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03.2023

# PRODUCT OVERVIEW CONTROLE UNITS


Interactive buttons

www.aumueller-gmbh.de

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## IMPORTANT NOTE

Although we have done everything we can to ensure that the date and information within this document is correct and up-to-date as possible, we cannot guarantee that there are not any errors. Be aware that the information and data contained in this document can be altered without prior and notice.


The publication of this document supersedes all previous editions.
In pursuance of our policy of continuing product improvement, the equipment described in this publication is subject to changes without notification.

All prices quoted shall be in Euro and are Euro ex works excluding packaging costs and excluding statutory rate of value added tax.
Orders with a net value of goods of less than 100 € cannot be processed economically and will therefore be subject to a minimum quantity surcharge of 20 €.

For offers, deliveries and performances our general terms and conditions shall apply exclusively.

By pasting this product list, previous editions become invalid.

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Product overview

## 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

Product overview

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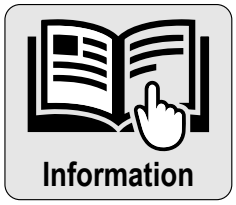



## General information about this product

- Product features EMB7300
- Software functions
- Application example of a complete system

To the information

## EMB7300 (2,5 A + 5 A) + accesories

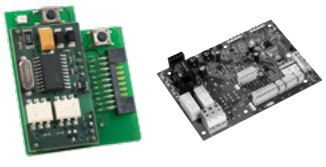
- EMB7300 2,5 A 0101
- EMB7300 5 A 0101
- EMB7300 5 A 0102
- Flush mounting housing EMB7300 2,5 A / 5 A
- Accumulator holder

To the product

## EMB7300 (10 A + 20 A) + accesories

- EMB7300 10 A 0101
- EMB7300 10 A 0102
- EMB7300 10 A 0204
- EMB7300 20 A 0102
- EMB7300 20 A 0204
- Wall fixing brackets IP54

To the product



## Accesories for EMB7300

- WR-SET TYPE 7x/8x – Wind and Rain Sensor Set
- BI-K - KNX Interface LZ1 / LZ6 / EMB7300
- REL65
- 7xPSB
- USB-Cable
- Accumulators
- Software / License / Programming EMB7300
- Radio-HSE - Break-glass unit main control panel (plastic)
- Receiver plug-in card radio SHEV
- Radio Antenna
- Replacement board EMB7300 2,5 A / 5 A / 10 A / 20 A
- Key + Lock 1D9

To the product

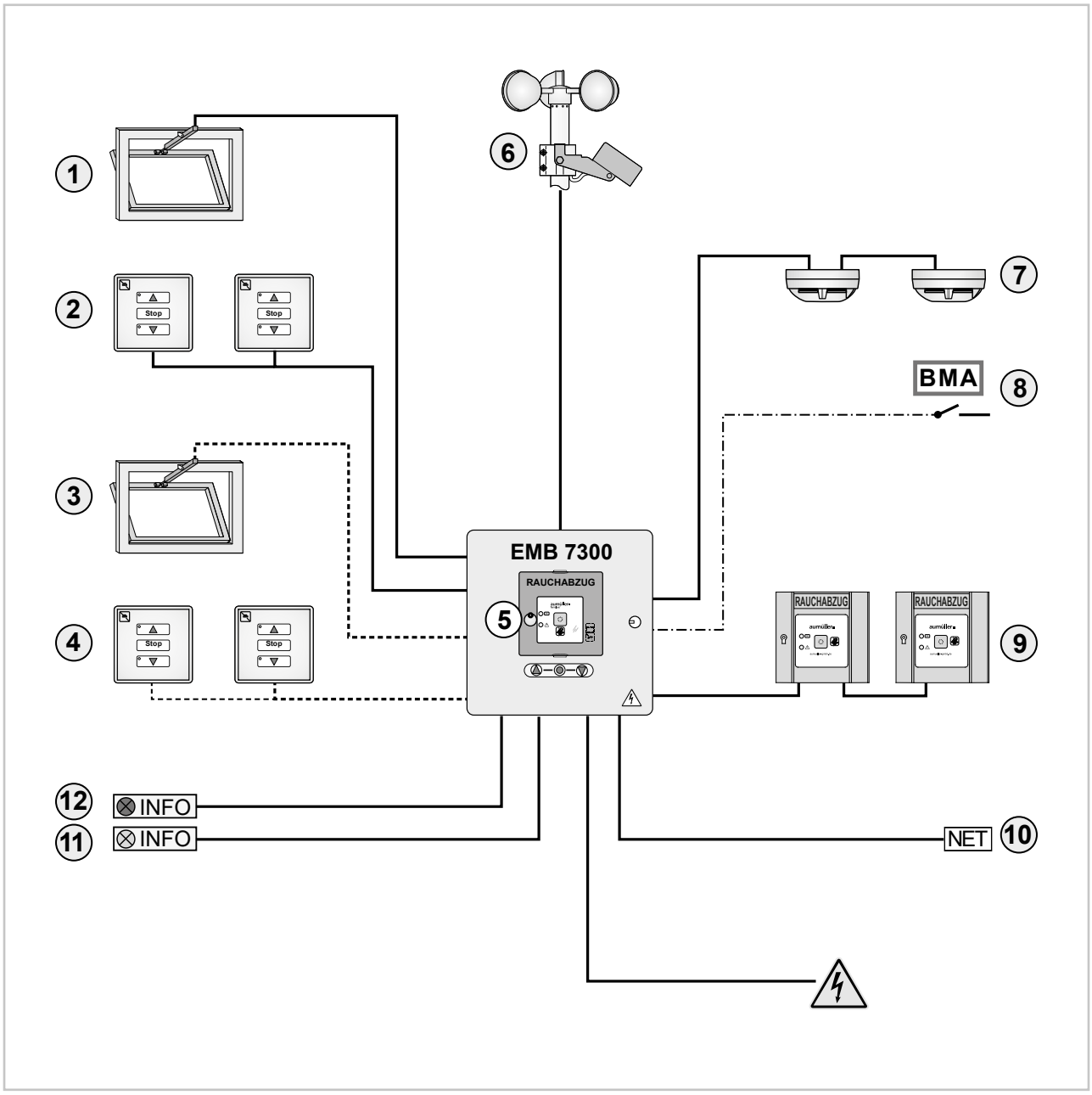

## PRODUCT FEATURES EMB7300

- 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 / ISO 21927-9
- 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 (KNK)
- 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 (KNX) | | ✓ |
| 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<br>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<br>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 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<br>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<br>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<br>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<br>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<br>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)**

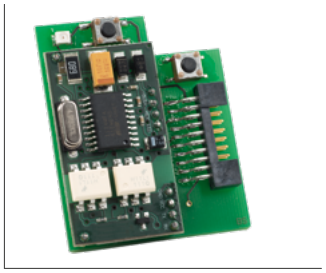
| | |
|---|---|
| Rated voltage: | 24 V DC (+/- 20%) |
| Rain sensor Type III – heated sensor surface, switch-off delay approx. 5 min. | |
| Contact: | 1 Change-over switch, max. 48 V / 5A |
| Current consumption: | <150 mA |
| Housing: | Surface mounting, ABS black with stainless steel bracket |
| Dimensions (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) |

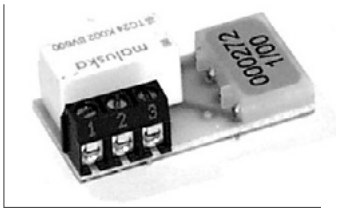
**Feature/Equipment**

- 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.

## 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 |

| | Part.-No. |
|---|---|
| **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<br>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!

| | Part.-No. |
|---|---|
| **Accumulators** | |

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

**TECHNICAL DATA**

| | |
|---|---|
| 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<br>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 EMB7300

| **Configuration software for extended scope of functions**<br>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. | | | |
|---|---|---|---|---|
| **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.

NEW

## VERSIONS

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Radio-HSE** | plastic orange | (similar to RAL 2011) | **528340** | | | | |
| **Radio-HSE** | plastic red | (similar to RAL 3000) | **528341** | | | | |
| **Radio-HSE** | plastic yellow | (similar to RAL 1018) | **528342** | | | | |
| **Radio-HSE** | plastic blue | (similar to RAL 5015) | **528343** | | | | |
| **Radio-HSE** | plastic grey | (similar to RAL 7035) | **528344** | | | | |

## OPTIONS

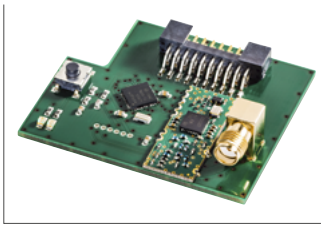
RADIO

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

## 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 |

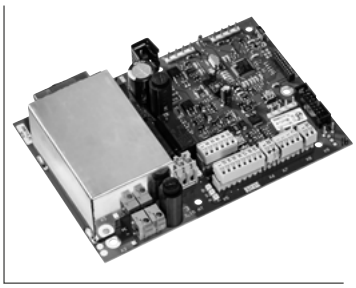
RADIO

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

## ORDER DATA

| | Part.-No. |
|---|---|
| **Replacement board EMB7300 2,5A 1LG** | **683029** |

**Application:** Replacement board, for Control Units **EMB7300-2,5A-0101** with one motor line.



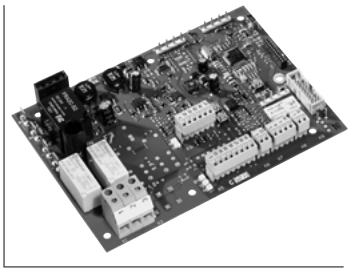
**TECHNICAL DATA**

| | |
|---|---|
| Operating voltage: | 230 V AC (195 - 253 V AC, 50/60 Hz) |
| Output voltage: | 24 V DC (2 Vpp) |
| Output current: | **2,5 A** |
| Vent groupe: | 1 |

**Feature/Equipment**
- Board assembled and checked

| | |
|---|---|
| **Replacement board EMB7300 5A / 10A 1LG** | **683059** |

**Application:** Replacement board, for Control Units **EMB7300-5A-0101** and **EMB7300-10A-0101** with one motor line.



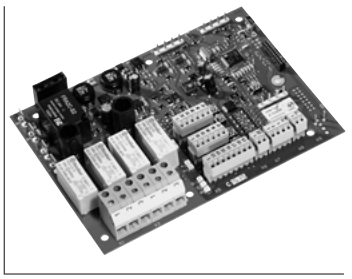
**TECHNICAL DATA**

| | |
|---|---|
| Operating voltage: | 230 V AC (195 - 253 V AC, 50/60 Hz) |
| Output voltage: | 24 V DC (2 Vpp) |
| Output current: | **5 / 10 A** |
| Vent groupe: | 1 |

**Feature/Equipment**
- Board assembled and checked

| | |
|---|---|
| **Replacement board EMB7300 5A / 10A / 20A 2LG** | **683229** |

**Application:** Replacement board, for Control Units **EMB7300-5A-0102, EMB7300-10A-0102** and **EMB7300-20A-0102** with two motor lines.



