Leuze electronic

the sensor people

Part no.: 50137197
LS3CL1/XX
Throughbeam photoelectric sensor transmitter

CE

c UL us LISTED

ECOLAB

IP 69K

IP 67

Figure can vary

Contents

SMART **SENSOR** BUSINESS

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Part no.: 50137197 – LS3CL1/XX – Throughbeam photoelectric sensor

Technical data

Basic data	
Series	3C
Operating principle	Throughbeam principle
Device type	Transmitter

Optical data	
Operating range	Guaranteed operating range
Operating range	0 ... 5 m
Operating range limit	Typical operating range
Operating range limit	0 ... 10 m
Beam profile	Collimated
Light source	Laser, Red
Laser light wavelength	650 nm
Laser class	1, IEC / EN 60825-1:2014
Transmitted-signal shape	Pulsed
Light-spot size [at sensor distance]	2.5 mm x 2 mm [1,000 mm]

Electrical data	
Protective circuit	Polarity reversal protection Short circuit protected

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

Timing	
Readiness delay	300 ms

Connection	

Connection 1	
Type of connection	Cable
Function	Voltage supply
Cable length	2,000 mm
Sheathing material	PUR
Cable color	Black
Number of conductors	4 -wire
Wire cross section	0.2 mm²

Mechanical data	
Design	Cubic
Dimension (W x H x L)	11.4 mm x 34.2 mm x 18.3 mm
Housing material	Plastic, PC-ABS
Lens cover material	Plastic / PMMA
Net weight	50 g
Housing color	Red
Type of fastening	Through-hole mounting Via optional mounting device
Compatibility of materials	ECOLAB

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Operation and display	
Type of display	LED
Number of LEDs	2 Piece(s)

Environmental data	
Ambient temperature, operation	-40 ... 55 °C
Ambient temperature, storage	-40 ... 70 °C

Certifications	
Degree of protection	IP 67 IP 69K
Protection class	III
Certifications	c UL US
Standards applied	IEC 60947-5-2

Classification	
eCl@ss 8.0	27270901
eCl@ss 9.0	27270901
ETIM 5.0	EC002716

Suitable receivers

	Part no.	Designation	Article	Description
	50137204	LE3CL1.1/6G	Throughbeam photoelectric sensor receiver	Operating range limit: 0 ... 10 m Supply voltage: DC Digital switching outputs: 2 Piece(s) Digital switching output 1: Transistor, Push-pull, Light switching (PNP)/dark switching (NPN) Digital switching output 2: Transistor, Push-pull, Dark switching (PNP)/light switching (NPN) Switching frequency: 3,000 Hz Connection: Connector, M8, Metal, 4 -pin Operational controls: 270° potentiometer

Dimensioned drawings

All dimensions in millimeters
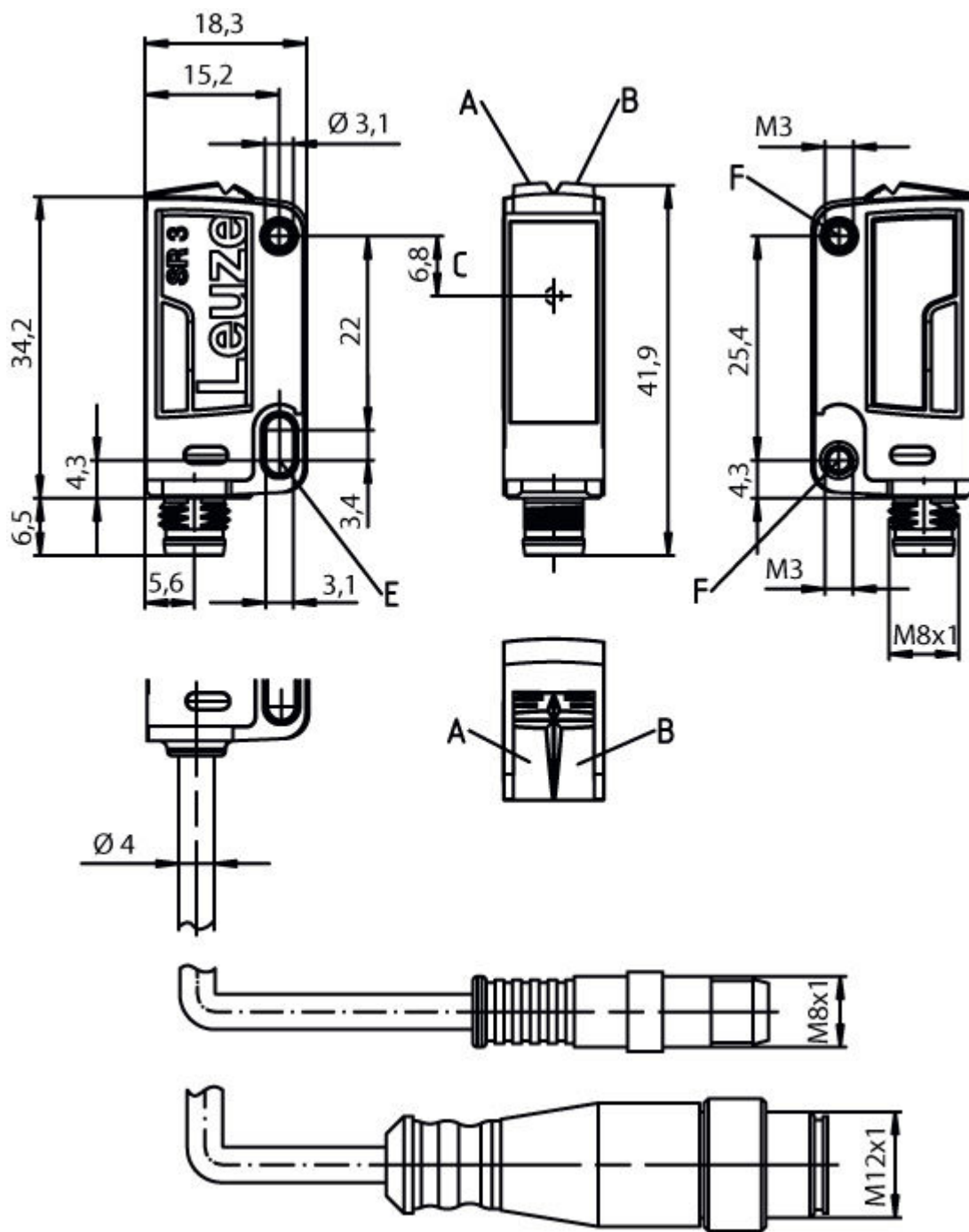
A   Green LED
B   Yellow LED
C   Optical axis
E   Mounting sleeve (standard)
F   Threaded sleeve (3C.B series)

