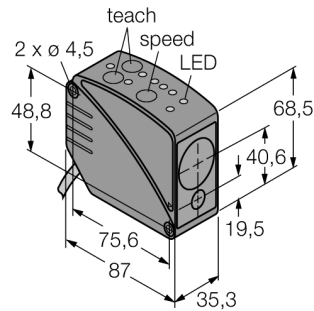


Photoelectric Sensor

Diffuse-Mode Laser Sensor (Runtime Measurement)

With Switching and Analog Output

LT3NI W/30



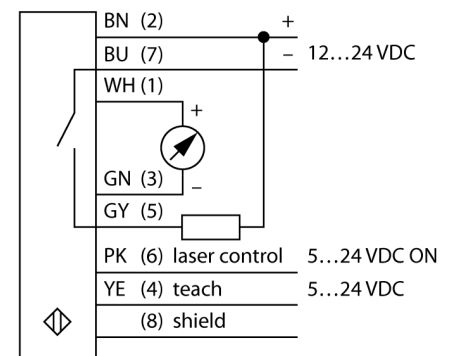
Type	LT3NI W/30
ID	3065512

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 U_s	12...24 VDC
Residual ripple	< 10 % U_s
DC rated operating current I_s	≤ 100 mA
No-load current I_0	≤ 108 mA
Short-circuit protection	yes
Reverse polarity protection	yes
Output function	NO contact, NPN/Analog output
Type of analog output	4...20 mA
Current output	4...20 mA
Load resistance	≤ 1000 Ω
Switching frequency	≤ 1000 Hz
Readiness delay	≤ 1 s
Readiness delay	≤ 1000 ms
Response time typical	< 1 ms

- 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
- 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.

Mechanical data	
Design	Rectangular, LT3
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
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

