

Technical data sheet

Throughbeam photoelectric sensor

Part no.: 50138586

LS15/XX



Figure can vary

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Technical data

Basic data

Series	15
Operating principle	Throughbeam principle
Device type	Transmitter

Optical data

Operating range	Guaranteed operating range
Operating range	0 ... 25 m
Operating range limit	Typical operating range
Operating range limit	0 ... 30 m
Light source	LED, Red
LED light wavelength	640 nm
Transmitted-signal shape	Pulsed
LED group	Exempt group (in acc. with EN 62471)

Electrical data

Protective circuit	Polarity reversal protection
	Short circuit protected
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

Timing

Readiness delay	300 ms
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Connection

Connection 1	
Function	Voltage supply
Type of connection	Cable
Cable length	2,000 mm
Sheathing material	PUR
Cable color	Black
Number of conductors	3 -wire
Wire cross section	0.14 mm ²

Mechanical data

Dimension (W x H x L)	15 mm x 42.7 mm x 30 mm
Housing material	Plastic, ABS
Lens cover material	Plastic
Net weight	37 g
Housing color	Black
Type of fastening	Through-hole mounting
	Via optional mounting device

Operation and display

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

Environmental data

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

Certifications

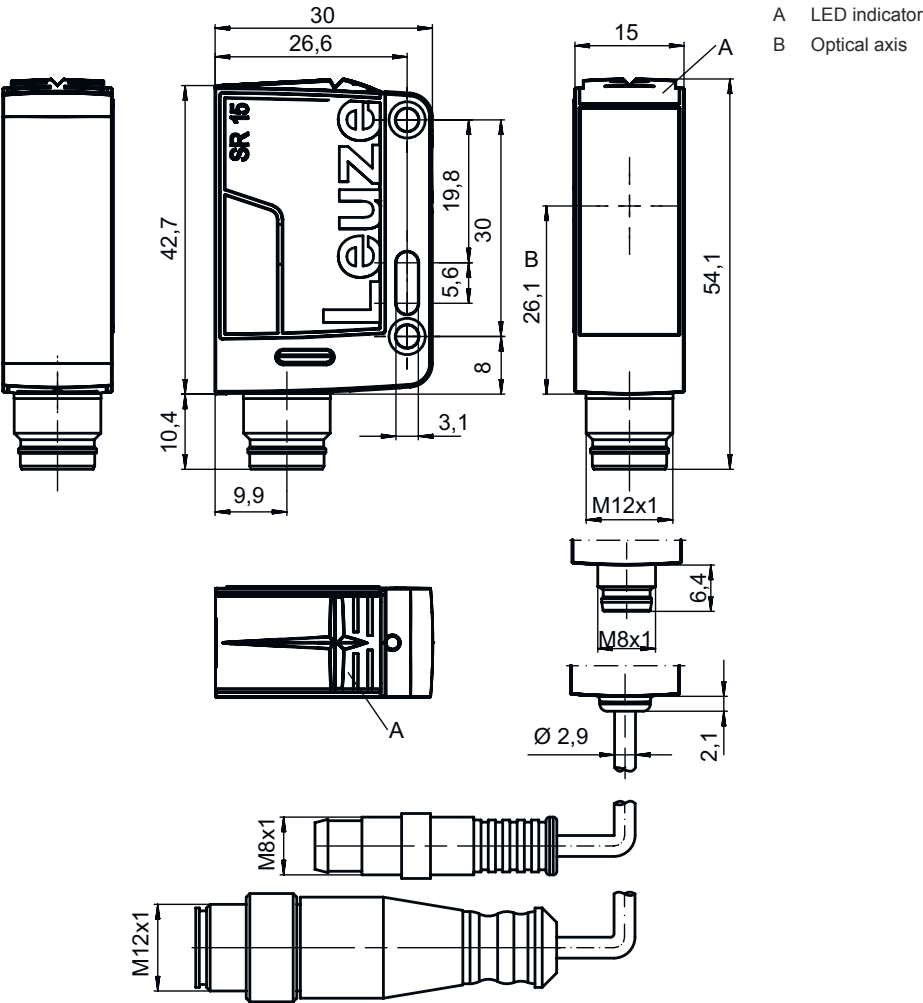
Degree of protection	IP 67
Protection class	III
Certifications	c UL US
Standards applied	IEC 60947-5-2

