on delay time for wind sensor	--	✓
Set switch-off delay time for wind sensor	--	✓
Disable retriggering of drive lines in alarm mode	--	✓
Active / disable manual break-glass unit lines (HSE)	--	✓
Active / disable smoke detector lines	--	✓
Enable smoke detector line input to be controlled by fire alarm systems "FAS"	--	✓
Set automatic switch-off time for drive lines	--	✓
EMERGENCY-CLOSE button while the smoke detector is active / disable	--	✓
Set drive running direction in alarm mode from open to close	--	✓
Set options of relay card REL65 (not in package)	--	✓
Set alarm functions for faults caused by each individual drive line (only 2 drive line version)	--	✓
Reset switch positions to the status before the weather control were activated	--	✓
Integration into digital networks with additional Plug-in Interface-Modules (LON, CAN)	--	✓
Function natural ventilation contol unit	--	✓
Setting operatingmodus (retention magnet / standard drive / pressure gas)	--	✓
SHEV dead-man	--	✓
Ventilation push button setting parallel operation	--	✓
Maintenance timer adjust	--	✓
OPEN case of line failure	--	✓
Activate with Reset button EMERGENCY-CLOSE	--	✓
Configure Content collective fault	--	✓



CAPTION

① Output for drive line 1, 24 V DC for smoke and heat exhausting and natural ventilation
② Input for ventilation line 1 (max. 10 vent buttons)
③ Output for drive line 2 (only for EMB 7300 5 A – 0102; 10 A – 0102; 20 A – 0102)
④ Input for ventilation line 2 (max. 10 vent buttons) (only for EMB 7300 5 A – 0102; 10 A – 0102; 20 A – 0102)
⑤ Housing of control unit with or without integrated break-glass unit and ventilation button
⑥ Connections for wind and rain sensor (disabled in case of alarm and power loss)
⑦ Input for smoke detectors (max. 10)
⑧ Input for signal from external fire alarm system (alternative connection)
⑨ Input for break-glass units (HSE – max. 10)
⑩ Port for network integration (requires additional module)
⑪ Output for signal transduction 1 (Plug-in-Module REL65 required)
⑫ Output for signal transduction 2 (Plug-in-Module REL65 required)
----- only available for EMB 7300 5 A – 0102; 10 A – 0102; 20 A – 0102

ORDER DATA

	Part.-No.			
EMB7300 2,5 A 0101	**683020-0101**			

Application: Compact control unit for smoke and heat exhaust ventilation systems operating with 24 V DC voltage, suitable for staircases.

TECHNICAL DATA (Rated values)

Operating voltage:	230 V AC (195 – 253 V AC, 50/60 Hz)
Max. power consumption:	115 W
Output voltage:	24 V DC (20 – 28 V DC / 2 Vpp)
Output current:	**2,5 A**
Ambient temperature range:	-5°C … + 40°C
Protection rating:	IP30
Housing:	Surface mounting, steel sheet, RAL 7035 (light grey)
Dimensions (WxHxD):	225 x 285 x 122 mm
Connection terminals:	1,5 mm² / drive line: 4 mm² (rigid wire)
VdS certification no.:	G 514001 (without or with orange SHEV button)
Motherboard:	**1 SHEV group / 1 Vent groups**

Feature/Equipment

- Further settings (e.g. maintenance period) only available with extra cost software license
- Cable entry from above / below / behind
- Optional housing for flash mounting
- Prepared for **2** maintanance-free back-up batteries **2x 12 V / 2,3 Ah** (Part. Nr. 541000)

OPTIONS

Version with break-glass unit (HSE) and ventilation button on the front of the housing			Part.-No.			
EMB7300 2,5 A 0101-T	HSE red	(similar to RAL 3000)	**683021-0101**			
EMB7300 2,5 A 0101-T	HSE yellow	(similar to RAL 1018)	**683022-0101**			
EMB7300 2,5 A 0101-T	HSE grey	(similar to RAL 7035)	**683023-0101**			
EMB7300 2,5 A 0101-T	HSE blue	(similar to RAL 5009)	**683024-0101**			
EMB7300 2,5 A 0101-T	HSE orange VdS certification no.: G 514001	(similar to RAL 2011)	**683025-0101**			

ORDER DATA

	Part.-No.				
EMB7300 5 A 0101	**683050-0101**				

Application: Compact control unit for smoke and heat exhaust ventilation systems operating with 24 V DC voltage, suitable for staircases.

TECHNICAL DATA (Rated values)

Operating voltage:	230 V AC (195 – 253 V AC, 50/60 Hz)
Max. power consumption:	460 W
Output voltage:	24 V DC (20 – 28 V DC / 0,5 Vpp)
Output current:	**5,0 A**
Ambient temperature range:	-5°C … + 40°C
Protection rating:	IP30
Housing:	Surface mounting, steel sheet, RAL 7035 (light grey)
Dimensions (WxHxD):	225 x 285 x 122 mm
Connection terminals:	1,5 mm² / Drives: 6 mm² (rigid wire)
VdS certification no.:	G 514001 (without or with orange SHEV button)
Motherboard:	**1 SHEV group / 1 Vent group**

Feature/Equipment
- Further settings (e.g. maintenance period) only available with extra cost software license
- Cable entry from above / below / behind
- Optional housing for flash mounting
- Prepared for **2** maintanance-free backup batteries **2x 12 V / 2,3 Ah** (Part. Nr. 541000)

OPTIONS

Available with brea kglass unit and,ventilation button on housing cover			Part.-No.
EMB7300 5 A 0101-T	HSE red	(similar to RAL 3000)	**683051-0101**
EMB7300 5 A 0101-T	HSE yellow	(similar to RAL 1018)	**683052-0101**
EMB7300 5 A 0101-T	HSE grey	(similar to RAL 7035)	**683053-0101**
EMB7300 5 A 0101-T	HSE blue	(similar to RAL 5009)	**683054-0101**
EMB7300 5 A 0101-T	HSE orange VdS certification no.: G 514001	(similar to RAL 2011)	**683055-0101**

EMB7300 5 A 0102		**683050-0102**	

Application: Compact control unit for smoke and heat exhaust ventilation systems operating with 24 V DC voltage, suitable for staircases.

TECHNICAL DATA (Rated values)

Operating voltage:	230 V AC (195 – 253 V AC, 50/60 Hz)
Max. power consumption:	460 W
Output voltage:	24 V DC (20 – 28 V DC / 0,5 Vpp)
Output current:	**5,0 A**
Ambient temperature range:	-5°C … + 40°C
Protection rating:	IP30
Housing:	Surface mounting, steel sheet, RAL 7035 (light grey)
Dimensions (WxHxD):	225 x 285 x 122 mm
Connection terminals:	1,5 mm² / Drives: 6 mm² (rigid wire)
VdS certification no.:	G 514001
Motherboard:	**1 SHEV group / 2 Vent groups**

Feature/Equipment
- Further settings (e.g. maintenance period) only available with extra cost software license
- Cable entry from above / below / behind
- Optional housing for flash mounting
- Prepared for **2** maintanance-free backup batteries **2x 12 V / 2,3 Ah** (Part. Nr. 541000)

ORDER DATA

	Part.-No.			
Flush mounting housing EMB7300 2,5 A / 5 A	**683111**			

Application: Housing for flush mouting of EMB7300 2,5 A or 5 A in its own housing 225 x 285 x 122 mm.

TECHNICAL DATA

2,5 A **5 A**

Material:	Steel sheet
Colour:	RAL 7035 (light grey)
Flush housing:	
Dimensions (WxHxD):	254 x 314 x 96 mm
Plaster frame:	
Dimensions (WxHxD):	282 x 342 x 48 mm
PE-Connecting cable:	160 mm with blade terminals 6,3 mm
Polystyrene plate:	240 x 302 x 93 mm

Feature/Equipment
- Plaster frame with 4x rounded head screws M3x6, 4x plain washer A4
- Flush housing with 4x screw sleeve and safety nuts M5,
  4x stainless steel mounting brackets 13 x 13 x 1 mm, 8x Tapping screws ST3, 5x6,5
- Polystyrene plate to avoid damage during plastering of the wall

Accumulator battery holder	**683250**			

Application: Holder to fix the Back-up batteries 12V / 2,3 Ah within the housing of control units.

TECHNICAL DATA

2,5 A **5 A**

Material:	Steel sheet
Colour:	RAL 7035 (light grey)

Feature/Equipment
- Suitable for **EMB7300 2,5 A** and **EMB7300 5 A**

ORDER DATA

	Part.-No.				
EMB7300 10 A 0101	**683010-0101**				

Application: Compact control unit for smoke and heat exhaust ventilation systems operating with 24 V DC voltage, suitable for staircases.

TECHNICAL DATA (Rated values)

Operating voltage:	230 V AC (195 – 253 V AC, 50/60 Hz)
Max. power consumption:	506 W
Output voltage:	24 V DC (20 – 28 V DC / 0,5 Vpp)
Output current:	**10 A**
Ambient temperature range:	-5°C … + 40°C
Protection rating:	IP40 IP54 with alternatively fixing brackets
Housing:	Surface mounting, steel sheet, RAL 7035 (light grey)
Dimensions (WxHxD):	400 x 300 x 150 mm
Connection terminals:	1,5 mm² / Drives: 6 mm² (rigid wire)
VdS certification no.:	G 514001
Motherboard:	**1 SHEV group / 1 Vent group**

Feature/Equipment
- Further settings (e.g. maintenance period) only available with extra cost software license
- Cable entry from above / below
- Prepared for **2** maintanance-free backup batteries **2x 12 V / 7 Ah** (Part. Nr. 542000)

EMB7300 10 A 0102	**683010-0102**				

Application: Compact control unit for smoke and heat exhaust ventilation systems operating with 24 V DC voltage, suitable for staircases.

TECHNICAL DATA (Rated values)

Operating voltage:	230 V AC (195 – 253 V AC, 50/60 Hz)
Max. power consumption:	506 W
Output voltage:	24 V DC (20 – 28 V DC / 0,5 Vpp)
Output current:	**10 A**
Ambient temperature range:	-5°C … + 40°C
Protection rating:	IP40 IP54 with alternatively fixing brackets
Housing:	Surface mounting, steel sheet, RAL 7035 (light grey)
Dimensions (WxHxD):	400 x 300 x 150 mm
Connection terminals:	1,5 mm² / Drives: 6 mm² (rigid wire)
VdS certification no.:	G 514001
Motherboard:	**1 SHEV group / 2 Vent groups**

Feature/Equipment
- Further settings (e.g. maintenance period) only available with extra cost software license
- Cable entry from above / below
- Prepared for **2** maintanance-free backup batteries **2x 12 V / 7 Ah** (Part. Nr. 542000)

EMB7300 10 A 0204	**683010-0204**				

Application: Compact control unit for smoke and heat exhaust ventilation systems operating with 24 V DC voltage, suitable for staircases.

TECHNICAL DATA (Rated values)

Operating voltage:	230 V AC (195 – 253 V AC, 50/60 Hz)
Max. power consumption:	506 W
Output voltage:	24 V DC (20 – 28 V DC / 0,5 Vpp)
Output current:	**10 A**
Ambient temperature range:	-5°C … + 40°C
Protection rating:	IP40 IP54 with alternatively fixing brackets
Housing:	Surface mounting, steel sheet, RAL 7035 (light grey)
Dimensions (WxHxD):	400 x 500 x 200 mm
Connection terminals:	1,5 mm² / Drives: 6 mm² (rigid wire)
VdS certification no.:	G 514001
2x Motherboard:	**2 SHEV group / 4 Vent groups**

Feature/Equipment
- Further settings (e.g. maintenance period) only available with extra cost software license
- Cable entry from above / below
- Prepared for **2** maintanance-free backup batteries **2x 12 V / 7 Ah** (Part. Nr. 542000)

ORDER DATA

	Part.-No.				
EMB7300 20 A 0102	**683220-0102**				

Application: Compact control unit for smoke and heat exhaust ventilation systems operating with 24 V DC voltage, suitable for staircases.

TECHNICAL DATA (Rated values)

Operating voltage:	230 V AC (195 – 253 V AC, 50/60 Hz)
Max. power consumption:	805 W
Output voltage:	24 V DC (20 – 28 V DC / 0,5 Vpp)
Output current:	**20 A**
Ambient temperature range:	-5°C … + 40°C
Protection rating:	IP40 IP54 with alternatively fixing brackets
Housing:	Surface mounting, steel sheet, RAL 7035 (light grey)
Dimensions (WxHxD):	400 x 400 x 200 mm
Connection terminals:	1,5 mm² / Drives: 6 mm² (rigid wire)
VdS certification no.:	G 514001
Motherboard:	**1 SHEV group / 2 Vent groups**

Feature/Equipment
- Further settings (e.g. maintenance period) only available with extra cost software license
- Cable entry from above / below
- Prepared for **2** maintanance-free backup batteries **2x 12 V / 7 Ah** (Part. Nr. 542000)

EMB7300 20 A 0204	**683220-0204**				

Application: Compact control unit for smoke and heat exhaust ventilation systems operating with 24 V DC voltage, suitable for staircases.

TECHNICAL DATA (Rated values)

Operating voltage:	230 V AC (195 – 253 V AC, 50/60 Hz)
Max. power consumption:	805 W
Output voltage:	24 V DC (20 – 28 V DC / 0,5 Vpp)
Output current:	**20 A**
Ambient temperature range:	-5°C … + 40°C
Protection rating:	IP40 IP54 with alternatively fixing brackets
Housing:	Surface mounting, steel sheet, RAL 7035 (light grey)
Dimensions (WxHxD):	400 x 500 x 200 mm
Connection terminals:	1,5 mm² / Drives: 6 mm² (rigid wire)
VdS certification no.:	G 514001
2x Motherboard:	**2 SHEV group / 4 Vent groups**

Feature/Equipment
- Further settings (e.g. maintenance period) only available with extra cost software license
- Cable entry from above / below
- Prepared for **2** maintanance-free backup batteries **2x 12 V / 12 Ah** (Part. Nr. 542200)

10 A **20 A**

ACCESSORIES

Part.-No.		VE			
500001	**Wall fixing brackets IP54**	4 piece			

ORDER DATA

	Part.-No.				
WR-Set Type 7x/8x – Wind and Rain Sensor Set	**482100**				

Application: Sensors for wind and rain to work with an evaluation unit WRAG2 or Typ IV, a WM Weather-Module or directly with a SHEV control unit, for closing and blocking the natural ventilation under bad weather conditions.

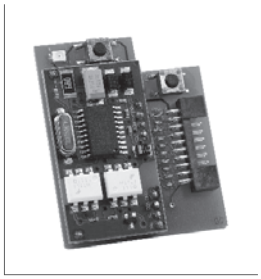
TECHNICAL DATA (Rated values)

Rated voltage:	24 V DC (+/- 20%)
Rain sensor Type III – heated sensor surface, switch-off delay approx. 5 min.	
Contact:	1 Change-over switch, max. 48 V / 5A
Current consumption:	<150 mA
Housing:	Surface mounting, ABS black with stainless steel bracket
Dimensions (WxHxD):	100 x 85 x 172 mm
Connection cable:	Non-halogen cable, approx. 4 m
Volt free contac:	1 Change-over switch, max. 48 V / 1A
Wind sensor Type III – Anemometer with 3 impact resistant wind cups (PA6)	
Measuring principle:	Pulse generator
Dimensions:	250 x 250 x 80 mm
Connection cable:	Non-halogen cable, approx. 4 m

Feature/Equipment
- Set including: Wind sensor Type III (Part.-No. 482021), rain sensor Type III (Part.-No. 480210), clamp ring (Part.-No. 515950), aluminium bracket for pole or wall mounting (Part.-No. 482093), without mounting screws

BI-K - KNX Interface LZ1 / LZ6 / EMB 7300	**683999**				

Application: Plug-in card for communication between the controllers **Aumüller** LZ1, LZ6 and EMB 7300 to the KNX BUS system.



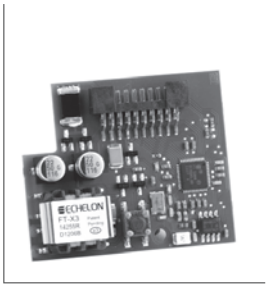
TECHNICAL DATA

Rated voltage:	24 V DC
Ambient temperature range:	-5°C … + 40°C
Relative humidity:	(no condensate) 5% … 90%
Data points:	up to 16 pieces per drive line
BUS current:	9mA
Housing:	without (assembled PCB)
Dimensions (WxH):	51 x 42 mm
Connection terminals:	2 x 2 x 0,8 mm (KNX-BUS-Terminal)

Feature/Equipment
- Data of the control (e.g. drive position) are sent on the KNX-BUS.
- The controls received direct orders from the KNX-BUS (e.g. position information, weather data).
- The licensed version of the „EMB compact configurator" required - for commissioning.

LON73	**683243**				

Application: Plug-in network card for EMB7300 for connection and integration in LON-networks.



TECHNICAL DATA

Rated voltage:	24 V DC
Ambient temperature range:	-5°C … + 40°C
Relative humidity:	(no condensate) 5% … 90%
Housing:	w/o (assembled PCB)
Dimensions (WxHxD):	40 x 50 x 13 mm
LON-Transceiver:	LPT10
Connection terminals:	Clamping range 0,6 – 0,8 mm (rigid wire) (included in delivery)

Feature/Equipment
- Connector for plugging the network card to the motherboard.
- Plastic holder for fixing the plug-in card on the motherboard .
- Configuration of the functional performances of connected control units via LON-Maker or compatible software.
- The licensed version of the „EMB compact configurator" required - for commissioning.

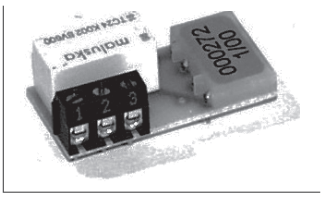
OPTIONS

LON programming					
Programming the LON73 - 2x EMB7300 master / slave	**683270**				

ORDER DATA

	Part.-No.
REL65	

Application: Plug-in card for EMB7300 with relay for forwarding the alarm or fault signal to external devices.



TECHNICAL DATA

Rated voltage:	24 V DC
Ambient temperature range:	-5°C … + 40°C
Housing:	w/o (assembled PCB)
Dimensions (WxHxD):	20 x 40 x 13 mm
Volt free contac:	1 Change-over switch, max. 48 V / 1A
Connection terminals:	3x 1,5 mm² (rigid wire)

Feature/Equipment
- Connector for plugging the relay card to the motherboard

VERSIONS

Part.-No.		
650200	Delivery in parcel	for customer self-installation
650200-9	Module factory fitted	factory fitted and fully wired

7xPSB	

Application: Plug-in card for EMB7300 for connection and powering of external consumers with **24 V DC voltage**.

TECHNICAL DATA

Rated voltage:	24 V DC
Ambient temperature range:	-5°C … + 40°C
Output current:	**0,5 A**
Housing:	w/o (assembled PCB)
Dimensions (WxHxD):	20 x 32 x 13 mm
Connection terminals:	Screw terminals 1,5 mm² (rigid wire)
Voltage tap:	2 terminals 24 V DC backup voltage supplied 2 terminals 24 V DC mains voltage supplied

Feature/Equipment
- Connector for plugging the card to the motherboard
- Screw-type-terminal 4 x 1,5 mm²

NOTE: The overall power consumption of connected external consumers is to be considered!

VERSIONS

Part.-No.		
683256	Delivery in parcel	for customer self-installation
683256-9	Module factory fitted	factory fitted and fully wired

ORDER DATA

	Part.-No.				
USB-Cable	**683253**				

Application: USB-Cable for connecting a PC with EMB7300 to configurate basic and special functions.

TECHNICAL DATA

USB-Standard:	USB2
Cable length:	3 m

Feature/Equipment
- Software „EMB-Compact“ required!

Accumulators					

Application: Maintenance of standby operation of SHEV control units over a period of 72 hours of main power supply loss.

TECHNISCHE DATEN

Type:	Lead storage battery
Output voltage:	12 V DC
Capacity:	see order data
Lifetime:	4 years (normal conditions)
Connections:	1,2 – 12 Ah: blade terminals 4,8 mm 17 – 38 Ah: screw terminals M5
Housing:	plastic, impact- and break-resistent

Feature/Equipment
- Maintenance free operation, long lasting durability, hight charging performance and long-cycle stability
- Disposal due to local, national or international rules (WEEE)

NOTE: Always 2 batteries are required per control unit!

