

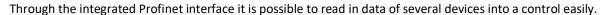
LDM42PN

Precise laser distance measurement for Profinet

he LDM42PN is an optoelectronic distance measuring device for industrial applications with integrated Profinet interface.

It works contact-free on the principle of comparative phase measurement (amplitude modulation) and facilitates precisely accurate measurement of distances.

Both, the LDM42PN distinguishes itself through high precision as well as high independence from the surface of the measuring object. The red, well visible laser beam allows for easy alignment. The LDM42PN provides different measurement modes for either fast distance measurements on white surfaces or long range measurements onto bad reflecting targets.





Key Features

- Millimeter precise measurement on various surfaces
- High range reflector-less distance measurement
- With additional reflectors on the target object measurements over 100 m
- Operation in extreme ambient temperatures with high precision and range
- High supply voltage range between 10 V and 30 V DC with low power consumption
- Safe operation through laser class 2
- Easy adjustment through visible laser beam
- Common flexible interface cable for supply voltage, switching output and analog output
- **Direct connection to Profinet**
- Setup of measurement mode, inside temperature measurement, switch-off Laser (Stand-by)
- Controlled by Profinet control byte
- Customized parameterization via PC
- Display of measured values in meters, feet, inches and others due to free scaling
- Robust, compact housing, easy to install, protection standard IP 65

Applications

- Distance measurement and determination of position
- Diameter measurement of rolls / coils
- Fill level measurement
- Position control
- Monitoring of safety-relevant parts
- Monitoring of lifting plants / lifting height measurement and positioning of elevators
- Monitoring and positioning of cranes and conveyor systems

Options and accessory

- Grey filter for signal attenuation
- Mounting bracket
- Digital display for analog signals
- Optional temperature controlled heating
- Protective housing
- Protective housing with water cooling
- Protective tube with purge air connector
- Protective window



Technical Data

Measurement uncertainty ²⁾ 22 mm under defined measuring conditions 43 mm (+15 °C +30 °C) 45 mm (-10 °C +50 °C) Resolution 0.1 mm, free scalable, standard 1 mm Reproducability ²⁾ 0.5 mm Measurement time 0.1 s 6 s adjustable or automatic in mode DT 0.1 s., fixed, in mode DW on white surface 20 ms in mode DX on white surface 20 ms in mode DX on white surface 4 m/s in measurement mode DX Max. movement speed 4 m/s in measurement mode DX Laser divergence 0.6 mrad Laser divergence 0.6 mrad Laser classification Laser cl	Measurement range 1)	0.1 m 150 m total
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MTBF 30000 hours @ 25 °C Mounting 4 drill holes for M6 screws, 100 mm x 85 mm	Protection class	IP 65
Mounting 4 drill holes for M6 screws, 100 mm x 85 mm	Shock resistant	10 g / 6 ms (DIN ISO 9022-3-31-01-1)
·	MTBF	
Options Viton® gaskets (-v), integrated heating (-h), pressure regulation unit (-d)	-	
	Options	Viton® gaskets (-v), integrated heating (-h), pressure regulation unit (-d)

¹⁾ Dependent on target reflectance, influence of extraneous light and atmospheric

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 $^{^{2)}}$ Statistical spread 95 %, Measurement on planar, vertical white surface at standstill or in continuous, +15 $^{\circ}$ C ... +30 $^{\circ}$ C

³⁾ Dependent on target reflectance, influence of extraneous light and atmospheric conditions

 $^{^{}m 4)}$ Please specify the optional heating when placing the order (-h)