Smoke and Heat Ventilation
Electronics – Pneumatics
Control Systems

Installation and Operating Instructions

Version 6/21

SHEVS Control Centre

RWZ 4 d

CE
0786

EN 12101-10:2005
Class A
0786-CPR-50643 (14)

ISO 21927-9:2012
Type D

VdS
G 513007

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Contents

Please read these instructions carefully.

Work at the Control Centre may be performed only by qualified personnel.

Symbols used:

OK = trouble-free operation	= Button/travel command "OPEN"	= Warning tone/buzzer
= Alarm	= Button/travel command "CLOSED"	= Strobe
= Fault	= "OPEN" position	= Ventilation position
= Maintenance	= Wind	= Ventilation time
	= Rain	
= Automatic fire detector	= manual call point	F = Fire Alarm Control Panel (FACP)

1 Concept of Control Centre

- Smoke and Heat Exhaust Ventilation System (SHEVS) Control Centre for the connection of 24 V- actuators
- Certified according to DIN EN 12101-10 (Internal power supply) and ISO 21927-9 (control unit)
- VdS approved according to the guidelines VdS 2581 and VdS 2593
- One SHE group, three signal lines:
  - Line 1: automatic fire detectors
  - Line 2: Fire alarm control panel (FACP) or additional automatic fire detectors
  - Line : Manual call point **RT 2** or **RT 4** (main alarm point RT 2/4-*-BS or secondary alarm point RT 2/4-*).
    Connectable versions see section 6 „Technical data“
- Reset the alarm/detector using the button in the main alarm point or in the Control Centre
- Selectable functions:
  - “Auto close” (automatic closure after resetting an alarm)
  - “Malfunction = Alarm” (alarm upon malfunction of a signal line)
  - “Automatic OFF” (automatic travel commands - apart from the alarm - are disabled)
  - “Thermal alarm” (alarm on exceeding an enclosure inside temperature of 70 °C)
  - “2-detector-dependency” (2-detector-dependency for automatic fire detectors in line 1)
- Possibility of connecting ventilation buttons, also with indication of position
- Adjustable ventilation position and ventilation time
- Possibility of connecting a Wind and Rain Control (WRC), e.g. type **WRS**. Optionally internal Wind and Rain Control
- Possibility of connecting an external malfunction contact (e.g. from an incoming air control)
- Indicators operation OK, alarm and malfunction ⚠ in the enclosure door
- Internal service display for detailed status information during installation and maintenance
- Plug-in connection terminals (apart from actuator output)
- The use of K + G/Grasl actuators is recommended. When driving third-party actuators, compatibility is to be checked. Also note section 6 "Technical data"
- Actuator specification: 24 V actuators, travelling time for full stroke at rated load (total travelling time) < 4 min.
- Upon direct change of the sense of travel, the actuators are briefly stopped before changing the sense
- Sheet steel enclosure, light grey (RAL 7035)

1.1 Options/Accessories

- **PK:** Potential-free contacts (PFC) for alarm/malfunction forwarding
- **WTM:** Outputs for controlling external warning devices in case of alarm or malfunction
- **WRM:** Internal Wind- and Rain Control Connection of wind sensor WM and/or rain sensor RS is required (accessory)

The option modules WRM and WTM are not VdS approved as there are no corresponding test specifications. However, their use has no influence on the VdS-approval of the control centre, as interactions were checked and excluded as part of the approval procedure.

2 Putting into service/putting out of service

Work may be performed only by qualified personnel!
Before starting any work, it is mandatory to deflect static charge!
We do not assume any guarantee or liability for defects caused by faulty connection.

Planning and design of SHEVS require observation of the following rules, as far as applicable: National building codes/model building code and regulations of local building and fire safety authorities, VDE regulations (particularly VDE 0100, 0108 and 0833), VdS Guidelines 2098 and 2221, DIN 18232, EN 12101, DIN 4102, model line systems policy.

2.1 Installation/Putting into service

Perform work only in de-energised condition!

Actuators must not be actuated directly (e.g., with external accumulators during installation/maintenance) when they are already connected. This can lead to defects in the power output.

- Fasten the enclosure securely to a wall using suitable mounting material. Guide the connection cables through the openings provided and wire them according to the connection diagrams.

- Make function settings (see 3.2).
- Switch on the mains voltage. The indicators and the service display light up briefly. Subsequently, the indicator ⚠ flickers for about 15 s (calibration process). If the indicator ⚠ is permanently lit, there is a fault in a signal line (see 5).
- Insert the accumulators in the enclosure as illustrated on the “Line voltage, Installation, Accumulators” plan and connect them.
- The indicator OK lights up, the indicator ⚠ goes out, the system is ready for operation. If a fault is still displayed, follow the instructions in section 5 "Detection of fault/Troubleshooting". If necessary, decommission the Control Centre again (see 2.2).
- While putting into service, check all functions and indicators of the Control Centre and its components. The individual functions are described in section 3. Also simulate faults and check detection (see 5).
- To finish putting into service, retract all actuators completely (press button ▽).

ℹ *After about 24 hours of continuous operation without mains failure, the accumulators are sufficiently charged to achieve the full standby time in case of mains failure.*

2.2 Putting out of service

- Disconnect the accumulators from the Control Centre (remove accumulator connection line or fuse F2).
  ℹ *Charged accumulators have a shelf-life of about 6 months. They must be recharged if stored for a longer period.*
- Switch off line voltage.

3 Functions and operation

Before touching the control elements in the Control Centre it is mandatory to deflect static charge!

3.1 Indicators/control elements of the Control Centre

- **Indicators on the board:**
  - OK (green): **Trouble-free operation**. Goes out when a fault is detected.
  - (red): **Alarm**, see 3.2 - 3.4.
  - ⚠ (yellow): **Fault**, see 5.
  - (blue): **Wind and Rain Control** is active.
  - (blue): **Maintenance is due** (flashes) or **maintenance mode enabled** (lights up).
  - (red): **Service display**, see 5.2.
  - △/▽ (blue): Travel command in OPEN/CLOSE direction active.
- **Indicators in the enclosure door:** The indicators OK, and ⚠ described above are also in the enclosure door.
- **Control elements on the board:**
  - **Button *Reset*** (red): Reset the alarm function.
  - **Button *Reset*** (yellow): Switch off the warning tone.
  - **Button** (ventilation position) and **potentiometer** (ventilation time): see 3.5.2 and 3.5.3.
  - **Button *Test***: Activate the alarm test function for maintenance purposes. Buzzers are not enabled.
  - **Button *µC-Reset*:** Only for service purposes.

3.2 Selectable functions

- **“Auto close”** DIP switch **S1-1**:
  In the ON position, the actuators are automatically retracted after resetting an alarm. When the function responds, ventilation can be resumed only after 4 minutes.
  Factory setting: ON (automatic closure is activated).
- **“Fault = Alarm”** DIP switch **S1-2**:
  In the ON position, the alarm function (see 3.4) is executed in case of wire-break or short-circuit of a signal line. The alarm can also be reset by pressing the button *Reset* in a main alarm point or the Control Centre before eliminating the fault.
  Factory setting: OFF (no alarm in case of fault).

