Technical data sheet
Throughbeam photoelectric sensor transmitter
Part no.: 50139688
LS25C/XX-M12



For Illustration purposes only

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Technical data

Basic data

Series	25C
Operating principle	Throughbeam principle
Device type	Transmitter

Optical data

Operating range	0 ... 25 m
Operating range	Guaranteed operating range
Operating range limit	0 ... 30 m
Operating range limit	Typical operating range
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

Time behavior

Readiness delay	300 ms

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

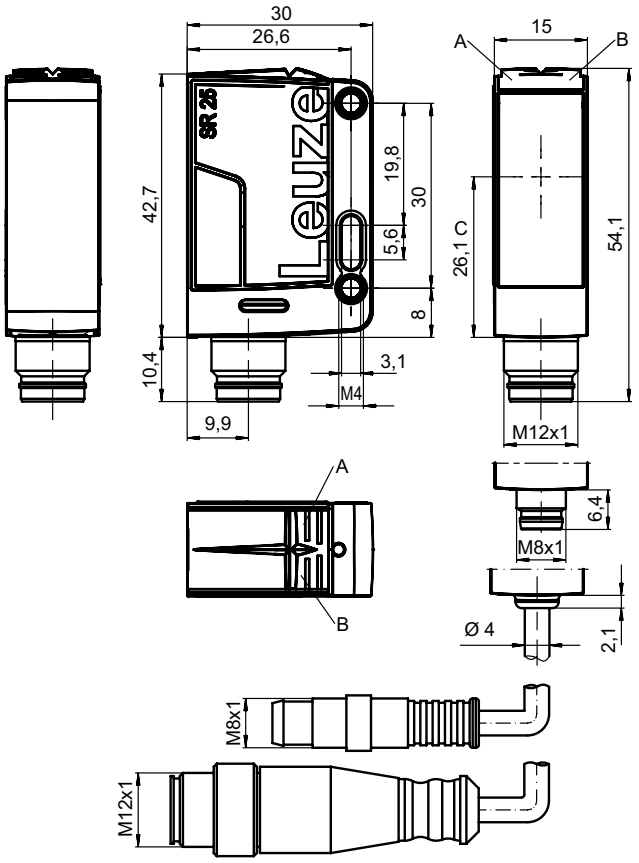
Degree of protection	IP 67
	IP 69K
Protection class	III
Approvals	c UL US
Standards applied	IEC 60947-5-2

Classification

Customs tariff number	85365019
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
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716
ETIM 8.0	EC002716
ETIM 9.0	EC002716
ETIM 10.0	EC002716

Dimensioned drawings

All dimensions in millimeters



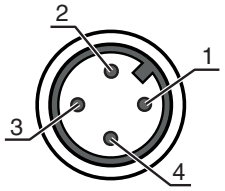
A Green LED
B Yellow LED
C Optical axis

Electrical connection

Connection 1

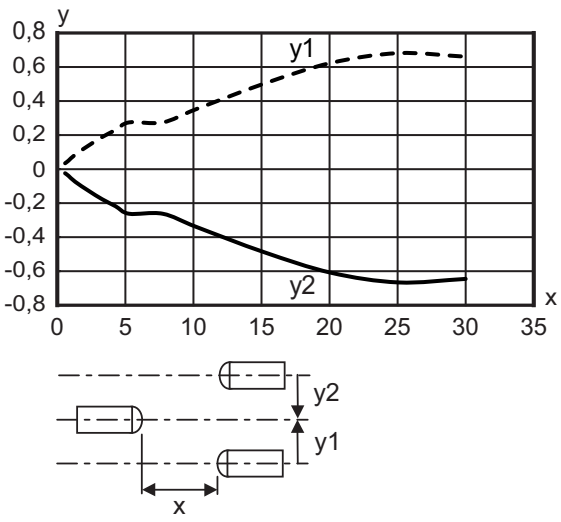
Function	Voltage supply
Type of connection	Connector
Thread size	M12
Type	Male
Material	PUR
No. of pins	4 -pin
Encoding	A-coded

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



Diagrams

Typ. response behavior



x Distance [m]
y Misalignment [m]

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, Light switching Switching output 2: Transistor, NPN, Dark switching Switching frequency: 1,500 Hz Connection: Connector, 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, Light switching Switching output 2: Transistor, PNP, Dark switching Switching frequency: 1,500 Hz Connection: Connector, 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, Light switching Switching output 2: Transistor, NPN, Dark switching Switching frequency: 1,500 Hz Connection: Connector, 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, Light switching Switching output 2: Transistor, PNP, Dark switching Switching frequency: 1,500 Hz Connection: Connector, M12, PUR, 4 -pin
	50139703	LE25C/4W-M12	Throughbeam photoelectric sensor receiver	Special version: Warning output Operating range limit: 0 ... 30 m Supply voltage: DC Digital switching outputs: 2 Piece(s) Switching output 1: Transistor, PNP, Light switching Switching output 2: Transistor, PNP, UB switching Switching frequency: 1,500 Hz Connection: Connector, 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 PP: Power PinPoint 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 8: activation input (activation with high signal)
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) M8.1: Snap-in, M8 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

Further information

- Light source: Average life expectancy 100,000 h 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 Connector, LED: No 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 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
	50118543	BT 300M.5	Mounting bracket	Design of mounting device: Angle, L-shape Fastening, at system: Through-hole mounting Mounting bracket, at device: Screw type, Suited for M4 screws Type of mounting device: Adjustable Material: Stainless steel

Accessories

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
	50117252	BTU 300M-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 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 website in the Download tab of the article detailed page.