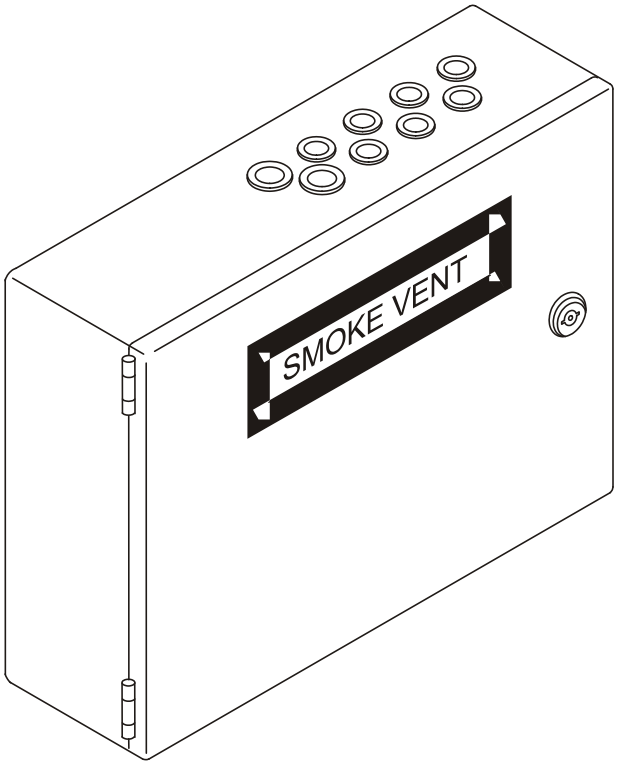
Smoke control unit
Type:
WSC 308 01



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Attention!
Adherence to the following information is mandatory:

Only allow correspondingly trained, qualified and skilled personnel to carry out installation work.

Reliable operation and the avoidance of damage and hazards is only guaranteed if installation and settings are carried out carefully in accordance with these instructions.

Check the technical data on the system plate.

Hazards to persons ensuing from flaps and wings operated by electric motors.

The forces occurring in the automatic mode can be such that parts of the body could get crushed. When opened, actuators could protrude into the room.
For this reason, measures have to be taken prior to starting up the actuators which exclude the danger of injury.

With wings tilting inwards or outwards, the wing must be protected from hinging down once the actuator is unhooked (e.g. for window cleaning). For safety reasons we recommend the use of catching shears.

In the event that wings or flaps are subjected to high wind loads, we recommend to connect the central control unit to a wind detector which will automatically close the flaps.

The fastening methods are exclusively intended for the intended use for which they are designed The manufacturer does not assume any liability for possible damage resulting from inappropriate use.

230V AC dangerous voltage
Can cause death, severe injury or considerable damage to assets.
The connection of the control system is reserved for qualified personnel.
Disconnect all poles of the unit from the supply voltage prior to opening, installation or assembling. Adhere to the VDE regulations.

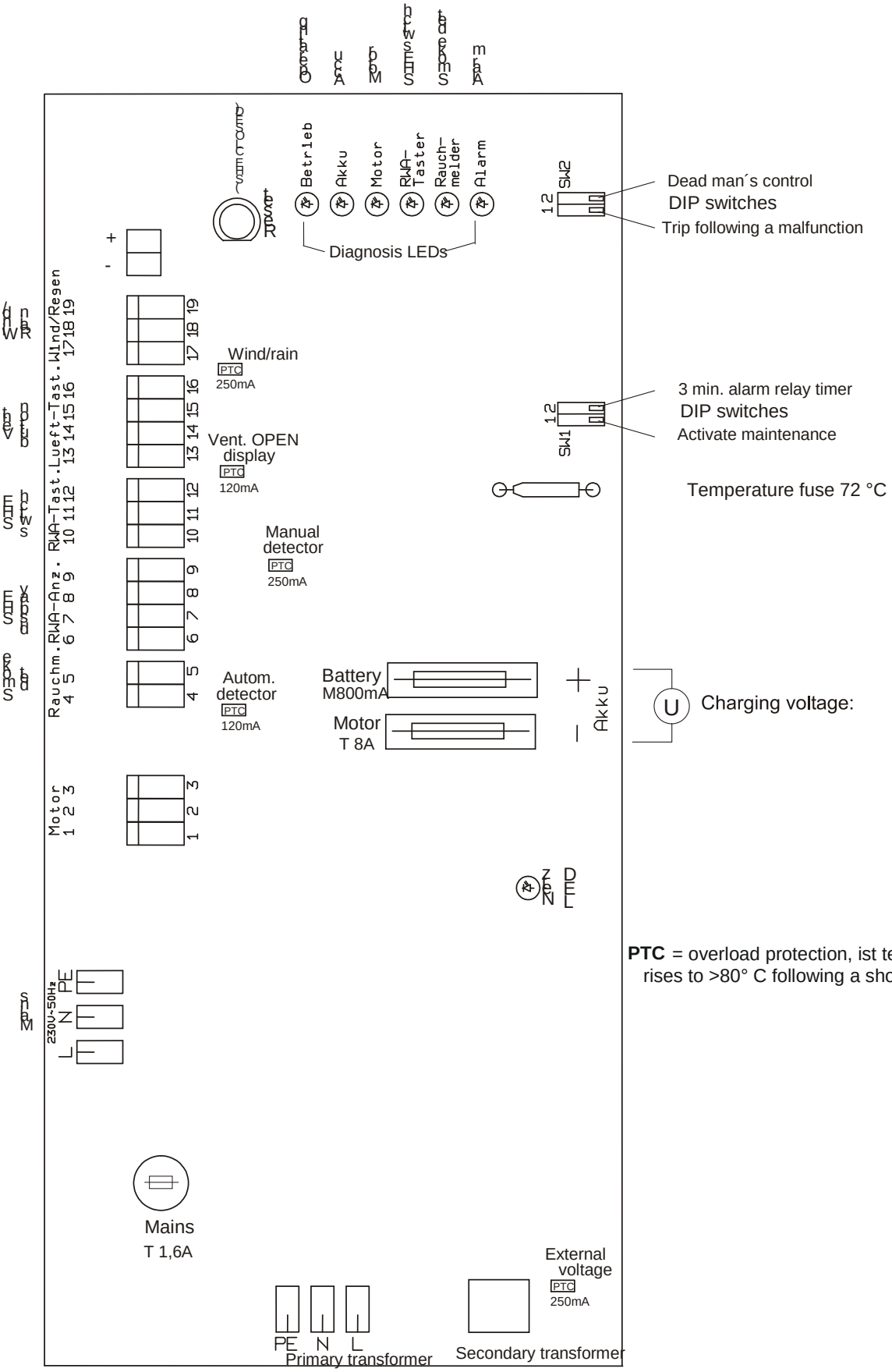
Field of application
The central control system is exclusively designed for the automatic closing of smoke extraction systems, windows, flaps or doors.
Always check that your system meets the valid regulations.
Pay particular attention to the opening cross section, the opening time and opening speed. The cable cross sections depend on the cable length and current consumption (amperage).

