

# Convir OL Series Non-Contact Fibre-Optic Temperature Sensor

- ◆ Especially suited for temperature measurement:
  - With vacuum-equipment
  - In hazardous areas
  - In induction heating processes
  - Of metal surfaces, liquid glass, glass bowls, ceramics and many others
- ◆ Linear 4 to 20 mA analog output
- ◆ 2-wire system
- ◆ High accuracy with digital signal processing
- ◆ Superior optics
- ◆ Adjustable emissivity from 0.05 to 1.0
- ◆ Partial measuring ranges
- ◆ Variable response times between 20 ms and 10 s
- ◆ Integrated maximum-value-storage
- ◆ Easy connection
- ◆ Stainless-steel housing
- ◆ Optical unit operates at temperatures up to 250°C
- ◆ EMV proof with CE label

The Convir OL fibre-optic, infrared temperature sensor is especially designed for high temperature applications where the target is hard-to-reach, in a strong electro-magnetic field or in a hazardous area.

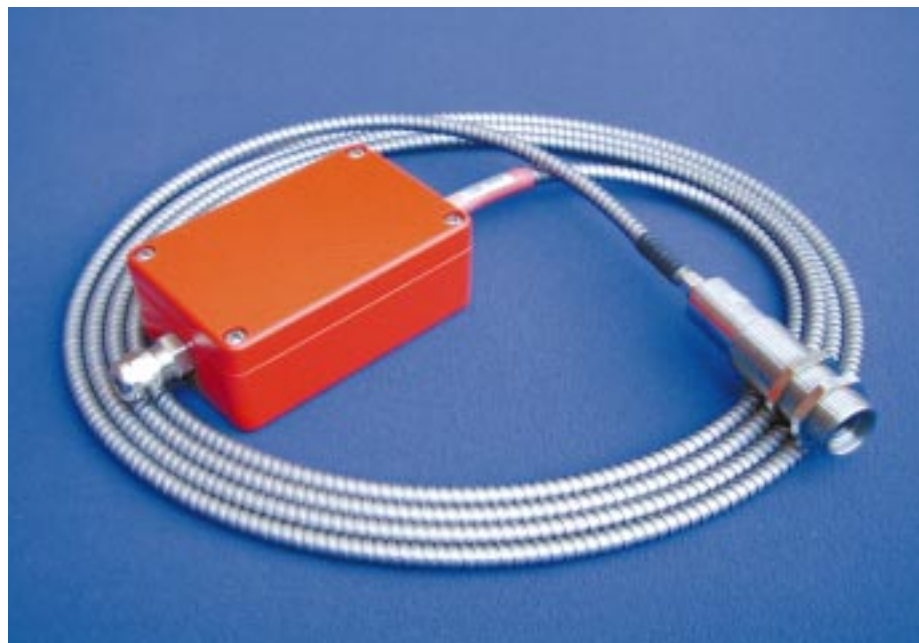
It detects short wavelength infrared radiation, which enables it to measure the temperature of metals and other such low emissivity materials with great accuracy.

With the electronics housing placed in a safe area, a fibre optic cable up to 15 m long allows the sensing head to be located in a hazardous area.

The Convir OL offers adjustable emissivity, temperature range, response time and maximum value storage, giving it great flexibility and making it suitable for many different applications.

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## GENERAL SPECIFICATIONS

<b>Temperature Range</b>	650°C to 1800°C
<b>Spectral Range</b>	0.8 µm to 1.1 µm
<b>Accuracy</b>	± 0.5% of reading in °C ± 1 °C (at the correct emissivity)
<b>Repeatability</b>	0.1% of reading in °C ± 1 °C
<b>Temperature Drift</b>	0.02% of measuring range / °C (basic measuring range)
<b>Resolution</b>	0.5 °C
<b>Response Time <math>t_{90}</math></b>	20 ms, 50 ms, 250 ms, 1 s, 3 s, 5 s and 10 s adjustable via interface
<b>Emissivity</b>	0.05 to 1.0 adjustable via interface
<b>Output</b>	linear, load independent DC current 4 to 20 mA, max. load 500 Ω
<b>Power Supply</b>	24 V DC ± 25%; stabilized ripple ≤ 50 mV
<b>Power Consumption</b>	max. 0.6 W
<b>Maximum Value Storage</b>	adjustable via interface

## MECHANICAL

<b>Weight</b>	converter ca. 300 g; optical unit ca. 100 g
<b>Fibre Optic Cable Protection</b>	stainless steel 3 m (standard), up to 15 m optional
<b>Optical Head</b>	stainless steel with glass lens, $\varnothing$ = PG 11 - thread
<b>Converter</b>	diecast aluminium 99 mm x 64 mm x 34 mm (l x b x h)

## ENVIRONMENTAL

<b>Environmental Rating</b>	IP 65
<b>Ambient Temperature</b>	0 to 70°C / 32°F to 158°F (optical unit up to 250°C / 482°F)
<b>Storage Temperature</b>	-20 to 70°C / -4 to 158°F

## OPTICAL DATA

<b>Distance (mm)</b>	0	600	1000	1500	2000
<b>Spot Diameter (mm)</b>	7	15	19	25	30