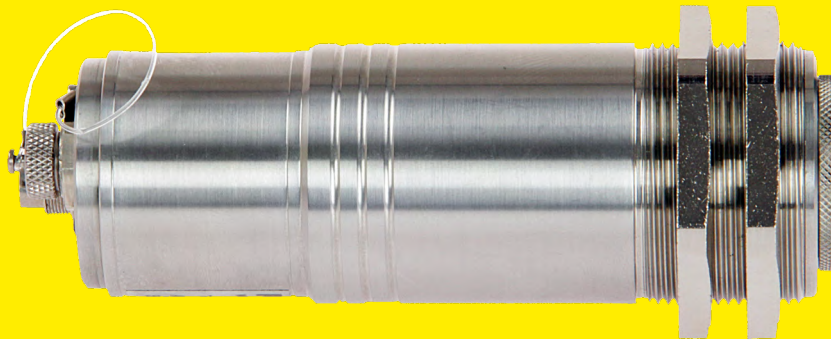


# Pyrometers OKS GE Q

75°C ... 2500 °C

Highly accurate temperature measurement of metals



Measurement range	75 - 650 °C	100 - 800 °C	150 - 1200 °C	600 - 1400 °C	700 - 1800 °C	800 - 2500 °C
Application	metal	metal	metal	metal	metal	metal
Spectral range	2,0 µm ... 2,6 µm	2,0 µm ... 2,6 µm	2,0 µm ... 2,6 µm	0,7 µm ... 1,1 µm	0,7 µm ... 1,1 µm	0,7 µm ... 1,1 µm
Ratio correction	no	no	no	yes	yes	yes
Measurement accuracy	0,5 %	0,5 %	0,5 %	0,5 %	0,5 %	0,5 %
Response time (t <sub>95</sub> )	5 ms	5 ms	5 ms	5 ms	5 ms	5 ms
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
Digital interface	RS-485 (MODBUS RTU)	RS-485 (MODBUS RTU)	RS-485 (MODBUS RTU)	RS-485 (MODBUS RTU)	RS-485 (MODBUS RTU)	RS-485 (MODBUS RTU)
Integrated pilot light	yes (LASER)	yes (LASER)	yes (LASER)	yes (LASER)	yes (LASER)	yes (LASER)
Housing [mm]	M40 x 125	M40 x 125	M40 x 125	M40 x 125	M40 x 125	M40 x 125
Housing material	stainless steel	stainless steel	stainless steel	stainless steel	stainless steel	stainless steel
Ambient temperature	0 ... +70 °C	0 ... +70 °C	0 ... +70 °C	0 ... +70 °C	0 ... +70 °C	0 ... +70 °C
Near-field optics type	<b>OKS 2 GE06.194 S10</b>	<b>OKS 2 GE08.194 S10</b>	<b>OKS 2 GE12.194 S10</b>	<b>OKS 2 Q14.194 S10</b>	<b>OKS 2 Q18.194 S10</b>	<b>OKS 2 Q25.194 S10</b>
Standard optics type	<b>OKS 3 GE06.194 S10</b>	<b>OKS 3 GE08.194 S10</b>	<b>OKS 3 GE12.194 S10</b>	<b>OKS 3 Q14.194 S10</b>	<b>OKS 3 Q18.194 S10</b>	<b>OKS 3 Q25.194 S10</b>
Long-range optics type	<b>OKS 4 GE06.194 S10</b>	<b>OKS 4 GE08.194 S10</b>	<b>OKS 4 GE12.194 S10</b>	<b>OKS 4 Q14.194 S10</b>	<b>OKS 4 Q18.194 S10</b>	<b>OKS 4 Q25.194 S10</b>