**TECHNICAL DATA**

| | |
|---|---|
| Operating voltage: | 230 V AC (195 - 253 V AC, 50/60 Hz) |
| Output voltage: | 24 V DC (2 Vpp) |
| Output current: | **5 / 10 / 20 A** |
| Vent groupes: | 2 |

**Feature/Equipment**
- For Control Units 5A - 20A with two motor lines.

## ORDER DATA

| | Part.-No. |
|---|---|
| **Key 1D9** | **260010** |

**Application:** Replacement key for the housing of a Control Unit.

**TECHNICAL DATA**

| | |
|---|---|
| Size: | **1D9** |
| Key: | 1 piece |

**Feature/Equipment**
- For lock 1D9 straight bolt EMB7300

| | Part.-No. |
|---|---|
| **Lock 1D9, including two keys** | **260008** |

**Application:** Lock - with security cylinder and straight bolt - for the housing of a Control Unit.
Including two keys and a spring.

**TECHNICAL DATA**

| | |
|---|---|
| Size: | **1D9**<br>**Security cylinder insert** |
| Keys: | 2 pieces |

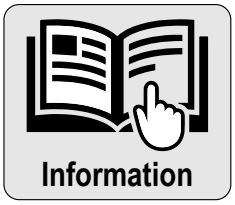
**Feature/Equipment**
- Lock 1D9 straight bolt EMB7300

aumüller

# 2 SHEV – Modular Control Units

Product overview

aumüller




## General information about this product

- Product features EMB8000+
- Scope of the configuration software
- Application example of a complete system
- Basic versions expandable:
  Planning notes / expansion limitation / configuration / parameter of modules

To the information

## EMB8000+ Basic versions expandable

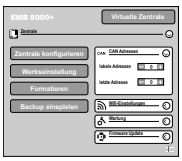
- EMB8000+ 5 A
- EMB8000+ 10 A
- EMB8000+ 24 A
- EMB8000+ 48 A
- EMB8000+ 72 A
- EMB8000+ 96 A

To the product

## EMB8000+ module

- DM
- + 230 V-DM Vent
- DMX
- IDM
- SM
- RM6
- IM-K - KNX
- WM
- CM
- PM
- PME

To the product




## EMB8000+ accesories

- Terminals
- Service
- Surge arrester Type 3
- Automatic circuit breaker
- Software licence EMB 8000+ Alpha
- Accumulators
- Relay interface + Wall fixing brackets
- Time switch
- Temperature sensor

To the product

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

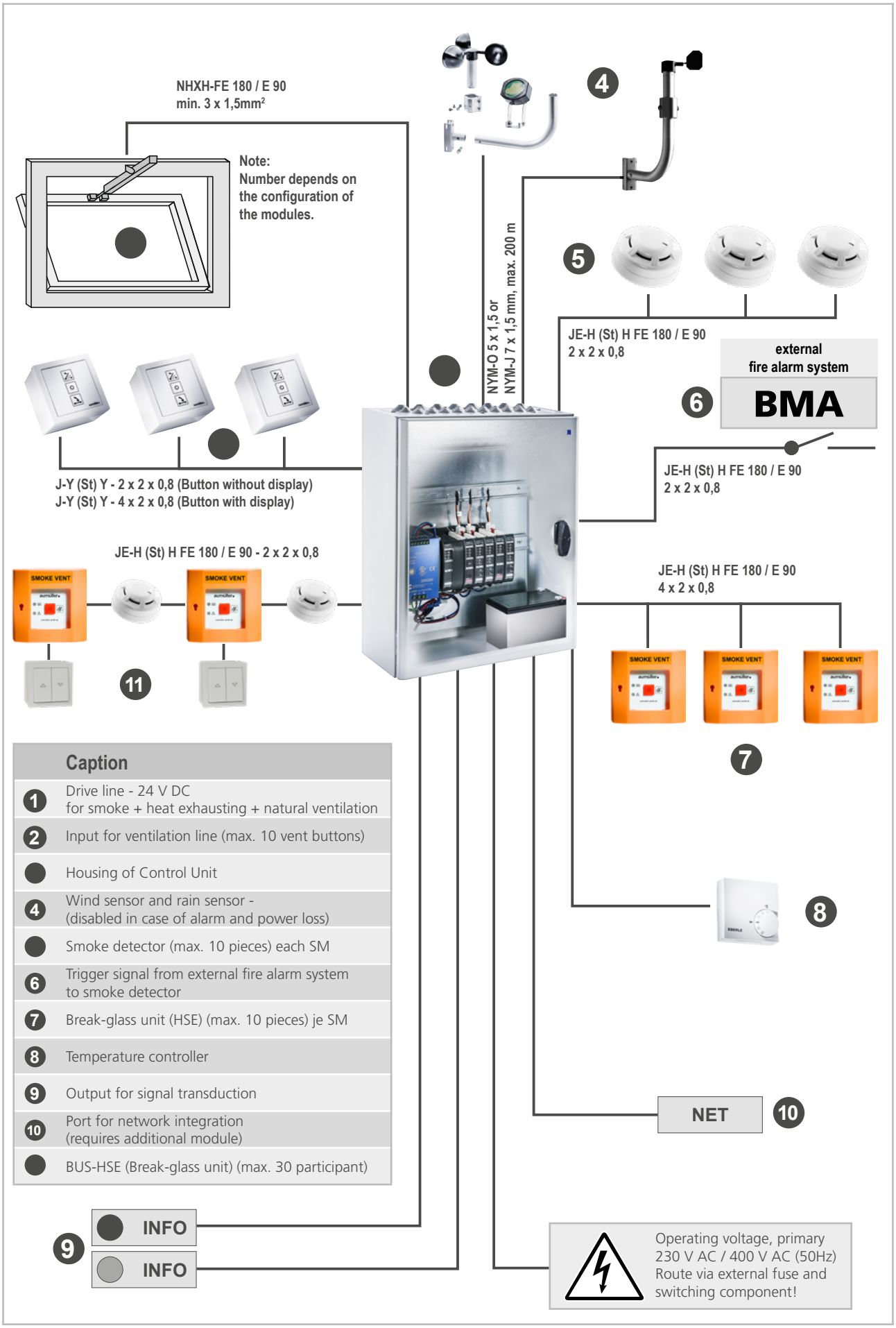
The LCA results of the different product types are listed at the end of this product catalogue. The EPD documents can be viewed or downloaded from our homepage **www.aumueller-gmbh.de**.

## PRODUCT FEATURES EMB 8000+

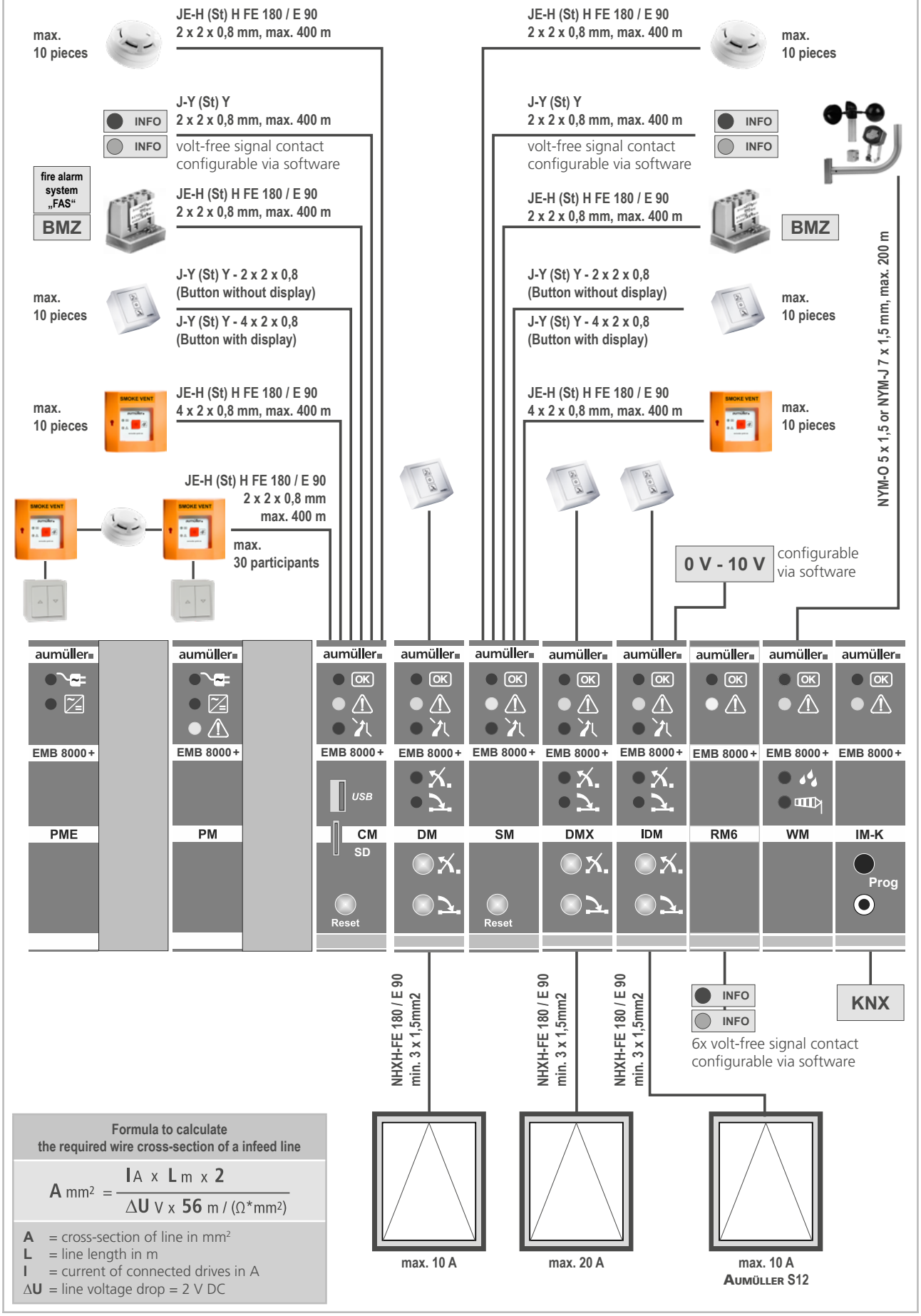
- Modular control panel with digital bus technology and power supply for 24 V DC drives for use in smoke and heat exhausting ventilation (SHEV) and in controlled natural ventilation systems
- Control panel compliant with prEN 12101-9 / ISO 21927-9
- Power supply compliant with EN 12101-10 (except EMB8000+ 5A)
- 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 (except EMB8000+ 5A)
- 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 (CAN, KNX) (requires additional modules) | -- | ✓ |




| | Caption |
|---|---|
| 1 | Drive line - 24 V DC<br>for smoke + heat exhausting + natural ventilation |
| 2 | Input for ventilation line (max. 10 vent buttons) |
| ● | Housing of Control Unit |
| 4 | Wind sensor and rain sensor -<br>(disabled in case of alarm and power loss) |
| ● | Smoke detector (max. 10 pieces) each SM |
| 6 | Trigger signal from external fire alarm system<br>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<br>(requires additional module) |
| ● | 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 Accumulators 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 accumulators – 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 pre-programmed 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 several 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 5.

