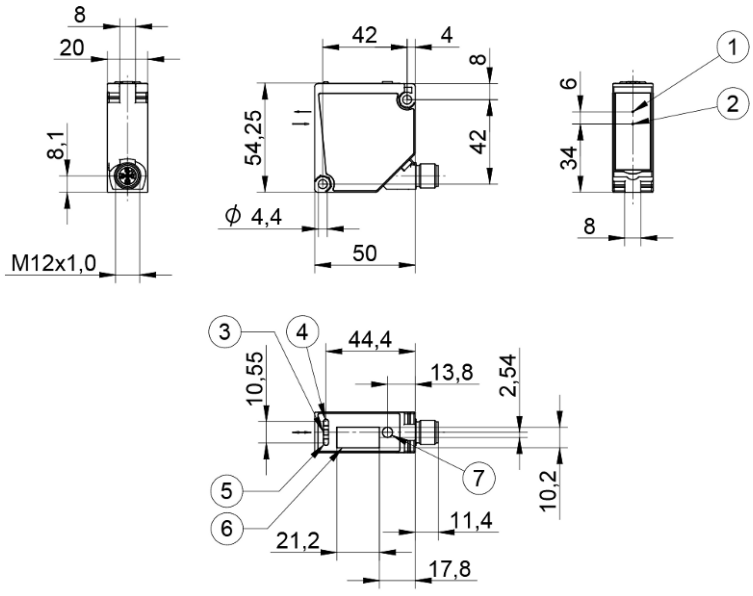
wenglor
the innovative family

Technical Data

P1PY218

Laser Distance Sensor

Time of Flight



Symbol	Key
1	Emitter diode
2	Receiver diode
3	Power LED
4	Indicator analog output AO
5	Switching status indicator O1
6	Indicator
7	Enter button

EN

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

Technical data

Optical Data	
Working Range	0...5000 mm
Measuring Range	50...5000 mm
Reproducibility maximum	3 mm*
Linearity Deviation	15 mm*
Light Source	Laser, blue
Light spot geometry	Line
Wavelength	445 nm
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	2
Max. Ambient Light	100000 Lux
Light Spot Diameter	see table 1
Reflector required	no

Electrical Data	
Supply Voltage	18...30 V DC
Current Consumption (Ub = 24 V)	< 60 mA
Measuring Rate	100 /s*
Measuring Rate (max.)	500 /s*
Temperature Drift	< 0.4 mm/K
Temperature Range	-40...50 °C
Analog Output	4...20 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Interface	IO-Link V1.1.3
IO-Link transmission speed	COM3
Protection Class	III
FDA Accession Number	2412451-000

Mechanical Data	
Setting Method	(OLED)/Bluetooth menu
Housing Material	Plastic, ABS
Optic Cover	Plastic, PMMA
Degree of Protection	IP67 IP68
Connection Type	Plug variant
Connection	M12 × 1; 5-pin

Safety-relevant Data	
MTTFd (EN ISO 13849-1)	352.09 a

General Data	
Scope of delivery	1 × Z1PE002 mounting set 1 × initial start-up instructions 1 × sensor

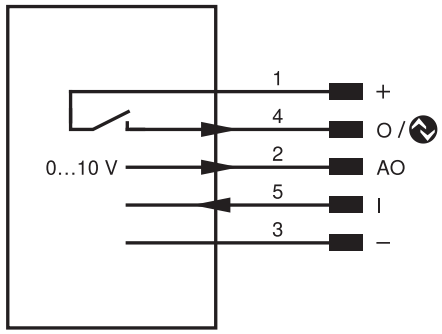
Adjustable parameters	
Output	Error Output Warning output
Analog output	4...20 mA
Other parameters	Off-delay On-delay Sensitivity Filter Unit of measure Measuring mode Emitted light Sensor localization Teach mode

All other parameters can be found in the product documentation.

* Depends on mode, see table 2

BMECat data	
eCl@ss 5.1.4	27-27-08-01 Optical distance sensor
eCl@ss 6.x	27-27-08-01 Optical distance sensor
eCl@ss 7.0	27-27-08-01 Optical distance sensor
eCl@ss 7.1	27-27-08-01 Optical distance sensor
eCl@ss 8.x	27-27-08-01 Optical distance sensor
eCl@ss 10.0.1	27-27-08-01 Optical distance sensor

Technical illustrations



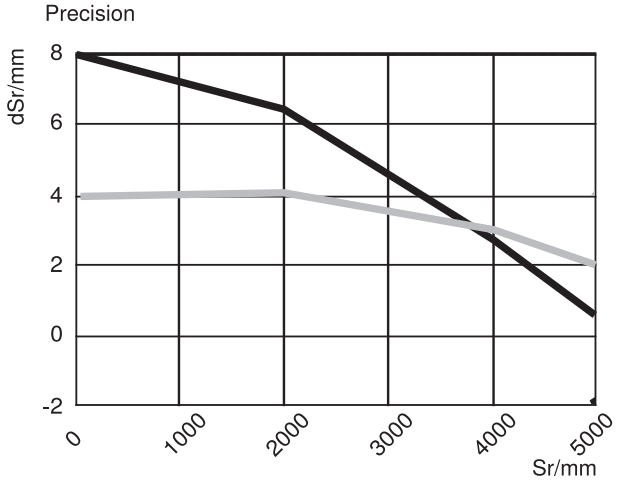
Pin	Pin function	Polarity	Circuit	Signal type
1	Supply Voltage +			
2	Analog output			4...20 mA
3	Supply voltage 0 V			
4	Switching output IO-Link	PNP	NO	
5	Switchable emitted light	High active		

Table 1			
Working Distance	0 m	2,5 m	5 m
Spot Size	2,5 × 5 mm	25 × 60 mm	65 × 160 mm

Illustration 1: Table 2

Mode	White working range	Gray working range	Black working range	Measuring rate	Maximum reproducibility	Linearity deviation	Low signal detection
Speed	0...5000 mm	0...5000 mm	0...5000 mm	500/s	5 mm	15 mm	+
Precision (default)	0...5000 mm	0...5000 mm	0...5000 mm	100/s	3 mm	15 mm	+ +
Precision Plus	0...5000 mm	0...5000 mm	0...5000 mm	50/s	3 mm	15 mm	+ + +

Illustration 2: Switching Distance Deviation



Typical characteristic curve based on white, 90 % remission

Sr = Switching Distance

dSr = Switching Distance Change

— black 6 % remission