ESSER

Operation and Installation Instructions

FB 8 Remote Control Panel (series 01 / 02)

Contents

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Explanation of symbols

LED lights up   LED flashes

Reference to the standards of the VdS Schadenverhütung GmbH

Important information

1   General

The FB 8 remote control panel (series 01 or series 02) allows the remote control and display of all panel functions of the 5008 intruder alarm computer. The control panel can also be used as a central control panel in the housing of the EMZ 5008. The control panel is connected to the intruder alarm panels via the 4-wire lead for transmitting data and supplying power to the RS485 interface.

Eight FB 8 remote control panels (series 01) can currently be connected to one basis card for the 5008 intruder alarm computer. Up to 16 FB8 control panels (series 02) are supported by the RS485 interface of the basic 5008 module.

A maximum of 800 inputs and outputs can be displayed on one FB 8 control panel (series 01). The FB8 control panel (series 02) supports the display of a maximum of 1500 inputs and outputs.

The distinction as to whether it is an FB 8 remote control panel (series 01) or an FB 8 remote control panel (series 02) is effected with the help of the operating panel pc board (see Chapter 7, Operating panel pc board).

User facilities

- 2 x 20-digit, illuminated alphanumeric LCD display

- LED common displays for the most important panel information

- Operating release via a built-in half cylinder and/or release code

- Internal arming/disarming of the intruder alarm panel

- Operation of up to 48 shunt lock areas

- Acknowledgement of the operating panel buzzer

- Cancel/reset function

- Lamp test

- Trouble blocking

- Activation/de-activation of the additional text displays

- Alarm counter enquiry

- Service display

- Event memory enquiry

- Display filter for area (from series 02)

- Sorting display by area (from series 02)
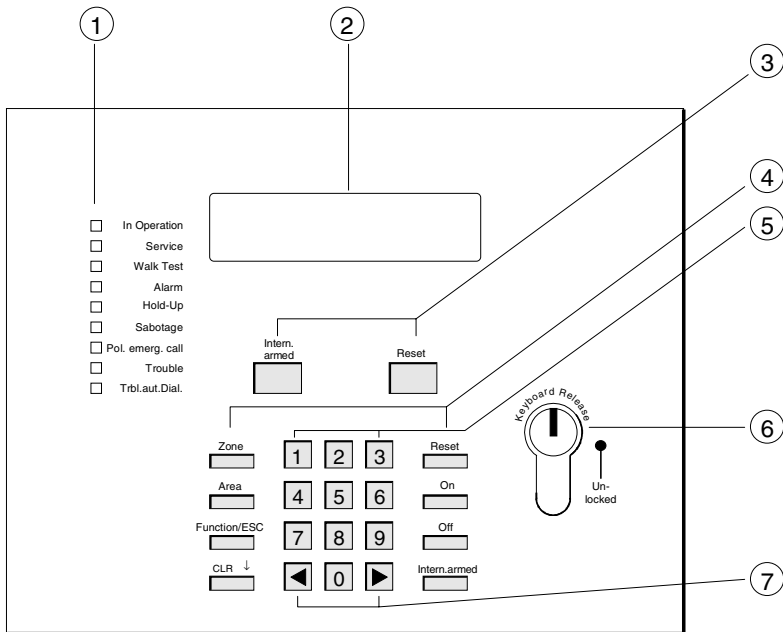
2 FB8 Operating panel

Fig. 1: Operating and display elements of the FB 8 operating panel

①	Status and common displays
②	2 x 20-digit illuminated alphanumeric display
③	"Internally armed" and "cancel" function keys
④	Function keys (under the keypad cover)
⑤	Digit keys 0 to 9 (under the keypad cover)
⑥	Key switch for operating release (Depending on the programming, operating release is possible only via the key switch and/or input of the release code)
⑦	Cursor keys (under the keypad cover)

2.1   Status and common displays

When the panel is set to the *externally armed* condition, all the visual indicators on the operating panel will go out. In accordance with VdS standards, display of alarm messages is not permitted when the system is set to the externally armed condition. Once the system has been disarmed, all identified messages are indicated with the relevant displays and display messages.

☐   In Operation
☐   Service
☐   Walk Test
☐   Alarm
☐   Hold-Up
☐   Sabotage
☐   Pol. emerg. call
☐   Trouble
☐   Trbl.aut.Dial.
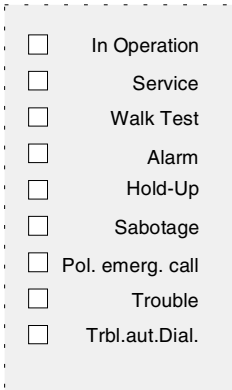
In Operation (green LED)

continuously lit	⇒	Normal operation, keypad locked
flashing	⇒	Keypad released for operation
off	⇒	Operating voltage failure, panel not ready for operation

Service (yellow LED)

continuously lit	⇒	Service mode is activated and service is being carried out
flashing	⇒	Remote diagnostics/programming is released
off	⇒	Normal operation

Walk test (yellow LED)

continuously lit	⇒	The *Walk test* function to test the monitoring area of motion detectors is activated
flashes	⇒	*One-man revision* service function is activated
off	⇒	Normal operation

Both the *Walk test* and *One-man revision* functions are required for commissioning, testing and service of the intruder alarm system by the customer service.

Alarm (red LED)

This display lights up if at least one internal or external alarm message (e.g. intruder or tamper alarm) has been detected.

continuously lit	$\Rightarrow$	At least one internal or external alarm message has been identified
off	$\Rightarrow$	Normal operation, no alarm messages

Hold-Up (red LED)

A Hold-Up detector zone on the panel has been activated. In practice, Hold-Up detector zones signal an alarm even when the system is disarmed.

continuously lit	$\Rightarrow$	Hold-Up alarm, e.g. a Hold-Up panel has been activated
flashing	$\Rightarrow$	First activation of a Hold-Up alarm. The first alarm message was activated by a Hold-Up detector zone
off	$\Rightarrow$	Normal operation; no Hold-Up message

VdS	In accordance with VdS standards, Hold-Up messages may not be user-resettable.

Sabotage / Tamper (red LED)

System components monitored for tampering have been tampered with, e.g. by unauthorised opening of the panel housing or a motion detector. In practice, tamper zones signal an alarm even when the system is disarmed.

continuously lit	$\Rightarrow$	Tamper alarm, at least one tamper message has been detected
flashing	$\Rightarrow$	First activation of a tamper alarm, the first detected alarm was triggered by a tamper message
off	$\Rightarrow$	Normal operation, no tamper message

VdS	In accordance with VdS standards, tamper messages may not be user-resettable.

Police emergency call (red LED)

This function is used if a permanent telephone link (dedicated circuit) is set up to the police or to a commissioned security service. If an alarm is detected which is intended to activate the police emergency call, the relevant emergency service can be alerted directly via this line.

continuously lit   ⇒   Police emergency call message has been forwarded

off   ⇒   Normal operation or the police emergency call function has not been programmed

Only the reviser is allowed to reset police emergency call messages.

Trouble (yellow LED)

This display lights up if at least one panel trouble message has been detected.

continuously lit   ⇒   Mains voltage (230 V AC) failure

flashing   ⇒   at least one fault has been detected, e.g. fault in the panel, the emergency power supply or the activation of a detector zone in trouble mode.

off   ⇒   Normal operation, no trouble messages

## Telephone dialler (TDD) trouble (yellow LED)

continuously lit   ⇒   Telephone dialler (TDD) not on standby

flashing   ⇒   TDD defective, a message could not be transmitted

off   ⇒   Normal operation, TDD on standby or no TDD connected or programmed

In the case of service and trouble messages please notify the customer service immediately.

2.2   Internal buzzer

The internal buzzer of the operating panel is activated in the event of:

- internal alarm messages, if necessary together with existing internal alarm devices
- external alarm messages following the disarming of the intruder alarm system until the $\overset{\text{Reset}}{\boxed{}}$ button is pressed
- activation of a fire detector zone
- technical alarm messages (TAL)
- activated alarm delay time
- a trouble message from the intruder alarm system in the disarmed or internally armed condition
- every key activation as a short acknowledgement tone
- trouble in communication with the panel

The buzzer is reset by pressing the $\overset{\text{Reset}}{\boxed{}}$ key.
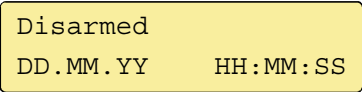
2.3   LCD display

The 2 x 20-digit illuminated alphanumeric display, in addition to the status and common display LED, provides information on the current panel condition. The LCD display light goes out automatically according to the time programmed in the customer data (default = 20 seconds).

If constant background lighting is required, this can be activated via the function menu on the $\overset{\text{Function/ESC}}{\boxed{}}$ key.
The background lighting is not active during AC failure.

The display message may vary according to the customer data programming of the panel. When the panel is idle and all areas are disarmed and there are no current troubles, the following display message appears:

```
Disarmed
DD.MM.YY    HH:MM:SS
```

2.3.1 **Display priorities**

In the event of an alarm or fault message, the event with the highest priority is always shown first on the display.

The "**+**" symbol in the first line of the display indicates that several messages have been detected, but cannot be shown simultaneously on the display.

The "**< >**" symbols indicate that these events can be scrolled within a priority level using the ◀ ▶ keys.

Press the $\overset{CLR \downarrow}{\boxed{}}$ key to change between the priority levels of the display.