## EXPANSION LIMITATIONS / SYSTEM LIMITS

The following key data must be taken into account when dimensioning SHEV Control Units:

- Number of smoke detectors per CM / SM 10 piece
- Number of break-glass units per CM / SM 10 piece
- Number of digital trigger units per CM 30 piece
- Number of smoke detectors per control unit 60 piece
- Number of break-glass units per control unit 60 piece
- Own power consumption per Control Unit (see chart 3 at the following page)
- Accumulator capacity / max. power consumption per Control Unit (see chart 3 at the following page)
- Dimensions of housing
- Cable entries

All values in the tables refer to the maximum assignment of the module inputs / outputs. The current values are given for maintaining the emergency power supply over a period of 72 hours. Other calculation bases on request.

The sum of the self-consumption of all modules in a Control Unit must not exceed the maximum permissible current of the Control Unit. To calculate the total power consumption, the individual consumption of the installed modules must be added.

The details of the outer diameter of cables refer to the cable types common in Germany. The wire cross-sections are given in mm². To maintain the electrical protection class of the Control Unit housing, only one cable is permitted per cable entry.
For checking purposes, the total number of cables required must be determined in accordance with Table 1 and coordinated with the number of cable entries in the Control Units from Table 4.

Due to the hardware and software, the EMB8000 + is limited by the following points. Configuration using the software is guaranteed within these limits.

1. A maximum of 50 modules per Control Unit (including CM, excluding PM and PMEs).
   The following maximum number of modules of the same type are supported per control center (in the network).

| Module | Maximum per Control Unit | Maximum per network |
|---|---|---|
| PME | 2 | 60 |
| PM | 1 | 30 |
| CM+ | 1 | 30 |
| SM | 20 | 570 |
| DM | 40 | 570 |
| DMX | 10 | 300 |
| IDM | 30 | 300 |
| 230 V DM Vent | 20 | 570 |
| RM6 | 20 | 570 |
| WM | 1 | 2 |
| IMK | 2 | 5 |

2. A maximum of 30 Conrol Unit in the network.
3. A maximum of 600 modules in the network (including CMs, excluding PMs and PMEs) e.g.: 30 Control Units with 20 modules or 12 Control Units with 50 modules.
4. 150 Can actuators (*) are supported without blocking the triggering CMs. Each additional Can actuator results in a recording delay of 9 ms.

   (*) Can actuator is an actuator in another Control Unit than the one in which the sensor is located.

## CONFIGURATION + PARAMETERIZATION

The basic configuration software for EMB 8000+ Control Units is available download on (free of charge for):

**www.aumueller-gmbh.de/downloads/software/ . . .**

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 | | |
| **230 V DM** | 23 | 1 | 7,0 | 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** | | **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.

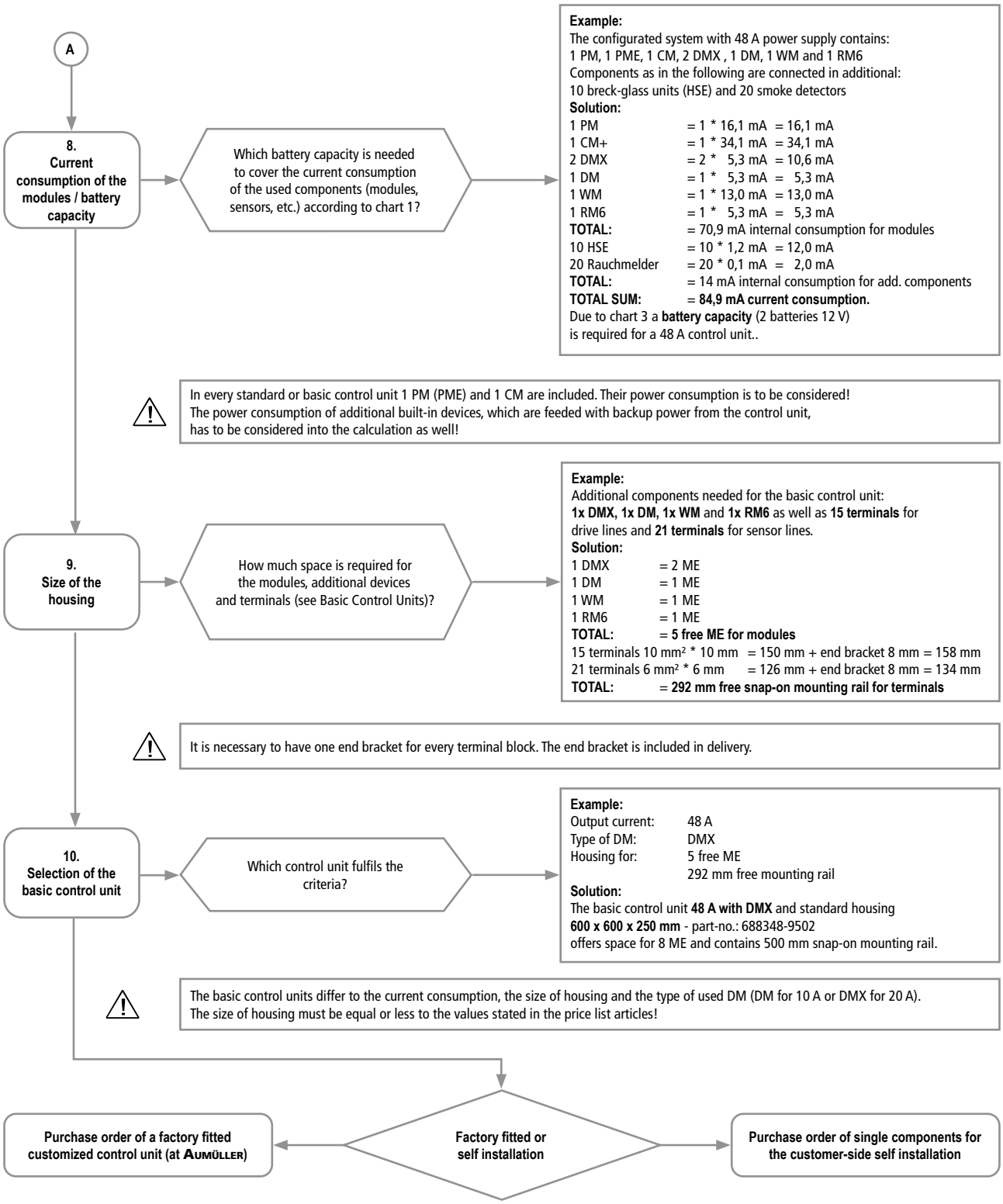
**7. Mounting of additional clamps**

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.




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 |

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.


**TECHNICAL DATA (Rated values)** **5 A**

| | |
|---|---|
| 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.


**TECHNICAL DATA (Rated values)** **5 A**

| | |
|---|---|
| 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) |

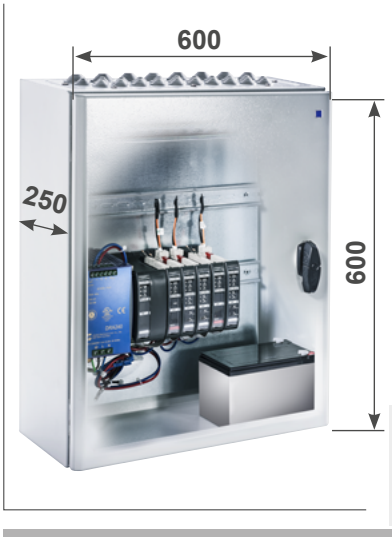
**Features:** The installer of the control unit has to examine and to respect on its sole responsibility that the total current consumption of the internal and external devices, the number of the used modules and cable entries match with the battery capacity and the system limitations.

#### 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.


**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 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) |

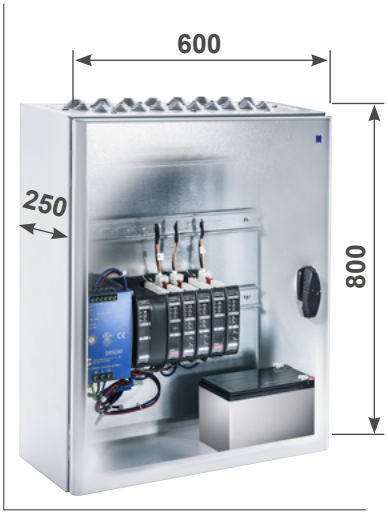
**Features:** The installer of the control unit has to examine and to respect on its sole responsibility that the total current consumption of the internal and external devices, the number of the used modules and cable entries match with the battery capacity and the system limitations.

#### 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 **26** | HS **500** mm | | | |
| **688324-9602** | PM, CM, **DMX** | ME **25** | HS **500** mm | | | |
| **688324-9603** | PM, CM, **IDM** | ME **26** | HS **500** 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) |

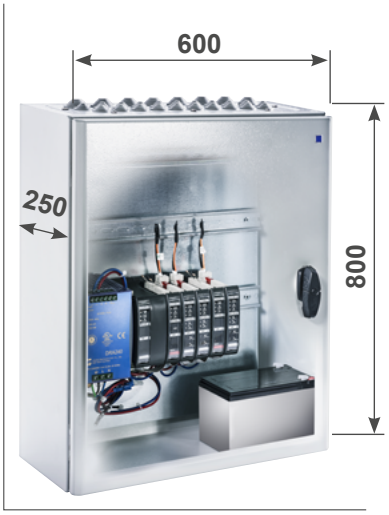
**Features:** The installer of the control unit has to examine and to respect on its sole responsibility that the total current consumption of the internal and external devices, the number of the used modules and cable entries match with the battery capacity and the system limitations.

#### 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)<br>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) |

**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, 2x PME, 2x CM, 2x **DM** | ME **10** | HS **700** mm |
| **688396-9502** | 2x PM, 2x PME, 2x CM, 2x **DMX** | ME **9** | HS **700** mm |
| **688396-9503** | 2x PM, 2x PME, 2x CM, 2x **IDM** | ME **10** | HS **700** 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)<br>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) |

**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, 2x PME, 2x CM, 2x **DM** | ME **17** | HS **1000** mm |
| **688396-9602** | 2x PM, 2x PME, 2x CM, 2x **DMX** | ME **16** | HS **1000** mm |
| **688396-9603** | 2x PM, 2x 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 | | | |

### 230 V-DM Vent – Drive-Modul Vent

**Application:** For the controlling of 230 V AC drives.

**TECHNICAL DATA (Rated values)** **5 A**

| | |
|---|---|
| Operating voltage: | 230 V AC |
| Output voltage: | 230 V AC |
| Internal consumption: | 7,0 mA |
| Output current: | **5 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 |
| 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, socket and plug with cable for internal BUS |
| Built-in fuse: | 5AT 5 x 20 mm |

**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. | | | | | |
|---|---|---|---|---|---|
| **688280** | Delivery in parcel | for customer self-installation | | | |
| **688280-9** | Module factory fitted | factory fitted and fully wired | | | |

## ORDER DATA

### 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),<br>Blade terminals 6,3 mm: Drives + power supply,<br>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 | | | |

### 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<br>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,<br>Blade terminals 6,3 mm: Power supply,<br>socket and plug with cable for internal BUS<br>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 | | | |

## ORDER DATA

### 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)<br>Ventialtion buttons (max. 10 pcs.) |
| Outputs: | 1 feedback contact (change-over switch, 42 V / 0,5 A) |
| Display: | Power, fault, alarm |
| Control elements: | Front push button: Reset |
| Connections: | Plug-in terminals 1 mm² (rigid wire),<br>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 | | | |

### 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, 42 V / 0,5 A) |
| Display: | Operating, Fault |
| Connections: | Plug-in terminals 1mm² (rigid wire),<br>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 | | | |

## ORDER DATA

### 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,<br>**KNX-BUS terminal** |
| Outputs: | 3 x potential free Relay contacts via KNX |
| Display: | Operation, fault, KNX-programming LED |
| Control elements: | KNX-programming button |
| Connections: | Plug-in terminals 1mm² (rigid wire),<br>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 | | | |

### 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,<br>external signals |
| Outputs: | Volt free contact (change-over switch, 42 V / 0,5 A) |
| 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+.