OPTIONS

for control units with backup power supply

2,2/2,3 Ah, 12 V	**1 Pcs.**	**541000**			
7 Ah, 12 V	**1 Pcs.**	**542000**			

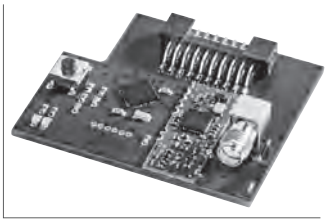
SOFTWARE / LICENSE / PROGRAMMING

Configuration software for extended scope of functions System Requirements: Microsoft® Windows 7 / Microsoft® Windows 10 64 Bit	Part.-No.			
First software license (3 years)	**683260**			
Follow-up software license (3 years)	**683261**			
Configuration of customized functions at the factory for one Control Unit	**683262**			

ORDER DATA

	Part.-No.				
Receiver plug-in card radio SHEV	**528738**				

Application: Plug-in card for radio communication between the **Aumüller** SHEV Control Unit EMB 7300 and **up to 10 Radio-HSE**.



TECHNICAL DATA

Rated voltage:	24 V DC
Ambient temperature range:	-5°C … + 40°C
Relative humidity:	(no condensate) 5% … 90%
Housing:	without (assembled PCB)
Dimensions (WxH):	51 x 42 mm
Connection:	SMA antenna connection

RADIO

Feature/Equipment
- Production of a bidirectional communication between **Radio-HSE** and **Aumüller** SHEV Control Unit EMB 7300.
- The licensed version of the „EMB compact configurator" required - for commissioning.

Radio Antenna			**528737**		

Application: Radio Antenna for radio communication between the **Aumüller** SHEV - Control Unit EMB 7300 and up to 10 Radio-HSE (Break-glass unit main control panel).

TECHNICAL DATA (Rated values)

Ambient temperature range:	-5°C … + 40°C
Relative humidity:	(no condensate) 5% … 90%
Dimensions (WxHxD)	34 x 265 x 82 mm
Connection:	SMA antenna connection

RADIO

Feature/Equipment
- Production of a bidirectional communication between Radio-HSE and EMB 7300.
- The licensed version of the „EMB compact configurator" required - for commissioning.

Radio-HSE - Break-glass unit main control panel (plastic)					

Application: Break-glass unit with indicators and buttons for the manual control of the emergency open and close functions of a SHEV group, for radio-connection in the **Aumüller** SHEV - Control Unit EMB 7300.

TECHNICAL DATA (Rated values)

Operating voltage:	3,6 V DC
Ambient temperature range:	-5°C … + 40°C
Housing:	Surface mounting, plastic (ABS)
Dimensions (WxHxD)	130 x 130 x 32 mm
Protection rating:	IP30
Display:	Emergency OPEN, power, fault
Control elements:	Buttons for emergency OPEN / CLOSE

RADIO

Feature / Equipment
- Lockable, glazed door (including key)
- Radio button
- 3,6 V Lithium battery
- The licensed version of the „EMB compact configurator" required - for commissioning.

VERSIONS

Radio-HSE	plastic red	(similar to RAL 3000)	**528731**			
Radio-HSE	plastic yellow	(similar to RAL 1018)	**528732**			
Radio-HSE	plastic grey	(similar to RAL 7035)	**528733**			
Radio-HSE	plastic blue	(similar to RAL 5015)	**528734**			
Radio-HSE	plastic orange	(similar to RAL 2011)	**528735**			

OPTIONS

RADIO

Spare battery 3,6 V Lithium	**545050**				

ORDER DATA

	Part.-No.				
Radio Ventilation Control FLS 24V	**623000**				

Application: Room automation control unit for one drive 24 V DC or one SHEV Control Unit, including a weather station with rain, temperature, sun and wind sensor and a radio control with indoor temperature sensor.

TECHNICAL DATA

Radio control frequency:	868,2 MHz
Control Panel	
Housing:	plastic material
Total weight:	approx. 170 gr. (including batteries)
Colour:	matt white (similar to RAL 9016)
Mounting:	surface mounted (aP)
Dimensions (W × H × D):	approx. 103 × 98 × 28
Ambient temperature range:	operation 0…+50°C, storage -10…+50°C
Ambient air humidity:	max. 80% rF, avoid bedewing
Operating voltage:	2 x 1,5V (2 batteries, AA / mignon / LR6) **or** 2 x 1,2V (2 rechargeable batteries, AA / mignon / LR6)
Weather Station	
Housing:	plastic material
Total weight:	approx. 200 gr.
Colour:	white / translucent
Mounting:	surface mounted (aP)
Protection rating:	IP 44
Dimensions (W×H×D):	approx. 96 × 77 × 118
Ambient temperature range:	operation -30…+60°C, storage -30…+70°C
Operating voltage:	12 - 40 V DC
Power consumption:	approx. 2,2 W (at 24 V), standby approx. 2 W (at 24 V)
Switching capacity relay:	(OPEN / CLOSE / COM) volt free contacts
Rain sensor heating:	approx. 1,2 W
Temperature measurement range:	-40…+80°C
Wind measurement range:	0…35 m / sec
Brightness measurement range:	0…150 kLux

Feature/Equipment

- Radio connection between weather station and control panel.
- Control panel for basic setting, setting of the automatic function and for manual operation.
- Opening position adjustable for automatic mode (e.g. open only halfway).

aumüller

2 SHEV – Modular Control Units

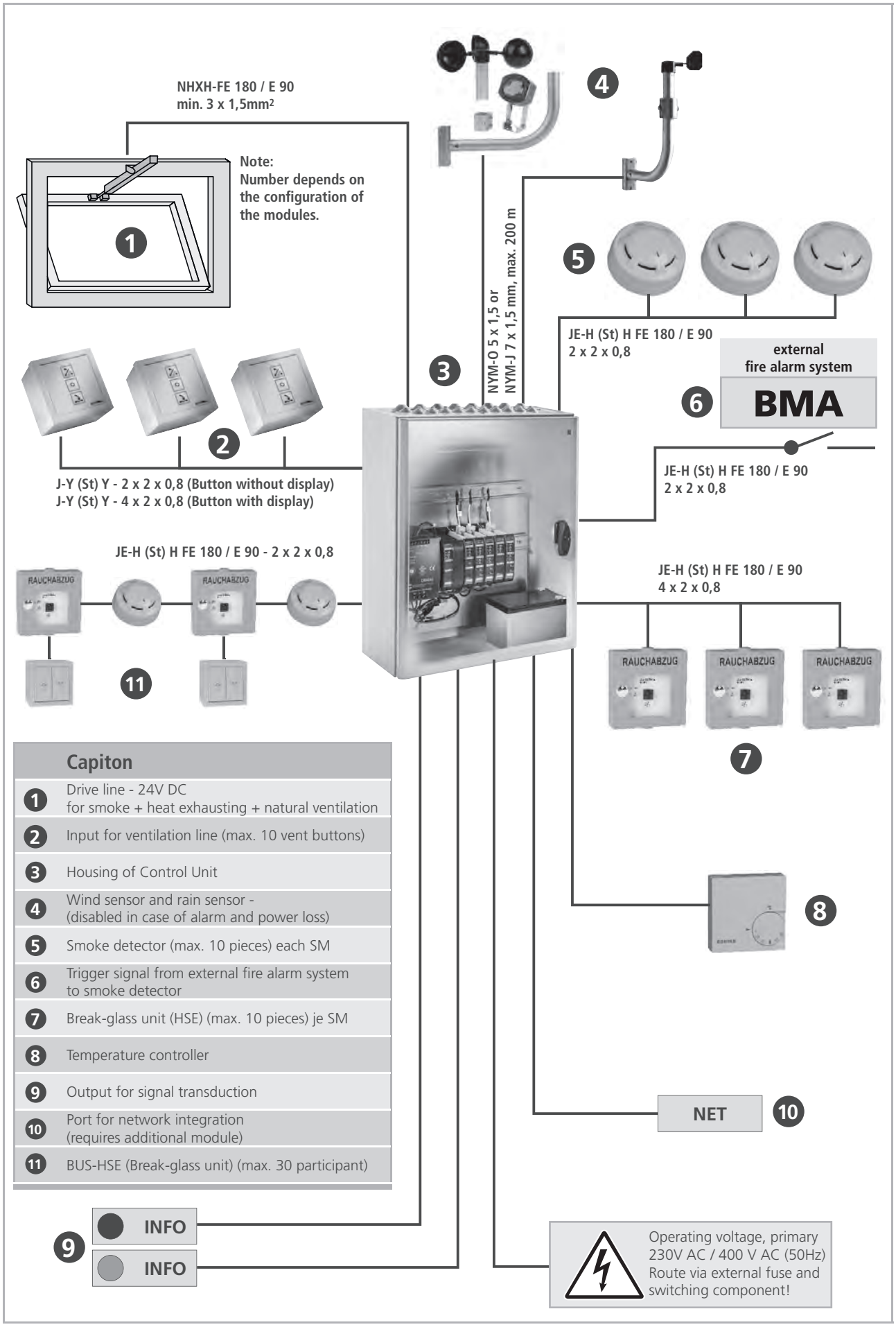
For this product series, a Type III Environmental Product Declaration (EPD) was issued according to ISO 14025 and EN 15804.

The LCA results of the different product types are listed at the end of this product catalogue. The EPD documents can be viewed or downloaded from our homepage **www.aumueller-gmbh.de**.

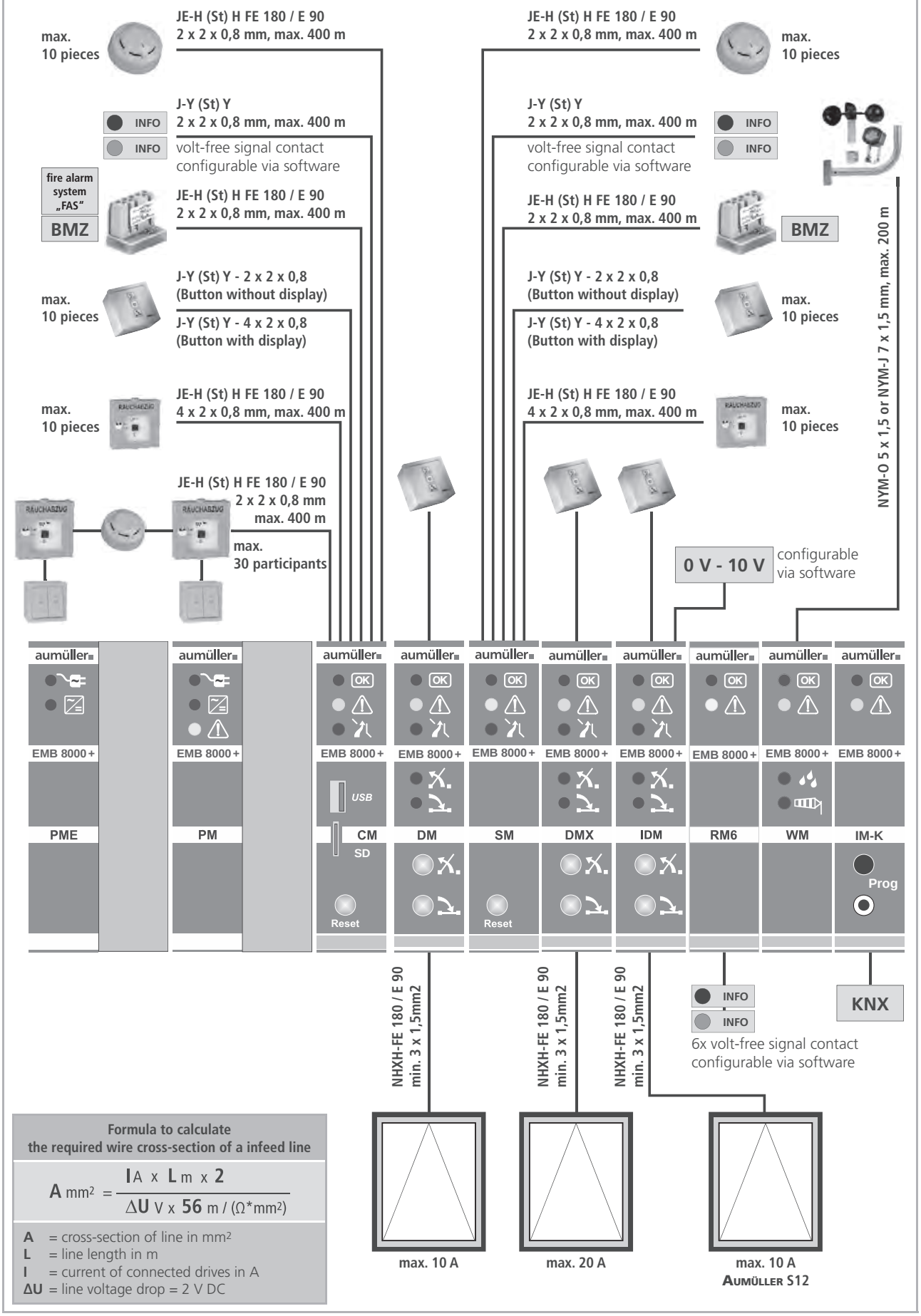
PRODUCT FEATURES EMB 8000+

- Modular control panel with digital bus technology and power supply for 24 V DC drives for use in smoke and heat exhausting ventilation (SHEV) and in controlled natural ventilation systems
- Control panel compliant with prEN 12101-9
- Power supply compliant with EN 12101-10
- Low residual ripple output voltage (<2 Vpp) - compatible with all common drives
- Easy and space saving installation on 35-mm snap-on mounting rail with many combination options
- Easy configuration of SHEV and ventilation groups by selective lining up of the modules
- Control- and Sensor-Module with 3 monitored detector lines with different priorities for connecting with:
  - Manual break-glass unit (HSE)
  - Automatic smoke and heat detectors
  - Control signal from fire alarm system (FAS)
- Drive-Module with monitored line outputs for connection of drives up to 20 A
- Relay-Module for the evaluation and transsmision of events (emergency open signal, fault signal, feedback signals)
- Weather-Module for connection with wind speed sensors, wind direction sensors and rain sensors
- Network-Modules for connection and integration with building management systems (CAN, KNX)
- All ventilation button inputs with OPEN-STOP-CLOSE function and adjustable priorities
- Clear operating and display elements
- Extensive settings of the basic functions via software offered by download free of charge
- Special functions programmable via extra costs software license as in the following:
  - Service and maintenance intervals
  - Changes of priorities, switching-thresholds and switch-off times
  - Deactivation of the detector lines or of their monitoring
  - Control of the alarm functions by a volt-free contact of the fire alarm system (FAS)
  - Network integration
- Steel sheet housing, protection class IP40 / IP54 alternatively available with wall fixing brackets, cable exit from above
- Prepared for connection of backup batteries (72 hours)
- VdS certification no.: G 512005
- In the state of delivery, the interconnection of SHEV and ventilation groups can be configured - by targeted lining up of the modules - without software.
- System components for individual assembly consisting of functional basic control units each with one SHEV and one ventilation group, as well as a variety of modules and components that can be ordered either as factory-installed or for customer-side yourself installation.
- Software licences for enabling and configuration of complex integrated special functions as well as for the interconnection of multiple control units to a network with higher-ranking funktions for SHEV, ventilation and weather groups
- Fully assembled and configured - at the factory or by self-expansion.
- Fully assembled and configured from the factory or for self-removal
- Individual customization through extensive software options

SCOPE OF THE CONFIGURATION SOFTWARE EMB 8000+		
Functions	Standard	Lizenz
Load configuration / Safe / Safe as	✓	✓
View, save and print system status	✓	✓
Set thresholds and on-off delay of wind sensor	--	✓
Create PDF of the configuration	✓	✓
System configuration / Load settings / Save settings	✓	✓
Read RealTime LOG-Data	✓	✓
Set Password for control unit	--	✓
Edit RealTime LOG-Data	--	✓
Firmware update	--	✓
Configure switching thresholds and on-off delay of the wind sensor	--	✓
Configure switching thresholds of wind direction sensor	--	✓
System time synchronisation / updating	--	✓
Backup battery monitoring: Performance and fault indications (active, windows OPEN / CLOSE)	--	✓
Set backup battery type and charging characteristics (temperature dependent / constant)	--	✓
Power supply loss: Performance and fault indication (Energy saving mode, CLOSE, ventilation mode)	--	✓
Ventilation push button in dead-man or jog-switch mode (OPEN or/and CLOSE direction)	--	✓
Ventilation push button as one rocker push-button (OPEN/STOP or CLOSE/STOP with one button)	--	✓
Set step-automatic in OPEN-direction (Automatic enabled / Time setting)	--	✓
Enable reset of smoke detector lines with emergency-CLOSE button	--	✓
Enable control of smoke detector line by fire alarm system „FAS“	--	✓
Disable alarms caused by detector line monitoring failures (Automatic and manual detectors)	--	✓
Disable fault detection of detector lines (Automatic and manual detectors)	--	✓
Set functions of PM, CM and SM relay contact	--	✓
Set service and maintenance interval and system behaviour	--	✓
Set drive line mode for use with motors, magnets or gas pressure generators	--	✓
Disable retriggering of drive line in alarm mode	--	✓
Set switch-off time of drive lines	--	✓
Enable and set automatic time-controlled drive line closing mode for ventilation purpose	--	✓
Enable drive closing mode on primary power loss	--	✓
Set drive run time and opening stroke limit for ventilation purpose	--	✓
Set failures of drive line monitoring as alarm signal	--	✓
Set drive running direction in alarm mode from open to close	--	✓
Set signal input of DM drive line (feedback input / inhibiting input)	--	✓
Set wind direction dependent OPENING / CLOSING of drive lines	--	✓
Reset switch positions to the status before the weather control were activated	--	✓
Set emergency close button from jog-switch mode to dead-man mode	--	✓
Set functions of RM6 relays	--	✓
Set assignment of detector and drive lines to SHEV, ventilation and weather groups	--	✓
Interconnection of several control units to a network with higher-ranking functions	--	✓
Integration into digital networks with additional Plug-in Interface-Modules (CAN, KNX)	--	✓



Capiton	
1	Drive line - 24V DC for smoke + heat exhausting + natural ventilation
2	Input for ventilation line (max. 10 vent buttons)
3	Housing of Control Unit
4	Wind sensor and rain sensor - (disabled in case of alarm and power loss)
5	Smoke detector (max. 10 pieces) each SM
6	Trigger signal from external fire alarm system to smoke detector
7	Break-glass unit (HSE) (max. 10 pieces) je SM
8	Temperature controller
9	Output for signal transduction
10	Port for network integration (requires additional module)
11	BUS-HSE (Break-glass unit) (max. 30 participant)



Formula to calculate the required wire cross-section of a infeed line

$$A\ mm^2 = \frac{I_A \times L_m \times 2}{\Delta U_V \times 56\ m / (\Omega * mm^2)}$$

A = cross-section of line in mm²
L = line length in m
I = current of connected drives in A
ΔU = line voltage drop = 2 V DC

IMPORTANT NOTES

The modular design of EMB 8000+ in combination which digital network technology make it possible for our customers to size, assemble and configures the control units by themselves. For this **Aumüller** is providing the required hardware and software.

The minimum equipment of a fully functional control unit:

- 1x Switch mode power supply PS 5 A up to 24 A – the installation up to 3 identical power supplies up to a maximum of 72 A is possible
- 2x Backup Prepared for batteries 12 V DC from 7 Ah to 38 Ah to ensure the emergency power supply for 72 hours
- 1x Power-Module PM for the charging control of batteries – completed with up to 2 Power-Module-Extensions PME
- 1x Control-Module CM with 3 detector input lines for automatic and manual smoke detectors and 1 ventilation button input line
- 1x Drive-Module DM, IDM or DMX for connection of drives with a total current consumption of 10 A respectively 20 A and 1 ventilation button input line

The control units on the following pages are intended for individual configuration and are prepared for 1 SHEV group with 1 ventilation line (10 A or 20 A) and are preprogrammed for basic functions. **Aumüller** does not assume any liability for further changes and configurations of these control units.

PLANNING NOTES

The build-in modules of EMB 8000+ are connected to each other and communicate via the digital network bus. On delivery respectively as long as the delivered software configuration is not changed, the modules are self-learning. SHEV groups can be easily and felxibel configured by selective lining up of the modules. A new SHEV group is created by adding a Sensor-Module (SM) into the row. All following Drive-Modules (DM / DMX) belong to the new SHEV group.

In the control units with 2 or 3 switch mode power supplies in one housing (48 A and 72 A), the interconnection of Drive-Modules (DM / DMX) and their total current consumption has to be adapted to the current consumption of the individual switch mode power supply at which they are connected. This can be done by replugging the power supply of the modules. The SHEV group to which the DM/DMX belongs is irrelevant. To ensure the optimum of safety in case of a failure of a switch mode power supply, it is recommended to power the DM/DMX of one SHEV group from only one switch mode power supply. The maximum switching capacity of the DM-modules is to be noted.