- **“Automatic OFF”** DIP switch **S1-3**:
  Setting ON deactivates the following automatic functions: Auto close, ventilation position and ventilation time, repetition of cycle ▽ and closing in case of mains failure or active wind and rain control. The actuators only travel in ventilation mode as long as an △/▽ button is pressed. The indication of position is deactivated.
  Factory setting: OFF (Automatic OFF is activated).

  When changing from the ON to the OFF position, the actuators are retracted automatically. Ventilation can be resumed only after 4 minutes.

- **“Thermal Alarm”** DIP switch **S1-4**:
  In the ON position, the alarm function (see 3.4) is executed when the inside temperature of the enclosure exceeds 70 °C.
  Factory setting: OFF (no alarm when 70 °C is exceeded).

- **"2-detector-dependency"** DIP switch **S1-5**:
  In the ON position, two automatic fire detectors must have responded in line 1 before the alarm function (see 3.4) is executed.
  As soon as the first automatic detector has responded, the pre-alarm is activated: The indicators on the board and the manual call points flash, manual call points with buzzer emit an intermittent warning tone.
  After changing the switch position, a recalibration is performed automatically (see 2.1).
  Factory setting: OFF (no 2-detector-dependency in line 1).

  Observe altered terminating resistors when function is enabled (see connection diagram).

- DIP switch **S1-6**: Do not change the setting. Factory setting: OFF.

3.3 Indicators/functions of the manual call points

- For activation and reset, see 3.4.
- **Show:**
  - (red, **RT 2/4-***): **Alarm**, see 3.4.
  - OK (green, **RT 2/4-*-BS**): **Trouble-free operation**. Goes out when a fault is detected.
  - ⚠ (yellow, **RT 2/4-*-BS**): **Fault**, see 5.
- **Button *Reset*** (**RT 2/4-*-BS**): Reset the alarm function (accessible after opening the door with a key).
- Manual call point with buzzer for alarm and fault signal (**RT 2/4-*-BS-AA)**:
  The buzzer emits a continuous tone in the event of alarm, and an intermittent warning tone in the event of pre-alarm or fault.
  The warning tone is switched off with the button *Reset*.
- Manual call point with indication of position (**RT 2-*-BS-A**): see 3.5.4.
  Manual call point with ventilation button and indication of position (**RT 4-*-BS-LT-A**): see 3.5.1 and 3.5.4.

3.4 Alarm functions

The ventilation functions are disabled while an alarm function is running.

- **Alarm function:** Upon detecting an alarm, the actuators are fully extended. The indicators light up and manual call points with buzzer emit a continuous tone. Repetition of cycle △ is executed for 30 minutes (extend, briefly retract, extend again).
- **Resetting the alarm function:** Resetting is done by briefly pressing the button *Reset* in a main alarm point or the Control Centre. Then the indicators will go out and the buzzers will be switched off.

  If the actuators are retracted by pressing the button ▽ after an alarm has been reset, ventilation can be resumed only after 4 minutes.

- **Manual call points:** For manual alarm signalling, break open the glass of the manual call point and press the control button until the indicator confirms the detection of the alarm.
  For maintenance work, the door of the manual call point can be opened with a key.
- **Automatic fire detectors:** The alarm is triggered automatically (depending on the type of detector due to smoke and/or heat detection).
  If an automatic fire detector responds immediately after resetting, press the button *Reset* again (smoke particles may still be present in the detector).

- **Fire Alarm Control Panel (FACP):** When an alarm is signalled by the FACP, the alarm function will be executed.
  The alarm is reset at the FACP.

ℹ *Other alarm functions (“Fault = Alarm”, “Thermal Alarm”, “2-detector-dependency”, “Auto Close”) see 3.2.*

3.5 Ventilation functions

ℹ *If the function "Automatic OFF" is activated (see 3.2), the functions ventilation position, ventilation time and wind and rain control are deactivated. The actuators only travel as long as a △/▽ button is pressed.*

❗ *When performing ventilation functions, do not exceed the duty cycle of the actuator output and of the actuators.*

3.5.1 Manual ventilation

- After briefly pressing a ventilation button (△/▽), the actuators travel up to the end position or the set ventilation position (see 3.5.2). Pressing the button again stops the actuators. Pressing the button for the opposite direction switches the travel direction after a brief stop.
- If the button is pressed for longer (> 1 s), the actuators travel as long as the button remains pressed. It is also possible to travel up to the end position or up to the set ventilation position.

3.5.2 Setting the ventilation position

ℹ *This setting can only be made when the system has no faults and WRC is not active.*
Initially, all actuators must be completely retracted and the travel command ▽ has to have finished.

- The desired ventilation position is defined by setting the travelling times in the OPEN and CLOSE directions. Factory setting: 15 s travelling time OPEN, 30 s travelling time CLOSE.
  - Enabling/disabling the ventilation position: Press button for longer than 3 s. The display shortly shows (activated) or (deactivated).
  - Reset to factory setting: Press button for longer than 6 s. The display shortly shows .
- Setting the travelling times:
  - Briefly press button to activate the programming mode (display:).
  - Briefly press button or a ventilation button △ to extend the actuators. When the desired ventilation position is reached, press the button again.
  - Briefly press button or a ventilation button ▽ to retract the actuators. When all actuators are fully retracted, press the button again. The display goes out.
  - The actuators automatically travel to the ventilation position for verification and then retract again.

  ℹ *The programming mode is cancelled automatically after 6 minutes without button activity or manually by double clicking on the button Reset .*
  If a changeover contact is used for ventilation, the setting is only made with the button .

3.5.3 Setting the ventilation time

- The ventilation time can be set to between 5 and 30 minutes using a screwdriver on potentiometer . After the set time has elapsed, the actuators retract automatically. The ventilation time is deactivated at the left stop (= factory setting).

3.5.4 Indication of position in the ventilation button

- The indicator
  - lights up: Actuators are in OPEN position
  - flickers: A travel command is active
  - blinks: Wind and rain control is active

  In case of a travel command towards CLOSED, the indicator goes out latest after 4 minutes.

ℹ *If the function "Automatic OFF" is activated (see 3.2), the indicator is deactivated.*

3.5.5 External Wind and Rain Control (WRC)

- If the wind and rain control is active, the actuators are retracted automatically. The ventilation functions are disabled. The indicator on the logic board lights up, until the WRC releases the ventilation functions once again. An alarm has priority.

3.6 Repetition of cycle ▽

- If not all actuators are properly retracted (e.g., actuator has switched off due to a gust of wind), the repetition of cycle function can be activated by briefly pressing the ventilation button ▽. The actuators are briefly extended and following the closing command is executed once again.

  ℹ *Note the setting of the "Automatic OFF" function (see 3.2).*

3.7 Mains failure

- In case of mains failure, the accumulators cannot be charged, but they provide the operating power for the standby time. Actuators in ventilation position are retracted and pressing the ventilation button △ is ignored. Alarm functions are not affected by the mains failure.
  The mains failure must be rectified immediately to prevent the deep-discharge protection from responding, to recharge the accumulators, and to ensure safe functioning of the system.

  ℹ *Note the setting of the "Automatic OFF" function (see 3.2).*

- **Deep discharge protection:** If the accumulators are in critical condition, the device is **switched off** completely. However, a low quiescent current continues to flow (in addition to the natural self-discharge). Therefore, without recharging, there is a risk of permanent damage to the accumulators after only a few days.