#### VERSIONS

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

## ORDER DATA

| | Part.-No. |
|---|---|
| **Control-Module CM** | **688120** |

**Application:** **Module for customer self-installation** into the SHEV Control Unit EMB 8000+ for the connecting of automatic smoke detectors and break-glass units. Monitors three fire alarm lines for triggering and malfunction. Processes signals from ventilation buttons.


**TECHNICAL DATA (Rated values)**

| | |
|---|---|
| Operating voltage: | 24 V DC |
| Detector line voltage: | 24 V DC |
| Internal consumption: | 34,1 mA |
| Housing (WxHxD): | **100 x 120 x 22,5 mm**, ABS, black |
| Module units: | 1 ME |
| Inputs: | 3 Detector lines (max. 10 detectors / line)<br>1 BUS-detector lines (max. 30 detectors)<br>1 Ethernet port<br>1 CAN interface<br>Ventialtion push buttons (max. 10 pieces) |
| Outputs: | 1 Feedback contact (1x change-over switch, 42 V / 0,5 A) |
| Display: | Power, fault, alarm |
| Control elements: | Front push button: Reset<br>Plug-in terminals 1 mm² (rigid wire),<br>socket and plug with cable for internal BUS |

**Feature/Equipment**
- Fixing on 35-mm mounting rail.
- Parameterization of functional and performance features that differ from the standard via configuration software EMB 8000+.
- Belongs to the basic equipment of a Control Unit and must be connected directly with the Power-Module **PM** via **BUS** cable.

| | |
|---|---|
| **Power-Module PM** | **688050** |

**Application:** **Module for customer self-installation** into the SHEV Control Unit EMB 8000+ for monitoring of the main power supply. Monitors the main power supply. Checks the accumulator charging voltage. Switches to back-up accumulator operation during power failure.


**TECHNICAL DATA (Rated values)**

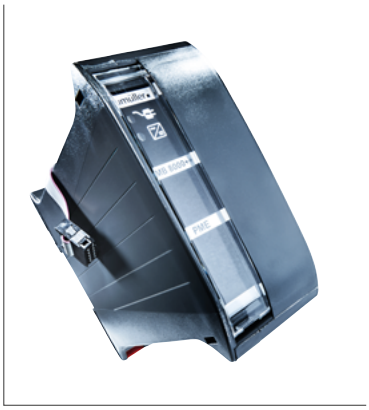
| | |
|---|---|
| Operating voltage: | 24 V DC |
| Internal consumption: | 16,0 mA |
| Housing (WxHxD): | **100 x 120 x 45 mm**, ABS, black |
| Module units: | 2 ME |
| Display: | Power, fault, status |
| Connections: | Plug-in terminals 1 mm² (rigid wire),<br>Socket and plug with cable for internal BUS |

**Feature/Equipment**
- Fixing on 35-mm mounting rail.
- Parameterization of functional and performance features that differ from the standard via configuration software EMB 8000+.
- Has a connection for a sensor „temperature-dependent charging of back-up accumulators“.

## ORDER DATA

| | Part.-No. | | | | |
|---|---|---|---|---|---|
| **Power-Module PME** | **688100** | | | | |

**Application:** **Module for customer self-installation** into the SHEV Control Unit EMB 8000+ for monitoring of the main power supply.
Monitors the main power supply for more than one switching power supply.
Switches to back-up accumulator operation during power failure.



**TECHNICAL DATA (Rated values)**

| | |
|---|---|
| Operating voltage: | 24 V DC |
| Internal consumption: | 0 mA |
| Housing (WxHxD): | **100 x 120 x 45 mm**, ABS, black |
| Module units: | 2 ME |
| Display: | Power, status |
| Connections: | Socket and plug with cable for internal BUS |

**Feature/Equipment**
- Fixing on 35-mm mounting rail.

## ORDER DATA

### TERMINALS TO SEND

| 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 | | | | |

### TERMINALS TO BE INSTALLED FROM THE FACTORY

| Part.-No. | | | | | | |
|---|---|---|---|---|---|---|
| **659945-9** | Single terminal **DS** | 2,5 mm² | factory fitted and fully wired | | | |
| **659946-9** | Single terminal | 6 mm² | factory fitted and fully wired | | | |
| **659947-9** | Single terminal | 10 mm² | factory fitted and fully wired | | | |
| **659948-9** | Single terminal | 16 mm² | factory fitted and fully wired | | | |
| **669937-9** | Terminals-Set **ML** | 5 x 6 mm² | factory fitted and fully wired | | | |
| **669938-9** | Terminals-Set **ML** | 5 x 10 mm² | factory fitted and fully wired | | | |
| **669939-9** | Terminals-Set **ML** | 5 x 16 mm² | factory fitted and fully wired | | | |
| **669949-9** | Terminals-Set **ML 230 V** | 5 x 4 mm² | factory fitted and fully wired | | | |
| **669940-9** | Terminals-Set **HSE** | 2,5 mm² | factory fitted and fully wired | | | |
| **669941-9** | Terminals-Set **RM** | 2,5 mm² | factory fitted and fully wired | | | |
| **669942-9** | Terminals-Set **LT** | 2,5 mm² | factory fitted and fully wired | | | |
| **669943-9** | Terminals-Set **LT with display** | 2,5 mm² | factory fitted and fully wired | | | |
| **669944-9** | Terminals-Set **relays** | 2,5 mm² | factory fitted and fully wired | | | |
| **669945-9** | Terminals-Set **blocking contact** | 2,5 mm² | factory fitted and fully wired | | | |
| **669946-9** | Terminals-Set **BUS-HSE** | 2,5 mm² | factory fitted and fully wired | | | |
| **669947-9** | Terminals-Set **WM** | 2,5 mm² | factory fitted and fully wired | | | |
| **669948-9** | Terminals-Set **CAN** | 2,5 mm² | factory fitted and fully wired | | | |

### SERVICE

| Part.-No. | | | | | |
|---|---|---|---|---|---|
| **240** | **Plan creation** | Wiring diagram per SHEV / ventilation group | | | |
| **688930** | **Programming** | Programming an EMB8000+ in the factory | | | |
| **SL125** | **Online commissioning support** | Price per hour | | | |

## ORDER DATA

| | Part.-No. |
|---|---|
| **Surge arrester Type 3** | |

**Application:** Surge arrester Type 3 for Control Unit output 1-phase or 3-phase - with additional detector contact.
For TS35; cross section of wire min. 1,5mm²

**TECHNICAL DATA (Rated values)**

| | |
|---|---|
| Nominal voltage: | 230 V AC |
| Version: | Type 3 / Class III |
| Function display: | green / red |
| Ambient temperature range: | -40°C …. +80°C |
| Connection cross-section: | max. 4 mm² |
| Protection rating: | IP20 |

### VERSIONS

| Part.-No. | | |
|---|---|---|
| **659977-9** | **1-phase** | Module factory fitted - factory fitted and fully wired |
| **659978-9** | **3-phase** | Module factory fitted - factory fitted and fully wired |

| **Automatic circuit breaker** | |
|---|---|

**Application:** Automatic circuit breaker for interrupting the circuit in the event of a short circuit or overload.
In the versions 6 A or 16 A or 25 A.

**TECHNICAL DATA (Rated values)**

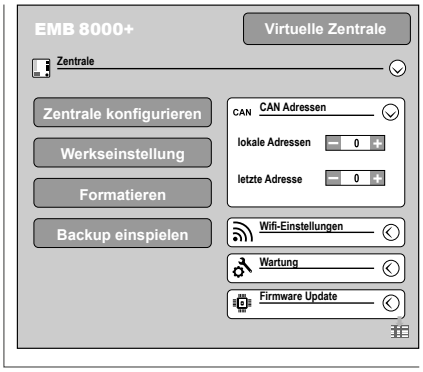
| | |
|---|---|
| Nominal voltage: | 230 V AC / 400 V AC (depending on the versions) |
| Housing: | Insulation group II, RAL 7035 |
| Ambient temperature range: | -25°C …. +55°C |
| Connection cross-section: | flexible with wire end ferrule 0,75 ... 25 mm² (depending on the versions) |
| Protection rating: | IP20 |

### VERSIONS

| Part.-No. | | |
|---|---|---|
| **669970-9** | **B 6A 1-pole** | Module factory fitted - factory fitted and fully wired |
| **669971-9** | **B16A 1-pole** | Module factory fitted - factory fitted and fully wired |
| **669972-9** | **B25A 1-pole** | Module factory fitted - factory fitted and fully wired |
| **669973-9** | **B16A 3-pole** | Module factory fitted - factory fitted and fully wired |

## ORDER DATA

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




**TECHNICAL DATA**
System requirements:
**Microsoft® Windows 10 - 64 Bit**

**Note**
**Aumüller** grants licences only after attending a product training

## SOFTWARE / LICENSE / PROGRAMMING

| | | | | |
|---|---|---|---|---|
| Licence for 1 month | **688911** | | | |
| Licence for 3 years | **688913** | | | |

## 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. | | | | | |

**TECHNICAL DATA**

| | |
|---|---|
| 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<br>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** | | | | |

| **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 | | | | |

### ACCESSORIES

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

## ORDER DATA

| | | Part.-No. | | | |
|---|---|---|---|---|---|
| **Time switch** | | **659927-9** | | | |
| **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
- Module factory fitted / factory fitted and fully wired

| | | | | | |
|---|---|---|---|---|---|
| **Temperature sensor** | | | | | |
| **Application:** | Temperature sensor PM - conductor with connection piece for the Control Unit **EMB 8000+**. | | | | |

**TECHNICAL DATA (Rated values)**

| | |
|---|---|
| Hardware: | **REV.1** |
| Bootloader: | **BL V0.0.10** |
| Application: | V0.0.17 |
| Cable: | 0,09mm² - AWG28; RM1,27 |
| Certification: | CE |

