



More Precision

optoNCDT ILR // Laser distance sensors

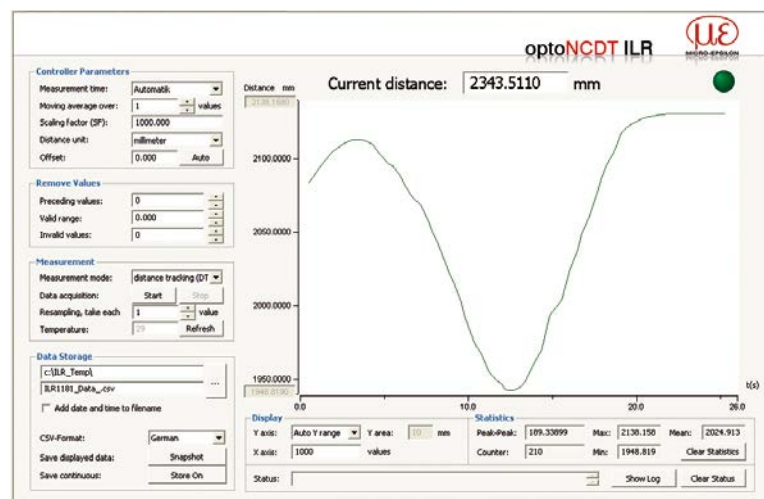
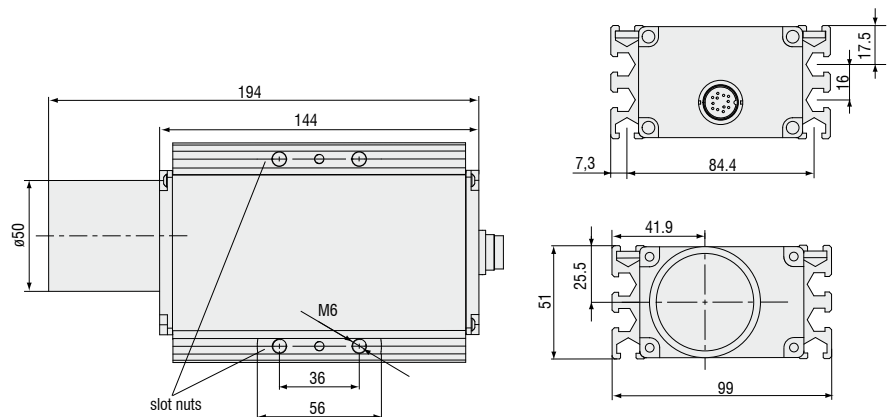




- Measuring range up to 80m on diffuse reflecting surfaces, up to 150m with reflector
- Option with integral heating
- Easy adjustment with laser sighting
- Precise measurement on various surfaces
- Practical mounting grooves for easy installation
- Accessories for harsh environments

Sensors in the optoNCDT ILR 1181/1182/1183 series are optoelectronic sensors for non-contact distance and displacement measurement for industrial applications. Both sensors operate according to the phase comparison principle, whereby higher precision can be achieved. They can be aligned and positioned in use with a visible laser beam with little effort.

The optoNCDT ILR 1182 series operates with a 50Hz measuring rate and is therefore suitable for fast processes. The mounting grooves on the housing offer flexible mounting options for many situations.



Configuration and measurement software for ILR1181 and ILR1182

| Model | ILR1181-30 | ILR1182-30 | ILR1183-30 |
|--|---|---|---|
| Measuring range ¹⁾ | black 6% | 0.4 ... 17m | |
| | grey 10% | 0.1 ... 30m | |
| | white 90% | 0.1 ... 50m | |
| | reflector | 50 ... 150m (reflector film ILR-RF118x) | |
| Linearity ²⁾ | ±2mm (+15°C ... +30°C), ±5mm (-40°C ... +47°C) | | |
| Resolution | 0.1mm | | |
| Repeatability | ≤0.5mm | | |
| Response time ¹⁾ | 100ms ... 6s | 20ms ... 6s | 20ms ... 6s |
| Laser class (IEC 825-1/EN 60825-1) | red 650nm, laser class 2 | | |
| Operation temperature | -10°C ... +47°C (optional -40°C ... +47°C, with integrated heating) | | |
| Storage temperature | -40°C ... +70°C | | |
| Limit outputs | QA (max. 500mA) | | QA/QB (max. 500mA) |
| Switching points | free adjustable | | |
| Switching hysteresis | free adjustable | | |
| Trigger input (not compatible with integral heating) | trigger edge and delay selectable, trigger pulse of max 24V | | |
| Serial interface | RS232 or RS422 3) adjustable, max 38.4 kBaud | | SSI interface (RS422), 24Bit, Gray-encoded, 50kHz ... 1MHz |
| Profibus ³⁾ | - | | Profibus (RS485) 9.6kBaud ... 12MBaud ³⁾ |
| Operation mode | external triggering, single/continuous measurement, distance tracking | | |
| Analogue output | 4 ... 20mA (16 Bit DA) | | - |
| Temperature stability | ≤50ppm/°C | | |
| Supply | 10 ... 30 VDC | | |
| Max. consumption | <1.5W at 24 V (<24W with heating) | | 3.2W at 24V (<26W with heating) |
| Connection | 12-pin M16 | | 1 x 12-pin M16 2 x 5-pin M12 B-encoded |
| Protection class | IP 65 | | |
| Material (housing) | aluminium strangeness profile, powder-coated | | |
| Vibration/Shock | 500g, 0.5ms, 1 shock/axis (DIN ISO 9022-30-08-1) | | |
| | 10g, 6ms, 1000 shocks/axis (DIN ISO 9022-3-31-01-1) | | |
| Weight | 980g | | |
| EMV | EN 61000-6-2, EN 55011 | | |
| Accessoires | page 14 - 15 | | |

¹⁾ depending on target reflectance, ambient light influences and atmospheric conditions

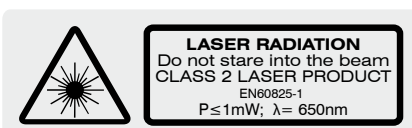
²⁾ with statistical spread of 95%

³⁾ sensor configuration via profibus interface

Product identification

ILR 118x - 30 (x x)

Serial interface
 0= none
 1= RS232
 2= RS422
 0= without heating
 2= integral heating



optoNCDT ILR 1181/1182/1183 operate with a wavelength of 650nm (visible, red). The maximum optical output is ≤ 1 mW. The sensors are classified in Laser Class 2. Class 2 lasers are not notifiable and a laser protection officer is not required either.

Spot diameter ILR1181/1182/1183



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Sensors and systems for displacement and position



Sensors and measurement devices for non-contact temperature measurement



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Measurement and inspection systems



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