



Figure can vary

**Part no.: 50138491**  
**LS23/XX-M8**  
**Throughbeam photoelectric sensor**  
**transmitter**



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## Technical data

<b>Basic data</b>	
Series	23
Operating principle	Throughbeam principle
Device type	Transmitter
<b>Optical data</b>	
Operating range	Guaranteed operating range
Operating range	0 ... 8 m
Operating range limit	Typical operating range
Operating range limit	0 ... 10 m
Light source	LED , Red
LED light wavelength	645 nm
Transmitted-signal shape	Pulsed
LED group	Exempt group (in acc. with EN 62471)
<b>Electrical data</b>	
Protective circuit	Polarity reversal protection Short circuit protected
<b>Performance data</b>	
Supply voltage $U_B$	10 ... 30 V , DC , Incl. residual ripple
Residual ripple	0 ... 15 % , From $U_B$
Open-circuit current	0 ... 15 mA
<b>Timing</b>	
Readiness delay	300 ms
<b>Connection</b>	
<b>Connection 1</b>	
Type of connection	Connector
Function	Voltage supply
Thread size	M8
Type	Male
Material	Plastic
No. of pins	4 -pin
<b>Mechanical data</b>	
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	20 g
Housing color	Black Red
<b>Operation and display</b>	
Type of display	LED
Number of LEDs	2 Piece(s)
<b>Environmental data</b>	

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

**Certifications**

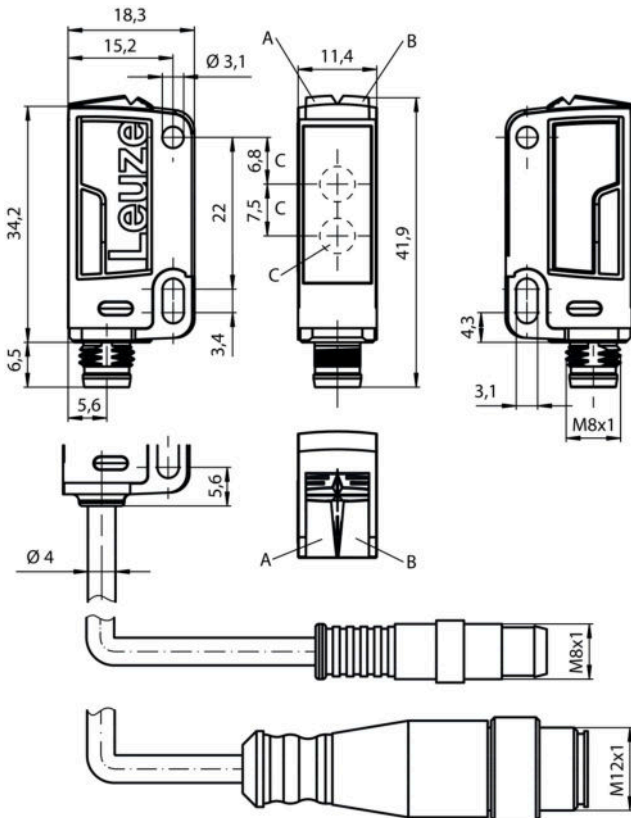
Degree of protection	IP 67
Protection class	III
Certifications	c UL US
Standards applied	IEC 60947-5-2

**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

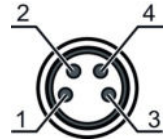


A Green LED  
 B Yellow LED  
 C Optical axis

## Electrical connection

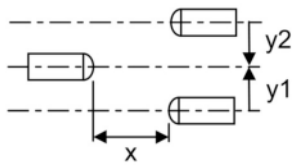
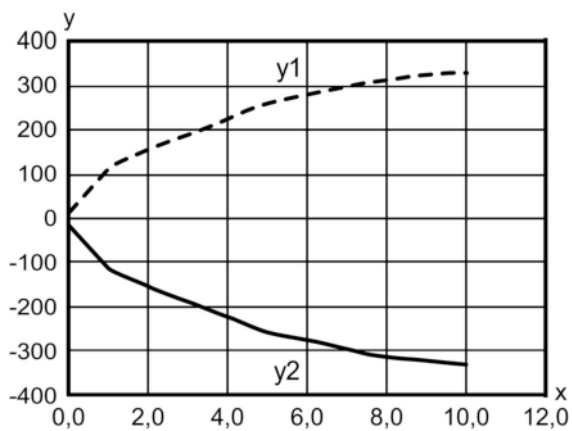
Connection 1	
Type of connection	Connector
Function	Voltage supply
Thread size	M8
Type	Male
Material	Plastic
No. of pins	4 -pin

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

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LED	Display	Meaning
2	Yellow, continuous light	Transmitted beam active

### Suitable receivers

	Part no.	Designation	Article	Description
	50138497	LE23/2X-M8	Throughbeam photoelectric sensor receiver	Operating range limit: 0 ... 10 m Supply voltage: DC Digital switching outputs: 1 Piece(s) Switching output 1: Transistor, NPN, Light switching Switching frequency: 500 Hz Connection: Connector, M8, Plastic, 4 -pin
	50138493	LE23/4X-M8	Throughbeam photoelectric sensor receiver	Operating range limit: 0 ... 10 m Supply voltage: DC Digital switching outputs: 1 Piece(s) Switching output 1: Transistor, PNP, Light switching Switching frequency: 500 Hz Connection: Connector, M8, Plastic, 4 -pin

### Part number code

Part designation: **AAA23.GJ/ ff-HH**

AAA23	<b>Operating principle / construction:</b> HT23: diffuse reflection sensor with background suppression PRK23: retro-reflective photoelectric sensor with polarization filter LS23: throughbeam photoelectric sensor transmitter LE23: throughbeam photoelectric sensor receiver ET23: energetic diffuse reflection sensor FT23: diffuse reflection sensor with fading
G	<b>Equipment:</b> T: autocollimation principle (single lens) for highly transparent bottles without tracking
J	<b>Operating range adjustment:</b> 3: teach-in via button
ff	<b>Switching output / function / OUT1OUT2 (OUT1 = pin 4, OUT2 = pin 2):</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 X: pin not used
HH	<b>Electrical connection:</b> n/a: cable, standard length 2000 mm, 3-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) 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 electronic website at [www.leuze.com](http://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)

## 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
	50118542	BT 200M.5	Mounting bracket	Design of mounting device: Angle, L-shape Fastening, at system: Through-hole mounting Mounting bracket, at device: Screw type, Suited for M3 screws Type of mounting device: Adjustable Material: Stainless steel
	50124651	BT 205M-10SET	Mounting device set	Contains: 10x 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

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## 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, 2 M3 x 20 screws, 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, 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 electronic website in the Download tab of the article detailed page.