Due to the compact design of the modules, the module connection terminals for peripheral devices are limited to 1 mm² and for drive lines to 2,5 mm² rigid wire conductors. The cross sections of the wires between control unit and drives depend on the cable length, the current consumption as well as the voltage drop on the line. A 35-mm snap-on mounting rail is provided inside the housing, for additional bigger connection terminals if the required cable cross section is larger than the module-own connection terminals. Suitable connection terminals will be found under „accessories“. The cross sections of the cables may be calculated with the formula indicated in chart 6.

LIMITATIONS OF EXPANDABLE BASIC VERSIONS

Please note the data in the following when sizing control units:

- Number of smoke detectors per CM / SM 10
- Number of break-glass units per CM / SM 10
- Number of digital trigger units per CM 30
- Number of smoke detectors per control unit 60
- Number of break-glass units per control unit 60
- Number of networkable control units via CAN-BUS 30
- Maximum no. of modules per control unit
- Internal current consumption of modules see chart 3
- Battery capacity / max. power consumption per control unit see chart 3
- Dimensions of housing
- No. of cable entries

The values in the charts are referring to the use of all module inputs and outputs. The current values are calculated to ensure the backup power supply for 72 hours. Further calculation criteria on request.

The internal current consumption of all used modules may not exceed the maximum current value of the control unit. Please add the current values of all modules to receive the total consumption.

All information of outside diameters of the cables are referring to the cable types used in Germany. The wire cross sections are indicated in mm². To obtain the electric protection rating of the housing is per cable entry only one cable allowed. The total numbers of the needed cables is to be calculated (see chart 1) and to be compared with the number of cable entries (see chart 4).

CONFIGURATION

The basic configuration software for EMB 8000+ control units is available download on www.aumueller-gmbh.de free of charge for.
For the configuration of special functions or integration of control units into networks, a software license (with extra costs) is required.

CHART 1: PARAMETER OF MODULES EMB 8000+

Features					Cables for inputs and outputs							
Module	Module width [mm]	Module units [ME]	Internal current consumption [mA]	Cable entries when using all inputs/outputs [pcs.]	Smoke detectors, FAS	Manual detectors Break-glass units	Drive line	Ventilation button with display	Ventilation button w/o display, other inputs	Volt free contact, drive feedback signal	Wind/Rain/Wind direction	Power supply
PM	46	2	16,0	1								1
PME	46	2	0,0	0								
CM+	23	1	34,1	5	2	1			1	1		
SM	23	1	12,6	5	2	1			1	1		
DM	23	1	5,3	3			1	1		1		
DMX	46	2	5,3	3			1	1		1		
IDM	23	1	6,0	5			1	1		1		
RM6	23	1	5,3	1						1–6		
IM-K	23	1	6,0	10								
WM	23	1	13,0	4					2	1	1	
Rec. Number of wires (w/o protective earth conductor)					4	8	4	8	4	4	7	3

CHART 2: INTERNAL CURRENT CONSUMPTION OF BACKUP BATTERY POWERD DETECTORS

Break-glass main unit	HSE	1,2 mA
Break-glass seccondary unit	HSE-N	0,0 mA
Smoke detector	ORM	0,1 mA
Wind direction sensor	WRG	7,1 mA
BUS Break-glass main unit	BUS-HSE	2,8 mA
BUS Smoke detector	BUS-RM	1,0 mA

CHART 3: MAXIMUM CURRENT CONSUMPTION PER CONTROL UNIT

PS / Battery	7 Ah	12 Ah	17 Ah	24 Ah	38 Ah
10 A	42 mA	120 mA	140 mA	240 mA	350 mA
24 A		70 mA	120 mA	200 mA	300 mA
48 A			80 mA	170 mA	300 mA
72 A				100 mA	300 mA

CHART 4: DIMENSIONS OF CONNECTION TERMINALS (pull spring feed through terminal blocks)

Terminal size [mm]	6 mm²	10 mm²	16 mm²	End bracket
Cross section of the wire (rigid wire)	0,13–6 mm²	2,5–10 mm²	4–16 mm²	
External width (feed through terminal)	6 mm	10 mm	12 mm	8 mm
Width of set with 5 terminals + end bracket	38 mm	58 mm		

CHART 5: CALCULATION OF DRIVE CABLES

A = 2 * L * I / (56 * ΔU)

A	Cross section of wire [mm²]
L	Length of the line [m]
I	Current of the drives [A]
ΔU	Voltage drop on the line [V] = max. 2 V

1. Calculation of the output current

How big is the current consumption of all the drives within the system?

Example:
There are 12 facade windows each with 2 drives * 1 A and
3 roof windows each with 1 drive * 2 A.
Solution:
Required current: 12 * 2 * 1 A + 3 * 2 A = 30 A
Used Control Unit with **48 A**

2. Number of vent groups / current per group

1. How many vent groups are required?
2. Which vent group need more than 10 A, which less than 10 A?

Example:
The windows are partitioned in 3 groups:
2 facade groups each with 6 windows * 2 A = 2 * 12 A
1 roof group with 3 windows * 2 A = 1 * 6 A
Solution:
There are 2 DMX und 1 DM required.
When a **basic control unit with 48 A and DMX** should be used,
in additional: **1 DMX and 1 DM**

⚠ In each basic control unit 1 DM / IDM or 1 DMX is included!

3. Number of SHEV groups

How many fire groups / SHEV groups are required?

Example:
in case of fire all 3 window groups should open simultanously within one SEV group.
Solution:
No additional **SM** is required.

⚠ In each basic control unit 1 CM is included for 1 SHEV group!
Any further SHEV group (or fire sector) requires 1 SM.

4. Wind / Rain detection

1. Should the windows to be closed automatically in case of wind/rain ?
2. In the case of a fire alarm should the windows be controlled wind direction dependent ?

Example:
All 3 window groups should be closed in case of wind/rain.
No wind direction control is required.
Solution:
1 WM is required.

⚠ For the configuration of the wind dependent control, a subject to charges licence for the configuration software EMB8000+ is required and a training by AUMÜLLER is strongly recommend!
The wind/rain sensores are to be ordered separately.

5. Transmission of status messages

Are volt free contacts required for the transmission of status messages to external devices?

Example:
A possible malfunction of the control unit should be transmitted to the building management system.
Solution:
1 RM6 is required.

⚠ Every RM6 has 6 volt free change over contacts.
For the configuration of RM6 a subject to charges licence for the configuration software EMB8000+ is required and a training by **Aumüller** is strongly recommend!

6. Calculation of the cable cross section

Which cross section (A) will be needed for single wires due to the formula from chart 5?

Example:
Cable length between control unit and junction box:
Window group 1 = 35 m (12 A)
Window group 2 = 45 m (12 A)
Window group 3 = 75 m (6 A)
Solution:
Window group 1: A = 2 * 35 m * 12 A / (56 * 2) = 7,5 mm²
Window group 2: A = 2 * 45 m * 12 A / (56 * 2) = 9,7 mm²
Window group 3: A = 2 * 75 m * 6 A / (56 * 2) = 8,0 mm²
For all the drive cables **terminals 10 mm²** are required.

⚠ The wire cross sections depends on the drive current, the cable length and the voltage drop (max. 2 V allowed).
The cables to the drives of SHEV systems must be fire resistant.
It is not allowed to use the green and yellow protective conductor for other purposes!
The next larger cross section is always to be chosen!
If the cross section of the cables are too large, the drives must be partitioned onto additonal DM(X) modules.

7. Mounting of additional clamps

Are the terminal clamps of the modules big enough to connect the required cable cross sections or are additonal clamps required?

Example:
All 3 DM(X) modules should be equipped with 10 mm² terminals.
The feedback contact of the WM module and all 6 RM6 outputs should be wired on 6 mm² terminals.
Solution:
In total are required:
3 DM(X) * 5 = **15 terminals** for the drive lines and
(1 + 6 ontacts) * 3 = **21 terminals** for the sensor lines.

A

⚠ When mounting a DMX, output terminals for the drive lines are absolutely neccessary!
The terminals are available for 6/10/16 mm². For each drive line the use of 5 terminals is reccomended, to connect all the cable cores.
Clamps up to 6 mm² are needed for the detection lines and for the feedback contacts.
The number of the clamps is to be determinated due to the EMB8000+ description or due to the installed cables.

A

8. Current consumption of the modules / battery capacity

Which battery capacity is needed to cover the current consumption of the used components (modules, sensors, etc.) according to chart 1?

Example:
The configurated system with 48 A power supply contains:
1 PM, 1 PME, 1 CM, 2 DMX , 1 DM, 1 WM and 1 RM6
Components as in the following are connected in additional:
10 breck-glass units (HSE) and 20 smoke detectors
Solution:

1 PM	= 1 * 16,1 mA = 16,1 mA
1 CM+	= 1 * 34,1 mA = 34,1 mA
2 DMX	= 2 * 5,3 mA = 10,6 mA
1 DM	= 1 * 5,3 mA = 5,3 mA
1 WM	= 1 * 13,0 mA = 13,0 mA
1 RM6	= 1 * 5,3 mA = 5,3 mA
TOTAL:	= 70,9 mA internal consumption for modules
10 HSE	= 10 * 1,2 mA = 12,0 mA
20 Rauchmelder	= 20 * 0,1 mA = 2,0 mA
TOTAL:	= 14 mA internal consumption for add. components
TOTAL SUM:	= **84,9 mA current consumption.**

Due to chart 3 a **battery capacity** (2 batteries 12V) is required for a 48 A control unit..

⚠ In every standard or basic control unit 1 PM (PME) and 1 CM are included. Their power consumption is to be considered! The power consumption of additional built-in devices, which are feeded with backup power from the control unit, has to be considered into the calculation as well!

9. Size of the housing

How much space is required for the modules, additional devices and terminals (see Basic Control Units)?

Example:
Additional components needed for the basic control unit:
1x DMX, 1x DM, 1x WM and **1x RM6** as well as **15 terminals** for drive lines and **21 terminals** for sensor lines.
Solution:

1 DMX	= 2 ME
1 DM	= 1 ME
1 WM	= 1 ME
1 RM6	= 1 ME
TOTAL:	= **5 free ME for modules**
15 terminals 10 mm² * 10 mm	= 150 mm + end bracket 8 mm = 158 mm
21 terminals 6 mm² * 6 mm	= 126 mm + end bracket 8 mm = 134 mm
TOTAL:	= **292 mm free snap-on mounting rail for terminals**

⚠ It is necessary to have one end bracket for every terminal block. The end bracket is included in delivery.

10. Selection of the basic control unit

Which control unit fulfils the criteria?

Example:
Output current: 48 A
Type of DM: DMX
Housing for: 5 free ME
292 mm free mounting rail
Solution:
The basic control unit **48 A with DMX** and standard housing **600 x 600 x 250 mm** - part-no.: 688348-9502 offers space for 8 ME and contains 500 mm snap-on mounting rail.

⚠ The basic control units differ to the current consumption, the size of housing and the type of used DM (DM for 10 A or DMX for 20 A). The size of housing must be equal or less to the values stated in the price list articles!

Factory fitted or self installation

Purchase order of a factory fitted customized control unit (at Aumüller)

Place an order for an expandable basic version control unit + factory fitted modules

1	Basic Control Unit 48 A, DMX, standard housing	688348-9502
1	DMX	688255-9
1	DM	688250-9
1	WM	688180-9
1	RM6	688200-9
15	Terminals for drive line (10 mm²)	659903
21	Terminals for sensor line (6 mm²)	659902
2	Batteries 24 Ah	544000
	Factory fitted configuration	688930

Purchase order of single components for the customer-side self installation

Place an order for an expandable basic version control unit + modules for self installation

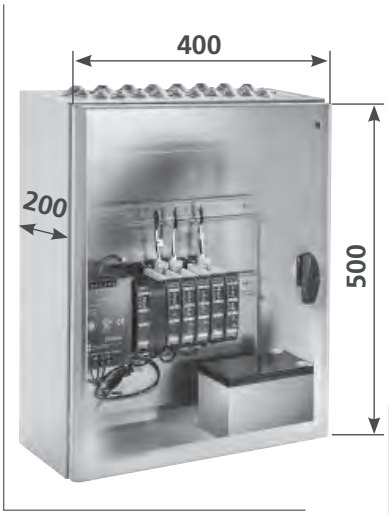
1	Basic Control Unit 48 A, DMX, standard housing	688348-9502
1	DMX	688255
1	DM	688250
1	WM	688180
1	RM6	688200
3	Terminal sets 5 x 10 mm² for drive line	659908
5	Terminal sets 5 x 6 mm² for sensor line	659906
2	Batteries 24 Ah	544000

Configuration software is required to configurate RM6!

ORDER DATA

EMB 8000+ 5 A (400 x 500 x 200 mm)

Application: Expandable basic version of modular control unit EMB 8000+, factory fitted and fully wired for customer-side self-configuration.



5 A

TECHNICAL DATA (Rated values)

Operating voltage:	230 V AC (195 – 253 V AC, 50/60 Hz)
Max. power consumption:	322 W
Output voltage:	24 V DC (20 – 28 V DC / 0,5 Vpp)
Output current:	**5 A**
Housing:	surface mounting, steel sheet, RAL 7035 (light grey)
Dimensions (WxHxD):	**400 x 500 x 200 mm**
Delivery state:	
SHEV groups:	1
Vent groups:	1
Module equipment:	PM, CM, DM
Prepared for batteries:	max. 2 x 12 V / 12 Ah (Capacity acc. to equipment)

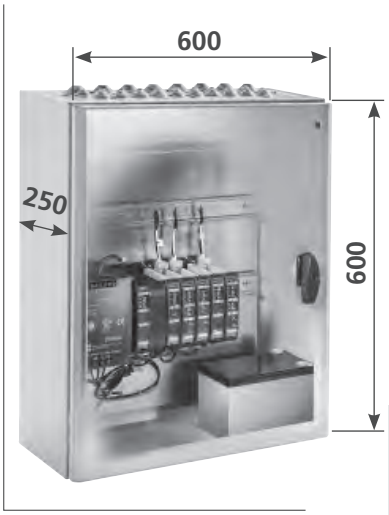
Features: The installer of the control unit has to examine and to respect on its sole responsibility that the total current consumption of the internal and external devices, the number of the used modules and cable entries match with the battery capacity and the system limitations.

VERSIONS

Part.-No.	equip module	free module units	free space			
688305-9501	PM, CM, **DM**	ME **8**	HS **300** mm			
688305-9503	PM, CM, **IDM**	ME **8**	HS **300** mm			

EMB 8000+ 5 A (600 x 600 x 250 mm)

Application: Expandable basic version of modular control unit EMB 8000+, factory fitted and fully wired for customer-side self-configuration.



5 A

TTECHNICAL DATA (Rated values)

Operating voltage:	230 V AC (195 – 253 V AC, 50/60 Hz)
Max. power consumption:	322 W
Output voltage:	24 V DC (20 – 28 V DC / 0,5 Vpp)
Output current:	**5 A**
Connections and functions:	depends on extension
Housing:	surface mounting, steel sheet, RAL 7035 (light grey)
Dimensions (WxHxD):	**600 x 600 x 250 mm**
Delivery state:	
SHEV groups:	1
Vent groups:	1
Prepared for batteries:	max. 2x 12 V / 12 Ah (Capacity acc. to equipment)

Features: The installer of the control unit has to examine and to respect on its sole responsibility that the total current consumption of the internal and external devices, the number of the used modules and cable entries match with the battery capacity and the system limitations.

VERSIONS

Part.-No.	equip module	free module units	free space			
688305-9601	PM, CM, **DM**	ME **19**	HS **500** mm			
688305-9603	PM, CM, **IDM**	ME **19**	HS **500** mm			

ORDER DATA

EMB 8000+ 10 A (400 x 500 x 200 mm)

Application: Expandable basic version of modular control unit EMB 8000+, factory fitted and fully wired for customer-side self-configuration.

TECHNICAL DATA (Rated values) **10 A**

Operating voltage:	230 V AC (195 – 253 V AC, 50/60 Hz)
Max. power consumption:	506 W
Output voltage:	24 V DC (20 – 28 V DC / 0,5 Vpp)
Output current:	**10 A**
Connections and functions:	depends on extension
Housing:	surface mounting, steel sheet, RAL 7035 (light grey)
Dimensions (WxHxD):	**400 x 500 x 200 mm**

Delivery state:

SHEV groups:	1
Vent groups:	1
Prepared for batteries:	max. 2x 12 V / 12 Ah (Capacity acc. to equipment)

Features: The installer of the control unit has to examine and to respect on its sole responsibility that the total current consumption of the internal and external devices, the number of the used modules and cable entries match with the battery capacity and the system limitations.

VERSIONS

Part.-No.	equip module	free module units	free space			
688310-9501	PM, CM, **DM**	ME **7**	HS **300** mm			
688310-9503	PM, CM, **IDM**	ME **7**	HS **300** mm			

EMB 8000+ 10 A (600 x 600 x 250 mm)

Application: Expandable basic version of modular control unit EMB 8000+, factory fitted and fully wired for customer-side self-configuration.

TECHNICAL DATA (Rated values) **10 A**

Operating voltage:	230 V AC (195 – 253 V AC, 50/60 Hz)
Max. power consumption:	506 W
Output voltage:	24 V DC (20 – 28 V DC / 0,5 Vpp)
Output current:	**10 A**
Connections and functions:	depends on extension
Housing:	surface mounting, steel sheet, RAL 7035 (light grey)
Dimensions (WxHxD):	**600 x 600 x 250 mm**

Delivery state:

SHEV groups:	1
Vent groups:	1
Prepared for batteries:	max. 2x 12 V / 38 Ah (Capacity acc. to equipment)

Features: The installer of the control unit has to examine and to respect on its sole responsibility that the total current consumption of the internal and external devices, the number of the used modules and cable entries match with the battery capacity and the system limitations.

VERSIONS

Part.-No.	equip module	free module units	free space			
688310-9601	PM, CM, **DM**	ME **19**	HS **500** mm			
688310-9603	PM, CM, **IDM**	ME **19**	HS **500** mm			

ORDER DATA

EMB 8000+ 24 A (600 x 600 x 250 mm)

Application: Expandable basic version of modular control unit EMB 8000+, factory fitted and fully wired for customer-side self-configuration.

TTECHNICAL DATA (Rated values) **24 A**

Operating voltage:	230 V AC (195 – 253 V AC, 50/60 Hz)
Max. power consumption:	805 W
Output voltage:	24 V DC (20 – 28 V DC / 0,5 Vpp)
Output current:	**24 A**
Connections and functions:	depends on extension
Housing:	surface mounting, steel sheet, RAL 7035 (light grey)
Dimensions (WxHxD):	**600 x 600 x 250 mm**

Delivery state:

SHEV groups:	1
Vent groups:	1
Prepared for batteries:	max. 2x 12 V / 38 Ah (Capacity acc. to equipment)

Features: The installer of the control unit has to examine and to respect on its sole responsibility that the total current consumption of the internal and external devices, the number of the used modules and cable entries match with the battery capacity and the system limitations.

VERSIONS

Part.-No.	equip module	free module units	free space			
688324-9501	PM, CM, **DM**	ME **19**	HS **500** mm			
688324-9502	PM, CM, **DMX**	ME **18**	HS **500** mm			
688324-9503	PM, CM, **IDM**	ME **19**	HS **500** mm			

EMB 8000+ 24 A (600 x 800 x 250 mm)

Application: Expandable basic version of modular control unit EMB 8000+, factory fitted and fully wired for customer-side self-configuration.

TECHNICAL DATA (Rated values) **24 A**

Operating voltage:	230 V AC (195 – 253 V AC, 50/60 Hz)
Max. power consumption:	805 W
Output voltage:	24 V DC (20 – 28 V DC / 0,5 Vpp)
Output current:	**24 A**
Connections and functions:	depends on extension
Housing:	surface mounting, steel sheet, RAL 7035 (light grey)
Dimensions (WxHxD):	**600 x 800 x 250 mm**

Delivery state:

SHEV groups:	1
Vent groups:	1
Prepared for batteries:	max. 2x 12 V / 38 Ah (Capacity acc. to equipment)

Features: The installer of the control unit has to examine and to respect on its sole responsibility that the total current consumption of the internal and external devices, the number of the used modules and cable entries match with the battery capacity and the system limitations.

