



Part no.: 50137205
LE3CL1.1/4W-M8
Throughbeam photoelectric sensor receiver



Figure can vary

Contents

- Technical data
- Suitable transmitters
- Dimensioned drawings
- Electrical connection
- Operation and display
- Accessories
- Notes



Part no.: 50137205 – LE3CL1.1/4W-M8 – Throughbeam photoelectric sensor

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 ... 5 m
Operating range limit	Typical operating range
Operating range limit	0 ... 10 m
Electrical data	
Protective circuit	Polarity reversal protection Short circuit protected
Performance data	
Supply voltage	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	Low: $\leq 2V$ High: $\geq (U_B - 2V)$
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	3,000 Hz
Response time	0.16 ms
Readiness delay	300 ms
Connection	

Part no.: 50137205 – LE3CL1.1/4W-M8 – Throughbeam photoelectric sensor
Connection 1

Type of connection	Connector
Function	Voltage supply Signal OUT
Thread size	M8
Type	Male
Material	Metal
No. of pins	4 -pin

Mechanical data

Design	Cubic
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	Through-hole mounting Via optional mounting device
Compatibility of materials	ECOLAB

Operation and display

Type of display	LED
Number of LEDs	2 Piece(s)
Operational controls	270° potentiometer
Function of the operational control	Sensitivity adjustment

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

eCl@ss 8.0	27270901
eCl@ss 9.0	27270901
ETIM 5.0	EC002716

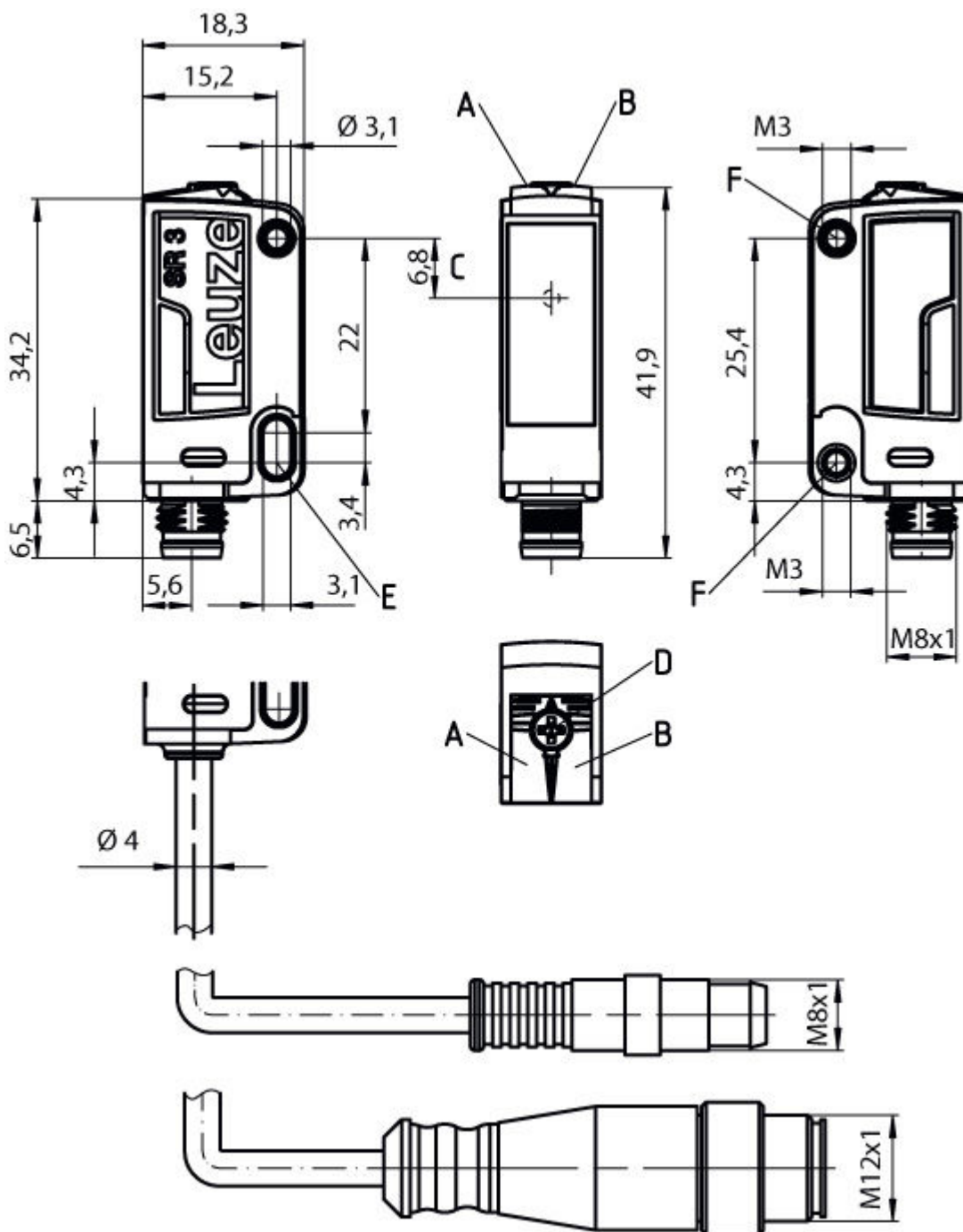
Part no.: 50137205 – LE3CL1.1/4W-M8 – Throughbeam photoelectric sensor