Operation is possible only when the keypad has been released.

Priority	Event	Priority	Event
1	Hold-Up	22	U_{bext} fault
2	Tamper	23	Battery fault
3	Intruder	24	AC failure
4	Fire	25	Ground fault
5	Technical alarm	26	External equipment fault
6	Internal alarm	27	Ring loop card failure
7	Externally armed	28	Blocked
8	Trouble	29	Disabled
9	Police emergency call	30	Internally armed
10	Main alarm, audible	31	Pre-alarm
11	Main alarm, visual	32	Service PC active
12	Silent alarm	33	Rel. remote programming
13	Telephone dialler acknowledgement	34	Daytime monitoring active
14	Reset	35	Lock open
15	Walk test	36	Out of paper warning (printer)
16	Communications fault	37	Triggered
17	Transponder comms fault	38	Customer data error
18	Ring loop short circuit/open circuit	39	Ring loop activation
19	Telephone dialler fault	40	Area disarmed
20	Memory fault	41	Activation
21	Test channel fault	---	
21 a	EEPROM fault		

2.4   Status displays with the LCD display

The first line shows the current panel status or the last event with the highest priority.

```
Disarmed
DD.MM.YY    HH:MM:SS
```

The "**+**" symbol in the first display line indicates that further status messages have been received.

The "**< >**" symbols indicate that these messages can be scrolled using the ◀ ▶ keys

The second line indicates the area (primary area) which can be operated with the FB 8, and the zone or additional text.

Example of a display message

Display message with message text:

```
Trouble
Area.  1     Zone  3
```

- Fault message in Area 1, Zone 3
- no other messages
- Status message is de-activated

Display message with additional text:

```
Trouble
Archive entrance
```

- Additional text activated: e.g. *Archive entrance*

Activating/de-activating the additional text display

Press the ⬚ Function/ESC key to activate or de-activate the additional text display.
Press the ⬚ Off key to switch temporarily between the message display and the additional text display.

2.4.1 Meaning of the display texts

| Status	Display text
Intruder detector zone activated when IAP disarmed	*Tiggered*
Intruder detector zone activated when IAP armed	*Intruder*
Hold-Up zone active	*Hold-Up*
Tamper zone active	*Tamper*
Technical alarm	*tech. alarm*
Trouble	*Trouble*
Fire detector zone fire	*Fire*
Lock zone active	*on lock*
Internal arming	*internally armed*
external arming	*extern armed*
AC failure	*trbl. mains*
Battery fault	*Battery trbl.*
Detector zone disablement	*disconnect*
Daytime monitoring active	*Daytime monitoring*
Trouble blocking	*Trouble blockage*
Telephone dialler fault	*Dialler trbl.*

2.5   Keypad release

The FB 8 operating panel can be released for operation in various ways. The release type can be adapted in the customer data programming according to the wishes and requirements of the user.

2.5.1 Keypad release via the key switch only

Key switch in vertical position

- The green *ON* LED is continuously lit
- The Reset key is released for buzzer de-activation
- All other keys are locked
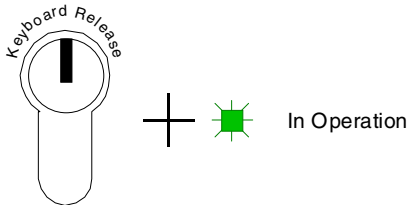
In Operation

Press the Reset key to de-activate the operating panel buzzer even when the keypad is de-activated. The buzzer is re-activated with every subsequent alarm.

Key switch in horizontal position
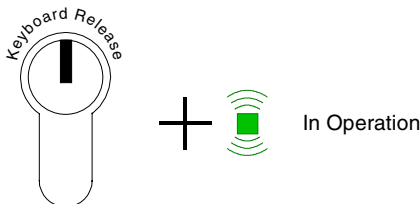
In Operation

- The green *ON* LED flashes
- The keypad is released for operation
- The key cannot be removed

## 2.5.2 Keypad release through release code only

With this option, operating release is performed via a 1 to 12-digit release code. The digit string "11111111" is the pre-programmed default release code for the FB 8.

> The pre-programmed default release code should be changed by the user once the system has been commissioned.

Entering the release code

Press any key on the operating panel. The following display appears:

```
Release code:
_
```
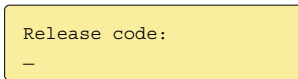
- A "*" symbol is displayed for every entered digit.

- The entered digits can be corrected using the ▭ CLR↓ key.

- Press the ▭ On key to confirm the fully entered release code.

- If the entered code is incorrect, the following message will be displayed: *Incorrect Code*.

- If the release code has been entered correctly, the keypad will be released for the time programmed in the customer data (default = 20 seconds). If no keys are pressed during this time, the keypad will be locked once more and the release code must be re-entered.

2.5.3 Keypad release using the key switch and release code

To release the keypad, first turn the key switch and then enter the 1 to 12-digit release code via the keypad (see above, Sect. 2.5.2).


```
release code:
************
```

2.5.4 Keypad release using the key switch <u>or</u> release code

With this option, the operating release is performed using either the release code or the key switch.

### 2.5.5 Keypad permanently operable (without key switch or release code)

With this variant, the FB 8 operating panel can be operated at any time and without restriction. The key switch and the release code prompt have no function.

Please note that, with this variant, actions such as the internal arming / disarming of areas and de-activation of detector zones can be carried out via the permanently operable operating panel, even by unauthorised persons.

2.6   Keypad

The keypad must be released for operation. The green *On* LED will flash to confirm the operating release.
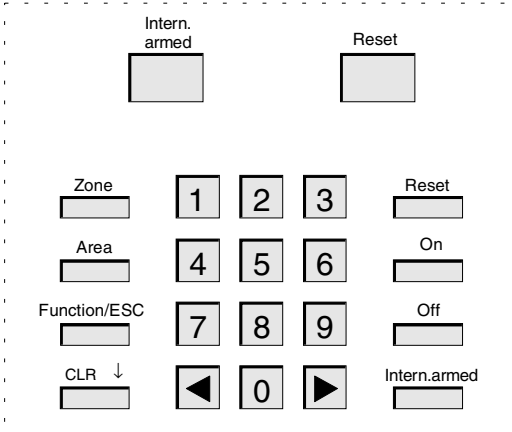
Function key Reset

Function for unreleased keypad:

- De-activation/acknowledgement of all connected operating panel buzzers

- Following internal alarms, de-activation of all internal alarm devices in all operable areas

Function for released keypad:

- Press key $\Rightarrow$ external alarm devices are reset in the disarmed condition following an external alarm.

- Press and hold down key for more than 4 seconds $\Rightarrow$ all disarmed areas allocated to this operating panel are reset (see also Area function key)

Intern.armed

Function key [____]

This key is used to internally arm or disarm the primary area allocated to the operating panel. If several areas are allocated to the operating panel, an area can be separately internally armed or disarmed once the relevant area number has been entered (toggle function).

Example: Internally arm or disarm Area 2

Area   Intern.armed

[____] | 2 | [____]

Zone

Function key [____]

Selection of the required detector zone and input of a detector zone number.

```
Zone: xxx
Add. text
```

If the detector zone belongs to an area which is not allocated to this operating panel, the following message will appear in the second line of the LCD display: *Invalid number*.

The additional text is displayed only if an additional text has been programmed in the customer data programming for this zone and the additional text display is activated.
The *Zone* function key can be used to perform the following functions:

- De-activate individual detector zones
- Activate individual detector zones
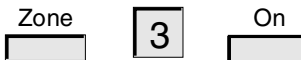- Activate all detector zones in the operable areas of this operating panel

Example:

- De-activate Detector zone 3:

Zone 3 Off

- Activate Detector zone 3:

Zone 3 On

Re-activate all detector zones

in the operable areas:

Zone On

The ◀ ▶ cursor keys can be used to scroll through all the zone numbers which are allocated to the primary area of the operating panel.

Area

Function key ▭

Selection of the required area to enter the area number.

```
Area: xxx
Add. text
```

If the selected area is not allocated to this operating panel, the following message will appear in the second line of the LCD display: *Invalid number*.

All the areas which can be displayed on the FB 8 can also be operated from this operating panel.

The additional text is displayed only if an additional text has been programmed in the customer data programming for this area and the additional text display is activated.

The *Area* function key can be used to perform the following functions:

- Internally arm Area XX

- Disarm Area XX

- Reset Area XX (All alarm messages and detector zones in this area are reset)

Example:

Area 3 disarmed ⇒ internally armed:
    Area   3   Intern. armed

Area 3 internally armed ⇒disarmed:
    Area   3   Intern. armed

Reset Area 3:
    Area   3   Reset

The ◀ ▶ cursor keys can be used to scroll through all the areas which are allocated to this operating panel.

If several areas are allocated to one remote control panel, each allocated area and its detector zones can be reset separately by entering the area number.

