

## Technical data sheet

### Throughbeam photoelectric sensor transmitter set

Part no.: 50128862

Set L318B.Y1

#### Contents

- Set consists of
- Technical data
- Dimensioned drawings
- Electrical connection
- Part number code
- Notes
- Further information
- Accessories



For illustration purposes only



**Set consists of**

Quantity	Part no.	Designation	Article	Description
1	50116847	LE318B/4P-M12	Throughbeam photoelectric sensor receiver	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: Connector, M12, Plastic, 4 -pin
1	50126605	LS318B.Y1	Throughbeam photoelectric sensor transmitter	Special version: Deactivation input, Small light spot (S) Operating range limit: 0 ... 14.2 m Light source: LED, Red Supply voltage: DC Deactivation inputs: 2 Piece(s) Connection: Connector, M12, Plastic, 4 -pin

**Technical data****Basic data**

Series	318B
Operating principle	Throughbeam principle
Device type	Set (transmitter and receiver)

**Special version**

Special version	Article set
	Deactivation input
	Small light spot (S)

**Optical data**

Operating range	0 ... 9.4 m (guaranteed operating range)
Operating range limit	0 ... 14.2 m (typical operating range)
Light source	LED, Red
Wavelength	620 nm
Transmitted-signal shape	Pulsed
LED group	Exempt group (in acc. with EN 62471)

**Electrical data**

Protective circuit	Polarity reversal protection Short circuit protected
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**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**

Type	Deactivation input
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**Deactivation input 1**

Active switching state	Low
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**Deactivation input 2**

Active switching state	High
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**Outputs**

Number of digital switching outputs	2 Piece(s)
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**Switching outputs**

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

**Switching output 1**

Switching element	Transistor, PNP
Switching principle	Light switching

**Switching output 2**

Switching element	Transistor, PNP
Switching principle	Dark switching

**Time behavior**

Switching frequency	500 Hz
Response time	1 ms
Readiness delay	300 ms

**Connection**

Number of connections	1 Piece(s)
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**Connection 1**

Function	Signal IN Transmitter device connection Voltage supply
Type of connection	Connector
Thread size	M12
Type	Male
Material	Plastic
No. of pins	4 -pin
Encoding	A-coded

**Connection 2**

Function	Receiver device connection Signal OUT Voltage supply
Type of connection	Connector
Thread size	M12
Type	Male
Material	Plastic
No. of pins	4 -pin
Encoding	A-coded

## Technical data

### Mechanical data

Dimension (Ø x L)	18 mm x 46 mm
Thread size	M18 x 1 mm
Housing material	Plastic
Plastic housing	ABS
Lens cover material	Plastic
Net weight	40 g
Housing color	Black
	Red

### Environmental data

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

### Certifications

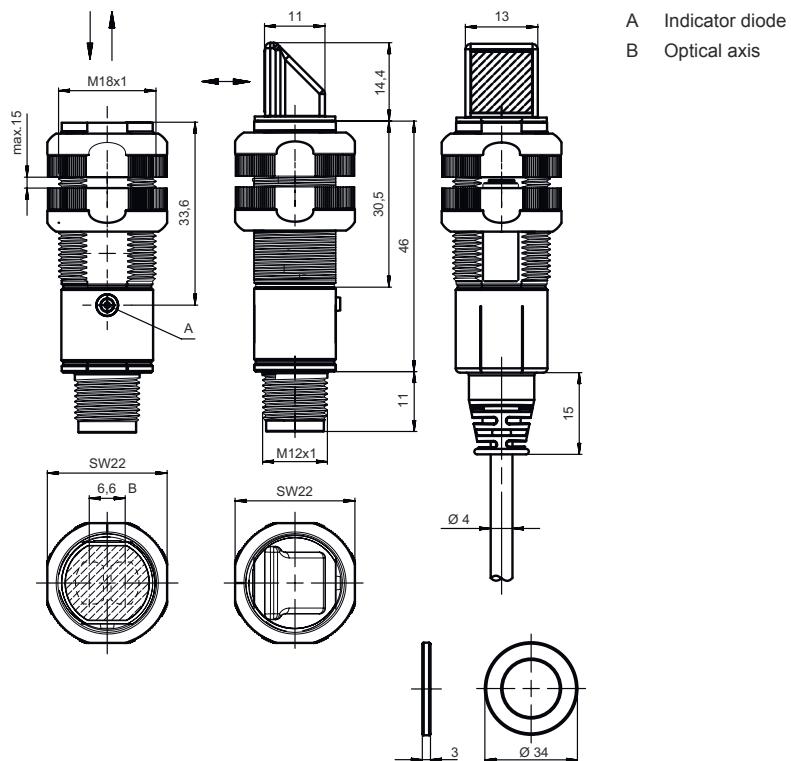
Degree of protection	IP 67
Protection class	III
Approvals	c UL US
Standards applied	IEC 60947-5-2

### 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

## Dimensioned drawings

All dimensions in millimeters



## Electrical connection

### Connection 1

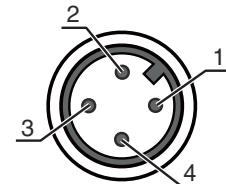
#### Transmitter

Function	Signal IN Transmitter device connection Voltage supply
Type of connection	Connector
Thread size	M12
Type	Male
Material	Plastic
No. of pins	4 -pin
Encoding	A-coded

### Pin

### Pin assignment

1	V+
2	IN 2
3	GND
4	IN 1

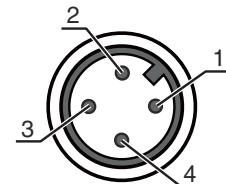


### Connection 2

#### Receiver

Function	Receiver device connection Signal OUT Voltage supply
Type of connection	Connector
Thread size	M12
Type	Male
Material	Plastic
No. of pins	4 -pin
Encoding	A-coded

Pin	Pin assignment
1	V+
2	OUT 2
3	GND
4	OUT 1



## Part number code

Part designation: XXX318BY-AAAAF.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

CC	<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
DDD	<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

	<b>Observe intended use!</b>
	<p>↳ This product is not a safety sensor and is not intended as personnel protection.</p> <p>↳ The product may only be put into operation by competent persons.</p> <p>↳ Only use the product in accordance with its intended use.</p>

### For UL applications:

	<p>↳ For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code).</p> <p>↳ These proximity switches shall be used with UL Listed Cable assemblies rated 30V, 0.5A min, in the field installation, or equivalent (categories: CYJV7 or PVVA/PVVA7)</p>
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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 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

## Accessories

Part no.	Designation	Article	Description
	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

## 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

## Mounting technology - Other

Part no.	Designation	Article	Description
	50117258 BT 318P-LS	Fastening	Contains: 10x Design of mounting device: Mounting clamp Fastening, at system: Through-hole mounting Mounting bracket, at device: Clampable Type of mounting device: Rigid Material: Plastic Shock absorber: No
	50121904 BT318B-OM	Fastening	Design of mounting device: Mounting clamp Fastening, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Swiveling, Adjustable, Turning Material: Plastic Shock absorber: No

### Note



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