VERSIONS

Part.-No.	equip module	free module units	free space			
688324-9601	PM, CM, **DM**	ME **19**	HS **1000** mm			
688324-9602	PM, CM, **DMX**	ME **18**	HS **1000** mm			
688324-9603	PM, CM, **IDM**	ME **19**	HS **1000** mm			

ORDER DATA

EMB 8000+ 48 A (600 x 600 x 250 mm)

Application: Expandable basic version of modular control unit EMB 8000+, factory fitted and fully wired for customer-side self-configuration.

TECHNICAL DATA (Rated values) **48 A**

Operating voltage:	230 V AC (195 – 253 V AC, 50/60 Hz)
Max. power consumption:	1610 W
Output voltage:	24 V DC (20 – 28 V DC / 0,5 Vpp)
Output current:	**48 A**
Connections and functions:	depends on extension
Housing:	surface mounting, steel sheet, RAL 7035 (light grey)
Dimensions (WxHxD):	**600 x 600 x 250 mm**

Delivery state:

SHEV groups:	1
Vent groups:	1
Prepared for batteries:	max. 2x 12 V / 38 Ah (Capacity acc. to equipment)

Features: The installer of the control unit has to examine and to respect on its sole responsibility that the total current consumption of the internal and external devices, the number of the used modules and cable entries match with the battery capacity and the system limitations.

VERSIONS

Part.-No.	equip module	free module units	free space			
688348-9501	PM, PME, CM, **DM**	ME **9**	HS **500** mm			
688348-9502	PM, PME, CM, **DMX**	ME **8**	HS **500** mm			
688348-9503	PM, PME, CM, **IDM**	ME **9**	HS **500** mm			

EMB 8000+ 48 A (600 x 800 x 250 mm)

Application: Expandable basic version of modular control unit EMB 8000+, factory fitted and fully wired for customer-side self-configuration.

TECHNICAL DATA (Rated values) **48 A**

Operating voltage:	230 V AC (195 – 253 V AC, 50/60 Hz)
Max. power consumption:	1610 W
Output voltage:	24 V DC (20 – 28 V DC / 0,5 Vpp)
Output current:	**48 A**
Connections and functions:	depends on extension
Housing:	surface mounting, steel sheet, RAL 7035 (light grey)
Dimensions (WxHxD):	**600 x 800 x 250 mm**

Delivery state:

SHEV groups:	1
Vent groups:	1
Prepared for batteries:	max. 2x 12 V / 38 Ah (Capacity acc. to equipment)

Features: The installer of the control unit has to examine and to respect on its sole responsibility that the total current consumption of the internal and external devices, the number of the used modules and cable entries match with the battery capacity and the system limitations.

VERSIONS

Part.-No.	equip module	free module units	free space			
688348-9601	PM, PME, CM, **DM**	ME **17**	HS **500** mm			
688348-9602	PM, PME, CM, **DMX**	ME **16**	HS **500** mm			
688348-9603	PM, PME, CM, **IDM**	ME **17**	HS **500** mm			

ORDER DATA

EMB 8000+ 72 A (600 x 800 x 250 mm)

Application: Expandable basic version of modular control unit EMB 8000+, factory fitted and fully wired for customer-side self-configuration.

TECHNICAL DATA (Rated values) **72 A**

Operating voltage:	230 V AC (195 – 253 V AC, 50/60 Hz)
Max. power consumption:	2415 W
Output voltage:	24 V DC (20 – 28 V DC / 0,5 Vpp)
Output current:	**72 A**
Connections and functions:	depends on extension
Housing:	surface mounting, steel sheet, RAL 7035 (light grey)
Dimensions (WxHxD):	**600 x 800 x 250 mm**

Delivery state:

SHEV groups:	1
Vent groups:	1
Prepared for batteries:	max. 2x 12 V / 38 Ah (Capacity acc. to equipment)

Features: The installer of the control unit has to examine and to respect on its sole responsibility that the total current consumption of the internal and external devices, the number of the used modules and cable entries match with the battery capacity and the system limitations.

VERSIONS

Part.-No.	equip module	free module units	free space			
688372-9501	PM, 2x PME, CM, **DM**	ME **15**	HS **500** mm			
688372-9502	PM, 2x PME, CM, **DMX**	ME **14**	HS **500** mm			
688372-9503	PM, 2x PME, CM, **IDM**	ME **15**	HS **500** mm			

EMB 8000+ 72 A (800 x 800 x 250 mm)

Application: Expandable basic version of modular control unit EMB 8000+, factory fitted and fully wired for customer-side self-configuration.

TECHNICAL DATA (Rated values) **72 A**

Operating voltage:	230 V AC (195 – 253 V AC, 50/60 Hz)
Max. power consumption:	2415 W
Output voltage:	24 V DC (20 – 28 V DC / 0,5 Vpp)
Output current:	**72 A**
Connections and functions:	depends on extension
Housing:	surface mounting, steel sheet, RAL 7035 (light grey)
Dimensions (WxHxD):	**800 x 800 x 250 mm**

Delivery state:

SHEV groups:	1
Vent groups:	1
Prepared for batteries:	max. 2x 12 V / 38 Ah (Capacity acc. to equipment)

Features: The installer of the control unit has to examine and to respect on its sole responsibility that the total current consumption of the internal and external devices, the number of the used modules and cable entries match with the battery capacity and the system limitations.

VERSIONS

Part.-No.	equip module	free module units	free space			
688372-9601	PM, 2x PME, CM, **DM**	ME **24**	HS **700** mm			
688372-9602	PM, 2x PME, CM, **DMX**	ME **23**	HS **700** mm			
688372-9603	PM, 2x PME, CM, **IDM**	ME **24**	HS **700** mm			

ORDER DATA

EMB 8000+ 96 A (800 x 800 x 250 mm)

Application: Expandable basic version of modular control unit EMB 8000+, factory fitted and fully wired for customer-side self-configuration.

TECHNICAL DATA (Rated values) **96 A**

Operating voltage:	400 V AC (50 / 60 Hz) 3 outer conductor
Max. power consumption:	3220 W
Output voltage:	24 V DC (20 – 28 V DC / 0,5 Vpp)
Output current:	**96 A**
Connections and functions:	depends on extension
Housing:	surface mounting, steel sheet, RAL 7035 (light grey)
Dimensions (WxHxD):	**800 x 800 x 250 mm**

Delivery state:

SHEV groups:	2
Vent groups:	12
Prepared for batteries:	max. 4x 12 V / 38 Ah (Capacity acc. to equipment)
Networking:	included 2x CAN-Module

Features: The installer of the control unit has to examine and to respect on its sole responsibility that the total current consumption of the internal and external devices, the number of the used modules and cable entries match with the battery capacity and the system limitations.

VERSIONS

Part.-No.	equip module	free module units	free space			
688396-9501	2x PM, 4x PME, 2x CM, 2x **DM**	ME **10**	HS **1000** mm			
688396-9502	2x PM, 4x PME, 2x CM, 2x **DMX**	ME **9**	HS **1000** mm			
688396-9503	2x PM, 4x PME, 2x CM, 2x **IDM**	ME **10**	HS **1000** mm			

EMB 8000+ 96 A (800 x 1000 x 250 mm)

Application: Expandable basic version of modular control unit EMB 8000+, factory fitted and fully wired for customer-side self-configuration.

TECHNICAL DATA (Rated values) **96 A**

Operating voltage:	400 V AC (50 / 60 Hz) 3 outer conductor
Max. power consumption:	3220 W
Output voltage:	24 V DC (20 – 28 V DC / 0,5 Vpp)
Output current:	**96 A**
Connections and functions:	depends on extension
Housing:	surface mounting, steel sheet, RAL 7035 (light grey)
Dimensions (WxHxD):	**800 x 1000 x 250 mm**

Delivery state:

SHEV groups:	2
Vent groups:	2
Prepared for batteries:	max. 4x 12 V / 38 Ah (Capacity acc. to equipment)
Networking:	included 2x CAN-Module

Features: The installer of the control unit has to examine and to respect on its sole responsibility that the total current consumption of the internal and external devices, the number of the used modules and cable entries match with the battery capacity and the system limitations.

VERSIONS

Part.-No.	equip module	free module units	free space			
688396-9601	2x PM, 4x PME, 2x CM, 2x **DM**	ME **17**	HS **1000** mm			
688396-9602	2x PM, 4x PME, 2x CM, 2x **DMX**	ME **16**	HS **1000** mm			
688396-9603	2x PM, 4x PME, 2x CM, 2x **IDM**	ME **17**	HS **1000** mm			

ORDER DATA

DM – Drive-Module

Application: For the controlling of drives, gas-pressure generators and magnetic locks.

TECHNICAL DATA (Rated values) **10 A**

Operating voltage:	24 V DC
Output voltage:	24 V DC (20 – 28 V DC / 0,5 Vpp)
Internal consumption:	5,3 mA
Output current:	**10 A**
Housing (WxHxD):	100 x 120 x 22,5 mm, ABS, black
Module units:	1 ME
Inputs:	Vent. buttons (max. 10 pcs), feedback contact OPEN/CLOSE
Outputs:	Drive line (gas-pressure generators / magnetic locks)
Display:	Power, fault, alarm, running direction OPEN / CLOSE
Control elements:	Front push button: OPEN / CLOSE
Connections:	Plug-in terminals 1 mm² (rigid wire), Drives: 2,5 mm², Blade terminals 6,3 mm: Power supply, socket and plug with cable for internal BUS

Features: Drive line monitoring, fixing on 35-mm mounting rail.
Configuration of the functional and performance features, which deviates from the standard systems via configuration software EMB 8000+.

VERSIONS

Part.-No.					
688250	Delivery in parcel	for customer self-installation			
688250-9	Module factory fitted	factory fitted and fully wired			

DMX – Drive-Module

Application: For the controlling of drives, gas-pressure generators and magnetic locks.

TECHNICAL DATA (Rated values) **20 A**

Operating voltage:	24 V DC
Output voltage:	24 V DC (20 – 28 V DC / 0,5 Vpp)
Internal consumption:	5,3 mA
Output current:	**20 A**
Housing (WxHxD):	100 x 120 x 45 mm, ABS, black
Module units:	2 ME
Inputs:	Vent. buttons (max. 10 pcs), feedback contact OPEN/CLOSE
Outputs:	Drive line (gas-pressure generators / magnetic locks)
Display:	Power, fault, alarm, running direction OPEN / CLOSE
Control elements:	Front push button: OPEN / CLOSE
Connections:	Plug-in terminals 1 mm² (rigid wire), Blade terminals 6,3 mm: Drives + power supply, socket and plug with cable for internal BUS

Features: Drive line monitoring, fixing on 35-mm mounting rail.
Configuration of the functional and performance features, which deviates from the standard systems via configuration software EMB 8000+.

Note: Drive output for blade terminals 6,3 mm!
Putchased parts package: 3 wires 2,5 mm² , 400 mm length with blade terminals.
Terminals always have to be ordered separately! (See options)

VERSIONS

Part.-No.					
688255	Delivery in parcel	for customer self-installation			
688255-9	Module factory fitted	factory fitted and fully wired			

ORDER DATA

IDM - Intelligent-Drive-Module

Application: For operating intelligent **Aumüller S12 / S3** drives up to max. **10 A** total current.

TECHNICAL DATA (Rated values) **10 A**

Operating voltage:	24 V DC
Output voltage:	24 V DC (20 – 28 V DC / 0,5 Vpp)
Internal consumption:	6 mA
Output current:	**10 A**
Housing (WxHxD):	100 x 120 x 22,5 mm, ABS, black
Module units:	1 ME
Inputs:	Vent. buttons (max. 10 pcs), feedback contact OPEN/CLOSE 0 - 10 V analog input
Outputs:	Drive line (**Aumüller S12 / S3**)
Display:	Power, fault, alarm, running direction OPEN / CLOSE
Control elements:	Front push button: OPEN / CLOSE
Connections:	Plug-in terminals 1 mm² (rigid wire), Drives: 2,5 mm², Blade terminals 6,3 mm: Power supply, socket and plug with cable for internal BUS 0-10 V analog input

Features: Drive line monitoring, fixing on 35-mm mounting rail.
Configuration of the functional and performance features, which deviates from the standard systems via configuration software EMB 8000+.

VERSIONS

Part.-No.					
688257	Delivery in parcel	for customer self-installation			
688257-9	Module factory fitted	factory fitted and fully wired			

SM – Sensor-Module

Application: For the connecting of automatic smoke detectors and break-glass units.

TECHNICAL DATA (Rated values)

Operating voltage:	24 V DC
Detector line voltage:	24 V DC
Internal consumption:	12,6 mA
Housing (WxHxD):	100 x 120 x 22,5 mm, ABS, black
Module units:	1 ME
Inputs:	3 detector lines (max 10 detectors/line) Ventialtion buttons (max. 10 pcs.)
Outputs:	1 feedback contact (change-over switch, 42 V / 0,5A)
Display:	Power, fault, alarm
Control elements:	Front push button: Reset
Connections:	Plug-in terminals 1 mm² (rigid wire), socket and plug with cable for internal BUS

Features: Überwachte detector lines, fixing on 35-mm mounting rail.
Configuration of the functional and performance features, which deviates from the standard systems via configuration software EMB 8000+.

VERSIONS

Part.-No.					
688150	Delivery in parcel	for customer self-installation			
688150-9	Module factory fitted	factory fitted and fully wired			

ORDER DATA

RM6 – Relay-Module

Application: For the transmitting of signals via volt free relay contacts.

TECHNICAL DATA (Rated values)

Operating voltage:	24 V DC
Internal consumption:	5,3 mA
Housing (WxHxD):	100 x 120 x 22,5 mm, ABS, black
Module units:	1 ME
Outputs:	6 volt free relay contacts (change-over switch, 42V / 0,5A)
Display:	Operating, Fault
Connections:	Plug-in terminals 1mm² (rigid wire), socket and plug with cable for internal BUS

Features: Fixing on 35-mm mounting rail.
Configuration of the functional and performance features, which deviates from the standard systems via configuration software EMB 8000+.

VERSIONS

Part.-No.					
688200	Delivery in parcel	for customer self-installation			
688200-9	Module factory fitted	factory fitted and fully wired			

IM-K – KNX-Module

Application: For communication between the **Aumüller** control unit EMB 8000+ and the KNX-BUS-System.

TECHNICAL DATA (Rated values)

Operating voltage:	24 V DC
Internal consumption:	6 mA
BUS current:	9 mA
Data points:	up to 16 lines with up to 16 data points
Housing (WxHxD):	100 x 120 x 22,5 mm, ABS, black
Module units:	1 ME
Inputs:	6 analog inputs KNX sided, 3 x potential free Relay contacts via KNX
Outputs:	**KNX-BUS terminal**
Display:	Operation, fault, KNX-programming LED
Control elements:	KNX-programming button
Connections:	Plug-in terminals 1mm² (rigid wire), socket and plug with cable for internal BUS

Features: Fixing on 35-mm mounting rail.
Configuration of the functional and performance features, which deviates from the standard systems via configuration software EMB 8000+, and an ETS-Software for KNX programming.

VERSIONS

Part.-No.					
688265	Delivery in parcel	for customer self-installation			
688265-9	Module factory fitted	factory fitted and fully wired			

ORDER DATA

WM – Weather-Module

Application: For the connecting of weather sensors.

TECHNICAL DATA (Rated values)

Operating voltage:	24 V DC
Detector line voltage:	24 V DC
Internal consumption:	13,0 mA
Housing (WxHxD):	100 x 120 x 22,5 mm, ABS, black
Module units:	1 ME
Inputs:	Wind- and rain sensors, wind direction sensor, external signals
Outputs:	Volt free contact (change-over switch, 42 V / 0,5A)
Display:	Power, fault, wind / rain activ
Connections:	Plug-in terminals 1,5 mm² (rigid wire)

Features: Fixing on 35-mm mounting rail.
Configuration of the functional and performance features, which deviates from the standard systems via configuration software EMB 8000+.

VARIANTEN

Part.-No.					
688180	Delivery in parcel	for customer self-installation			
688180-9	Module factory fitted	factory fitted and fully wired			

ORDER DATA

Relay interface					
Application:	Relay for the connection of 230 V AC drives to a 24 V DC drive line, triggering by pole change of 24 V DC drive line.				

TECHNICAL DATA (Rated values)

Operating voltage:	24 V DC, +/-20% (max. 2 Vpp)
Standby consumption:	<100 mA
Switching capacity:	230 V AC / 3 A
Drive type:	S2, S3, S12, MP
Ambient temperature range:	0 ... +70 °C
Housing:	Surface mounting, plastic, white
Dimensions (WxHxD):	98 x 98 x 58 mm
Connections:	Screw terminals 4,0 mm² (rigid wire)
Protection rating:	IP54

Feature/Equipment
- Connection to the **drive line** of SHEV or natural ventilation control units

VERSIONS

Part.-No.					
670071	Delivery in parcel	for customer self-installation			
670075-9	Module factory fitted	factory fitted and fully wired. Including 5 terminals 4,0 mm²			

TERMINALS

Part.-No.					
659941	Terminals-Set 5 x 2,5 mm²	for customer self-installation			
659942	Terminals-Set 5 x 6,0 mm²	for customer self-installation			
659943	Terminals-Set 5 x 10 mm²	for customer self-installation			
659944	Terminals-Set 5 x 16 mm²	for customer self-installation			
659945-9	Terminal 1 x 2,5 mm²	factory fitted and fully wired			
659946-9	Terminal 1 x 6,0 mm²	factory fitted and fully wired			
659947-9	Terminal 1 x 10 mm²	factory fitted and fully wired			
659948-9	Terminal 1 x 16 mm²	factory fitted and fully wired			

CIRCUIT DIAGRAM

Part.-No.					
240	**Plan creation**	Wiring diagram per SHEV / ventilation group			

ACCESSORIES

Part.-No.		VE			
500001	**Wall fixing brackets IP54**	4 piece			

ORDER DATA

	Part.-No.			
Software licence EMB 8000+				
Application: Software licence for configuration, integration in networks and maintenace of EMB 8000+.				

TECHNICAL DATA

System requirements: **Microsoft® Windows 7 / Microsoft® Windows 10 64 Bit**

Feature/Equipment

- Free updates within licence period
- **Aumüller** grants licences only after attending a product training

SOFTWARE / LICENSE / PROGRAMMING

Technician Permanent Basic (licence not linked to control unit)				
TPB-1M – Licence for 1 month	**688911**			
TPB-3J – Licence for 3 years	**688913**			
Factory fitted preprogramming of EMB 8000				
Configuration of customized functions at the factory for one Control Unit	**688930**			

ORDER DATA

		Part.-No.			
Accumulators					
Application: Maintenance of standby operation of SHEV control units over a period of 72 hours of main power supply loss.					

TECHNISCHE DATEN

Type:	Lead storage battery
Output voltage:	12 V DC
Capacity:	see order data
Lifetime:	4 years (normal conditions)
Connections:	7 – 12 Ah: blade terminals 4,8 mm 17 – 38 Ah: screw terminals M5
Housing:	plastic, impact- and break-resistent

Feature/Equipment
- Maintenance free operation, long lasting durability, hight charging performance and long-cycle stability
- Disposal due to local, national or international rules (WEEE)

NOTE: Always 2 batteries are required per control unit!

OPTIONS

for control units with backup power supply					
7 Ah, 12 V	**1 Pcs.**	**542000**			
12 Ah, 12 V	**1 Pcs.**	**542200**			
17 Ah, 12 V	**1 Pcs.**	**543000**			
24 Ah, 12 V	**1 Pcs.**	**544000**			
38 Ah, 12 V	**1 Pcs.**	**545000**			

aumüller

3 Accessories for SHEV Control Units

ORDER DATA

Part.-No.

HSE – Break-glass unit main control panel

Application: Break-glass unit with indicators and buttons for the manual control of the emergency open and close functions of a SHEV group, for connection in the detector line of a control unit.

TECHNICAL DATA (Rated values)

Operating voltage:	24 V DC
Ambient temperature range:	-5°C … + 40°C
Housing:	**Surface mounting, plastic (ABS)**
Dimensions (WxHxD):	130 x 130 x 32 mm
Connections:	Screw terminal, 1,0 mm² (rigid wire)
Protection rating:	IP41
Display:	Emergency OPEN, power, fault
Control elements:	Buttons for emergency OPEN / CLOSE

ABS

Feature/Equipment
- Lockable, glazed door (including key)
- **Connection to the detector line input**
- HSE orange: **VdS certifcation no. G 501006**

VERSIONS

HSE red	(similar to RAL 3000)	**528691**
HSE yellow	(similar to RAL 1018)	**528692**
HSE grey	(similar to RAL 7035)	**528693**
HSE blue	(similar to RAL 5015)	**528694**
HSE orange	(similar to RAL 2011)	**528695**

HSE-N – Break-glass unit secondary control panel

Application: Break-glass unit with indicator and button for the manual control of the emergency open function of a SHEV group, for connection in the detector line of a control unit.