Example: Reset Area 5
    Area   5   Reset

Function/ESC

Function key

The *Function/Cancel* function key can be used to perform the following functions:

1) Cancel the current function/entry

2) Perform the following functions:

- Activate/de-activate additional text
- Activate lamp test
- Display area number of the primary area
- Activate/de-activate walk test
- Date/time setting
- Display operating panel address
- Release remote programming
- Change release code
- Change user code
- Display operating panel software version
- Activate/de-activate LCD display lighting
- Display alarm counter
- Activate trouble blocking of zones
- Activate trouble blocking of transponders
- Activate trouble blocking of operating panels
- Activate trouble blocking of monitored outputs
- Activate trouble blocking of the power supply unit
- Read out event memory
- Activate/de-activate printer
- Activate sorting by area *
- Activate/de-activate filter for area *
- Activate/de-activate essernet$^{®}$ diagnosis *

see also Section 3.1 "Function menu"

* *This function provided the FB 8 remote control panel series 02.*

CLR ↓

Function key

Press the *Rem.* function key to perform the following functions:

- Cancel last input

or

- Change priority level of the display message

Digit keys

The ten digit keys are used to enter the following numbers for the selected function, e.g. activate/de-activate or reset:

- Area number, e.g. of the area to be reset
- Zone number, e.g. of the detector zone to be activated/de-activated
- user code to release operating functions which are protected by the user code against unauthorised operations
- Release code to release the keypad (if programmed in the customer data)

1	2	3
4	5	6
7	8	9
	0	
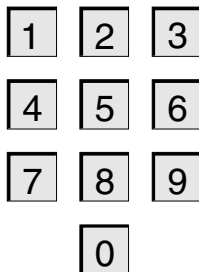
Cursor keys

The cursor keys can be used within a priority level to scroll through the display messages.

The "**< >**" symbols in the first display line indicate that further messages have been received, but cannot all be shown simultaneously on the display.

On

Function key

This key is used to activate/perform the selected function and confirm the release code or user code input

Example:
Zone
3
On

Date and time display of a message

Press the On key to display the date and time associated with the current message.

Off

Function key

Press this key to de-activate the selected function.

Example:
Zone
3
Off

Press the Off key to switch between the message display and additional text display in the second display line (toggle function). This function is available even if the keypad is locked.

3 Operation

The operation of the 5008 intruder alarm panel may differ from the functions described below, according to the customer data programming carried out by the specialist installer.
Operations can be performed on the panel only when the keypad is released and the intruder alarm panel is disarmed.

- Every keypad input is acknowledged with a short buzzer tone. The operation/input is not carried out until this acknowledgement is given.

Release code

The release code can be used on its own or in conjunction with the operating panel key switch to release the operating panel keypad. Depending on the customer data programming, input of the programmed release code and/or actuation of the key switch is required for operating release.

User code

Input of the user code is required if functions are to be performed which cannot be performed with the normal operating release or are not intended to be performed, e.g. release of remote service or trouble blocking.
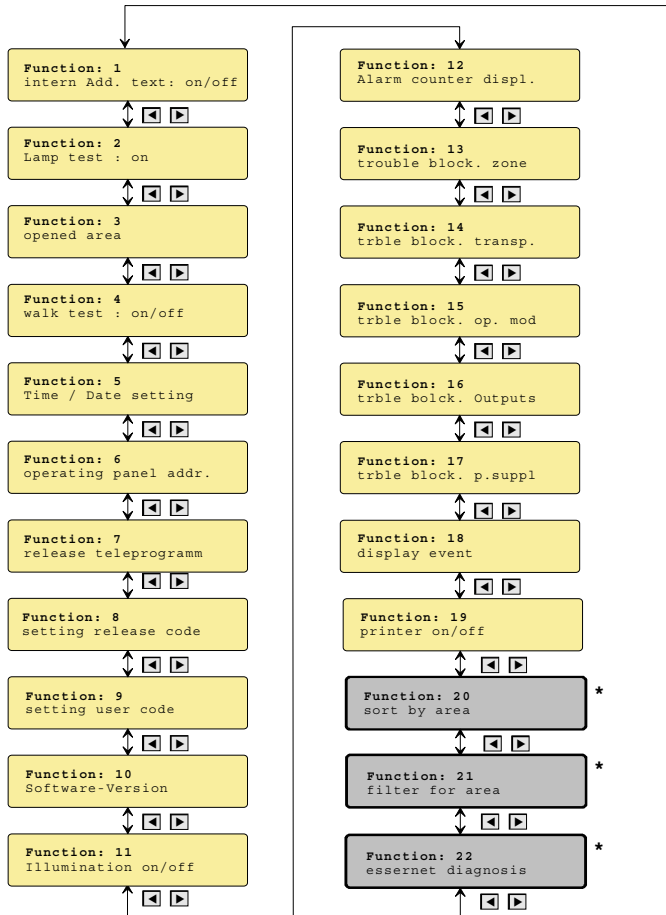
If an operating log is required for the intruder alarm system, performed operations, e.g. activation and de-activation of detector zones, must be entered in the operating log.

The intruder alarm system user or person responsible must be trained in respect of the operation and programmed functionality of the panel.

3.1 Function menu

The settings relating to the operating panel are defined and the functions which cannot be performed directly via the keypad are selected in the operating panel function menu.

Press the ⬚ Function/ESC key to select the function menu:

```
Function: 1              Function: 12
intern Add. text: on/off Alarm counter displ.
         ↕ ◄ ►                    ↕ ◄ ►
Function: 2              Function: 13
Lamp test : on           trouble block. zone
         ↕ ◄ ►                    ↕ ◄ ►
Function: 3              Function: 14
opened area              trble block. transp.
         ↕ ◄ ►                    ↕ ◄ ►
Function: 4              Function: 15
walk test : on/off       trble block. op. mod
         ↕ ◄ ►                    ↕ ◄ ►
Function: 5              Function: 16
Time / Date setting      trble bolck. Outputs
         ↕ ◄ ►                    ↕ ◄ ►
Function: 6              Function: 17
operating panel addr.    trble block. p.suppl
         ↕ ◄ ►                    ↕ ◄ ►
Function: 7              Function: 18
release teleprogramm     display event
         ↕ ◄ ►                    ↕ ◄ ►
Function: 8              Function: 19
setting release code     printer on/off
         ↕ ◄ ►                    ↕ ◄ ►
Function: 9              Function: 20          *
setting user code        sort by area
         ↕ ◄ ►                    ↕ ◄ ►
Function: 10             Function: 21          *
Software-Version         filter for area
         ↕ ◄ ►                    ↕ ◄ ►
Function: 11             Function: 22          *
Illumination on/off      essernet diagnosis
         ◄ ►                     ◄ ►
```
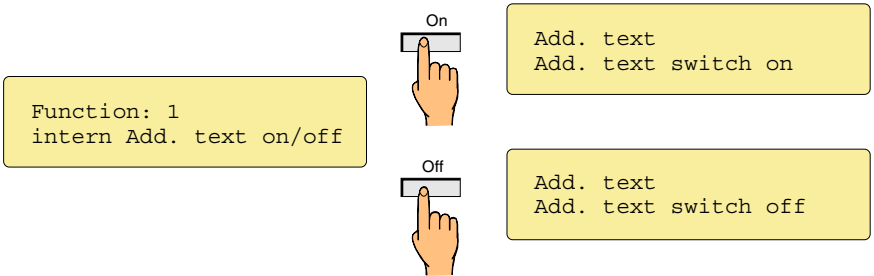
- Press the ◄ ► cursor keys to select the required function
- Press the ⬚ On key to confirm the selected function

* *This function provided the FB 8 remote control panel series 02.*

3.1.1 Additional text On/Off

The area and detector zone-related additional text can be activated/de-activated with this function.

The additional text is displayed only if an additional text has been programmed in the customer data programming and the additional text display is activated.

```
On
┌──┐
└──┘
```
```
Add. text
Add. text switch on
```

```
Function: 1
intern Add. text on/off
```

```
Off
┌──┐
└──┘
```
```
Add. text
Add. text switch off
```

If the Off key is pressed, it is possible to switch in the second display line between the message display and additional text display (toggle function) even if the additional text display is de-activated.

3.1.2 Lamp test

With the *Lamp test* function, the display LED and operating panel buzzer are activated for approx. 5 seconds for function testing. The LC display light simultaneously goes out.

```
On
┌──┐
└──┘
```
```
■■■■■■■■■■■■■■■■■■■
■■■■■■■■■■■■■■■■■■■
```
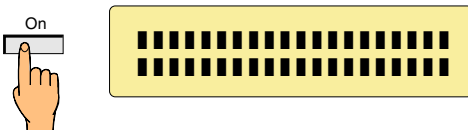
The lamp test can be interrupted by pressing the Function/ESC key.

3.1.3 Primary area display

All the areas allocated to this operating panel are shown on the display. The primary area is defined as the area directly allocated to the FB 8 operating panel, which is normally the monitored installation site of the operating panel. The primary area of an operating panel is defined in the customer data of the panel. Only one primary area can ever be allocated to one operating panel.

Operations, e.g. *internally arm*, are possible for the primary area of an operating panel without additional input of an area number. If further areas in addition to the primary area are allocated to an operating panel, these areas can be operated only if the corresponding area number for this area has previously been specified.

Example: Primary area = Area no. 1

```
Primary area = 1
X X X X
```
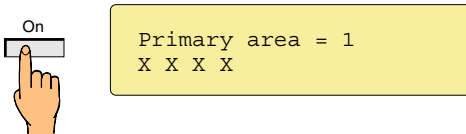
Meaning of the display message

The lower display line shows any available area numbers of additional areas which can be operated and displayed via the operating panel.

If more areas are allocated to an operating panel than can be displayed in the lower display line, an arrow symbol ">" will also appear on the display.

Press the ▶ key to show these area numbers on the display also.

