Pyrometers in 2 wire form with digital signal processing for temperature measurements of metal surfaces, graphite, ceramics etc. between 300 and 2500°C

IS 210 • IGA 210

CE

- Small, robust stainless steel housing for easy installation with electrical connector for facile mounting / demounting
- 2-wire technique for current supply and temperature measurement at the same time
- Internal digital signal processing for high accuracy
- High quality optics for detection of small measuring objects
- Built-in LED targeting light for fast and precise alignment to the measuring object
- Built-in maximum value storage detects always the highest temperature value of a series of measurements
- Temperature subrange programmable to adapt the analog output to the measuring task

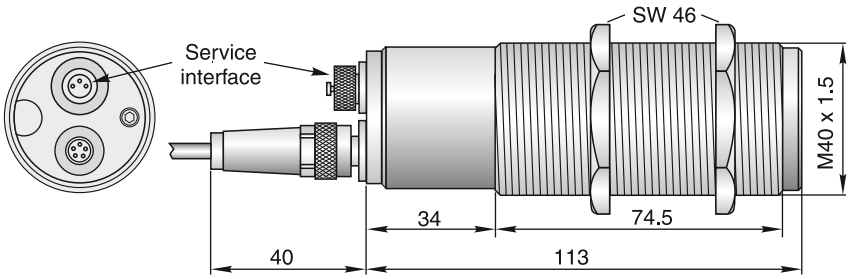
IS 210 and **IGA 210** are stationary pyrometers for non-contact temperature measurement of metal surfaces, graphite, ceramics etc.

The instruments are digital pyrometers in two wire format. This format combines the high accuracy of the digital signal processing with the simple connection and operating with two wires.

The setting of the programmable parameters such as emissivity, subrange, response time or maximum value storage can be adjusted either with the portable setting device HT 6000 or via USB adapter and the setting software *InfraWin*. This enables the instrument to be adapted to various measuring tasks. On request all necessary values can be set ex works.

The solid and robust design of the instruments guarantees high operation safety even in rough industrial environments.

Dimensions:



Technical Data

Temperature range:	See reference numbers
Spectral range:	IS 200: 0.8 to 1.1 µm IGA 200: 1.45 to 1.8 µm
Accuracy [1]:	0.5% of reading in °C + 1°C
Repeatability [1]:	0.1% of reading in °C + 1°C
Resolution:	0.1°C
Parameters [2]:	Sub range, emissivity, response time, maximum value storage
Response time t_{90}:	20 ms ... 10 s
Clear time of maximum value storage:	Off, 50 ms, 250 ms, 1 s, 5 s, 25 s, auto
Emissivity ε:	0.05 ... 1.0
Output:	4 - 20 mA, linear; max. load 700 Ω at 24 V

[1] (ε = 1, $T_{amb.}$ = 25°C, t_{90} = 1 s)

[2] Programming via service interface with portable battey driven setup device HT 6000 or via USB adapter and software *infraWin* (optional) or preset ex works (on request)

Power supply:	24 V DC ± 25%, ripple 500 mV; LED targeting light: 5 to 30 V DC, 35 mA
Power consumption:	Max. 0.6 W (without LED targeting light)
Sighting:	LED targeting light
Protection class:	IP65 (according to DIN 40 050)
Ambient temp.:	0 to 70°C
Storage temperature:	-20 to 70°C
Weight:	approx. 450 g
CE-label	According to EU directives about electromagnetic immunity

Scope of delivery: Instrument, works certificate, user manual.

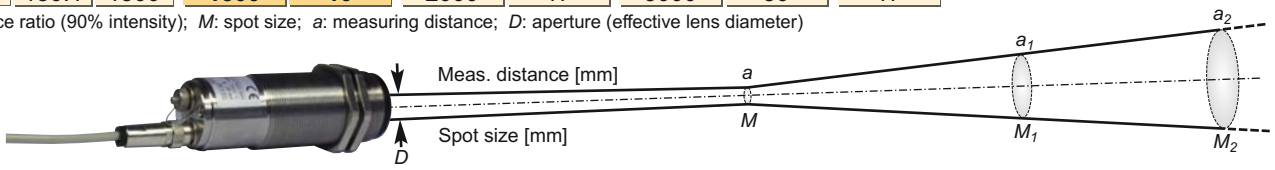
Ordering note: A connection cable is not included in scope of delivery and has to be ordered separately.