Maintenance work
Where devices are used in smoke and heat extraction systems, ensure that they are checked, maintained and, if necessary, repaired at least once per year.
Remove all soiling from the devices,
check the fastening and clamping screws for firm seating. Trial run the entire system.
Defective devices may only be repaired in our factory.
Only use original spare parts.
The supplied accumulators are subject to regular checks and must be replaced every 4 years.

Cable routing and electrical connection
Fuse the 230V AC power supply cable separately on site. **Leave the insulation of the power supply cable in place up to the mains terminal.**
Adhere to the DIN and VDE regulations (Germany) or equivalent in your country.
Establish the cable types, if necessary, with the local approval bodies or the fire protection authority.
Do not conceal flexible cables. Junction box must be accessible for maintenance purposes.
Disconnect all poles of the mains voltage and the accumulators prior to starting maintenance work or making changes to the system.
Secure the system to prevent unintentional switching on again.
Design cable types, lengths and cross sections in accordance with the technical information.
Route all low voltage cables (24V DC) separate from the power current cables.

Manufacturer's declaration
The devices have been inspected and manufactured in accordance with the European directives.
A corresponding manufacturer's declaration is available.
You are only authorised to use the devices if a conformity declaration is issued for the entire system.

Operating elements, diagnosis LED's, fuse review and terminals
Smoke control unit WSC 308 01



PTC = overload protection, ist temperature rises to >80° C following a short circuit !

Smoke and heat extraction system alarm trip:

Break glass unit::
Break the glass in the break glass unit! Press the red button. The smoke extraction opens.
An acoustic alarm signal sounds (continuous sound) in the break glass unit.
All ventilation functions are out of operation.
Display: The red alarm LED in the smoke control unit and the red LED in the break glass unit are lit.

Smoke detector:
If smoke develops, the smoke extraction system automatically opens.
An acoustic alarm signal sounds (continuous sound) in the break glass unit.
All ventilation functions are out of operation.
Display: The red alarm LED in the smoke control unit, the red LED in the break glass unit, and the red LED at the tripped automatic detector are lit.

Resetting a tripped smoke control unit:
Press the „CLOSE button“ in the break glass unit or the „Reset button” in the smoke control unit.
The acoustic alarm signal in the break glass unit stops sounding.
The ventilation functions are operational again once the smoke extraction system has closed.
(Prior to resetting, blow out or replace the detector after it was tripped by an automatic detector).
Display: The red alarm LED in the smoke control unit, the red LED in the break glass unit, and the red LED at the tripped automatic detector extinguish.

Tripping caused by high temperature:
The function is activated, SW 2/1 =ON.
The smoke control system automatically trips if the temperature inside the smoke control unit exceeds 70°C.
An acoustic alarm signal sounds (continuous sound) in the break glass unit.
Display: The red alarm LED in the smoke control unit and the red LED in the break glass unit are lit.
The yellow malfunction LED in the break glass unit flashes. The green operating LED's extinguish.

Resetting a trip caused by high temperature:
The smoke extraction system can be closed again by pressing the „Reset button“ in the smoke control unit or the „CLOSE button“ in the break glass unit.
After operating the CLOSE function, an acoustic pulse tone sounds, and the flashing malfunction LED is only displayed in the break glass unit.

Note:
The built-in thermal switch will then be irreversibly destroyed. The smoke control unit has to be returned for checking.

Alarm trip caused by a malfunction signal:
When this function is activated (SW2/1 = ON), the smoke control unit will trip in the event of a motor, smoke detector or break glass unit circuit malfunction. An acoustic alarm signal sounds (continuous sound) in the break glass unit.
No trip occurs as a result of a malfunction in the mains or battery circuit.
Display: The red alarm LED in the smoke control unit and the red LED in the break glass unit are lit.
The yellow malfunction LED in the break glass unit and the corresponding yellow malfunction LED in the smoke control unit flash.

Option: External signalling of the alarm or malfunction signal
It is possible to send an alarm or malfunction signal potential free, by plugging in the alarm/malfunction signalling module.

Cascading smoke control units:
The smoke control units can be cascaded by a monitored 2 wire connection from the alarm module of the master smoke control unit to the smoke detector input of the slave central panel.
A malfunction in the cascaded smoke control units is detected via the 2 wire BUS cable. The malfunction is only displayed in the corresponding smoke control unit and in the break glass unit connected to the master smoke control unit.

Ventilation functions:

Ventilation OPEN:
With the dead man's circuit activated (SW2/2 = ON), the actuators only move open for as long as the OPEN button of the ventilation button is kept pressed.
If no dead man's function is activated (SW2/2 = OFF), the actuators open after pressing the OPEN button (self hold).
Display: The ventilation open LED in the ventilation button is lit (only with LED integrated in the button).

Ventilation stop:
The actuators stop when both buttons are pressed.
Display: The ventilation open LED in the ventilation button remains lit (only with LED integrated in the button).

Ventilation closed:
The actuators close after pressing the CLOSED button.
Display: The ventilation open LED in the ventilation button has extinguished (only with LED integrated in the button).

Option: Ventilation time module
Time setting between 1 and 30 min. Once this time has elapsed, the actuators close after ventilation „OPEN“ or ventilation „STOP“. This function is not operative if the setting potentiometer is on the right-hand stop.

Wind/rain CLOSE:
The actuators close when the wind/rain sensor has tripped (potential free contact in the sensor switches). The ventilation functions are out of operation as long as a tripped situation is pending.

