## SMART SENSOR BUSINESS

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Part no.: 50126330 SLE46C-70.K4/4P-M12 Single beam safety device receiver



Figure can vary

# Contents

- Technical data
- · Dimensioned drawings
- · Electrical connection
- · Operation and display
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- Notes
- Accessories

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### Part no.: 50126330 – SLE46C-70.K4/4P-M12 – Single beam safety device

#### **Technical data**

Basic data			
Series	46C		
Functions			
Functions	Alignment indicator		
	Diagnostic output		
Characteristic parameters			
Characteristic parameters Type	4, IEC/EN 61496, in combination with MSI-TRMB safety relay		
SIL	3, IEC 61508, in combination with MSI-TRMB safety relay		
SILCL	3 , IEC/EN 62061, in combination with MSI-TRMB safety relay		
Performance Level (PL)	e, EN ISO 13849-1:2008, In combination with MSI-TRMB safety ready		
	lay		
MTTFd	900 years , EN ISO 13849-1		
Mission time T <sub>M</sub>	20 years , EN ISO 13849-1		
Category	4, EN ISO 13849:2008, In combination with MSI-TRMB safety relay		
Electrical data			
Protective circuit	Polarity reversal protection		
	Short circuit protected		
Performance data			
Supply voltage UB	24 V , DC , -20 20 % , Incl. residual ripple		
Residual ripple	10 % , From U <sub>B</sub>		
Open-circuit current	0 15 mA		
Outputs			
Number of digital switching outputs	2 Piece(s)		
Number of digital switching outputs Switching outputs	2 Piece(s)		
	2 Piece(s) 22 V		
Switching outputs			
Switching outputs Switching voltage high, min.	22 V		
Switching outputs Switching voltage high, min. Switching voltage low, max.	22 V 2 V		
Switching outputs Switching voltage high, min. Switching voltage low, max. Switching voltage, typ.	22 V 2 V 23 V		
Switching outputsSwitching voltage high, min.Switching voltage low, max.Switching voltage, typ.Voltage type	22 V 2 V 23 V DC 100 mA High: ≥(U <sub>B</sub> -2V)		
Switching outputsSwitching voltage high, min.Switching voltage low, max.Switching voltage, typ.Voltage typeSwitching current, max.Switching voltage	22 V 2 V 23 V DC 100 mA		
Switching outputsSwitching voltage high, min.Switching voltage low, max.Switching voltage, typ.Voltage typeSwitching current, max.Switching voltageSwitching voltageSwitching voltage	22 V 2 V 23 V DC 100 mA High: ≥(UB-2V) Low: ≤2V		
Switching outputs         Switching voltage high, min.         Switching voltage low, max.         Switching voltage, typ.         Voltage type         Switching current, max.         Switching voltage         Switching voltage         Switching output 1         Assignment	22 V 2 V 23 V DC 100 mA High: ≥(U <sub>B</sub> -2V) Low: ≤2V Connection 1, pin 2		
Switching outputs         Switching voltage high, min.         Switching voltage low, max.         Switching voltage, typ.         Voltage type         Switching current, max.         Switching voltage         Switching voltage         Switching output 1         Assignment         Switching element	22 V 2 V 23 V DC 100 mA High: ≥(UB-2V) Low: ≤2V Connection 1, pin 2 Transistor , PNP		
Switching outputs         Switching voltage high, min.         Switching voltage low, max.         Switching voltage, typ.         Voltage type         Switching current, max.         Switching voltage         Switching voltage         Switching output 1         Assignment         Switching principle	22 V 2 V 23 V DC 100 mA High: ≥(UB-2V) Low: ≤2V Connection 1, pin 2 Transistor , PNP Dark switching		
Switching outputs         Switching voltage high, min.         Switching voltage low, max.         Switching voltage, typ.         Voltage type         Switching current, max.         Switching voltage         Switching voltage         Switching output 1         Assignment         Switching principle         Function	22 V 2 V 23 V DC 100 mA High: ≥(UB-2V) Low: ≤2V Connection 1, pin 2 Transistor , PNP		
Switching outputs         Switching voltage high, min.         Switching voltage low, max.         Switching voltage, typ.         Voltage type         Switching current, max.         Switching voltage         Switching voltage         Switching output 1         Assignment         Switching element         Switching output 2	22 V         2 V         23 V         DC         100 mA         High: ≥(UB-2V)         Low: ≤2V         Connection 1, pin 2         Transistor , PNP         Dark switching         Diagnostic output		
