

# Technical data sheet

## Throughbeam photoelectric sensor receiver

Part no.: 50140154

LE412B/4

### Contents

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



For illustration purposes only



## Technical data

### Basic data

Series	412B
Operating principle	Throughbeam principle
Device type	Receiver

### Optical data

Operating range	see transmitter
-----------------	-----------------

### Electrical data

Protective circuit	Polarity reversal protection Short circuit protected
--------------------	---

### Performance data

Supply voltage $U_B$	10 ... 36 V, DC, Incl. residual ripple
Residual ripple	0 ... 20 %, From $U_B$
Open-circuit current	0 ... 15 mA

### Outputs

Number of digital switching outputs	1 Piece(s)
-------------------------------------	------------

Switching outputs	
Type	Digital switching output
Voltage type	DC
Switching current, max.	200 mA

Switching output 1	
Switching element	Transistor, PNP
Switching principle	Light switching

### Time behavior

Switching frequency	1,000 Hz
Response time	0.5 ms
Readiness delay	20 ms

### Connection

Number of connections	1 Piece(s)
-----------------------	------------

Connection 1	
Function	Signal OUT Voltage supply
Type of connection	Cable
Cable length	2,000 mm
Sheathing material	PVC
Cable color	Black
Number of conductors	3 -wire
Wire cross section	0.34 mm <sup>2</sup>

### Mechanical data

Dimension (Ø x L)	12 mm x 51 mm
Thread size	M12 x 1 mm
Housing material	Metal
Metal housing	Chromed brass
Lens cover material	Glass
Net weight	100 g
Housing color	Silver

### Operation and display

Type of display	LED
Number of LEDs	2 Piece(s)

### Environmental data

Ambient temperature, operation	-25 ... 55 °C
--------------------------------	---------------

### Certifications

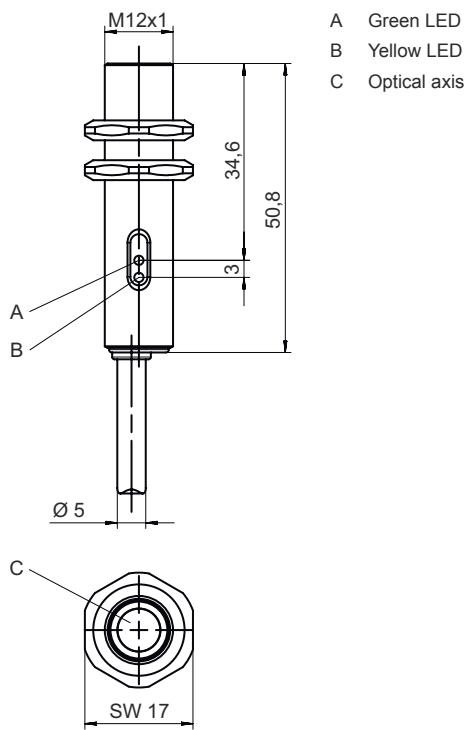
Degree of protection	IP 67
Protection class	III
Approvals	c UL US
Standards applied	IEC 60947-5-2

### 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
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



## Electrical connection

### Connection 1

Function	Signal OUT
Type of connection	Voltage supply
Cable length	2,000 mm
Sheathing material	PVC
Cable color	Black
Number of conductors	3 -wire
Wire cross section	0.34 mm <sup>2</sup>
<b>Conductor color</b>	
Brown	V+
Black	OUT 1
Blue	GND
<b>Conductor assignment</b>	

## Operation and display

LED	Display	Meaning
1	Green, continuous light	Function reserve
2	Yellow, continuous light	Switching output/switching state active

## Suitable transmitters

Part no.	Designation	Operating range Operating range limit	Description
50140153	LS412B/D	0 ... 10 m 0 ... 10 m	Special version: Deactivation input Operating range limit: 0 ... 10 m Light source: LED, Red Supply voltage: DC Deactivation inputs: 1 Piece(s) Connection: Cable, 2,000 mm, 3 -wire

## Part number code

Part designation: AAA412BGG.H/ii-K

<b>AAA412B</b>	<b>Operating principle / construction</b> LS412B: Throughbeam photoelectric sensor transmitter LE412B: Throughbeam photoelectric sensor receiver ET412B: Energetic diffuse reflection sensor PRK412B: Retro-reflective photoelectric sensor with polarization filter
<b>GG</b>	<b>Light source</b> n/a: LED L2: laser class 2
<b>H</b>	<b>Operating range adjustment</b> 1: 270° potentiometer
<b>ii</b>	<b>Switching output / function / OUT1OUT2 (OUT1 = pin 4, OUT2 = pin 2)</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 D: Deactivation input (deactivation with low signal) X: pin not used
<b>K</b>	<b>Electrical connection</b> n/a: cable, standard length 2000 mm, 3-wire M12: M12 connector, 4-pin (plug)

### Note

↳ A list with all available device types can be found on the Leuze website at [www.leuze.com](http://www.leuze.com).

## Notes

 <b>Observe intended use!</b>
 ↳ 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.

## Accessories

### Mounting technology - Mounting brackets

Part no.	Designation	Article	Description
50113549	BT D12M.5	Mounting bracket	<p>Diameter, inner: 12 mm            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: Stainless steel</p>

#### Note



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