Operating instructions - Operating unit SD 2 a

Please read these instructions carefully and completely.
Only qualified personnel may conduct work on the device!

Content

1 Concept

- Operating unit for SHEVS Controls of type **RWD 2** (bus system)
- 4-line display and keypad for status indication and operation of the SHE groups, ventilation groups and the individual Controls
- An operating unit **SD 2** is required for operation of the bus system. The unit can be plugged directly into any Control of the system or into a device socket. Optionally, a second operating unit can be used
- Power supply to the **SD 2** is provided from a **RWD 2**

2 Putting into service / Putting out of service

Only qualified personnel may conduct work on the device!
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.

- Fasten the wall frame securely using suitable mounting material.
- Screw the enclosure of the operating unit into the wall frame using the self-tapping screws provided.
- Plug in the network cable in the operating unit and an **RWD 2** or a bus device socket **BA-SD**.
- Unplug the network cable for putting out of operation.

🗋 *When using two operating units, the second unit must not be put into operation until the first one has completed the start procedure (Booting. Please wait...) and the start screen is displayed.*

3 Functions and operation

ⓘ *The screens shown below are examples and may differ from the actual display depending on the configuration and operating status of the system.*

3.1 Backlight

- The backlight is switched on by pressing any key. After 120 s without operation, it is switched off again.
- If an alarm or fault is detected when the backlight is switched off, the backlight will flash. When pressing any key, the backlight will change from flashing to lit.

3.2 Start screen

The start screen is displayed
 − after switching on the voltage supply.
 − after pressing `Esc` several times.
 − when the backlight goes out.

```
 2 SGr▶A        OK  ¹
 4 VGr▶B    Fault  ▶1
10 RWD▶C    Alarm  ▶4
 1 In2▶D    Info   ▶↵
```

Start screen of a configuration with 2 SHE groups (`SGr`), 4 ventilation groups (`VGr`), 10 Controls **RWD 2** (`RWD`) and 1 In2 group (`In2`).

3.3 Operating levels / Info screen

From the start screen, `↵` calls up the screen `Info 1/2`:

```
Ventilation▶0  ←▶Esc
Parameter  ▶2  →▶↵
Maintenance▶5
               1/2
```

- `0` selects the operating level for controlling the ventilation functions. See also section 3.7.

- `2` selects the operating level for setting the ventilation parameters. See also section 3.8. ²

- `5` selects the operating level for maintenance and special functions. See also sections 3.9 and 3.10. ²

Pressing `↵` again will call up the screen `Info 2/2`:

```
Language   ▶8  ←▶Esc
VP-mode    ▶9
               2/2
```

- `8` switches the display language.

- `9` is used for the alternative setting of the ventilation position. See section 3.8.3.

3.4 Display system configurations

`A` selects the SHE group. Press again to select the next SHE group:

```
SGr  1▶A        OK
 4 VGr▶B      Closed  ³
 8 RWD▶C
 2 In2▶D In2 passive  ⁴
```

- `B` selects the ventilation group. Press again to select the next ventilation group.

- `C` selects the RWD. Press again to select the next RWD.

- `D` selects the In2 group. Press again to select the next In2 group.

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¹ *Status displays:* `OK`, `Alarm`, `Test al.` (Test alarm), `Loc.alarm` (Local alarm), `Aut.close` (Auto close), `WRC`, `Fault`, `Main.mode` (Maintenance mode)
² *It may be necessary to enter a password, see 3.11.*
³ *Status displays:* `▼`, `Closed`, `▲`, `Open`, `Auto Close`, `WRC`. *Changes to the status display can take up to 6 s.*
⁴ *Status displays:* `In2 passive`, `In2 active`. *Changes to the status display can take up to 6 s.*

3.5 Viewing fault messages

From the start screen, **1** calls up the screen `Fault`:

```
RWD  3▶A       Fault
SGr  1 VGr  2 In2  2
MCP wire-break        1
```

🛈 *If the status changes from `OK` to `Fault` when the backlight is turned off, the backlight flashes and the screen `Fault` is automatically displayed.*

Display without fault:

```
No fault detected

Fault memory      ▶1
                 ←▶Esc
```

1 displays the fault memory:

```
SGr  1          Fault
RWD  3
Detec. short-circuit 1
      Clear memory▶C
```

3.6 Viewing alarm messages

From the start screen, **4** calls up the screen `Alarm`:

```
RWD  3▶A       Alarm
SGr  1 VGr  1 In2  1
MCP alarm          2
        Loc.alarm▶7
```

