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Fleischmann  
**unitro**<sup>®</sup>  
STÖRMELDESISTEME

# Flashing alarm annunciator units with signal storage FSB 16 + FSB 16-OUTR

programmable via USB, for front panel installation, 16 signal inputs

Type designation:

**FSB 16 + FSB 16-OUTR**  
flashing alarm annunciator  
16 signal inputs and relay  
output module,  
outputs freely  
assignable for each signal



## FSB 16: front panel installation

### Controls and displays

- Bright 5mm LED display
- Status indicator (green = Power ON)
- Easily exchangeable label strips
- Integrated functional buttons (+ external) + LED-test

### Parameterization

- via rear integrated **Mini USB interface** for parameterization each signal: quiescent / operating current, running- / alarm, assignment of the outputs, response delay variable max. 10min, overall: new alert / first alert

### Electrical characteristics

- 16 signal inputs with LED-display red
- Clocked input circuitry to reduce power loss
- Acknowledgeable flash warning
- Integrated mini horn
- EMC-values: UNITRO-Standard in accordance with EN 61000
- Input level for signal inputs and supply voltage: 48/60V DC, 110/125V DC, 220V DC

### Mechanical characteristics

- Compact plastic junction housing 96 x 96 x 85 + 25mm, degree of protection: front IP50
- Connection: Screw-type terminals, plug connection max. 2,5mm<sup>2</sup>

## FSB 16-OUTR: snap-on module

### Controls and displays

- LED display yellow (19x relay state), illuminated when relay contacts are closed
- LED yellow and red for internal data bus (flashing yellow on intact data transfer, continuous red light at fault)
- Status indicator (green = Power ON)

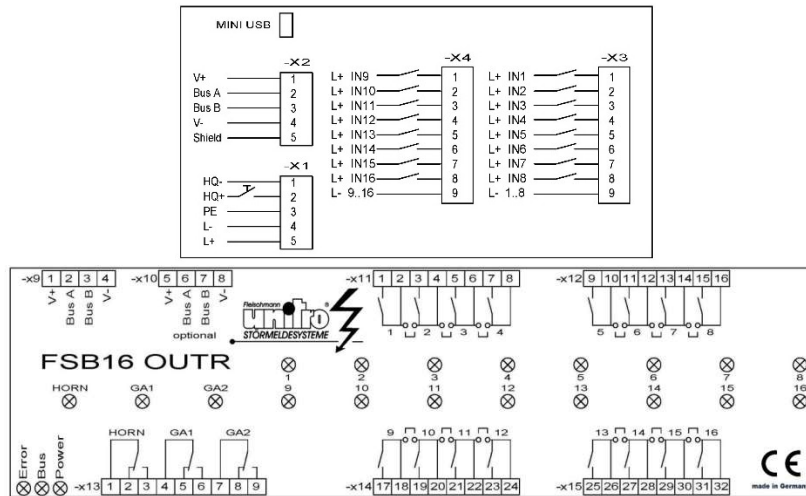
### Electrical characteristics

- 16 potential-free normally open, all poles led out relay contacts, groupable on up to 2 contact groups with common root contact via integrated jumpers
- 2x group alarm outputs change-over with "device-disturbed" monitoring, various settings are possible by means of programming software
- 1x horn output change-over, various settings are possible by means of programming software
- EMC-values: UNITRO-Standard in accordance with EN 61000
- Relay contact rating: 24-250V AC, 2A / 110V DC, 0,5A / 220V DC, 0,3A

### Mechanical characteristics

- Snap-on housing 200 x 100 x 60mm, degree of protection IP20
- Connection: Screw-type terminals, plug connection max. 2,5mm<sup>2</sup>

