




















## 1. Concept of Control Centre

- Smoke and Heat Exhaust Ventilation System (SHEVS) Control Centre with four outputs for the connection of 24V- actuators
- VdS approval G 512002 to VdS 2581 and VdS 2593
- Internal power supply designed and certified to DIN EN 12101-10
- Control unit to prEN 12101-9
- Selectable group configuration: one or two SHE groups, up to four ventilation groups
- For every SHE group, two signal lines:
  - Line : automatic fire detectors
  - Line : manual call points **RT 2** as
    - a) **Main alarm point** with indicators operation , alarm , malfunction  and button **Reset** . Connection of main alarm point with mini buzzer  (alarm / malfunction) and indication of position OPEN  also possible
    - b) **Secondary alarm point** with indicator alarm 
- Line  for connection of a Fire Alarm Control Panel (FACP)
- Reset the alarm / detector using the button in the main alarm point or in the Control Centre
- Selectable functions:
  - "Thermal alarm" (alarm on exceeding an enclosure inside temperature of 70°C)Selectable for each SHE group:
  - "Malfunction = Alarm" (alarm upon malfunction of a signal line)
  - "2-detector-dependency" (2-detector-dependency for automatic fire detectors)Selectable for each actuator output:
  - "Auto Close" (automatic closure after resetting an alarm)
  - "WRC" (automatic closure for active Wind and Rain Control)
  - "Travelling time 3min" (auto-switch-off after 3 min travelling time)
  - "Alarm close" (the actuators are closed in case of alarm)
- Possibility of connecting ventilation buttons for each vent. group, also with indication of position OPEN 
- For each actuator output adjustable ventilation position  and ventilation time 
- Possibility of connecting an external Wind and Rain Control (WRC), e.g. type **WRS** (for each SHEVS Control Centre to be controlled, a separate contact is required). Optionally internal Wind and Rain Control
- Indicators operation , alarm  and malfunction  in the enclosure door
- Internal service display for detailed status information for installation and maintenance
- The use of K + G / Grasl actuators is recommended. When driving third-party actuators, compatibility is to be checked! Also note Section 2 "Technical Data"
- Actuator specification: 24V actuators, travelling time for full stroke at rated load (total travelling time) < 1.5 minutes or < 3 minutes
- Actuators must be suitable for the repetition of OPEN and / or CLOSE cycle
- 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**: One potential-free contact (PK) each for alarm / malfunction forwarding
- **PK-SA**: potential-free contacts for forwarding indication of position
- **WTM**: Outputs for controlling external warning devices in case of alarm or malfunction (e.g. multiple-tone sounder **MS** and strobe **BL**)
- **WRM**: Internal Wind and Rain Control
  - Actuators are automatically closed on response of WRM. Connection of wind sensor **WM** and / or rain sensor **RS** is required (accessory)
  - Direct connection of the sensors on the module in the Control Centre. No external WRC required
  - Response thresholds of the sensors are adjustable
  - The closing command remains active for at least 6 minutes, or for the time of sensor response
  - Indicators for wind  and rain  on the module

 *As there are no corresponding regulations, the optional boards WRM and WTM are not VdS approved. However their usage does not affect the VdS approval of the Control Centre, since interactions have been checked and excluded during the approval process.*

## **2. Technical data**







### **2.1 Versions**

Type	<b>RWZ 5-8e</b>	<b>RWZ 5-16e</b>	<b>RWZ 5-24e</b>	<b>RWZ 5-32e</b>
Product code	8100 5508 0000	8100 5516 0000	8100 5524 0000	8100 5532 0000
Maximum total output current	8A (24V $\overline{=}$ / 192W)	16A (2x 8A) (24V $\overline{=}$ / 384W)	24A (3x 8A) (24V $\overline{=}$ / 576W)	32A (4x 8A) (24V $\overline{=}$ / 768W)
Current input	1.1A / 230V $\sim$	2.2A / 230V $\sim$	3.3A / 230V $\sim$	4.4A / 230V $\sim$
Lead-acid accumulators, VdS approved	2 x 7Ah / 12V	2 x 12Ah / 12V	2 x 17Ah / 12V	
I / U charge	0.7A (28.8V) / 27.4V	1.2A (28.8V) / 27.4V	1.8A (28.8V) / 27.4V	
Accumulator fuse F2	10A	20A	30A	40A
Dimensions in mm (W x H x D)	500 x 500 x 210		600 x 600 x 210	

### **2.2 General**

Line voltage supply:	230V $\sim$ / 50 - 60Hz
Internal voltage supply / standby time:	24V $\overline{=}$ / 72 hrs. (mains failure)
Cable feed through membrane grommets (from above):	12 x M16, 2 x M20, 4 x M32
For mounting dimensions, see plan "Line voltage, mounting, accumulators"	
Environmental Class 1 / III (to EN 12101-10 / VdS 2581):	-5 to +40°C
Relative humidity:	20 to 80%, non-condensing
Enclosure protection rating (to DIN EN 60529):	IP40
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.	

