wenglor
the innovative family

Technical Data

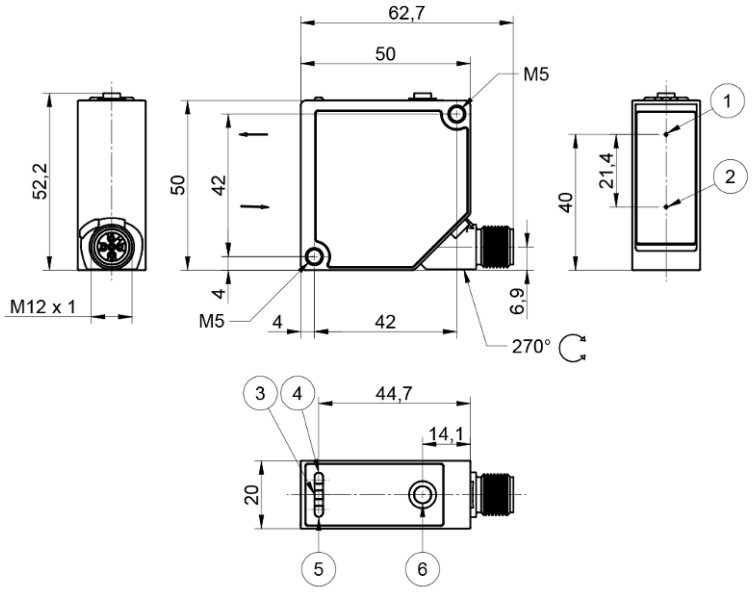
P3PC102

Laser Distance Sensor

Triangulation

inspect award 2024





Symbol	Key
1	Emitter diode
2	Receiver diode
3	Power LED
4	Switching status indicator O1
5	Switching status indicator O2
6	Teach-in button

EN

Dimensions in mm
Subject to change without notice
Version 0
www.wenglor.com

Technical data

Optical Data	
Working Range	40...240 mm
Setting Range	40...240 mm
Reproducibility maximum	70 µm
Reproducibility: 1 Sigma	6 µm
Linearity Deviation	200 µm
Switching Hysteresis	< 0.5 %
Light Source	Laser, red
Wavelength	655 nm
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	1
Max. Ambient Light	20000 Lux
Light Spot Diameter	see table 1

Electrical Data	
Supply Voltage	18...30 V DC
Current Consumption (Ub = 24 V)	< 50 mA
Switching Frequency	650 Hz
Response Time	< 0.5 ms
Temperature Drift	< 15 µm/K
Temperature Range	-30...60 °C
Number of Switching Outputs	2
Switching Output Voltage Drop	< 1.5 V
Switching Output/Switching Current	100 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Interface	IO-Link V1.1
IO-Link Version	1.1
IO-Link transmission speed	COM3
Protection Class	III
FDA Accession Number	2310674-000

Mechanical Data	
Setting Method	Teach-In
Housing Material	Aluminum, anodised Plastic, ABS
Degree of Protection	IP67
Connection Type	Plug variant
Connection	M12 × 1; 5-pin
Optic Cover	Plastic, PMMA

Safety-relevant Data	
MTTFd (EN ISO 13849-1)	720.35 a

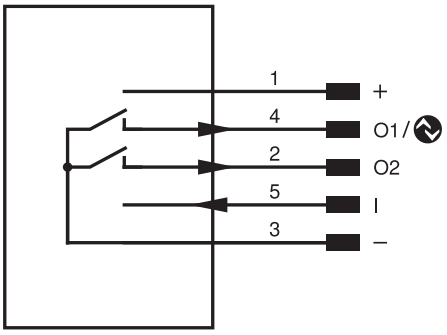
General Data	
Scope of delivery	1 × initial start-up instructions 1 × sensor

Adjustable parameters	
Output	Error Output Push-pull NPN PNP
Circuit	NC NC/NO NO
Other parameters	Exposure time Laser light Switching hysteresis Teach-in mode Off-delay On-delay

All other parameters can be found in the product documentation.

BMECat data	
eCl@ss 5.1.4	27-27-09-04 Light scanner w. background masking
eCl@ss 6.x	27-27-09-04 Light scanner w. background masking
eCl@ss 7.0	27-27-09-04 Light scanner w. background masking
eCl@ss 7.1	27-27-09-04 Light scanner w. background masking
eCl@ss 8.x	27-27-09-04 Light scanner w. background masking
eCl@ss 10.0.1	27-27-09-04 Light scanner w. background masking

Technical illustrations



Pin	Pin function	Polarity	Circuit
1	Supply Voltage +		
2	Switching Output 2	NPN	NO
3	Supply voltage 0 V		
4	Switching Output 1 IO-Link	NPN	NO
5	Switchable emitted light	High active	

Table 1			
Detection Range	40 mm	140 mm	240 mm
Light Spot Diameter	1,5 mm	1 mm	1 mm