# Connection diagrams FSB 16 + FSB 16-OUTR



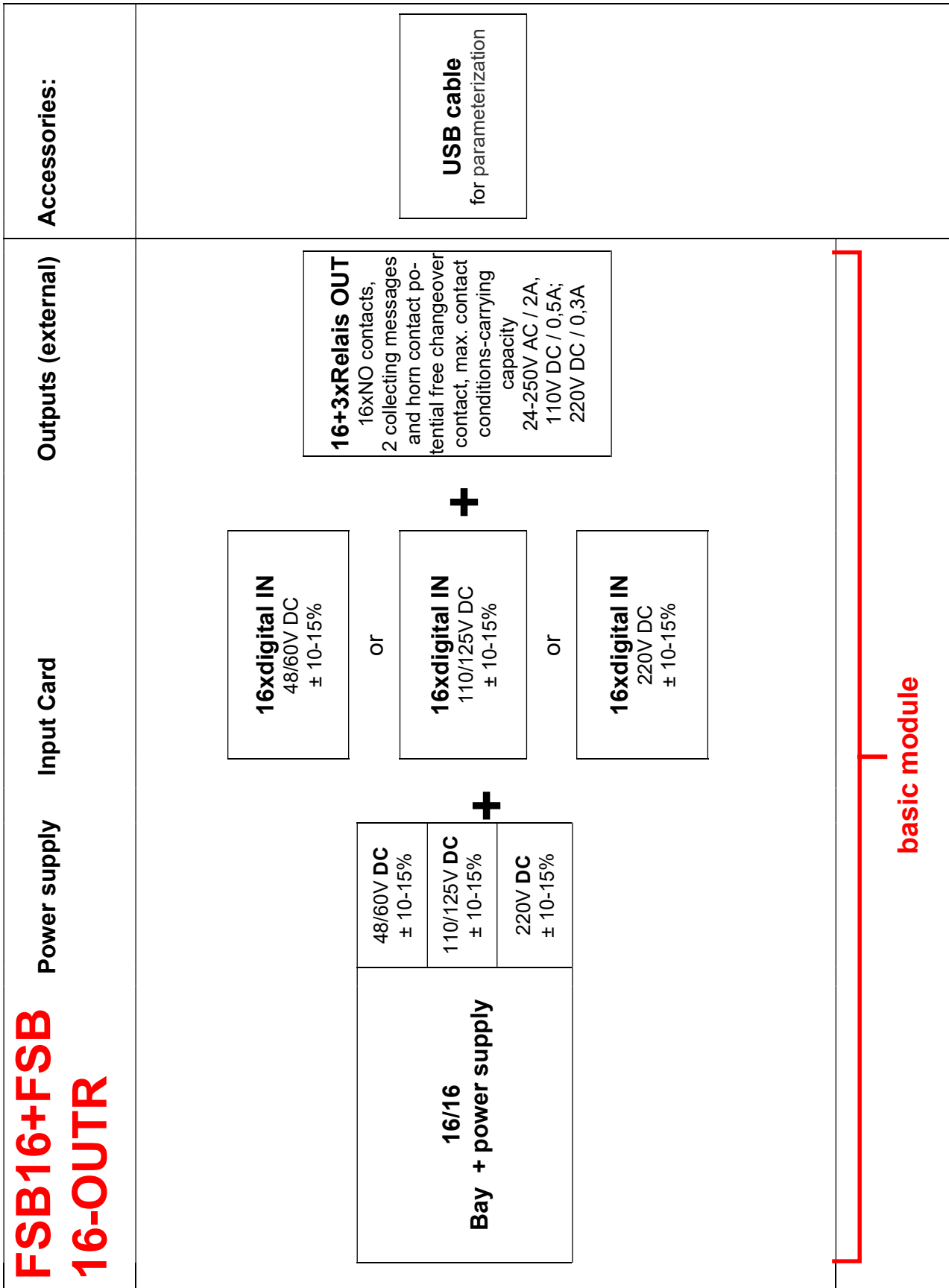
## Technical data:

- Type of construction:  
**FSB 16:**  
 control board housing 96 x 96 x 85 + 25mm  
 (cutting for installation 92 x 92 + 1mm)  
**FSB 16-OUTR:**  
 snap-on housing 200 x 100 x 60mm
- Degree of protection:  
**FSB 16:**  
 front IP50 (option IP54), rear IP20  
**FSB 16-OUTR snap-on housing** IP20
- Weight:  
**FSB 16** approx. 400g  
**FSB 16-OUTR** approx. 500g
- Climatically conditions:  
 in accordance with UNITRO-Standard
- Connection:  
 screw-type terminals/ plug connection  
 max. 2,5 mm<sup>2</sup>
- Front panel buttons:  
 acknowledge horn, acknowledge flash light,  
 LED test
- Supply voltage:  
 24V AC/DC or 48-60V AC/DC or  
 110/125V AC/DC or 220/240V AC/DC  
 voltage-adapted
- Max. fuse:  
 4A medium slow
- Input level for signal inputs:  
 48/60V DC -10% +15% max. 2,5mA  
 110/125V DC -10% +15% max. 2,5mA  
 220V DC -10% +15% max. 2mA  
 voltage-adapted  
 voltage tolerance ±10%
- Minimum signal duration:  
 DC: 10ms
- Data retention in the absence of power:  
 flash memory
- Power loss 100% ED:  
 60V DC max. 4,5W  
 110V DC / 220V DC max. 5,9W
- LED display:  
**FSB 16 control board housing, labeled with marking strips:**  
 alarm new alert: red flash light  
 alarm acknowledge: red steady light  
 alarm removed: LED dark  
  
