Non-contact temperature measurement of metals

Piros S Pyrometer
GE series
75 °C up to 1200 °C
Piros S Pyrometer
General information GE series

Piros Pyrometer are non-contact measuring thermometers with analog outputs. They complete the Piros infrared sensor range with switching behaviour which have been tried and tested for years.

For temperature measurement of metals we offer the stationary design OKS GE in various versions with measurement ranges between 75 °C and 1,200 °C.

The sensors have been designed for control and monitoring tasks in many varied industries:

- steel works and rolling mills
- forging works
- presses
- soldering, sintering and hardening works

We recommend the use of our questionnaire for application analysis so that the user does not necessarily need to cope with the theory of radiation measurement.

The following criteria are relevant for the selection of the correct sensor:

- size and material of the object
- minimum/maximum object temperature
- distance from sensor to the desired measuring area
- ambient temperature

Highlights at a glance:

Stainless steel housing with M40 thread
Plug connection with S10 plug (M18)

Temperature range:
- 75 °C up to 650 °C for metal
- 100 °C up to 800 °C for metal
- 150 °C up to 1,200 °C for metal

Electrical connection:
- 24 V DC
- 0/4 - 20 mA output signal
- RS 485 interface (galvanically isolated) for parameterization and measuring data transmission with PC software

Technical data:
- spectral range of 2,0 - 2,6 µm
- response times from 5 ms
- measuring areas from 1,5 mm diameter
- measuring failure from 0,5%
- emissivity adjustable
- MODBUS RTU
- Laser pilot light unit
- maximum value memory

An extensive accessories programme rounds off the product range and permits the adaptation to different applications.

Software

The integrated RS 485 interface allows via software the display and adaption of the following parameters:

- temperature display °C / °F
- measuring range settings
- emissivity
- maximum value memory
- setting time (95% time)
- 0/4-20 mA analog output

Settings can be carried out using a laptop / PC with the aid of an optional software and a RS 485 interface adapter. The software runs under Windows. The user guidance system is multi-lingual and largely selfexplanatory. Besides parameterization, the software also offers the opportunity to evaluate and keep records of the measurement data.

Advantages of the GE series:

- temperature measurement at low temperatures
- short response times
- high accuracy
- BUS solution with up to 32 devices
- spectral range 2,0 - 2,6 µm

Different optics ensure the optimal adjustment of the measuring spot to the object size. The table below shows the size of the measuring spot in relation to the object distance.

Type summary GE series

Pyrometer of the OKS GE series for temperature measurement of metals are available in different versions. The spectral range of 2,0 - 2,6 µm allows a high accuracy even at lower material temperatures.

Various optics enable adaption to the object size and distance. All devices are equipped with a plug connection. Separate connection cables are available in different lengths.

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Piros S GE series Pyrometer

Piros OKS accessories

<table>
<thead>
<tr>
<th>accessory description</th>
<th>type</th>
<th>art.-no.</th>
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<tbody>
<tr>
<td>connection cable 2 m *)</td>
<td>ST S10/12-2</td>
<td>9847H</td>
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<td>connection cable 5 m *)</td>
<td>ST S10/12-5</td>
<td>9847D</td>
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<td>SIC 485 UD</td>
<td>9861E</td>
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<td>mounting bracket adjustable</td>
<td>DAK 305</td>
<td>6913E</td>
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<td>DAK 304</td>
<td>6913D</td>
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<td>air purge unit</td>
<td>DAK 303</td>
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<tr>
<td>cooling jacket with air purge</td>
<td>DAK 302</td>
<td>6913B</td>
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<td>vacuum flange</td>
<td>DAK 322</td>
<td>6913O</td>
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</tbody>
</table>

*) Further cable lengths on request
Furthermore we offer suitable protective cable hoses for the Pyrometer with cooling jacket.

Proven applications for Proxitron Pyrometer are for example:

- temperature monitoring at presses
- object temperature in furnaces
- preheating
- hardening
- soldering
- rolling
- furnace construction
- research and development

Other Pyrometer versions are available for special applications.
Please let us know your requirements. We will be pleased to advise you!