Classification

Customs tariff number	85365019
eCl@ss 8.0	27270901
eCl@ss 9.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716

Dimensioned drawings

All dimensions in millimeters



Electrical connection

Connection 1

Function	Voltage supply
Type of connection	Cable
Cable length	2,000 mm
Sheathing material	PUR
Cable color	Black
Number of conductors	3 -wire
Wire cross section	0.14 mm²

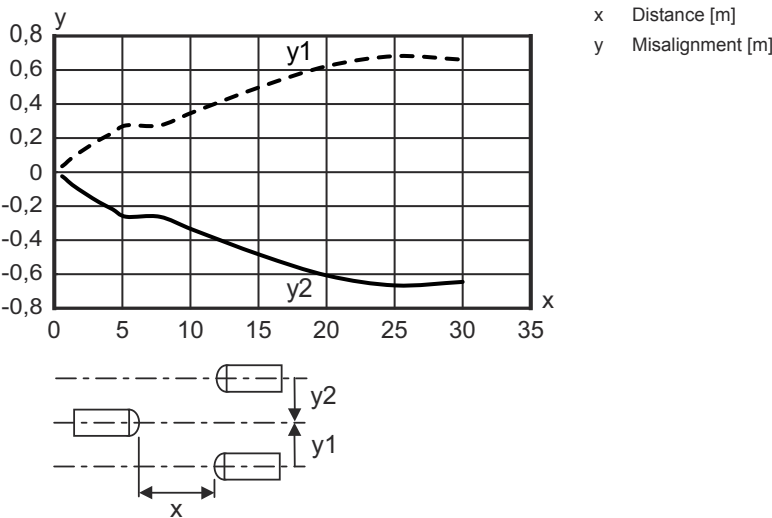
Conductor color

Conductor assignment

Brown	V+
Black	n.c.
Blue	GND

Diagrams

Typ. response behavior



Operation and display

LED	Display	Meaning
1	Yellow, continuous light	Object detected
2	Green, continuous light	Operational readiness

Suitable receivers

	Part no.	Designation	Article	Description
	50138591	LE15/2X	Throughbeam photoelectric sensor receiver	Operating range limit: 0 ... 30 m Supply voltage: DC Digital switching outputs: 1 Piece(s) Switching output 1: Transistor, NPN, Light switching Switching frequency: 500 Hz Connection: Cable, 2,000 mm, 4 -wire
	50138590	LE15/4X	Throughbeam photoelectric sensor receiver	Operating range limit: 0 ... 30 m Supply voltage: DC Digital switching outputs: 1 Piece(s) Switching output 1: Transistor, PNP, Light switching Switching frequency: 500 Hz Connection: Cable, 2,000 mm, 4 -wire

Part number code

Part designation: AAA15d.EE/ ff-HH

AAA15	Operating principle / construction HT15: diffuse reflection sensor with background suppression PRK15: retro-reflective photoelectric sensor with polarization filter LS15: throughbeam photoelectric sensor transmitter LE15: throughbeam photoelectric sensor receiver
d	Light type n/a: red light l: infrared light

Part number code

EE	Equipment 1: adjustable range D: detection of stretch-wrapped objects
ff	Switching output / function / OUT1OUT2 (OUT1 = pin 4, OUT2 = pin 2) 2: NPN transistor output, light switching N: NPN transistor output, dark switching 4: PNP transistor output, light switching P: PNP transistor output, dark switching X: pin not used
HH	Electrical connection n/a: cable, standard length 2000 mm, 4-wire M8: M8 connector, 4-pin (plug) 200-M12: cable, length 200 mm with M12 connector, 4-pin, axial (plug) 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:



↪ 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)

Further information

- Light source: Average life expectancy 100,000 h at an ambient temperature of 25 °C

Accessories

Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
	50040269	BT 25	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
	50117829	BTP 200M-D12	Mounting system	Design of mounting device: Protection hood Fastening, at system: For 12 mm rod Mounting bracket, at device: Screw type Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal
	50117255	BTU 200M-D12	Mounting system	Design of mounting device: Mounting system Fastening, at system: For 12 mm rod, Sheet-metal mounting Mounting bracket, at device: Screw type, Suited for M3 screws Type of mounting device: Clampable, 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.