Option: Transmission of the wind/rain signal
The trip signal of the wind/rain sensor can be transmitted potential free to the next smoke control unit by plugging in the wind/rain relaying module.

Note: All ventilation functions are locked in the event of a power failure or when an alarm is triggered!

General information:

CLOSE after a power failure:
Opened actuators will automatically close via the ventilation system 2 minutes after a power failure.
The motor voltage will be deactivated after another 2 minutes.
In the event the smoke control system trips, this function will be deactivated.

EMC protection:
All inputs and outputs are protected from coupled in interferences.

Short-circuit protection:
All outputs are protected against short-circuit and overload.

Maintenance:
Smoke control systems must be maintained by the builder at least once per year.
The maintenance and check of the system must be documented in a test placard in the smoke control unit as well as in a logbook.

Optional sheet for CLOSE signal from ASV

The ASV-CLOSE function is an optional function that must be specially made in the production by using special software.

ASV CLOSE:
When ASV CLOSE is tripped, all actuators automatically „CLOSE“.
An acoustic alarm signal sounds (continuous sound) in the break glass unit.
All ventilation functions are out of operation.
Display: The red alarm LED in the smoke control unit and the red LED in the break glass unit are lit.

An alarm in the break glass unit (actuators “OPEN“) has priority over an ASV CLOSE signal.

Technical data, Smoke central unit Type WSC 308 01

Supply voltage / mains connection	230V AC / 50Hz (+10% / -15%)
Safety transformer	according to EN 61558
Mains amperage	200VA
Rated voltage (at 230V mains voltage)	24V DC , load dependent
Emergency power supply batteries	2x 12V / 7Ah 4 year operating time
Charging unit: Charging voltage	27.5V 28V
Charging current	700mA, current limited
Operating duration (emergency power supply)	72 hours if batteries are fully charged
Current load of the actuators	8A max.
Switch-on duration	20%
Review of fuses	Mains 1.6A slow-blow Motor 8 A slow-blow Battery 800mA medium slow-blow
Type of connection to external	Mains screw terminal / plug/screw terminals / 0.5-2.5sqmm Motor screw terminal 0.5-10sqmm
Cable monitoring	automatic detectors (detector circuit with active end module), break glass unit (detector circuit with end resistor, actuators (with motor end module), batteries (cyclic measurement)
Message Alarm trip / malfunction	optically alternating or steady signals by LED's Operating and alarm tripping = steady signal. Malfunction ofbattery, motor, break glass unit and smoke detector in the event of an interruption = alternating, in the event of a short circuit = steady signal
Environment class	III according to VdS 2581 / 2593 (-5°C to +40°C)
Housing	Sheet steel housing, type KL-40/30-S103 surface-mounted Protection class I Dimensions WxHxD 400x300x120mm
Protection type according to DIN EN60529	IP 54
Weight	Central unit without batteries approx. 8.8 kg with batteries approx. 13.4kg
Colour	RAL 7035

Connection possibilities:

1) Motors up to 8A.
2) Smoke detectors, differential heat detectors and/or maximum heat detectors, multi-sensor smoke detectors (smoke/heat combination detectors), up to 15 units.
3) Break glass units (primary), up to 6 units (max. current load of the alarm display = 250mA).
4) Break glass units (secondary), up to 15.
5) Ventilation buttons with ‚open' indicator, up to 15, any number without ‚open' indicator (max. current load = 120mA).
6) Wind/rain detectors with potential free N/O contact (max. current load of the detector = 250mA).
7) ASC CLOSE function at the smoke detector input (insert ASV module).

Operating/control elements:

The reset button on the control PCB is used to reset a tripped smoke ventilation system and to close the actuators.

Setting possibilities via slide switch SW1:

SW 1/1 = ON	Maintenance control is activated.
SW 1/1 = OFF	Maintenance control is not activated. Only a coded deactivation is possible following an activation!

As a control of the activation, the operating LED flashes for 10 sec. If SW1/1 is switched back to OFF again within this time, the activation process is deleted.
The maintenance control is triggered after the elapse of a 12 month time period. The yellow malfunction LED in the break glass unit (primary) is lit, and a permanent acoustic alarm signal sounds. Also the green operating LED is still lit to indicate the absence of a fault. A malfunction message has priority.

SW 1/2 = ON	The transmission of the alarm message (alarm malfunction module 1) is interrupted after 3 minutes.
SW 1/2 = OFF	The alarm message (alarm malfunction module 1) is transmitted for as long as an alarm is tripped.

Setting possibilities via slide switch SW2:

SW 2/1 = ON	The smoke control system trips following a malfunction message from the motor, smoke detector, SHE switch circuit, over-temperature
SW 2/1 = OFF	The smoke control system does not trip following a malfunction message. The malfunction message is only displayed by LED`s.

SW 2/2 = ON	The actuators only move OPEN for as long as the ventilation button is pressed (dead man control).
SW 2/2 = OFF	The actuators move OPEN as soon as the ventilation button is pressed (self-hold).

MALFUNCTION REMEDY:

Diagnosis / monitoring in the smoke control unit:

LED's on the PCB's	Function OK	Malfunction	Diagnosis
Mains (green)	lit	off	Check mains voltage and mains fuse
Operation (green)	lit	off at any malfunction	Check all functions Temp. Check temperature fuse for 0 Ohm
Smoke detector (yellow))	off	flashes when interrupted, is lit after a short circuit	Check wiring and the active end module
Break glass unit (yellow)	off	flashes when interrupted, is lit after a short circuit	Check wiring and jumper J1 in the last or only break glass unit
Motor Circuit (yellow)	off	flashes when interrupted, after approx. 8 s	Check motor end module and the motor fuse
Battery/load control (yellow)	off	see diagnosis battery	see diagnosis battery

Diagnosis / battery monitoring:

Battery charge:
Charging voltage 27.5V to 28V. Charging current limited to approx. 700mA.
Short-circuit monitoring of the connection cables, charging voltage disconnected in the event of a short-circuit.

Malfunction	Function	Diagnosis
Yellow battery LED flashes	Mains failure	Check mains fuse
Yellow battery LED is lit	No battery connected or battery voltage below 19V	Check battery, battery voltage and battery fuse

Note: The battery malfunction indicator can have a time delay of approx. 8 s.

Note:
Replace the emergency power batteries every 4 years!