Switching outputs         Switching voltage high, min.         Switching voltage low, max.         Switching voltage, typ.         Voltage type         Switching current, max.         Switching voltage         Switching voltage         Switching output 1         Assignment         Switching principle         Function         Switching output 2         Assignment	22 V 2 V 23 V DC 100 mA High: ≥(UB-2V) Low: ≤2V Connection 1, pin 2 Transistor , PNP Dark switching Diagnostic output Connection 1, pin 4		
Switching outputs         Switching voltage high, min.         Switching voltage low, max.         Switching voltage, typ.         Voltage type         Switching current, max.         Switching voltage         Switching output 1         Assignment         Switching principle         Function         Switching output 2         Assignment         Switching element         Switching output 2         Assignment         Switching element	22 V 2 V 23 V DC 100 mA High: ≥(UB-2V) Low: ≤2V Connection 1, pin 2 Transistor , PNP Dark switching Diagnostic output Connection 1, pin 4 Transistor , PNP		
Switching outputs         Switching voltage high, min.         Switching voltage low, max.         Switching voltage, typ.         Voltage type         Switching current, max.         Switching voltage         Switching output 1         Assignment         Switching principle         Function         Switching output 2         Assignment         Switching principle         Function         Switching element         Switching output 2         Assignment         Switching element         Switching principle         Switching principle         Switching element         Switching principle	22 V         2 V         23 V         DC         100 mA         High: ≥(UB-2V)         Low: ≤2V         Connection 1, pin 2         Transistor , PNP         Dark switching         Diagnostic output         Connection 1, pin 4         Transistor , PNP         Light switching         Light switching		
Switching outputs         Switching voltage high, min.         Switching voltage low, max.         Switching voltage, typ.         Voltage type         Switching current, max.         Switching voltage         Switching output 1         Assignment         Switching principle         Function         Switching output 2         Assignment         Switching element         Switching output 2         Assignment         Switching element	22 V 2 V 23 V DC 100 mA High: ≥(UB-2V) Low: ≤2V Connection 1, pin 2 Transistor , PNP Dark switching Diagnostic output Connection 1, pin 4 Transistor , PNP		
Switching outputsSwitching voltage high, min.Switching voltage low, max.Switching voltage, typ.Voltage typeSwitching current, max.Switching voltageSwitching voltageSwitching output 1AssignmentSwitching principleFunctionSwitching output 2AssignmentSwitching elementSwitching principleFunctionSwitching principleFunctionSwitching principleFunctionSwitching principleFunction	22 V         2 V         23 V         DC         100 mA         High: ≥(UB-2V)         Low: ≤2V         Connection 1, pin 2         Transistor , PNP         Dark switching         Diagnostic output         Connection 1, pin 4         Transistor , PNP         Light switching         Light switching		
Switching outputs         Switching voltage high, min.         Switching voltage low, max.         Switching voltage, typ.         Voltage type         Switching current, max.         Switching voltage         Switching output 1         Assignment         Switching principle         Function         Switching output 2         Assignment         Switching principle         Function         Switching principle         Function         Switching principle         Function         Switching principle         Function	22 V         2 V         23 V         DC         100 mA         High: ≥(UB-2V)         Low: ≤2V         Connection 1, pin 2         Transistor , PNP         Dark switching         Diagnostic output         Connection 1, pin 4         Transistor , PNP         Light switching         Switching output		
Switching outputsSwitching voltage high, min.Switching voltage low, max.Switching voltage, typ.Voltage typeSwitching current, max.Switching voltageSwitching voltageSwitching output 1AssignmentSwitching principleFunctionSwitching output 2AssignmentSwitching elementSwitching principleFunctionSwitching principleFunctionSwitching principleFunctionSwitching principleFunction	22 V 2 V 23 V DC 100 mA High: ≥(UB-2V) Low: ≤2V Connection 1, pin 2 Transistor , PNP Dark switching Diagnostic output Connection 1, pin 4 Transistor , PNP Light switching		