3.1.4 Walk test

This function is used for commissioning and adjustment of motion detectors by the specialist installer and for function testing by the user.
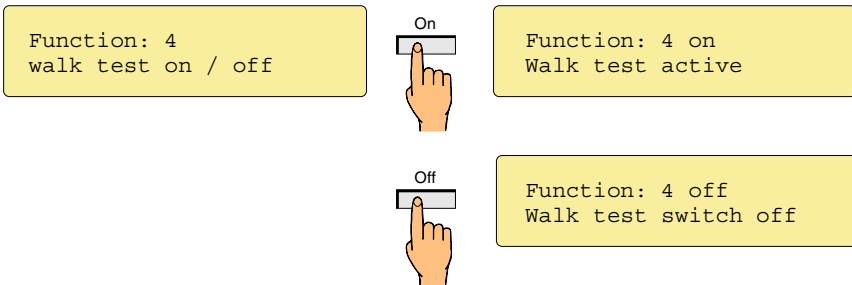
If motion detectors with a built-in walk test function are connected to the 5008 intruder alarm panel, the monitoring area of these detectors can be checked using the *Walk test* function when the panel is disarmed. When the walk test function is activated, every activation of the motion detector, e.g. by someone walking across the monitoring area, will be indicated by the red LED of the motion detector.

Internal or external alarm signals are not triggered by the walk test. The detector LED goes out once more when the tester walks out of the monitoring area.

Activate/de-activate walk test/

Select the *Walk test* function and press the ⬜ On key to confirm:

The activated walk test function is indicated on the operating panel by the continuously illuminated *Walk test* LED.


```
Function: 4
walk test on / off
```

```
Function: 4 on
Walk test active
```

```
Function: 4 off
Walk test switch off
```
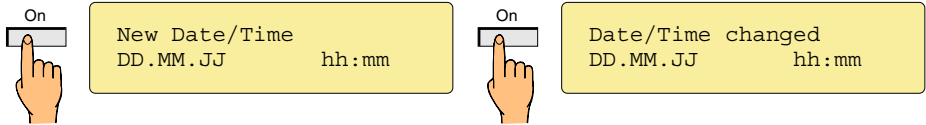
Once the monitoring area has been tested, de-activate the *Walk test* function once more. The yellow *Walk test* LED will go out and the panel will return to normal operation.

3.1.5 Time/Date

This menu item displays the current time and date.

Press the ⌷ On key to modify or set the displayed information.


```
New Date/Time
DD.MM.JJ        hh:mm
```



```
Date/Time changed
DD.MM.JJ        hh:mm
```

Enter the new values for the date (e.g. 17.10.97) and time (e.g. 14:15) using the operating panel digit keys.

Use the ◀ ▶ keys to move specifically to the required input location.

Finally, press the ⌷ On key to confirm the set date and time.

3.1.6 Operating panel address

Indication of the operating panel address which has been set using the DIL switch on the PC board and programmed in the customer data.
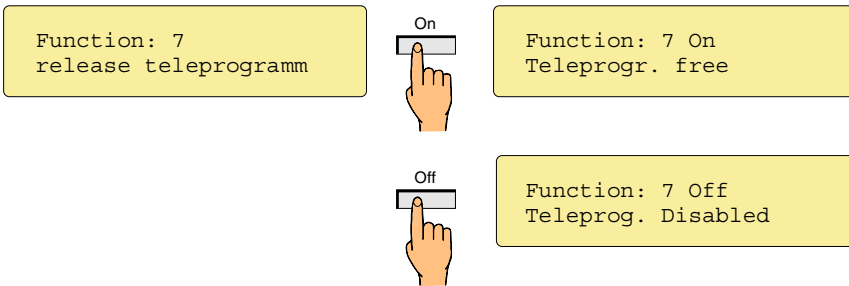


```
Function: 6 on
operating addr = 1
```
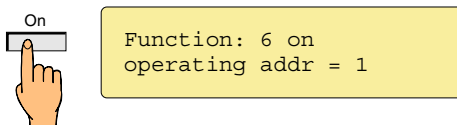
3.1.7 Remote diagnostics/programming release

Remote diagnostics/programming can be started up by the specialist in-
staller/customer service via a modem link only if this function has been
previously released by the user.

Press the ▭ key to activate the release.

Then enter the user code and press the ▭ key to confirm.

Once the release is activated, the yellow "Service" LED will flash and the
LCD display light will go out after approx. 20 seconds.

```
Function: 7
release teleprogramm
```
On

```
Function: 7 On
Teleprogr. free
```

Off

```
Function: 7 Off
Teleprog. Disabled
```

If the remote diagnostics/programming is started up via the modem link
following the release, the link will not be cleared down until the customer
service has completed the remote diagnostics/programming via the Service
PC. The panel will then automatically revert to normal operation.

The release cannot be de-activated by pressing the ▭ (Off) key once
the remote diagnostics/programming has started.

3.1.8 Changing the release code

In this menu item, the release code is changed for operating panel keypad release.

This menu item is displayed only if a keypad release code prompt has also been programmed in the customer data for the panel.

The current valid release code is requested before the release code is changed.

If the operating panel release code is not known, the user code which is valid for this operating panel can also be entered to change the release code.

- Enter the valid (old) release code and press the On key.
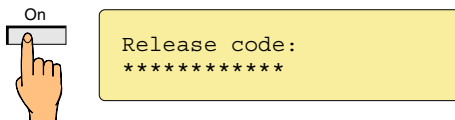
```
Release code:
************
```

- Every entered digit is indicated by a "*" symbol.
- Input corrections can be made using the CLR↓ key.

Enter the new 1-12-digit release code and press the On key.

```
New release code
************
```
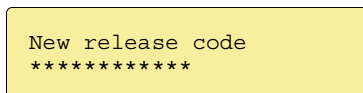
The new release code is requested once more for verification purposes.

```
Repeating code:
************
```

Enter the new release code again and press the $\overset{\text{On}}{\square}$ key.

If the input is correct, the following message will appear on the display:

```
Release code
was changed
```

If an invalid release code is entered or the entered release code is not repeated correctly at the further verification prompt, the change will be rejected and the old release code retained.

Please record the new 1 to 12-digit release code.

The changed release code is valid only for the FB 8 operating panel on which the release code has been changed.

3.1.9 Changing the user code

The user code is changed in this menu item.

The user code must be entered to perform functions which cannot be performed with the normal operating release or are not intended to be performed, e.g. release of remote service or trouble blocking.

This menu item is displayed only if the option to change the user code has been programmed in the customer data for the panel. The current valid user code is requested before the user code is changed.

- Enter the valid (old) user code and press the $\overset{\text{On}}{\boxed{}}$ key.
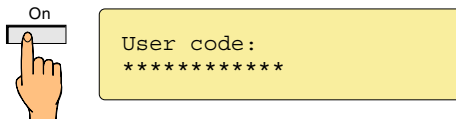

```
User code:
************
```

- Every entered digit is indicated by a "*" symbol.

- Input corrections can be made using the $\overset{\text{CLR}\downarrow}{\boxed{}}$ key.

Enter the new 1-12-digit user code and press the $\overset{\text{On}}{\boxed{}}$ key.

```
New user code
************
```
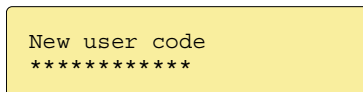
The new user code is requested once more for verification purposes.

```
repeating code:
***********
```

Enter the new user code again and press the ⌷ᴼⁿ key.

If the input is correct, the following message will appear on the display:

```
User code
was changed
```

If an invalid user code is entered or the entered user code is not repeated correctly at the further verification prompt, the change will be rejected and the old user code retained.

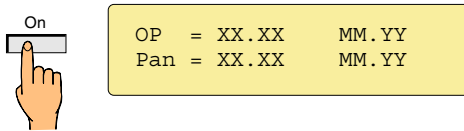|											

Please record the new 1 to 12-digit user code.

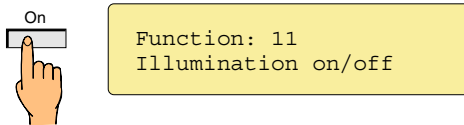The changed user code is valid only for the FB 8 operating panel on which the user code has been changed.

3.1.10 Software version

Display of the current operating panel and panel software.

```
OP  = XX.XX    MM.YY
Pan = XX.XX    MM.YY
```

On

3.1.11 Display lighting

The LCD display lighting can be activated/de-activated with this function.

```
Function: 11
Illumination on/off
```

On

On =   LCD display is continuously illuminated.
         In the customer data programming, it is possible to specify that the lighting is de-activated when the panel is externally armed in accordance with VdS standards.

Off =   LCD display is lit up only during operation of the released keypad. Depending on the setting in the customer data programming, the lighting is de-activated once more approx. 20 seconds after the last key actuation.

3.1.12 Alarm counter

In the *Alarm counter* menu item, the total number of all previously detected alarm messages is shown on the display.

```
Function: 12 on
Alarm counter = 0003
```

On
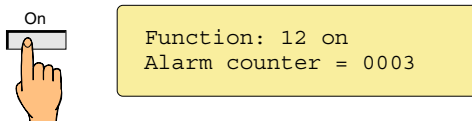
3.1.13 Trouble blocking

Trouble blocking can be performed for individual inputs, outputs or bus devices if these are defective and would prevent arming of the area.

Trouble blocking can be performed via the operating panel of the control panel if an area needs to be armed despite a fault. Once the area has been disarmed, it cannot be re-armed until, for example, the input is again blocked or the fault is cleared.

