L318B.Y1 — Throughbeam photoelectric sensors

en 02-2015/09 50127463



0 … 14.2m

10 - 30 V DC

500 Hz

- Throughbeam photoelectric sensor with clearly visible red light and high function reserve
- Fast alignment through *brightVision®*
- Simple fine adjustment via *omni-mount*
- Embedded mounting option
- Robust plastic housing acc. to IP 67 for industrial application
- Deactivation output for testing and interlinking of the sensor
- Complementary outputs for light/dark switching

IEC 60947...

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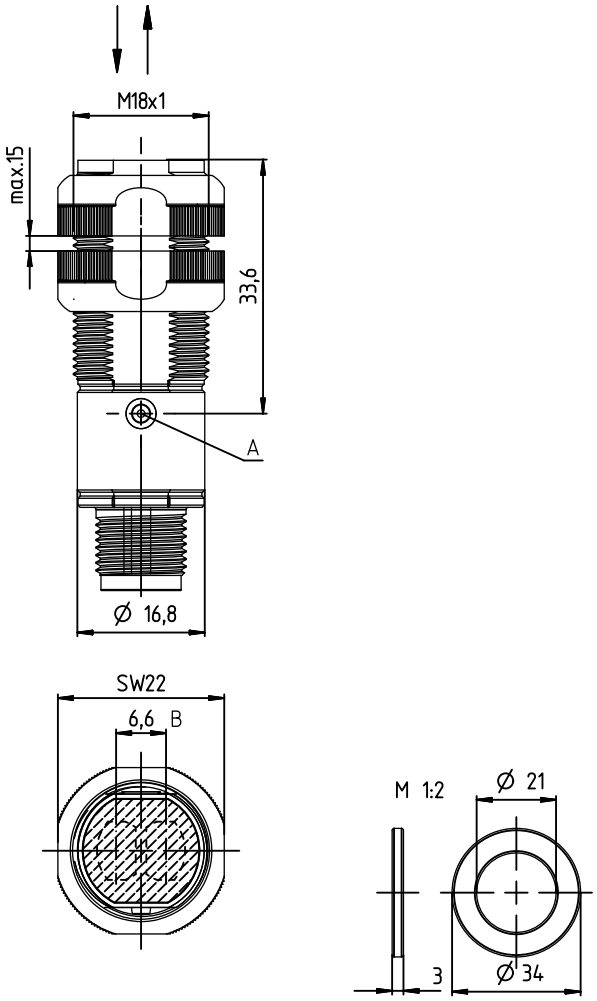
IP 67

Accessories:

(available separately)

- Mounting systems (BT 318, BT 318-ARH)
- M12 connectors (KD …)
- Ready-made cables (K-D …)

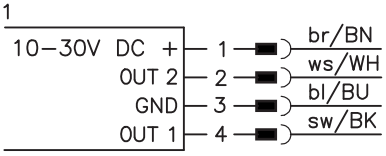
Dimensioned drawing



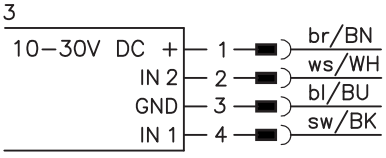
A Indicator diode
B Optical axis

Electrical connection

Receiver



Transmitter



We reserve the right to make changes • DS_L318B.Y1_en_50127463.fm

Specifications

Optical data

Typ. operating range limit [1]	0 … 14.2m
Operating range [2]	0 … 9.5m
Light source	LED (modulated light)
Wavelength	620nm (visible red light)

Timing

Switching frequency	500Hz
Response time	1ms
Delay before start-up	≤ 300ms

Electrical data

Operating voltage U_B [3]	10 … 30VDC
Residual ripple	≤ 15% of U_B
Open-circuit current	≤ 15mA
Switching output	2 PNP transistor outputs pin 2: PNP dark switching, pin 4: PNP light switching
Switching input	2 deactivation inputs pin 2: transmitter active when not connected or with HIGH signal pin 4: transmitter active when not connected or with LOW signal
Signal voltage high/low	≥ (U_B-2V)/≤ 2V
Output current	max. 100mA [4]

Indicators

Green LED	ready
Yellow LED	light path free
Yellow LED, flashing	light path free, no function reserve

