

# Technical data sheet

## Throughbeam photoelectric sensor receiver

Part no.: 50144756

LE3C/4-200-M8.3



For illustration purposes only

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## Technical data

### Basic data

Series	3C
Operating principle	Throughbeam principle
Device type	Receiver

### Optical data

Operating range	see transmitter
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### Electrical data

Protective circuit	Polarity reversal protection Short circuit protected
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### 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

### Outputs

Number of digital switching outputs	1 Piece(s)
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Switching outputs	
Type	Digital switching output
Voltage type	DC
Switching current, max.	100 mA
Switching voltage	high: $\geq(U_B-2V)$ low: $\leq 2 V$

Switching output 1	
Assignment	Connection 1, pin 4
Switching element	Transistor, PNP
Switching principle	Light switching

### Time behavior

Switching frequency	1,000 Hz
Response time	0.5 ms
Readiness delay	300 ms

### Connection

Number of connections	1 Piece(s)
Connection 1	
Function	Signal OUT
	Voltage supply
Type of connection	Cable with connector
Cable length	200 mm
Sheathing material	PUR
Cable color	Black
Number of conductors	3 -wire
Wire cross section	0.2 mm <sup>2</sup>
Thread size	M8
Type	Male
Material	Metal
No. of pins	3 -pin
Version	Axial

### Mechanical data

Dimension (W x H x L)	11.4 mm x 34.2 mm x 18.3 mm
Housing material	Plastic
Plastic housing	PC-ABS
Lens cover material	Plastic / PMMA
Net weight	20 g
Housing color	Red
Type of fastening	Through-hole mounting Via optional mounting device
Recommended tightening torque for M3 fastening	0.9 N·m
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

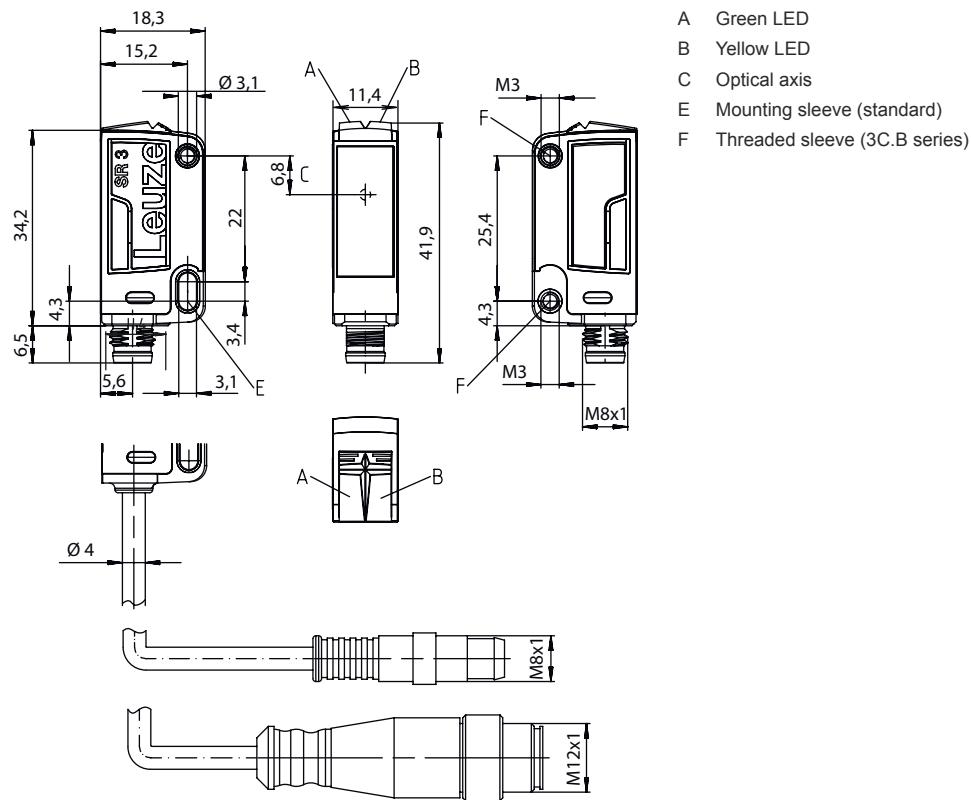
### Certifications

Degree of protection	IP 67
	IP 69K
Protection class	III
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

