# Safety control unit module



#### **Model Number**

### IF-SB4-01

Interface for SafeBox SB4 modules 4CP and 4C

Refer to "General Notes Relating to Pepperl+Fuchs Product Information" Pepperl+Fuchs Group www.pepperl-fuchs.com

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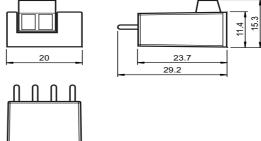
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Dimensions



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inctional safety related parameter	ers
Safety Integrity Level (SIL)	SIL 3
Performance level (PL)	PL e
Category	Cat. 4
MTTF <sub>d</sub>	100 a
Mission Time (T <sub>M</sub> )	20 a
PFH <sub>d</sub>	0.62 E-9
Туре	4
Input	
Input type	PNP OSSD signals from photoelectric safety sensors
Actuating voltage	ON: 24 V DC + 20 %/- 30 %; OFF: < 1 V
Activation current	max. 15 mA
Output	
Signal output	on SB4 modules 4CP or 4C
Switching current	min. 7.5 mA
Response time	3 ms
Conformity	
Functional safety	ISO 13849-1
Product standard	EN 61496-1
Ambient conditions	
Ambient temperature	0 50 °C (32 122 °F)
Storage temperature	-20 70 °C (-4 158 °F)
Mechanical specifications	
Degree of protection	IP20
Connection	screw terminals , Cable cross-section 0.2 1.5 mm <sup>2</sup>
Material	
Housing	ABS
Mass	approx. 10 g
General information	
Ordering information	For the connection are always two IF-SB4-01 is required
Approvals and certificates	
CE conformity	CE
TÜV approval	TÜV SÜD
NRTL approval	cNRTLus

**Electrical connection** 

#### Thru-beam sensor SLA12, SLA29 **R**1 Τ1 T1 R1 T2 R2 T2 R2 R n.c. n.c. Т R đ E ৯৯৯৫ Tr = 3ms IEC 61496-1 øøqq Made in Germany Type 4 Ω 0V ₩ R4 ÷X R3 -∰ R2 -∰ R1 123 567 ØØØØ @&@@ IE-SB4-01 Т ດ ĊĖ C PNP OSSD n.c. Signal safety sensors 0 V n.c. 1 GND R Q2 GND Q1 Light curtain SLCT Safety unit 1 Safety unit 2 OSSD1 OSSD2 GND OSSD 1.1 OSSD 1.2 OSSD 2.1 OSSD 2.2 Channel assignment to SB4 Module 4CP and 4C Receiver Transmitte Terminal channel 2 Terminal channel 3 Terminal channel 1 Terminal channel 4 24 V DC DND 5 12 16 00 NO 6 11 15 2 4 7 3 10 14 8 4 9 13 24 V DC GND Connection example

IF-SB4-01 is operated on a safety control interface unit type SafeBox SB4 on the modules SB4, 4CP, and 4C.

Please note the operating instructions for the SafeBox.

# Function

IF-SB4-01 enables the use of Photoelectric Safety Sensors with semiconductor output on the SafeBox modules:

- SB4 modules 4CP
- SB4 modules 4C

The task of the interface is to filter test pulses for cross-wire monitoring from the sensor at the connection cable between the semi-conductor outputs and inputs on the SafeBox module.

## O Note! ∏ If a sa

If a safety device with PNP outputs is connected to SafeBox "SB4 Modules 4CP" or "SB4 Modules 4C" using the IF-SB4-01, then care must be taken to ensure that the line discharges after each pulse within 200  $\mu$ s. PNP outputs, whose output drivers are constructed as a Push-Pull step, are particularly suitable for this purpose.

# Operating mode setting on the SB4-4CP and SB4-4C modules

There are 4 DIP switches on the assembly group of the SB4 modules 4CP and SB4 modules 4C. When using IF-SB4-01, the functionality of the simultaneous evaluation of neighboring channels (1 and 2, 3 and 4) has to be selected. 2 switches always have to be actuated for the function selection.

### Note!

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For correct simultaneous monitoring of the SB4 modules 4CP and SB4 modules 4C outputs, the connection of the PNP OSSD outputs must be made in pairs to the channel pair 1 and 2 or 3 and 4.

The position and operation of the DIP switches of the SB4 modules 4CP and SB4 modules 4C are given in the data sheet and the SafeBox operating instructions.