4 Maintenance

- In the course of maintenance - unless other local regulations apply - check all the functions and displays of the device and the components at least once a year. This also includes checking the terminal points, connection cables, indicators and fuses, and cleaning of various components, if necessary.
  The individual functions are described in section 3. Likewise simulate faults of the signal lines and power supply and check the detection, see 5.

- **Indication of a due maintenance**
  If the maintenance company has enabled this function, the indicator 🔧 flashes after about 11 months of service life. After about 14 months, the overdue maintenance leads to the indication of a fault ⚠.

- **Accumulators:**
  - Check the accumulators **at least once a year** for proper functioning. They should be replaced following a typical service life of 3, but no more than 4 years in an ambient temperature of 20 °C. For every 10 °C rise in ambient temperature, the service life decreases by about 1 year!
  - Checking the accumulators:
    Briefly press button *Test* and then button *Reset* 🔇. This switches from mains to accumulator operation during the test alarm. Fully extend the actuators. If the accumulator voltage drops too low during this, the accumulators are defective. A fault will be displayed until the accumulators have been replaced.
    After testing the accumulators, reset the test alarm (press button *Reset* briefly) and retract all actuators again.
    ℹ *A quick check of the accumulators with low load takes place automatically every 60 minutes.*
  - The end user, i.e., the final owner, has to return used batteries/accumulators to a distributor or public waste management company. This return obligation applies regardless of whether the end user is a private or commercial consumer.
  - If the system needs to be put out of service/temporarily shut down, **the accumulators have to be disconnected** and the mains voltage has to be switched off!
  - Accumulators that are charged but not yet connected have a shelf-life of about 6 months. They must be recharged if stored for a longer period.

❗ *Actuators must not be actuated directly (e.g., with external accumulators during installation/maintenance) when they are already connected. This can lead to defects in the power output.*

5 Detection of fault/Troubleshooting

5.1 General notes

Occurrence of a fault is indicated by flashing of the indicator ⚠ in the centre door and main alarm points. With the help of the service display, the cause can be limited (see 5.2).

- The following are detected as **faults**:
  - Accumulator or mains failure, accumulator polarity reversed
  - Failure of the fuses F1 to F3
  - Wire-break or short-circuit of the signal lines
  - Wire-break or short-circuit of the actuator line (unbranched common line)
  - External fault, maintenance overdue (if activated)
- Notify the maintenance company in case of faults.
- **Spare material:** In the control centre, there is a bag of spare fuses and resistors.
- **Automatic calibration in case of a fault in the signal line ▭:** After rectifying a fault that was present for more than 10 minutes, the line is automatically calibrated. The indicator ⚠ flickers for about 15 s. If the indicator ⚠ then lights up continuously, there is another fault.

5.2 Service display

- Operating conditions can be accurately displayed with the help of the service display.
  The display is switched off in normal condition. It can be switched on for 120 s by pressing the button *Reset* 🔇 for 4 s.
- If no alarm/fault message is present, the memory content of the display can be shown for 1 s by briefly pressing the button *Reset* 🔥 (alarm memory) or the button *Reset* 🔇 (fault memory).
- In case of alarm/fault, the display is switched on automatically, but switched off again after 10 s in the event of a power failure. In this case it can be switched on again for 10 s by pressing the button *Reset* 🔇 for 4 s.

Operating conditions:

Code	Description
0	Mains failure or fuse F1 blown
1	Wire-break of accumulator or F2 blown
2	Actuator output: Fuse F3 blown
3	Actuator output: Wire-break/short-circuit
4	Line ▭ 1: Alarm
5	Line ▭ 1: Wire-break
6	Line ▭ 1: Short-circuit
7	Line ▭ 1: Undefined [1]
8	Line ⊡: Alarm
9	Line ⊡: Wire-break
A	Line ⊡: Short-circuit
b	Line ⊡: Undefined
c	Line ▭ 2: Alarm
d	Line ▭ 2: Wire-break
E	Line ▭ 2: Short-circuit
F	Line ▭ 2: Undefined

Code	Description
h	"Fault = Alarm" active
J	External fault
L	Setting ventilation position
n	Line ▭ 1: Pre-Alarm
P	Changeover contact for ventilation detected
r	"Automatic OFF" with changeover contact
t	Alarm through internal thermal sensor
U	Accumulator test active
U	Accumulator is defective
y	Accumulator polarity reversed
-	Memory alarm/fault empty
F	Button *Reset* 🔥: Short-circuit
J	Button *Reset* 🔇: Short-circuit
H	Test alarm active
Ξ	Maintenance due
P	Error, service required

Accu charging phases:
[ı.] = I-charging, [u.] = U-charging, [o.] = Trickle charging, [n.] = Standby, [.] = No charging

[1] *In case of display 7, check whether the proper terminating resistor was used (see connection diagram)*

6 Technical data

6.1 Version

Type	**RWZ 4-8d**
Part number	8100 4408 0000
Output current	8 A (24 V⎓/192 W)
Current input	1.1 A/230 V~
Dimensions in mm (W x H x D)	400 x 400 x 125
Lead accumulators (VRLA-AGM), VdS approved	2 x 7 Ah/12 V
Only supplied or approved accumulators may be used. See compatibility list on: www.kg-tectronic.de (Electronics - System Accessories - Accumulators)	

The requirements of the Directives 2014/35/EU and 2014/30/EU are met. CE
Suitable for operation in residential, business and commercial areas.

6.2 Performance data and characteristics

General

Line voltage supply Internal supply voltage/standby time	230 V~/50 - 60 Hz 24 V⎓/72 h in case of mains failure
Cable entry from above through stepped nipples	9 x Ø 22 mm, 1 x Ø 28 mm
Environmental class 1/III (EN 12101-10/VdS 2581) Relative humidity Enclosure protection rating	-5 °C … +40 °C 20 % … 80 %, non-condensing IP40
Mounting dimensions, see plan “Line voltage, mounting and accumulators”. Not suitable for use outdoors. Protect from direct sunlight, humidity and excessive formation of dust! Preferably, the installation should be carried out in dry, heated rooms.	

Signalling lines

Line monitoring	Wire-break, short-circuit
Line 1, automatic fire detectors: Smoke detector/heat detector (**RM 2**/**TM 2** or **RM 3**/**TM 3**)	20 pieces, of which max. 10 heat detectors [2]
Line 2: Fire alarm control panel or additional automatic fire detectors	Normally open contact see Line 1
Line, manual call points: – **RT 2/4-*** – **RT 2/4-*-BS** – **RT 2/4-*-BS-AA** – **RT 2-*-BS-A** – **RT 2-*-BS-A-AA** – **RT 4-*-BS-LT-A** – **RT 4-*-BS-LT-A-AA**	total of 10 pieces, of which max. 3 pieces with buzzer

Inputs/outputs

Ventilation button **LT** Ventilation button **LT x-A**	unlimited 10 pieces
Wind and Rain Control (type **WRS**)	Normally closed contact [3]
External malfunction	Normally closed contact

[2] *heat detector:* **TM 2-D** (65-55000-122), **TM 2-M** (65-55000-137), **TM 3-D** (FD-851RE), **TM 3-M** (FD-851HTE), **RM 3-OT** (SD-851-TE),
Optical detectors: **RM 2-O** (65-55000-317), **RM 3-O** (SD-851-E)
[3] *In the WRC, a separate contact is required for each Control Centre to be controlled.*