Optics

Type		*a* : *M* *)	Optics	*a* [mm]	*M* [mm]	a_1 [mm]	M_1 [mm]	a_2 [mm]	M_2 [mm]	*D* [mm]
IS 210	(MB 18)	130:1	600	**600**	**4.5**	1000	15	1500	28	13
	(MB 25)	240:1			**2.5**		12		23	
	(MB 18)	140:1	1000	**1000**	**7**	1500	15	2000	24	16
	(MB 25)	240:1			**4.2**		12		19	
	(MB 18)	135:1	1500	**1500**	**11**	2000	17	3000	32	17
	(MB 25)	235:1			**6.4**		14		30	
IGA 210	MB 13L + MB 18L	165:1	300	**300**	**1.8**	400	6	600	15	17
		175:1	350	**350**	**2**	500	8	800	18	16
		145:1	500	**500**	**3.4**	800	11	1000	16	14
		150:1	600	**600**	**4**	1000	13	1500	24	13
		140:1	1000	**1000**	**7**	1500	14	2000	22	16
		150:1	1500	**1500**	**10**	2000	17	3000	30	17

*) *a* : *M*; distance ratio (90% intensity); *M*: spot size; *a*: measuring distance; *D*: aperture (effective lens diameter)

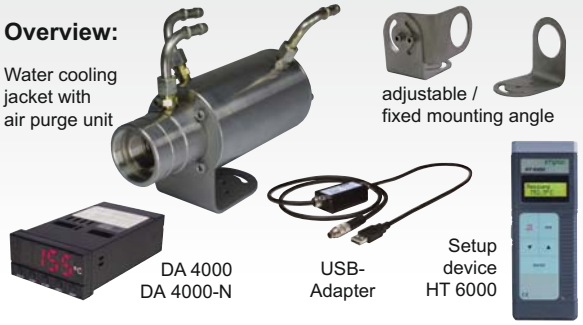
The pyrometers are equipped ex works with on of the specified optics. The smallest spot size *M* [mm] for each optics is in the nominal distance *a* [mm]. If the distance to the measuring object is decreased or increased the spot sizes will enlarge (see example values in the table).



Reference Numbers

Optics	IS 210		IGA 210	
	650 ... 1800°C (MB 18)	800 ... 2500°C (MB 25)	300 ... 1300°C (MB 13L)	350 ... 1800°C (MB 18L)
300	-	-	3 819 860	3 819 890
350	-	-	3 819 870	-
500	-	-	3 819 880	-
600	3 819 740	3 819 770	3 819 800	3 819 830
1000	3 819 750	3 819 780	3 819 810	3 819 840
1500	3 819 760	3 819 790	3 819 820	3 819 850

Overview:



Connection cable:

3 821 ...	2 m ... 750	5 m ... 760	10 m ... 770	15 m ... 780	20 m ... 790	25 m ... 800	30 m ... 810

3 852 290	Power supply NG DC; 100...240 V AC ⇒ 24 V DC, 1 A
3 826 500	Portable battery driven setup device HT 6000
3 821 600	Interface cable to HT 6000
3 826 660	USB adapter + adjustment software *InfraWin*
3 890 640	Digital display DA 4000-N with 2-wire supply
3 890 650	Digital display DA 4000 with 2-wire supply and 2 limit switches
3 852 290	Power supply NG DC (100...240 V AC ⇒ 24 V DC, 1 A)
3 837 360	Water cooling jacket with integrated air purge unit
3 835 320	Air purge unit
3 834 350	Mounting angle, adjustable
3 834 360	Mounting angle, fixed

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