



Figure can vary

Part no.: 50137172
LS3C.B/XX-M8
Throughbeam photoelectric sensor transmitter



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Technical data

Basic data	
Series	3C
Operating principle	Throughbeam principle
Device type	Transmitter
Optical data	
Operating range	Guaranteed operating range
Operating range	0.05 ... 8.5 m
Operating range limit	Typical operating range
Operating range limit	0.05 ... 10 m
Beam profile	Divergent
Light source	LED , Red
LED light wavelength	632 nm
Transmitted-signal shape	Pulsed
LED group	Exempt group (in acc. with EN 62471)
Light-spot size [at sensor distance]	4 mm [100 mm]
Type of light-spot geometry	Round
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
Connection	
Connection 1	
Type of connection	Connector
Function	Voltage supply
Thread size	M8
Type	Male
Material	Metal
No. of pins	4 -pin
Mechanical data	
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	10 g
Housing color	Red
Type of fastening	Two M3 threaded sleeves Via optional mounting device
Compatibility of materials	ECOLAB

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

Classification

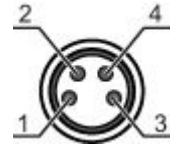
Customs tariff number	85365019
eCl@ss 8.0	27270901
eCl@ss 9.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716

Dimensioned drawings

All dimensions in millimeters

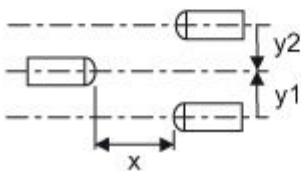
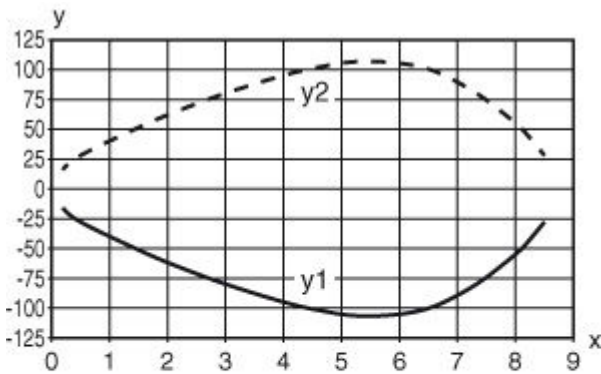
Connection 1	
Type	Male
Material	Metal
No. of pins	4 -pin
Encoding	

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



Diagrams

Typ. response behavior







x Distance [m]
y Misalignment [mm]

Operation and display

LEDs

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

Suitable receivers

	Part no.	Designation	Article	Description
	50137190	LE3C.B/4W-M8	Throughbeam photoelectric sensor receiver	Special design: Warning output Operating range limit: 0.05 ... 10 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: 1,000 Hz Connection: Connector, M8, Metal, 4 -pin
	50137181	LE3C.B/6G-M8	Throughbeam photoelectric sensor receiver	Operating range limit: 0.05 ... 10 m Supply voltage: DC Digital switching outputs: 2 Piece(s) Switching output 1: Transistor, Push-pull, Light switching (PNP)/dark switching (NPN) Switching output 2: Transistor, Push-pull, Dark switching (PNP)/light switching (NPN) Switching frequency: 1,000 Hz Connection: Connector, M8, Metal, 4 -pin
	50137193	LE3C.B/LP-M8	Throughbeam photoelectric sensor receiver	Operating range limit: 0.05 ... 10 m Supply voltage: DC Digital switching outputs: 2 Piece(s) Switching output 1: Transistor, Push-pull, IO-Link / light switching (PNP)/dark switching (NPN) Switching output 2: Transistor, PNP, Dark switching Switching frequency: 1,000 Hz Interface: IO-Link Connection: Connector, M8, Metal, 4 -pin
	50137183	LE3C.B1/6G-M8	Throughbeam photoelectric sensor receiver	Operating range limit: 0.05 ... 10 m Supply voltage: DC Digital switching outputs: 2 Piece(s) Switching output 1: Transistor, Push-pull, Light switching (PNP)/dark switching (NPN) Switching output 2: Transistor, Push-pull, Dark switching (PNP)/light switching (NPN) Switching frequency: 1,000 Hz Connection: Connector, M8, Metal, 4 -pin Operational controls: 270° potentiometer

Part number code

Part designation: **AAA 3C d EE-f.GG H/i J-K**

AAA3C	Operating principle / construction: HT3C: diffuse reflection sensor with background suppression LS3C: throughbeam photoelectric sensor transmitter LE3C: throughbeam photoelectric sensor receiver PRK3C: retro-reflective photoelectric sensor with polarization filter
d	Light type: n/a: red light l: infrared light
EE	Light source: n/a: LED L1: laser class 1 L2: laser class 2
f	Pre-set range (optional): n/a: operating range acc. to data sheet XXXX: pre-set range [mm]
GG	Equipment: n/a: standard A: autocollimation principle (single lens) for positioning tasks B: housing model with two M3 threaded sleeves, brass F: permanently set range L: long light spot S: small light spot T: autocollimation principle (single lens) for highly transparent bottles without tracking TT: autocollimation principle (single lens) for highly transparent bottles with tracking V: V-optics XL: extra long light spot
H	Operating range adjustment: n/a with HT: range adjustable via 8-turn potentiometer n/a with retro-reflective photoelectric sensors (PRK): operating range not adjustable 1: 270° potentiometer 3: teach-in via button 6: auto-teach

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i	<p>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 6: push-pull switching output, PNP light switching, NPN dark switching G: push-pull switching output, PNP dark switching, NPN light switching /L: IO-Link 8: activation input (activation with high signal) X: pin not used</p>
J	<p>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 6: push-pull switching output, PNP light switching, NPN dark switching G: push-pull switching output, PNP dark switching, NPN light switching W: warning output X: pin not used 8: activation input (activation with high signal) 9: deactivation input (deactivation with high signal) T: teach-in via cable</p>
K	<p>Electrical connection: n/a: cable, standard length 2000 mm, 4-wire 5000: cable, standard length 5000 mm, 4-wire M8: M8 connector, 4-pin (plug) M8.3: M8 connector, 3-pin (plug) 200-M8: cable, length 200 mm with M8 connector, 4-pin, axial (plug) 200-M8.3: cable, length 200 mm with M8 connector, 3-pin, axial (plug) 200-M12: cable, length 200 mm with M12 connector, 4-pin, axial (plug)</p>

<p>Note</p>
<p>A list with all available device types can be found on the Leuze electronic website at www.leuze.com.</p>

Notes



<p>Observe intended use!</p>
<ul style="list-style-type: none"> • 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.

<p>For UL applications:</p>
<ul style="list-style-type: none"> • 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)


- 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
 	50130850	KD U-M8-4A-V1-050	Connection cable	Connection 1: Connector, M8, Axial, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC
 	50130871	KD U-M8-4W-V1-050	Connection cable	Connection 1: Connector, M8, Angled, Female, 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
	50060511	BT 3	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	Contains: 2x M3 x 16 screw, 2x M3 x 20 screw, 2x position washers Design of mounting device: Mounting system Fastening, 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