<b>OKS 2 GE06.194 S10</b>	Measurement distance a [mm]	0	100	<b>290</b>	400	500	600
<b>OKS 2 GE08.194 S10</b>	Measurement spot diameter M [mm]	11,8	9,0	<b>3,6</b>	9,4	14,7	20
<b>OKS 2 GE12.194 S10</b>	Measurement spot diameter M [mm]	11,8	8,6	<b>2,4</b>	7,7	12,6	17,4
<b>OKS 2 GE12.194 S10</b>	Measurement spot diameter M [mm]	11,8	8,2	<b>1,5</b>	6,5	11,1	15,7

<b>OKS 3 GE06.194 S10</b>	Measurement distance a [mm]	0	200	<b>650</b>	800	1000	1500
<b>OKS 3 GE08.194 S10</b>	Measurement spot diameter M [mm]	10,8	9,9	<b>7,7</b>	11,9	17,6	32
<b>OKS 3 GE08.194 S10</b>	Measurement spot diameter M [mm]	10,8	9,2	<b>5,4</b>	9,2	14,1	27
<b>OKS 3 GE12.194 S10</b>	Measurement spot diameter M [mm]	10,8	8,6	<b>3,5</b>	6,8	11,2	22

<b>OKS 4 GE06.194 S10</b>	Measurement distance a [mm]	0	500	750	1000	<b>1500</b>	2000
<b>OKS 4 GE08.194 S10</b>	Measurement spot diameter M [mm]	10,4	12,9	14,1	15,3	<b>17,7</b>	27
<b>OKS 4 GE08.194 S10</b>	Measurement spot diameter M [mm]	10,4	10,8	11	11,2	<b>11,6</b>	18,9
<b>OKS 4 GE12.194 S10</b>	Measurement spot diameter M [mm]	10,4	9,4	8,9	8,5	<b>7,5</b>	13,5

Focus point = **bold value**

<b>OKS 2 Q14.194 S10</b>	Measurement distance a [mm]	0	100	<b>290</b>	400	500	600
<b>OKS 2 Q18.194 S10</b>	Measurement spot diameter M [mm]	11,8	9,8	<b>6</b>	13	19	25
<b>OKS 2 Q18.194 S10</b>	Measurement spot diameter M [mm]	11,8	8,8	<b>3</b>	8,6	14	19
<b>OKS 2 Q25.194 S10</b>	Measurement spot diameter M [mm]	11,8	8,2	<b>1,5</b>	6,5	11,1	15,7

<b>OKS 3 Q14.194 S10</b>	Measurement distance a [mm]	0	200	<b>650</b>	800	1000	1500
<b>OKS 3 Q14.194 S10</b>	Measurement spot diameter M [mm]	10,8	11,5	<b>13</b>	18,5	26	44
<b>OKS 3 Q18.194 S10</b>	Measurement spot diameter M [mm]	10,8	9,2	<b>6,5</b>	10,5	16	29
<b>OKS 3 Q25.194 S10</b>	Measurement spot diameter M [mm]	10,8	8,6	<b>3,5</b>	6,8	11,2	22

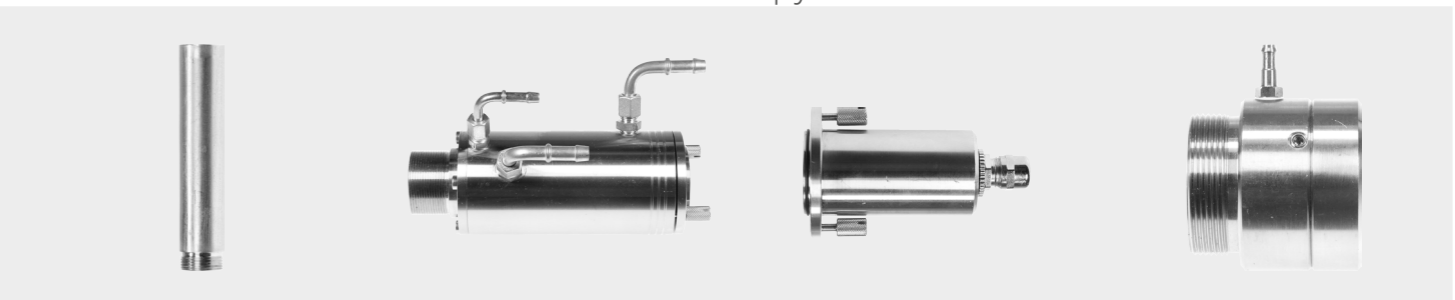
<b>OKS 4 Q14.194 S10</b>	Measurement distance a [mm]	0	500	750	1000	<b>1500</b>	2000
<b>OKS 4 Q14.194 S10</b>	Measurement spot diameter M [mm]	10,4	17	20	24	<b>30</b>	43
<b>OKS 4 Q18.194 S10</b>	Measurement spot diameter M [mm]	10,4	11,9	12,7	13,5	<b>15</b>	24
<b>OKS 4 Q25.194 S10</b>	Measurement spot diameter M [mm]	10,4	9,4	8,9	8,5	<b>7,5</b>	13,5