 status LED (power on) = green steady light  
  
**FSB 16-OUTR snap-on housing:**  
 power on LED: green steady light  
 data LED: yellow flash light  
 data error LED: red steady light  
 relay contact LED: yellow
- Flashing frequencies:  
 alarms 2Hz / 0,5Hz
- Relay outputs:  
 16 full potential-free normally open contacts,  
 the input messages about software as as-  
 signed  
 (assigned to Standard 1:1)  
 (reduced by jumpers on 4 common roots)  
  
 2x group alarm messages and 1x horn  
 contact, potential-free change-over, max. con-  
 tact conditions-carrying capacity:  
 24-250V AC, 2A / 110V DC, 0,5A /  
 220V DC, 0,3A
- Parameterization:  
 via rear **Mini USB interface**  
 per input: running- / alarm  
 quiescence- / operation current  
 switch on delay max. 10min  
 assignment of the output contacts  
 overall: first up / new alert
- Leakage distances and clearances:  
 in accordance with UNITRO-Standard
- EMC, immunity of interference:  
 UNITRO-Standard,  
 in accordance with EN 61000



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## Combinations FSB 16 + FSB 16-OUTR



FSB 16-16 Programmer V1.0

Open file Save file Send data to PC Send data to FSB-USB Print Info

Signal subroutine:  
 First-up signal, single-freq. flashing light  
 New-value signal, single-freq. flashing light  
 New-value signal, two-freq. flashing light

Device name: FSB 16-16

Sprache/Language:  
 German  
 English

Factory settings  Enable programming with function keys

Version: ---

Signal inputs | Switch-on delay | Outputs | **Outputs inverted** | Input to output | Input to group signal output | Labelling


Signal input settings

Card 1

<input checked="" type="checkbox"/> Input 1 - relevant	<input type="checkbox"/> Input 1 - closed-circuit current	<input type="checkbox"/> Input 1 - operating condition
<input checked="" type="checkbox"/> Input 2 - relevant	<input type="checkbox"/> Input 2 - closed-circuit current	<input type="checkbox"/> Input 2 - operating condition
<input checked="" type="checkbox"/> Input 3 - relevant	<input type="checkbox"/> Input 3 - closed-circuit current	<input type="checkbox"/> Input 3 - operating condition
<input checked="" type="checkbox"/> Input 4 - relevant	<input type="checkbox"/> Input 4 - closed-circuit current	<input type="checkbox"/> Input 4 - operating condition
<input checked="" type="checkbox"/> Input 5 - relevant	<input type="checkbox"/> Input 5 - closed-circuit current	<input type="checkbox"/> Input 5 - operating condition
<input checked="" type="checkbox"/> Input 6 - relevant	<input type="checkbox"/> Input 6 - closed-circuit current	<input type="checkbox"/> Input 6 - operating condition
<input checked="" type="checkbox"/> Input 7 - relevant	<input type="checkbox"/> Input 7 - closed-circuit current	<input type="checkbox"/> Input 7 - operating condition
<input checked="" type="checkbox"/> Input 8 - relevant	<input type="checkbox"/> Input 8 - closed-circuit current	<input type="checkbox"/> Input 8 - operating condition

Conditions

<input checked="" type="checkbox"/> Input = relevant	<input checked="" type="checkbox"/> Input = closed-circuit current	<input checked="" type="checkbox"/> Input = operating condition
<input type="checkbox"/> Input = irrelevant	<input type="checkbox"/> Input = working current	<input type="checkbox"/> Input = fault indication



Signal inputs | Switch-on delay | Outputs | **Outputs inverted** | Input to output | Input to group signal output | Labelling

Outputs inverted

<input type="checkbox"/> Channel 1 - inverted
<input type="checkbox"/> Channel 2 - inverted
<input type="checkbox"/> Channel 3 - inverted
<input type="checkbox"/> Channel 4 - inverted
<input type="checkbox"/> Channel 5 - inverted
<input type="checkbox"/> Channel 6 - inverted
<input type="checkbox"/> Channel 7 - inverted
<input type="checkbox"/> Channel 8 - inverted

