# Pyrometers OKSD T GA S
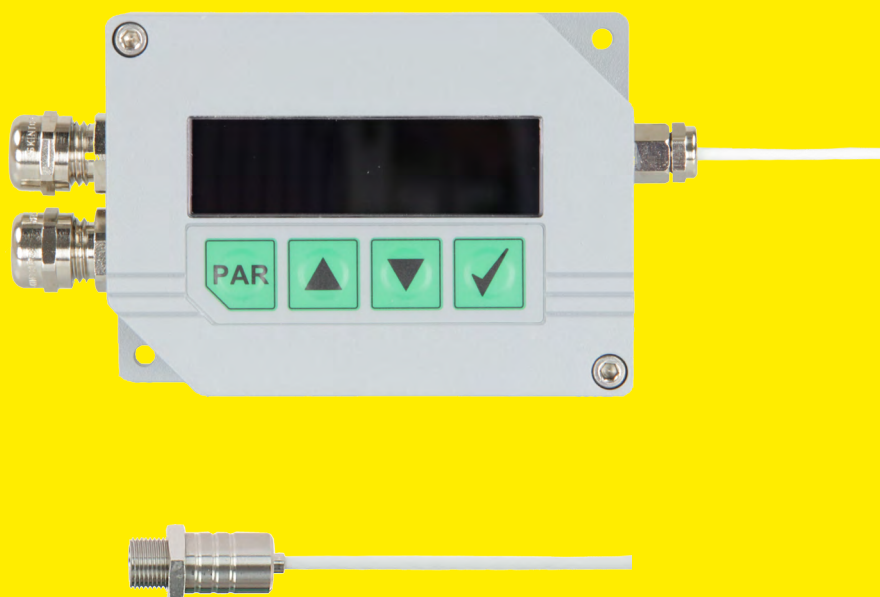## -40 °C ... +2500 °C

Non-contact temperature measurement of steel, paper, plastics, ceramics

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SENSORS MADE IN GERMANY

Pyrometers
OKSD T GA S

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| Measurement range | -40 - 1000 °C | 0 - 1000 °C | 250 - 1300 °C | 350 - 1800 °C | 600 - 1800 °C | 800 - 2500 °C |
|---|---|---|---|---|---|---|
| Application | universal use | universal use | metal | metal | metal | metal |
| Spectral range | 8 µm ... 14 µm | 8 µm ... 14 µm | 1,5 µm ... 1,8 µm | 1,5 µm ... 1,8 µm | 0,8 µm ... 1,1 µm | 0,8 µm ... 1,1 µm |
| Accuracy | 1 % | 1 % | 1 % | 1 % | 1 % | 1 % |
| Response time ($t_{95}$) | 100 ms | 100 ms | 10 ms | 10 ms | 10 ms | 10 ms |
| Display (OLED) | temperature and parameters | temperature and parameters | Temperature and parameters | Temperature and parameters | Temperature and parameters | Temperature and parameters |
| Programming | Via keyboard and software | Via keyboard and software | via keyboard and software | Via keyboard and software | Via keyboard and software | Via keyboard and software |
| Ausgang Output | 0/4 -20 mA | 0/4 -20 mA | 0/4 -20 mA | 0/4 -20 mA | 0/4 -20 mA | 0/4 -20 mA |
| Switching output | 2 x solid state relays | 2 x solid state relays | 2 x solid state relays | 2 x solid state relays | 2 x solid state relays | 2 x solid state relays |
| Inputs | 2 | 2 | 2 | 2 | 2 | 2 |
| Digital interface | RS-485 | RS-485 | RS-485 | RS-485 | RS-485 | RS-485 |
| **Electronics** | | | | | | |
| Housing [mm] | 110 x 80 x 40 | 110 x 80 x 40 | 110 x 80 x 40 | 110 x 80 x 40 | 110 x 80 x 40 | 110 x 80 x 40 |
| Housing material | aluminium | aluminium | aluminium | aluminium | aluminium | aluminium |
| Ambient temperature | 0 ... +70 °C | 0 ... +70 °C | 0 ... +70 °C | 0 ... +70 °C | 0 ... +70 °C | 0 ... +70 °C |
| **Sensor head** | | | | | | |
| Housing [mm] | M12 x 35 | M12 x 35 | M12 x 35 | M12 x 35 | M12 x 35 | M12 x 35 |
| Housing material | stainless steel | stainless steel | stainless steel | stainless steel | stainless steel | stainless steel |
| Ambient temperature | 0 ... +125 °C | 0 ... +180 °C | 0 ... +125 °C | 0 ... +125 °C | 0 ... +125 °C | 0 ... +125 °C |
| Cable length | 2,5 m, 5 m, 10 m | 2,5 m, 5 m, 10 m | 2,5 m, 5 m, 10 m | 2,5 m, 5 m, 10 m | 2,5 m, 5 m, 10 m | 2,5 m, 5 m, 10 m |
| Near-field optics type | | | **OKSD 1 GA13.194 R** | **OKSD 1 GA18.194 R** | **OKSD 1 S18.194 R** | **OKSD 1 S25.194 R** |
| Standard optics type | **OKSD T10.194 R** | **OKSD T10.194 RH** | **OKSD 2 GA13.194 R** | **OKSD 2 GA18.194 R** | **OKSD 2 S18.194 R** | **OKSD 2 S25.194 R** |