Optional plug-in modules:

Multi-input malfunction warning module (WSA 301) – Model 1:
Multi-input malfunction warning:
1 x change-over contact (max. load: 60V, 1A) with 3 pole connection terminal for potential free transmission to the BMS / panel etc.
2 pole connection terminal for 2 wire BUS cable for the feedback of malfunctions in cascaded smoke control units to the break glass unit connected to the master smoke control unit.

Alarm message:
1 x change-over contact (max. load: 60V, 1A) with 3 pole connection terminal for potential free transmission to BMS / panel etc., or as monitored 2 wire alarm cable for cascading smoke control units.

Jumper plugged in J1 = Only for the alarm transmission to the next smoke control panel unit (cascading).
Jumper plugged in J2 = pot.-free alarm contact (factory setting).

Wind/rain relaying module (WSA 302) – Module 2:
1 x change-over contact (max. load: 60V, 1A) with 3 pole connection terminal for potential free transmission of the wind/rain trip.

Ventilation time module (WSA 303) – Model 3:
Automatic closing in the ventilation mode according to preselected time (1 min. to 30 min.) after ventilation OPEN was actuated.

Installation information:
Fit the break glass units at a height of approx. 1.40 m of FF top edge.

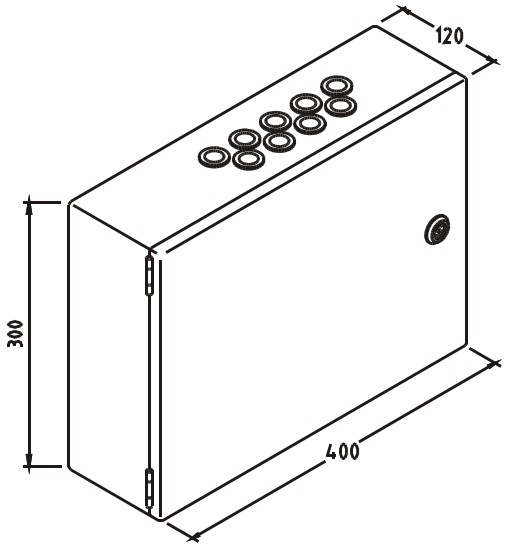
Cable routing

Please note the safety information contained in this operating manual.
For the type of cables and routing, please refer to **Electrical cables**.
Do not reduce the cable cross sections specified in the cable lengths table.
All cables of the smoke control unit (except the mains supply cable) carry 24V DC and have to be routed separate from the mains supply cable.
Adhere to the pertinent VDE regulations when routing the cables.
Do not use the green/yellow conductor.
Ensure that the mains cable can be switched via an external or customer-supplied two-pole switch element or a switch element controlling all poles.

Smoke control unit installation

Note the smoke control unit has to be installed in a dry room.

Surface mounted housing
Refer to the sketch below for the installation position



Open the smoke control unit and affix by means of the 4 holes in the building structure. Ensure that suitable fastening material is available.
Note!
Place sealing washers (plastic or similar) between the housing wall and the fastening screws (IP 54 !).

Installation of the Break glass unit, ventilation buttons and detectors

Ensure that the Break glass unit and the ventilation buttons are visible and well accessible. Do not fit behind protruding walls, door panels or hidden by the building structure.
Note: Installation height of the Break glass unit = 1.4 m above floor top edge.
Install the automatic detectors in accordance with the enclosed operating manuals.

Installation

Lead the connection cables into the housing of the smoke control unit from above.
All connection terminals (except the mains terminals and the motor terminals) are pluggable.
Connect the connection cables in accordance with the terminal plan. Ensure that the connections are made correctly.
Incorrect connection, number and colour errors could lead to malfunctions of the smoke control unit or of the external elements.

Electrical cables

Ensure that the electrical cables are always routed according to the valid national and local regulations of the individual country.

Maintaining the cable functions
The sample cable system directive (MLAR) in its current version is decisive for the type of cables and their corresponding way of routing. In most of the German provinces, MLAR has been introduced as Technical Construction Regulation. Various revisions of the MLAR as Technical Construction Regulation are valid in the individual provinces. Due to the fact that the requirements with regard to the conductors for smoke control systems contained in the individual versions differ considerably, different conductor requirements result for the individual provinces. MLAR is based on the state-of-the-art of the year 2000 (Revision: 06/2001). In this directive, for the first time a differentiation is made between machine operated and natural smoke ventilation systems. For natural smoke extraction systems it is sufficient to maintain the function according to classification E30. These cables must be checked and approved in accordance with DIN 4102 Part 12. Route the cables in conformity with the instructions of the cable manufacturers using the corresponding fastening materials. The maintenance of the function for the smoke ventilation cables is not required if all cable paths are monitored by the smoke detector and when the smoke and heat detection system opens as a result of the automatic detector tripping.

Concealed installation is not an approved type of installation to maintain the function in accordance with DIN 4102 Part 12. The function is also only securely maintained by cables of class E30, or the room is monitored by smoke detectors.

The cable network for smoke ventilation systems („Cable system“) ends at the interface (junction box) for the actuator! The flexible, heat resistant connection cable of the smoke ventilation system actuator is part of the system component ‚electric motor actuation' and does not belong to the electrical installation!

We recommend in all cases to discuss the type of cable routing with the competent fire fighting authorities. Independent of the fact whether or not the respective MLAR is introduced in the corresponding province as Technical Building Regulation, we recommend to point out the technical possibilities and the state-of-the-art of MLAR 2000.

Cable length table

For determining the maximum permissible cable lengths between the smoke control unit and the actuators, taking into account the specified cables cross sections, please refer to the following table:

Maximum motor current: 8A **Note**: Be aware of the overall capacity/rating of the smoke control unit!

