

# Non-Contact Temperature Measurement

**DIGITAL - INFRARED - PYROMETER**

**Temperature range 300 to 1300°C**

**Temperature control during production process**

- compact unit**
- with light beam aiming device
  - focusable optic
  - RS 232 interface
  - limit output
  - software IR-LOG

**Series KTRD 4075-1**



HIMMEL – Infrared – pyrometer can also assist you to monitor your heating processes, ensuring a uniform standard of quality for your products.

The fast heat treatment processes for the inductive heating is qualified for the non-contact temperature measurement.

The Series KTRD 4075 are partial radiation spectralpyrometer, which record the infrared radiation emitted from the heat source over a narrow spectral range, and convert it into a signal suitable for recording, switching and controlling purposes. When using non-contact temperature measurement it's to note, that the emission of an annealing position is depending on material and surface.

This physical characteristic is described as emissivity, and can be present at the instrument in the form of an emission factor.

**Examples for application with induction heating:**

steel, iron, non-ferrous metal, annealing, coating, wires, hardening, forging, preheat

Unit type	Target marking
KTRD 4075 - 1	Light beam aiming device / LED green

**Temperature measuring range - linear**

No.	Temp.-range short
1	300 - 800°C
2	350 - 900°C
3	400 - 1000°C
4	500 - 1200°C

No.	Temp.-range long
5	300 - 1300°C

**Technical datas:**

Spectral response	1,45 – 1,7µm
Response time	10 ms
Accuracy	0,5% ±1°C
Reproducibility	1 ‰
Emissivity	100 – 10%
Operating temperature	0 – 60°C
Storage temperature	-10°C -+70°C
Temperature-sensitivity	0,01 % / °C
Humidity tolerance	35 – 85 % RF
Analog output temp.linear	0 – 20 mA or 4 – 20 mA
1 Limit output (open coll.)	24 V 100 mA
Digital output	RS 232 ±50 V isolated
Operating voltage	DC 24 V ± 10%
Supply current	< 100 mA
Unit connection	8-pol. Plug connector
Dimensions (HxWxD)	65 x 30 x 80 mm
Weight	0,15 kg
Protection class	IP 65

**Objektive:** For optimum accommodation to the measuring application an objective with focusing is available. Adjusting range 100 mm to infinite, distance ratio depending on Temperature range: D = 85

Calculation of target size :       $\emptyset$  = focusing distance M : Distance ratio D

Par ex. : M=100mm D=85       $\emptyset = 100 : 85 = 1,18 \text{ mm}$