

Technical data sheet

Throughbeam photoelectric sensor

Part no.: 50139688
LS25C/XX-M12



Figure can vary

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Technical data

Basic data

Series	25C
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
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	Connector
Thread size	M12
Type	Male
Material	PUR
No. of pins	4 -pin
Encoding	A-coded

Mechanical data

Dimension (W x H x L)	15 mm x 42.7 mm x 30 mm
Housing material	Plastic
Plastic housing	ABS
Lens cover material	Plastic
Net weight	22 g
Housing color	Red
Type of fastening	Through-hole mounting with M4 thread
	Via optional mounting device
Compatibility of materials	ECOLAB

Environmental data

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

Certifications

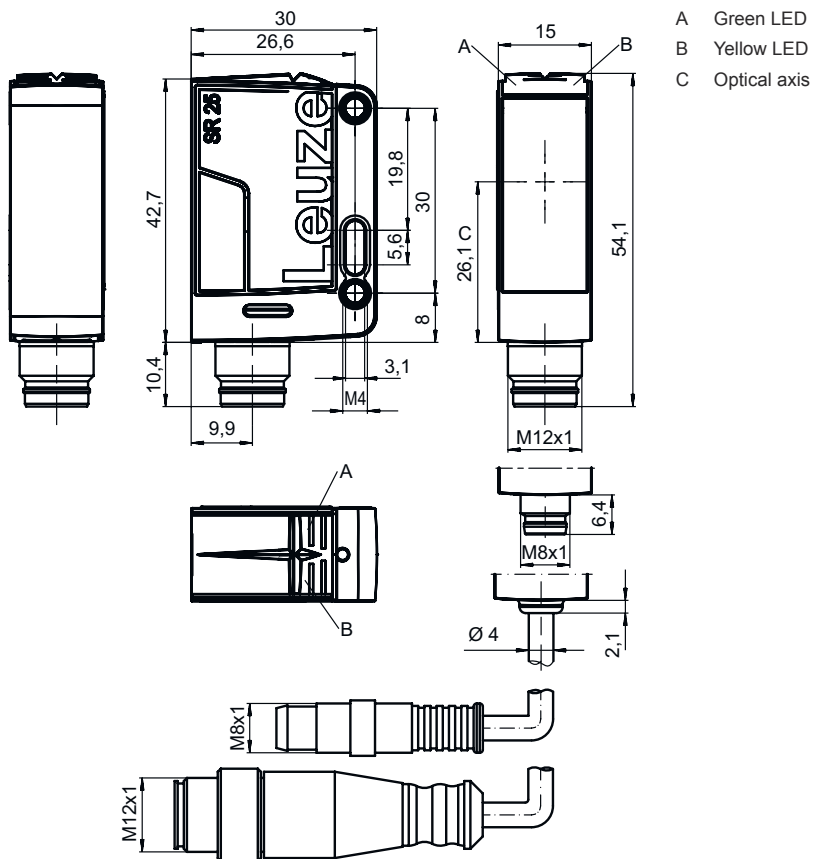
Degree of protection	IP 67
	IP 69K
Protection class	III
Certifications	c UL US
Standards applied	IEC 60947-5-2

Classification

Customs tariff number	85365019
eCl@ss 5.1.4	27270901
eCl@ss 8.0	27270901
eCl@ss 9.0	27270901
eCl@ss 10.0	27270901
eCl@ss 11.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716

Dimensioned drawings

All dimensions in millimeters

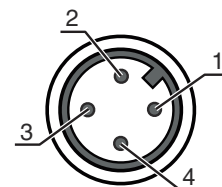


Electrical connection

Connection 1

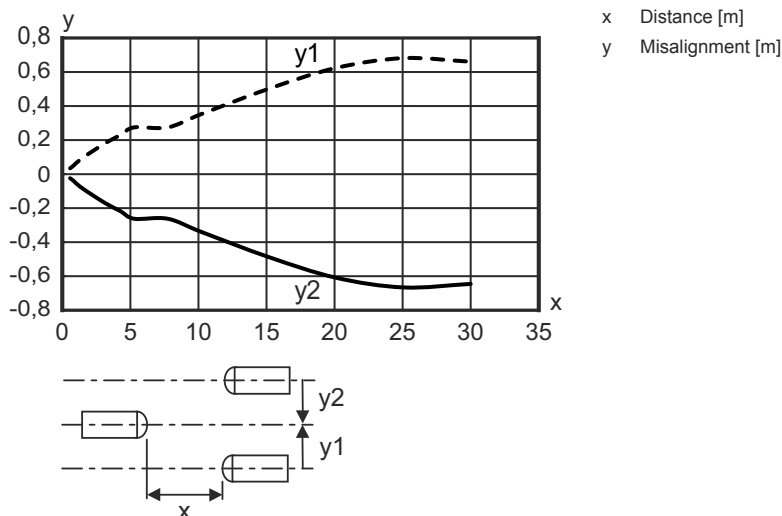
Function	Voltage supply
Type of connection	Connector
Thread size	M12
Type	Male
Material	PUR
No. of pins	4 -pin
Encoding	A-coded