**Feature/Equipment**
- Conductor with connection piece

## VERSIONS

| for SHEV Control Units of emergency power supply | | Part.-No. | | | |
|---|---|---|---|---|---|
| 1 piece | PM 0,4 m | **680055** | | | |
| 1 piece | PM 0,9 m | **680056** | | | |

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**.

aumüller

# 3 Accessories for SHEV Control Units

Product overview


## HSE – Break-glass unit

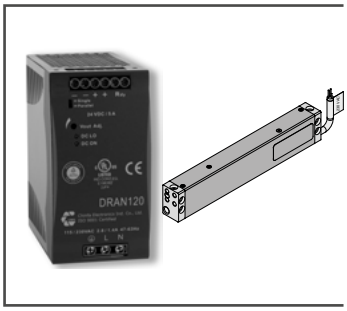
- ☐ HSE – main control panel
- ☐ HSE-N – secondary control panel
- ☐ HSE – main control panel with buzzer
- ☐ BUS HSE – main control panel with BUS
- ☐ Frame – for flush mounting

To the product

## Automatic detector

- ☐ Optical BUS smoke detector
- ☐ Optical smoke detector
- ☐ FAS Interface-Module
- ☐ Drive line end module
- ☐ Heat sensitive fire detector
- ☐ Heat sensitive detector clip 70°C

To the product




## Power supply

- ☐ NT-DRA240-10 – Power supply 230 V AC / 24 V DC, 5 A
- ☐ NT-DRA240-10 – Power supply 230 V AC / 24 V DC, 10 A
- ☐ NT-DRA480-20 – Power supply 230 V AC / 24 V DC, 20 A
- ☐ External Power Supply Laser Sensor

To the product


## Accesories for HSE (Break-glass unit)

- ☐ HSE-Empty Housing - Break-glass unit
- ☐ Key for plastic Break-glass unit
- ☐ Key for aluminium Break-glass unit
- ☐ Replacement glass panes for Break-glass unit
- ☐ Circuit board for Break-glass unit - ABS
- ☐ Circuit board for Break-glass unit

To the product

## ORDER DATA

| | Part.-No. |
|---|---|
| **HSE – Break-glass unit main control panel** | |

**Application:** Break-glass unit with indicators for manual activation of the Emergency OPEN function and the CLOSE function of a SHEV group via the detector lines of a SHEV Control Unit.


**TECHNICAL DATA (Rated values)**

| | |
|---|---|
| Operating voltage: | 24 V DC |
| Ambient temperature range: | -5°C … +40°C |
| Dimensions (WxHxD): | 130 x 130 x 32 mm |
| Connections: | Spring terminals, 0,5 mm² (rigid wire) |
| Protection rating: | IP30 |
| Display: | Emergency OPEN, power, fault |
| Control elements: | Button for Emergency OPEN / Button for CLOSE |

**Feature/Equipment**
- Lockable, glazed door (including key)
- **Connection to the detector line input**
- **The termination resistance is activated or deactivated using a DIP switch**

**NEW**

### VERSIONS

| | | | |
|---|---|---|---|
| **HSE orange** | **Aluminium** | **(similar to RAL 2011)** | **528400** |
| **HSE red** | **Aluminium** | **(similar to RAL 3000)** | **528401** |
| **HSE yellow** | **Aluminium** | **(similar to RAL 1018)** | **528402** |
| **HSE blue** | **Aluminium** | **(similar to RAL 5015)** | **528403** |
| **HSE grey** | **Aluminium** | **(similar to RAL 7035)** | **528404** |

| | Part.-No. |
|---|---|
| **HSE – Break-glass unit main control panel** | |

**Application:** Break-glass unit with indicators for manual activation of the Emergency OPEN function and the CLOSE function of a SHEV group via the detector lines of a SHEV 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: | IP30 |
| Display: | Emergency OPEN, power, fault |
| Control elements: | Button for Emergency OPEN / Button for CLOSE |

**ABS**

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

**DISCONTINUED PRODUCT**

### 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** |

## ORDER DATA

| | | | Part.-No. | | | |
|---|---|---|---|---|---|---|
| **HSE-N – Break-glass unit secondary control panel** | | | | | | |
| **Application:** | Break-glass unit with indicators for manual activation of the Emergency OPEN function of a SHEV group via the detector lines of a SHEV Control Unit | | | | | |


**TECHNICAL DATA (Rated values)**

| | |
|---|---|
| Operating voltage: | 24 V DC |
| Ambient temperature range: | -5°C … +40°C |
| Dimensions (WxHxD): | 130 x 130 x 32 mm |
| Connections: | Spring terminals, 0,5 mm² (rigid wire) |
| Protection rating: | IP30 |
| Display: | Emergency OPEN |
| Control elements: | Button for Emergency OPEN |

**Feature/Equipment**
- Lockable, glazed door (including key)
- **Connection to the detector line input**
- **The termination resistance is activated or deactivated using a DIP switch**

**NEW**

### VERSIONS

| | | | | | | |
|---|---|---|---|---|---|---|
| **HSE-N orange** | **Aluminium** | **(similar to RAL 2011)** | **528410** | | | |
| **HSE-N red** | **Aluminium** | **(similar to RAL 3000)** | **528411** | | | |
| **HSE-N yellow** | **Aluminium** | **(similar to RAL 1018)** | **528412** | | | |
| **HSE-N blue** | **Aluminium** | **(similar to RAL 5015)** | **528413** | | | |
| **HSE-N grey** | **Aluminium** | **(similar to RAL 7035)** | **528414** | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **HSE-N – Break-glass unit secondary control panel** | | | | | | |
| **Application:** | Break-glass unit with indicators for manual activation of the Emergency OPEN function of a SHEV group via the detector lines of a SHEV 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: | IP30 |
| 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**

**DISCONTINUED PRODUCT**

### 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 - buzzer**

**Application:** Break-glass unit with built-in buzzer and indicators and buttons for the manual activation of the Emergency OPEN function and Emergency CLOSE function of a SHEV group via the detector lines of a SHEV Control Unit.
Signal for faults and alarm selectable via DIP switches.


**TECHNICAL DATA (Rated values)**

| | |
|---|---|
| Operating voltage: | 24 V DC |
| Ambient temperature range: | -5°C … +40°C |
| Dimensions (WxHxD): | 130 x 130 x 32 mm |
| Connections: | Spring terminals, 0,5 mm² (rigid wire) |
| Protection rating: | IP30 |
| Display: | Emergency OPEN, power, fault |
| Control elements: | Button for Emergency OPEN / Button for CLOSE |

**SUMMER**

**Feature/Equipment**
- Built-in buzzer
- Lockable, glazed door (including key)
- **Connection to the detector line input**
- **The termination resistance is activated or deactivated using a DIP switch**
- **Signal for faults and alarm selectable via DIP switches.**

**NEW**

### VERSIONS

| | | | Part.-No. |
|---|---|---|---|
| HSE-Summer orange | Aluminium | (similar to RAL 2011) | 528420 |
| HSE-Summer red | Aluminium | (similar to RAL 3000) | 528421 |
| HSE-Summer yellow | Aluminium | (similar to RAL 1018) | 528422 |
| HSE-Summer blue | Aluminium | (similar to RAL 5015) | 528423 |
| HSE-Summer grey | Aluminium | (similar to RAL 7035) | 528424 |

**HSE – Break-glass unit main control panel - buzzer**

**Application:** Break-glass unit with built-in buzzer and indicators and buttons for the manual activation of the Emergency OPEN function and Emergency CLOSE function of a SHEV group via the detector lines of a SHEV 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: | IP30 |
| Display: | Emergency OPEN, power, fault |
| Control elements: | Button for Emergency OPEN / Button for 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

**DISCONTINUED PRODUCT**

### VERSIONS

| | | Part.-No. |
|---|---|---|
| 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 activation of the Emergency OPEN function and CLOSE function 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: | IP30 |
| Display: | Emergency OPEN, power, fault |
| Control elements: | Button for Emergency OPEN / Button for CLOSE |
| Connection possibility: | Ventilation push button - input<br>Screw terminal, 1,0 mm² (rigid wire) |

**ABS**

**BUS**

**Feature/Equipment**

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

**DISCONTINUED PRODUCT**

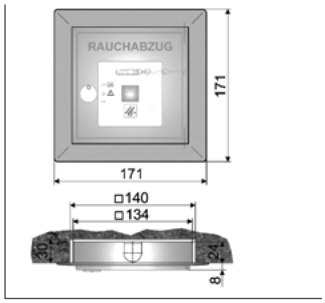
## VERSIONS

| | | | | | |
|---|---|---|---|---|---|
| **HSE red** | **(similar to RAL 3000)** | **528491** | | | |
| **HSE yellow** | **(similar to RAL 1018)** | **528492** | | | |
| **HSE grey** | **(similar to RAL 7035)** | **528493** | | | |
| **HSE blue** | **(similar to RAL 5015)** | **528494** | | | |
| **HSE orange** | **(similar to RAL 2011)** | **528495** | | | |

## ORDER DATA

| | Part.-No. | | | |
|---|---|---|---|---|
| **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 |

ALU

**Feature/Equipment**

- Suitable for break-glass units (130 x 130 x 32 mm) - until 2023 only for HSE in version „ABS“ (plastic housing)
  - from 2023 for all HSE

## ORDER DATA

| | Part.-No. |
|---|---|
| **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.

**BUS**

**TECHNICAL DATA (Rated values)**

| | |
|---|---|
| Measuring element: | photo electric / scattered light principle |
| Operating voltage: | 24 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 |

**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**

| | |
|---|---|
| **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 |

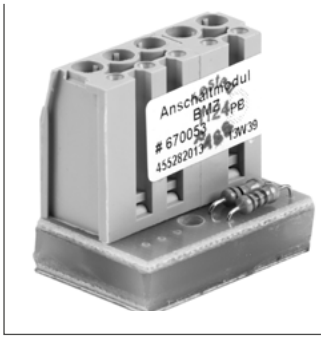
**Feature/Equipment**
- Fire algorithms for avoiding false alarms, automatic alarm threshold tracking
- According to EN 54-7, connection to the **detector line input**

## 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

## ORDER DATA

| | Part.-No. |
|---|---|
| **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

| | |
|---|---|
| **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 |

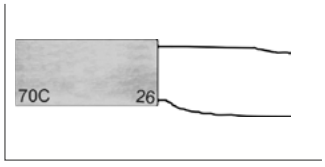
**Feature/Equipment**
- With base for surface mounting

### 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

## ORDER DATA

| | Part.-No. |
|---|---|
| **NT-DRAN120-5 – Power supply 230 V AC / 24 V DC, 5 A** | **680005** |

**Application:** Switching power supply for fixing on 35-mm mounting rail or external power supply of the ventilation modules LZA and LZH.