### **2.3 Inputs**

<u>Automatic fire detectors</u> (Line  )	20 pieces per SHE group, of which max. 10 heat detectors
<b>RM 2-O</b> (65-55000-317) <b>TM 2-D</b> (65-55000-122) *	<b>RM 3-O</b> (SD-851-E) <b>TM 3-D</b> (FD-851RE) *
<b>TM 2-M</b> (65-55000-137) *	<b>RM 3-OT</b> (SD-851-TE) * <b>TM 3-M</b> (FD-851HTE) *
* = heat detector	
<u>Manual call points</u> (Line  )	
<ul style="list-style-type: none"> <li>- Secondary alarm point (<b>RT 2-*</b>)</li> <li>- Main alarm point (<b>RT 2*-BS</b>)</li> <li>- Main alarm point (<b>RT 2*-BS-A</b>, with indication OPEN )</li> <li>- Main alarm point (<b>RT 2*-BS-AA</b>, with buzzer )</li> </ul>	} total of 10 pieces per SHE group, of which max. 3 pieces with buzzer
<u>Fire Alarm Control Panel</u> (Line  )	
<ul style="list-style-type: none"> <li>- Terminating resistor:</li> <li>- Alarm resistor:</li> </ul>	normally open contact with 10k $\Omega$ $\pm$ 10% ¼W 1k $\Omega$ ..1.5k $\Omega$ $\pm$ 10% ½W
<u>Additional</u>	
Ventilation button ( <b>LT</b> ):	unlimited per ventilation group
Ventilation button with indication of position OPEN  ( <b>LT-A</b> ):	10 pieces for each ventilation group
Wind and Rain Control (type <b>WRS</b> ): (in the WRC, a separate contact is required for each SHEVS Control Centre to be controlled)	normally closed contact

**SHEVS Control Centre  
RWZ 5e**

**2.4 Actuator outputs**

Rated voltage: 24V $\overline{=}$  (+6V / -4V)  
 Maximum current per actuator output: 8A  
 ⚡ For **RWZ 5-16** note: Current of outputs 1 and 2 cumulated  $\leq$  8A and current of outputs 3 and 4 cumulated  $\leq$  8A.  
 For **RWZ 5-24** note: Current of outputs 3 and 4 cumulated  $\leq$  8A.  
 Note maximum total output current of Control Centre (see 2.1)!

Mode of operation / duty cycle: S3 30%  
 Maximum cable cross-section of the supply line: 4 x 10mm $^2$  (rigid) per output  
 Allowable voltage drop between Control Centre and actuator: 1V at full load

Allowed cable lengths per output with simple and moderately branched arrangement of the actuators:

Current Cross section	0.1A	0.2A	0.3A	0.4A	0.5A	0.6A	0.7A	0.8A
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, short-circuit, earth fault  
 Actuators (unbranched common line): Wire-break, short-circuit, earth fault


**2.6 Fuses**

Primary mains (miniature fuse 5x20mm): F1: T 2A  
 Accumulators (flat fuse 19mm): F2, value see 2.1  
 Actuators (flat fuse 19mm): F3.1 - F3.4: 10A  
 Additional power supply unit (miniature fuse 5x20mm): N:F1: T 2A

**2.7 Alarm and malfunction forwarding (option PK)**

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



**2.8 Forwarding the indication of position (option PK-SA)**

Contact load rating PFC  (4 change-over contacts): 0.2A / 30V $\overline{=}$

**2.9 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**, heated rain sensor **RS**: 1 piece each  
 Adjustment range of the response threshold for wind : approx. 5 - 15m/s or 20 - 60km/h (approx. wind force 3 - 7)  
 Adjustment range of the response threshold for rain : light - stronger rain

**2.11 EC statement of conformity**

The Control Centre complies with the requirements of the 2006/95/EC and 2004/108/EC Directives (emission: EN 61000-6-3 and EN 55022, immunity: EN 61000-6-2 and EN 50130-4).