

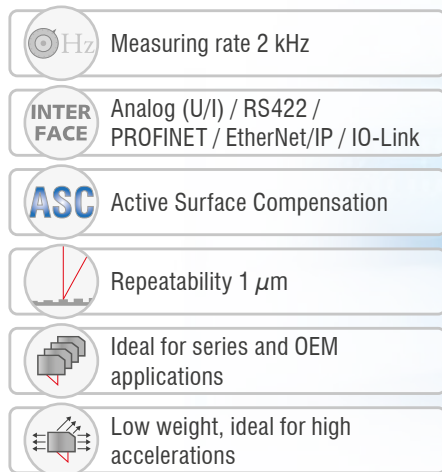


More Precision

optoNCDT 1220-IO-Link // Compact laser displacement sensor with IO-Link



Compact laser sensor for OEM and serial applications with IO-Link optoNCDT 1220



NEW: optoNCDT 1220 with IO-Link

The optoNCDT 1220 sensor features an IO-Link interface that simplifies data communication and reduces the commissioning time.

What is IO-Link?

- Fieldbus-independent interface
- Standardized worldwide according to IEC61131-9
- Manufacturer-independent digital, bidirectional point-to-point communication
- Connection to the IO-Link master via 3-wire plug-in cables
- IO-Link can be integrated into all common fieldbus and automation systems

Advantages of IO-Link

- A uniform interface standard
- No different wiring and connection options as with conventional fieldbuses/interfaces
- Lower costs
- Less programming effort
- Faster commissioning
- Continuous communication between sensor and control unit
- Reduced troubleshooting effort due to consistent diagnostic information right down to sensor level
- Reduced downtimes, as sensor parameters can be adjusted by the control system or the operator
- Easier device replacement during operation due to automatic re-parameterization
- Consistent device information

Best in Class:

Compact, precise and faster

The optoNCDT 1220 laser sensors are among the best in their class. They offer a unique combination of speed, size and performance. These laser sensors are used for the precise measurement of displacement, distance and position in all fields of automation technology, such as machine building, 3D printers and robotics.

The optoNCDT 1220 sensors use intelligent surface control. Auto Surface Compensation (ASC) enables stable measurement results, even if the target surface changes color or brightness.



| Model | | ILD1220-10-IO-Link | ILD1220-25-IO-Link | ILD1220-50-IO-Link | ILD1220-100-IO-Link | ILD1220-200-IO-Link | ILD1220-500-IO-Link |
|--|------------|---|--------------------------|--------------------------|---------------------|---------------------|-----------------------------|
| Measuring range | | 10 mm | 25 mm | 50 mm | 100 mm | 200 mm | 500 mm |
| Start of measuring range | | 20 mm | 25 mm | 35 mm | 50 mm | 60 mm | 100 mm |
| Mid of measuring range | | 25 mm | 37.5 mm | 60 mm | 100 mm | 160 mm | 350 mm |
| End of measuring range | | 30 mm | 50 mm | 85 mm | 150 mm | 260 mm | 600 mm |
| Measuring rate ^[1] | | 4 adjustable stages: 2 kHz / 1 kHz / 0.5 kHz / 0.25 kHz | | | | | |
| Linearity ^[2] | | < ±10 μm | < ±25 μm | < ±50 μm | < ±100 μm | < ±200 μm | < ±750 μm ... 1500 μm |
| | | < ±0.10 % FSO | | | | | < ±0.15 % ... 0.30 % FSO |
| Repeatability ^[3] | | 1 μm | 2.5 μm | 5 μm | 10 μm | 20 μm | 50 μm |
| Temperature stability ^[4] | | ±0.015 % FSO / K | | | ±0.01 % FSO / K | | |
| Light spot diameter ^[5] | SMR | 90 x 120 μm | 100 x 140 μm | 90 x 120 μm | 750 x 1100 μm | 750 x 1100 μm | 750 x 1100 μm |
| | MMR | 45 x 40 μm | 120 x 130 μm | 230 x 240 μm | | | |
| | EMR | 140 x 160 μm | 390 x 500 μm | 630 x 820 μm | | | |
| | smallest Ø | 45 x 40 μm with 24 mm | 55 x 50 μm with 31 mm | 70 x 65 μm with 42 mm | - | - | - |
| Light source | | Semiconductor laser < 1 mW, 670 nm (red) | | | | | |
| Laser class | | Class 2 in accordance with IEC 60825-1: 2014 | | | | | |
| Permissible ambient light ^[6] | | 20,000 lx | | | | 7,500 lx | |
| Supply voltage | | 12 ... 30 VDC | | | | | |
| Power consumption | | < 2 W (24 V) | | | | | |
| Digital interface | | IO-Link 1.1 | | | | | |
| Connections | | Power/signal: pigtail 0,3 m with M12 screw-in connector, 4-pin; A-coded | | | | | |
| Mounting | | Screw connection via two mounting holes | | | | | |
| Temperature range | Storage | -20 ... +70 °C (non-condensing) | | | | | |
| | Operation | 0 ... +50 °C (non-condensing) | | | | | |
| Shock (DIN EN 60068-2-6) | | 15 g / 6 ms in 3 axes, 1000 shocks each | | | | | |
| Vibration (DIN EN 60068-2-27) | | 20 g / 20 ... 500 Hz in 3 axes, 2 directions and 10 cycles each | | | | | |
| Protection class (DIN EN 60529) | | IP67 | | | | | |
| Material | | Aluminum housing | | | | | |
| Weight | | approx. 50 g (incl. pigtail) | | | | | |
| Control and indicator elements | | Select button: zero, factory settings; 2 x color LEDs for state / output | | | | | |

^[1] Factory setting 1 kHz

^[2] FSO = Full Scale Output; the specified data apply to white, diffuse reflecting surfaces (Micro-Epsilon reference ceramic for ILD sensors)

^[3] Measuring rate 1 kHz, median 9

^[4] Related to digital output in the mid of the measuring range; the specified value is only achieved by mounting on a metallic sensor holder. Good heat dissipation from the sensor to the holder must be ensured.

^[5] ±10 %; SMR = Start of measuring range; MMR = Mid of measuring range; EMR = End of measuring range

^[6] Illuminant: light bulb

[illegible]

| MR | SMR | Y |
|-----|-----|-----|
| 10 | 20 | 10 |
| 25 | 25 | 21 |
| 50 | 35 | 28 |
| 100 | 50 | 46 |
| 200 | 60 | 70 |
| 500 | 100 | 190 |



Modifications reserved / Y9761862-A03255GKE