LT3NILVQ
Photoelectric Sensor – Retroreflective Sensor
Laser Running Time Meter

Technical data

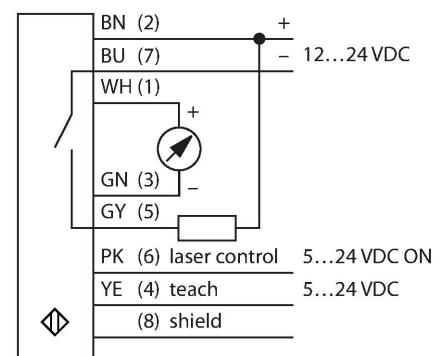| Type	LT3NILVQ
ID	3067283
Optical data	
Function	Retroreflective Sensor
Operating mode	Time-of-Flight
Reflector included in delivery	yes
Light type	Red
Wavelength	658 nm
Laser class	⚠ 1
Repeatability	4.5 mm
Range	500…50000 mm
Ambient light immunity	5000 lux
Electrical data	
Operating voltage	12…24 VDC
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	4…20 mA
Current output	4…20 mA
Load resistance	≤ 1000 Ω
Switching frequency	≤ 1000 Hz
Readiness delay	≤ 1 s
Readiness delay	≤ 1000 ms

Features

- Male M12 × 1, 8-pin
- Indication of signal intensity
- Protection class IP67
- BRT-TVHG-8X10P highly reflective foil, incl. in delivery
- Measuring range with according reflector foil: 50 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.
The sensor achieves its highest accuracy after a 30-min. warm-up period.

Technical data

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Response time typical	< 1 ms
Mechanical data	
Design	Rectangular, LT3
Dimensions	87 x 35.3 x 68.5 mm
Housing material	Plastic, ABS, Black
Lens	plastic, Acrylic
Electrical connection	Connector, M12 × 1, PVC
Number of cores	8
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

Resolution in Dependence on Distance
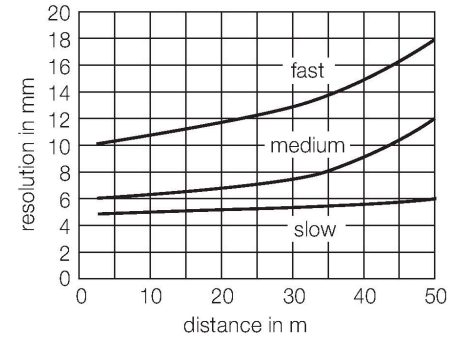
Accessories
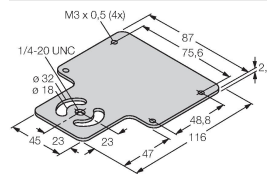
SMBAMSLT3IP	3073442
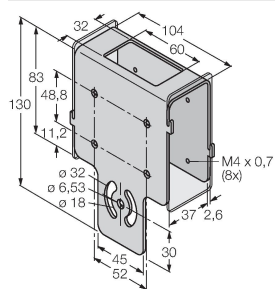
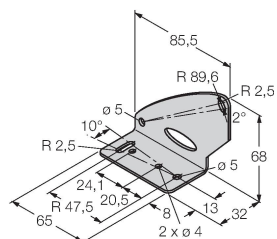Protective housing with safety glas panel, for LT3 series

SMBAMSLT3P	3073132

Backplane, stainless steel, for LT3 series
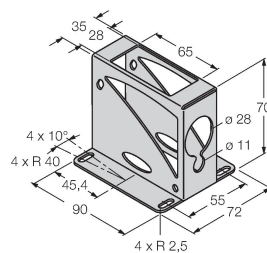
SMBLT31	3068505

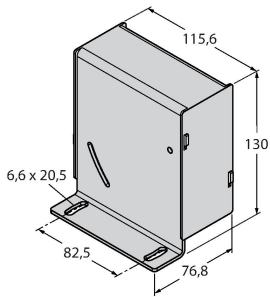Mounting bracket, stainless steel, for LT3 series

SMBLT32	3069236

Protective housing, stainless steel, for LT3 series
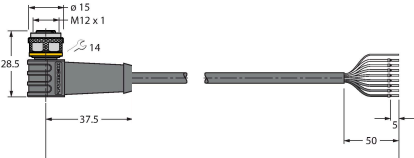
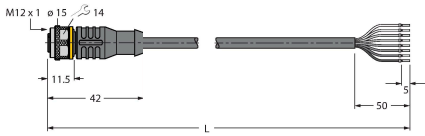| SMBLT3IP	3070973

Protective housing, stainless steel, for LT3 series

115,6
130
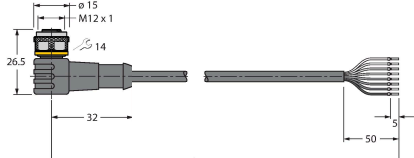6,6 x 20,5
82,5
76,8

Accessories

Dimension drawing	Type	ID	
	MQDC-806	3057593	Connection cable, PVC, shielded, M12 × 1 female, 8-pin to open end
	RKC8T-2/TEL	6625130	Connection cable, M12 female, straight, 8-pin, cable length: 2 m, jacket material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com
	WKC8T-2/TEL	6625133	Connection cable, M12 female connector, angled, 8-pin, cable length: 2 m, jacket material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com
	RKS8T-2/TEL	6625446	Connection cable, M12 female connector, straight, 8-pin, cable length: 2 m, sheath material: PVC, black; shielded; cULus approval; other cable lengths and qualities available, see www.turck.com
	WKS8T-2/TEL	6625449	Connection cable, M12 female connector, angled, 8-pin, cable length: 2 m, sheath material: PVC, black; shielded; cULus approval; other cable lengths and qualities available, see www.turck.com

Accessories

Dimension drawing	Type	ID	
	BRT-TVHG-8X10P	3069119	Reflective foil, self-adhesive, cuttable, highly reflective, 203 x 254 mm