

















1. Concept of Control Centre

- ◆ Smoke and Heat Exhaust Ventilation System (SHEVS) Control Centre for connection of 24V- actuators
- ◆ One or two Smoke and Heat Exhaust groups (SHE groups)(**RWZ 5.1.2 / RWZ 5.2.2**), two ventilation groups
- ◆ For each SHE group, two signal lines:
 - Line : automatic fire detectors
 - Line : hand-operated fire alarms **RT 2** (non automatic fire detectors) as
 - a) Main alarm point with status lights Operation , Alarm , Malfunction  and push-button „Reset“ . Connection of main alarm point with mini buzzer  (Alarm / Malfunction) and indication of position OPEN  also possible
 - b) Secondary alarm point with status light Alarm 
- ◆ Line  for connection to a Fire Alarm Control Panel (FACP)
- ◆ 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 for each ventilation group, also with indication of pos. OPEN 
- ◆ Blocking of ventilation function OPEN in the case of insufficient accumulator charge or mains failure
- ◆ Ventilation position can be adjusted for each ventilation group (stroke limitation)
- ◆ Adjustable ventilation time for each ventilation group (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). Internal Wind and Rain Control at option
- ◆ 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)
 - “One ventilation group” (both ventilation groups will open / close at the same time)
- ◆ Status lights Operation , Alarm  and Malfunction  in the enclosure door
- ◆ Use of K+G / Grasl actuators is recommended. When controlling third party actuators, check them for suitability. For this purpose, please refer to section “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, light grey (RAL 7035)



1.1 Options / accessories

- ◆ **PK**: One potential-free contact (PFC) each for alarm / malfunction
- ◆ **WTM**: Outputs for controlling external warning devices in the event of alarm or malfunction (e.g. multiple-tone sounder **MS** and strobe **BL**)
- ◆ **WRM**: Internal Wind- and Rain Control
 - All actuators / groups will automatically close on response of WRM. Requires connection of wind sensor **WM** and / or rain sensor **RS** (accessories)
 - Direct sensor connection on the module in SHEVS Control Centre. No external WRC required
 - Closing command remains active for at least 6 minutes, or for the time of sensor response
 - Wind speed response point and rain sensor response threshold are adjustable
 - Status LEDs for wind  and rain  on the module
- ◆ **SD 1**: Service display unit for detailed status information (alarms, malfunctions, charging condition) during maintenance and installation. It is advisable to use two to three display units at the same time (**RWZ 5.1.2 / RWZ 5.2.2**)
- ◆ **SVM**: Battery backed service module for indication of due maintenance action

2. Technical data

2.1 Versions

Type	Ident No.	SHE-groups	Ventilation-groups	Output current
RWZ 5.1.2-8d	8100 5120 8D00	1	2	8A (24V \equiv / 192W)
RWZ 5.2.2-8d	8100 5220 8D00	2	2	8A (24V \equiv / 192W)
RWZ 5.1.2-16d	8100 5121 6D00	1	2	2x8A (24V \equiv / 384W)
RWZ 5.2.2-16d	8100 5221 6D00	2	2	2x8A (24V \equiv / 384W)

2.2 General

Dimensions in mm (W x H x D):	400 x 400 x 155
Cable entry through membrane grommets (from above):	3 x M25, 11 x M16
Environmental class III (to VdS 2581):	-5 to +40°C
Relative humidity:	20 to 80%, no condensation
Enclosure protection rating (to DIN EN 60529):	IP40

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.


2.3 Power supply unit


Line voltage supply:	230V~ / 50Hz
Current input:	0,4A
Internal voltage supply:	24V \equiv / 72 hours for line failure
RWZ 5.*.2-8d: Sealed lead-acid accumulators: I / U - charge:	2 x 12V / 7Ah, VdS approved max. 750mA (29,4V) / 27,4V
RWZ 5.*.2-16d: Sealed lead-acid accumulators: I / U - charge:	2 x 12V / 12Ah, VdS approved max. 1,2A (29,4V) / 27,4V

2.4 Inputs

Automatic fire detectors: (Line ):

Smoke detector / heat detector (**RM 2 / TM 2** or **RM 3 / TM 3**): 20 pieces per SHE group

Hand operated fire alarms (non automatic fire-detectors): (Line ) total of 10 pieces per SHE group, max. 3 of these with buzzer

- Secondary alarm point (**RT 2-***)
- Main alarm point (**RT 2-*-BS**)
- Main alarm point (**RT 2-*-BS-A**, with indication of position OPEN \nearrow .)
- Main alarm point (**RT 2-*-BS-AA**, with buzzer )

Fire Alarm Control Panel: (Line )

Terminating resistor:

Release resistor:

NO contact with
10k Ω \pm 10% 1/4W
1k Ω ..1,5k Ω \pm 10% 1/2W

Other:

Ventilation button (**LT**):

Ventilation button with indication of position OPEN \nearrow . (**LT-A**):

unlimited for each ventilation group
10 pieces per ventilation group

Wind and Rain Control (**WRC**):

(WRC must have a separate contact for each SHEVS Control Centre to be controlled)

NC contact

SHEVS control centres / controls
RWZ 5d

2.5 Actuator outputs

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

Max. total output current: **RWZ 5.*.2-8d** (2 outputs) 8A (e.g. 6A + 2A or 4A + 4A)
RWZ 5.*.2-16d (2 outputs) 16A (each max. 8A)

If actuator arrangement is simple (no complex branching), the following cable lengths per output 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.





2.6 Line monitoring

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

2.7 Fuses

Mains primary (G fuse link 5x20mm): F1: T 1A
 Mains secondary (G fuse link 5x20mm): F2: T 3,15A
 Actuators (G fuse link 5x20mm): F3.1, F3.2: T 8A
 Accumulators (flat car fuse 19mm): **RWZ 5.*.2-8d:** F4: 10A
RWZ 5.*.2-16d: F4: 20A

2.8 Potential-free contacts (option PK)

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

2.9 Outputs for controlling external warning devices (option WTM)

Multiple-tone sounder **MS**: 24V $\overline{=}$ / max. 100mA
 Strobe **BL**: 24V $\overline{=}$ / max. 250mA

2.10 Internal Wind and Rain Control (option WRM)

Wind sensor **WM**: 1 piece
 Heated rain sensor **RS**: 1 piece
 Response threshold setting range for wind : approx. 5 - 15m/s or 20 - 60km/h (approx. wind force 3 - 7)
 Response threshold setting range for rain : drizzle - stronger rainfall

2.11 EC statement of conformity

The Control meets the demands of directives 2006/95/EC and 2004/108/EC (emission: DIN EN 61000-6-3 and DIN EN 55022, immunity: DIN EN 61000-6-2 and DIN EN 50130-4).