





1. Concept of Control Centre

- ◆ Smoke and Heat Exhaust Ventilation System (SHEVS) Control Centre for connection of 24V- actuators
- ◆ One Smoke and Heat Exhaust group (SHE group), 2 signal lines
 - 1st line: automatic fire detectors or Fire Alarm Control Panel (FACP)
 - 2nd line: hand-operated fire alarms **RT 2** (non automatic fire detectors) as
 - a) Main alarm point with status lights Alarm , Operation , Malfunction  and Reset button
 - b) Secondary alarm point with status light Alarm 
- ◆ Reset of alarm / fire detectors by push-buttons at the main alarm point or at the Control Centre
- ◆ Cycle repetition function in the event of alarm to VdS 2581
- ◆ Monitoring of signal lines, actuator supply line, fuses, accumulators and power line
- ◆ Standby power supply for at least 72 hours with accumulator management to VdS 2593
- ◆ Reverse connection and deep-discharge protection for the accumulators
- ◆ Possibility of connecting ventilation buttons
- ◆ Blocking of ventilation function OPEN in the case of insufficient accumulator charge or mains failure
- ◆ Ventilation position can be adjusted (stroke limitation)
- ◆ Adjustable ventilation time (automatic closing on ventilation action)
- ◆ Possibility of connecting an external Wind and Rain Control (WRC), e.g. **WRS** (WRC must have a separate contact for each SHEVS Control Centre to be controlled)
- ◆ Functions selectable by DIP switches:
 - "Auto Close" (closes automatically when an alarm has been reset)
 - "Malfunction = Alarm" (malfunction in a signal line will trigger an alarm)
 - "Thermal Alarm" (alarm is triggered when enclosure inside temperature is higher than 70°C)
 - "Travelling time 6min" (actuators will stop after 6 minutes travelling time)
- ◆ Use of K+G / Grasl actuators is recommended. When controlling actuators made by others, check them for suitability. For this purpose, please refer to the technical specifications
- ◆ Connectable actuators: 24V actuators, travelling time for full stroke at rated load (total travelling time) < 3 minutes or < 6 minutes
- ◆ Actuators must be suitable for cycle repetition functions OPEN or CLOSE
- ◆ When directly changing the sense of travel, the actuators will stop for about 1s before the change of sense
- ◆ Driving power for the actuators is obtained from the system's accumulators
- ◆ Sheet steel enclosure, grey (RAL 7032), cable entry through membrane grommets



1.1 Options / accessories

- ◆ **PK:** One potential-free contact (PFC) each for alarm / malfunction
- ◆ **SD 1:** Service display unit for detailed status information (alarms, malfunctions, charging condition) during maintenance and installation. It is advisable to use two display units at the same time

2. Technical Data

2.1 General

Type / ident no.:	RWZ 4.1-8c / 8104 0801 0000
Dimensions in mm (W x H x D):	400 x 300 x 120
Cable entry through membrane grommets (5x M16 and 2x M25):	from above
Environmental class III (to VdS 2581):	-5 to +40°C
Relative humidity:	20 to 80%, no condensation
Enclosure protection rating (to DIN EN 60529):	IP54

Not to be used outdoors. To be protected from direct exposure to sun rays, moisture and excessive formation of dust! To be installed preferably at dry and heated indoor location.

2.2 Power supply unit

Line voltage supply:	230V~ / 50Hz
Current input:	0,2A

SHEVS control centres / controls
RWZ 4c

Internal voltage supply: 24V $\overline{=}$ / 72 hours for line failure
 Deep-discharge protection: accumulator voltage < 18,8V
 Sealed lead-acid accumulators: 2 x 12V / 7Ah, VdS approved
 I / U charge: max. 750mA (29,4V) / 27,4V

2.3 Inputs

Automatic fire detectors (1st signal line):

Smoke or heat detector (**RM 2 / TM 2** or **RM 3 / TM 3**): 20 pieces
 Fire Alarm Control Panel (FACP): NO contact with
 Terminating resistor: 10k Ω \pm 10% 1/4W
 Release resistor: 1k Ω ..1,5k Ω \pm 10% 1/2W

Hand operated fire alarms (non automatic fire-detectors, 2nd signal line): total of 10 pieces

- Secondary alarm point (**RT 2-***)
- Main alarm point (**RT 2-*-BS**)

Other:

Ventilation button (**LT**): unlimited
 Wind and Rain Control (**WRS**): NC contact
 (WRC must have a separate contact for each SHEVS Control Centre to be controlled)

2.4 Actuator output

Rated voltage / current: 24V $\overline{=}$ (+6V/-4V) / 8A
 Max. cross section of supply cable: 4 x 10mm² (rigid)
 Admissible voltage drop from Control Centre to actuator: 1V at full load

If actuator arrangement is simple, without complex branching, the following cable lengths are admissible:

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

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

2.5 Line monitoring

Signal lines: wire-break, earth fault, short-circuit
 Actuators (unbranched common line): wire-break, earth fault, short-circuit

2.6 Fuses

Mains primary (G fuse link 5x20mm): F1: T 125mA
 Mains secondary (G fuse link 5x20mm): F2: T 0,5A
 Accumulators / actuators (G fuse link 5x20mm): F3: T 4A

2.7 Potential-free contacts (option PK)

Contact load rating PFC Alarm, PFC Malfunction (changeover contacts): 5A / 30V $\overline{=}$ / 230V \sim
 Fuses PFC Alarm, PFC Malfunction (G fuse links 5x20mm): P:F1, P:F2: F 5A