

## Technical data sheet

### Throughbeam photoelectric sensor

Part no.: 50144558

LS318BI/9D-200-M12

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- Dimensioned drawings
- Electrical connection
- Diagrams
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- Part number code
- Notes
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Figure can vary



## Technical data

### Basic data

Series	318B
Operating principle	Throughbeam principle
Device type	Transmitter

### Special version

Special version	Deactivation input
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### Optical data

Operating range	Guaranteed operating range
Operating range	0 ... 16 m
Operating range limit	Typical operating range
Operating range limit	0 ... 23 m
Light source	LED, Infrared
LED light wavelength	850 nm
LED group	Exempt group (in acc. with EN 62471)
Transmitted-signal shape	Pulsed

### 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 ... 15 mA

#### Inputs

Number of deactivation inputs	2 Piece(s)
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#### Deactivation inputs

##### Deactivation input 1

Active switching state	Low
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##### Deactivation input 2

Active switching state	High
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### Timing

Readiness delay	300 ms
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### Connection

#### Connection 1

Function	Signal IN
	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

Thread size	M18 x 1 mm
Dimension (Ø x L)	18 mm x 46 mm
Housing material	Plastic
Plastic housing	ABS
Lens cover material	Plastic
Net weight	20 g
Housing color	Black
	Red

### Operation and display

Type of display	LED
Number of LEDs	1 Piece(s)

### Environmental data

Ambient temperature, operation	-40 ... 50 °C
Ambient temperature, storage	-40 ... 70 °C

### Certifications

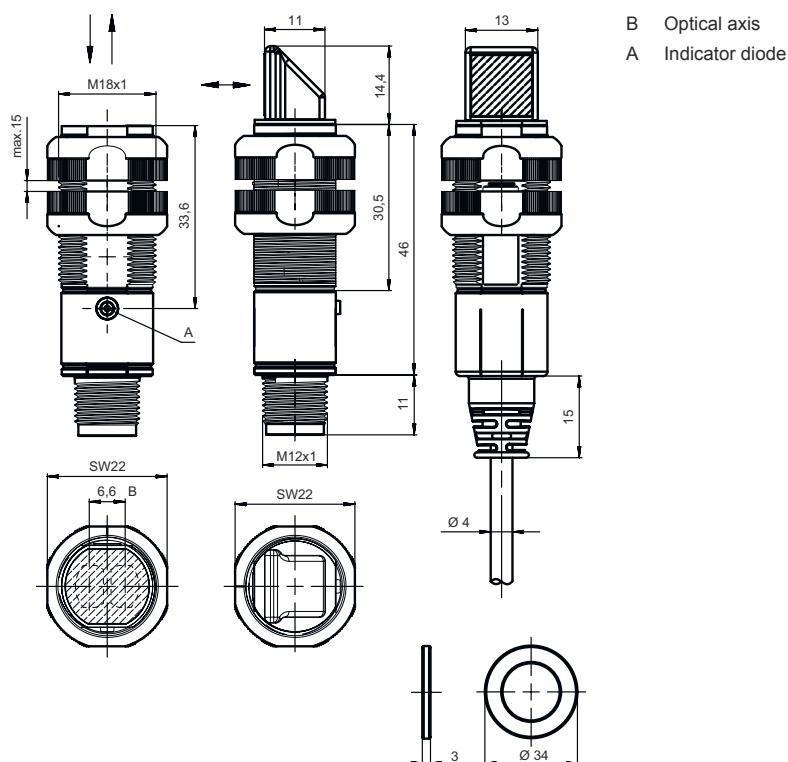
Degree of protection	IP 67
Protection class	III
Certifications	c UL US
Standards applied	IEC 60947-5-2

### Classification

Customs tariff number	85365019
eCl@ss 5.1.4	27270901
eCl@ss 8.0	27270901
eCl@ss 9.0	27270901
eCl@ss 10.0	27270901
eCl@ss 11.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716

# Dimensioned drawings

All dimensions in millimeters



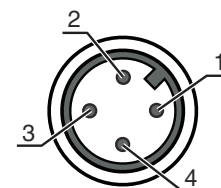
## Electrical connection

### Connection 1

Function	Signal IN 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>
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### Pin Pin assignment

1	V+
2	IN2
3	GND
4	IN1

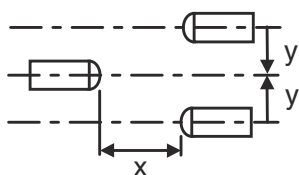


## Diagrams

### Typ. response behavior




x Distance [m]  
y Misalignment [mm]



## Operation and display

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

## Suitable receivers

	Part no.	Designation	Article	Description
	50144559	LE318B/4P-200-M12	Throughbeam photoelectric sensor receiver	Operating range limit: 0 ... 15 m Supply voltage: DC Digital switching outputs: 2 Piece(s) Switching output 1: Transistor, PNP, Light switching Switching output 2: Transistor, PNP, Dark switching Switching frequency: 500 Hz Connection: Cable with connector, 200 mm, M12, Plastic, 4 -wire, 4 -pin

## Part number code


Part designation: **XXX318BY-AAAF.BB/CC-DDD**

<b>XXX318B</b>	<b>Operating principle</b> PRK: retro-reflective photoelectric sensor with polarization filter ET: energetic diffuse reflection sensor FT: diffuse reflection sensor with fading LE: throughbeam photoelectric sensor receiver LS: throughbeam photoelectric sensor transmitter
<b>Y</b>	<b>Light type</b> n/a: red light I: infrared light
<b>AAAF</b>	<b>Preset range (optional)</b> n/a: operating range acc. to data sheet xxxF: preset range [mm]
<b>BB</b>	<b>Equipment</b> n/a: axial optics W: 90° angular optics 3: teach-in via button X: reinforced fading

## Part number code


<b>CC</b>	<b>Switching output / function (OUT1 = pin 4, OUT2 = pin 2):</b> 4: PNP transistor output, light switching P: PNP transistor output, dark switching 2: NPN transistor output, light switching N: NPN transistor output, dark switching 9: input for transmitter deactivation (deactivation with HIGH signal) D: input for transmitter deactivation (deactivation with LOW signal) X: pin not used
<b>DDD</b>	<b>Electrical connection</b> n/a: cable, standard length 2000 mm, 4-wire M12: M12 connector, 4-pin (plug) 5000: cable, standard length 5000 mm, 4-wire 200-M12: cable, length 200 mm with M12 connector, 4-pin, axial (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> .
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## 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.
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### 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)
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## Further information


- Sum of the output currents for both outputs, 50 mA for ambient temperatures > 40 °C

## 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 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 Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC

## Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
	50113548	BT D18M.5	Mounting bracket	Diameter, inner: 18 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

## Mounting technology - Rod mounts

	Part no.	Designation	Article	Description
	50117490	BTU D18M-D12	Mounting system	Design of mounting device: Mounting system Fastening, at system: Through-hole mounting Mounting bracket, at device: Screw type 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.