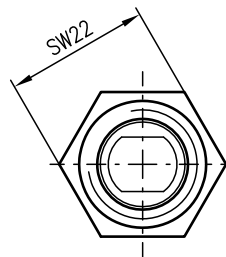
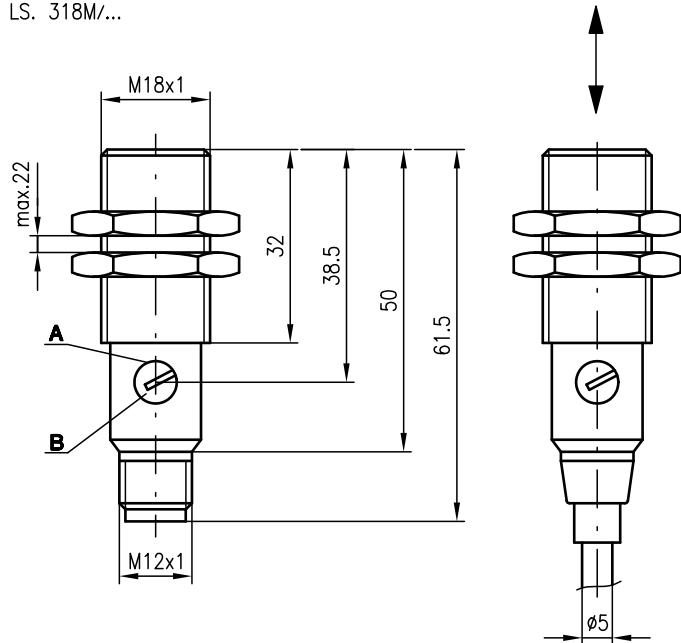


LS 318

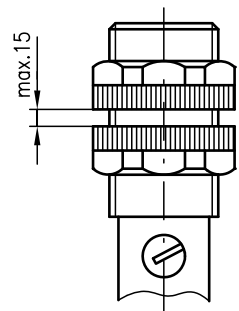
Throughbeam photoelectric sensors

Dimensioned drawing

LS. 318M/...

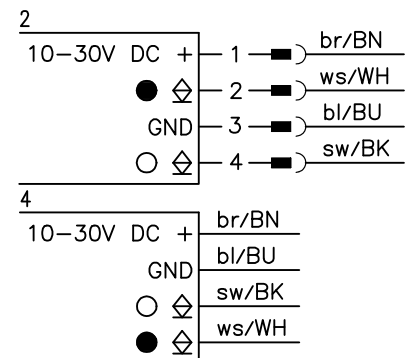
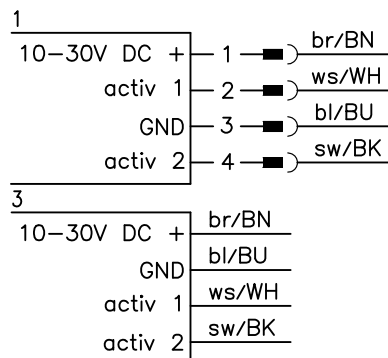


LS. 318K/...



- A Indicator diode
- B Sensitivity adjustment

Electrical connection



Part No. 501 08678



0 ... 20m
0 ... 45m



- Throughbeam photoelectric sensors with long operating range in infrared light and straight optics
- Robust cylindrical stainless steel or plastic housing M18x1, protection class IP 67 for industrial application
- Activation input for testing and interlinking
- Complementary switching outputs for light/dark switching or as a control function
- Very short construction for application in limited spaces



Accessories:

(available separately)

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

We reserve the right to make changes • 318_a06gb.fm

Specifications

Optical data

Typ. operating range limit ¹⁾	0 ... 20m, 0 ... 45m
Operating range ²⁾	0 ... 15m, 0 ... 35m
Light source	LED (modulated light)
Wavelength	880nm

Timing

Switching frequency	1000Hz
Response time	0.5ms
Delay before start-up	≤ 30ms

Electrical data

Operating voltage U_B	10 ... 30VDC
Residual ripple	≤ 10% of U_B
Bias current	≤ 25mA
Switching output	2 NPN transistor outputs, complementary
Function characteristics	light/dark switching
Signal voltage high/low	≥ ($U_B - 1.6V$) / ≤ 1.6V
Output current	max. 100mA
Sensitivity	adjustable

Indicators

LED red	light path free
LED red flashing	light path free, no performance reserve

Mechanical data

Housing	polyamide 12 or stainless steel
Optics cover	polyamide 12
Weight	90g (cable), 20g (M12)
Connection type	M12 connector, 4-pin cable 2m, 4x0.25mm ²

Environmental data

Ambient temp. (operation/storage)	-25°C ... +65°C / -40°C ... +70°C
Protective circuit ³⁾	1, 2, 3, 4
VDE safety class ⁴⁾	II, all-insulated
Protection class	IP 67
LED class	1 (acc. to EN 60825-1)
Standards applied	IEC 60947-5-2

Options

Activation input activ 1	
Transmitter active/not active	≥ 8V or not connected / ≤ 1.5V
Activation input activ 2	
Transmitter active/not active	≤ 1.5V or not connected / ≥ 8V

- 1) Typ. operating range limit: max. attainable range without performance reserve
- 2) Operating range: recommended range with performance reserve
- 3) 1=transient protection, 2=polarity reversal protection, 3=short circuit protection for all outputs, 4=interference blanking
- 4) Rating voltage 250VAC

Approved purpose:

The throughbeam photoelectric sensors are optical electronic sensors for optical, contactless detection of objects.

Order guide

Selection table		Order code →						
Equipment ↓		LS 318K/N-70-S12 Part No. 500 82195 (Tr) Part No. 500 82140 (Re)	LS 318K/N-S12 Part No. 500 81335 (Tr) Part No. 500 82140 (Re)	LS 318K/N-70 Part No. 500 82176 (Tr) Part No. 500 83111 (Re)	LS 318K/N Part No. 500 81337 (Tr) Part No. 500 83111 (Re)	LS 318M/N-70 Part No. 500 82188 (Tr) Part No. 501 08613 (Re)	LS 318M/N Part No. 500 81341 (Tr) Part No. 501 08613 (Re)	
Housing	plastic	●	●	●	●			
	stainless steel					●	●	
Connection	M12 connector	●	●					
	cable			●	●	●	●	
Switching output	PNP							
	NPN	●	●	●	●	●	●	
Operating range	15m		●		●		●	
	35m	●		●		●		
Connection diagram	transmitter	1	1	3	3	3	3	
	receiver	2	2	4	4	4	4	

Tables

LS 318...-70-...

0	35	45
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LS 318...

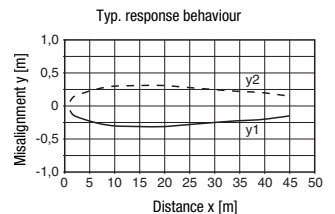
0	15	20
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Operating range [m]
Typ. operating range limit [m]

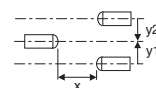
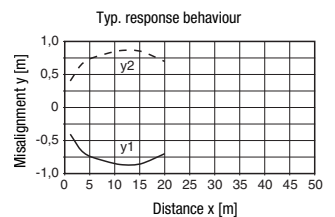
Model with integrated pin or slit diaphragm for detection of small parts or precise positioning tasks on request.

Diagrams

LS 318...-70...



LS 318...



Remarks

- For versions with PNP transistor output see separate data sheet.