The total number of possible trouble blockings is defined in the customer data programming. If the number of possible trouble blockings in this area is programmed as the value [1], no further trouble blocking can be performed following the initial trouble blocking until the panel has been reset by the customer service.

If a bus device, e.g. an IAP esserbus® transponder or bus-enabled motion detector, is blocked, all the available inputs on this bus device must be blocked individually. Non-blocked transponder inputs would be indicated on the operating panel as a communications fault in the event of trouble blocking of the transponder itself.
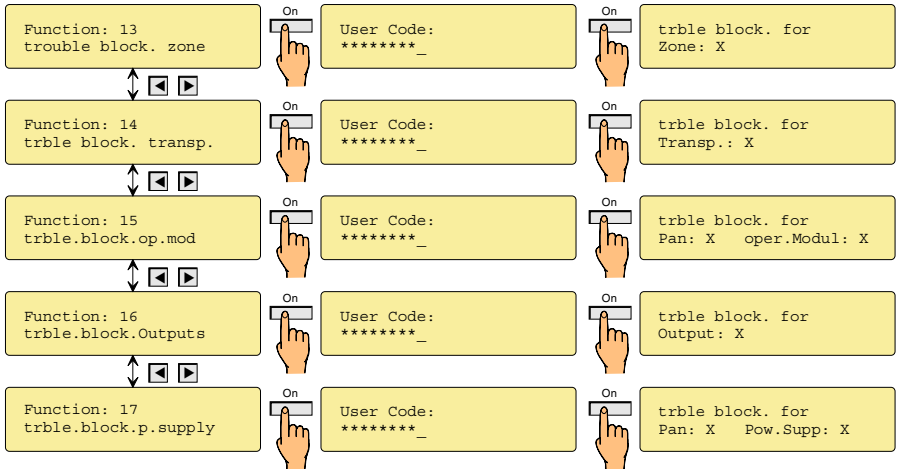
In the case of inputs which can be de-activated from an operating panel by the user of the intruder alarm system or which are not included in the inevitability of an area, trouble blocking is not required in the event of a fault. In this case, de-activation of the defective input would enable the trouble blocking of the area.

VdS In accordance with VdS standards, trouble blocking of monitoring inputs which are included in the panel inevitability is permitted in exceptional cases only.

Activate trouble blocking

Select the *Trouble blocking* function, enter the user code and press the ⌷ On key to confirm:

Function: 13 trouble block. zone	User Code: ********_	trble block. for Zone: X
Function: 14 trble block. transp.	User Code: ********_	trble block. for Transp.: X
Function: 15 trble.block.op.mod	User Code: ********_	trble block. for Pan: X oper.Modul: X
Function: 16 trble.block.Outputs	User Code: ********_	trble block. for Output: X
Function: 17 trble.block.p.supply	User Code: ********_	trble block. for Pan: X Pow.Supp: X

Example: Trouble blocking of a detector zone

Enter the detector zone to be blocked and press ⌷ On to confirm.

```
trble block.activ
Area: X    Zone: X
```

The required detector zone is blocked.

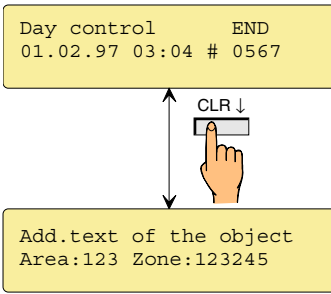The trouble blocking is reset by disarming the area.

3.1.14 Event memory

Up to 1,000 event messages, e.g. alarm messages, de-activations, arming/disarming operations and other events are recorded and stored in the event memory of the panel. After 1000 entries, the oldest event is overwritten by the most recent message.

Display and operation of the event memory

An event is divided over two display pages to allow the event information to be shown on the display. The last entered, most recent event is also the first to be displayed.

- Press the ⌷ⁿ key to show the event memory on the display.

- The current valid user code is requested before the event memory is displayed.

- Enter the user code and press the ⌷ⁿ key to confirm your input.


```
Day control      END
01.02.97 03:04 # 0567
```
Example: Display page 1

```
Add.text of the object
Area:123 Zone:123245
```
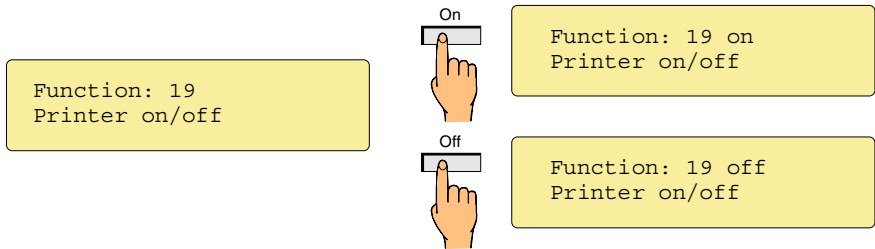Example: Display page 2

The ⌷ CLR↓ key is used to toggle between the first and second display pages.

The ◄ ► cursor keys can be used to show the individual events in succession on the display.

The digit keys 0 to 9 can be used to move by 10 to 100 events in the direction last selected with the ◄ ► cursor keys.
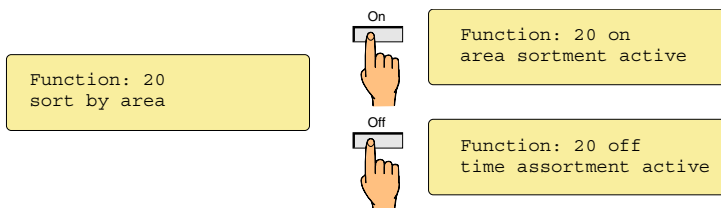
3.1.15 Printer

The connected log printer is activated/de-activated with this function.

```
On
```

```
Function: 19
Printer on/off
```

```
Function: 19 on
Printer on/off
```

```
Off
```

```
Function: 19 off
Printer on/off
```

The initial display returns approx. 20 seconds after the last key actuation or when the Function/ESC key is pressed.

3.1.16 Sort by area (this function provided the FB 8 series 02)

The remote control panel offers the option of sorting displayed results in ascending order with the help of their area numbers. The results from one area are displayed in chronological order.

```
On
```

```
Function: 20
sort by area
```

```
Function: 20 on
area sortment active
```

```
Off
```

```
Function: 20 off
time assortment active
```

If Sort by area is active, this is indicated by the identifier *"S"* in the status display.

```
                                S
```
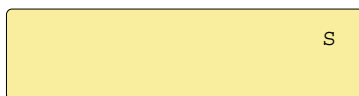
3.1.17 Filter for area (this function provided the FB 8 series 02)

This function, which is only supported by the remote control panel, sets the filter for an area. Only the events of the selected area are shown on the display. The sequence of displayed events corresponds to the preset sorting criteria (see Chapter 3.1.16 Sort).

```
Function: 21
filter for area
```

On

```
filter for area xx
```

On

Off

```
Function: 21  Off
filter for area off
```
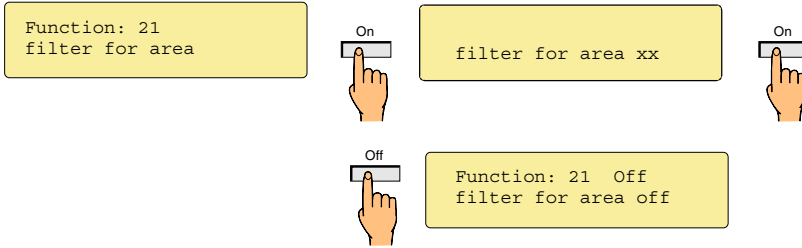
If the filter is set for an area, this is indicated by the identifier *"F"* in the status display.

```
                         F
```

3.1.18 essernet® diagnosis

The following system requirements must be met in order to use the essernet® diagnosis functions:

- **EMZ 5008 operating system software version 1.35 or later**
- **customer data editor software *tools 5008* version 1.33.0 or later**

This essernet® diagnosis function can be used to check the essernet® link to the neighbouring panels. The essernet® diagnosis line at the remote control panel (series 02) indicates which connections are OK or malfunctioning.
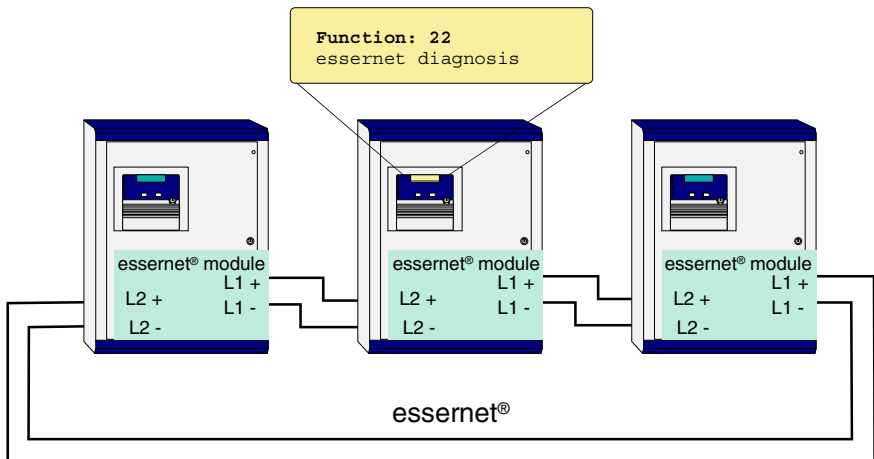
The various diagnosis functions can be scrolled through on the display by means of the cursor buttons ◀ ▶.

