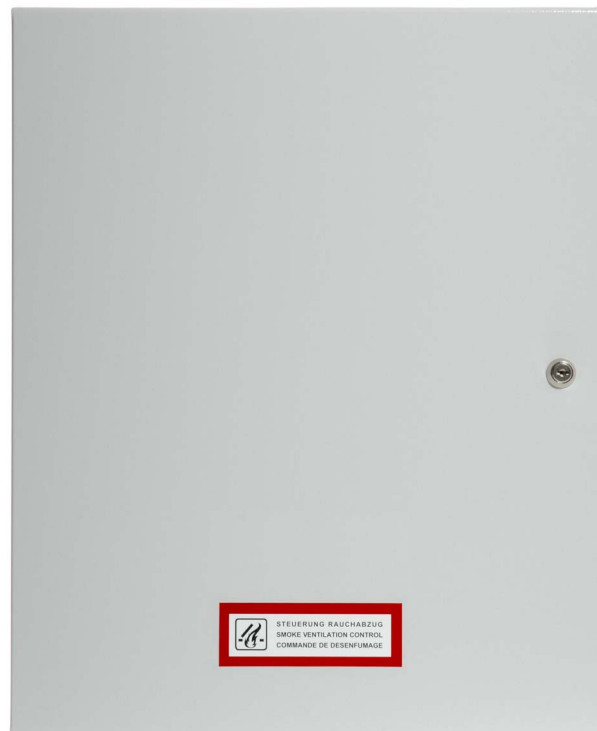


Installation and Operation Instructions

Version 2/21

SHEVS Control Centre RWZ 5 f



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1 Concept of Control Centre

- SHEVS Control Centre with four outputs for connecting 24 V actuators (RWZ 5f-xx) or 48 V actuators (RWZ 5f-xx-48V)
- Functions according to EN 12101-10 (power supply), ISO 21927-9 (control), VdS 2581 and VdS 2593
- Selectable group configuration: one or two SHE groups, up to four ventilation groups
- For every SHE group, two signal lines:
 - Line : Automatic fire detectors or fire alarm control panel (FACP)
 - Line : Manual call points **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”
- Line  for connecting a FACP (activating the alarm in both SHE groups)
- Reset the alarm / the detectors using the button in the main alarm point or in the Control Centre
- Selectable functions:
 - “Auto Close” (automatic closure after resetting an alarm)
 - “Fault = Alarm” (fault in a signal line will trigger an alarm)
 - “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 detector in line )
 - “WRC” (automatic closure in the case of active wind and rain control)
- Possibility of connecting ventilation button for each ventilation group, also with indication of position .
- For each actuator output adjustable ventilation position  and ventilation time 
- Possibility of connecting an external wind and rain control, e.g., type **WRS**. Internal wind and rain control, optional
- Internal service display for indicating the detailed status
- The use of K + G / Grasl actuators is recommended. When controlling 3rd party actuators, compatibility is to be checked. Also note section 6 „Technical Data“ for this
- Connectable actuators: 24 V / 48 V actuators, travelling time for full stroke at rated load (total travelling time) < 4 minutes
- When directly changing the sense of travel, the actuators are stopped briefly before change of sense
- Sheet steel enclosure, light grey (RAL 7035)

1.1 Options / Accessories

- **PK**: Potential-free contacts (PFC) for alarm and/or fault forwarding
- **PK-SA**: Potential-free contacts for forwarding indication of position
- **WTM**: Outputs for controlling external warning devices in case of alarm or fault
- **WRM**: Internal wind and rain control. Connection of wind sensor **WM** and/or rain sensor **RS** is required (accessory)

 The PK-SA and WTM options cannot be provided at the same time!

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).

6 Technical Data

6.1 Versions

24 V - types	RWZ 5f-20	RWZ 5f-40
Item number	8100 5620 1000	8100 5640 1000
Total output current	20 A (24 V $\overline{=}$ / 480 W)	40 A (24 V $\overline{=}$ / 960 W)
Current input	2.5 A / 230 V~	5.0 A / 230 V~
Inrush current	ca. 80 A	ca. 115 A
Accumulators (VRLA-AGM)	2 x 12 Ah / 12 V	2 x 17 Ah / 12 V

48 V - types	RWZ 5f-10-48V	RWZ-5f-20-48V
Item number	8100 5610 1100	8100 5620 1100
Total output current	10 A (48 V $\overline{=}$ / 480 W)	20 A (48 V $\overline{=}$ / 960 W)
Current input	2.5 A / 230 V~	5.0 A / 230 V
Inrush current	ca. 80 A	ca. 115 A
Accumulators (VRLA-AGM)	2 x 12 Ah / 12 V	2 x 17 Ah / 12 V

Only supplied or approved accumulators may be used.

See compatibility list on: www.kg-pneumatik.de (Electronics - System Accessories - Accumulators)

The requirements of Directives 2014/35/EU and 2014/30/EU are met. 

Suitable for operation in residential, business and commercial areas.