**TECHNICAL DATA**

| | |
|---|---|
| Operating voltage: | 230 V AC (195 – 253 V AC, 50/60 Hz) |
| Power consumption max. : | 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: | for fixing on 35-mm mounting rail |
| Dimensions (WxHxD): | 65 x 95 x 123 mm |

**Feature/Equipment**
- For installation in a control cabinet or comparable housing.

| | |
|---|---|
| **NT-DRA240-10 – Power supply 230 V AC / 24 V DC, 10 A** | **680010** |

**Application:** Switch mode power supply for power supply and control of drives 24 V DC for daily ventilation, with one ventilation line. Control in the OPEN / CLOSE direction via the 230 V AC mains voltage.


**TECHNICAL DATA**

| | |
|---|---|
| Operating voltage: | 230 V AC (195 - 253 V AC, 50/60 Hz) |
| Output voltage: | 24 V DC (20 – 28 V DC / 0,5 Vpp) |
| Output current: | **10 A** |
| Ambient temperature range: | -5°C … + 40°C |
| Housing: | for fixing on 35-mm mounting rail |
| Dimensions (WxHxD): | 125 x 84 x 124 mm |

**Feature/Equipment**
- For installation in a control cabinet or comparable housing.

| | |
|---|---|
| **NT-DRA480-20 – Power supply 230 V AC / 24 V DC, 20 A** | **680024** |

**Application:** Switch mode power supply for power supply and control of drives 24 V DC for daily ventilation, with one ventilation line. Control in the OPEN / CLOSE direction via the 230 V AC mains voltage.


**TECHNICAL DATA**

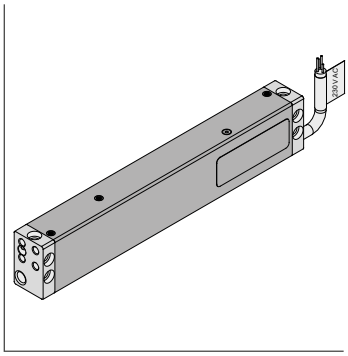
| | |
|---|---|
| Operating voltage: | 230 V AC (195 - 253 V AC, 50/60 Hz) |
| Output voltage: | 24 V DC (20 – 28 V DC / 0,5 Vpp) |
| Output current: | **20 A** |
| Ambient temperature range: | -5°C … + 40°C |
| Housing: | for fixing on 35-mm mounting rail |
| Dimensions (WxHxD): | 125 x 176 x 124 mm |

**Feature/Equipment**
- For installation in a control cabinet or comparable housing.

## ORDER DATA

| | Part.-No. | | | |
|---|---|---|---|---|
| **External Power Supply Laser Sensor** | **680027** | | | |

**Application:** External Power Supply NT-S-2 KS2/KSA - 230 V AC / 24 V DC factory installed in KS2 chain drive housing.
For power supply and control of SKL3 flatscan and flat scan sensor.



**TECHNICAL DATA (Rated values)**

| | |
|---|---|
| Operating voltage: | 230 V AC (195 – 253 V AC, 50/60 Hz) |
| Record measurement: | 30 W |
| Output voltage: | 24 V DC (20 – 28 V DC / 2 Vpp) |
| Output current: | 2,0 A |
| Output: | 1x drive line - 24 V DC / 2,0 A<br>1x continuous current - 24 V DC / 0,2 A |
| Connections: | 24 V DC drive, up to max. 2,0 A<br>24 V DC continuous current, up to max. 0,2 A |
| Connection cable: | non-halogen, grey 6 x 0,75 mm², length 3 meters<br>maximum extendable to 25 meters in length |
| Housing: | Aluminium natural anodized |
| Dimensions (WxHxD): | 41 x 26 x 230 mm |
| Connection terminals: | Screw terminals 1,0 mm² (rigid wire) |
| Protection rating: | IP 32 |

**Feature/Equipment**

- Factory installed in the housing of a KS2 chain drive.

## ORDER DATA

| | | | Part.-No. | | | |
|---|---|---|---|---|---|---|
| **HSE-Empty Housing - Break-glass unit** | | | | | | |
| **Application:** HSE-Empty Housing with lockable, glazed door - including key. | | | | | | |


**TECHNICAL DATA (Rated values)**
Dimensions (WxHxD): 130 x 130 x 32 mm

**NEW**

### VERSIONS

| | | | | | | |
|---|---|---|---|---|---|---|
| HSE-Empty Housing orange | Aluminium | (similar to RAL 2011) | 528480 | | | |
| HSE-Empty Housing red | Aluminium | (similar to RAL 3000) | 528481 | | | |
| HSE-Empty Housing yellow | Aluminium | (similar to RAL 1018) | 528482 | | | |
| HSE-Empty Housing blue | Aluminium | (similar to RAL 5015) | 528483 | | | |
| HSE-Empty Housing grey | Aluminium | (similar to RAL 7035) | 528484 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **HSE-Empty Housing - Break-glass unit** | | | | | | |
| **Application:** HSE-Empty Housing with lockable, glazed door - including key. | | | | | | |


**TECHNICAL DATA (Rated values)**
Housing: **Surface mounting, plastic (ABS)**
Dimensions (WxHxD): 130 x 130 x 32 mm

**ABS**

**DISCONTINUED PRODUCT**

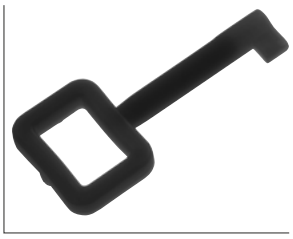
### VERSIONS

| | | | | | | |
|---|---|---|---|---|---|---|
| HSE-Empty Housing red | (similar to RAL 3000) | 528001 | | | |
| HSE-Empty Housing yellow | (similar to RAL 1018) | 528002 | | | |
| HSE-Empty Housing grey | (similar to RAL 7035) | 528003 | | | |
| HSE-Empty Housing blue | (similar to RAL 5015) | 528004 | | | |
| HSE-Empty Housing orange | (similar to RAL 2011) | 528009 | | | |

## ORDER DATA

| | Part.-No. |
|---|---|
| **Key for plastic Break-glass unit (HSE plastic button)** | **527007** |

**Application:** The plastic Break-glass units (HSE plastic button) have a lockable door.
The key is used to open or close this door.



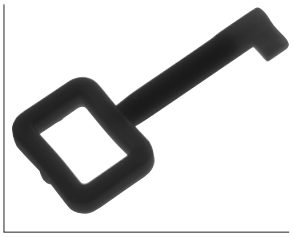
**TECHNICAL DATA**

| | |
|---|---|
| Function: | for plastic Break-glass unit (HSE plastic button) |
| Material: | Polyamid PA 6.6 |
| Colour: | white |
| Key: | 1 piece |

**Feature/Equipment**
- Suitable for all **AUMÜLLER** plastic Break-glass unit (HSE plastic buttons)

| | |
|---|---|
| **Key for aluminium Break-glass unit (HSE aluminium button)** | **527008** |

**Application:** The aluminium Break-glass units (HSE aluminium button) have a lockable door.
The key is used to open or close this door.



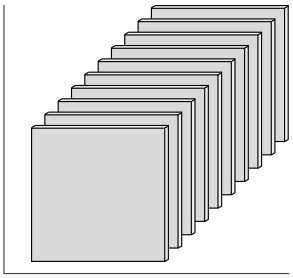
**TECHNICAL DATA**

| | |
|---|---|
| Function: | for aluminium Break-glass unit (HSE aluminium button) |
| Material: | Metal |
| Type: | Schl-HM/10 |
| Keys: | 10 pieces |

**Feature/Equipment**
- Suitable for all **AUMÜLLER** aluminium Break-glass unit (HSE aluminium buttons)

| | |
|---|---|
| **Replacement glass panes for Break-glass unit (HSE button)** | **527002** |

**Application:** Panes of glass for replacement on site.



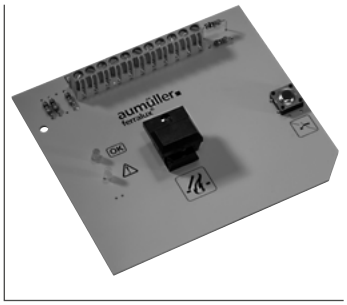
**TECHNICAL DATA**

| | |
|---|---|
| Dimensions (W x H x D): | 80 x 80 x 0,7 |
| Glass panes: | 10 pieces |

**Feature/Equipment**
- Suitable for all **AUMÜLLER** Break-glass unit (HSE buttons)

## ORDER DATA

| | Part.-No. | | | |
|---|---|---|---|---|
| **Circuit board for Break-glass unit ABS (HSE button ABS)** | | | | |
| **Application:** Circuit board for Break-glass unit (HSE button) - with logo „Ferralux“. Can be exchanged on site - without subsequent processing. | | | | |



**TECHNICAL DATA**

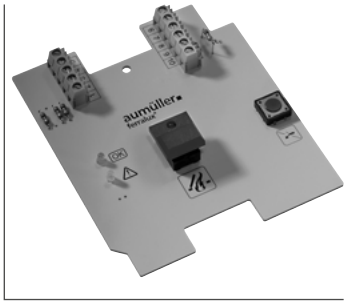
Type: **Ferralux DIN99-1 A-Z /A-B-S**, is equipped
Installation in an ABS housing

For housing type: Plastic

**ABS**

| **VERSIONS** | | | | | |
|---|---|---|---|---|---|
| **with** certification **VdS** | **528785** | | | | |
| **without** certification **VdS** | **528784** | | | | |

| | | | | | |
|---|---|---|---|---|---|
| **Circuit board for Break-glass unit (HSE button)** | **528782** | | | | |
| **Application:** Circuit board for Break-glass unit (HSE button) - with logo „Ferralux“. Can be exchanged on site - without subsequent processing. | | | | | |



**TECHNICAL DATA**

Type: **Ferralux DIN AL4 orange**, is equipped
Installation in an aluminum housing
**VdS** similar version

For housing type: Aluminium

**ALU**

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**.

aumüller

# 4 Accessories for Control Units

Product overview

## Ventilation button + Interface-Module for ventilation

- ☐ **Ventilation button (24 V DC / 230 V AC)**
- ☐ **Ventilation key switch**
- ☐ **Rotary ventilation switch (230 V AC)**
- ☐ **Interface-Module - for ventilation**

To the product


## Control elements

- ☐ **Room temperature controller**
- ☐ **Hygrostat**
- ☐ **CO2 – Air quality sensor**

To the product

## Weather sensors

- ☐ **Wind sensor Type III**
- ☐ **Rain kompact sensor Typ III (24 V DC / 230 V AC)**
- ☐ **WR-Set Type 7x/8x – wind and rain sensor set**
- ☐ **Wall bracket + Pole bracket** for wind / rain sensor set
- ☐ **WRG-Set – Wind direction sensor - set**
- ☐ **Mast bracket / Wall bracket** for wind and rain sensor

To the product


## Peripheral devices

- ☐ **Conservatory Control WG 3006**
- ☐ **REL1 – Relay for status forwarding**
- ☐ **WRAG2 – Wind evaluation unit / Rain evaluation unit**
- ☐ **REL-WRAG2 – Relay for contact multiplier**
- ☐ **Compact distributor housing for WRAG2**

To the product

## Weather station / evaluation devices

- ☐ **Wind and rain evaluation Type IV**
- ☐ **Wind and rain sensor set Type IV**

To the product


## Smart Vent Box (SVB)

- ☐ **SVB Flex**
- ☐ **SVB 0-10 V**

To the product

## ORDER DATA

| | Part.-No. | | | |
|---|---|---|---|---|
| **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<br>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<br>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<br>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<br>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.