Actuator output

Rated voltage	24 V⎓ (+6 V/-4 V)
Mode of operation/duty cycle	S3 30 %
Maximum cable cross-section of the supply line	4 x 10 mm² (rigid)
Line monitoring (unbranched common line)	wire-break, short-circuit

The permissible cable length between the control centre and the actuator control/the actuator depends on their respective minimum permissible operation voltage and the conductor cross-section.
In case of a voltage drop of 1 V (simple arrangement without extensive branching), the following applies:

Strom / Querschnitt	1,0 A	2,0 A	3,0 A	4,0 A	5,0 A	6,0 A	7,0 A	8,0 A
2 x 1,5 mm²	44 m	22 m	15 m	11 m	9 m	7 m	6 m	5 m
2 x 2,5 mm²	73 m	36 m	24 m	18 m	15 m	12 m	10 m	9 m
2 x 4,0 mm²	116 m	58 m	39 m	29 m	23 m	19 m	17 m	15 m
2 x 6,0 mm²	174 m	87 m	58 m	44 m	35 m	29 m	25 m	22 m
2 x 10,0 mm²	290 m	145 m	97 m	73 m	58 m	48 m	41 m	36 m
4 x 1,5 mm²	87 m	44 m	29 m	22 m	17 m	15 m	12 m	11 m
4 x 2,5 mm²	145 m	73 m	48 m	36 m	29 m	24 m	21 m	18 m
4 x 4,0 mm²	232 m	116 m	77 m	58 m	46 m	39 m	33 m	29 m
4 x 6,0 mm²	348 m	174 m	116 m	87 m	70 m	58 m	50 m	44 m
4 x 10,0 mm²	580 m	290 m	193 m	145 m	116 m	97 m	83 m	73 m

When 4 cores are used, connect 2 cores each in parallel.

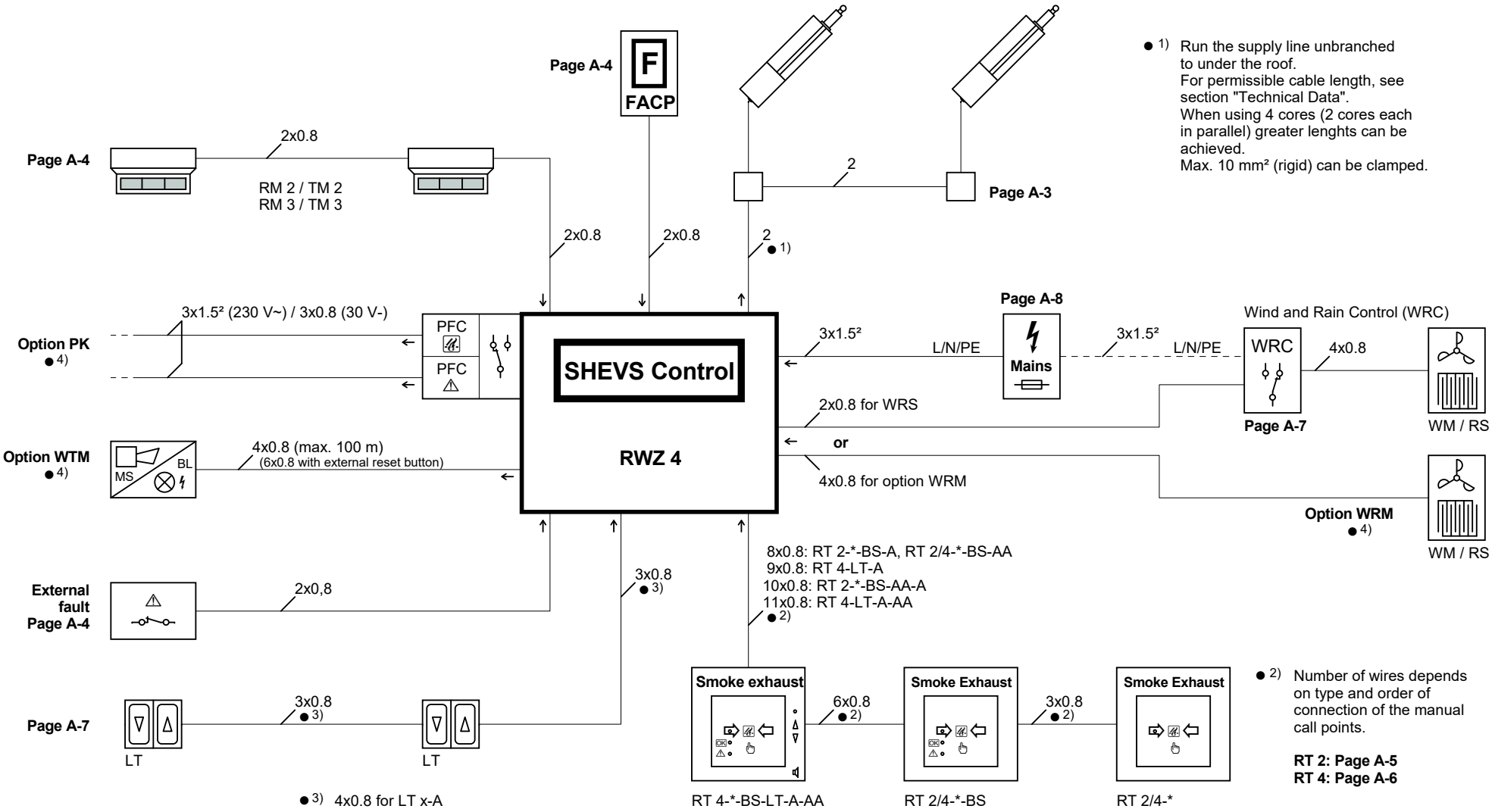
Fuses

Primary mains (miniature fuse 5 x 20 mm)	F1: T 2 A
Accumulators (flat fuse 19 mm)	F2: 10 A
Actuators (flat fuse 19 mm)	F3: 10 A

SHEVS Control Centre RWZ 4d

System diagram (please consider local conditions / components)

Example of connection on page A-2, detailed examples on following pages.



