Technical data sheet

Throughbeam photoelectric sensor transmitter

Part no.: 50138492

LS23/XX-200-M12

For Illustration purposes only

Contents

- Technical data
- Dimensioned drawings
- Electrical connection
- Diagrams
- Operation and display
- Suitable receivers
- Part number code
- Notes
- Accessories

Technical data

Leuze

Basic data

Series	23
Operating principle	Throughbeam principle
Device type	Transmitter

Optical data

Operating range	0 ... 8 m
Operating range	Guaranteed operating range
Operating range limit	0 ... 10 m
Operating range limit	Typical operating range
Light source	LED, Red
Wavelength	645 nm
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 ... 15 mA

Time behavior

Readiness delay	300 ms

Connection

Connection 1	
Function	Voltage supply
Type of connection	Cable with connector
Cable length	200 mm
Sheathing material	PUR
Cable color	Black
Wire cross section	0.2 mm²
Thread size	M12
Type	Male
Material	Plastic
No. of pins	4 -pin
Encoding	A-coded

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	Black
	Red

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
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
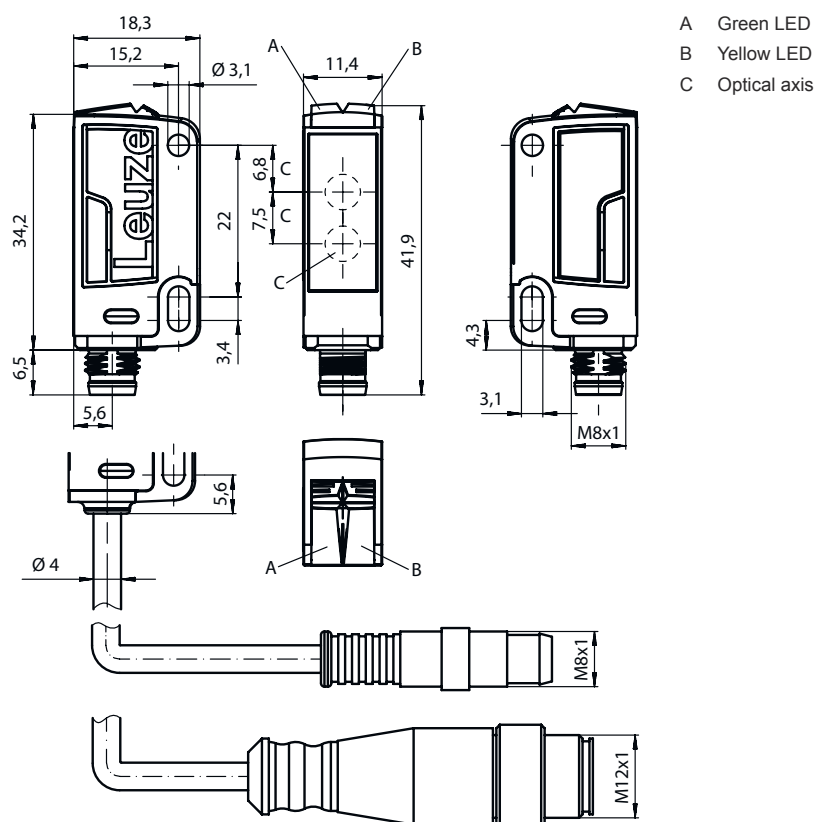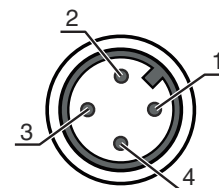
A   Green LED
B   Yellow LED
C   Optical axis

Electrical connection

Connection 1

Function	Voltage supply
Type of connection	Cable with connector
Cable length	200 mm
Sheathing material	PUR
Cable color	Black
Wire cross section	0.2 mm²
Thread size	M12
Type	Male
Material	Plastic
No. of pins	4 -pin
Encoding	A-coded

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

The Sensor People   Leuze electronic GmbH + Co. KG
In der Braike 1, D-73277 Owen/Germany   info@leuze.com • www.leuze.com
Phone: +49 7021 573-0 • Fax: +49 7021 573-199   We reserve the right to make technical changes
eng • 2025-04-06   3/7

Diagrams

Typ. response behavior

x   Distance [m]

y   Misalignment [mm]
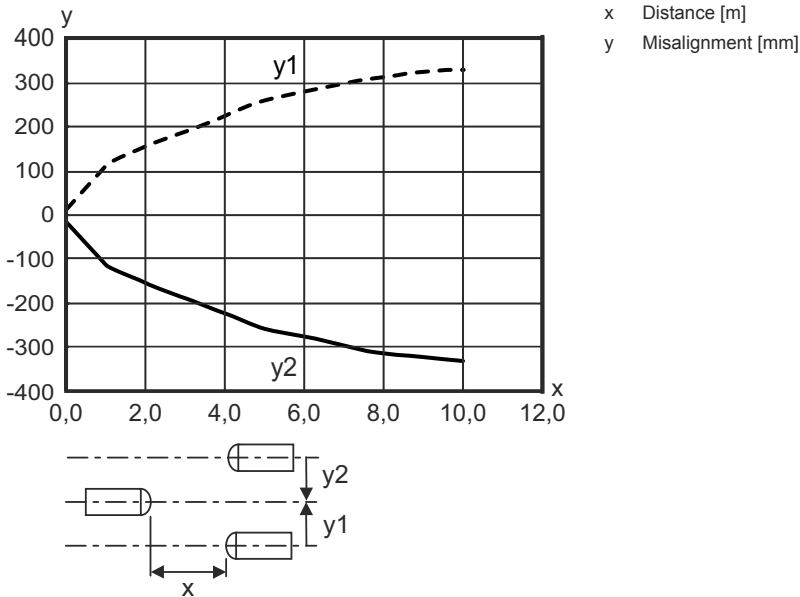
Operation and display

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

Suitable receivers

	Part no.	Designation	Article	Description
	50138498	LE23/2X-200-M12	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: Cable with connector, 200 mm, M12, Plastic, 4 -wire, 4 -pin
	50138494	LE23/4X-200-M12	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: Cable with connector, 200 mm, M12, Plastic, 4 -wire, 4 -pin

Part number code

Leuze

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

AAA23	**Operating principle / construction**
	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	**Equipment**
	T: autocollimation principle (single lens) for highly transparent bottles without tracking
J	**Operating range adjustment**
	3: teach-in via button
ff	**Switching output / function / OUT1OUT2 (OUT1 = pin 4, OUT2 = pin 2)**
	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	**Electrical connection**
	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 website at www.leuze.com.

Notes

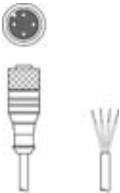| **⚠ Observe intended use!** |
|---|
| ✎ This product is not a safety sensor and is not intended as personnel protection. |
| ✎ The product may only be put into operation by competent persons. |
| ✎ Only use the product in accordance with its intended use. |

For UL applications:
✎ Only for use in "class 2" circuits
✎ 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

Leuze

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
	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	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	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

Accessories

Leuze

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

The Sensor People

Leuze electronic GmbH + Co. KG
In der Braike 1, D-73277 Owen/Germany

info@leuze.com • www.leuze.com
Phone: +49 7021 573-0 • Fax: +49 7021 573-199

We reserve the right to make technical changes
eng • 2025-04-06

7/7