🛈 *If the status changes from `OK` to `Alarm` when the backlight is turned off, the backlight flashes and the screen `Alarm` is automatically displayed.*

Display without active alarm:

```
No alarm active

Alarm memory      ▶4
                 ←▶Esc
```

4 displays the alarm memory:

```
SGr  1          Alarm
RWD  3
Fire detector alarm   2
      Clear memory▶C
```

---

1 *Fault displays:* `Mains failure, Charging failure, Accumulator failure, Fuse F2 blown, Actuator M1 failure, Actuator M2 failure, Detec. wire-break` (Fire detector: wire-break), `Detec. short-circuit, Detec. undefined, MCP wire-break` (Manual call point: wire-break), `MCP short-circuit, MCP undefined, In1 wire-break, In1 short-circuit, In1 undefined, In2 wire-break, In2 short-circuit, In2 undefined, Bus failure, Bus address failure, Configuration error, Maintenance overdue!, Changeover sw + DIP3` ("Automatic OFF" combined with changeover contact), `Controller failure, B-Controller failure` (Bus-Controller failure), `MCP s-c Reset alarm` (Manual call point: short-circuit Reset 🔁), `MCP s-c Reset tone` (Manual call point: short-circuit Reset 🔇)
2 *Alarm displays:* `Fire detector alarm, MCP alarm` (Manual call point alarm), `Test alarm, Malfunction = Alarm, Fire det. pre-alarm` (Fire detector pre-alarm)
   Alarm displays (local alarm): `Thermal alarm, In1 alarm`

3.7 Controlling the ventilation functions

From the start screen, the operating level for controlling the ventilation functions can be called up:
- for all RWD connected to the bus system: `0`
- for all RWD of the selected SHE group: `A` [1] `0`
- for all RWD of the selected ventilation group: `B` [1] `0`
- for a single RWD: `C` [1] `0`

```
xxx  2          Closed  3
xxx       Open      ▶B
xxx       Close     ▶D
          Repetition▶1
```

- `B` moves the actuators in the open direction.

- `C` stops the actuators.

- `D` moves the actuators in the close direction.

- If not all actuators are properly closed (e.g., actuator has switched off due to a gust of wind), the repetition of cycle function can be enabled by pressing `1`. The actuators are briefly opened and following the closing command is activated once again.

3.8 Setting the ventilation parameters

From the start screen, the operating level for setting the ventilation parameters can be called up:
- for all RWD connected to the bus system: `2` [4]
- for all RWD of the selected SHE group: `A` [1] `2` [4]
- for all RWD of the selected ventilation group: `B` [1] `2` [4]
- for a single RWD: `C` [1] `2` [4]

After selecting the desired operating level, see
- Setting the ventilation time: 3.8.1
- Setting the ventilation position: 3.8.2

Alternative setting of the ventilation position see 3.8.3.

3.8.1 Setting the ventilation time

After selecting the operating level (see 3.8), the following is displayed:

```
xxx  2
V-time:      Local ▶B        Possible values: Local, off, 10 - 1800s
V-pos. ▲    Fact. ▶C
V-pos. ▼    Fact. ▶D
```

Factory setting of the ventilation time: Local.

`B` calls up the setting of the ventilation time:

```
xxx  2
V-time  Local off ▶A
Local  ▶B    +10s ▶C
Send   ▶↵    -10s ▶D
```

Setting the ventilation time:
- `A`: deactivate.
- `B`: set to Local.
- `C`: increase by 10 s.
- `D`: decrease by 10 s.
- Direct input in 10 s steps (`1` `2` = 120s).

`↵` applies the set flashing parameter.

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[1] *Press the key repeatedly until the desired group / RWD is displayed.*
[2] *Display of the selected group / RWD:* All / SGr / VGr / RWD
[3] *Status displays:* ▼, Closed, ▲, Open, Aut.close *(Auto close). Changes to the status display can take up to 6 s.*
[4] *It may be necessary to enter a password, see 3.11.*

3.8.2 Setting the ventilation position

After selecting the operating level (see 3.8), the following is displayed:

```
xxx  1
V-time:     Local ▶B
V-pos. ▲    Fact. ▶C        Possible values: Fact., off, on, 1...120s, Local  2
V-pos. ▼    Fact. ▶D                         Fact., off, on, 1...120s, Local
```

Factory setting of the ventilation position, travelling time OPEN: Fact. (15 s).
travelling time CLOSE: Fact. (30 s).

