

Digital MAURER Pyrometer

## KTRD 4065

measuring range 100-1200°C

COMPACT DEVICE



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: 2,1 µm
- Short response time between 1 and 5 ms
- 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. 100 – 300 °C (D = 50)              | 5. 100 – 500 °C (D = 50)  | $\text{Target size (mm)} = \frac{\text{Measuring distance (mm)}}{\text{Distance ratio } D}$                       |
| 2. 150 – 400 °C (D = 50)              | 6. 150 – 800 °C (D = 50)  |                                                                                                                   |
| 3. 200 – 600 °C (D = 85)              | 7. 200 – 1200 °C (D = 85) | for example:                                                                                                      |
| 4. 250 – 800 °C (D = 85)              |                           | $\text{Target size 2,0 mm } \varnothing = \frac{\text{Measuring distance 100 mm}}{\text{Distance ratio } D = 50}$ |
| Special measuring ranges upon request |                           |                                                                                                                   |

### Scope of Applications

Processing of steel, iron, non-ferrous metal, wires and ceramics; rolling, soldering, welding, transforming, induction heating; vacuum furnace etc.

## Technical Data

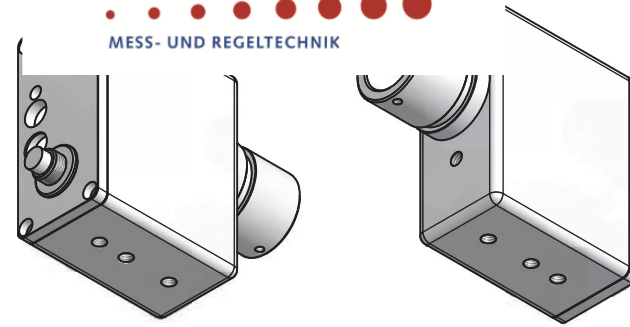
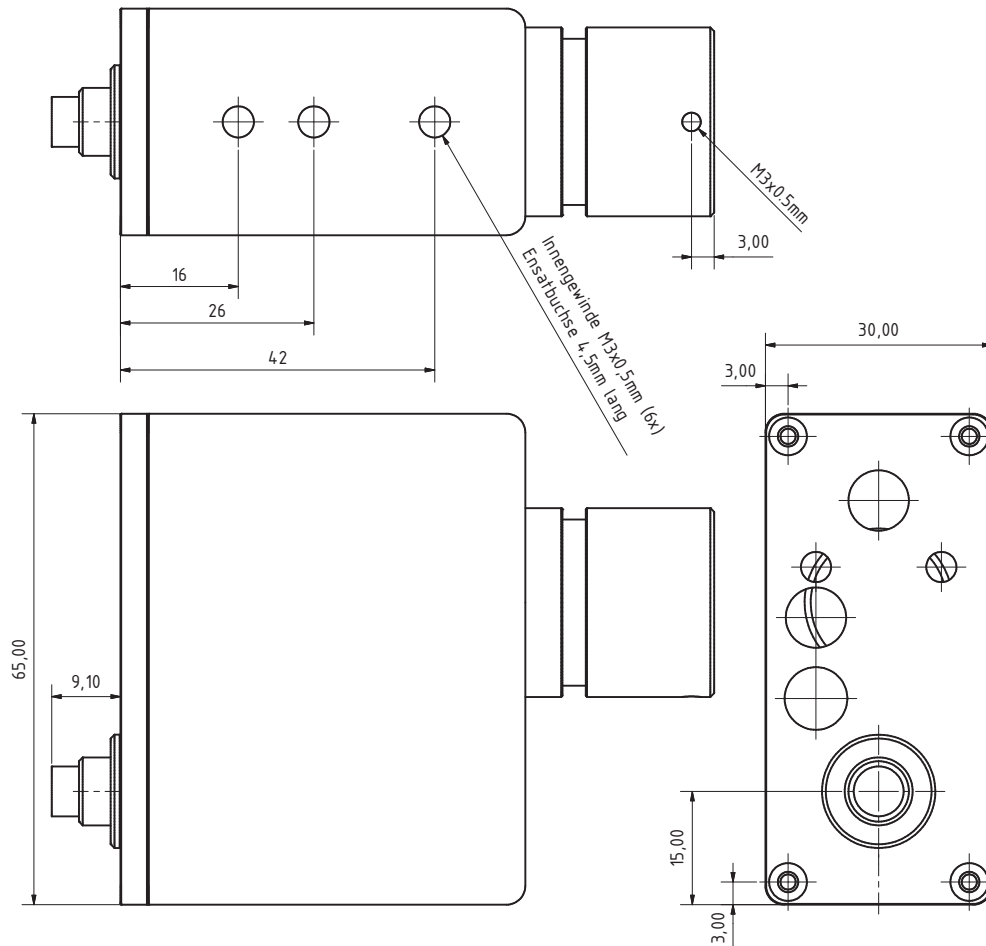
|                                 |                                                                                                                                                                |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Spectral range                  | 2,1 µm                                                                                                                                                         |
| Target marking                  | Green target light (LED)                                                                                                                                       |
| Response time                   | 1 ms or 5 ms, depending on measuring range                                                                                                                     |
| 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

- High speed version: KTRD 4065-HS
- 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                 |



|                              |            |          |      |                   |  |
|------------------------------|------------|----------|------|-------------------|--|
| Dr. Maurer                   |            | Tol. +/- |      |                   |  |
| Gehäuse + Deckel +           |            | 0,1mm    |      |                   |  |
| Rundsteckverbinder Serie 712 |            |          |      | Aluminium         |  |
|                              |            |          |      | Gehäuse KTRD 4000 |  |
|                              |            |          |      |                   |  |
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| Status                       | Änderungen | Datum    | Name |                   |  |