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### Part no.: 50126330 – SLE46C-70.K4/4P-M12 – Single beam safety device

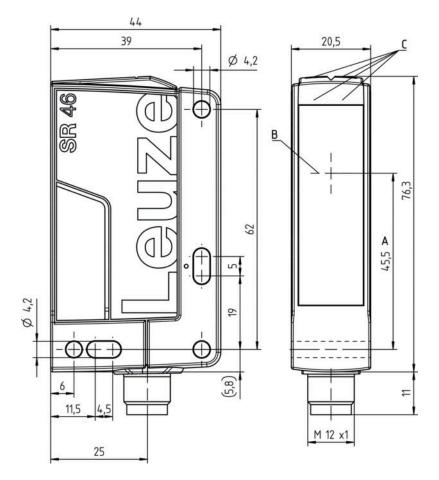
Connection		
Number of connections	1 Piece(s)	
Connection 1		
Type of connection	Connector	
Function	Signal OUT Voltage supply	
Thread size	M12	
Material	Plastic	
No. of pins	4 -pin	
Mechanical data		
Design	Cubic	
Dimension (W x H x L)	20.5 mm x 76.3 mm x 44 mm	
Housing material	Plastic , PC-PBT	
Lens cover material	Plastic / PMMA	
Net weight	50 g	
Housing color	Yellow	
Type of fastening	Through-hole mounting	
Compatibility of materials	ECOLAB	
Operation and display		
Type of display	LED	
Number of LEDs	2 Piece(s)	
	2 Piece(s)	
Environmental data		
	2 Piece(s) -30 60 °C -30 70 °C	
<i>Environmental data</i> Ambient temperature, operation	-30 60 °C	
<i>Environmental data</i> Ambient temperature, operation Ambient temperature, storage	-30 60 °C	
Environmental data Ambient temperature, operation Ambient temperature, storage Certifications	-30 60 °C	
<i>Environmental data</i> Ambient temperature, operation	-30 60 °C -30 70 °C IP 67	
Environmental data Ambient temperature, operation Ambient temperature, storage Certifications Degree of protection Protection class	-30 60 °C -30 70 °C IP 67 IP 69K	
<i>Environmental data</i> Ambient temperature, operation Ambient temperature, storage <i>Certifications</i> Degree of protection	-30 60 °C -30 70 °C IP 67 IP 69K III , Rating voltage 50 V c TÜV NRTL US	
Environmental data Ambient temperature, operation Ambient temperature, storage Certifications Degree of protection Protection class Certifications	-30 60 °C -30 70 °C IP 67 IP 69K III , Rating voltage 50 V c TÜV NRTL US c UL US	
Environmental data Ambient temperature, operation Ambient temperature, storage Certifications Degree of protection Protection class Certifications Standards applied Classification	-30 60 °C -30 70 °C IP 67 IP 69K III , Rating voltage 50 V c TÜV NRTL US c UL US	
Environmental data Ambient temperature, operation Ambient temperature, storage Certifications Degree of protection Protection class Certifications Standards applied	-30 60 °C -30 70 °C IP 67 IP 69K III , Rating voltage 50 V c TÜV NRTL US c UL US IEC 60947-5-2, IEC/EN 61496 85365019	
Environmental data Ambient temperature, operation Ambient temperature, storage Certifications Degree of protection Protection class Certifications Standards applied Classification Customs tariff number	-30 60 °C -30 70 °C IP 67 IP 69K III , Rating voltage 50 V c TÜV NRTL US c UL US IEC 60947-5-2, IEC/EN 61496 85365019 27272701	
Environmental data Ambient temperature, operation Ambient temperature, storage Certifications Degree of protection Protection class Certifications Standards applied Classification Customs tariff number ecl@ss 8.0	-30 60 °C -30 70 °C IP 67 IP 69K III , Rating voltage 50 V c TÜV NRTL US c UL US IEC 60947-5-2, IEC/EN 61496 85365019	

#### **Dimensioned drawings**

All dimensions in millimeters

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Part no.: 50126330 – SLE46C-70.K4/4P-M12 – Single beam safety device



A Optical axis

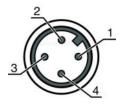
B Transmitter and receiver

C Green/yellow indicator diodes

### **Electrical connection**

Connection 1	
Type of connection	Connector
Function	Signal OUT Voltage supply
Thread size	M12
Туре	Male
Material	Plastic
No. of pins	4 -pin
Encoding	A-coded

Pin	Pin assignment	Conductor color
1	+24V	Brown
2	Diagnosis	White
3	GND	Blue
4	OUT	Black



### Part no.: 50126330 - SLE46C-70.K4/4P-M12 - Single beam safety device

#### **Operation and display**

#### LEDs

LED	Display	Meaning
1	Green, continuous light	Ready
2	Yellow, continuous light	Light path free

#### Suitable transmitters

	Part no.	Designation	Article	Description
Į	50126548	SLS46C-70.K48-M12	Single beam safety device transmitter	Special design: Activation input Operating range: 5 70 m Operating range limit: 5 80 m Light source: LED, Red Response time: 2.5 ms Connection: Connector, M12, Plastic, 4 -pin

#### Notes

Observe intended use!

- The product may only be put into operation by competent persons.
- Only use the product in accordance with its intended use.

#### ATTENTION!

- The SLS46CK4 safety sensors are a type 4 AOPD only in combination with the MSI-TRM safety relays.
- For mounting, electrical connection and operation, the operating instructions of the MSI-TRM safety relays are to be observed.

#### For UL applications:

- Certification: UL 508, C22.2 No.14-13
- Only for use in "class 2" circuits
- These proximity switches shall be used with UL Listed Cable assemblies rated 30V, 0.5A min, in the field installation, or equivalent (categories: CYJV/CYJV7 or PVVA/PVVA7)
- Light source: Average life expectancy 100,000 h at an ambient temperature of 25 °C

#### Accessories

Connection technology - Connection unit

Part no.	Designation	Article	Description
547931	MSI-TRMB-01	Safety relay	
547932	MSI-TRMB-02	Safety relay	

## Connection technology - Connection cables

Part no.	Designation	Article	Description
50130690	KD U-M12-4W- V1-050	Connection cable	Connection 1: Connector, M12, Angled, Female, A-coded, 4 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC

## Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
E13	50105315	BT 46	Mounting device	Design of mounting device: Angle, L-shape Fastening, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Rigid Material: Metal

### Muting - Mounting systems

Part no.	Designation	Article	Description
50117252	BTU 300M-D12	Mounting system	Contains: 2x M4 x 25 screw, 2x M4 x 20 screw, 4x position washers Design of mounting device: Mounting system Fastening, at system: For 12 mm rod, Sheet-metal mounting Mounting bracket, at device: Screw type, Suited for M4 screws Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal

Note

A list with all available accessories can be found on the Leuze electronic website in the Download tab of the article detailed page.