Technical data sheet
Throughbeam photoelectric sensor transmitter
Part no.: 50148472
LS49CI-M12



For Illustration purposes only

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Technical data

Basic data

Series	49C
Operating principle	Throughbeam principle
Device type	Transmitter

Optical data

Operating range	0.5 ... 120 m (guaranteed operating range)
Operating range limit	0 ... 150 m (typical operating range)
Light source	LED, Infrared
Wavelength	860 nm
Transmitted-signal shape	Pulsed
LED group	Exempt group (in acc. with EN 62471)

Electrical data

Protective circuit	Polarity reversal protection
	Short circuit protected
	Transient protection

Performance data

Supply voltage U_B	10 ... 30 V, DC, Incl. residual ripple
Residual ripple	0 ... 15 %, From U_B
Open-circuit current	0 ... 20 mA

Time behavior

Readiness delay	300 ms

Connection

Number of connections	1 Piece(s)

Connection 1

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

Mechanical data

Dimension (W x H x L)	31 mm x 104 mm x 55.5 mm
Housing material	Plastic
Plastic housing	PC
Lens cover material	Plastic
Net weight	150 g
Housing color	Red
Type of fastening	Through-hole mounting
	Via optional mounting device
Recommended tightening torque for M3 fastening	0.9 N·m
Recommended tightening torque for M4 fastening	1.4 N·m

Operation and display

Type of display	LED
Number of LEDs	3 Piece(s)

Environmental data

Ambient temperature, operation	-40 ... 60 °C
Ambient temperature, storage	-40 ... 70 °C

Certifications

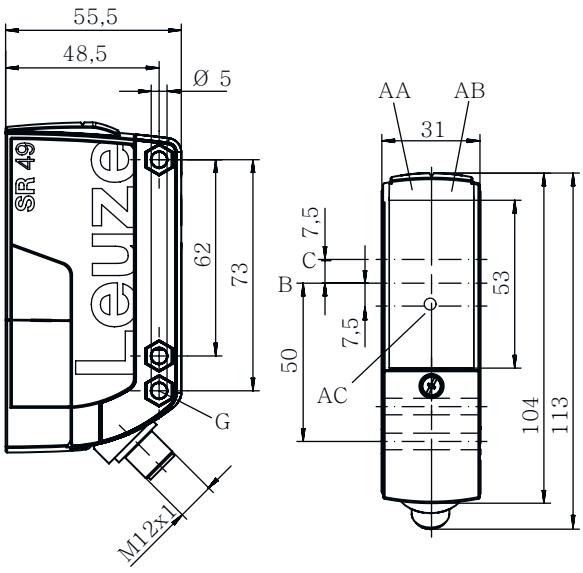
Degree of protection	IP 67
Protection class	II
Approvals	c UL US
Standards applied	IEC 60947-5-2

Classification

Customs tariff number	85365080
ECLASS 5.1.4	27270901
ECLASS 8.0	27270901
ECLASS 9.0	27270901
ECLASS 10.0	27270901
ECLASS 11.0	27270901
ECLASS 12.0	27270901
ECLASS 13.0	27270901
ECLASS 14.0	27270901
ECLASS 15.0	27270901
ECLASS 16.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716
ETIM 8.0	EC002716
ETIM 9.0	EC002716
ETIM 10.0	EC002716
UNSPSC 26.08	39121528

Dimensioned drawings

All dimensions in millimeters



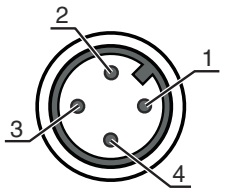
AA Green LED
AB Yellow LED
AC Yellow LED
B Optical axis
C Transmitter
G Countersinking for SK nut M5, 4.2 mm deep