6.2 Performance data and characteristics

General

Line voltage supply	230 V~ / 50 - 60 Hz
Circuit breaker with tripping characteristics C needed	
Internal supply voltage / standby time	24 V $\overline{=}$ / 72 h (mains failure)
Dimensions in mm	W 415 x H 520 x D 185
Cable entry through membrane grommets (from above)	13 x M16, 1 x M20, 8 x M25
2 housing openings (from behind)	144 x 34 mm (W x H)
Environmental class 1 (EN 12101-10 / ISO 21927-9) / III (VdS 2581)	-5 °C ... +40 °C
Relative humidity	20 % ... 80 %, non-condensing
Enclosure protection rating	IP30

Installation dimensions, see "Line voltage, Installation, Accumulators" diagram.

Not suitable for outdoor use. Protect from direct sunlight, humidity and excessive formation of dust! Preferably, the installation should be carried out in dry, heated rooms.

Signal lines

Line monitoring	wire-break, short-circuit
Line  : Automatic fire detectors: Smoke detector / heat detector (RM 2 / TM 2 or RM 3 / TM 3) or Fire alarm control panel	20 pieces per SHE group, of which max. 10 heat detectors ¹
Line  , manual call point: - RT 2/4-*  - RT 2/4-*-BS    - RT 2/4-*-BS-AA    	NC / NO contact
	total of 10 pieces per SHE group, of which max. 3 pieces with buzzer 
Line  , Fire Alarm Control Panel	NC / NO contact

Inputs / Outputs

Ventilation buttons LT  	unlimited per ventilation group
Ventilation buttons LT x-A   	10 pieces for each ventilation group
Wind and Rain Control (type WRS)	NC contact ²

¹ 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 detector: **RM 2-O** (65-55000-317), **RM 3-O** (SD-851-E)

² In the WRC, a separate contact is required for each Control Centre to be controlled

Actuator outputs 24 V - types (RWZ 5f-xx)

Rated voltage	24 V $\overline{=}$ (+6 V / -4 V)
Operating mode / duty cycle	S3 30 %
Maximum cross-section of the supply line	4 x 10 mm ² (rigid)
Line monitoring (unbranched common line)	wire-break, short-circuit

Permissible current per output / permissible total current

	RWZ 5f-20				RWZ 5f-40			
Output	1	2	3	4	1	2	3	4
Current	16 A	8 A	16 A	8 A	16 A	8 A	16 A	8 A
Total current	20 A				20 A		20 A	

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:

Current Cross-section	2.0 A	4.0 A	6.0 A	8.0 A	10.0 A	12.0 A	14.0 A	16.0 A
2 x 1.5 mm ²	22 m	11 m	7 m	5 m	4 m	4 m	3 m	3 m
2 x 2.5 mm ²	36 m	18 m	12 m	9 m	7 m	6 m	5 m	5 m
2 x 4.0 mm ²	58 m	29 m	19 m	15 m	12 m	10 m	8 m	7 m
2 x 6.0 mm ²	87 m	44 m	29 m	22 m	17 m	15 m	12 m	11 m
2 x 10.0 mm ²	145 m	73 m	48 m	36 m	29 m	24 m	21 m	18 m
4 x 1.5 mm ²	44 m	22 m	15 m	11 m	9 m	7 m	6 m	5 m
4 x 2.5 mm ²	73 m	36 m	24 m	18 m	15 m	12 m	10 m	9 m
4 x 4.0 mm ²	116 m	58 m	39 m	29 m	23 m	19 m	17 m	15 m
4 x 6.0 mm ²	174 m	87 m	58 m	44 m	35 m	29 m	25 m	22 m
4 x 10.0 mm ²	290 m	145 m	97 m	73 m	58 m	48 m	41 m	36 m

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

Actuator outputs 48 V - types (RWZ 5f-xx-48V)

Rated voltage	48 V $\overline{=}$ (+1 V / -2 V)
Operating mode / duty cycle	S3 30 %
Maximum cross-section of the supply line	4 x 6 mm ² (rigid)
Line monitoring (unbranched common line)	Wire-breakage, short-circuit

Permissible current per output / permissible total current

	RWZ 5f-10-48V				RWZ 5f-20-48V			
Output	1	2	3	4	1	2	3	4
Current	5 A	5 A	5 A	5 A	5 A	5 A	5 A	5 A
Total current	10 A				10 A		10 A	

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 4 V (simple arrangement without extensive branching), the following applies:

Current Cross-section	1.0 A	2.0 A	3.0 A	4.0 A	5.0 A
2 x 1.5 mm ²	174 m	87 m	58 m	44 m	35 m
2 x 2.5 mm ²	290 m	145 m	97 m	73 m	58 m
2 x 4.0 mm ²	464 m	232 m	155 m	116 m	93 m
2 x 6.0 mm ²	696 m	348 m	232 m	174 m	139 m
4 x 1.5 mm ²	348 m	174 m	116 m	87 m	70 m
4 x 2.5 mm ²	580 m	290 m	193 m	145 m	116 m
4 x 4.0 mm ²	928 m	464 m	309 m	232 m	186 m
4 x 6.0 mm ²	1392 m	696 m	464 m	348 m	278 m

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

Fuses

Mains primary (miniature fuse 5 x 20 mm)	F1.1, F1.2, F1.3: T 4 A
Accumulators (blade fuse 19 mm)	F2.1, F 2.2: 30 A
Actuators (mini blade fuse 11 mm)	RWZ 5f-xx RWZ 5f-xx-48V
	F3.1, F 3.3: 20 A, F3.2, F3.4: 10 A F3.1 - F3.4: 15 A