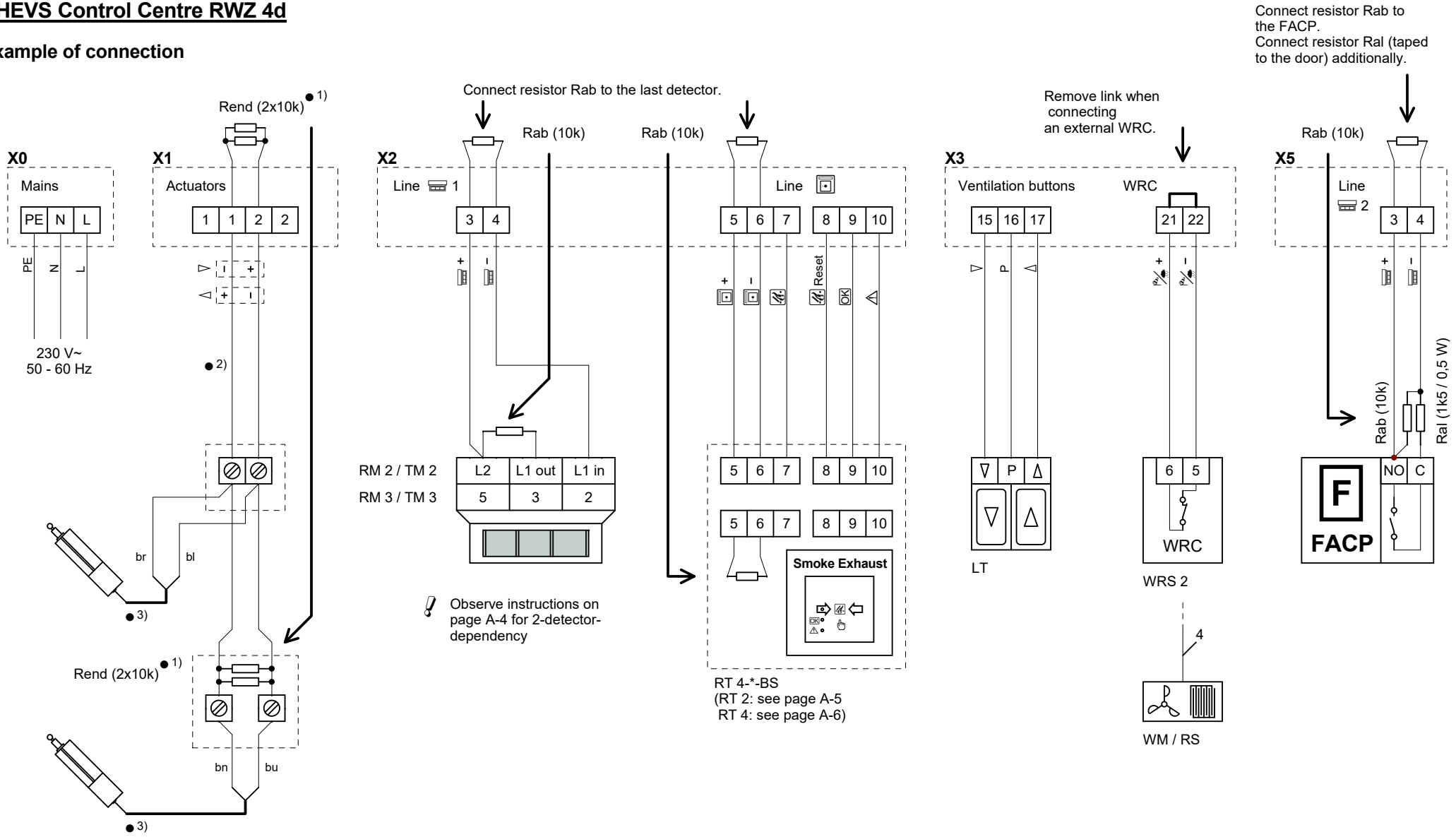
Cable types (examples):
Signal lines: J-Y(St)Y 2x2x0.8 - 4x2x0.8
Mains: NYM-J 3x1.5 mm²
PFC: NYM-J 4x1.5 mm² / NYM-O 3x1.5 mm²

● 4) Separate documentation

General: length of cable max. 400 m, if not specified otherwise.

SHEVS Control Centre RWZ 4d

Example of connection



● 1) Connect resistors Rend to the last actuator.

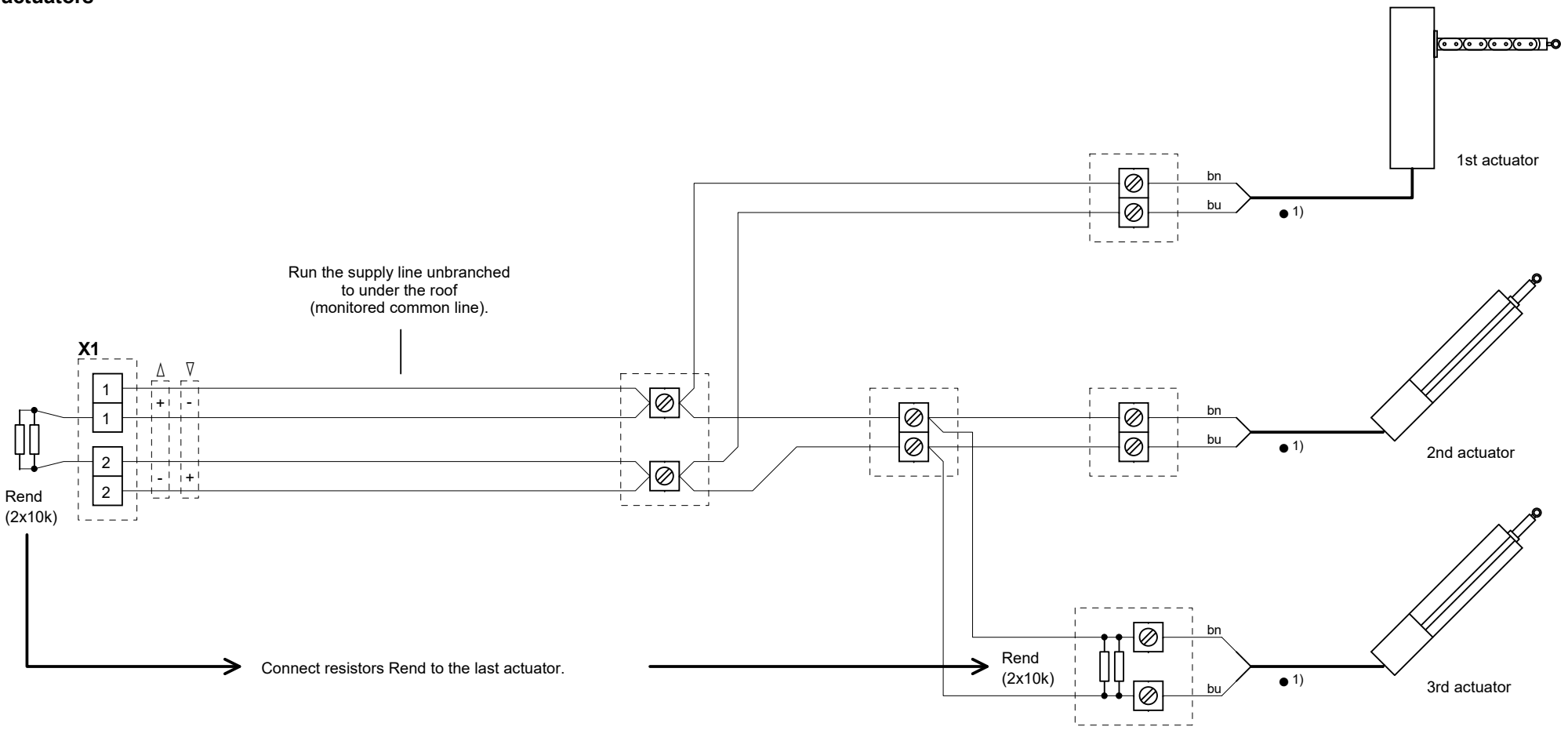
● 2) Run the supply line unbranched to under the roof.

● 3) In case of wrong travelling sense, reverse polarity of actuator cable.

Colour code for resistors: 10k = brown/black/black/red 1k5 = brown/green/black/brown

SHEVS Control Centre RWZ 4d

24 V- actuators



Actuators must not be actuated directly (e.g., with external accumulators during installation / maintenance) when they are already connected. This can lead to defects in the power output.