Maximum cable length: (always routed from the central control panel to the last connection socket)
Actuating current: Sum of all motor currents per group module

Note: **Do not use the green/yellow wire!**
Per motor supply line, 3 wires are required (2 wires current carrying /1 wire for monitoring)

Cross section Actuator current in A	3 wire 1,5 mm²	5 wire 1,5 mm² (2 parallel wires)	3 wire 2,5 mm²	5 wire 2,5 mm² (2 parallel wires)	3 wire 4 mm²	3 wire 6 mm²
1	84,00 m	168,00 m	140,00 m	280,00 m	224,00 m	336,00 m
2	42,00 m	84,00 m	70,00 m	140,00 m	112,00 m	168,00 m
3	28,00 m	56,00 m	46,67 m	93,33 m	74,67 m	112,00 m
4	21,00 m	42,00 m	35,00 m	70,00 m	56,00 m	84,00 m
5	16,80 m	33,60 m	28,00 m	56,00 m	44,80 m	67,20 m
6	14,00 m	28,00 m	23,33 m	46,67 m	37,33 m	56,00 m
7	12,00 m	24,00 m	20,00 m	40,00 m	32,00 m	48,00 m
8	10,50 m	21,00 m	17,50 m	35,00 m	28,00 m	42,00 m

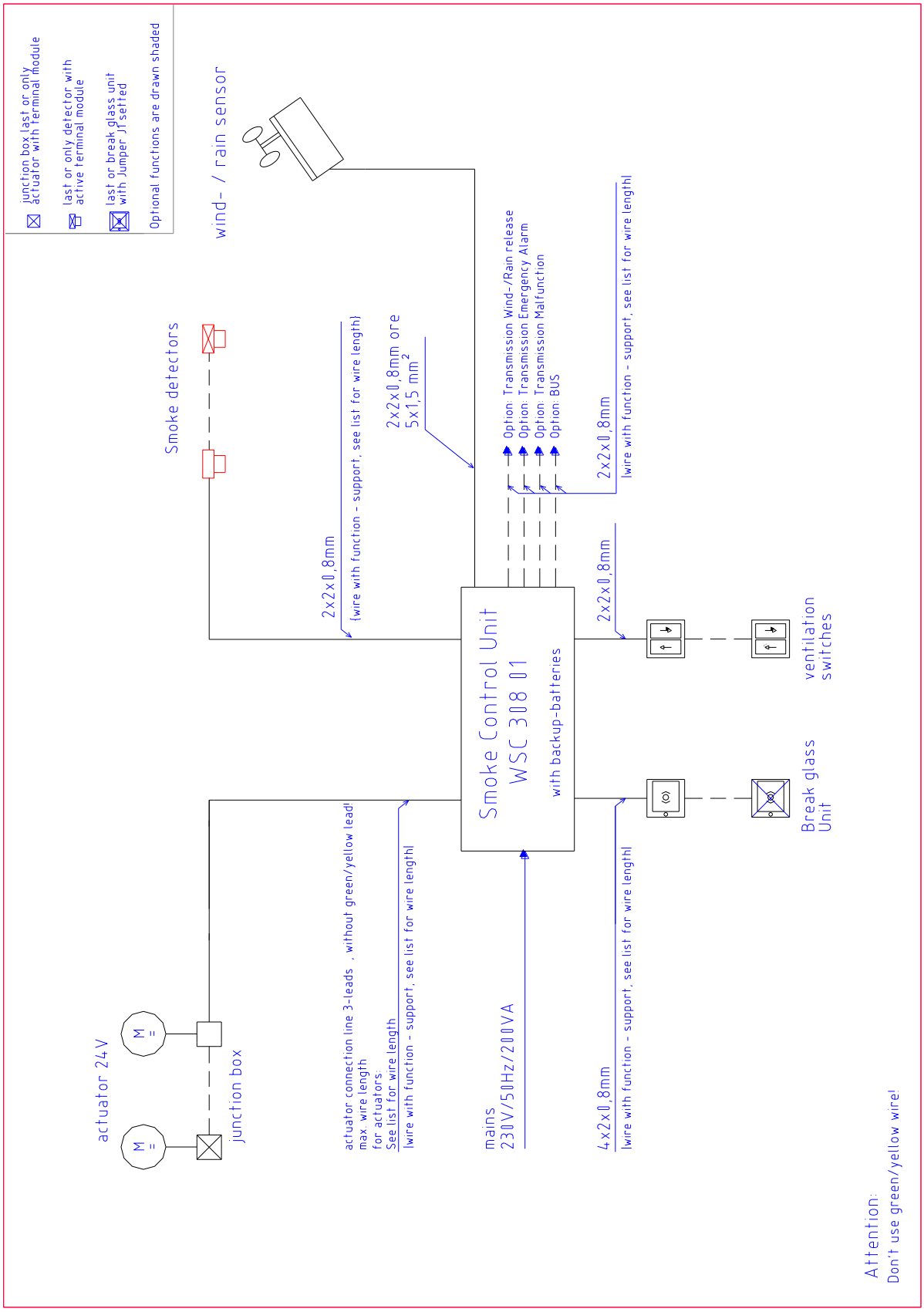
(The information is valid for ambient temperatures of 25°C)

Formula for the calculation of the maximum cable length
Maximum permissible voltage drop in the cable UL : 2 Volt