Button can be used to start the factory-set diagnosis function (direction 12 / direction 34) (ref. table on page 43).

Pressing button terminates the currently active diagnosis function and returns to the previous function menu. The same change will be triggered if no keyboard entry is made within 20 seconds after entering the diagnosis menu.

essernet® diagnosis example:

```
Function: 22
essernet diagnosis
```

On

```
Richtung 12   2553
Richtung 34   2555
```

◀ ▶

```
Richtung 34   2555
Stoer 12 [%]     0
```

◀ ▶

```
Stoer 12 [%]     0
Stoer 34 [%]     0
```

◀ ▶

```
Stoer 34 [%]     0
StMax 12 [%]     8
```

◀ ▶

```
StMax 12 [%]     8
StMax 34 [%]     6
```

◀ ▶

```
StMax 34 [%]     6
TelWiederh       0
```

◀ ▶

```
TelWiederh       0
ZentralenNr     10
```

◀ ▶
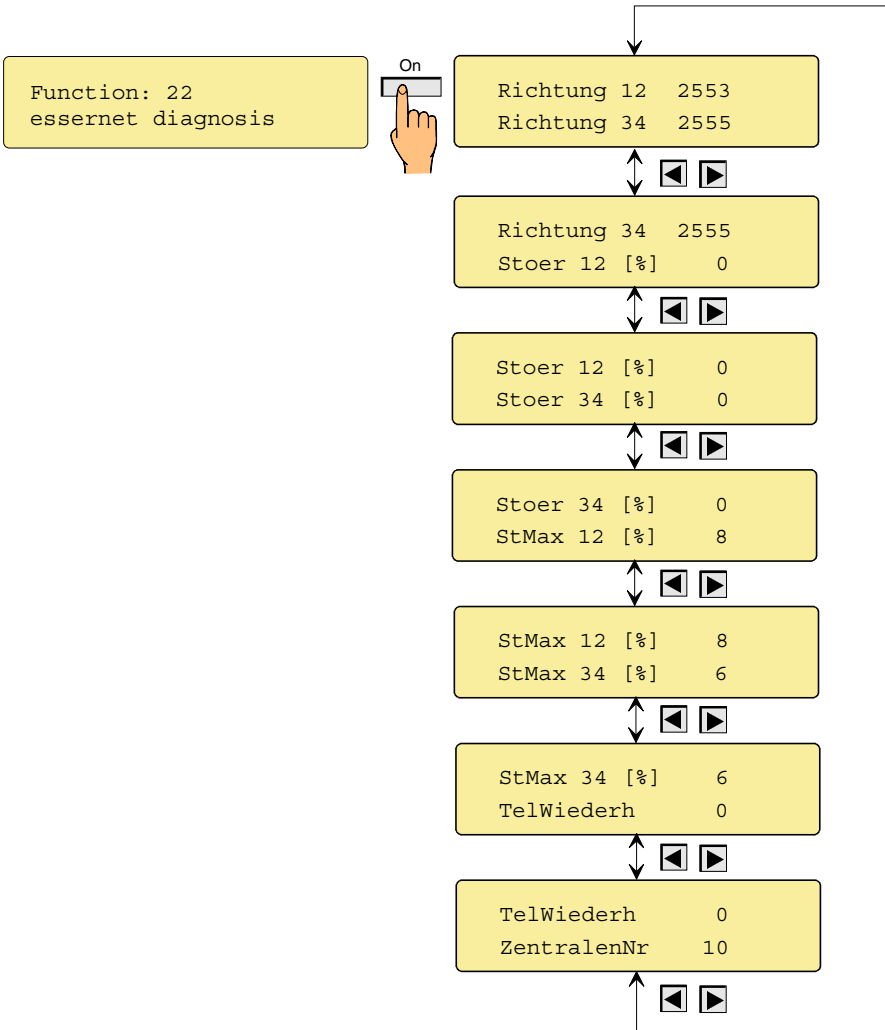
All displays in combination with the diagnosis function will be in German language, only.

Meanings of the display messages (example, page 42)

Display message	Value (example)	Meaning	
Richtung 12	2553	Number of telegrams received without errors at terminals 1+2 of the essernet® micro module terminal card.	
		automatic display update:	
		essernet® type 1 (62.5kBd):	every 45 sec
		essernet® type 2 (500kBd):	every 10 sec
Richtung 34	2555	terminals 3+4 (ref.: Richtung 1+2)	
Stoer 12 [%]	0	Percentage of damaged telegrams received at terminals 1+2 of the essernet® micro module terminal card.	
		automatic display update:	
		essernet® type 1 (62.5kBd):	every 45 sec
		essernet® type 2 (500kBd):	every 10 sec
Stoer 34 [%]	0	terminals 3+4 (ref.: Stoer 12)	
StMax 12 [%]	8	Maximum percentage of corrupted telegrams received at terminals 1+2 of the essernet® micro module terminal card since the last re-start of the panel. This function allows for long-term measurement. The counter is reset to ,0' on each re-start of the panel.	
StMax 34 [%]	6	terminals 3+4 (ref.: StMax 12)	
TelWiederh	0	Number of repeat requests. Repeat requests for telegrams are always an indicator for malfunctions of a module or transmission line.	
ZentralenNr	10	The micro-module address set at the essernet® module. This address must match the setting of the customer data for this intruder alarm panel.	

3.2 Activation/de-activation of detector zones

Detector zones can be activated/de-activated when the panel is disarmed.

The corresponding zone number is entered with the digit keys 0 to 9 and is activated by pressing the _{On} key and de-activated by pressing the _{Off} key.

The zone de-activation facility can be freely programmed in the customer data for the panel and can be modified by the customer service.

De-activating a detector zone

Example: De-activate Detector zone 3

Zone   3   Off

VdS   In accordance with VdS standards, de-activation of Hold-Up detector zones and tamper zones is not permitted.

Activating detector zones

A de-activated detector zone can be re-activated when the panel is disarmed by pressing the On key.

Example: Activate Detector zone 3

Zone   3   On

The *Zone-On* key combination can also be used to simultaneously re-activate all de-activated detector zones in the areas which can be operated with this operating panel.

Zone   On   Re-activate <u>all</u> detector zones in the operable areas.

3.3   Resetting messages and alarm devices

When the area or panel is disarmed, detected alarm messages and external alarm devices can be reset by pressing the ⌷Reset⌷ key.

Function of the ⌷Reset⌷ key when the keypad is <u>not</u> released:

- De-activation of all connected operating panel buzzers

- De-activation of the internal alarm devices in all operable areas

Function   of   the   ⌷Reset⌷   key   when   the   keypad   is   released:

- Press   and   hold   down   the   key   for   more   than   4   seconds: Reset of all disarmed areas allocated to this operating panel

- Following disarming in the event of external alarm messages, de-activation of the external alarm devices

If several areas are allocated to the operating panel, an area and its detector zones can be reset separately with the following input:

<u>Example:</u>   Reset Area 5:

Area		5	Reset	

VdS   In accordance with the standards of the Association of Loss Insurers (VdS), reset of Hold-Up and tamper messages by the system user is not permitted.

# 3.4 Arming/disarming of the intruder alarm panel

Thanks to the object-specific and application-specific programming facility of the 5008 intruder alarm panel, the functionality for arming/disarming the panel and panel functions may differ from the following description.

Area disarmed

The intruder alarm panel is on restricted alarm standby in this area, i.e. only tamper and Hold-Up messages are detected. Persons located in this area do not trigger an alarm. If an intruder detector zone is activated, <u>no</u> alarm message is transmitted.

Area internally armed

The primary area of the operating panel can be internally armed by pressing

the [Intern. armed] key or via an external switching contact, e.g. using a key switch. This function enables the partial monitoring of buildings, i.e. areas in which persons are located can be excluded from monitoring by de-activating the relevant detector zones. These areas can - following input of the area number - be internally armed or disarmed on an individual basis.

- In the event of an alarm message, only alarm devices within the building, e.g. the panel buzzer, are activated

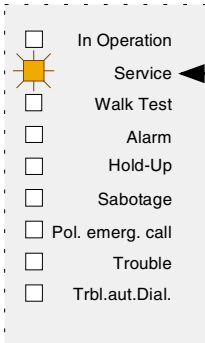- De-activated detector zones signal no alarm (the default programming can be modified)

Area externally armed

The area is externally armed with a shunt lock or key switch.

Persons located in the externally armed monitoring area of the intruder alarm panel trigger an external alarm. External arming is possible only if no alarm or fault message has been sent at the time of arming and the lock detector zones associated with the area are idle, i.e. doors and windows in this area which are monitored for opening are closed and locked.

- All connected detector zones are on alarm standby. De-activated detector zones are automatically re-activated via the shunt lock in the case of external arming. (The default programming can be modified)

- External alarm devices are activated if an event occurs

- Emergency services, e.g. the security service, are alerted via the telephone dialler (if available)

3.5 Service

☐	In Operation	
🔶	Service ◄───	Yellow LED for service display
☐	Walk Test	
☐	Alarm	
☐	Hold-Up	
☐	Sabotage	
☐	Pol. emerg. call	
☐	Trouble	
☐	Trbl.aut.Dial.	