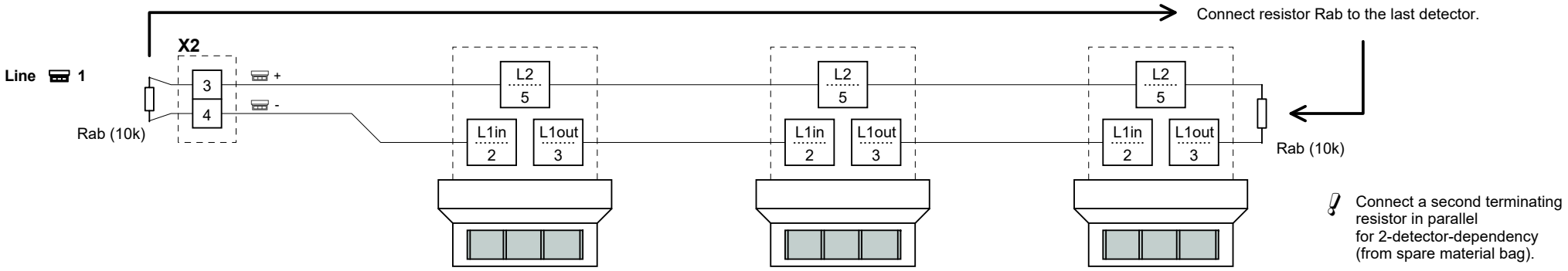
● 1) In case of wrong travelling sense, reverse polarity of actuator cable.

Colour code for resistors: 10k = brown/black/black/red

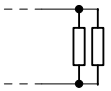
SHEVS Control Centre RWZ 4d

Automatic fire detectors, Fire Alarm Control Panel (FACP), external fault

Automatic fire detectors RM 2 / TM 2 (terminals L1 in, L1 out and L2) **or RM 3 / TM 3** (terminals 2, 3 and 5)

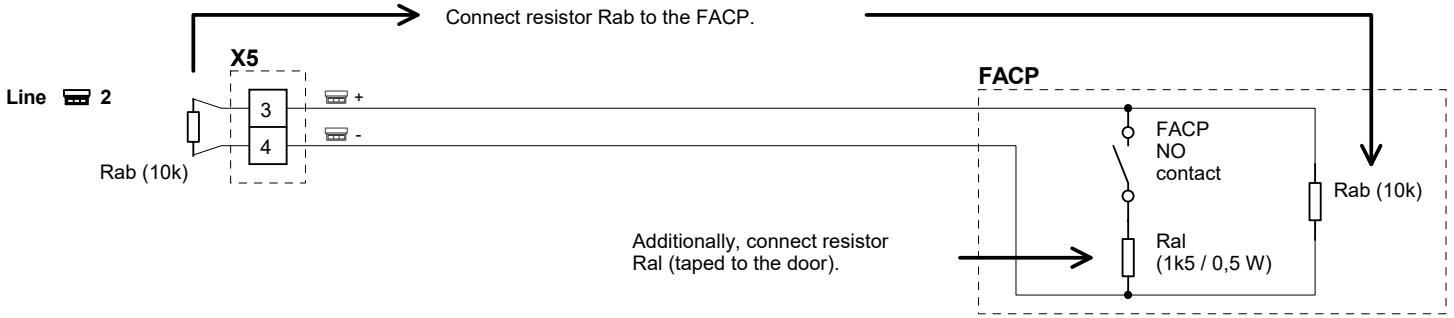


Connect a second terminating resistor in parallel for 2-detector-dependency (from spare material bag).



2x Rab (10k)

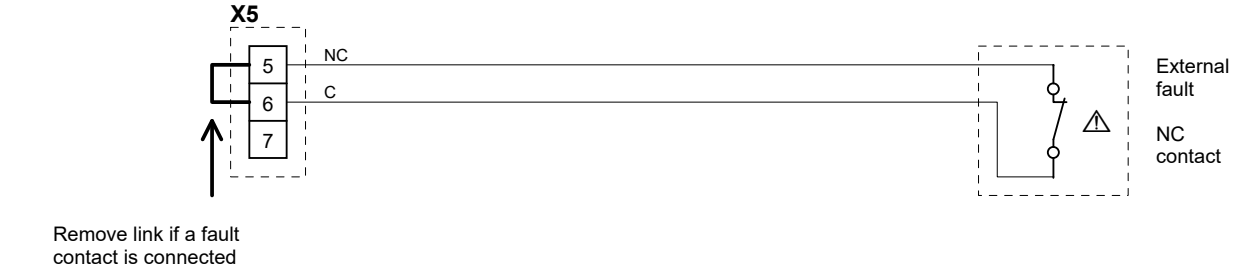
Fire Alarm Control Panel (FACP)



Instead of an FACP additional automatic fire detectors can be connected. Connection is done as shown for terminal block X2 above (but 2-detector-dependency is not possible).

For more convenient connection of an NO contact to terminals X5, the module MA (accessory) can be used. The required resistors are already present on the module and do not need to be wire separately.

External fault

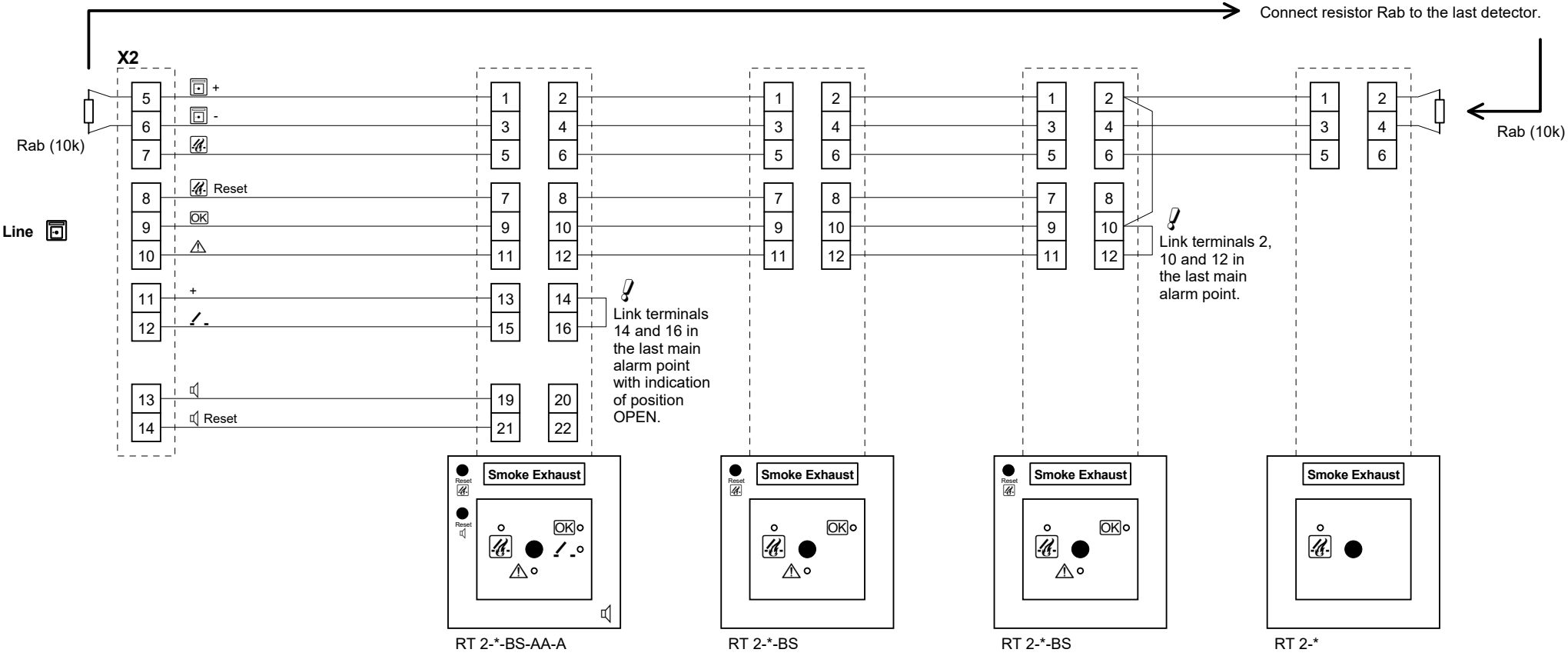


Colour code for resistors: 10k = brown/black/black/red 1k5 = brown/green/black/brown