Electrical connection

Connection 1	
Type of connection	Cable
Function	Voltage supply
Cable length	2,000 mm

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Connection 1	
Sheathing material	PUR
Cable color	Black
Number of conductors	4 -wire
Wire cross section	0.2 mm²

Conductor color	Conductor assignment
Brown	V+
White	n.c.
Blue	GND
Black	n.c.

Operation and display

LEDs

LED	Display	Meaning
1	Green, continuous light	Operational readiness
2	Yellow, continuous light	Transmitted beam active

Accessories

Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
	50118542	BT 200M.5	Mounting bracket	Design of mounting device: Angle, L-shape Mounting bracket, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Adjustable Material: Stainless steel
	50124651	BT 205M	Mounting device set	Contains: 10x Design of mounting device: Angle, L-shape Mounting bracket, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Rigid Material: Metal
	50060511	BT 3	Mounting device	Design of mounting device: Angle, L-shape Mounting bracket, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Rigid Material: Metal
	50105585	BT 3.1	Mounting strap set	Contains: 10x Design of mounting device: Retaining clip Mounting bracket, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Rigid Material: Metal

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	Part no.	Designation	Article	Description
	50105546	BT 3B	Mounting device	Design of mounting device: Angle, L-shape Mounting bracket, 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
	50117830	BTP 200M-D10	Mounting system	Design of mounting device: Protection hood Mounting bracket, at system: For 10 mm rod Mounting bracket, at device: Screw type Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal
	50117829	BTP 200M-D12	Mounting system	Design of mounting device: Protection hood Mounting bracket, at system: For 12 mm rod Mounting bracket, at device: Screw type Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal
	50117828	BTP 200M-D14	Mounting system	Design of mounting device: Protection hood Mounting bracket, at system: For 14 mm rod Mounting bracket, at device: Screw type Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal
	50117256	BTU 200M-D10	Mounting system	Contains: 2x M3 x 18 screw, 2x position washers Design of mounting device: Mounting system Mounting bracket, at system: For 10 mm rod, Sheet-metal mounting Mounting bracket, at device: Screw type Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal
	50117255	BTU 200M-D12	Mounting system	Contains: 2x M3 x 18 screw, 2x position washers Design of mounting device: Mounting system Mounting bracket, at system: For 12 mm rod, Sheet-metal mounting Mounting bracket, at device: Screw type Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal
	50117254	BTU 200M-D14	Mounting system	Contains: 2x M3 x 18 screw, 2x position washers Design of mounting device: Mounting system Mounting bracket, at system: For 14 mm rod, Sheet-metal mounting Mounting bracket, at device: Screw type Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal
	50120426	BTU 200M.5-D12	Mounting system	Contains: 2x M3 x 18 screw, 2x M3 mounting nut, 2x position washers Design of mounting device: Mounting system Mounting bracket, at system: For 12 mm rod Mounting bracket, at device: Screw type Type of mounting device: Turning, 360°, Clampable, Adjustable Material: Stainless steel

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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)

WARNING! LASER RADIATION – LASER CLASS 1

The device satisfies the requirements of IEC 60825-1:2014 (EN 60825-1:2014) safety regulations for a product of **laser class 1** as well as the U.S. 21 CFR 1040.10 regulations with deviations corresponding to "Laser Notice No. 50" from June 24, 2007.

- Observe the applicable statutory and local laser protection regulations.

- The device must not be tampered with and must not be changed in any way.
  There are no user-serviceable parts inside the device.
  Repairs must only be performed by Leuze electronic GmbH + Co. KG.

- Light source: Average life expectancy 50,000 h at an ambient temperature of 25 °C

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