TECHNICAL DATA (Rated values)

Operating voltage:	24 V DC
Ambient temperature range:	-5°C … + 40°C
Housing:	**Surface mounting, plastic (ABS)**
Dimensions (WxHxD):	130 x 130 x 32 mm
Connections:	Screw terminal, 1,0 mm² (rigid wire)
Protection rating:	IP41
Display:	Emergency OPEN
Control elements:	Button for emergency OPEN

ABS

Feature/Equipment
- Lockable, glazed door (including key)
- **Connection to the detector line input**
- HSE orange: **VdS certifcation no. G 501006**

VERSIONS

HSE-N red	(similar to RAL 3000)	**525001**
HSE-N yellow	(similar to RAL 1018)	**525002**
HSE-N grey	(similar to RAL 7035)	**525003**
HSE-N blue	(similar to RAL 5015)	**525004**
HSE-N orange	(similar to RAL 2011)	**525005**

ORDER DATA

		Part.-No.			
HSE – Break-glass unit main control panel (aluminium housing)					
Application:	Break-glass unit with indicators and buttons for the manual control of the emergency open and close functions of a SHEV group, for connection in the detector line of a control unit.				

TECHNICAL DATA (Rated values)

Operating voltage:	24 V DC
Ambient temperature range:	-5°C … + 40°C
Housing:	**Surface mounting, aluminium**
Dimensions (WxHxD):	125 x 125 x 33 mm
Connections:	Screw terminal, 1,0 mm² (rigid wire)
Protection rating:	IP41
Display:	Emergency OPEN, power, fault
Control elements:	Buttons for emergency OPEN / CLOSE

ALU

Feature/Equipment
- Lockable, glazed door (including key)
- **Connection to the detector line input**

VERSIONS						
HSE-Alu red	(similar to RAL 3001)	**527550**				
HSE-Alu yellow	(similar to RAL 1012)	**527551**				
HSE-Alu grey	(similar to RAL 7035)	**527552**				
HSE-Alu blue	(similar to RAL 5012)	**527553**				
HSE-Alu orange	(similar to RAL 2011)	**527554**				
Protective housing IP54 for break-glass unit HSE-Alu gray – add-on kit		**527559**				

HSE – Break-glass unit main control panel - buzzer					
Application:	Break-glass unit with built-in buzzer and indicators and buttons for the manual control of the emergency open and close functions of a SHEV group, for connection in the detector line of a control unit.				

TECHNICAL DATA (Rated values)

Operating voltage:	24 V DC
Ambient temperature range:	-5°C … + 40°C
Housing:	**Surface mounting, plastic (ABS)**
Dimensions (WxHxD):	130 x 130 x 32 mm
Connections:	Screw terminal, 1,0 mm² (rigid wire)
Protection rating:	IP41
Display:	Emergency OPEN, power, fault
Control elements:	Button for emergency OPEN / CLOSE

ABS

SUMMER

Feature/Equipment
- Built-in buzzer
- Lockable, glazed door (including key)
- **Connection to the detector line input**
- Settings via DIP switch: Warning sound in case of fault and / or SHEV

VERSIONS						
HSE red	(similar to RAL 3000)	**528711**				
HSE yellow	(similar to RAL 1018)	**528712**				
HSE grey	(similar to RAL 7035)	**528713**				
HSE blue	(similar to RAL 5015)	**528714**				
HSE orange	(similar to RAL 2011)	**528715**				

ORDER DATA

		Part.-No.			
HSE – Break-glass unit main control panel					
Application: Break-glass unit with indicators and buttons for the manual control of the emergency open and close functions of a SHEV group, for connection in the BUS line of a control unit.					

TECHNICAL DATA (Rated values)

Operating voltage:	24 V DC
Ambient temperature range:	-5°C … + 40°C
Housing:	**Surface mounting, plastic (ABS)**
Dimensions (WxHxD):	130 x 130 x 32 mm
Connections:	BUS terminal, 2 x 0,8 mm²
Protection rating:	IP41
Display:	Emergency OPEN, power, fault
Control elements:	Buttons for emergency OPEN / CLOSE
Connection possibility:	Ventilation push button - input Screw terminal, 1,0 mm² (rigid wire)

ABS

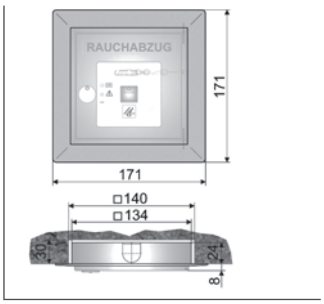
BUS

Feature/Equipment
- Lockable, glazed door (including key)
- **Connection to the detector line input**

VERSIONS

HSE red	(similar to RAL 3000)	**528691**			
HSE yellow	(similar to RAL 1018)	**528692**			
HSE grey	(similar to RAL 7035)	**528693**			
HSE blue	(similar to RAL 5015)	**528694**			
HSE orange	(similar to RAL 2011)	**528695**			

HSE – Frame for flush mounting	**528015**				
Application: Flush mounting of break-glass units.					



TECHNICAL DATA

Housing:	Surface mounting, steel sheet
Dimensions (WxHxD):	171 x 171 x 26 mm
Surface:	powder-coated in light grey w/o structure
Installation Dimensions:	140 x 140 x 30 mm

ABS

Feature/Equipment
- Suitable for break glass units with plastic housing 130 x 130 x 32 mm

Optical BUS-smoke detector	**531530**				
Application: BUS-smoke detector for the automatic early detection of fire for controlling of the EMERGENCY OPEN function via the BUS detector line of the **EMB 8000+**, with smoke generation in the monitored area.					

TECHNICAL DATA (Rated values)

Measuring element:	photo electric / scattered light principle
Operating voltage:	12 V DC via BUS
Standby current:	< 110 µA
Housing:	Surface mounting, plastic (ABS), signal white (similar to RAL 9003)
Dimensions (WxHxD):	∅120 x 60 mm
Connections:	Screw terminals 1,0 mm² (rigid wire)
Protection rating:	IP30
Ambient temperature range:	-10°C … +55°C
Display:	Alarm LED

BUS

Feature/Equipment
- Fire algorithms for avoiding false alarms, automatic alarm threshold tracking
- According to EN 54-7, Connection to the **BUS detector line input**
- **VdS certifcation no. G 209219**

ORDER DATA

	Part.-No.				
Optical smoke detector	**531520**				

Application: Smoke detector for the automatic early detection of fire for controlling of the EMERGENCY OPEN function via a detector line of SHEV control units, with smoke generation in the monitored area.

TECHNICAL DATA (Rated values)

Measuring element:	photo electric / scattered light principle
Operating voltage:	8,5 – 33 V DC
Standby current:	< 100 µA
Housing:	Surface mounting, plastic (ABS), pearl white
Dimensions (WxHxD):	∅100 x 50 mm
Connections:	Screw terminals 1,0 mm² (rigid wire)
Protection rating:	IP23D
Display:	Alarm LED

Feature/Equipment
- Fire algorithms for avoiding false alarms, automatic alarm threshold tracking
- According to EN 54-7, Connection to the **detector line input**

ACCESSORIES

Ball protection (chromed steel grid) e.g. use in sporthalls	**513546**				

FAS Interface-Module	**670053**				

Application: Module for the automatic control of the emergency open function via volt free contact of a fire alarm system.

TECHNICAL DATA (Rated values)

Operating voltage:	24 V DC
Standby consumption:	<10 mA
Ambient temperature range:	0 ... +40 °C
Housing:	w/o, equipped circuit board
Dimensions (WxHxD):	27 x 19 x 13 mm
Connections:	Screw terminal 1,5 mm² (rigid wire)
FAS contact:	Normal open switch at alarm status

Feature/Equipment:
- For connection to **detector line input** of SHEV control units, with line monitoring between control unit and module

Drive line end module	**670052**				

Application: For installation in the last or only junction box for the line monitoring of drive line.

TECHNICAL DATA (Rated values)

Operating voltage:	24 V DC (+/-5%)
Standby consumption:	<10 mA
Ambient temperature range:	0 ... +70 °C
Housing:	w/o, equipped circuit board
Dimensions (WxHxD):	27 x 19 x 13 mm
Connections:	3 single cores

Feature/Equipment
- For connection into **drive line** of SHEV control units

ORDER DATA

	Part.-No.
Heat sensitive fire detector	

Application: Heat detector for the automatic control of the emergency open function of a SHEV group of a SHEV control unit.

TECHNICAL DATA (Rated values)

Measuring element:	Bimetal switch
Operating voltage:	24 V DC
Contact load:	48 V DC / 0,5 A
Standby current:	< 10 mA
Housing:	Surface mounting, plastic (ABS), white
Dimensions (WxHxD):	∅56 x 77 mm
Connections:	Screw terminals 1,0 mm² (rigid wire)
Protection rating:	IP20

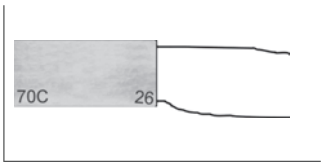
Feature/Equipment
- With base for surface mounting

VERSIONS

Connection in detector line	NO switch 70°C	**533205**
Connection in drive line	NC switch 70°C	**533200**

Heat sensitive detector clip 70°C	**533201**

Application: Heat detector for controlling of the emergency open function of a SHEV group, for connection in the drive line.



Measuring element:	Bimetal switch with ceramic housing
Operating voltage:	24 V DC
Contact type:	**NC switch** at 70°C
Contact load:	48 V DC / 0,5 A
Standby current:	< 10 mA

Feature/Equipment
- No housing, connection in the **monitoring line of the drive output** of a SHEV control unit

NOTES

For this product series, a Type III Environmental Product Declaration (EPD) was issued according to ISO 14025 and EN 15804.

The LCA results of the different product types are listed at the end of this product catalogue.
The EPD documents can be viewed or downloaded from our homepage **www.aumueller-gmbh.de**.

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4 Accessories for Control Units

ORDER DATA

	Part.-No.			
Ventilation button (with foil push buttons and displys)				

Application: Ventilation button for connection to the ventilation inputs of SHEV or natural ventilation control units.

Picture: Surface mounting

TECHNICAL DATA (Rated values)

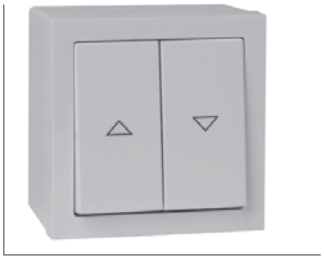
Contact type:	2 NO switches
Switching capacity:	max. 42V / 50 mA
Current consumption display:	< 10 mA
Housing:	plastic, white (similar to RAL 9016)
Dimensions (WxHxD)	Surface mounting: 81 x 81 x 54 mm
	Flush mounting: 81 x 81 x 11 mm
Connections:	Screw terminal 1,5 mm² (rigid wire)
Protection rating:	IP20
Functions:	OPEN-STOP-CLOSE
Display:	LED for OPEN, CLOSE

Feature/Equipment
- Push buttons **without** mechanical locking
- With display LED OPEN / CLOSE

VERSIONS	
Surface mounting	**529021**
Flush mounting (in box ∅60 mm)	**529051**

Ventilation button	

Application: Ventilation button for connection to the ventilation inputs of SHEV or natutal ventilation control units.



Picture: Surface mounting

TECHNICAL DATA (Rated values)

Contact type:	2 NO switches
Switching capacity:	230 V AC / 10 A
Housing:	plastic, white (similar to RAL 9016)
Dimensions (WxHxD):	Surface mounting: 81 x 81 x 54 mm
	Flush mounting: 81 x 81 x 11 mm
Connections:	Plug-in terminal 1,5 mm² (rigid wire)
Protection rating:	IP20
Functions:	OPEN / CLOSE

Feature/Equipment
- Push buttons **without** mechanical locking, stop function when both buttons are pushed

VERSIONS	
Surface mounting	**529030**
Flush mounting (in box ∅60 mm)	**529230**

Ventilation button 230 V AC	

Application: Ventilation button for connection to the push button input of 230 V AC power supplies or for direct control of 230 V AC drives.

Picture: Surface mounting

TECHNICAL DATA (Rated values)

Contact type:	2 NO switches
Switching capacity:	max. 230 V AC (10 A)
Housing:	plastic, white (similar to RAL 9016)
Dimensions (WxHxD)	Surface mounting: 81 x 81 x 54 mm
	Flush mounting: 81 x 81 x 11 mm (of visible surfaces)
Connections:	Plug-in terminal 1,5 mm² (rigid wire)
Protection rating:	IP20
Functions:	OPEN/CLOSE dead-man (push to run mode)

Feature/Equipment
- Push buttons **with** mechanical locking, the drive move as long as a button is pushed

VERSIONS	
Surface mounting	**529530**
Flush mounting (in box ∅60 mm)	**529630**

ORDER DATA

	Part.-No.			
Ventilation key switch				

Application: Ventilation button for connection to the ventilation inputs of SHEV or natural ventilation control units.

Picture: Surface mounting

TECHNICAL DATA (Rated values)

Contact type:	2 NO switches
Switching capacity:	230 V AC / 10 A
Housing:	plastic, white (similar to RAL 9016)
Dimensions (WxHxD):	Surface mounting: 81 x 81 x 54 mm Flush mounting: 81 x 81 x 11 mm
Connections:	Plug-in terminal 1,5 mm² (rigid wire)
Protection rating:	IP20
Functions:	OPEN-STOP-CLOSE

Feature/Equipment
- Switch with semicylinder (DIN 19525) and 3 keys

VERSIONS					
Surface mounting	**529350**				
Flush mounting (in box ∅60 mm)	**529450**				

Rotary ventilation switch 230 V AC					

Application: Rotary switch for connection to the push button input of 230 V AC power supplies or for direct control of 230 V AC drives.

Picture: Surface mounting

TECHNICAL DATA (Rated values)

Contact type:	2 NO switches
Switching capacity:	230 V AC / 10 A
Housing:	plastic, white (similar to RAL 9016)
Dimensions (WxHxD)	Surface mounting: 81 x 81 x 54 mm Flush mounting: 81 x 81 x 11 mm (of visible surfaces)
Connections:	Plug-in terminal 1,5 mm² (rigid wire)
Protection rating:	IP20
Functions:	OPEN-STOP-CLOSE

Feature/Equipment
- Switch **with** mechanical locking,

VERSIONS					
Surface mounting	**529550**				
Flush mounting (in box ∅60 mm)	**529650**				

FAS Interface-Module - for ventilation	**533601**				

Application: When connecting the room sensor, hygrostat or timer to the **EMB 7X00** for signal conversion from permanent contact to short-time pulse

TECHNICAL DATA (Rated values)

Operating voltage:	24 V DC
Housing:	plastic, for 35-mm mounting rail
Dimensions (WxHxD):	27 x 50 x 96 mm

Feature/Equipment
- Module for **EMB 8000** not required.

OPTIONS					
Cabinet mounting (a larger housing may be required)	**500113**				

ORDER DATA

	Part.-No.				
Room temperature controller	**483200**				

Application: Thermostat as on-off controller for room temperature detection.

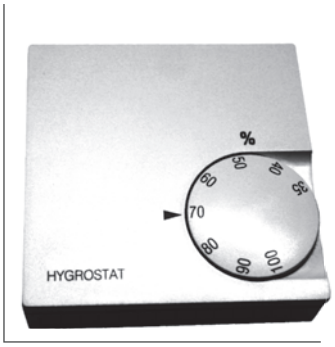
TECHNICAL DATA (Rated values)

Measuring element:	Bimetal switch
Contact type:	1 change-over switch
Switching capacity:	230 V AC / 5 A
Settings:	0 – 30 °C
Housing:	Surface mounting, plastic, white
Dimensions (WxHxD):	74,5 x 74,5 x 25 mm
Connections:	Screw terminal 1,5 mm² (rigid wire)
Protection rating:	IP30

Feature/Equipment
- Connection to **ventilation inputs** of SHEV or natural ventilation control units

Hygrostat	**483050**				

Application: Hygrostat as on-off controller for room humidity detection.



TECHNICAL DATA (Rated values)

Measuring element:	Bimetal switch
Contact type:	1 Change-over switch
Switching capacity:	230 V AC / 5 A
Settings:	35 – 100% humidity
Housing:	Surface mounting, plastic, white
Dimensions (WxHxD):	74,5 x 74,5 x 25 mm
Connections:	Screw terminal 1,5 mm² (rigid wire)
Protection rating:	IP30

Feature/Equipment
- Connection to **ventilation input** of SHEV or natural ventilation control units

CO2 – Air quality sensor	**483710**				

Application: Sensor for the detection and evaluation of the CO2 concentration inside rooms.

TECHNICAL DATA (Rated values)

Operating voltage:	24 V DC (+/-5%)
Measuring element:	electronic
Contact type:	2 Normal open switch
Pulse duration:	3,5 sec.
Switching capacity:	230 V AC / 0,5 A
Measuring range:	0 – 3000 ppm CO2
Housing:	Surface mounting, plastic, white
Dimensions (WxHxD):	78 x 78 x 35 mm
Connections:	Screw terminal 1,5 mm² (rigid wire)
Protection rating:	IP30
Display:	3 LED (green, yellow, red)

Feature/Equipment
- Connection to **ventilation input** of SHEV or natural ventilation control units

ORDER DATA

	Part.-No.			
Wind sensor Type III	**482021**			

Application: Anemometer with 3 impact resistant wind cups (PA6) for wind speed detection.

TECHNICAL DATA (Rated values)

Operating voltage:	24 V DC (+/- 20%)
Measuring principle:	Pulse generator, ball beared
Housing:	Aluminium ∅36 mm, untreated
Wind cups:	PA6, black
Dimensions:	250 x 250 x 80 mm
Connection cable:	non-halogen cable, approx. 4 m

Feature/Equipment

- For connection with: EMB7300 control units, WM Weather-Module (EMB8000), wind/rain controls WRAG2 and Type IV. With clamp ring for fixing on all the wall/pole brackets with outer diameter ∅36mm

COMPONENTS

Cups for wind sensor Type III	**490601**				
Clamp ring for wind sensor Type III	**515950**				

Rain sensor Typ III 24 V DC	**480210**				

Application: Rain sensor with heated sonsor surface and internal control with volt free output contact.

TECHNICAL DATA (Rated values)

Operating voltage:	24 V DC (+/- 20%)
Standby current:	<150 mA
Measuring principle:	Conductivity measurement, heated sensor
Hysteresis:	5 min
Display:	Output active
Output:	Change-over switch, 5 A / max. 48 V
Protection rating:	IP65
Housing:	Surface mounting, ABS black with bracket (stainless steel)
Dimensions:	100 x 85 x 172 mm
Connection cable:	non-halogen cable, approx. 4 m

Feature/Equipment

- For connection with: EMB7300 control units, WM Weather-Module (EMB8000), wind / rain controls WRAG2 and Type IV

Rain sensor Typ III 230 V AC	**480110**				

Application: Rain sensor with heated sonsor surface and internal control with volt free output contact.

TECHNICAL DATA (Rated values)

Operating voltage:	230 V AC (50 Hz)
Power consumption:	<1,5 VA
Measuring principle:	Conductivity measurement
Display:	Output active
Output:	Change-over switch, 5 A / max. 230 AC
Protection rating:	IP65
Housing:	Surface mounting, ABS black with bracket (stainless steel)
Dimensions:	100 x 85 x 172 mm
Connection cable:	non-halogen cable, approx. 4 m

Feature/Equipment

- Single device for the feed from electric mains power supply

ORDER DATA

	Part.-No.			
WR-Set Type 7x/8x – Wind and Rain Sensor Set	**482100**			

Application: Sensors for wind and rain to work with an evaluation unit WRAG2 or Typ IV, a WM Weather-Module or directly with a SHEV control unit, for closing and blocking the natural ventilation under bad weather conditions.