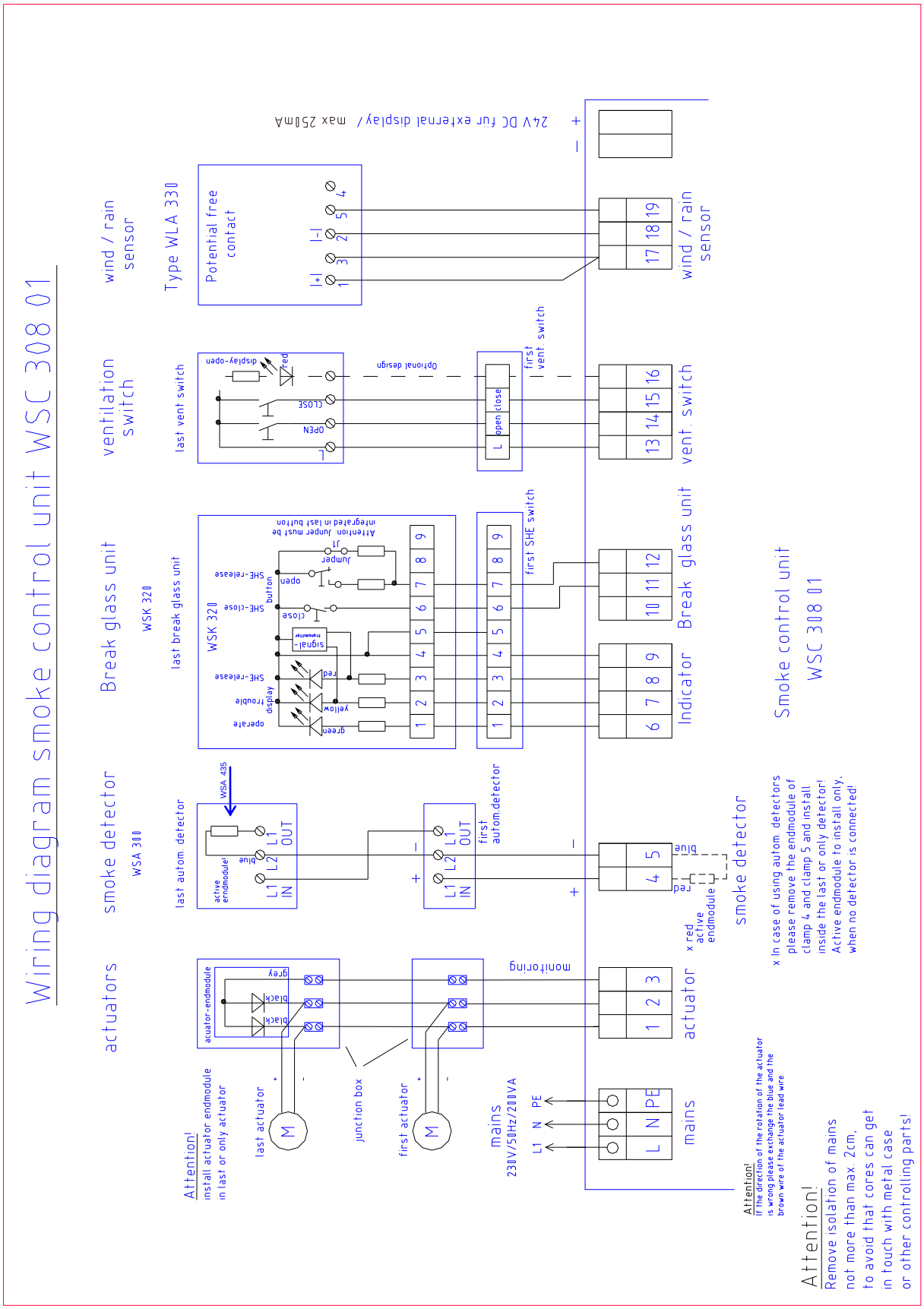
$$\text{max. cable length} = \frac{\text{permissible voltage drop (UL) x conductivity of copper (56) x cable cross section (A)}}{\text{max. actuator current total (I) in amps x 2}}$$

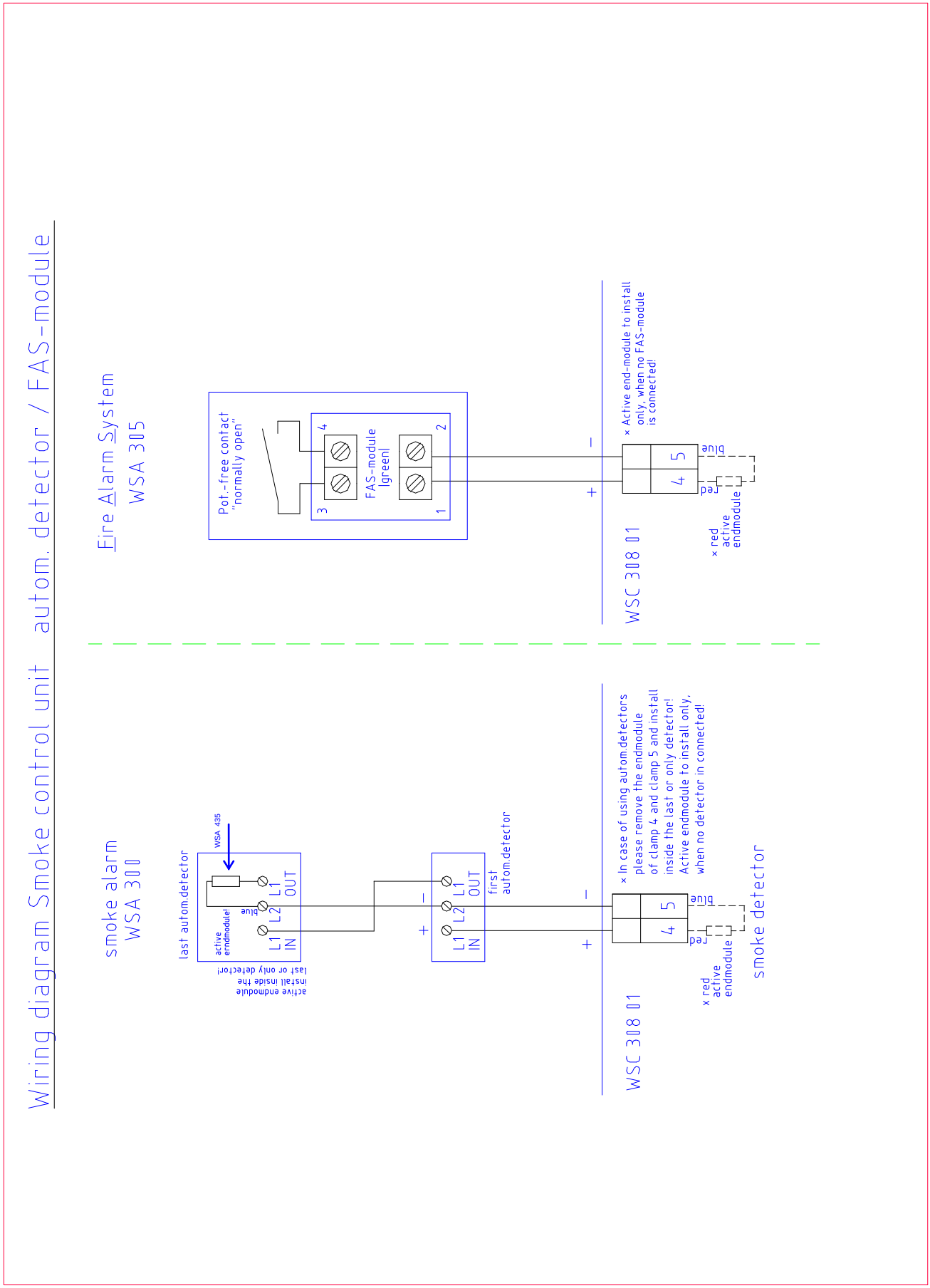
Permissible cable length for the break glass unit supply cable when using.....4x2x0.8mm: **up to 200m**
The motor connection cable length to the junction box (or control module) must not exceed **10 m.**

