

## Technical data sheet

### Throughbeam photoelectric sensor receiver

Part no.: 50147136

LE36.1/2X-200-M12



#### Contents

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



## Technical data

### Basic data

Series	36
Operating principle	Throughbeam principle
Device type	Receiver

### Optical data

Operating range	0.5 ... 80 m
Operating range	Guaranteed operating range
Operating range limit	Typical operating range
Operating range limit	0 ... 100 m

### Electrical data

Protective circuit	Polarity reversal protection
	Short circuit protected
	Transient protection

### 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	1 Piece(s)
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### Switching outputs

Voltage type	DC
Switching current, max.	100 mA
Switching voltage	high: $\geq(U_B - 2V)$ low: $\leq 2 V$

### Switching output 1

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

### Time behavior

Switching frequency	300 Hz
Response time	1.66 ms
Readiness delay	300 ms

### Connection

#### Connection 1

Function	Signal OUT
	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

### Operation and display

Type of display	LED
Number of LEDs	2 Piece(s)
Operational controls	270° potentiometer

### Environmental data

Ambient temperature, operation	-40 ... 60 °C
Ambient temperature, storage	-40 ... 70 °C

### Certifications

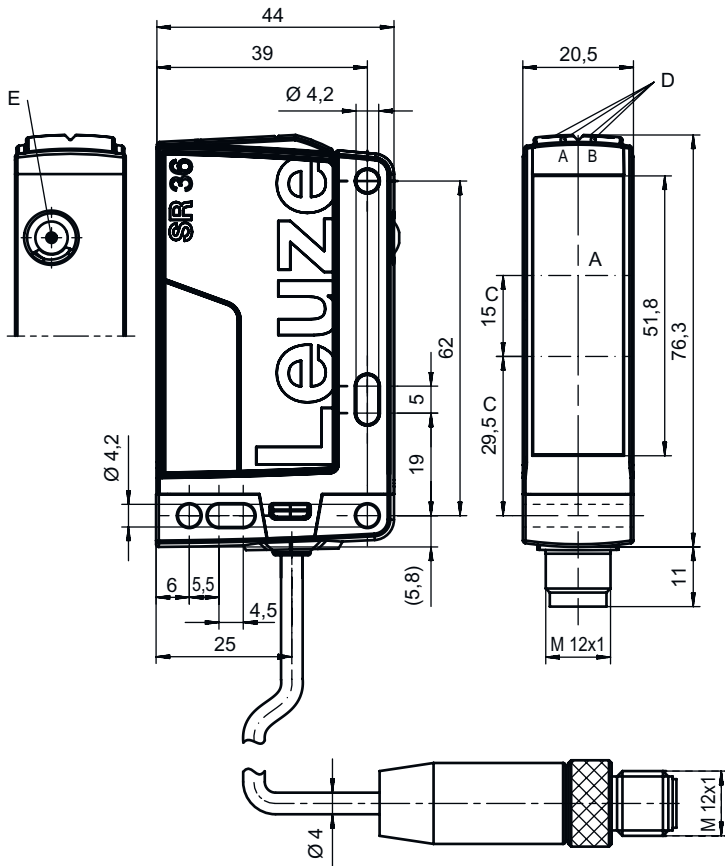
Degree of protection	IP 67
Protection class	III
Certifications	c UL US
Standards applied	IEC 60947-5-2

### 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
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716
ETIM 8.0	EC002716
ETIM 9.0	EC002716

# Dimensioned drawings

All dimensions in millimeters



- A Receiver
- C Optical axis
- DA Green LED
- DB Yellow LED
- E Sensitivity adjustment

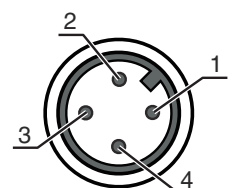
## Electrical connection

### Connection 1

Function	Signal OUT 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

### Pin Pin assignment

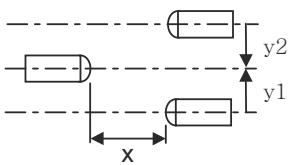
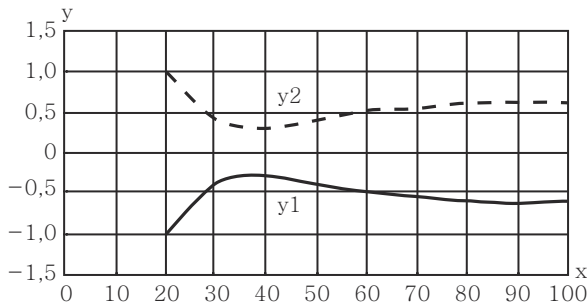
1	V+
2	n.c.
3	GND
4	OUT 1



# Diagrams

## Typ. response behavior

x Distance [m]  
y Misalignment [m]



## Operation and display

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

## Suitable transmitters

	Part no.	Designation	Article	Description
	50147128	LS36/XX-200-M12	Throughbeam photoelectric sensor transmitter	Operating range limit: 0 ... 100 m Light source: LED, Red Supply voltage: DC Connection: Cable with connector, 200 mm, M12, Plastic, 4 -wire, 4 -pin

## Part number code

Part designation: AAA36 D.E/FG-K

AAA36	<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
D	<b>Light type</b> n/a: red light I: infrared light
E	<b>Equipment</b> n/a: standard 1: 270° potentiometer D: Depolarizing media

## Part number code

<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
<b>K</b>	n/a: cable, standard length 2000 mm, 3-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>

For UL applications:	
	<ul style="list-style-type: none"> <li>⌘ For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code).</li> <li>⌘ 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)</li> </ul>

## Further information


- Response time: For short decay times, an ohmic load of approx. 5kOhm is recommended

## Accessories


### 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


## Accessories

	Part no.	Designation	Article	Description
	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
	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	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.