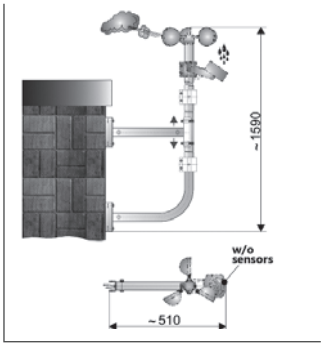
TECHNICAL DATA (Rated values)

Rated voltage:	24 V DC (+/- 20%)
Rain sensor Type III	heated sensor surface, switch-off delay approx. 5 min.
Contact:	1 Change-over switch, max. 48 V / 5A
Current consumption:	<150 mA
Housing:	Surface mounting, ABS black with stainless steel bracket
Dimensions (WxHxD):	100 x 85 x 172 mm
Connection cable:	Non-halogen cable, approx. 4 m
Volt free contac:	1 Change-over switch, max. 48 V / 1A
Wind sensor Type III	Anemometer with 3 impact resistant wind cups (PA6)
Measuring principle:	Pulse generator
Dimensions:	250 x 250 x 80 mm
Connection cable:	non-halogen cable, approx. 4 m

Feature/Equipment
- Set including: Wind sensor Type III (Part.-No. 482021), rain sensor Type III (Part.-No. 480210), clamp ring (Part.-No. 515950), aluminium bracket for pole or wall mounting (Part.-No. 482093), without mounting screws

Wall bracket for wind and rain sensor	**491200**			

Application: Wall bracket with dual fixings for wind and rain sensors.



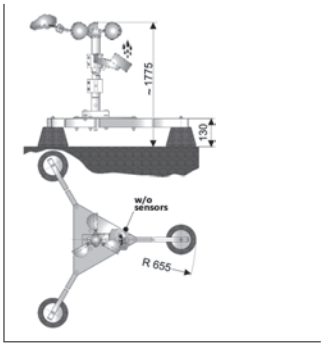
TECHNICAL DATA

Height:	app. 1590 mm
Outreach:	app. 510 mm
Material:	Aluminium ∅36mm

Feature/Equipment
- w/o fixing screws and sensors

Pole bracket for wind and rain sensors	**491101**			

Application: Pole bracket for the fixing of wind and rain sensors at flat roofs.



TECHNICAL DATA

Height:	app. 1775 mm
Base area:	app. ∅1310 mm
Material:	Aluminium ∅36mm with 3 stable concrete feet

Feature/Equipment
- w/o sensors

ORDER DATA

	Part.-No.			
WRG-Set – Wind direction sensor	**482120**			

Application: Sensor for wind direction detecting to work with an evaluation unit or a WM Weather-Module for the wind direction depending OPENING / CLOSING of windows in case of fire.

TECHNICAL DATA (Rated values)

Operating voltage:	24 V DC (+/- 20%)
Wind direction sensor	ball beared measuring element with wind vane
Measuring range:	8 wind directions
Material:	Revolving head: PA6 black, wind vane: stainless steel
Connection cable:	Non-halogen 6 x 0,34 mm², length ca. 3 m
Junction box	with circuit board and screw terminals
Connections:	WRG, wind sensor Type III, rain sensor TYP III
Housing (WxHxD):	110 x 110 x 66 mm, IP54
Connections:	Screw terminals 1,5 mm² (rigid wire),

Feature/Equipment

- Set including: Wind direction sensor (Part.-No. 482120), Junction box (Part.-No. 482110), clamp ring (Part.-No. 515950), aluminium bracket for pole or wall mounting (Part.-No. 482093), without mounting screws

ORDER DATA

	Part.-No.				
Conservatory Control WG 3006	**484001**				

Application: Control of 230 V drives. For opening and closing of conservatories, terraces and balconies canopies - manually and depends on the internal temperature. It may be a 230 V rain sensor can be connected.

TECHNICAL DATA (Rated values)

Operating voltage:	230 V AC
Contact type:	1 change-over switch
Switching capacity:	230 V AC / 3 A
Settings:	5 – 30 °C
Housing:	Surface mounting, plastic, white
Dimensions (WxHxD):	127 x 74 x 24 mm
Connections:	Screw terminal 1,5 mm² (rigid wire)
Protection rating:	IP30

Feature/Equipment
- Thermostat with switch hand/automatic and rocker-switch OPEN/CLOSE

Time switch	**722374**				

Application: For the time controlled opening / closing of ventilation lines, with 30 day- and week-programm steps.

TECHNICAL DATA (Rated values)

Operating voltage:	230 V AC
Contact type:	change-over switch
Switching capacity:	230 V AC / 16 A
Housing:	plastic, white, for 35 mm top rail
Dimensions (WxHxD):	17,6 x 63 x 90 mm
Connections:	Screw terminal 1,5 mm² (rigid wire)
Protection rating:	IP20

Feature/Equipment
- Connection to the **ventilation input** of SHEV or natural ventilation control units

OPTIONS

Cabinet mounting (a larger housing may be required)	**500113**				

REL1 – Relay for status forwarding	**659950**				

Application: For the transmission of various functions or status of a SHEV or natural ventilation control unit to external devices.

TECHNICAL DATA (Rated values)

Operating voltage:	24 V DC
Contact type:	3 Change-over switch
Switching capacity:	230 V / 10 A
Connections:	Screw terminal 1,5 mm² (rigid wire)

Feature/Equipment
- With base for installation at 35-mm mounting rail and surpressor diode

OPTIONS

Cabinet mounting (a larger housing may be required)	**500113**				

ORDER DATA

	Part.-No.				
WRAG2 – Wind / Rain evaluation unit	**482005**				

Application: For the evaluation of wind and rain signals from wind and rain sensors Type 7x/8x or rain sensors operating with 24 V DC and their transmission via 2 volt free contacts, with additional input for connecting of ventilation buttons (or time switches etc.).

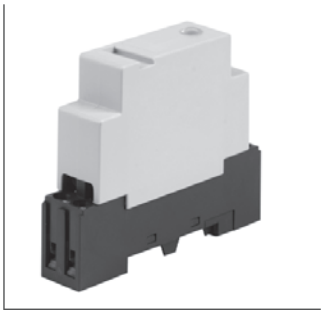
TECHNICAL DATA (Rated values)

Operating voltage:	230 V AC, 50 Hz
Standby consumption:	<100 mA
Inputs:	Rain sensor 24 V DC, wind sensor, ventilation button
Display:	Power, wind, rain
Wind speed range:	2,5 – 20 m/s, adjustable
Outputs:	2 Change-over switches, 230 V AC / 5 A
Housing:	plastic, surface RAL 7035, bottom RAL 7021
Dimensions (WxHxD):	105 x 86 x 58 mm
Installation:	35-mm mounting rail
Connections:	Screw terminals 1,5 mm² (rigid wire)
Protection rating:	IP40

Feature/Equipment
- Signal transmission for wind or/and rain (separately or together) adjustable via 4 DIP switches, direct connection of drives up to max. 5 A, switch-on time delay for wind and rain signal, and switch-off time delay for wind signal

REL-WRAG2 – Relay for contact multiplier	**487020**				

Application: Relay as contact multiplier of output signals of wind and rain evaluation unit WRAG2.



TECHNICAL DATA (Rated values)

Operating voltage:	230 V AC, 50 Hz
Contact type:	2 Change-over switches
Switching capacity:	230 V / 8 A
Connections:	Screw terminal 1,5 mm² (rigid wire)

Feature/Equipment
- With base for installation on 35-mm mounting rail

Compact distributor housing for WRAG2	**482011**				

Application: Surface mounting distributor housing for the installation and wiring of wind and rain evaluation WRAG2 and max. 2 relays.

TECHNICAL DATA

Material:	plastic (ABS)
Type of installation:	Surface mounting
Protection rating:	IP30
Dimensions (WxHxD):	182 x 180 x 82 mm
Reserve space:	2 REL-WRAG2

Feature/Equipment
- w/o fixing screws

ORDER DATA

	Part.-No.				
Distributor housing for WRAG2	**482015**				

Application: Surface mounting distributor housing for the installation and wiring of wind and rain evaluation WRAG2 and max. 6 relays.

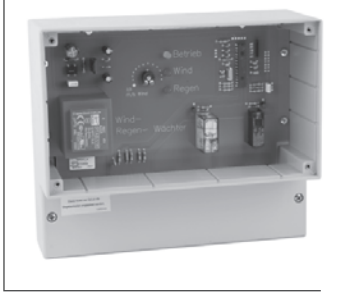
TECHNICAL DATA

Material:	plastic (ABS)
Type of installation:	Surface mounting
Protection rating:	IP30
Dimensions (WxHxD):	303 x 245 x 95 mm
Reserve space:	6 REL-WRAG2

Feature/Equipment
- w/o fixing screws

Wind and rain evaluation Type IV	**482008**				

Application: For the evaluation of wind and rain signals from wind and rain sensors Type 7x/8x or rain sensors operating with 24 V DC and their transmission via 3 volt free contacts.



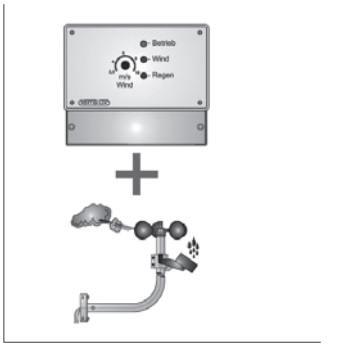
TECHNICAL DATA (Rated values)

Operating voltage:	230 V AC, 50 Hz
Standby current:	<100 mA
Inputs:	Rain sensor 24 V DC, wind sensor
Display:	Power, wind, rain
Wind speed range:	2,5 – 10 m/s, adjustable
Outputs:	3 Change-over switches, 5 A / 230 V AC
Housing:	plastic, surface RAL 7035, bottom RAL 7021
Dimensions (WxHxD):	212 x 180 x 80 mm
Installation:	Surface mounting
Connections:	Screw terminal 1,5 mm² (rigid wire)
Protection rating:	IP40

Feature/Equipment
- Direct connection of drives up to max. 5 A, switch-on time delay for wind and rain signal, and switch-off time delay for wind signal
- Suitable for surface mounting

Wind and rain sensor set Typ IV	**481990**				

Application: Set consisting of wind and rain evaluation Type IV with wind and rain sensor set Type 7x/8x, for the evaluation of wind and rain signals and their transmission via 3 volt-free contacts.



TECHNICAL DATA
See wind and rain control unit Type IV
and wind and rain sensor set Type 7x/8x.

Feature/Equipment
- Set including: Wind and rain evaluation (Part.-No. 482008), Wind sensor Type III (Part.-No. 482021), rain sensor Type III (Part.-No. 480210), clamp ring (Part.-No. 519950), bracket for pole or wall mounting (Part.-No. 482093), without mounting screws

NOTES

For this product series, a Type III Environmental Product Declaration (EPD) was issued according to ISO 14025 and EN 15804.

The LCA results of the different product types are listed at the end of this product catalogue.
The EPD documents can be viewed or downloaded from our homepage **www.aumueller-gmbh.de**.

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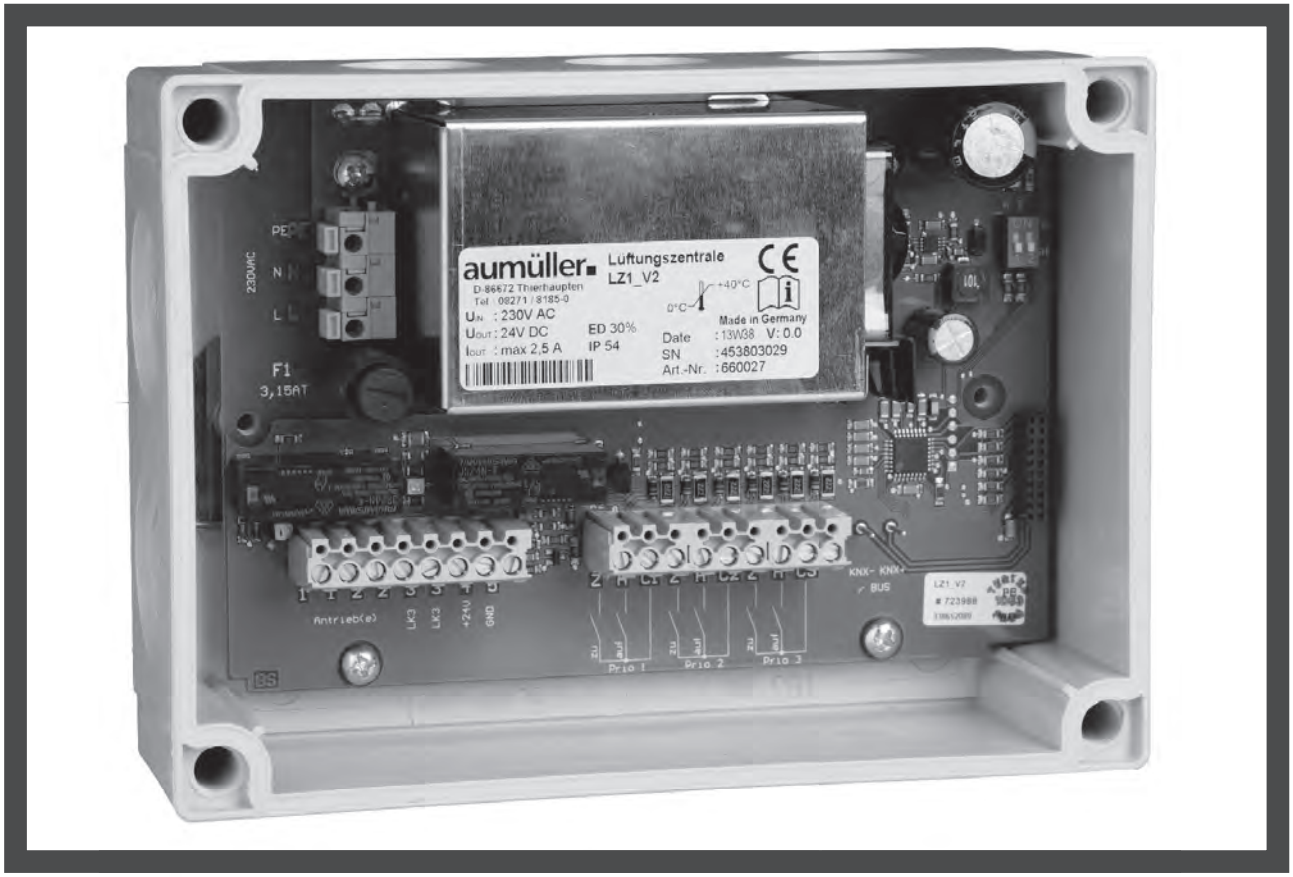
5 Natural Ventilation Control Units



FEATURES OF NATURAL VENTILATION – CONTROL UNITS AND POWER SUPPLIES

- Control units with accessories like weather sensors and control panels for the control of drives
- 24 V DC for natural ventilation purpose within rooms or buildings
- Low residual ripple output voltage (<2 Vpp)
- Inputs of two or more control units may be switched in parallel
- Connection of various control units in one ventilation group
- Ventilation button inputs with OPEN-STOP-CLOSE function and 2 or 3 priorities
- Vent. push button inputs configurable in dead-man or jog-switch mode
- All drive line outputs are fused
- Input for higher-ranked e.g. volt free wind and rain signals
- Suitable for the use in controlled natural ventilation systems
- Various display and control elements
- Flat surface mounted housings, suitable for the installation in false floor or suspended ceilings
- Optional BUS interface for integration into GLT systems via LON and KNX
- Digital interface for **Aumüller** S12 drives

For this product series, a Type III Environmental Product Declaration (EPD) was issued according to ISO 14025 and EN 15804.
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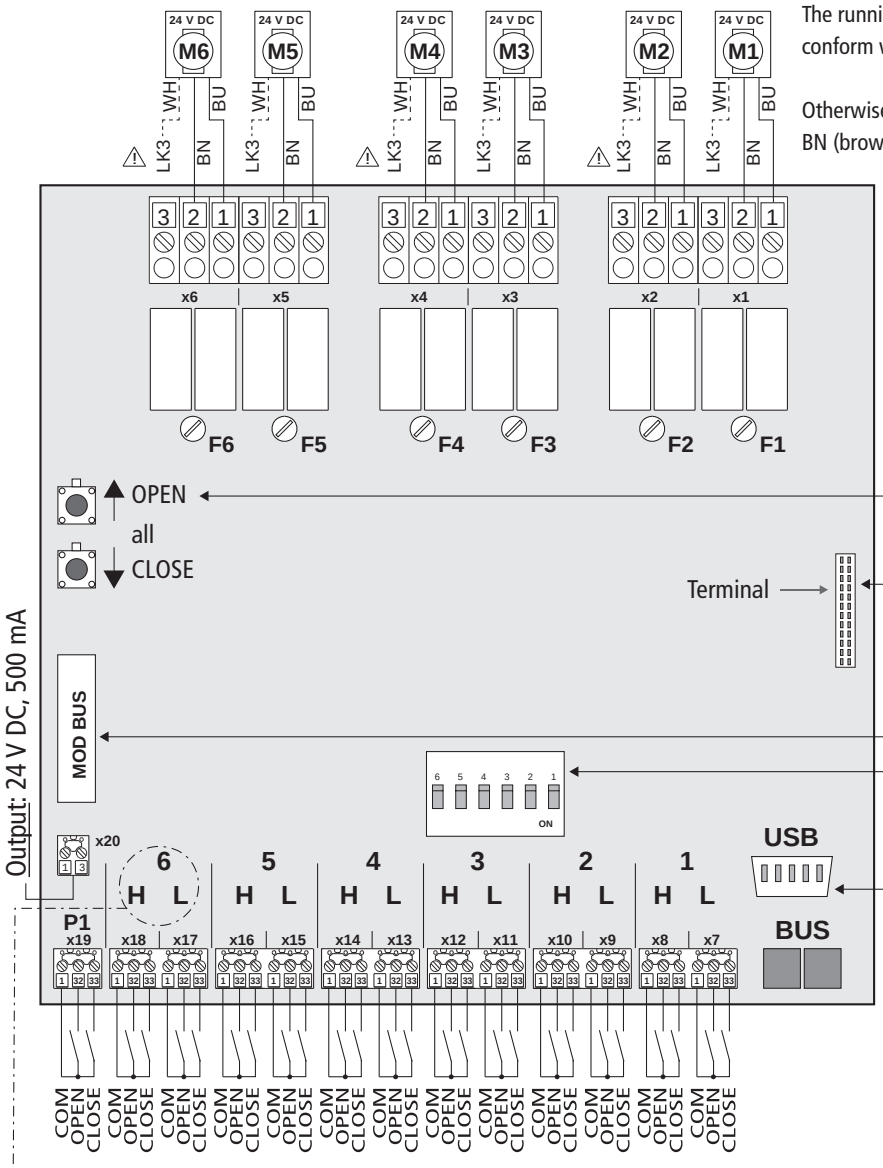
SIMPLIFIED DIAGRAMM – LZ6



The running direction of the drives has to be conform with the indicated direction.

Otherwise exchange the leads:
BN (brown) and BU (blue)

Using ↑**OPEN and** ↓**CLOSE button** on the board, all the lines can be opened and closed together.

On the **BUS slot**, depending on the configuration of the control unit, a KNX or LON field BUS-Module can be plugged, to bind the ventilation control unit LZ6 to a building management system.

WM connection or **external DM**

On the **DIP switch** can be set for each ventilation groups, if the button in latching (ON) or in dead-man (OFF) operation works.

The **USB port** can using LZ6 configuration software various functions for the respective ventilation groups are set.

P1 - Input
common control

H (P2) = HIGH - higher priority
L (P3) = LOW - lower priority
for switching process

Plug in of ventilation button, as well as weather, time and tempreature controls or singnals of building management system.

ORDER DATA

	Part.-No.			
LZ1 2,5 A – Natural ventilation control unit 24 V DC				

Application: Natural ventilation control panel with power supply for the controlling of 24 V DC drives in one ventilation group.

TECHNICAL DATA (Rated values)

Operating voltage:	230 V AC (195 – 253 V AC, 50/60 Hz)
Power consumption:	60 W
Output voltage:	24 V DC (20 – 28 V DC / 2 Vpp)
Output current:	**2,5 A**
Inputs:	1 Ventilation button line with 3 prorities
Outputs:	1 Drive line 24 V DC / 500 mA (e.g. rain sensor)
Display:	Power, output voltage switched in OPEN/CLOSE direction
Slot:	BUS-Module (LON, KNX)
Connections:	S12 drives (for communication with BUS-Modules)
Housing:	Surface mounting, plastic (ABS)
Dimensions (WxHxD):	**180 x 130 x 60 mm**
Connection terminals:	Screw terminals 2,5 mm² (rigid wire)
Protection rating:	IP54

Feature/Equipment
- DIP switch for the configuration of the inputs with low priority in jog-switch or dead-man mode
- Inputs of various LZ1 and/or LZ6 are switchable in parallel
- With the BUS-Module it is possible to control drives with internal intelligent cut-off switch S12 for controlled natural ventilation via the bus protocol

VERSIONS						
LZ1 2,5 A	**without** BI-K - KNX-Interface-Module	**660027**				
LZ1 2,5 A	**including** BI-K - KNX-Interface-Module (Part.-No.: 683999)	**660028**				

	Part.-No.			
LZ6 – Natural ventilation control unit 24 V DC				

Application: Natural ventilation control panel with power supply for the controlling of 24 V DC drives in 6 ventilation groups.

