◢ **Leuze electronic**

the *sensor* people

Part no.: 50137190
LE3C.B/4W-M8
Throughbeam photoelectric sensor receiver

CE   cULus LISTED   IP 67   IP 69K   ECOLAB

Figure can vary

Contents

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1 / 8

Technical data

Basic data

Series	3C
Operating principle	Throughbeam principle
Device type	Receiver

Special design

Special design	Warning output

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

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

Outputs

Number of digital switching outputs	2 Piece(s)

Switching outputs

Voltage type	DC
Switching current, max.	100 mA
Switching voltage	High: ≥(U_B-2V) Low: ≤2V

Switching output 1

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

Switching output 2

Assignment	Connection 1, pin 2
Switching element	Transistor , PNP
Switching principle	U_B switching

Timing

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

Connection

Connection 1

Type of connection	Connector
Function	Signal OUT 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

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3 / 8
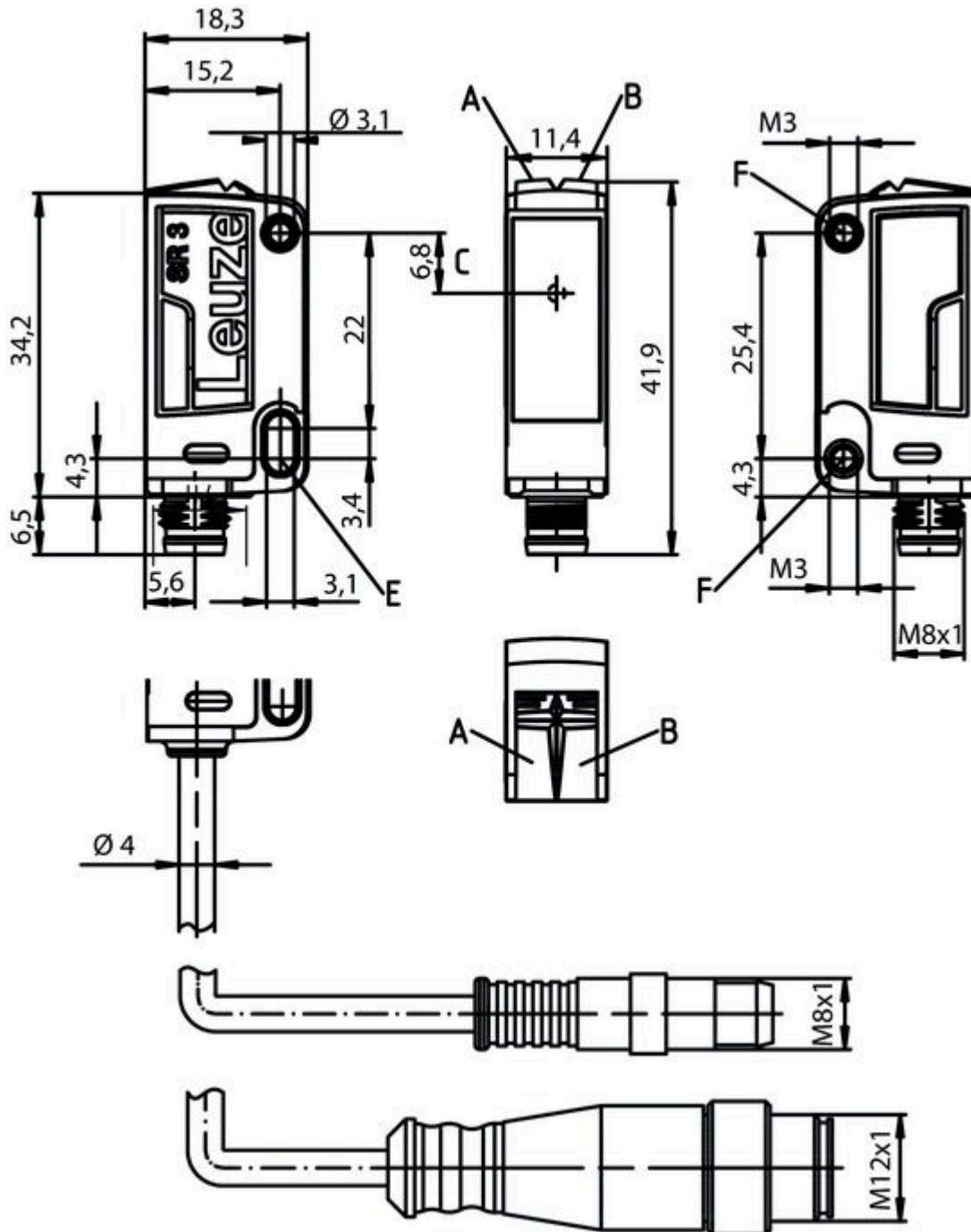
A Green LED
B Yellow LED
C Optical axis
E Mounting sleeve (standard)
F Threaded sleeve (3C.B series)

Electrical connection

Connection 1	
Type of connection	Connector
Function	Signal OUT Voltage supply

Connection 1	
Thread size	M8
Type	Male
Material	Metal
No. of pins	4 -pin
Encoding	

Pin	Pin assignment
1	V+
2	OUT WARN
3	GND
4	OUT 1
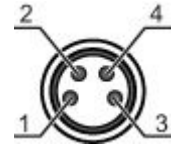
Diagrams

Typ. response behavior
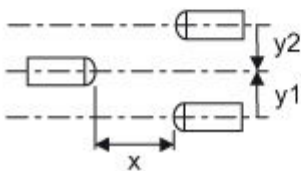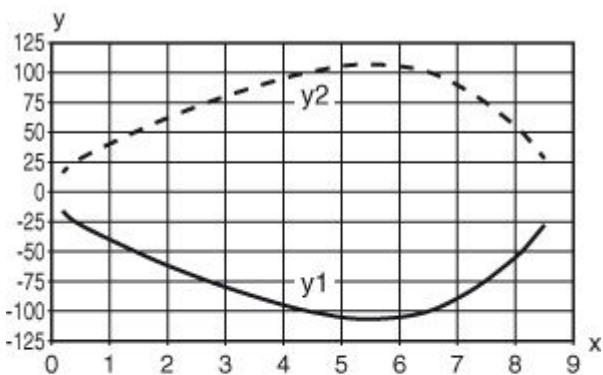
x   Distance [m]
y   Misalignment [mm]

Operation and display

LEDs

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

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5 / 8

Part no.: 50137190 – LE3C.B/4W-M8 – Throughbeam photoelectric sensor

Suitable transmitters

	Part no.	Designation	Article	Description
	50137174	LS3C.B/8X-M8	Throughbeam photoelectric sensor transmitter	Operating range limit: 0.05 ... 10 m Light source: LED, Red Supply voltage: DC Connection: Connector, M8, Metal, 4 -pin Special design: Activation input
	50137172	LS3C.B/XX-M8	Throughbeam photoelectric sensor transmitter	Operating range limit: 0.05 ... 10 m Light source: LED, Red Supply voltage: DC Connection: Connector, M8, Metal, 4 -pin

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 I: 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
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 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

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6 / 8

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 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	**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)

Note
A list with all available device types can be found on the Leuze electronic 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:

- 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)

- 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
	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

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7 / 8

	Part no.	Designation	Article	Description
	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 - 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

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8 / 8