**Remark: The settings must be enabled in the tab 'Outputs'.**

Signal inputs | Switch-on delay | Outputs | Outputs inverted | **Input to output** | Input to group signal output | Labelling

Input to output

Output 1	Output 2	Output 3	Output 4	Output 5	Output 6	Output 7	Output 8
Card 1	Card 1	Card 1	Card 1	Card 1	Card 1	Card 1	Card 1
<input checked="" type="checkbox"/> Input 1	<input type="checkbox"/> Input 1	<input type="checkbox"/> Input 1	<input type="checkbox"/> Input 1	<input type="checkbox"/> Input 1	<input type="checkbox"/> Input 1	<input type="checkbox"/> Input 1	<input type="checkbox"/> Input 1
<input type="checkbox"/> Input 2	<input checked="" type="checkbox"/> Input 2	<input type="checkbox"/> Input 2	<input type="checkbox"/> Input 2	<input type="checkbox"/> Input 2	<input type="checkbox"/> Input 2	<input type="checkbox"/> Input 2	<input type="checkbox"/> Input 2
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<input type="checkbox"/> Input 7	<input type="checkbox"/> Input 7	<input type="checkbox"/> Input 7	<input type="checkbox"/> Input 7	<input type="checkbox"/> Input 7	<input type="checkbox"/> Input 7	<input checked="" type="checkbox"/> Input 7	<input type="checkbox"/> Input 7
<input type="checkbox"/> Input 8	<input type="checkbox"/> Input 8	<input type="checkbox"/> Input 8	<input type="checkbox"/> Input 8	<input type="checkbox"/> Input 8	<input type="checkbox"/> Input 8	<input type="checkbox"/> Input 8	<input checked="" type="checkbox"/> Input 8
Output 9	Output 10	Output 11	Output 12	Output 13	Output 14	Output 15	Output 16
Card 2	Card 2	Card 2	Card 2	Card 2	Card 2	Card 2	Card 2
<input checked="" type="checkbox"/> Input 1	<input type="checkbox"/> Input 1	<input type="checkbox"/> Input 1	<input type="checkbox"/> Input 1	<input type="checkbox"/> Input 1	<input type="checkbox"/> Input 1	<input type="checkbox"/> Input 1	<input type="checkbox"/> Input 1
<input type="checkbox"/> Input 2	<input checked="" type="checkbox"/> Input 2	<input type="checkbox"/> Input 2	<input type="checkbox"/> Input 2	<input type="checkbox"/> Input 2	<input type="checkbox"/> Input 2	<input type="checkbox"/> Input 2	<input type="checkbox"/> Input 2
<input type="checkbox"/> Input 3	<input type="checkbox"/> Input 3	<input checked="" type="checkbox"/> Input 3	<input type="checkbox"/> Input 3	<input type="checkbox"/> Input 3	<input type="checkbox"/> Input 3	<input type="checkbox"/> Input 3	<input type="checkbox"/> Input 3
<input type="checkbox"/> Input 4	<input type="checkbox"/> Input 4	<input type="checkbox"/> Input 4	<input checked="" type="checkbox"/> Input 4	<input type="checkbox"/> Input 4	<input type="checkbox"/> Input 4	<input type="checkbox"/> Input 4	<input type="checkbox"/> Input 4
<input type="checkbox"/> Input 5	<input type="checkbox"/> Input 5	<input type="checkbox"/> Input 5	<input type="checkbox"/> Input 5	<input checked="" type="checkbox"/> Input 5	<input type="checkbox"/> Input 5	<input type="checkbox"/> Input 5	<input type="checkbox"/> Input 5
<input type="checkbox"/> Input 6	<input type="checkbox"/> Input 6	<input type="checkbox"/> Input 6	<input type="checkbox"/> Input 6	<input type="checkbox"/> Input 6	<input checked="" type="checkbox"/> Input 6	<input type="checkbox"/> Input 6	<input type="checkbox"/> Input 6
<input type="checkbox"/> Input 7	<input type="checkbox"/> Input 7	<input type="checkbox"/> Input 7	<input type="checkbox"/> Input 7	<input type="checkbox"/> Input 7	<input type="checkbox"/> Input 7	<input checked="" type="checkbox"/> Input 7	<input type="checkbox"/> Input 7
<input type="checkbox"/> Input 8	<input type="checkbox"/> Input 8	<input type="checkbox"/> Input 8	<input type="checkbox"/> Input 8	<input type="checkbox"/> Input 8	<input type="checkbox"/> Input 8	<input type="checkbox"/> Input 8	<input checked="" type="checkbox"/> Input 8