All dimensions in millimeters

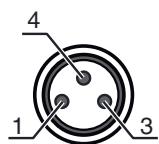


## Electrical connection

## Connection 1

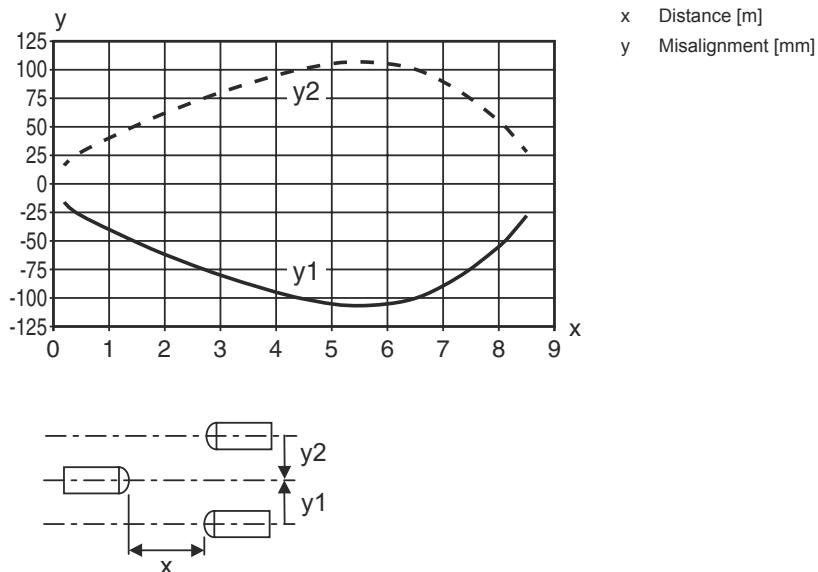
<b>Function</b>	Signal OUT
<b>Type of connection</b>	Voltage supply
<b>Cable length</b>	200 mm
<b>Sheathing material</b>	PUR
<b>Cable color</b>	Black
<b>Number of conductors</b>	3 -wire
<b>Wire cross section</b>	0.2 mm <sup>2</sup>
<b>Thread size</b>	M8
<b>Type</b>	Male
<b>Material</b>	Metal
<b>No. of pins</b>	3 -pin
<b>Version</b>	Axial

Pin	Pin assignment
1	V+
3	GND
4	OUT 1



## Diagrams

### Typ. response behavior



## Operation and display

LED	Display	Meaning
1	Green, continuous light	Operational readiness
2	Yellow, continuous light	Light path free
	Yellow, flashing	Light path free, no function reserve

## Suitable transmitters

Part no.	Designation	Operating range Operating range limit	Description
 50144755	LS3C/X-200-M8.3	0.05 ... 8.5 m 0.05 ... 10 m	Operating range limit: 0.05 ... 10 m Light source: LED, Red Supply voltage: DC Connection: Cable with connector, 200 mm, M8, Metal, 3 -wire, 3 -pin

## Part number code

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

AAA3C	<b>Operating principle / construction</b> 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 ODT3C: Distance diffuse sensor with background suppression
d	<b>Light type</b> n/a: red light I: infrared light

## Part number code

EE	<b>Light source</b> n/a: LED L1: laser class 1 L2: laser class 2 PP: Power PinPoint® LED
f	<b>Preset range (optional)</b> n/a: operating range acc. to data sheet xxxF: Preset range [mm] 2M: operating range of 2 meters
GG	<b>Equipment</b> 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 X: extended model HF: Suppression of HF illumination (LED)
H	<b>Operating range adjustment</b> 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
i	<b>Switching output/function OUT 1/IN: Pin 4 or black conductor</b> 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 interface (SIO mode: PNP light switching, NPN dark switching) 8: activation input (activation with high signal) X: pin not used 1: IO-Link / light switching (NPN) / dark switching (PNP)
J	<b>Switching output / function OUT 2/IN: pin 2 or white conductor</b> 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
K	<b>Electrical connection</b> 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)

### Note



↳ A list with all available device types can be found on the Leuze website at [www.leuze.com](http://www.leuze.com).

## Notes

	<b>Observe intended use!</b>
	<ul style="list-style-type: none"> <li>⚠ This product is not a safety sensor and is not intended as personnel protection.</li> <li>⚠ The product may only be put into operation by competent persons.</li> <li>⚠ Only use the product in accordance with its intended use.</li> </ul>

	<b>For UL applications:</b>
	<ul style="list-style-type: none"> <li>⚠ For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code).</li> <li>⚠ 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)</li> </ul>

## Further information

- The push-pull switching outputs must not be connected in parallel.
- Response time: For short decay times, an ohmic load of approx. 5 kOhm is recommended
- Sum of the output currents for both outputs, 50 mA for ambient temperatures > 40 °C

## Accessories

### Connection technology - Connection cables

Part no.	Designation	Article	Description
	50130832	KD U-M8-3A-V1-050	Connection cable Connection 1: Connector, M8, Axial, Female, 3 -pin Connector, LED: No Connection 2: Open end Shielded: No Cable length: 5.000 mm Sheathing material: PVC
	50130862	KD U-M8-3W-V1-050	Connection cable Connection 1: Connector, M8, Angled, Female, 3 -pin Connector, LED: No Connection 2: Open end Shielded: No Cable length: 5.000 mm Sheathing material: PVC

### 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

## Accessories

Part no.	Designation	Article	Description
	50117255	BTU 200M-D12	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.