

# Safety control unit module SB4 Module OR/165

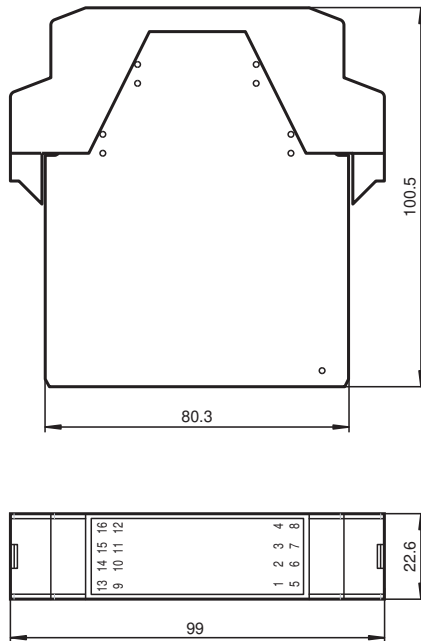


- OSSD-R/Supply-module
- Safety outputs OSSD, external status displays OSSD
- Start/Restart disable
- Operating mode can be selected by means of DIP switches
- Relay monitor
- Screw terminals or spring terminals

Safety control unit module



## Dimensions



## Technical Data

### General specifications

Operating mode Start/restart disable, relay monitor,

### Functional safety related parameters

Safety Integrity Level (SIL)	SIL 3
Performance level (PL)	PL e
Category	Cat. 4
Mission Time (T <sub>M</sub> )	20 a
B <sub>10d</sub>	see instruction manuals
Type	4

### Indicators/operating means

Release date: 2023-02-15 Date of issue: 2023-02-15 Filename: 206766\_eng.pdf

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.com

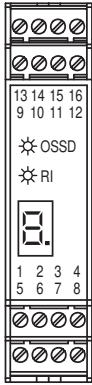
Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

**PF** PEPPERL+FUCHS

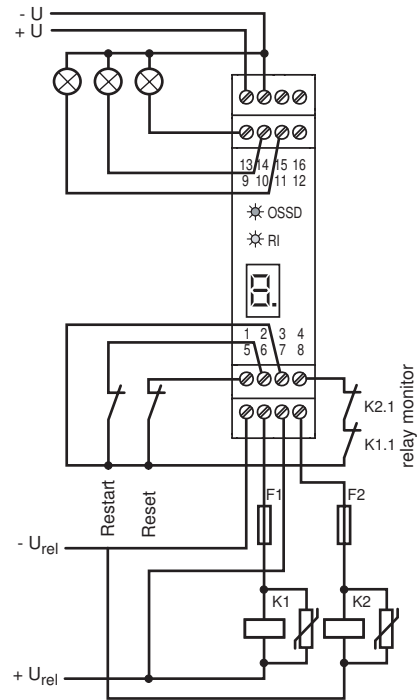
## Technical Data

Diagnostics indicator		7-segment display
Function indicator		LED red: OSSD OFF LED green: OSSD ON Yellow LED: start readiness
Control elements		DIP switch
<b>Electrical specifications</b>		
Operating voltage	U <sub>B</sub>	24 V DC ± 20 % , via SB4 Housing
<b>Input</b>		
Activation current		approx. 7 mA
Activation time		0.4 ... 1.2 s
Test input		Reset-input for system test
<b>Output</b>		
Safety output		2 relay outputs, force-guided NO-contact
Signal output		Output for displaying the switching state of the OSSDs
Switching voltage		10 V ... 250 V AC/DC
Switching current		min. 10 mA , max. 6 A AC/DC
Switching power		max. DC 24 VA , AC 230 VA
<b>Conformity</b>		
Functional safety		ISO 13849-1 ; EN 61508 part1-4
Product standard		EN 61496-1
<b>Approvals and certificates</b>		
CE conformity		CE
UL approval		cULus
TÜV approval		TÜV
<b>Ambient conditions</b>		
Ambient temperature		0 ... 50 °C (32 ... 122 °F)
Storage temperature		-20 ... 70 °C (-4 ... 158 °F)
<b>Mechanical specifications</b>		
Degree of protection		IP20
Connection		Cage tension spring terminals , Cable cross-section 0.2 ... 1.5 mm <sup>2</sup>
Material		
Housing		Polyamide (PA)
Mass		approx. 150 g