TECHNICAL DATA (Rated values)

Operating voltage:	230 V AC (195 – 253 V AC, 50/60 Hz)
Max. power consumption:	506 W / 805 W / 1518 W
Output voltage:	24 V DC (20 – 28 V DC / 0,5 Vpp)
Output current:	**10 A / 24 A / 30 A**
Inputs:	6 Ventilation button lines with 2 prorities (P3: LOW; P2: HIGH) 1 Input all outputs OPEN/CLOSE (P1)
Outputs:	6 Drive output lines 24 V DC / 500 mA (e.g. rain sensor)
Display:	Power, output voltage switched in OPEN/CLOSE direction
Slot:	for optional BUS-Module (LON / KNX)
Housing:	Surface mounting, steel sheet, RAL 7035 (light grey)
Dimensions (WxHxD):	**420 x 300 x 144 mm**
Connection terminals:	Screw terminals 2,5 mm² (rigid wire)
Protection rating:	IP30

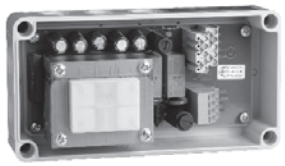
Feature/Equipment
- DIP switch for the configuration of the inputs with low priority in jog-switch or dead-man mode
- Inputs of various LZ1 and/or LZ6 are switchable in parallel
- All outputs are fused

VERSIONS						
LZ6 10 A	Output current: 6 x 1,6 A	**660070**				
LZ6 24 A	Output current: 6 x 4,0 A	**660071**				
LZ6 30 A	Output current: 6 x 5,0 A	**660072**				

ORDER DATA

	Part.-No.
NT-T-2,5 – Power supply 230 V AC / 24 V DC, 2,5 A	**660009**

Application: Power supply with transformer for the controlling of 24 V DC drives in one ventilation group.



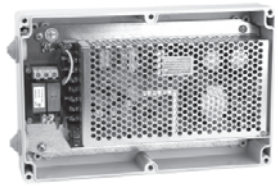
TECHNICAL DATA (Rated values)

Operating voltage:	230 V AC (+/-10%)
Power consumption:	60 W
Output voltage:	24 V DC (21 – 28 V DC)
Output current:	**2,5 A**
Duty cycle:	ED20% (10 min)
Ambient temperature range:	-5 °C ... +40 °C
Housing:	Surface mounting, plastic (ABS)
Dimensions (WxHxD):	94 x 180 x 81 mm
Connection terminals:	Screw terminals 2,5 mm² (230 V) / 4 mm² (24 V) (rigid wire)
Protection rating:	IP54

Feature/Equipment
- Control of OPEN/CLOSE with the 230 V AC power supply voltage

NT-S-6,5 – Power supply 230 V AC / 24 V DC, 6,5 A	**660007**

Application: Switch mode power supply for the controlling of 24 V DC drives in one ventilation group.



TECHNICAL DATA (Rated values)

Operating voltage:	230 V AC (195 – 253 V AC, 50/60 Hz)
Power consumption:	460 W
Output voltage:	24 V DC (2 Vpp)
Output current:	**6,5 A**
Duty ratio:	ED30% (10 min)
Ambient temperature range:	-5 °C ... +40 °C
Housing:	Surface mounting, plastic (ABS)
Dimensions (WxHxD):	160 x 250 x 55 mm
Connection terminals:	Screw terminals 4 mm² (rigid wire)
Protection rating:	IP54

Feature/Equipment
- Control of OPEN/CLOSE with the 230 V AC power supply voltage
- Max. 8 power supplies may be switched in parallel

PS5 – Switch mode power supply	**680005**

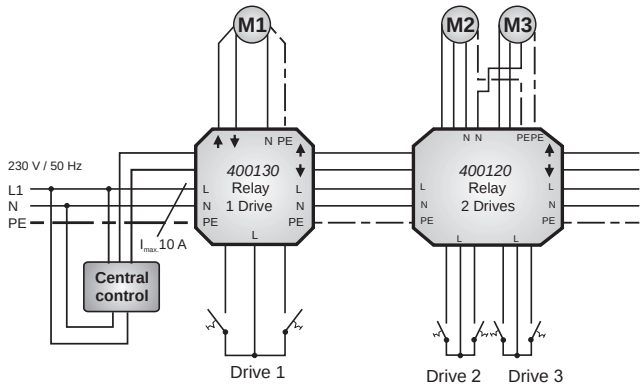
Application: Switch mode power supply for fixing on 35-mm mounting rail, for the external power supply of Ventilation-Modules LZA and LZH.

TECHNICAL DATA (Rated values)

Operating voltage:	230 V AC (195 – 253 V AC, 50/60 Hz)
Max. power consumption:	322 W
Output voltage:	24 V DC (20 – 28 V DC / 0,5 Vpp)
Output current:	**5 A**
Ambient temperature range:	-5 °C ... +40 °C
Housing:	suitable for 35-mm mounting rail
Dimensions (WxHxD):	65 x 95 x 123 mm
Connection terminals:	Screw terminals 4 mm² (rigid wire)

Feature/Equipment
- To be intagrated into housing or cabinet

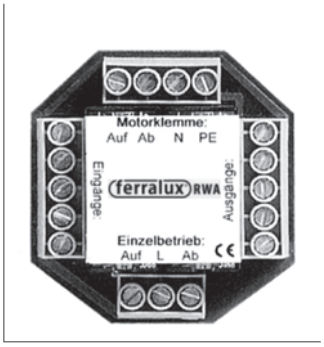
SIMPLIFIED DIAGRAMM – CONTROL RELAY



ORDER DATA

	Part.-No.
Universal Control Relay for 1 drive 230 V AC	**400130**

Application: Control Relay for the single or group-wise control of 1 drive 230 V AC, suitable for the installation in a flush-mounted junction box behind the ventilation button.



TECHNICAL DATA (Rated values)

Operating voltage:	230 V AC (+/-10%), 50 Hz
Output voltage:	230 V AC
Current consumption relay:	10 mA
Operating capacity:	**5 A**
Duty cycle:	ED30% (10 min)
Ambient temperature range:	0 °C ... +60 °C
Connections:	1 Ventilation button 230 V AC 1 Central OPEN/CLOSE (input / output) 1 Drive 230 V AC / 5 A
Operating mode:	Dead-man mode
Housing:	Plastic (ABS), for flush mounting junction box ∅60 mm
Dimensions (WxHxD):	46 x 52 x 30 mm
Connection terminals:	Screw terminal 1,5 mm² (rigid wire)
Protection rating:	IP20

Feature/Equipment
- Every Control Relay has an inputs and outputs for looping through of a higher priority command (i.e. from ventilation buttons or time switch) and the power supply
- The ventilation input controls the modul-own drive output only

Relay Interface for 2 drives 230 V AC	**400120**

Application: Relay Interface for the single or group-wise control of 2 drives 230 V AC, suitable for the installation in a flush-mounted junction box behind the ventilation button.

TECHNICAL DATA (Rated values)

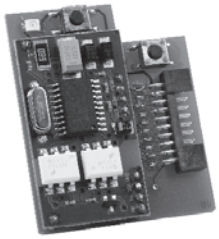
Operating voltage:	230 V AC (+/-10%), 50 Hz
Output voltage:	230 V AC
Current consumption relay:	10 mA
Operating capacity:	**5 A per output**
Duty cycle:	ED30% (10 min)
Ambient temperature range:	0 °C ... +60 °C
Connections:	2 Ventilation buttons 230 V AC 1 Central OPEN/CLOSE (input / output) 2 Drives 230 V AC / 5 A
Operating mode:	Dead-man mode
Housing:	Plastic (ABS), for flush mounting junction box ∅70 mm
Dimensions (WxHxD):	60 x 60 x 30 mm
Connection terminals:	Screw terminal 1,5 mm² (rigid wire)
Protection rating:	IP20

Feature/Equipment
- Every Relay Interface has an inputs and outputs for looping through of a higher priority command (i.e. from ventilation buttons or time switch) and the power supply
- Each ventilation input controls its own drive output only

ORDER DATA

	Part.-No.			
BI-K - KNX Interface LZ1 / LZ6 / EMB 7300	**683999**			

Application: Plug-in card for communication between the controllers **Aumüller** LZ1, LZ6 and EMB 7300 to the KNX BUS system.



TECHNICAL DATA

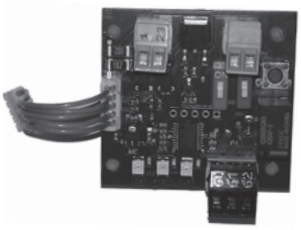
Rated voltage:	24 V DC
Ambient temperature range:	-5°C … + 40°C
Relative humidity:	(no condensate) 5% … 90%
Data points:	up to 16 pieces per drive line
BUS current:	9mA
Housing:	without (assembled PCB)
Dimensions (WxH):	51 x 42 mm
Connection terminals:	2 x 2 x 0,8 mm (KNX-BUS-Terminal)

Feature/Equipment

- Data of the control (e.g. drive position) are sent on the KNX-BUS.
- The controls received direct orders from the KNX-BUS (e.g. position information, weather data).
- The licensed version of the „EMB compact configurator“ required - for commissioning.

SHEV-Module LZ6	**660066**			

Application*:* SHEV-Module for connecting of one or more smoke detectors (max. 10) to a **LZ6** ventilation control unit.



TECHNICAL DATA

Rated voltage:	24 V DC
Housing:	without (assembled PCB)
Dimensions (WxH):	45 x 42 mm
Ambient temperature range:	-5 °C ... +60 °C
Relative humidity:	(no condensate) 5% … 90%

Feature/Equipment

- The smoke detector is triggered with the highest priority and leads to the complete opening of the drives connected to the LZ6. All other ventilation commands are locked. This condition is indicated by the alarm LED.

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6 Controlled Natural Ventilation

PRODUCT FEATURES

- Our controlled natural ventilation system offers solutions for modern buildings in the highest possible comfort level for the user
- Our controlled natural ventilation systems require careful planning and professional installation. The system provides:
  - supply of rooms with fresh air by having a low power demand
  - improves cooling of the building in the summer
  - it has an integrated night cooling system which saves energy in the summer, heat losses in the winter are prevented by short ventilation intervals
  - it prevents moisture damage and mould formation
- Controlled natural ventilation basics:
  - Single sided ventilation (windows are on one side of the room) – suitable for rooms with low public accordance and a room depth < 2,5x room height, with low air exchange rates
  - Cross ventilation (windows are on both sides of the room) – it occurs where there are ventilation openings on both sides of the room and where there are significant differences in wind pressure. It is suitable for rooms for high frequency rooms and a room depth < 5x room height
  - Atrium ventilation (windows are arranged into the facade or into the roof) – Windows which are suitated on different height levels are a trigger to the „chimney effect". Thus makes the warm air rise up and escape in the form of exhaust air through the roof windows. This produces an under pressure within the building and allows fresh air to enter freely through the facade windows
  - Hybrid ventilation – it uses the advantages of a controlled natural ventilation system and supports it with an additional added mechanical ventilation (e.g. extract air fan). A hybrid ventilation can be used in rooms which have a high public accordance (e. g. conference rooms)
- Due to the very extensive functions and tasks controlled ventilation systems have to fulfil, the components used within such systems are usually networked via wired bus systems like KNX, LON, CAN or via wireless radio sytems

For this product series, a Type III Environmental Product Declaration (EPD) was issued according to ISO 14025 and EN 15804.
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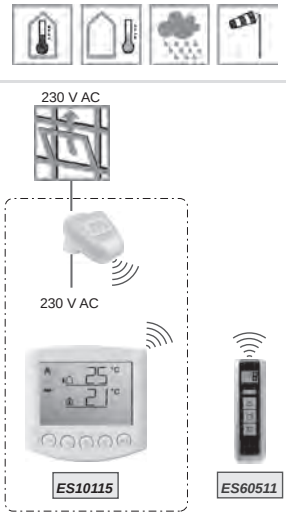
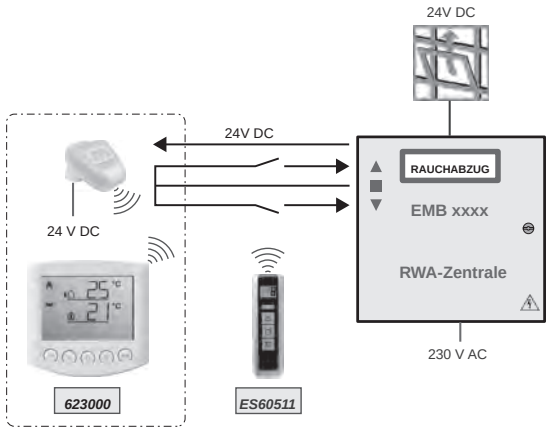
Principal diagramm – **Ventilation control 230 V** for ventilation (radio system)

Sensor



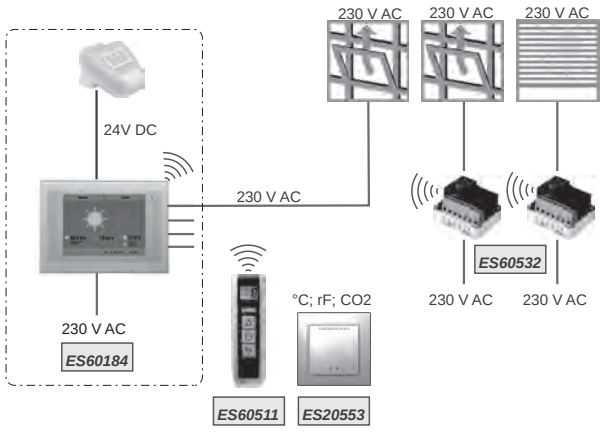
Principal diagramm – **Ventilation control 24 V** for ventilation and SHEV (radio system)

Sensor RWA



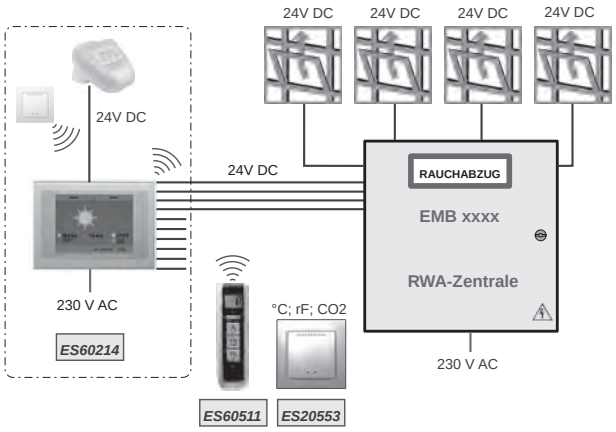
Principal diagramm – **WS1® Style 230 V** for ventilation

Sensor



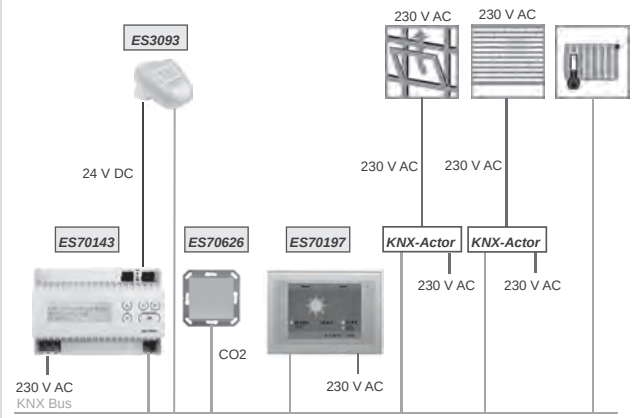
Principal diagramm – **WS1000® Style PF** for ventilation and SHEV

Sensor RWA



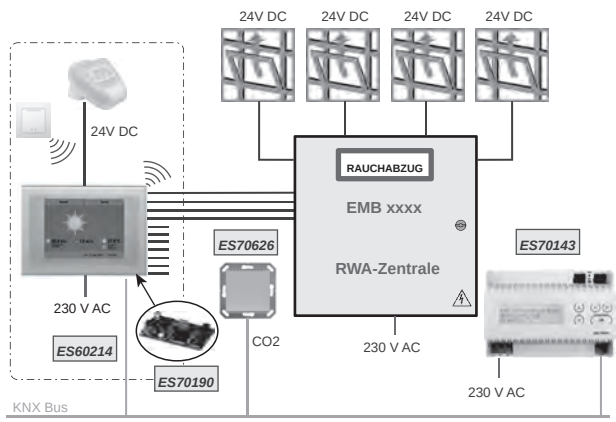
Principal diagramm – **KNX Touch-One® Style** for ventilation

Sensor GPS



Principal diagramm - (KNX) WS1000® Style PF for ventilation and SHEV

Sensor RWA



ORDER DATA

	Part.-No.				
Radio Ventilation Control FLS 24V	**623000**				

Application: Room automation control unit for one drive 24 V DC or one SHEV Control Unit, including a weather station with rain, temperature, sun and wind sensor and a radio control with indoor temperature sensor.

TECHNICAL DATA

Radio control frequency:	868,2 MHz
Control Panel	
Housing:	plastic material
Total weight:	approx. 170 gr. (including batteries)
Colour:	matt white (similar to RAL 9016)
Mounting:	surface mounted (aP)
Dimensions (W × H × D):	approx. 103 × 98 × 28
Ambient temperature range:	operation 0…+50°C, storage -10…+50°C
Ambient air humidity:	max. 80% rF, avoid bedewing
Operating voltage:	2 x 1,5V (2 batteries, AA / mignon / LR6) **or** 2 x 1,2V (2 rechargeable batteries, AA / mignon / LR6)
Weather Station	
Housing:	plastic material
Total weight:	approx. 200 gr.
Colour:	white / translucent
Mounting:	surface mounted (aP)
Protection rating:	IP 44
Dimensions (W×H×D):	approx. 96 × 77 × 118
Ambient temperature range:	operation -30…+60°C, storage -30…+70°C
Operating voltage:	12 - 40 V DC
Power consumption:	approx. 2,2 W (at 24 V), standby approx. 2 W (at 24 V)
Switching capacity relay:	(OPEN / CLOSE / COM) volt free contacts
Rain sensor heating:	approx. 1,2 W
Temperature measurement range:	-40…+80°C
Wind measurement range:	0…35 m / sec
Brightness measurement range:	0…150 kLux

Feature/Equipment
- Radio connection between weather station and control panel.
- Control panel for basic setting, setting of the automatic function and for manual operation.
- Opening position adjustable for automatic mode (e.g. open only halfway).

ORDER DATA

	Part.-No.			
Radio Control Arexa® 230V	**ES10115**			

Application: Room automation control unit for one drive 230 V AC, including a weather station with rain, temperature, sun and wind sensor and a radio control with indoor temperature sensor.

TECHNICAL DATA

Radio control frequency:	868,2 MHz

Control Panel

Housing:	plastic material
Total weight:	approx. 170 gr. (including batteries)
Colour:	matt white (similar to RAL 9016)
Mounting:	surface mounted (aP)
Dimensions (W × H × D):	approx. 103 × 98 × 28
Ambient temperature range:	operation 0…+50°C, storage -10…+50°C
Ambient air humidity:	max. 80% rF, avoid bedewing
Operating voltage:	2 x 1,5V (2 batteries, AA / mignon / LR6) **or** 2 x 1,2V (2 rechargeable batteries, AA / mignon / LR6)

Weather Station

Housing:	plastic material
Total weight:	approx. 260 gr.
Colour:	white / translucent
Mounting:	surface mounted (aP)
Protection rating:	IP 44
Dimensions (W×H×D):	approx. 96 × 77 × 118
Ambient temperature range:	operation -30…+60°C, storage -30…+70°C
Operating voltage:	230 V AC, 50 Hz
Current:	max. 22 mA
Power consumption:	max. 10 W, standby approx. 4 W
Switching capacity relay:	max. 1000 W (up / down / N / PE)
Rain sensor heating:	approx. 1,2 W
Temperature measurement range:	-40…+80°C
Wind measurement range:	0…35 m / sec
Brightness measurement range:	0…150 kLux

Feature/Equipment

- Radio connection between weather station and control panel.
- Control panel for basic setting, setting of the automatic function and for manual operation.
- Opening position adjustable for automatic mode (e.g. open only halfway).