## Accessories for pyrometers



| Accessory | **Mounting bracket** | **Air unit** | **Interface converter** |
|---|---|---|---|
| Type | **DAK 333** | **DAK 331** | **SIC 485 UD** |
| Description | mounting bracket for M12 sensor head | air purge for M12 | RS 485 >USB |
| Type | | | |
| Description | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **OKSD T10.194 R** / **OKSD T10.194 RH** | Measurement distance a [mm] | 0 | **85** | 100 | 200 | 400 | 800 |
| | Measurement spot diameter M [mm] | 7 | **6** | 7 | 10 | 25 | 55 |
| **OKSD 1 GA13.194** / **OKSD 1 S18.194 R** | Measurement distance a [mm] | 0 | 50 | **80** | 100 | 150 | 200 |
| | Measurement spot diameter M [mm] | 3,5 | 2,9 | **2,5** | 4 | 7,5 | 11 |
| **OKSD 1 GA18.194** / **OKSD 1 S25.194 R** | Measurement distance a [mm] | 0 | 50 | **80** | 100 | 150 | 200 |
| | Measurement spot diameter M [mm] | 3,5 | 2,2 | **1,3** | 2,5 | 5,5 | 8,5 |
| **OKSD 2 GA13.194 R** / **OKSD 2 S18.194 R** | Measurement distance a [mm] | 0 | 250 | **500** | 750 | 1000 | 1500 |
| | Measurement spot diameter M [mm] | 3,5 | 10 | **16** | 22,5 | 29 | 42 |
| **OKSD 2 GA18.194 R** / **OKSD 2 S25.194 R** | Measurement distance a [mm] | 0 | 250 | **500** | 750 | 1000 | 1500 |
| | Measurement spot diameter M [mm] | 3,5 | 7 | **10** | 13 | 16 | 22 |

Focus point = **bold value**

# Pyrometers OKSD T GA S – General Information

Stationary pyrometers of the OKSD series measure the temperature of object contactless and give an analog output signal. For the measurement on different materials several variants are available for temperature ranges between -40 and +2500 °C. The OKSD series has been designed for control and monitoring tasks in different industrial sectors.



The key feature in selecting a pyrometer is its spectral range, as this must be related to the proper-ties of the specific material and to the application. A pyrometer with wavelength as short as possible is recommended, if you want to achieve high accuracy. Various optical systems ensure best adaptation to the object size. To avoid reading errors, it is necessary to choose a measurement spot that can always be completely filled by the object. The table shows for the different types the spot dimension in relation to the object distance. The OKSD series features a separate sensor head which can be used at ambient temperature of up to 125 °C or 180 °C. Installation in limited spaces is possible thanks to its compact stainless steel M12 housing.

All models are provided with an analog output 0/4-20 mA, two relay outputs, two inputs and a RS 485 interface. The electronics box has a display to show temperature values and adjust parameters.

can be displayed Through the multilingual windows software – associated with the interface cable - it is possible to adjust the measurement range and emissivity, as well as to display the temperature values in °C / °F, evaluate and record them. Also max and min. storage value and the measuring rate can be set. Versions in different cable lengths are available. A comprehensive range of accessories allows the adaptation to different operating conditions.

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- **Temperature measurement between -40 and +2500°C**
- **Accuracy up to 1%**
- **Response time from 10 ms**
- **Different optics**
- **Sensor head in M12 stainless steel housing**
- **Ambient temperature up to +70**
- **Integrated OLED display**
- **Memory for minimum and maximum value**
- **0/4 - 20 mA output**
- **RS 485 interface**
- **Adjustment of temperature range, emissivity and measuring rate possible via software**
- **Windows software for parameterization, display, storage and evaluation of the measurement values**
- **Extensive range of accessories**