Service **display LED**

Continuously lit:	Service mode is activated and service is currently being carried out
Flashing:	Remote diagnostics/programming via the modem is released on the operating panel by entering the user code
Off:	Normal operation, no service function active

Remote diagnostics/programming

This function can be performed only by the customer service via a modem connected to the panel. The panel housing does not need to be opened for remote diagnostics/programming.

Remote diagnostics/programming cannot be performed on the panel by the customer service until the panel has been released by the user.

VdS Remote programming of the panel during the project planning of the intruder alarm system is not permissible in accordance with VdS standards.

🛈 Service must be performed by trained specialist personnel, e.g. the customer service. A tamper alarm is triggered when the operating panel or panel housing is opened even if the system is disarmed.

Installation Instructions

FB 8 Remote Control Panel (series 01 / 02)

Contents

Section	Page

Explanation of symbols

VdS   Reference to the standards of the VdS Schadenverhütung GmbH

    Important information

4   Project planning instructions

4.1   Connection

The following instructions should be followed during the project planning of the intruder alarm system with FB 8 remote control panels:

Follow the relevant standards and regulations for setting up and operating intruder alarm systems (see Operating and installation instructions for the panels).

For VdS-compliant project planning, observe the relevant standards of the Association of Loss Insurers (VdS).

Use screened lines only, e.g. telecommunications cable IY (St) Y n x 2 x 0.6 mm or 0.8 mm.

The selected cross-section and the resulting line resistance are determined by the power consumption of the connected consumers.

The following applies to data lines of the serial RS 485 interface between the panel and the remote control panel:
−   Line length: max. 1000 m

If the remote control panel voltage is supplied via the panel, the voltage drop on the connection line between the panel and the FB 8 must not exceed 2 V.

If the calculated line cross-section is not adequate, several wires of the cable which is to be installed can be connected in parallel in order to attain the required line cross-section value. If necessary, install separate lines for data transmission and voltage supply.
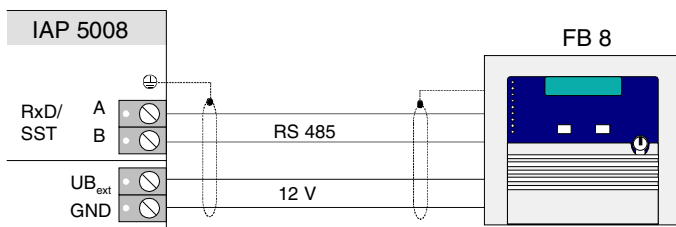
4.2 Calculation

In order to determine the required cross-sections, the wire resistance of the cabling to the RS-485 devices needs to be calculated.

If the calculated line cross-section is not adequate, several wires of the cable which is to be installed can be connected in parallel in order to attain the required line cross-section value. This must be done for each connection (12 V DC and 0 V).

Specified values:

- max. power consumption of <u>one</u> Remote Control Panel FB8   :   30 mA
- max. permissible voltage drop on the panel ⇔ Remote Control Panel FB8 connection line   :   2 V DC

ΔU = max. voltage drop on the line

I = max. power consumption of one Remote Control Panel FB8 or the total of all connected RS-485 devices

ℓ = max. line length in metres

n = number of wires connected in parallel

χ = specific conductance (e.g. copper = 56 m/Ωmm^2)

π = 3.1416

d = diameter orf one wire [mm]

$A_{\varnothing 0,X}$ = cross-section of the connecting wire, Ø 0,X mm [mm²]

R_L = line resistance [Ω]

Calculation of wire cross-section

Cabeltype:

IY (St) Y n x 2 x 0,6 mm

IY (St) Y n x 2 x 0,8 mm

$$A_{\varnothing 0,x} = \frac{d^2 \times \pi}{4}$$

$$A_{\varnothing 0,6} = \frac{0,6^2 \text{ mm}^2 \times \pi}{4} = 0,28 \text{ mm}^2$$

$$A_{\varnothing 0,8} = \frac{0,8^2 \text{ mm}^2 \times \pi}{4} = 0,50 \text{ mm}^2$$

<u>Example:</u>

Two RS-485 devices (Remote Control Panel) are to be connected to a 300 m long RS-485 line.

Line resistance

$$R_L = \frac{\Delta U}{I} = \frac{2 \text{ V}}{0,060 \text{A}} = 33,4 \, \Omega$$

Required number of wires

$$n = \frac{A}{A_{\varnothing 0,8}} = \frac{0,32 \text{mm}^2}{0,50 \text{mm}^2} = 0,64 \cong 1 \text{ wire}$$

required cross-section

$$A = \frac{2 \times \ell}{\chi \times R_L} = \frac{2 \times 300 \text{m}}{56 \frac{m}{\Omega \, \text{mm}^2} \times 33,4 \, \Omega} = 0,32 \text{ mm}^2$$

<u>Result:</u>

Communications cable type IY (St) Y n x 2 x 0,8 mm may be used for connecting the RS-485 devices. It is necessary to instal one wire for each connection (12 V DC and 0 V).

5 Installation instructions

The FB 8 remote panel should be installed in a dry, readily area which is not visible from outside. The operating panel in the security area of the intruder alarm system - e.g. in the monitoring zone of an intruder detector - must be fitted using suitable screws and wall plugs to a stable internal wall subject to no mechanical distortion.

Lines outside the security area must be flush-mounted. Make sure that these are not identifiable as part of the intruder alarm system.

Use screened lines only, e.g. telecommunications cable
IY (St) Yn x 2 x 0.6 mm or 0.8 mm, for the connection.

Accessories/options

| Designation	Part no.
FB8 RCP plastic housing, white (similar RAL 9001)	384751
FB8 RCP plastic housing, grey (similar RAL 7035)	384752
Flush-mounting wall installation set, white (similar RAL 9001)	384745
19" installation set for one FB8 RCP and integrated thermal printer 384902	384746
same as 384746 but without integrated thermal printer 384902	384747

6   Installation

The voltage supply to the FB 8 remote control or connected panel must always be disconnected before the following work is carried out.
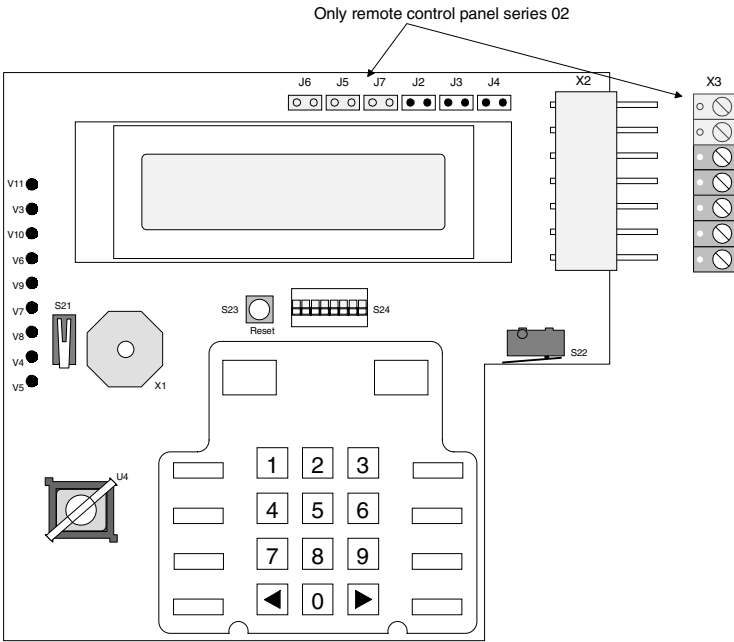Attach the housing and inserted pc board to the installation surface without mechanical distortion.
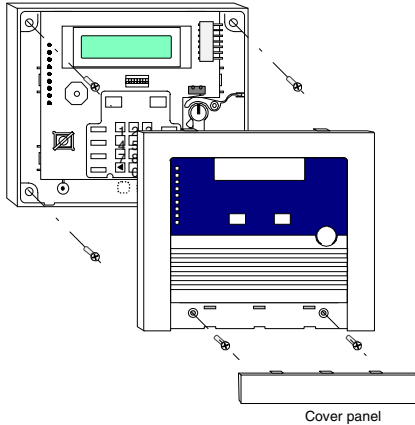
- Open operating panel housing
- Mark 4 fixing points
- Drill holes into the installation surface and insert suitable wall plugs
- Insert connection cable and fit lower part of housing
- Set operating panel address
- Close housing

Cover panel

Installation height information

approx. 800mm to 1600mm

Operator standing area

7   FB8 Operating panel pc board
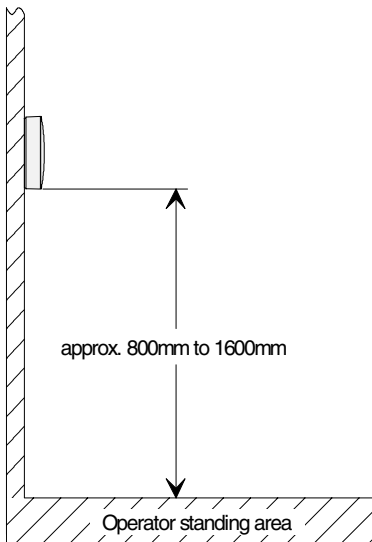
Only remote control panel series 02

| X1	internal buzzer
X2	terminal strip to control panel, soldered (FB8 series 01 only)
X3	terminal strip to control panel, screw-type connection (FB8 series 02 only)
J2 – J7	jumpers for RS485 bus device configuration (FB8 series 02 only)
U4	program memory chip
S21	cover contact/tamper open ⇒ tamper message closed ⇒ normal condition with housing closed
S22	Switch contact/keypad lock open ⇒ keypad locked closed ⇒ keypad released for operation
S23	Reset button
S24	DIL switch to set operating panel address
V3 - V11	LED status and common displays

Addressing / DIL switch S24

The address of the LED remote operating panel on the RS485 bus is set using DIP-switch S1. To do this, set switches 4 – 8 in accordance with their values.