Suitable transmitters

	Part no.	Designation	Article	Description
	50137198	LS3CL1/8X-M8	Throughbeam photoelectric sensor transmitter	Special design: Activation input Operating range limit: 0 ... 10 m Light source: Laser, Red Supply voltage: DC Connection: Connector, M8, Metal, 4 -pin
	50137194	LS3CL1/XX-M8	Throughbeam photoelectric sensor transmitter	Operating range limit: 0 ... 10 m Light source: Laser, Red Supply voltage: DC Connection: Connector, M8, Metal, 4 -pin

Dimensioned drawings

All dimensions in millimeters



- A Green LED
- B Yellow LED
- C Optical axis
- D Potentiometer
- E Mounting sleeve (standard)
- F Threaded sleeve (3C.B series)

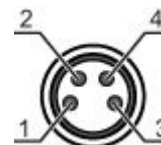
Electrical connection

Connection 1	
Type of connection	Connector

Part no.: 50137205 – LE3CL1.1/4W-M8 – Throughbeam photoelectric sensor

Connection 1	
Function	Voltage supply Signal OUT
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






Operation and display

LEDs





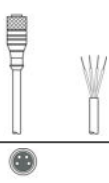
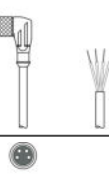

LED	Display	Meaning
1	Green, continuous light	Operational readiness
2	Yellow, continuous light	Light path free
	Yellow, flashing	Light path free, no function reserve

Accessories




Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50130854	KD U-M8-4A-P1-020	Connection cable	Connection 1: Connector, M8, Axial, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 2,000 mm Sheathing material: PUR
	50130855	KD U-M8-4A-P1-030	Connection cable	Connection 1: Connector, M8, Axial, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 3,000 mm Sheathing material: PUR
	50130856	KD U-M8-4A-P1-050	Connection cable	Connection 1: Connector, M8, Axial, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PUR



