LM150KIQP
Photoelectric Sensor –   Laser Sensor, Diffuse Mode (Triangulation)
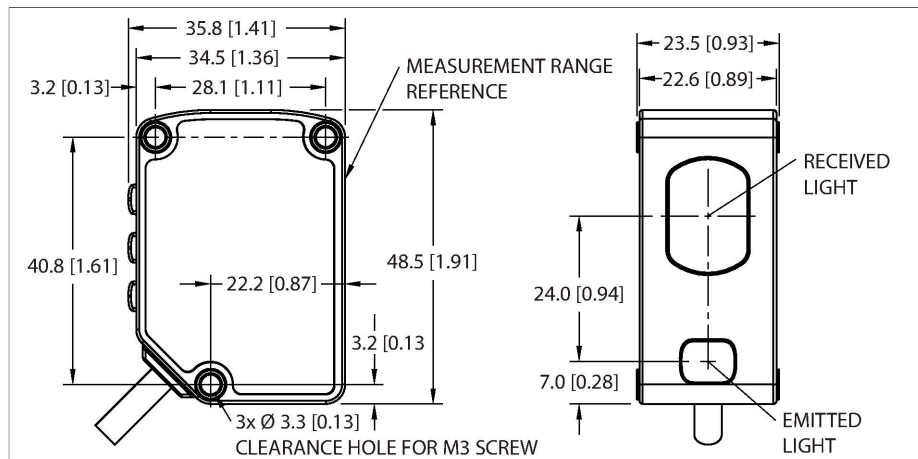

Technical data

Type	LM150KIQP
ID no.	3803940
Optical data	
Function	Proximity switch
Operating mode	Triangulation
Light type	Red
Wavelength	655 nm
Laser class	⚠ 2
Optical resolution	0.004 mm
Repeatability	0.002 mm
Range	50…150 mm
Ambient light immunity	10000 lux
Electrical data	
Operating voltage	10…30 VDC
No-load current	≤ 62 mA
Short-circuit protection	yes
Reverse polarity protection	yes
Communication protocol	IO-Link
Output function	NO contact, PNP/NPN, analog output
Output 2	Analog current
Current output	4…20 mA
Readiness delay	≤ 2100 ms
Response time typical	< 0.5 ms
IO-Link	
IO-Link specification	V 1.1
IO-Link port type	Class A

Features

- Stainless steel housing
- Protection class IP67
- Connection via 300 mm cable with connector, M12 × 1, 5-pin
- Laser class 2
- Visible red, 655 nm
- Analog output accuracy: 0,004 mm
- IO-Link accuracy: 0.2 mm
- Range: 50…150 mm
- Operating voltage: 10…30 VDC
- Push/pull switching output or IO-Link
- Analog output 4…20 mA

Wiring diagram
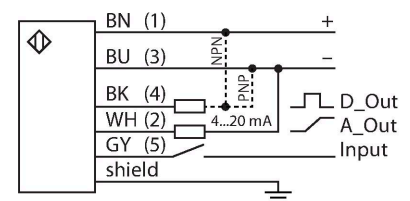
Functional principle

The LM laser triangulation sensor is designed to take very precise measurements at short distances. It features a push/pull switching output as well as an analog output. IO-Link communication is supported.
In addition to the indicators on the housing, the optional RSD display and adjustment tool allows you to view the current measured range or the value of the output analog signal on an LCD screen.
Versions with current output are already available. The sensor is connected to the M12 male connector via the cable.

Technical data

Communication mode	COM 2 (38.4 kBaud)
Process data width	40 bit
Measured value information	19 bit
Switchpoint information	1 bit
Status bit information	1 bit
Frame type	Type_2_2
Minimum cycle time	3.6 ms
Function Pin 4	DI
Function Pin 2	Analog
Maximum cable length	20 m
Profile support	Smart Sensor Profil
Included in the SIDI GSDML	Yes
Mechanical data	
Design	Rectangular, LM
Dimensions	35.8 x 23.5 x 48.5 mm
Housing material	Metal, Stainless steel, Grey
Lens	acrylic, Plastic
Electrical connection	Cable with connector, M12 × 1, 0.3 m, PVC
Number of cores	5
Ambient temperature	-10…+55 °C
Storage temperature	-35…+60 °C
Relative humidity	90 %
Protection class	IP67
Special features	Chemical-resistant Clear object detection keep/defer Resistant to chemicals
Power-on indication	LED, Green
Switching state	LED, Yellow
Tests/approvals	
Approvals	CE cULus

A stainless steel housing with IP67 protection rating completes the package for this compact yet powerful sensor.

Accessories

SMBLML1	3805826
	Mounting bracket for mounting LM proximity sensors, right-angled, stainless steel, dimensions WHD: 37x44x20 mm

Accessories

Dimension drawing	Type	ID no.	
	RKS4.5T-2/TEL	6626361	Connection cable, M12 female connector, straight, 5-pin, cable length: 2 m, sheath material: PVC, black; shielded; cULus approval; other cable lengths and qualities available, see www.turck.com
	WKS4.5T-2/TEL	6626364	Connection cable, M12 female connector, angled, 5-pin, cable length: 2 m, sheath material: PVC, black; shielded; cULus approval; other cable lengths and qualities available, see www.turck.com
	RKS4.5T-2-RSS4.5T/TEL	6626388	
	RKC4.5T-2/TEL	6625016	Connection cable, female M12, straight, 5-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com
	WKC4.5T-2/TEL	6625028	Connection cable, female M12, angled, 5-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com

Accessories

Dimension drawing	Type	ID no.	
	RSD1QP	3804095	Optional display and adjustment tool for displaying the measured values and parameterization of LM, LE and LTF sensors, 2-line 8-segment display, installation on DIN rail, connection via 2 × cables with male connector, M12 × 1, 5-pin and female connector, M12 × 1, 5-pin, memory for up to six setting configurations