Electrical connection

Connection 1

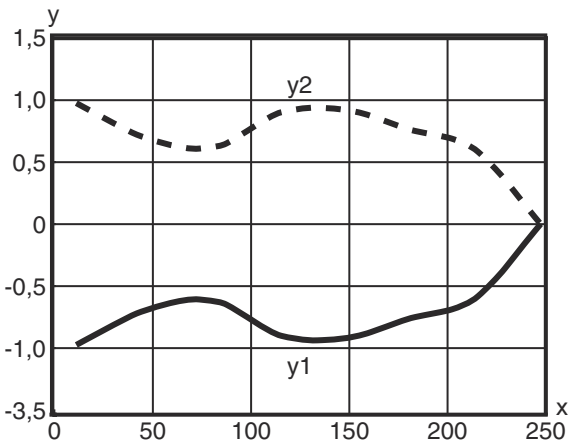
Function	Voltage supply
Type of connection	Connector
Thread size	M12
Type	Male
Material	Plastic
No. of pins	4 -pin
Encoding	A-coded

Pin	Pin assignment
1	V+
2	n.c.
3	GND
4	n.c.

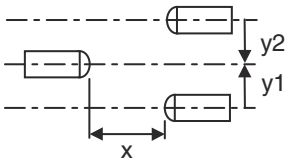


Diagrams

Typ. response behavior



x Distance [m]
y Misalignment [m]



Operation and display

LED	Display	Meaning
1	Green, continuous light	Operational readiness
2	Yellow, continuous light	Operating voltage applied
3	Yellow, continuous light (**alignment display** behind lens cover)	Transmitted beam active

Suitable receivers

	Part no.	Designation	Operating range Operating range limit	Description
	50148471	LE49CI.1/4X-M12	0.5 ... 120 m 0 ... 150 m	Operating range limit: 0 ... 150 m Supply voltage: DC Digital switching outputs: 1 Piece(s) Switching output 1: Transistor, PNP, Light switching Switching frequency: 500 Hz Connection: Connector, M12, Plastic, 4 -pin Operational controls: 270° potentiometer, Teach button

Part number code

Part designation: **AAA49Cd.EEfG/iJ-KL**

AAA49C	**Operating principle / construction** PRK49C: Retro-reflective photoelectric sensor with polarization filter HT49C: Diffuse reflection sensor with background suppression LS49C: Throughbeam photoelectric sensor transmitter LE49C: Throughbeam photoelectric sensor receiver
d	**Light type** n/a: red light I: infrared light

Part number code

EE	**Operating voltage** n/a: 10 ... 30 V, DC UC: 20 … 250V AC/DC (all-mains design)
f	**Equipment** H: with heating D: Depolarizing media 1: 270° potentiometer 8: activation input (activation with high signal)
iJ	**Switching output / Function / OUT1OUT2** 2: NPN transistor output, light switching N: NPN transistor output, dark switching 4: PNP transistor output, light switching P: PNP transistor output, dark switching W: warning output TS: Relay, NC contact/NO contact M4: Low impedance MOSFET semiconductor switching output, NO contact X: pin not used
KL	**Electrical connection** TB: Terminal block - terminal compartment with spring terminals (5 x 1.5 mm²) n/a: cable, standard length 2000 mm M12: M12 connector, 4-pin (plug)

Note

- A list with all available device types can be found on the Leuze website at www.leuze.com.

Notes

Observe intended use!

- This product is not a safety sensor and is not intended as personnel protection.
- The product may only be put into operation by competent persons.
- Only use the product in accordance with its intended use.

For UL applications:

- For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code).
- 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)

Further information

- All-insulated, rating voltage 250 VAC
- The use of connection cables with angled connector is not recommended.

Accessories

Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50130652	KD U-M12-4A-V1-050	Connection cable	Application: Chemical resistant Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin Connector, LED: No Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC

Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
	50025570	BT 96	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

Mounting technology - Rod mounts

	Part no.	Designation	Article	Description
	50128380	BTU 460M-D12	Mounting system	Design of mounting device: Mounting system Fastening, at system: For 12 mm rod Mounting bracket, at device: Screw type Type of mounting device: Adjustable, Turning, 360° Material: Metal

Note

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