

LT3NU

Photoelectric Sensor – Diffuse Mode Sensor

Laser Running Time Meter



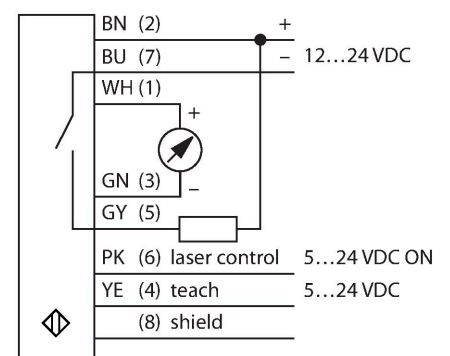
Technical data

| | |
|------------------------------|-------------------------------|
| Type | LT3NU |
| ID no. | 3065505 |
| 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 | NO contact, NPN/Analog output |
| Type of analog output | 0...10 V |
| Voltage output | 0...10 V |
| Load resistance | ≥ 2500 Ω |
| Switching frequency | ≤ 1000 Hz |
| Readiness delay | ≤ 1 s |
| Readiness delay | ≤ 1000 ms |
| Response time typical | < 1 ms |

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
- Hysteresis and measuring range independently adjustable
- Edge of the analog output invertible

Wiring diagram



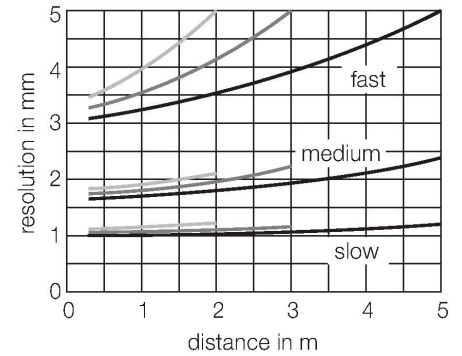
Functional principle

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

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

Resolution in Dependence on Distance

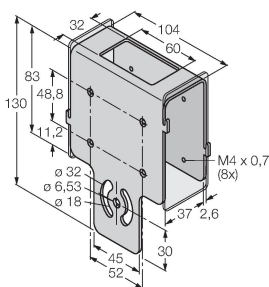


| Mechanical data | |
|------------------------|--|
| Design | Rectangular, LT3 |
| Dimensions | 87 x 35.3 x 68.5 mm |
| Housing material | Plastic, ABS, Black |
| Lens | plastic, Acrylic |
| Electrical connection | Cable, 2 m, PVC |
| Number of cores | 8 |
| Core cross-section | 0.34 mm ² |
| Ambient 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 |

Accessories

SMBAMSLT3IP

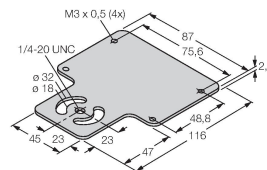
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Protective housing with safety glass panel, for LT3 series

SMBAMSLT3P

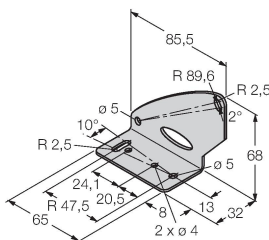
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Backplane, stainless steel, for LT3 series

SMBLT31

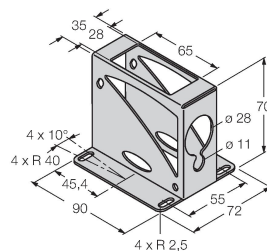
3068505



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