

## Technical data sheet

## Throughbeam photoelectric sensor transmitter

Part no.: 50150348

LS35CI.XR1/XX-M12



For illustration purposes only

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## Technical data

### Basic data

Series	35C
Operating principle	Throughbeam principle
Device type	Transmitter
Application	Detection of products in bag packaging

### Optical data

Operating range	0 ... 180 m (guaranteed operating range)
Operating range limit	0 ... 220 m (typical operating range)
Light source	LED, Infrared
Wavelength	860 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 ... 20 mA

### Time behavior

Readiness delay	300 ms
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### Connection

Number of connections	1 Piece(s)
Connection 1	
Function	Voltage supply
Type of connection	Connector
Thread size	M12
Type	Male
Material	Stainless steel
No. of pins	4 -pin
Encoding	A-coded

### Mechanical data

Dimension (W x H x L)	18.8 mm x 55.3 mm x 32.4 mm
Housing material	Stainless steel
Material of operational control	Plastic (POM Hostaform C9021, copoly-ester Tritan TX1001), non-diffusive
Housing roughness	$R_a \leq 0,8$ , Typical value for the stainless steel housing
Stainless steel housing	AISI 316L, DIN X2CrNiMo17132, W. No1.4404
Lens cover material	Plastic (PMMA+) with scratch-resistant Indium protective coating
Net weight	120 g
Housing color	Silver
Type of fastening	Through-hole mounting Via optional mounting device
Compatibility of materials	CleanProof+ ECOLAB Johnson Diversey

### Operation and display

Operational controls	270° potentiometer
Function of the operational control	Sensitivity adjustment

### Environmental data

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

### Certifications

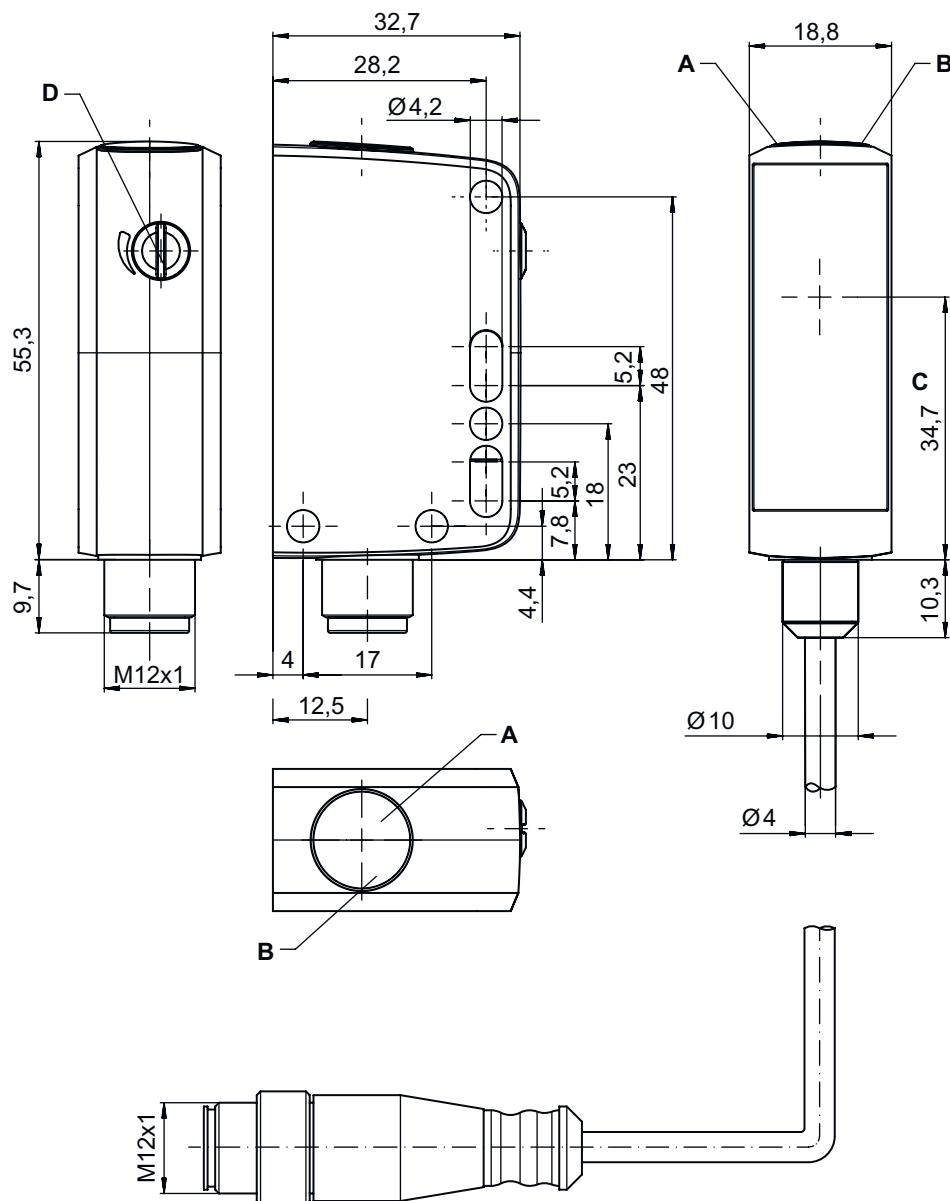
Degree of protection	IP 67 IP 68 IP 69K
Protection class	III
Approvals	c UL US
Standards applied	IEC 60947-5-2

