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Technical Data

P3EC441

Laser Distance Sensor

Triangulation

inspect award 2024



LASER CLASS 2
EN 60825-1

c UL us LISTED
IND. CONT. EQ
72HL / E189727
For use in class 2 circuits

RoHS

UK CA

EN

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

Technical data

Optical Data	
Working Range	150...1000 mm
Measuring Range	150...1000 mm
Reproducibility maximum	250 µm
Reproducibility: 1 Sigma	30 µm
Linearity Deviation	850 µm
Light Source	Laser (blue)
Wavelength	405 nm
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	2
Max. Ambient Light	10000 Lux
Light Spot Diameter	see Table 1

Electrical Data	
Supply Voltage	18...30 V DC
Current Consumption (Ub = 24 V)	< 70 mA
Measuring Rate	2500 /s
Response Time	< 0.5 ms
Temperature Drift	< 75 µm/K
Temperature Range	0...60 °C
Analog Output	4...20 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	2311156-000

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

Safety-relevant Data	
MTTFd (EN ISO 13849-1)	397.4 a

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

Adjustable parameters	
Output	Error Output Push-pull NPN PNP
Analog output	0...10 V 4...20 mA
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.

Display brightness may decrease with age. This does not result in any impairment of the sensor function.

Technical illustrations

Table 1			
Working Distance	150 mm	575 mm	1000 mm
Light Spot Diameter	1 mm	1 mm	1 mm