ORDER DATA

	Part.-No.			
Control Unit WS1® Style				

Application: Room automation control unit including a weather station with temperature and moisture sensor and a weather station with rain, temperature, sun and wind sensor.

TECHNICAL DATA

Operating voltage:	230 V AC, 50 Hz
Number of radio channels:	max. 32 (868,2 MHz)
Operation:	animated graphical colour display 5,7“ (adjustable languages: German, English, French, Italian)
Connection drives:	WS1® Style-1: 1 / WS1® Style-4: 4
Electric output Version 230V:	max. 400 W per output (max. 1500 W in total)
Electric output Version PF:	volt free NO switch
Connection for ventilation button:	WS1® Style-1: 1 / WS1® Style-4: 4
Multifunctional outputs:	2 (e.g. heating, lighting)
Multifunctional inputs:	2 (e.g. motion detector)
Eff. range indoor temp. sensor:	0 ... +45°C
Eff. range indoor humidity sensor:	0 ... 100% rF (avoid bedewing)
Eff. range outdoor temp. sensor:	-30 ... +50 °C
Eff. range brightness sensor:	0 ... 99 kLux
Eff. range wind sensor:	0 ... 35 m/s
Housing:	glass, plastic (white / gray)
Dimensions (WxHxD):	181 x 131 x 8 mm (display)
Protection rating:	IP40
Ambient temperature range:	0 ... +45°C
Mounting in flush-mounted box: (WxHxD)	172 x 122 x 81 mm

Feature/Equipment
- Setting of switching threshold via touch screen menu and control options via radio remote control Remo® 8

VERSIONS

WS1® Style-1	(1 drive output 230 V)	**ES60181**			
WS1® Style-4	(4 drive outputs 230 V)	**ES60184**			
WS1® Style-Ø	(without drive outputs; only radio connections)	**ES60180**			
WS1® Style-4	(4 drive outputs PF)	**ES60194**			

Radio controlled interior sensors				

Application: Indoor sensor optionally for temperature, relative humidity (ES20550 - WGTH - uP) or for CO2, temperature, relative humidity (ES20553 - WG-AQS / TH - uP).

TECHNICAL DATA

Operating voltage:	7 ... 30 V DC
Power consumption:	max. 35 mA
Radio control frequency:	868,2 MHz
Eff. range indoor temp. sensor:	-20 ... +70°C
Eff. range indoor humidity sensor:	0 ... 95% rF
Measuring range CO2:	0 ... 2000 ppm (only with version WG-AQS / TH - uP
Housing:	plastic, white translucent (similar to RAL 9016)
Dimensions (WxHxD):	71 x 71 x 15 mm
Protection rating:	IP20
Ambient temperature range:	-20 ... +70°C
Ambient air humidity range:	max. 95% rF (avoid bedewing)
Mounting in flush-mounted box:	60 mm, 42 mm deep

Feature/Equipment
- Integration into radio controlled systems with Control Unit WS1® Style, WS1000® Style

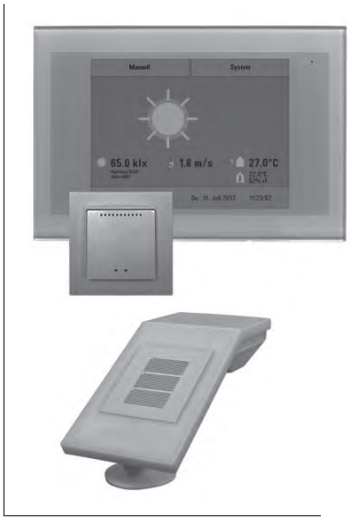
VERSIONS

WGTH - uP	(temperature, relative humidity)	**ES20550**			
WG-AQS / TH - uP	(CO2, temperature, relative humidity)	**ES20553**			

ORDER DATA

	Part.-No.			
Control Unit WS1000® Style				

Application: Room automation control unit including a weather station with temperature and moisture sensor and a weather station with rain, temperature, sun and wind sensor and a radio controlled thermo hygrometer WGTH - uP.



TECHNICAL DATA

Operating voltage:	230 V AC, 50 Hz
Number of radio channels:	max. 32 (868,2 MHz)
Operation:	animated graphical colour display 8,4“ (adjustable languages: German, English, French, Italian)
Connection drives:	WS1000® Style-4: 4 / WS1000® Style-10: 10
Electric output Version 230V:	max. 400 W per output (max. 1500 W in total)
Electric output Version PF:	volt free NO switch
Connection for ventilation button:	WS1000® Style-4: 4 / WS1000® Style-10: 10
Multifunctional outputs:	4 (e.g. heating, lighting)
Multifunctional inputs:	4 (e.g. motion detector)
Eff. range indoor temp. sensor:	-20 ... +70°C
Eff. range indoor humidity sensor:	0 ... 100% rF
Eff. range outdoor temp. sensor:	-30 ... +50 °C
Eff. range brightness sensor:	0 ... 99 kLux
Eff. range wind sensor:	0 ... 35 m/s
Housing:	glass, plastic
Dimensions (WxHxD):	270 x 185 x 9 mm (display)
Protection rating:	IP40
Ambient temperature range:	0 ... +45°C
Mounting in flush-mounted box: (WxHxD)	245 x 171 x 85 mm

Feature/Equipment
- Setting of switching threshold via touch screen menu and control options via radio remote control Remo® 8

VERSIONS

WS1000® Style-4	(4 drive outputs 230V)	**ES60201**			
WS1000® Style-10	(10 drive outputs 230V)	**ES60204**			
WS1000® Style-10	(10 drive outputs PF)	**ES60214**			

Wind and rain sensor RW-PF	**ES30155**			

Application: Wind and rain sensor for the detection and analysis of weather data with Volt free outputs.

TECHNICAL DATA

Operating voltage:	12 ... 35 V DC
Output rain:	1x NO switch, volt free
Output wind alarm:	1x NO switch, volt free
Display:	2x LED for wind and rain alarm
Eff. range wind sensor:	0 ... 35 m/s
Rain sensor heating:	approx. 1,2 W
Housing:	plastic, white/translucent
Dimensions:	96 x 77 x 118 mm
Mounting:	On wall or polet
Ambient temperature range:	-30 ... +50°C

Feature/Equipment
- Electronic measurement of wind is very reliable when weather conditions change to hail, snow or if temperature drop to sub-zero
- Setting of wind threshold value via DIP switches. Heated rain sensor prevents false reports as a result of fog or dew

ORDER DATA

	Part.-No.			
Radio controlled motor control unit RF-MSG				

Application: Radio controlled motor control unit with 1 drive output 230 V AC for electric motor driven windows or awnings, blinds and rolling shutters.

TECHNICAL DATA

Operating voltage:	230 V AC, 50 Hz
Radio control frequency:	868,2 MHz
Outputs:	1x drives 230 V AC
Switching capacity Version 230 V:	max. 230 V AC / 4 A (PE / N / Off / On)
Switching capacity Version PF:	volt frei output (On / Off / L)
Housing:	without, for mounting in flush or surface mounted box
Dimensions (WxHxD):	38 x 47 x 29 mm
Protection rating:	IP20
Ambient temperature range:	-20 ... +70°C
Ambient air humidity range:	max. 95% rF (avoid bedewing)

Feature/Equipment
- Radio communication with of building Control Unit WS1® Style, WS1000® Style or directly controlled by radio remote control Remo® 8

VERSIONS

RF-MSG	**ES60532**				
RF-MSG PF	**ES60533**				

Remote control Remo® 8	**ES60511**				

Application: Radio controlled hand-held transmitter with display for the manual control of WS1® Style, WS1000® Style, Arexa® or radio controlled motor control unit RF-MSG, RF-REL uP.

TECHNICAL DATA

Operating voltage:	1x battery 3 V DC type CR2032
Radio control frequency:	868,2 MHz
Number of radio channels:	max. 8
Total weight:	~95 g
Housing:	plastic, white / light gray
Dimensions of transmitter (WxHxD):	41 x 140 x 21 mm
Dimensions of wall holder (WxHxD):	54 x 150 x 11 mm
Protection rating:	IP40
Ambient temperature range:	0 ... +50°C
Ambient air humidity range:	max. 95% rF (avoid bedewing)

Feature/Equipment
- Magnetic wall holder included

ORDER DATA

	Part.-No.			
Operation panel KNX Touch-One® Style	**ES70197**			

Application: Touch panel for room automation, with KNX connection and integrated indoor sensors for temperature and humidity detection.

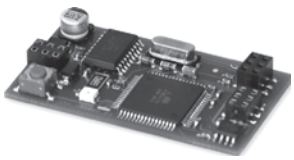
TECHNICAL DATA

Operating voltage:	230 V AC, 50 Hz
Auxiliary supply:	12 ... 40 V DC
BUS current:	max. 10 mA
Operation:	animated graphical colour display 5,7“ (adjustable languages: German, English, French, Italian)
Multifunctional inputs:	4 binary inputs (e.g. for buttons)
Data output:	KNX +/- terminals
Group addresses:	max. 1024
Assignments:	max. 1024
Communication objects:	477 (Number 1 ... 532)
Eff. range indoor temp. sensor:	-40 ... +80°C
Eff. range indoor humidity sensor:	0 ... 100% rH (avoid bedewing)
Housing:	glass, plastic, white / gray
Display Dimensions (WxHxD):	181 x 111 x 8 mm
Flush mounting housing (WxHxD):	172 x 122 x 81 mm
Protection rating:	IP20
Ambient temperature range:	0 ... +50°C

Feature/Equipment
- Internal automatic for shading (sun and view protected), room climate control (heating, cooling, ventilation), internal lightning control, BUS for time and scene control options, universal menu to display status information and use of function and object allocations

Interface KNX for WS1000® Style	**ES70190**			

Application: For plugging the circuit board on Control Unit WS1000® Style.



TECHNICAL DATA

Operating voltage:	KNX bus voltage
Data output:	KNX +/- BUS screw terminal
Communications object:	254
Housing:	without
Dimensions (WxHxD):	53 x 7 x 30 mm
Ambient temperature range:	0 … +50 °C
Ambient air humidity range:	max. 95 rF (avoid bedewing)

Feature/Equipment
- Transmission of KNX bus data from and back of Control Unit WS1000®
- Control of KNX actuator via automated functions of Control Unit WS1000®

Power supply KNX PS640				

Application: Power supply for KNX bus.

TECHNICAL DATA

Operating voltage:	230 V AC, 50 Hz
Display:	Display (adjustable languages: German, English, Spanish, Dutch)
Outputs:	KNX bus voltage 29 V (choked) max. 640 mA 24 V DC (not choked) max. 150 mA
Housing:	plastic, white
Dimensions (WxHxD):	123 x 89 x 61 mm (7 TE)
Mounting:	serial mounting on top rail 35 mm
Protection rating:	IP20
Ambient temperature range:	-5 ... +45°C
Ambient air humidity range:	max. 95% rF (avoid bedewing)

Feature/Equipment
- Reset of one line possible
- Reporting of operating hours, overload, external overvoltage, internal overvoltage, short circuit and overtemperature
- Display of operating data, bus voltage, bus current and temperature of the device

VERSIONS

KNX PS 640 USB	**ES70143**			
KNX PS 640 IP	**ES70142**			

ORDER DATA

	Part.-No.			
Weather station KNX Suntracer GPS	**ES3093**			

Application: Weather station with KNX connection to report and analyse: outdoor temperature, wind speed, brightness. Suitable for GPS receiver (time and location settings), includes system to calculate the exact position of the sun (azimuth and elevation) on the basis of loca-tion coordinates and time. Contain an integrated week and calendar time controller.

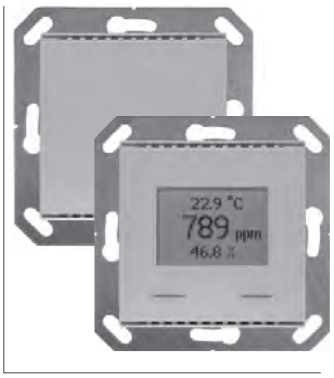
TECHNICAL DATA

Operating voltage:	230 V AC, 50 Hz
Auxiliary supply:	12 ... 40 V DC, max. 81 mA at 24 V DC
BUS current:	max. 8 mA
Data output:	KNX +/- BUS screw terminal
Group addresses:	max. 254
Assignments:	max. 255
Communication objects:	254
Eff. range temperature sensor:	-30 ... +80°C
Eff. range wind sensor:	0 ... 35 m/s
Eff. range brightness sensor:	0 ... 150.000 Lux
Housing:	plastic, white / translucent
Dimensions (WxHxD):	96 x 77 x 118 mm
Mounting:	surface mounting
Protection rating:	IP44
Ambient temperature range:	-30 ... +50°C

Feature/Equipment
- Shading for up to 6 facades with slat and shadow edge tracking
- The wind strength measurement takes place electronically and thus noiselessly and reliably, even during hail, snow and sub-zero temperatures
- Heated precipitation sensor prevents false reports as a result of fog or dew
- The weekly time switch switches up to 4 different periods per day
- Switching outputs for all measured and calculated values (threshold values can be set via parameters or communications objects) 8 AND + 8 OR logic gate with 4 for each input
- Configuration via KNX software ETS

KNX indoor sensor				

Application: Indoor sensor for measuring of CO2 in the air, of temperature and air humidity (absolute and relative).



TECHNICAL DATA

Operating voltage:	KNX BUS voltage
BUS current:	max. 20 mA
Data output:	KNX +/- BUS screw terminal
Communication objects:	196 (without display) / 224 (with display)
Eff. range CO2 sensor:	300 ... 5000 ppm
Housing without display:	plastic, pure white (similar to RAL 9010)
Housing with display:	plastic, signal white (similar to RAL 9003)
Dimensions (WxHxD):	71 x 71 x 15 mm
Protection rating:	IP20
Ambient temperature range:	0 ... +50°C
Ambient air humidity range:	max. 95% rH (avoid bedewing)
Mounting in flush mounted box:	∅60 mm, 42 mm deep

Feature/Equipment
- PI controller for ventilation depending on humidity and CO2 concentration
- PI controller for heating and cooling depending on temperature
- Threshold values can be adjusted per parameter or via communication objects
- Configuration via KNX software ETS

VERSIONS

KNX AQS/TH - uP gl (without display)	**ES70626**			
KNX AQS/TH - uP Touch (with display)	**ES70618**			

ORDER DATA

	Part.-No.			
Hinge arm mounting GAW-G for weather station	**ES30109**			

Application: Suitable for walls, pole or beam mounting.

TECHNICAL DATA

Material:	Aluminium
Colour:	powder coated RAL 9016 (traffic white)
Number of hinges:	1
Length:	approx. 420 mm

Feature/Equipment
- Includes adjusting screw, w/o brackets

Mounting clamp BS-2	**ES30232**			

Application: Suitable for mounting on pipe pylons.

TECHNICAL DATA

Material:	Steel, galvanized
Diameter:	∅40 – 60 mm

Feature/Equipment
- 2 pcs.

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7 EPD Values

	GWP (greenhouse potential)	Ozone depletion potential	Acidification potential	Eutrophication potential	Photochemical oxidation potential	Abiotic depletion - elements	Abiotic depletion - fossil	Primary energy not renewable	Primary energy renewable	Freshwater consumption
	(GWP 100)	(ODP)	(AP)	(EP)	(POCP)	($ADP_{el.}$)	(ADP_{fos})	($PE_{n\ reg}$)	(PE_{reg})	(H_2O)
	kg CO_2-equivalent	kg R11-equivalent	kg SO_2-equivalent	kg PO_4^{3-}	kg C_2H_4-equivalent	kg Sb-equivalent	MJ	MJ	MJ	m^3
control units										
7300 2A	3,77E+01	6,04E-06	3,85E+02	3,48E+01	2,46E+01	6,07E-02	4,65E+02	1,36E+02	1,02E+04	8,12E+01
7300 5A	3,77E+01	6,04E-06	3,85E+02	3,48E+01	2,46E+01	6,07E-02	4,65E+02	1,36E+02	1,02E+04	8,12E+01
7300 10A	1,51E+02	2,42E-05	1,54E+03	1,39E+02	9,84E+01	2,43E-01	1,86E+03	5,44E+02	4,06E+04	3,25E+02
7300 20A	3,02E+02	4,83E-05	3,08E+03	2,79E+02	1,97E+02	4,86E-01	3,72E+03	1,09E+03	8,12E+04	6,50E+02
8000+ 5A	7,54E+01	1,21E-05	7,71E+02	6,96E+01	4,92E+01	1,21E-01	9,30E+02	2,72E+02	2,03E+04	1,62E+02
8000+ 10A	1,51E+02	2,42E-05	1,54E+03	1,39E+02	9,84E+01	2,43E-01	1,86E+03	5,44E+02	4,06E+04	3,25E+02
8000+ 24A	3,62E+02	5,80E-05	3,70E+03	3,34E+02	2,36E+02	5,83E-01	4,47E+03	1,30E+03	9,75E+04	7,80E+02
8000+ 48A	7,24E+02	1,16E-04	7,40E+03	6,68E+02	4,72E+02	1,17E+00	8,93E+03	2,61E+03	1,95E+05	1,56E+03
8000+ 72A	1,09E+03	1,74E-04	1,11E+04	1,00E+03	7,09E+02	1,75E+00	1,34E+04	3,91E+03	2,92E+05	2,34E+03
LZ1	3,77E+01	6,04E-06	3,85E+02	3,48E+01	2,46E+01	6,07E-02	4,65E+02	1,36E+02	1,02E+04	8,12E+01
LZ6 24	3,62E+02	5,80E-05	3,70E+03	3,34E+02	2,36E+02	5,83E-01	4,47E+03	1,30E+03	9,75E+04	7,80E+02
LZ6 30	4,52E+02	7,25E-05	4,62E+03	4,18E+02	2,95E+02	7,28E-01	5,58E+03	1,63E+03	1,22E+05	9,75E+02
controllers										
NT-T2,5	3,77E+01	6,04E-06	3,85E+02	3,48E+01	2,46E+01	6,07E-02	4,65E+02	1,36E+02	1,02E+04	8,12E+01
NT-S 6,5	9,80E+01	1,57E-05	1,00E+03	9,05E+01	6,40E+01	1,58E-01	1,21E+03	3,53E+02	2,64E+04	2,11E+02
HSE	6,28E-02	1,01E-08	6,42E-01	5,80E-02	4,10E-02	1,01E-04	7,75E-01	2,27E-01	1,69E+01	1,35E-01
WR-Set7x/8x	1,26E-01	2,01E-08	1,28E+00	1,16E-01	8,20E-02	2,02E-04	1,55E+00	4,53E-01	3,38E+01	2,71E-01
RS TIII 24	9,42E-02	1,51E-08	9,63E-01	8,70E-02	6,15E-02	1,52E-04	1,16E+00	3,40E-01	2,54E+01	2,03E-01
RS TIII 230	9,42E-01	1,51E-07	9,63E+00	8,70E-01	6,15E-01	1,52E-03	1,16E+01	3,40E+00	2,54E+02	2,03E+00
WRAG2	3,14E-01	5,03E-08	3,21E+00	2,90E-01	2,05E-01	5,06E-04	3,88E+00	1,13E+00	8,46E+01	6,77E-01
WRA TypIV	6,28E-01	1,01E-07	6,42E+00	5,80E-01	4,10E-01	1,01E-03	7,75E+00	2,27E+00	1,69E+02	1,35E+00
WR-ST IV	1,26E+00	2,01E-07	1,28E+01	1,16E+00	8,20E-01	2,02E-03	1,55E+01	4,53E+00	3,38E+02	2,71E+00

Declaration code: **M-EPD-SVR-GB-101**
Programme operator: **ift Rosenheim GmbH**
Theodor-Gietl-Str. 7-9,
83026 Rosenheim, Germany
LCA prepared by: **Life Cycle Engineering Experts**
Berliner Allee 58,
64295 Darmstadt, Germany
Declaration holder: **Aumüller Aumatic GmbH.**

The declaration is based on the PCR (Product Category Rules) document „Building Components for Smoke and Heat Control Systems" No. PCR-RW-1.1:2013.

LCA calculations were based on the „cradle to grave" life cycle including all upstream processes (e.g. raw material extraction, etc.).

The reference service life has been specified to 25 years. The calculation of the life cycle scenarios is based on a service life of **50 years** per electrical device.

The life cycle was modelled using the sustainability software tool „GaBi6" for the development of Life Cycle Assessments. For the consideration of the impact categories the characterisation factors of the ELCD (European Reference Life Cycle Database) were used.

In accordance with the REACH candidate list, no substances of very high concern are contained.

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