Focus point = **bold value**

Accessories for pyrometers



Accessories for pyrometers



Accessories	Mounting bracket	Connection cable	Interface converter	Protection tube	Cooling jacket	Cable Protection Cape	Air purge unit
Type	<b>DAK 304</b>	<b>ST S10/12-2</b>	<b>SIC 485 UD</b>	<b>DAK 319</b>	<b>DAK 302</b>	<b>DAK 329</b>	<b>DAK 303</b>
Description	one-side mounting bracket	length 2 m	RS-485 to USB	length 100 mm	incl. air blow	compatible with DAK 302	air blow unit M40
Type	<b>DAK 305</b>	<b>ST S10/12-5</b>		<b>DAK 320</b>			
Description	mounting bracket adjustable	length 5 m		length 300 mm			

Additional accessories, as for ex. dedicated furnace windows and vacuum flange adapters, are available for industrial furnaces applications

# Pyrometers OKS GE Q – General Information

Stationary pyrometers of the OKS GE and OKS Q series measure the temperature of metal objects contactless and provide an analog output signal. Several variants are available for temperature ranges between -75 and +2500 °C. The OKS pyrometers have been designed for control and monitoring tasks specifically in the metal industry.



The key feature in selecting a pyrometer is its spectral range. A pyrometer with wavelength as short as possible is recommended, if you want to achieve high accuracy. Through the ratio correction factors it is possible to obtain, with the ratio pyrometers of the OKS Q series, very accurate measurement values regardless of the surface properties of the metal object, or of its emissivity. The pyrometers of the OKS GE series, instead, are ideal for the temperature measurements of metals starting from 75 °C. 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 how the spot dimension changes in relation to the object distance.

The incorporated LASER light makes precise alignment on the object to be measured easier, as the light dimension approximately represents the measurement spot. All models are provided with a connector with 0/4-20 mA analog output, and also with a RS-485 interface with galvanic isolation, allowing the parallel operation of up to 32 devices via MODBUS RTU.

Through the multilingual Windows software, included in the supply, 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.

Separate connection cables are available in several lengths. A comprehensive range of accessories allows the adaptation to different operating conditions.

- Temperature measurement of metals
- Temperature monitoring in presses
- Process control in furnaces
- Hardening
- Preheating
- Forging
- Welding
- Foundries
- Rolling
- Annealing
- Research and Development
- Steelworks and rolling mills
- Forging plants
- Presses
- Soldering, sintering and hardening



- Temperature measurement between 75 °C and +2500°C
- Measurement independent of emissivity (OKS Q series)
- Accuracy up to 0,5%
- Response time from 5 ms
- Several optics
- Robust stainless steel M40 housing
- Ambient temperature up to +70 °C
- Cooling jacket up to +200 °C
- Integrated LASER light for alignment
- Memory for minimum and maximum value
- 4 - 20 mA output
- USB interface, with galvanic isolation
- 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