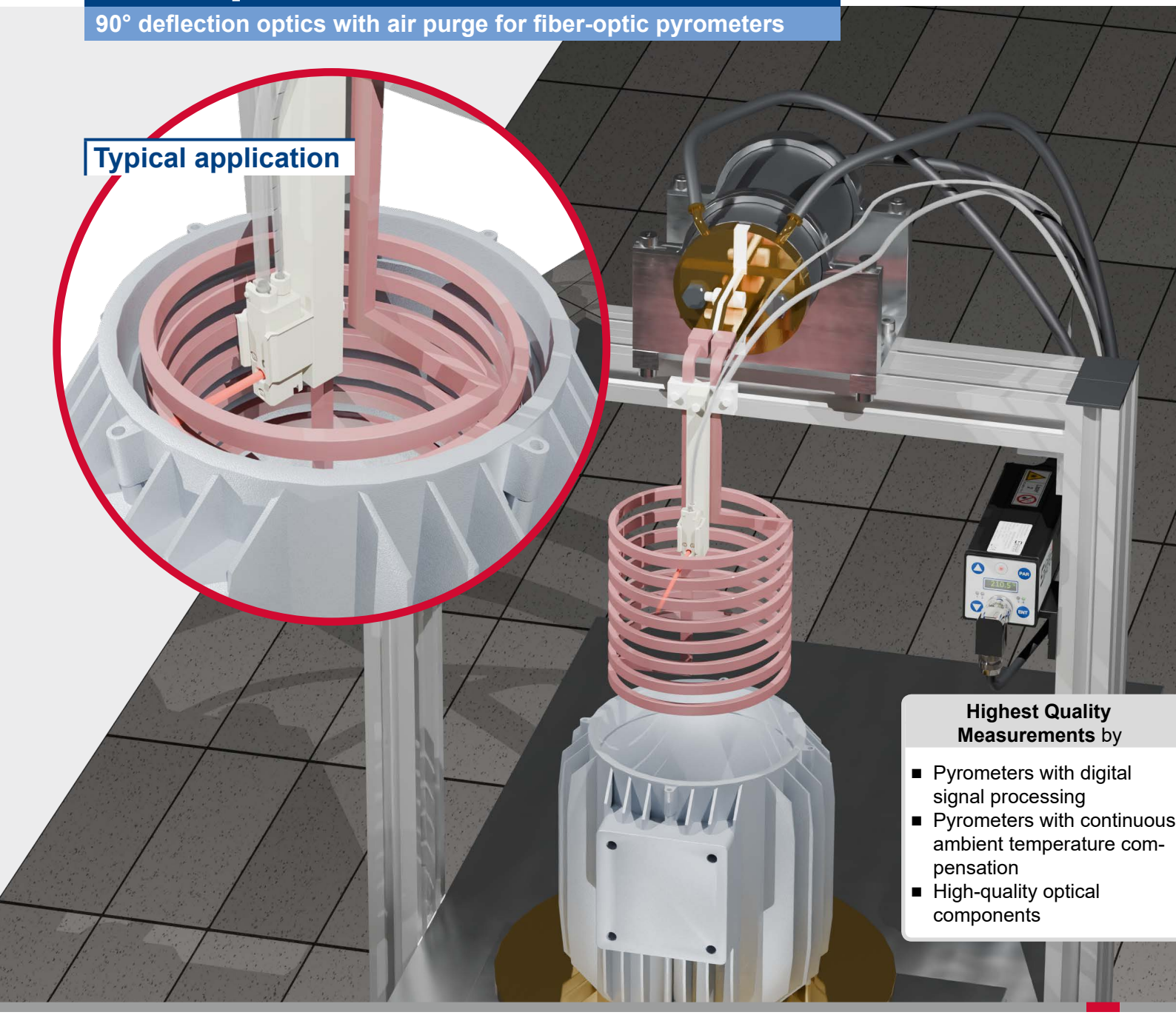
SENSOR THERM
MEMBER OF THE NYNOMIC GROUP

90° optics LL04-UM

90° deflection optics with air purge for fiber-optic pyrometers



Highest Quality Measurements by

- Pyrometers with digital signal processing
- Pyrometers with continuous ambient temperature compensation
- High-quality optical components

90° deflection optics for fiber-optic pyrometers for non-contact temperature measurement of objects inside induction coils.