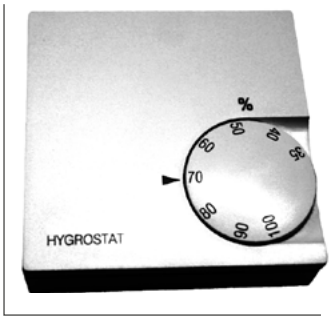

**TECHNICAL DATA (Rated values)**

| | |
|---|---|
| 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.

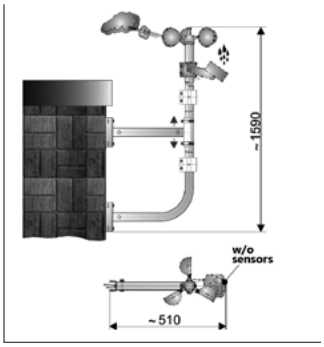
**TECHNICAL DATA (Rated values)**

| | |
|---|---|
| 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 / 5 A |
| 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.



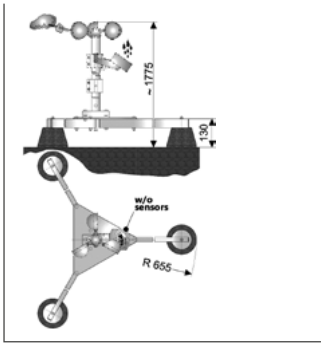

**TECHNICAL DATA**

| | |
|---|---|
| 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

| | |
|---|---|
| **Mast bracket / wall bracket for wind and rain sensor** | **482093** |

**Application:** Console for mast mounting or wall mounting made of aluminum (untreated), without fastening screws.

**TECHNICAL DATA (Rated values)**

**Pipe elbow**

| | |
|---|---|
| Material: | Aluminium (E6/C-0) |
| Dimensions: | ∅36 X 2 mm |
| Length: | 488,5 mm |

**Connection piece**

| | |
|---|---|
| Material: | AlSi12 |
| Dimensions (H x D x W): | 120 x 80 x 45 mm |

**Feature/Equipment**

- Console consisting of pipe elbow and connection piece, with connecting elements M8

## 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

| | |
|---|---|
| **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** |

| | |
|---|---|
| **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)**

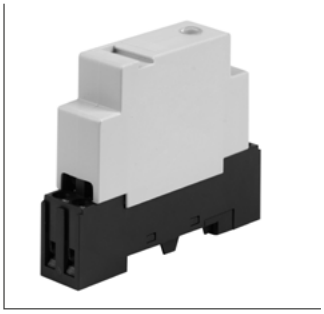
| | |
|---|---|
| Operating voltage: | 230 V AC, 50 Hz |
| Standby consumption: | <100 mA |
| Inputs: | Rain sensor 24 V DC, wind sensor, ventilation button |
| Display: | Power, wind, rain |
| Wind speed range: | 2,5 – 20 m/s, adjustable |
| Outputs: | 2 Change-over switches, 230 V AC / 5 A |
| Housing: | 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

## ORDER DATA

| | Part.-No. |
|---|---|
| **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**
- without fixing screws
- without cover strips

| | |
|---|---|
| **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**
- without fixing screws
- without cover strips

## ORDER DATA

| | Part.-No. |
|---|---|
| **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.

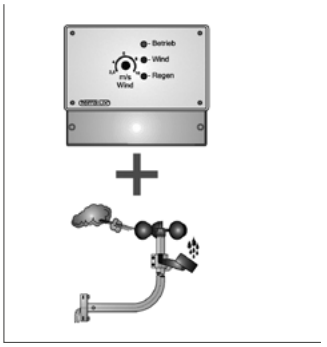

**TECHNICAL DATA (Rated values)**

| | |
|---|---|
| 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 Type 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

## ORDER DATA

| | Part.-No. |
|---|---|
| **SVB Flex - Smart Vent Box Flex** | **660110** |

**Application:** for digital control of the running direction „OPEN“ or „CLOSE“ at **AUMÜLLER** drives 24 V DC - S12


**TECHNICAL DATA (Rated values)**

| | |
|---|---|
| Rated voltage: | 24 V DC (19 - 28 V DC) |
| Connection: | 1x drive group<br>1x input for external superordinate signals<br>1x ventilation button connection |
| Ambient temperature range: | -5°C to +40°C |
| Dimensions (WxHxD): | 40,5 x 48,5 x 28,3 mm |
| Connection terminals: | 9x spring terminals, max. 1,5 mm² |
| Protection rating: | IP20 |

**Feature/Equipment**

- With 9x spring terminals for connection at **AUMÜLLER** drives 24 V DC - S12

| | |
|---|---|
| **SVB 0-10 V - Smart Vent Box 0-10 V** | **660120** |

**Application:** for analog control of the running direction „OPEN“ or „CLOSE“ at **AUMÜLLER** drives 24 V DC - S12


**TECHNICAL DATA (Rated values)**

| | |
|---|---|
| Rated voltage: | 24 V DC (19 - 28 V DC) |
| Connection: | 1x drive group<br>1x input for external superordinate signals<br>1x 0 - 10 V input<br>1x report output |
| Ambient temperature range: | -5°C to +40°C |
| Dimensions (WxHxD): | 40,5 x 48,5 x 28,3 mm |
| Connection terminals: | 9x spring terminals, max. 1,5 mm² |
| Protection rating: | IP20 |

**Feature/Equipment**

- With 9x spring terminals for connection at **AUMÜLLER** drives 24 V DC - S12

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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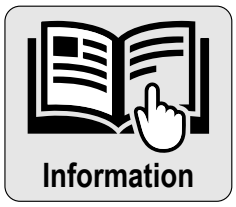
# 5 Natural Ventilation Control Units

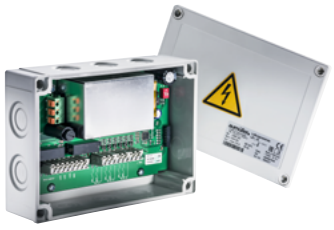
Product overview




## General information about this product

- Product features Lüftungszentralen und Netzteile
- Simplified diagramm LZ6

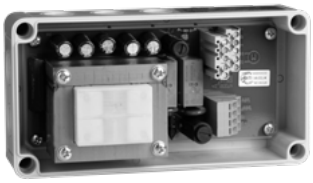
To the information



## Natural ventilation control unit

- LZ1 2,5 A – Natural ventilation control unit 24 V DC
- LZ6 – Natural ventilation control unit 24 V DC

To the product



## Power supply - 230 V AC / 24 V DC

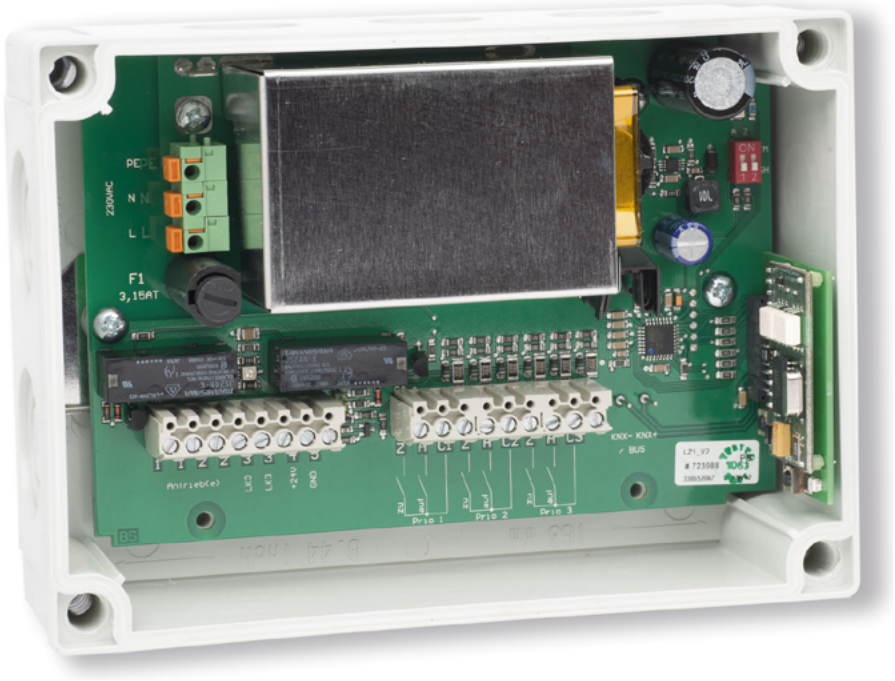
- NT-T-2,5 – Power supply 230 V AC / 24 V DC, 2,5 A
- NT-S-6,5 – Power supply 230 V AC / 24 V DC, 6,5 A

To the product

## Control Relay - 230 V AC + accesories

- Universal Control Relay for one 230 V AC drive
- Relay Interface for two 230 V AC drives
- BI-K - KNX Interface LZ1 / LZ6 / EMB7300

To the product

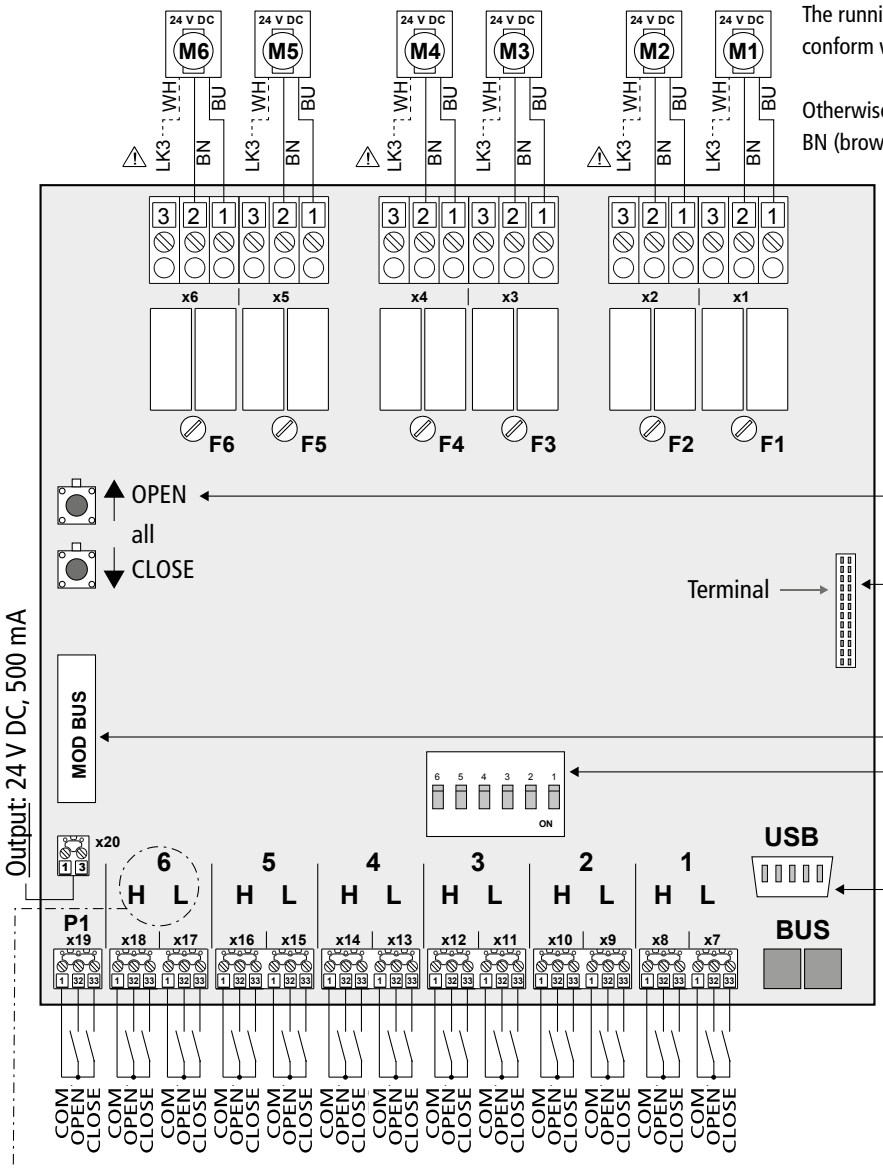



## FEATURES OF NATURAL VENTILATION – CONTROL UNITS AND POWER SUPPLIES

- 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 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.
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**.