Part no.: 50137205 – LE3CL1.1/4W-M8 – Throughbeam photoelectric sensor

	Part no.	Designation	Article	Description
	50130857	KD U-M8-4A-P1-100	Connection cable	Connection 1: Connector, M8, Axial, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 10,000 mm Sheathing material: PUR
	50130858	KD U-M8-4A-P1-150	Connection cable	Connection 1: Connector, M8, Axial, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 15,000 mm Sheathing material: PUR
	50130859	KD U-M8-4A-P1-200	Connection cable	Connection 1: Connector, M8, Axial, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 20,000 mm Sheathing material: PUR
	50130848	KD U-M8-4A-V1-020	Connection cable	Connection 1: Connector, M8, Axial, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 2,000 mm Sheathing material: PVC
	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
	50130851	KD U-M8-4A-V1-100	Connection cable	Connection 1: Connector, M8, Axial, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 10,000 mm Sheathing material: PVC
	50130852	KD U-M8-4A-V1-150	Connection cable	Connection 1: Connector, M8, Axial, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 15,000 mm Sheathing material: PVC
	50130853	KD U-M8-4A-V1-200	Connection cable	Connection 1: Connector, M8, Axial, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 20,000 mm Sheathing material: PVC
	50130873	KD U-M8-4W-P1-020	Connection cable	Connection 1: Connector, M8, Angled, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 2,000 mm Sheathing material: PUR
	50130880	KD U-M8-4W-P1-020-DP	Connection cable	Connection 1: Connector, M8, Angled, Female, 4 -pin Connector, LED: Yes, 1 Piece(s) Connection 2: Open end Shielded: No Cable length: 2,000 mm Sheathing material: PUR




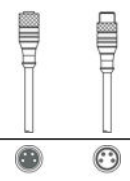
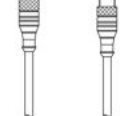
Part no.: 50137205 – LE3CL1.1/4W-M8 – Throughbeam photoelectric sensor

	Part no.	Designation	Article	Description
 	50130874	KD U-M8-4W-P1-030	Connection cable	Connection 1: Connector, M8, Angled, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 3,000 mm Sheathing material: PUR
 	50130875	KD U-M8-4W-P1-050	Connection cable	Connection 1: Connector, M8, Angled, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PUR
 	50130881	KD U-M8-4W-P1-050-DP	Connection cable	Connection 1: Connector, M8, Angled, Female, 4 -pin Connector, LED: Yes, 1 Piece(s) Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PUR
 	50130876	KD U-M8-4W-P1-100	Connection cable	Connection 1: Connector, M8, Angled, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 10,000 mm Sheathing material: PUR
 	50130882	KD U-M8-4W-P1-100-DP	Connection cable	Connection 1: Connector, M8, Angled, Female, 4 -pin Connector, LED: Yes, 1 Piece(s) Connection 2: Open end Shielded: No Cable length: 10,000 mm Sheathing material: PUR
 	50130869	KD U-M8-4W-V1-020	Connection cable	Connection 1: Connector, M8, Angled, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 2,000 mm Sheathing material: PVC
 	50130877	KD U-M8-4W-V1-020-DP	Connection cable	Connection 1: Connector, M8, Angled, Female, 4 -pin Connector, LED: Yes, 1 Piece(s) Connection 2: Open end Shielded: No Cable length: 2,000 mm Sheathing material: PVC
 	50130870	KD U-M8-4W-V1-030	Connection cable	Connection 1: Connector, M8, Angled, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 3,000 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
 	50130878	KD U-M8-4W-V1-050-DP	Connection cable	Connection 1: Connector, M8, Angled, Female, 4 -pin Connector, LED: Yes, 1 Piece(s) Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC


Part no.: 50137205 – LE3CL1.1/4W-M8 – Throughbeam photoelectric sensor

	Part no.	Designation	Article	Description
	50130872	KD U-M8-4W-V1-100	Connection cable	Connection 1: Connector, M8, Angled, Female, 4 -pin Connection 2: Open end Shielded: No Cable length: 10,000 mm Sheathing material: PVC
	50130879	KD U-M8-4W-V1-100-DP	Connection cable	Connection 1: Connector, M8, Angled, Female, 4 -pin Connector, LED: Yes, 1 Piece(s) Connection 2: Open end Shielded: No Cable length: 10,000 mm Sheathing material: PVC





