

LT3BD W/30

Photoelectric Sensor – Diffuse Mode Sensor

Laser Running Time Meter



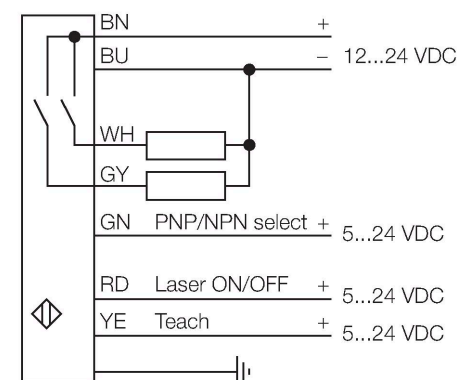
Technical data

Type	LT3BD W/30
ID no.	3065518
Optical data	
Function	Proximity switch
Operating mode	Runtime
Light type	Red
Wavelength	658 nm
Laser class	▲ 2
Repeatability	1 mm
Range	300...5000 mm
Ambient light immunity	5000 lux
Electrical data	
Operating voltage	12...24 VDC
Residual ripple	< 10 % U _{ss}
DC rated operational current	≤ 100 mA
No-load current	≤ 108 mA
Short-circuit protection	yes
Reverse polarity protection	yes
Output function	2 normally open contact, PNP/NPN
Switching frequency	≤ 1000 Hz
Readiness delay	≤ 1 s
Readiness delay	≤ 1000 ms
Response time typical	< 1 ms
Mechanical data	
Design	Rectangular, LT3
Dimensions	87 x 35.3 x 68.5 mm

Features

- Cable, 7-wire, 9 m
- Indication of signal intensity
- Protection class IP67
- Measuring range (distance to white object): 5 m
- 3 response times adjustable for switching output
- Operating voltage: 12...24 VDC
- Two independently adjustable switching ranges

Wiring diagram



Functional principle

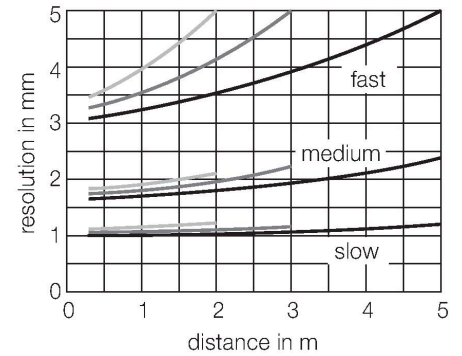
This distance sensor uses pulsed time-of-flight technology and is thus extremely powerful. The laser pulses one million times per second. The microprocessor records the time required for each pulse to travel to the object and back to the sensor. Every millisecond, one thousand pulse times are averaged and the corresponding value is transferred to the output.

Technical data

Housing material	Plastic, ABS, Black
Lens	plastic, Acrylic
Electrical connection	Cable, 9 m, PVC
Number of cores	8
Core cross-section	0.34 mm ²
Ambient temperature	0...+50 °C
Relative humidity	90 %
Protection class	IP67
Special features	Laser Teach input
Power-on indication	LED, Green
Switching state	LED, Yellow
Error indication	LED
Excess gain indication	LED, red
Tests/approvals	
MTTF	15 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE, cURus

The sensor achieves its highest accuracy after a 30-min. warm-up period.

Resolution in Dependence on Distance

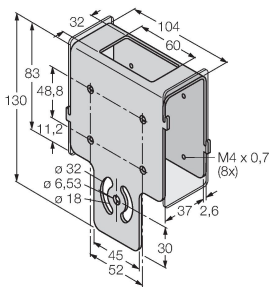


Accessories

SMBAMSLT3IP

3073442

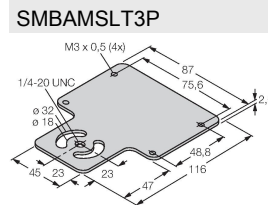
Protective housing with safety glass panel, for LT3 series



SMBAMSLT3P

3073132

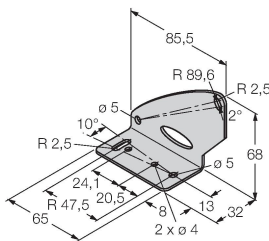
Backplane, stainless steel, for LT3 series



SMBLT31

3068505

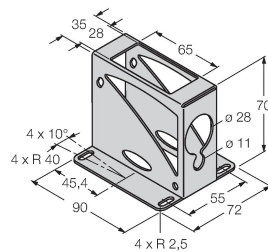
Mounting bracket, stainless steel, for LT3 series



SMBLT32

3069236

Protective housing, stainless steel, for LT3 series



SMBLT3IP

3070973

Protective housing, stainless steel, for
LT3 series