

## Technical data sheet

### Throughbeam photoelectric sensor transmitter

Part no.: 50147128

LS36/XX-200-M12



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## Technical data

### Basic data

Series	36
Operating principle	Throughbeam principle
Device type	Transmitter

### Optical data

Operating range	0.5 ... 80 m (guaranteed operating range)
Operating range limit	0 ... 100 m (typical operating range)
Beam path	Divergent
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
	Transient protection
<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 ... 20 mA

### Time behavior

Readiness delay	300 ms
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### Connection

Number of connections	1 Piece(s)
<b>Connection 1</b>	
Function	Voltage supply
Type of connection	Cable with connector
Cable length	200 mm
Sheathing material	PUR
Cable color	Black
Number of conductors	4 -wire
Wire cross section	0.2 mm <sup>2</sup>
Thread size	M12
Type	Male
Material	Plastic
No. of pins	4 -pin
Encoding	A-coded

### Mechanical data

Dimension (W x H x L)	20.5 mm x 76.3 mm x 44 mm
Housing material	Plastic
Plastic housing	PC-PBT
Lens cover material	Plastic / PMMA
Net weight	65 g
Housing color	Black
Type of fastening	Through-hole mounting Via optional mounting device
Recommended tightening torque for M3 fastening	0.9 N·m
Recommended tightening torque for M4 fastening	1.4 N·m

### 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

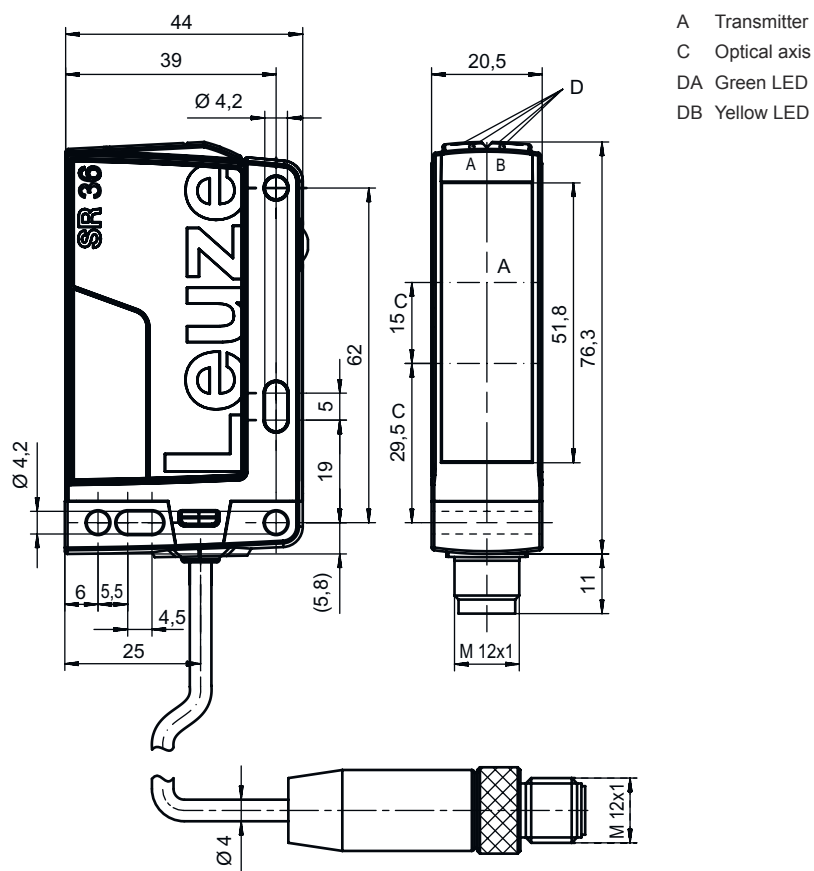
Degree of protection	IP 67
Protection class	III
Approvals	c UL US
Standards applied	IEC 60947-5-2

### 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
ECLASS 16.0	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
UNSPSC 26.08	39121528

# Dimensioned drawings

All dimensions in millimeters



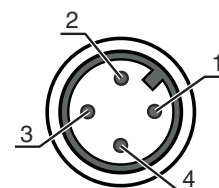
## Electrical connection

### Connection 1

Function	Voltage supply
Type of connection	Cable with connector
Cable length	200 mm
Sheathing material	PUR
Cable color	Black
Number of conductors	4 -wire
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### Pin Pin assignment





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



## Operation and display

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

## Suitable receivers

	Part no.	Designation	Operating range Operating range limit	Description
	50147136	LE36.1/2X-200-M12	0.5 ... 80 m 0 ... 100 m	Supply voltage: DC Digital switching outputs: 1 Piece(s) Switching output 1: Transistor, NPN, Light switching Switching frequency: 300 Hz Connection: Cable with connector, 200 mm, M12, Plastic, 4 -wire, 4 -pin Operational controls: 270° potentiometer
	50147134	LE36.1/4X-200-M12	0.5 ... 80 m 0 ... 100 m	Supply voltage: DC Digital switching outputs: 1 Piece(s) Switching output 1: Transistor, PNP, Light switching Switching frequency: 300 Hz Connection: Cable with connector, 200 mm, M12, Plastic, 4 -wire, 4 -pin Operational controls: 270° potentiometer
	50147137	LE36.1/NX-200-M12	0.5 ... 80 m 0 ... 100 m	Supply voltage: DC Digital switching outputs: 1 Piece(s) Switching output 1: Transistor, NPN, Dark switching Switching frequency: 300 Hz Connection: Cable with connector, 200 mm, M12, Plastic, 4 -wire, 4 -pin Operational controls: 270° potentiometer
	50147135	LE36.1/PX-200-M12	0.5 ... 80 m 0 ... 100 m	Supply voltage: DC Digital switching outputs: 1 Piece(s) Switching output 1: Transistor, PNP, Dark switching Switching frequency: 300 Hz Connection: Cable with connector, 200 mm, M12, Plastic, 4 -wire, 4 -pin Operational controls: 270° potentiometer

## Part number code

Part designation: **AAA36 D.E/FG-K**

<b>AAA36</b>	<b>Operating principle / construction</b> HT36: Diffuse reflection sensor with background suppression LS36: Throughbeam photoelectric sensor transmitter LE36: Throughbeam photoelectric sensor receiver PRK36: Retro-reflective photoelectric sensor with polarization filter
<b>D</b>	<b>Light type</b> n/a: red light I: infrared light
<b>E</b>	<b>Equipment</b> n/a: standard 1: 270° potentiometer D: Depolarizing media
<b>FG</b>	<b>Switching output / Function</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

## Part number code

<b>K</b>	<b>Electrical connection</b> n/a: cable, standard length 2000 mm, 3-wire 200-M8: cable, length 200 mm with M8 connector, 4-pin, axial (plug) 200-M12: cable, length 200 mm with M12 connector, 4-pin, axial (plug) M12: M12 connector, 4-pin (plug)
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### Note



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



- ⌘ 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)

## Further information

- Light source: Average life expectancy 100,000h at an ambient temperature of 25 °C


## Accessories

### Connection technology - Connection cables


	Part no.	Designation	Article	Description
	50130652	KD U-M12-4A-V1-050	Connection cable	Application: Chemical resistant 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	Application: Chemical resistant 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

## Accessories

### Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
	50105315	BT 46	Mounting device	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
	50117252	BTU 300M-D12	Mounting system	Contains: 2x M4 x 25 screw, 2x M4 x 20 screw, 4x 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 M4 screws Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal

#### Note



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