Connection technology - Interconnection cables

	Part no.	Designation	Article	Description
	50107276	K-DS M8A-M12A-4P-0,3m-PVC	Interconnection cable	Connection 1: Connector, M12, Axial, Male, A-coded, 4 -pin Connection 2: Connector, M8, Axial, Female, 4 -pin Shielded: No Cable length: 300 mm Sheathing material: PVC
	50130913	KDS U-M8-4A-M8-4A-P1-003	Interconnection cable	Connection 1: Connector, M8, Axial, Female, 4 -pin Connection 2: Connector, M8, Axial, Male, 4 -pin Shielded: No Cable length: 300 mm Sheathing material: PUR
	50130914	KDS U-M8-4A-M8-4A-P1-006	Interconnection cable	Connection 1: Connector, M8, Axial, Female, 4 -pin Connection 2: Connector, M8, Axial, Male, 4 -pin Shielded: No Cable length: 600 mm Sheathing material: PUR
	50130915	KDS U-M8-4A-M8-4A-P1-010	Interconnection cable	Connection 1: Connector, M8, Axial, Female, 4 -pin Connection 2: Connector, M8, Axial, Male, 4 -pin Shielded: No Cable length: 1,000 mm Sheathing material: PUR
	50130916	KDS U-M8-4A-M8-4A-P1-020	Interconnection cable	Connection 1: Connector, M8, Axial, Female, 4 -pin Connection 2: Connector, M8, Axial, Male, 4 -pin Shielded: No Cable length: 2,000 mm Sheathing material: PUR






Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
	50118542	BT 200M.5	Mounting bracket	Design of mounting device: Angle, L-shape Mounting bracket, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Adjustable Material: Stainless steel



Part no.: 50137205 – LE3CL1.1/4W-M8 – Throughbeam photoelectric sensor

	Part no.	Designation	Article	Description
	50124651	BT 205M	Mounting device set	Contains: 10x Design of mounting device: Angle, L-shape Mounting bracket, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Rigid Material: Metal
	50060511	BT 3	Mounting device	Design of mounting device: Angle, L-shape Mounting bracket, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Rigid Material: Metal
	50105585	BT 3.1	Mounting strap set	Contains: 10x Design of mounting device: Retaining clip Mounting bracket, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Rigid Material: Metal
	50105546	BT 3B	Mounting device	Design of mounting device: Angle, L-shape Mounting bracket, 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
	50117830	BTP 200M-D10	Mounting system	Design of mounting device: Protection hood Mounting bracket, at system: For 10 mm rod Mounting bracket, at device: Screw type Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal
	50117829	BTP 200M-D12	Mounting system	Design of mounting device: Protection hood Mounting bracket, at system: For 12 mm rod Mounting bracket, at device: Screw type Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal
	50117828	BTP 200M-D14	Mounting system	Design of mounting device: Protection hood Mounting bracket, at system: For 14 mm rod Mounting bracket, at device: Screw type Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal
	50117256	BTU 200M-D10	Mounting system	Contains: 2x M3 x 18 screw, 2x position washers Design of mounting device: Mounting system Mounting bracket, at system: For 10 mm rod, Sheet-metal mounting 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 18 screw, 2x position washers Design of mounting device: Mounting system Mounting bracket, 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

Part no.: 50137205 – LE3CL1.1/4W-M8 – Throughbeam photoelectric sensor

	Part no.	Designation	Article	Description
	50117254	BTU 200M-D14	Mounting system	Contains: 2x M3 x 18 screw, 2x position washers Design of mounting device: Mounting system Mounting bracket, at system: For 14 mm rod, Sheet-metal mounting Mounting bracket, at device: Screw type Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal
	50120426	BTU 200M.5-D12	Mounting system	Contains: 2x M3 x 18 screw, 2x M3 mounting nut, 2x position washers Design of mounting device: Mounting system Mounting bracket, at system: For 12 mm rod Mounting bracket, at device: Screw type Type of mounting device: Turning, 360°, Clampable, Adjustable Material: Stainless steel

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