Connection



Terminal	Function
1	Reset input; normally closed contact
2	Restart input (RI); normally closed contact
3	24 V DC connection for reset, restart and RM
4	Relay monitor (RM)
5 - 6	OSSD1; potential free relay contact; normally open contact
7 - 8	OSSD2; potential free relay contact; normally open contact
9	Signal output OSSD OFF
10	Signal output OSSD ON
11	Signal output restart
12	Leave free (n.c.)
13	+24 V DC supply voltage
14	0 V DC supply voltage
15	Earth
16	Leave free (n.c.)



Accessories

	<b>SB4 Cape</b>	cover sheet
	<b>SB4 Housing 2</b>	Empty housing for Evaluation unit SB4
	<b>SB4 Housing 3</b>	Empty housing for Evaluation unit SB4
	<b>SB4 Housing 4</b>	Empty housing for Evaluation unit SB4
	<b>SB4 Housing 5</b>	Empty housing for Evaluation unit SB4
	<b>SB4 Housing 6</b>	Empty housing for Evaluation unit SB4
	<b>SB4 Housing 8</b>	Empty housing for Evaluation unit SB4

Release date: 2023-02-15 Date of issue: 2023-02-15 Filename: 206766\_eng.pdf

This module can only be operated within an evaluation device of the SafeBox SB4 type.  
The SafeBox instruction manual should be observed.

**Function**

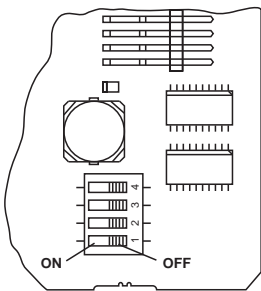
The OSSD-R/supply module contains the power supply of the SafeBox, 2 OSSDs, the relay monitor and the restart connection. This module is located in slot 1 of the SafeBox and only exists once.

The OSSDs are designed as potential free connection NO contacts. The module can be operated with or without restart interlock. Also, monitoring of the externally connected switching elements can be activated (relay monitor). The OSSD On or Off statuses are indicated via a short-circuit-proof pnp signal output. The restart output is used for indication of the start readiness status. In the case of an error, this output oscillates with 1 Hz.

**Settings**

The assembly contains 4 DIP switches for selecting the functions  
Restart and relay monitor. For selecting functions, 2 selector switches must always be actuated.

**Position of the DIP switches**



Switch	Position	Operation type
1 and 3	OFF	Without restart interlock (restart, RI)
	ON	With restart interlock (restart, RI)
2 and 4	OFF	Without relay monitor (RM)
	ON	With relay monitor (RM)

**Displays**

The OSSD-R/supply module has a red/green LED for indicating the OSSD on/off statuses, a yellow LED for the start-ready status and a 7 segment display for system diagnosis.

The 7 segment display indicates the status and the error codes of the system. The concept of error localisation is structured in such a way that the 7 segment display shows the error code. The yellow LED of the Stop 0-OSSD assembly of the group in which the error occurs is flashing and the indicators on the faulty assembly are also flashing with 5 Hz. If there is an error on the OSSD assembly itself, only the displays on this assembly are flashing.

Display	LED	Meaning
OSSD	red	OSSD outputs switched off
	green	OSSD outputs switched on
RI	yellow	Continuous light: protected area free, OSSD off, start readiness, actuate restart push button Flashing (5 Hz): Error on the card, in the switch group or system errors (see status 7 segment display)

Display	7 segment display
1	DIP switch position does not match
2	Incorrect configuration
3	Time-out at one or more muting sensors
4	Transmitter error
6	Muting lamp error
7	Simultaneousness monitoring error
8	Receiver error
9	Error at sensor channel
E	System error
F	Relay monitor error
H	Selection chain error
U	Low voltage or voltage surge detected

Release date: 2023-02-15 Date of issue: 2023-02-15 Filename: 206766\_eng.pdf