Mechanical data

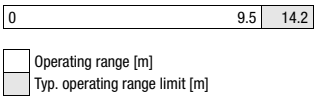
Housing	plastic
Optics cover	plastic
Weight	20g
Connection type	M12 connector, 4-pin

Environmental data

Ambient temp. (operation/storage)	-40°C … +60°C/-40°C … +70°C
Protective circuit [5]	2, 3
VDE safety class	III
Degree of protection	IP 67
Light source	exempt group (in acc. with EN 62471)
Standards applied	IEC 60947-5-2
Certifications	UL 508, C22.2 No.14-13 [3] [6]

1) Typ. operating range limit: max. attainable range without function reserve
2) Operating range: recommended range with function reserve
3) For UL applications: for use in class 2 circuits according to NEC only
4) Sum of the output currents for both outputs, 50mA when ambient temperatures > 40°C
5) 2=polarity reversal protection, 3=short circuit protection for all outputs
6) 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)

Tables



Remarks

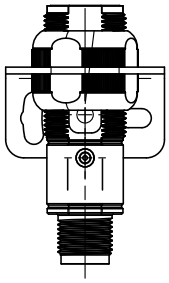
Operate in accordance with intended use!

- 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 the intended use.

Mounting options

Standard mounting

Alignment of the supplied mounting nuts with flat side towards the mounting sheet.
Mounting bracket BT D18M.5 is recommended for standard mounting.

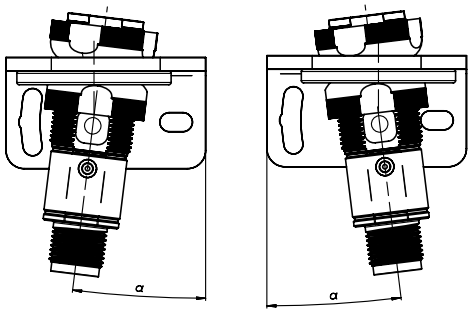


omni-mount

omni-mount makes fine adjustment of the sensors possible in a very simple and economical manner. For this type of mounting, the mounting nuts are used with the round side towards the mounting device. The mounting sheet must have a bore hole of approx. 21 mm in diameter. The special molding of the mounting nuts together with the spacer disc included in the delivery contents allows form-locking fastening of the sensors at different adjustment angles. The maximum possible tilt angle depends on the thickness of the mounting sheet. Mounting bracket BT D21M is recommended for *omni-mount*.

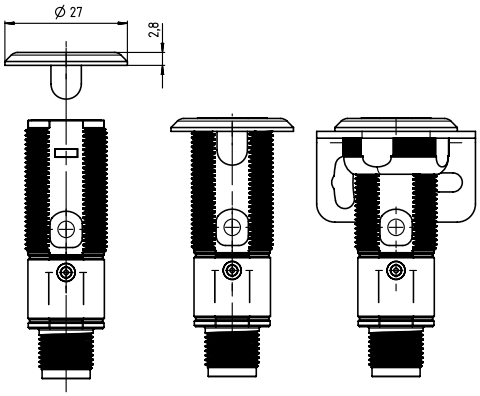
Mounting sheet thickness	Max. adjustment angle
2 mm	+/- 5°
4 mm*)	+/- 8°

*) Corresponds to the thickness of the BT D21M mounting bracket



Embedded mounting

Embedded mounting, e.g. into a materials handling belt, is possible via the BT 318P-LS mounting support.
The supports can be used either for fastening the axial sensors or for sensors with 90° optics.



Order guide

The sensors listed here are preferred types; current information at www.leuze.com.

			Designation	Part no.
Sensors with axial optics				
Transmitter	**With M12 connector**	With integrated diaphragm, 2 deactivation inputs (pin 4 = IN1, pin 2 = IN2)	LS318B.Y1	50126605
Receiver	**With M12 connector**	Pin 4: PNP light switching, pin 2: PNP dark switching	LE318B/4P-M12	50116847
Set	**With M12 connector**	Set consisting of: transmitter LS318B.Y1 (50126605) and receiver LE318B/4P-M12 (50116847)	Set L318B.Y1	50128862
Accessories for optimum fastening				
Accessories	Support for embedded mounting	Collective packaging with 10 supports	BT 318P-LS	50117258
	Mounting bracket for standard mounting		BT D18M.5	50113548
	Mounting bracket for omni-mount		BT D21M	50117257