### 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

## Dimensioned drawings

All dimensions in millimeters



- A Green LED
- B Yellow LED
- C Optical axis

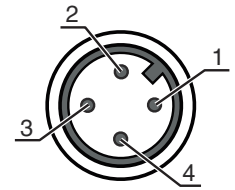
## Electrical connection

### Connection 1


Function	Voltage supply
Type of connection	Connector
Thread size	M12
Type	Male
Material	Stainless steel
No. of pins	4 -pin
Encoding	A-coded

## Electrical connection

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



## Suitable receivers

	Part no.	Designation	Operating range Operating range limit	Description
	50150345	LE35CI.XR1/LG-M12	0 ... 180 m 0 ... 220 m	Application: Detection of products in bag packaging Supply voltage: DC Digital switching outputs: 2 Piece(s) Switching output 1: Transistor, Push-pull, IO-Link / light switching (PNP)/dark switching (NPN) Switching output 2: Transistor, Push-pull, Dark switching (PNP)/light switching (NPN) Switching frequency: 100 Hz Interface: IO-Link Connection: Connector, M12, Stainless steel, 4 -pin Operational controls: 270° potentiometer

## Part number code

Part designation: **AAA35C d EE.GGH/IJ-K**



<b>AAA35C</b>	<b>Operating principle</b> LS35C: Throughbeam photoelectric sensor transmitter LE35C: Throughbeam photoelectric sensor receiver PRK35C: Retro-reflective photoelectric sensor with polarization filter HT35C: Diffuse reflection sensor with background suppression DRT35C: Dynamic reference diffuse sensor
<b>d</b>	<b>Light type</b> n/a: red light I: infrared light
<b>EE</b>	<b>Light source</b> n/a: LED PP: Power PinPoint® LED L1: laser class 1
<b>GG</b>	<b>Equipment</b> A: Autocollimation principle (single lens) D: Detection of stretch-wrapped objects X: extended model XL: Extra long light spot TT: autocollimation principle (single lens) for highly transparent bottles with tracking R: greater operating range XXR: super power transmitter
<b>H</b>	<b>Operating range adjustment</b> 1: 270° potentiometer 2: multiturn potentiometer 3: teach-in via button
<b>i</b>	<b>Switching output/function OUT 1/IN: Pin 4 or black conductor</b> X: pin not used 8: activation input (activation with high signal) L: IO-Link interface (SIO mode: PNP light switching, NPN dark switching) 4: PNP transistor output, light switching 6: push-pull switching output, PNP light switching, NPN dark switching 1: IO-Link / light switching (NPN) / dark switching (PNP)

Part number code

J	<b>Switching output / function OUT 2/IN: pin 2 or white conductor</b> T: teach-in via cable G: Push-pull switching output, PNP dark switching, NPN light switching X: pin not used P: PNP transistor output, dark switching 6: push-pull switching output, PNP light switching, NPN dark switching
K	<b>Electrical connection</b> n/a: cable, standard length 2000 mm, 4-wire 200-M12: cable, length 200 mm with M12 connector, 4-pin, axial (plug) M12: M12 connector, 4-pin (plug)

Note	
	A list with all available device types can be found on the Leuze website at <a href="http://www.leuze.com">www.leuze.com</a> .

Notes


 Observe intended use!	
	<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>

Further information

- Ambient temperature, operation: +70 °C permissible only briefly (≤ 15min)
- IP 69K only in combination with connector
- Light source: Average life expectancy 100,000h at an ambient temperature of 25 °C
- Sum of the output currents for both outputs 100 mA


Accessories

Connection technology - Connection unit


	Part no.	Designation	Article	Description
	50144900	MD 798i-11-82/L5-2222	IO-Link master	Type: IO-Link master Current consumption, max.: 11,000 mA Switching outputs for each sensor connection: 1 Piece(s) Switching output: Transistor, PNP Interface: IO-Link, Automatic protocol detection, EtherNet IP, Modbus TCP, PROFINET Connections: 12 Piece(s) Sensor connections: 8 Piece(s) Connections for voltage supply: 2 Piece(s) Interface connections: 2 Piece(s) Degree of protection: IP 67, IP 65, IP 69K

## Accessories



### Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50130657	KD U-M12-4A-P1-050	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: PUR
	50148349	KD U-M12-4A-T0-020 F+B	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 4 -pin Connector, LED: No Connection 2: Open end Shielded: No Cable length: 2.000 mm Sheathing material: TPE
	50148350	KD U-M12-4A-T0-050 F+B	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: TPE

### Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
	50118543	BT 300M.5	Mounting bracket	Design of mounting device: Angle, L-shape Fastening, at system: Through-hole mounting Mounting bracket, at device: Screw type, Suited for M4 screws Type of mounting device: Adjustable Material: Stainless steel

### Mounting technology - Rod mounts

	Part no.	Designation	Article	Description
	50117252	BTU 300M-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 M4 screws Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal
	50120425	BTU 300M.5-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 M4 screws Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Stainless steel

Accessories

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