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



Diagrams

Typ. response behavior



Suitable receivers

	Part no.	Designation	Article	Description
	50139698	LE25C.1/2N-M12	Throughbeam photoelectric sensor receiver	Operating range limit: 0 ... 30 m Supply voltage: DC Digital switching outputs: 2 Piece(s) Switching output 1: Transistor, NPN, hellschaltend Switching output 2: Transistor, NPN, dunkelschaltend Switching frequency: 1,500 Hz Connection: Rundstecker, M12, PUR, 4 -pin Operational controls: 270°-Potentiometer
	50139697	LE25C.1/4P-M12	Throughbeam photoelectric sensor receiver	Operating range limit: 0 ... 30 m Supply voltage: DC Digital switching outputs: 2 Piece(s) Switching output 1: Transistor, PNP, hellschaltend Switching output 2: Transistor, PNP, dunkelschaltend Switching frequency: 1,500 Hz Connection: Rundstecker, M12, PUR, 4 -pin Operational controls: 270°-Potentiometer
	50139696	LE25C/2N-M12	Throughbeam photoelectric sensor receiver	Operating range limit: 0 ... 30 m Supply voltage: DC Digital switching outputs: 2 Piece(s) Switching output 1: Transistor, NPN, hellschaltend Switching output 2: Transistor, NPN, dunkelschaltend Switching frequency: 1,500 Hz Connection: Rundstecker, M12, PUR, 4 -pin
	50139695	LE25C/4P-M12	Throughbeam photoelectric sensor receiver	Operating range limit: 0 ... 30 m Supply voltage: DC Digital switching outputs: 2 Piece(s) Switching output 1: Transistor, PNP, hellschaltend Switching output 2: Transistor, PNP, dunkelschaltend Switching frequency: 1,500 Hz Connection: Rundstecker, M12, PUR, 4 -pin
	50139703	LE25C/4W-M12	Throughbeam photoelectric sensor receiver	Special version: Warnausgang Operating range limit: 0 ... 30 m Supply voltage: DC Digital switching outputs: 2 Piece(s) Switching output 1: Transistor, PNP, hellschaltend Switching output 2: Transistor, PNP, UB schaltend Switching frequency: 1,500 Hz Connection: Rundstecker, M12, PUR, 4 -pin

Part number code

Part designation: AAA25C d EE-f.GGH/IJ-K

AAA25C	Operating principle / construction HT25C: Diffuse reflection sensor with background suppression PRK25C: Retro-reflective photoelectric sensor with polarization filter LS25C: Throughbeam photoelectric sensor transmitter LE25C: Throughbeam photoelectric sensor receiver DRT25C: Dynamic reference diffuse sensor
d	Light type n/a: red light I: infrared light
EE	Light source n/a: LED L1: laser class 1 L2: laser class 2
f	Preset range (optional) n/a: operating range acc. to data sheet xxxF: Preset range [mm]
GG	Equipment A: Autocollimation principle (single lens) S: small light spot D: Detection of stretch-wrapped objects X: extended model HF: Suppression of HF illumination (LED) XL: Extra long light spot T: autocollimation principle (single lens) for highly transparent bottles without tracking TT: autocollimation principle (single lens) for highly transparent bottles with tracking F: Foreground suppression R: greater operating range SL: Slit diaphragm
H	Operating range adjustment 1: 270° potentiometer 2: multiturn potentiometer 3: teach-in via button R: greater operating range
i	Switching output/function OUT 1/IN: Pin 4 or black conductor 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 8: activation input (activation with high signal) L: IO-Link interface (SIO mode: PNP light switching, NPN dark switching) 6: push-pull switching output, PNP light switching, NPN dark switching G: Push-pull switching output, PNP dark switching, NPN light switching
J	Switching output / function OUT 2/IN: pin 2 or white conductor 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 X: pin not used 6: push-pull switching output, PNP light switching, NPN dark switching T: teach-in via cable G: Push-pull switching output, PNP dark switching, NPN light switching
K	Electrical connection n/a: cable, standard length 2000 mm, 4-wire 200-M12: cable, length 200 mm with M12 connector, 4-pin, axial (plug) M8: M8 connector, 4-pin (plug) M12: M12 connector, 4-pin (plug) 200-M8: cable, length 200 mm with M8 connector, 4-pin, axial (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:

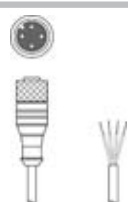

- ⌘ Only for use in "class 2" circuits

Further information


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

Accessories

Connection technology - Connection cables



	Part no.	Designation	Article	Description
	50130652	KD U-M12-4A-V1-050	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC
	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
	50118543	BT 300M.5	Mounting bracket	Design of mounting device: Winkel L-Form Fastening, at system: Durchgangsbefestigung Mounting bracket, at device: schraubbar, für M4-Schrauben geeignet Type of mounting device: justierbar Material: Edelstahl

Accessories

Mounting technology - Rod mounts

	Part no.	Designation	Article	Description
	50117829	BTP 200M-D12	Mounting system	Design of mounting device: Schutzhaube Fastening, at system: für Rundstange 12 mm Mounting bracket, at device: schraubbar Type of mounting device: klemmbar, drehbar 360°, justierbar Material: Metall
	50117252	BTU 300M-D12	Mounting system	Design of mounting device: Montagesystem Fastening, at system: für Rundstange 12 mm, Blechklemmbefestigung Mounting bracket, at device: schraubbar, für M4-Schrauben geeignet Type of mounting device: klemmbar, drehbar 360°, justierbar Material: Metall

Note



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