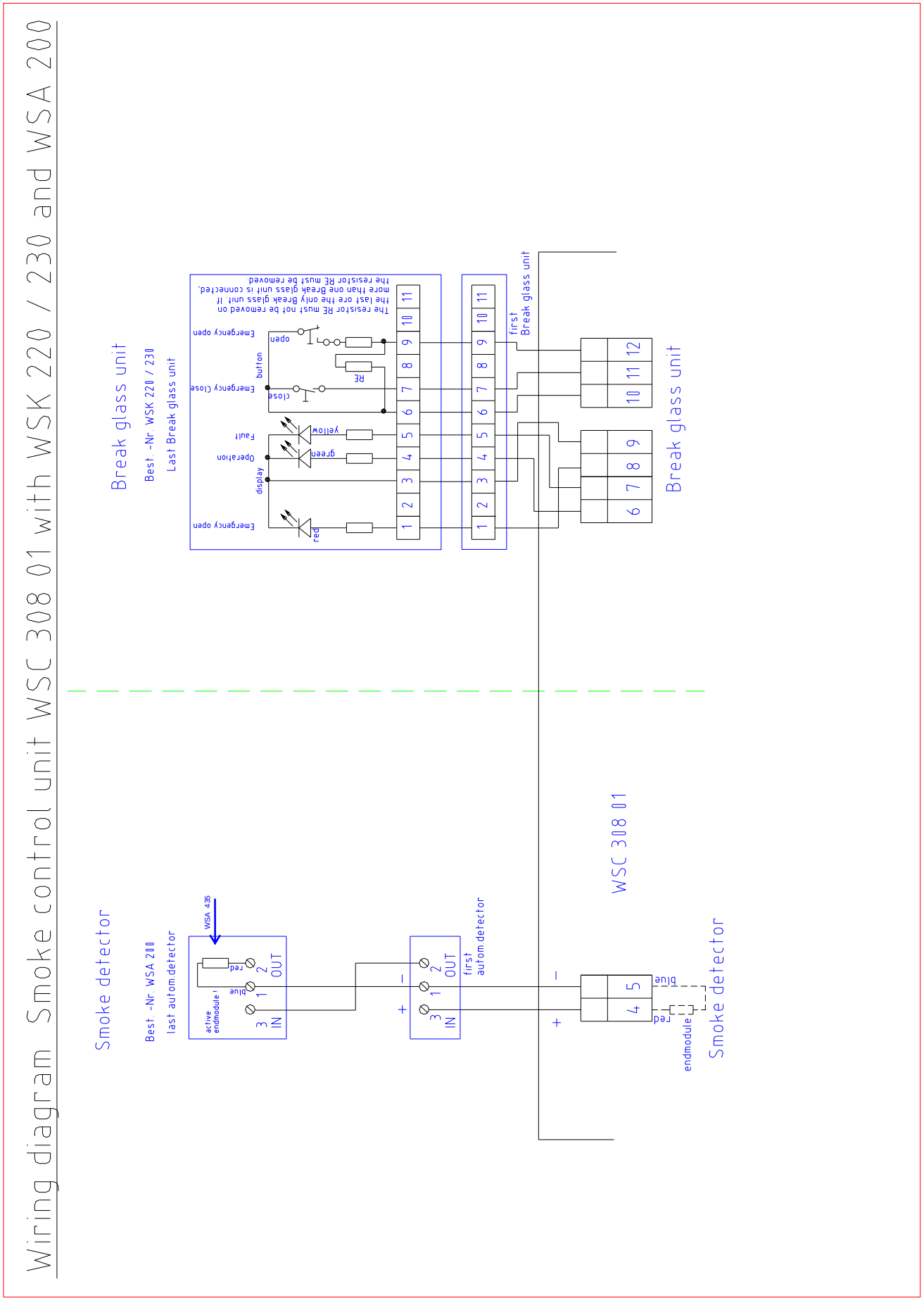
Cable plan


junction box last or only actuator with terminal module
last or only detector with active terminal module
last or break glass unit with Jumper jf setted
Optional functions are drawn shaded
wind- / rain sensor
Smoke detectors
2x2x0,8mm
(wire with function - support, see list for wire length)
2x2x0,8mm ore 5x1,5 mm²
Option: Transmission Wind-/Rain release
Option: Transmission Emergency Alarm
Option: Transmission Malfunction
Option: BUS
2x2x0,8mm
(wire with function - support, see list for wire length)
Smoke Control Unit
WSC 308 01
with backup-batteries
2x2x0,8mm
ventilation switches
Break glass Unit
actuator 24V
junction box
actuator connection line 3-leads , without green/yellow lead!
max. wire length for actuators:
See list for wire length
(wire with function - support, see list for wire length!)
mains 230V/50Hz/200VA
4x2x0,8mm
(wire with function - support, see list for wire length!)
Attention:
Don't use green/yellow wire!

Standard wiring diagram




Wiring diagram Smoke control unit autom. detector / FAS-module
Fire Alarm System
WSA 305
Pot.-free contact
"normally open"
FAS-module
(green)
× Active end-module to install
only, when no FAS-module
is connected!
WSC 308 01
× red
active
endmodule
smoke alarm
WSA 300
last autom.detector
WSA 435
active endmodule!
blue
L1 L2 L1
IN OUT
active endmodule
install inside the
last or only detector!
first
autom.detector
× In case of using autom.detectors
please remove the endmodule
of clamp 4 and clamp 5 and install
inside the last or only detector!
Active endmodule to install only,
when no detector in connected!
smoke detector


Wiring diagram Smoke control unit WSC 308 01 with WSK 220 / 230 and WSA 200
Break glass unit
Best.-Nr. WSK 220 / 230
Last Break glass unit
The resistor RE must not be removed on the last ore the only Break glass unit if more than one Break glass unit is connected, the resistor RE must be removed.
Emergency open
Emergency close
button
open
close
RE
Fault
Operation
display
yellow
green
red
first Break glass unit
Break glass unit
Smoke detector
Best.-Nr. WSA 200
last autom.detector
WSA 435
active endmodule
blue
red
3 IN
2 OUT
1
first autom.detector
WSC 308 01
endmodule
Smoke detector

When error message occur, please refer to chapter Operating elements/LED diagnosis.

