LT3BD
Photoelectric Sensor –   Diffuse Mode Sensor
Laser Running Time Meter
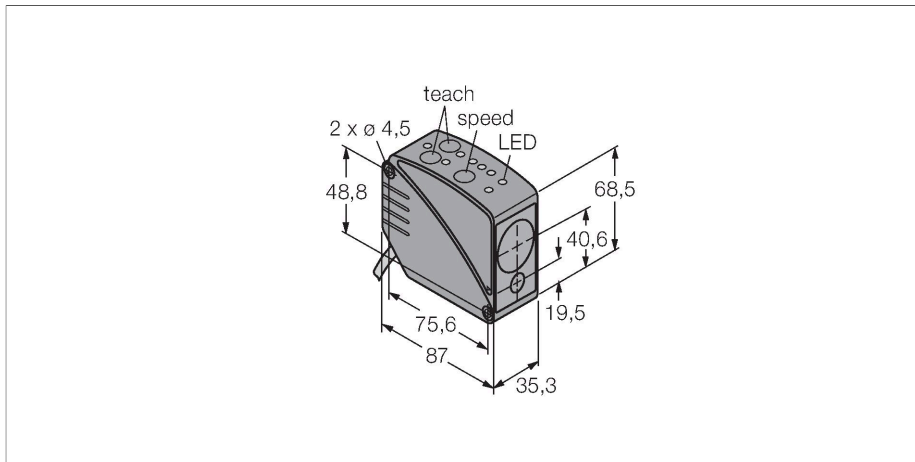

Technical data

Type	LT3BD
ID	3065517
Optical data	
Function	Proximity switch
Operating mode	Time-of-Flight
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, 2 m, 7-wire
- 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
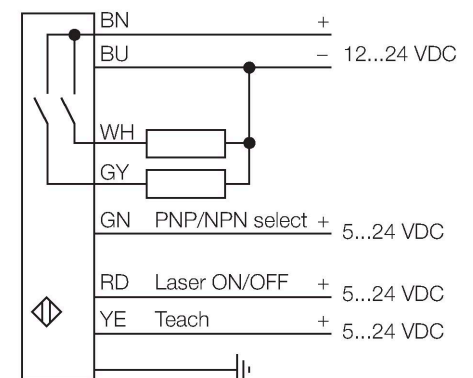
Functional principle

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, 2 m, PVC
Number of cores	8
Core cross-section	0.34 mm²
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.
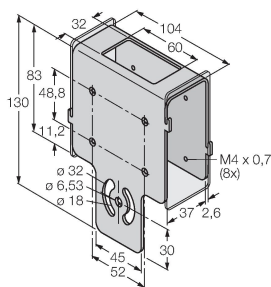
Resolution in Dependence on Distance
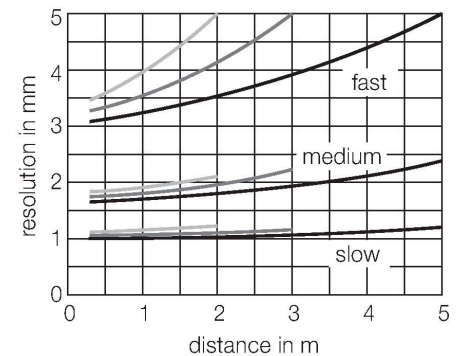
Accessories
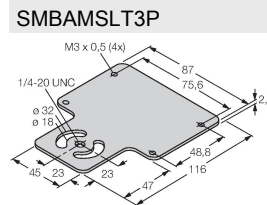
SMBAMSLT3IP	3073442

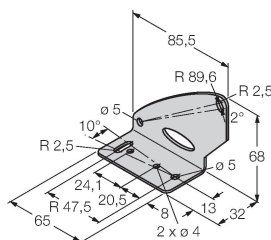Protective housing with safety glas panel, for LT3 series

SMBAMSLT3P	3073132

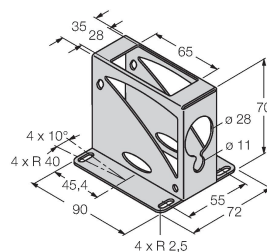Backplane, stainless steel, for LT3 series

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