SHEVS Control Centre RWZ 4d

Manual call points RT 2

(Manual call points RT 4 see page A-6)

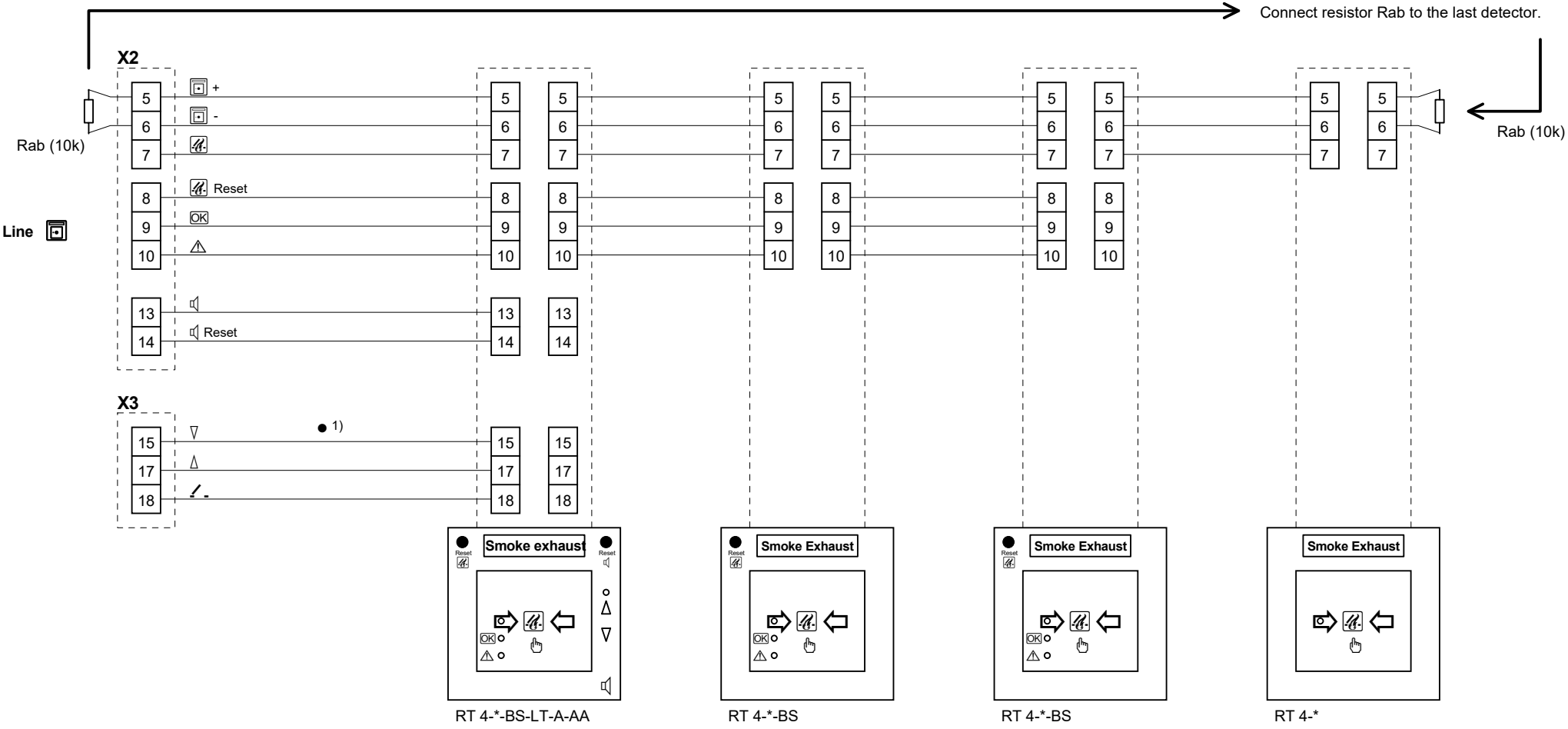


Colour code for resistors: 10k = brown/black/black/red

SHEVS Control Centre RWZ 4d

Manual call points RT 4

(Manual call points RT 2 see page A-5)



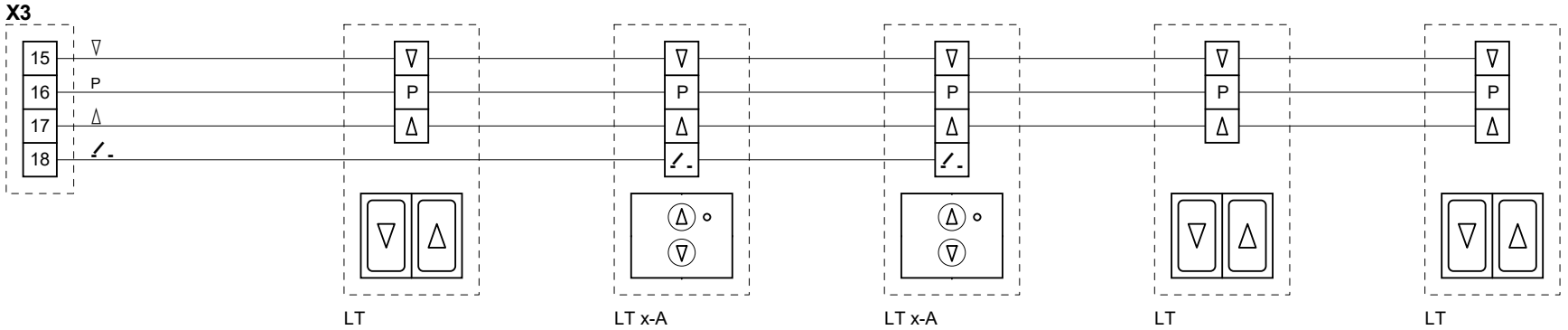
● 1) Lines are connected parallel to the ventilation buttons (see page A-7).

Colour code for resistors: 10k = brown/black/black/red

SHEVS Control Centre RWZ 4d

Ventilation buttons, external wind and rain control

Ventilation buttons



External Wind and Rain Control

● 1)

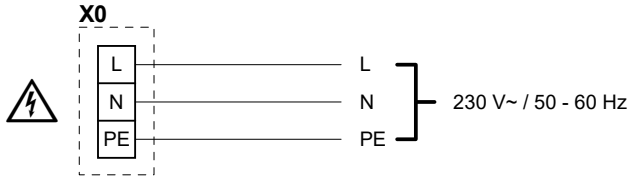
WRS 2	x	y
Output contact 1	5	6
Output contact 2	8	9
Output contact 3	11	12
Output contact 4	14	15

Use a separate contact for each
connected Control Centre / Control!