An acoustic message only occurs in the break glass unit (primary) with the door closed or the door contact switch pressed!

1) <u>The smoke control unit is completely installed, without the operating voltage applied</u>

a) Check all mechanical and electrical components for damage.
b) Check the DIP slide switches in the smoke control unit for their correct (required) position.
c) Check all screw and plug connections for tightness and/or firm seating.
d) Check that all external components are installed.

Actuators:	Is the final module at the last or only actuator inserted?
Automatic detectors:	Is the active end module at the last or only detector inserted?
Manual detectors:	Is the jumper only inserted in the last or only operating panel?

2) <u>With mains voltage, without battery</u>

Adhere to the VDE regulations! Externally disconnect the mains voltage.

a) Connect the mains cables and reapply the mains voltage.
b) The mains LED is ON, the operating LED is OFF, the battery LED is ON. The malfunction signal at the break glass units is ON.

3) <u>With mains voltage, with battery</u>

a) Remove the protection film from one face of the supplied foam rubber. Glue each foam rubber to the bottom side of the batteries. Connect the batteries to the black battery bridge according to the wiring diagram, then connect the red and the blue connection cable to the red and the black flat plug. Remove the bottom protection film of the foam rubber and insert the batteries in the smoke control unit according to figure 1 (symmetrically, with an approx. 3 mm spacing from the housing edge), and firmly press down to the housing bottom!
b) Plug the red connection cable to the + and the blue connection to the flat plug of the smoke control unit. Note: Check correct polarity!
c) The operating LED is ON, the battery LED is OFF. The malfunction signal at the break glass units is OFF.

4) <u>Ventilation button</u>

a) Closely observe the actuators during opening and closing. They must not be impaired in any position by the building structure. Also the motor connection cables must not be subject to pulling or crushing.
b) Briefly actuate the Open button to have the actuators move open up to the final position. With the SW2/2 =ON (hold-to-run) setting, the actuators only move as long as the button is pressed. The OPEN display (if existing) in the button is ON.
c) Briefly actuate the CLOSED button, the actuators close. The Open display is OFF.
d) Press both buttons simultaneously while running, this corresponds to stop. The ventilation Open display is ON, the actuators stop.
e) Briefly press the Close button again, the actuators fully close, the Open display is OFF.

5) <u>Break glass unit</u>

a) Open the door and press the red Open button. The actuators move open through to the end position. The red alarm LED (also in the smoke control unit) is ON, at the same time a permanent acoustic signal sounds (door contact pressed!).
b) While running, press the Close button at the ventilation button, then press both buttons, the actuators must neither close nor stop!
c) Press the reset/Closed button in the break glass unit. The actuators close through to the end position. The ventilation function is released again. The red alarm LED (also in the smoke control unit) and the signal generator are OFF.

6) <u>Break glass unit (secondary)</u>

a) Check as described under 5). “Operation”, “Malfunction” and the acoustic signal are missing!

7) Automatic detectors

a) Spray test aerosol on the detectors.
b) The actuators move open through to the end position. The red LED in the detector, the red alarm LED (also in the smoke control unit) and the permanent acoustic signal in the break glass unit are ON.
c) While running, press the Close button at the ventilation button, then press both buttons, the actuators must neither close nor stop!
d) Press the reset/Close button in the break glass unit. The actuators close through to the end position. The ventilation function is released again. The red alarm LED (also in the smoke control unit) and the signal generator are OFF.

8) Emergency power supply test

a) Remove the mains fuse from the smoke control unit. Adhere to the VDE regulations!
b) The green mains and operating LED's are OFF, the yellow battery LED is flashing (smoke control unit in the battery mode). The malfunction signal at the break glass units is ON.
c) The ventilation buttons are deactivated.
d) If the actuators were open, they will automatically close after 2 minutes.
e) Test the smoke trip and reset/close as described under 5).
f) Refit the mains fuse.
g) The green mains and operating LED's are ON, the yellow battery LED is OFF. The malfunction signal at the break glass units is OFF.

9) Activation of internal check

a) Move the DIP switch SW1/1 to ON
b) As a control of the activation the operating LED flashes for 10 sec.
c) If SW1/1 is switched back to OFF again within this time, the activation process is deleted.
d) After 10 sec. is the operating LED continuously lit, and the internal check is activated.

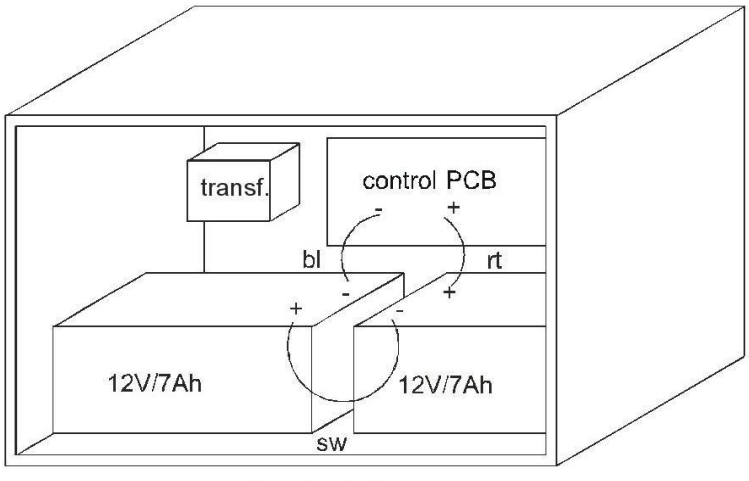
10) Wind/rain detector

a) Open the actuators with the ventilation button.
b) Wet the rain sensor, the actuators will fully close, the green wind/rain LED in the control centre is ON.
c) While running, press the Open button at the ventilation button, then press both buttons, the actuators must neither open nor stop!
d) The SHE trip has priority.

When the start-up was successful, then close the doors of the break glass units and of the smoke control unit.

If the start-up was unsuccessful (error with one of the test run processes), please refer to the chapter **Function description** and **Operating elements / LED diagnosis**. If necessary, check the wiring in accordance with the **wiring diagram**.

Pic. 1



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