

## Technical data sheet

### Throughbeam photoelectric sensor

Part no.: 50140153

LS412B/D

#### Contents

- Technical data
- Dimensioned drawings
- Electrical connection
- Suitable receivers
- Part number code
- Notes
- Accessories



Figure can vary



## Technical data

### Basic data

Series	412B
Operating principle	Throughbeam principle
Device type	Transmitter

### Special design

Special design	Deactivation input
----------------	--------------------

### Optical data

Operating range	Guaranteed operating range
Operating range	0 ... 10 m
Light source	LED, Red
LED light wavelength	660 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 ... 36 V, DC, Incl. residual ripple
Residual ripple	0 ... 20 %, From $U_B$
Open-circuit current	0 ... 15 mA

### Inputs

Number of deactivation inputs	1 Piece(s)
-------------------------------	------------

### Deactivation inputs

Voltage type	DC
--------------	----

### Deactivation input 1

Active switching state	Low
------------------------	-----

### Connection

#### Connection 1

Function	Signal IN
	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

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

### Environmental data

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

### Certifications

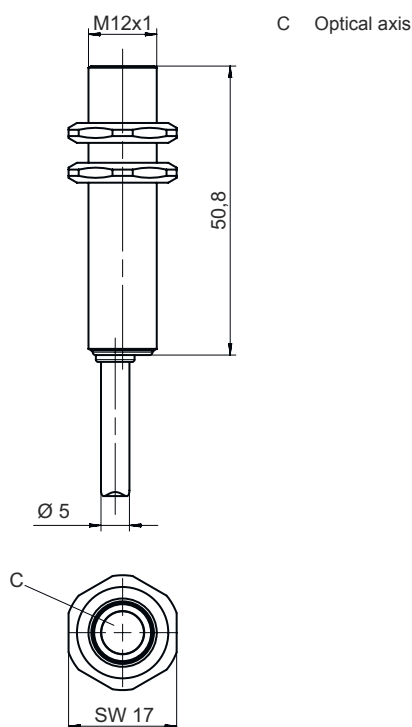
Degree of protection	IP 67
Protection class	III
Certifications	c UL US
Standards applied	IEC 60947-5-2

### Classification

Customs tariff number	85365019
eCl@ss 8.0	27270901
eCl@ss 9.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716

## Dimensioned drawings

All dimensions in millimeters



## Electrical connection

### Connection 1


Function	Signal IN
	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>

### Conductor color




### Conductor assignment

Brown	V+
Black	IN 1
Blue	GND

## Suitable receivers

	Part no.	Designation	Article	Description
	50140158	LE412B/2	Throughbeam photoelectric sensor receiver	Supply voltage: DC Digital switching outputs: 1 Piece(s) Switching output 1: Transistor, NPN, Light switching Switching frequency: 1,000 Hz Connection: Cable, 2,000 mm, 3 -wire

## Suitable receivers

	Part no.	Designation	Article	Description
	50140154	LE412B/4	Throughbeam photoelectric sensor receiver	Supply voltage: DC Digital switching outputs: 1 Piece(s) Switching output 1: Transistor, NPN, Light switching Switching frequency: 1,000 Hz Connection: Cable, 2,000 mm, 3 -wire
	50140159	LE412B/N	Throughbeam photoelectric sensor receiver	Supply voltage: DC Digital switching outputs: 1 Piece(s) Switching output 1: Transistor, NPN, Dark switching Switching frequency: 1,000 Hz Connection: Cable, 2,000 mm, 3 -wire
	50140155	LE412B/P	Throughbeam photoelectric sensor receiver	Supply voltage: DC Digital switching outputs: 1 Piece(s) Switching output 1: Transistor, PNP, Dark switching Switching frequency: 1,000 Hz 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




### 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.

**Accessories****Mounting technology - Mounting brackets**

	Part no.	Designation	Article	Description
	50113549	BT D12M.5	Mounting bracket	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

**Note**

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