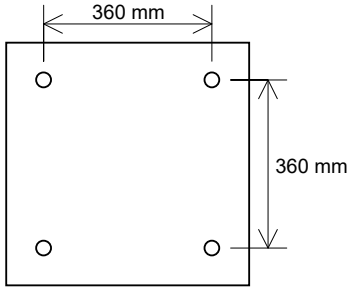
SHEVS Control Centre RWZ 4d

Line voltage, mounting, accumulators

Line voltage:

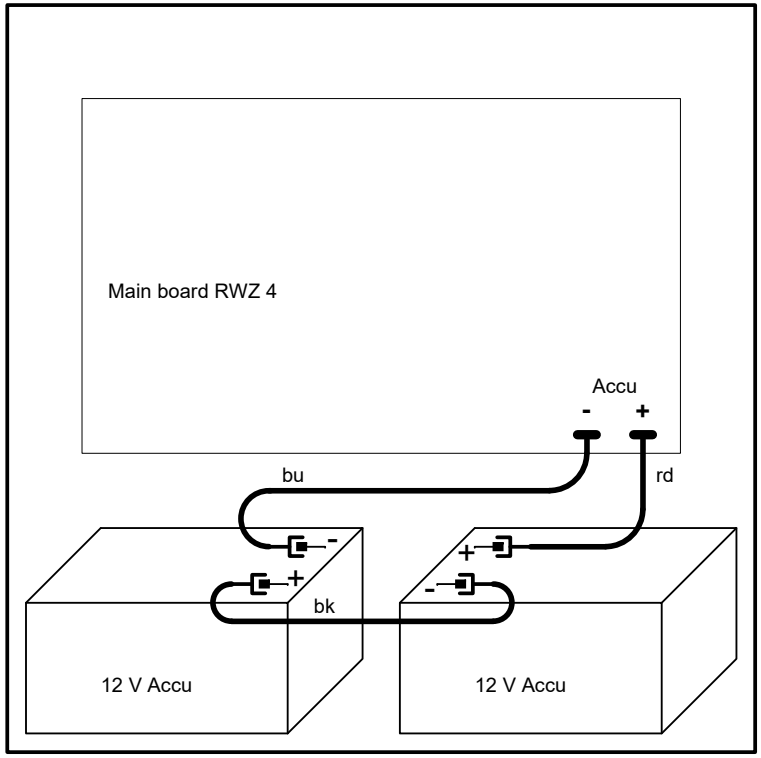


Mounting:

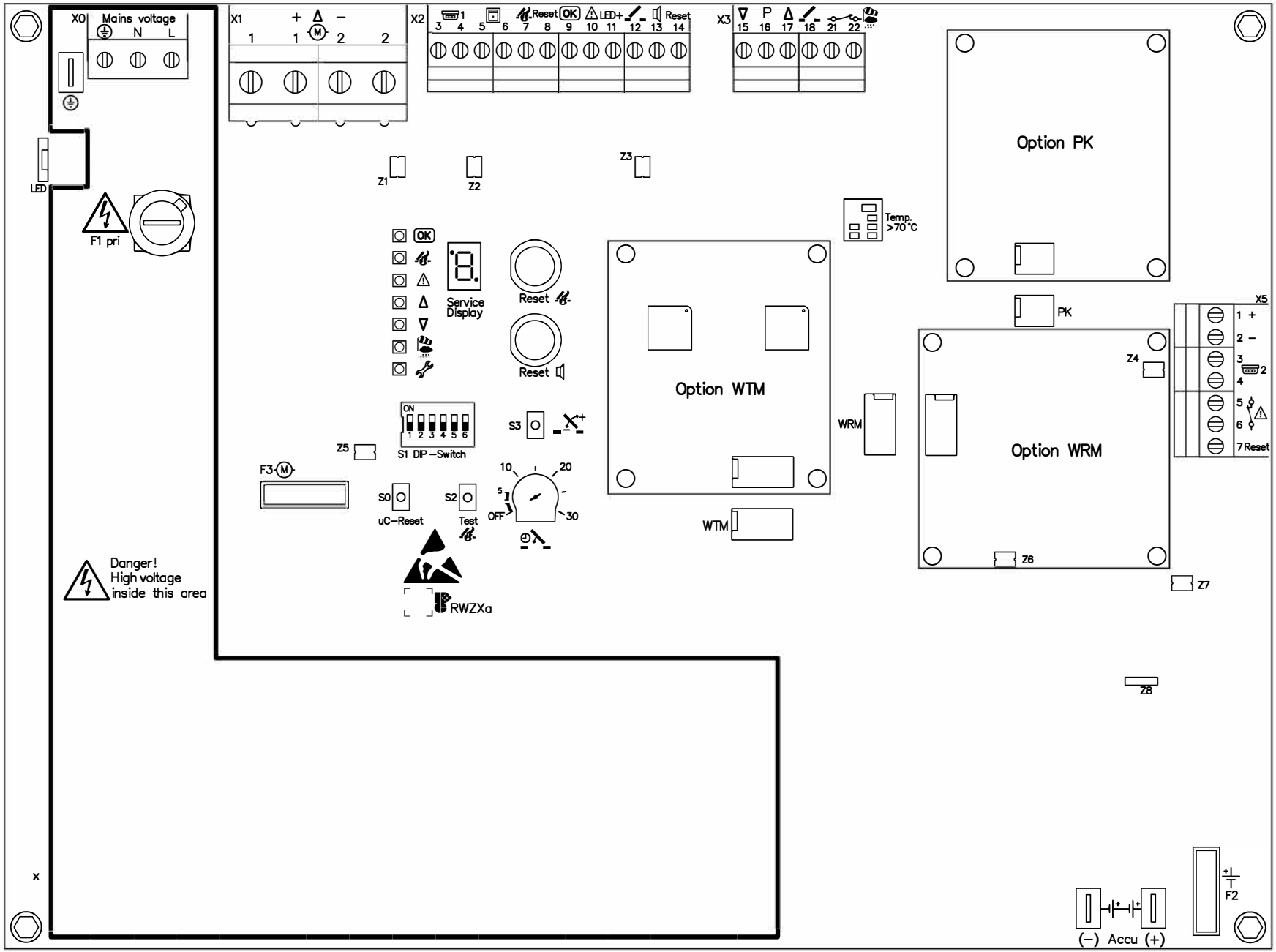


Accumulators:

Insert the accumulators in the enclosure and connect them as illustrated.



When putting into / out of service, observe the operating instructions!
Be sure to disconnect the accumulators if mains voltage supply is cut out for a longer time.



Fuses

F1:	T 2 A	Primary mains
F2:	10 A	Accumulators
F3:	10 A	Actuators

DIP–switch

S1: 1: Auto close
2: Fault=Alarm
3: Automatic OFF
4: Thermal alarm
5: 2–detector–dePendency Line
6: Do not change the setting

SHEVS Control Centre RWZ 4d			
Layout diagram			
RWZ4dA31.pcb	Ver. 3/18	Mo 14 mar. 2018	