Setting of the ventilation position - travelling time OPEN

C calls up the setting of the ventilation position - travelling time OPEN:

```
xxx  1
V-pos ▲ Fact. off ▶A
Fact.  ▶B      +1s ▶C
Send   ▶↵      -1s ▶D
```

Setting the travelling times:
- **A**: switch on or off.
- **B**: reset the travelling times to factory settings.
- **C**: increase by 1 s.
- **D**: decrease by 1 s.
- Direct input in 1 s steps (**2** **4** = 24s).

↵ applies the set flashing parameter.

Press **Esc** to return to the previously selected level.

Setting of the ventilation position - travelling time CLOSE

D calls up the setting of the ventilation position - travelling time CLOSE:

```
xxx  1
V-pos ▼ Fact. off ▶A
Fact.  ▶B      +1s ▶C
Send   ▶↵      -1s ▶D
```

Carry out the setting as described above.

---

1 *Display of the selected group / RWD:* All / SGr / VGr / RWD
2 Fact. *= Factory setting*

3.8.3 Alternative setting of the ventilation position

Alternatively, the ventilation position can be set using ventilation buttons (not with changeover contact). Visual contact with the actuators must be maintained here.

⚡ This setting can only be made when the system has no malfunction and WRC is not active.
Initially, all actuators must be completely closed and the travel commands must be terminated.

From the start screen, select the group / RWD for which the ventilation position setting is to be activated:
- Setting for all ventilation groups of the selected SHE group: [1]   **A** [2]   **9** [3]
- Setting for all RWD of the selected ventilation group: **B** [2]   **9** [3]
- Setting for a single RWD: **C** [2]   **9** [3]

```
xxx  4
Adjust ventila-
tion position:    ▶B
Mode deactivated      5
```

B activates the mode for setting the ventilation position:

```
xxx  4
Adjust ventila-
tion position:    ▶B
Mode activated      5
```

Carry out the setting as follows:
- Briefly press a ventilation button △ to extend the actuators. When reaching the desired ventilation position, press the button again.
- Briefly press a ventilation button ▽ to retract the actuators. When all actuators are fully retracted, press the button again.
- The actuators of the ventilation group / RWD automatically travel to the ventilation position for verification and then close again.

⏲ Without pressing a ventilation button, setting the ventilation position is aborted after 15 minutes.

3.9 Resetting alarm and warning tone, test alarm

From the start screen, **A** **5** [6] calls up the following screen:

```
RGr 1            ▶A
Alarm reset      ▶B
Warning tone  off ▶C
Test al.  set    ▶D
```

- **A** selects the SHE group.

- **B** resets an active alarm in the selected SHE group.

- **C** switches off an active warning tone in the selected SHE group.

- **D** activates a test alarm in the selected SHE group using accumulator operation mode (for maintenance purposes and to check the accumulators). If a test alarm is active, the warning tone and PFC alarm are not activated.

---

[1] The setting is activated in all ventilation groups of the selected SHE group. The setting must be made separately for the ventilation groups.
[2] Press the key repeatedly until the desired group / RWD is displayed.
[3] It may be necessary to enter the password for operating level 2, see 3.11.
[4] Display of the selected group / RWD: SGr / VGr / RWD
[5] Changes to the status display can take up to 6 s.
[6] It may be necessary to enter a password, see 3.11.

3.10 Maintenance mode, reconfiguration, putting out of service

From the start screen, **5** [1] calls up the following screen:

```
All
Mainten. mode  off▶B ²
Reconfiguration    ▶C
Special functions ▶D
```

- **B** turns maintenance mode on or off for all RWD in the bus system.

- **C** reconfigures the bus system. This is necessary if one or more RWD have been temporarily taken out of service or have received a new address.
  - *When an RWD is switched on again, the bus system configures itself automatically.*

- **D** causes
  - − activating the accumulator test (⌂) during mains operation.
    - *A new accumulator test is only possible after 3 minutes.*
  - − resetting the fault ⌂ (accumulator test failed).
  - − stopping active travel commands in the close direction.
  - − resetting an activated module *Option WRM*.
  - − putting out of service of all RWD where the mains voltage is switched off (fault "mains failure"). For putting into service again, the mains voltage must be switched on.
    - *If SD 2 is connected to an affected RWD, it will also be switched off!*

3.11 Password input

If a customer-specific password has been assigned, operating levels **2** and **5** are only enabled after it has been entered. Different passwords can be assigned to the levels.

```
Restricted area.
Password please:
*****
```

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[1] *It may be necessary to enter a password, see 3.11.*
[2] *Status displays:* on, off. *Changes to the status display can take up to 6 s.*