## 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 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: | 1x Ventilation button line with 3 prorities |
| Outputs: | 1x Drive line<br>24 V DC / 500 mA (e.g. rain sensor) |
| Display: | Power, output voltage switched in OPEN/CLOSE direction |
| Slot: | BUS-Module (KNK) |
| 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** |

### 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: | 6x Ventilation button lines with 2 prorities (P3: LOW; P2: HIGH)<br>1x Input all outputs OPEN/CLOSE (P1) |
| Outputs: | 6x Drive output lines<br>24 V DC / 500 mA (e.g. rain sensor) |
| Display: | Power, output voltage switched in OPEN/CLOSE direction |
| Slot: | for optional BUS-Module (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.

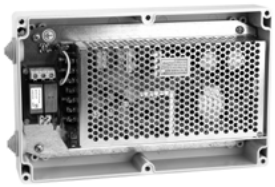
**TECHNICAL DATA (Rated values)**

| | |
|---|---|
| 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.

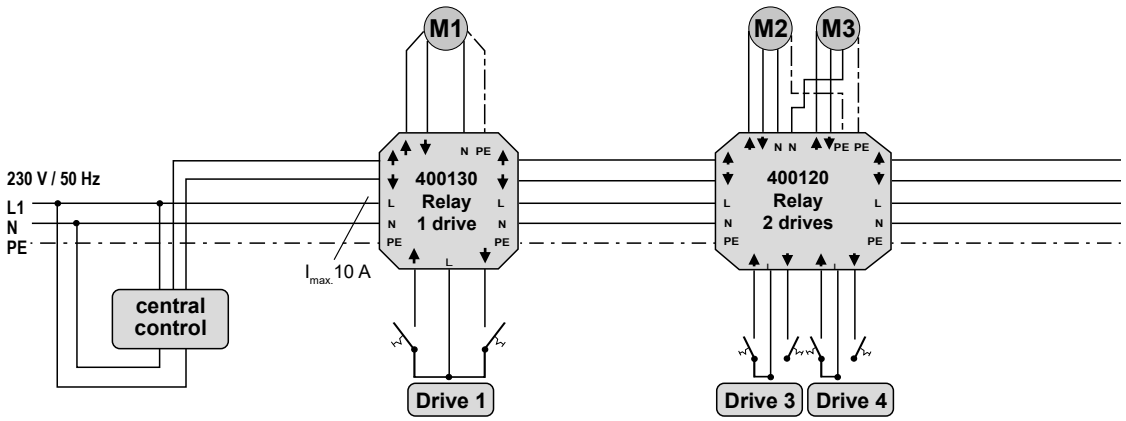


**TECHNICAL DATA (Rated values)**

| | |
|---|---|
| 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

## SIMPLIFIED DIAGRAMM – CONTROL RELAY

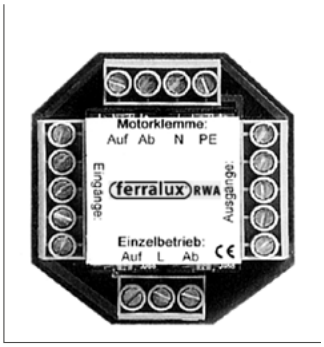



## ORDER DATA

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<br>1 Central OPEN/CLOSE (input / output)<br>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<br>1 Central OPEN/CLOSE (input / output)<br>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 |

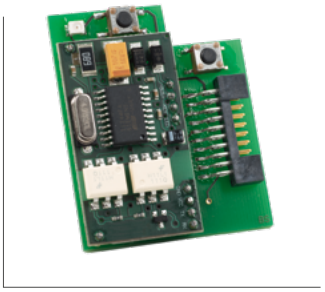
**Feature/Equipment**

- 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** | |

**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.

## VERSIONS

| Part.-No. | | |
|---|---|---|
| **683999** | Delivery in parcel | for customer self-installation |
| **683999-9** | Module factory fitted | factory fitted and fully wired |

aumüller

# 6 EPD Values

Product overview

| | GWP (green-house potential) | Ozone depletion potential | Acidifi-cation potential | Eutrophi-cation potential | Photo-chemical oxidation potential | Abiotic depletion - elements | Abiotic depletion - fossil | Primary energy not renewable | Primary energy renewable | Freshwater consump-tion |
|---|---|---|---|---|---|---|---|---|---|---|
| | (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** | 4,31E+01 | 6,03E-06 | 3,85E+02 | 3,48E+01 | 2,46E+01 | 6,07E-02 | 4,65E+02 | 5,89E+02 | 1,36E+02 | 2,12E+01 |
| **7300 5A** | 4,31E+01 | 6,03E-06 | 3,85E+02 | 3,48E+01 | 2,46E+01 | 6,07E-02 | 4,65E+02 | 5,89E+02 | 1,36E+02 | 2,12E+01 |
| **7300 10A** | 1,72E+02 | 2,41E-05 | 1,54E+03 | 1,39E+02 | 9,84E+01 | 2,43E-01 | 1,86E+03 | 2,36E+03 | 5,44E+02 | 8,49E+01 |
| **7300 20A** | 3,45E+02 | 4,82E-05 | 3,08E+03 | 2,79E+02 | 1,97E+02 | 4,86E-01 | 3,72E+03 | 4,71E+03 | 1,09E+03 | 1,70E+02 |
| **8000+ 5A** | 8,62E+01 | 1,21E-05 | 7,71E+02 | 6,97E+01 | 4,92E+01 | 1,21E-01 | 9,30E+02 | 1,18E+03 | 2,72E+02 | 4,25E+01 |
| **8000+ 10A** | 1,72E+02 | 2,41E-05 | 1,54E+03 | 1,39E+02 | 9,84E+01 | 2,43E-01 | 1,86E+03 | 2,36E+03 | 5,44E+02 | 8,49E+01 |
| **8000+ 24A** | 4,14E+02 | 5,79E-05 | 3,70E+03 | 3,35E+02 | 2,36E+02 | 5,83E-01 | 4,47E+03 | 5,66E+03 | 1,30E+03 | 2,04E+02 |
| **8000+ 48A** | 8,27E+02 | 1,16E-04 | 7,40E+03 | 6,69E+02 | 4,72E+02 | 1,17E+00 | 8,93E+03 | 1,13E+04 | 2,61E+03 | 4,08E+02 |
| **8000+ 72A** | 1,24E+03 | 1,74E-04 | 1,11E+04 | 1,00E+03 | 7,09E+02 | 1,75E+00 | 1,34E+04 | 1,70E+04 | 3,91E+03 | 6,11E+02 |
| **LZ1** | 4,31E+01 | 6,03E-06 | 3,85E+02 | 3,48E+01 | 2,46E+01 | 6,07E-02 | 4,65E+02 | 5,89E+02 | 1,36E+02 | 2,12E+01 |
| **LZ6 24** | 4,14E+02 | 5,79E-05 | 3,70E+03 | 3,35E+02 | 2,36E+02 | 5,83E-01 | 4,47E+03 | 5,66E+03 | 1,30E+03 | 2,04E+02 |
| **LZ6 30** | 5,17E+02 | 7,23E-05 | 4,62E+03 | 4,18E+02 | 2,95E+02 | 7,28E-01 | 5,58E+03 | 7,07E+03 | 1,63E+03 | 2,55E+02 |
| **controllers** | | | | | | | | | | |
| **NT-T2,5** | 4,31E+01 | 6,03E-06 | 3,85E+02 | 3,48E+01 | 2,46E+01 | 6,07E-02 | 4,65E+02 | 5,89E+02 | 1,36E+02 | 2,12E+01 |
| **NT-S 6,5** | 1,12E+02 | 1,57E-05 | 1,00E+03 | 9,06E+01 | 6,40E+01 | 1,58E-01 | 1,21E+03 | 1,53E+03 | 3,53E+02 | 5,52E+01 |
| **HSE** | 7,18E-02 | 1,00E-08 | 6,42E-01 | 5,81E-02 | 4,10E-02 | 1,01E-04 | 7,75E-01 | 9,82E-01 | 2,27E-01 | 3,54E-02 |
| **WR-Set7x/8x** | 1,44E-01 | 2,01E-08 | 1,28E+00 | 1,16E-01 | 8,20E-02 | 2,02E-04 | 1,55E+00 | 1,96E+00 | 4,53E-01 | 7,08E-02 |
| **RS TIII 24** | 1,08E-01 | 1,51E-08 | 9,63E-01 | 8,71E-02 | 6,15E-02 | 1,52E-04 | 1,16E+00 | 1,47E+00 | 3,40E-01 | 5,31E-02 |
| **RS TIII 230** | 1,08E+00 | 1,51E-07 | 9,63E+00 | 8,71E-01 | 6,15E-01 | 1,52E-03 | 1,16E+01 | 1,47E+01 | 3,40E+00 | 5,31E-01 |
| **WRAG2** | 3,59E-01 | 5,02E-08 | 3,21E+00 | 2,90E-01 | 2,05E-01 | 5,06E-04 | 3,88E+00 | 4,91E+00 | 1,13E+00 | 1,77E-01 |
| **WRA TypIV** | 7,18E-01 | 1,00E-07 | 6,42E+00 | 5,81E-01 | 410E-01 | 1,01E-03 | 7,75E+00 | 9,82E+00 | 2,27E+00 | 3,54E-01 |
| **WR-ST IV** | 1,44E+00 | 2,01E-07 | 1,28E+01 | 1,16E+00 | 8,20E-01 | 2,02E-03 | 1,55E+01 | 1,96E+01 | 4,53E+00 | 7,08E-01 |

**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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