

Digital MAURER Pyrometer

KTRD 4085-HS

measuring range 600-1600°C

HIGHSPEED COMPACT DEVICE

Laser application



Performance, precision and reliability - you can count on MAURER pyrometers. The compact and easy to use design, as well as a large selection of matching accessories, enables you to quickly integrate the pyrometer into your surroundings.

The most important **features** and **characteristics** at a glance:

- Spectral range: 0,85 – 1,1 µm
- **Ultra-short response time of 100 µs**
- **Emissivity from 100 – 10 %**, adjustable directly at the pyrometer or via interface
- **Green target light (LED)** that is exactly identical to the actual measuring spot in position and size
- With **Vario-optic**, adjustable from 100 – 500 mm, for exact focusing on the measuring spot
- Use with **digital and analogue output**
- **1 limit output** (open collector)
- Operating voltage **24 V DC**
- **Free software** (IR-LOG) for parameter setting, data recording and storage

Measuring Ranges

Short measuring ranges	Long measuring ranges	Target size
1. 600 – 1200 °C (D = 135)	5. 600 – 1600 °C (D = 135)	Target size (mm) = $\frac{\text{Measuring distance (mm)}}{\text{Distance ratio } D}$
2. 650 – 1300 °C (D = 135)		for example:
3. 700 – 1400 °C (D = 135)		Target size 0,74 mm Ø = $\frac{\text{Measuring distance 100 mm}}{\text{Distance ratio } D = 135}$
4. 750 – 1500 °C (D = 135)		
Special measuring ranges upon request		

Scope of Applications

Processing of steel, iron, non-ferrous metal and wires, ceramics, glass tub, glass arching, as well as hardening, rolling, soldering, forging, welding, transforming, induction heating, vacuum furnace, etc.

Technical Data

Spectral range	0,85 – 1,1 µm
Target marking	Green target light (LED)
Response time	100 µs
Measurement uncertainty	0,5 % ± 1 °C (ε = 1, Tu = 23°C, T95 = 1 s)
Temperature dependence	0,01 % / °C
Reproducibility	0,1 % ± 1 °C (ε = 1, Tu = 23°C, T95 = 1 s)
Emissivity	100 – 10 %, adjustable directly at the pyrometer or via interface
Resolution	< 0,1 % at the analogue output < 0,1 °C at the interface
Operating / Storage temperature	0 – 60 °C / -10 °C – 70 °C 32 – 140 °F / 14 – 158 °F
Permissible humidity	35 – 85 % RH (non-condensing)
Analogue output	0 – 20 mA / 4 – 20 mA (Load max. 500 Ω)
1 limit output (open collector)	24 V 100 mA
Interface	RS 232 ± 50 V isolated <u>or</u> RS 485 ± 70 V isolated
Maximum value memory	Maximum memory, peak value memory double, adjustable time and threshold value, erasing after time, external contact, by software, after every measuring object
Supply voltage	24 V DC ± 10 %
Power consumption	< 100 mA
Device connection	8-pol. plug connector if RS232, 7-pol. plug connector if RS485
Dimensions (LxHxW) / Weight	30 x 65 x 80 mm / 0,19 kg
IP Code	IP65

Configurations

- Version with optic: KTRD 4085
- Special objectives and measuring ranges upon request

Main Equipment

Electronic Equipment		Mechanical Equipment	
Connection cables	Power Supply 100-270 VAC – 24 VDC	Cooling plate	Mirror 90° for beam deflection
Electronic process units	Interface converter (to USB)	Mounting parts	Blowing device