- **Very small optics** for measurements in very hard-to-reach places
- **For measurements through induction coils,** precisely to align, using the pyrometer's laser targeting light
- **With air purge unit** for blowing the lens clean in dusty environments

Spot size
3 mm

Pyrometer temp. range
between 100 and 1300°C

Pyrometer response time
< 1 ms

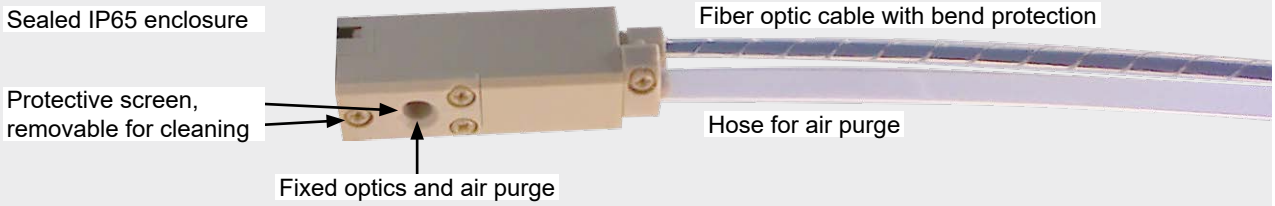
Small, specialized, versatile

Thanks to an internal deflection mirror, the small optics captures temperatures at a 90° angle relative to the fiber-optic coupling. Its metal-free design is specifically optimized for installation between coils or inductors, ensuring it does not heat up due to induction.
The optic's collimated measurement field maintains a nearly constant diameter from the exit aperture out to a distance of several centimeters, ensuring that the temperature of an area approximately 3 mm in size is consistently measured. The pyrometer's laser pilot light makes the measurement field clearly visible during alignment.
Additionally, a purge air connection is integrated; an air purge can be used to keep the lens's protective window clean in dusty environments.

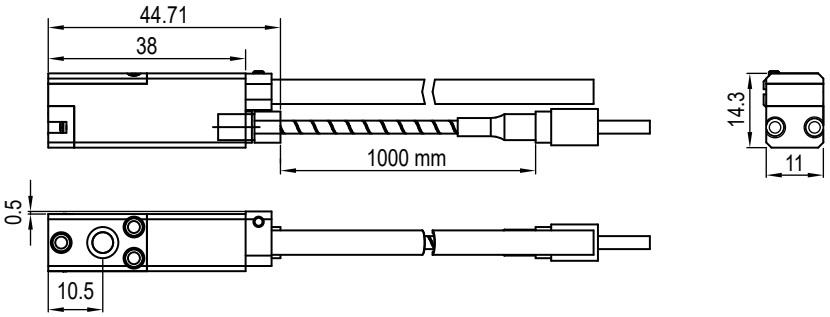
Recommended Pyrometer Model

Model	METIS M318 
Temperature range	100 – 700°C, 150 – 1200°C, 180 – 1300°C
Temp. sub ranges	Any temperature sub-range adjustable within the temperature range (minimum span 50°C)
Spectral range	1.65–2.1 µm
Detector	InGaAs
Response time t_{90}	< 1 ms (with dynamical adaptation at low signal levels), adjustable up to 10 s
Exposure time	< 0.5 ms
Analog outputs	2 x 0/4–20 mA
Serial interface	RS232 (4.8–115.2 kBd) or RS485 (4.8–921.6 kBd), switchable. Resolution 0.1°C / °F
Inputs / outputs	3 configurable connections, each serving as a digital input, digital output, or analog input.
Fieldbus interface	Optional: PROFIBUS, PROFINET or Ethernet
Display	✓
Power requirement	24 V DC (18–30 V DC), max. 6 VA
Laser targeting light	red or green, P<1 mW, laser class 2
Ambient temperature	Pyrometer and fiber optics: 0–80°C
Protection class	IP65 (with plugged in connector)

Details



Dimensions (in mm)



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