Switches 1 – 3 are solely for test purposes. Changing the factory settings may have an adverse effect on the correct functioning of the LED remote operating panel.

Example: Setting the remote control panel address, address 9 (binary)

$$2^0 = 1$$
$$2^3 = 2 \times 2 \times 2 = 8$$
$$1 + 8 = 9$$
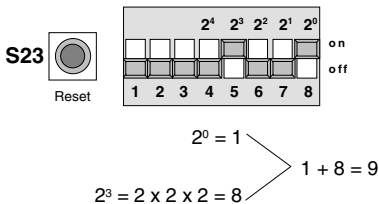
The operating panel address setting is not accepted until the reset button (S 23) on the operating panel pc board is pressed. The operating panel address must also be programmed in the customer data for the panel.

An operating panel address may not be allocated more than once within the RS485 line of an intruder alarm panel.

Assignment of areas to the operating panel
Each operating panel must be allocated to its own primary area. Operating panel entries with no specified area number, e.g. *internally armed*, always relate to the primary area of the operating panel.

In addition to the primary area, further areas can be allocated to an FB 8. All allocated areas can also be operated and indicated from this operating panel by specifying the corresponding area number. The area allocation is carried out via the customer data programming.

8   RS485 bus device configuration

The FB8 remote control panel (series 02) is connected to the RS485 interface of the control panel via the RS485 bus. Here it is important to ensure that the bus structure is strictly adhered to. Spurs and/or star-type wiring arrangements are not permissible. The maximum bus line length must not exceed 1000 m.
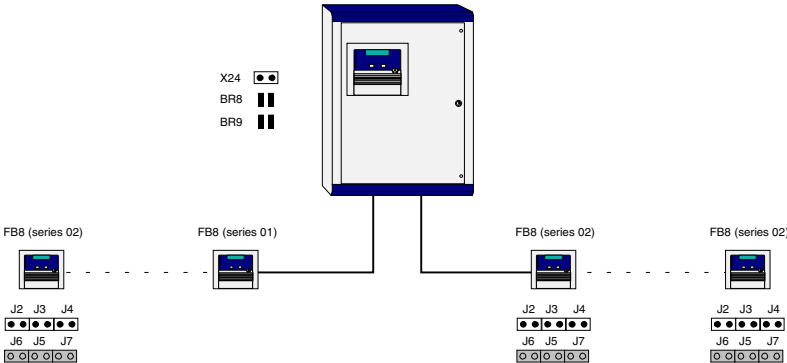
Each FB8 remote control panel (series 02) can be configured using jumpers J2 – J7. At the same time, the end-of-line resistor of the bus line is set using the jumpers. The configuration for individual applications can be seen in the following illustrations.

8.1   FB8 remote control panel (series 01/02)

Example: FB8 (series 01) as a station as well as EMZ 5008 and FB8 (series 02) as end-stations in the RS485 bus
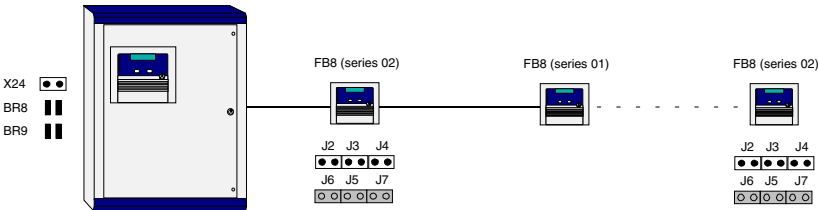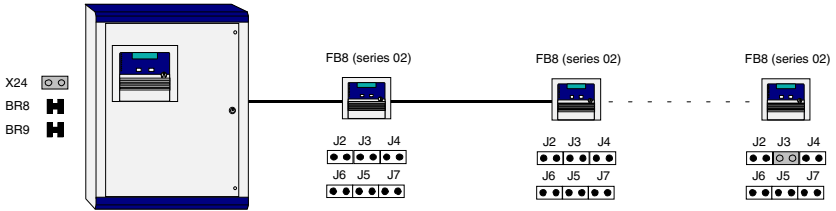

Example: FB8 (series 01) as a station as well as FB8 (series 02) as end-stations in the RS485 bus
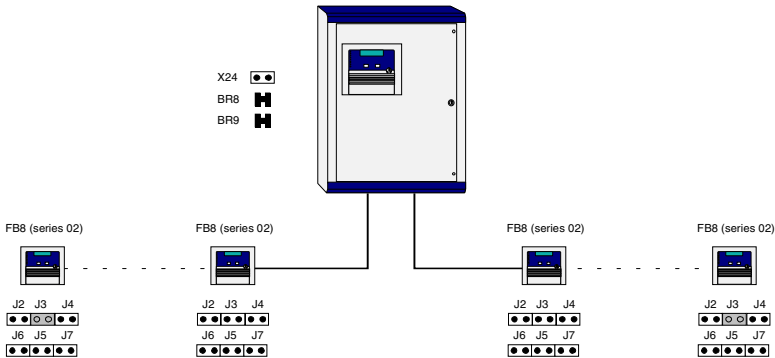
8.2 FB8 remote control panel (series 02)

Example: EMZ 5008 and FB8 (series 02) as end-stations in the RS485 bus

FB8 (series 02)   FB8 (series 02)   FB8 (series 02)

X24
BR8
BR9

J2 J3 J4   J2 J3 J4   J2 J3 J4
J6 J5 J7   J6 J5 J7   J6 J5 J7

Example: FB8 (series 02) as end-stations in the RS485 bus

X24
BR8
BR9

FB8 (series 02)   FB8 (series 02)   FB8 (series 02)   FB8 (series 02)

J2 J3 J4   J2 J3 J4   J2 J3 J4   J2 J3 J4
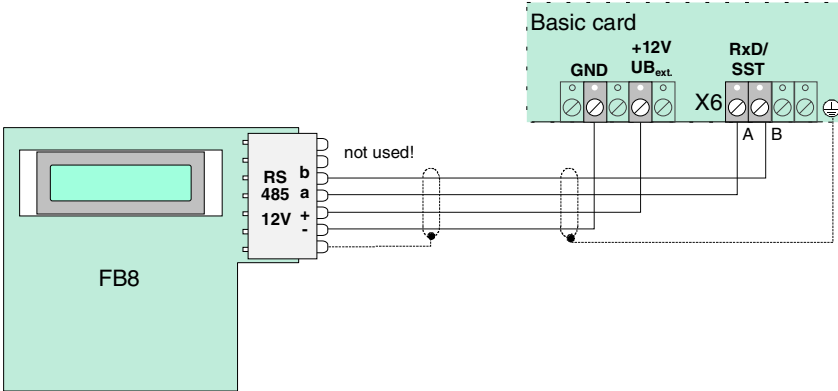J6 J5 J7   J6 J5 J7   J6 J5 J7   J6 J5 J7

Jumper connected

Jumper disconnected
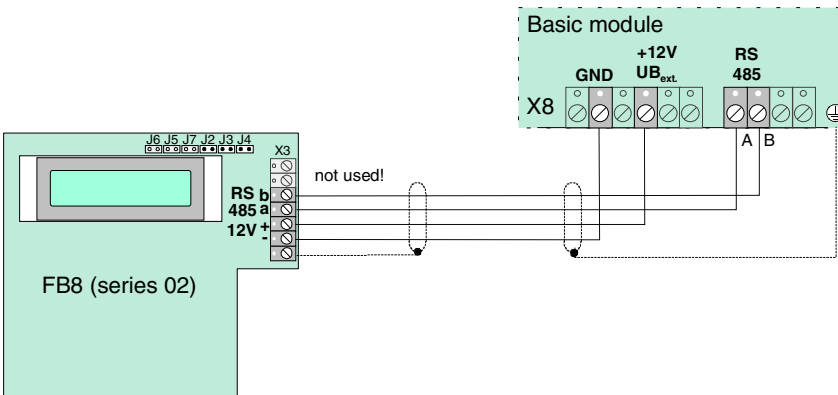
9 Connection

9.1 FB8 remote control panel (series 01)

Connecting an FB8 control panel to the basis card of the 5008 intruder alarm panel.

9.2 FB8 remote control panel (series 02)

Connecting an FB8 control panel to the basis module of the 5008 intruder alarm panel.

10 Technical data

Operating voltage:	10.5 V to 15 V DC
Rated voltage:	12 V DC

Power consumption

− quiescent current:	approx. 25 mA
− with LCD lighting:	approx. 50 mA

max. data line length:	1000 m ($\varnothing$ 0.8 mm)
max. line resistance:	65 Ohm
Ambient temperature:	0 °C to +50 °C
Storage temperature:	0 °C to +60 °C
Protection type:	IP 30
Weight:	approx. 750 g

Dimensions (W x H x D)

− Plastic housing:	206 x 177 x 48.5 (mm)
− Flush-mounting installation:	235 x 205 x 50 (mm)