Pyrometer for temperature measurement of non-metallic surfaces as well as painted, coated or anodized metals. Temperature range between -32 and 900 °C.

IN 210

- 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
- Temperature subrange programmable for adaptation of the analog output to the measuring task

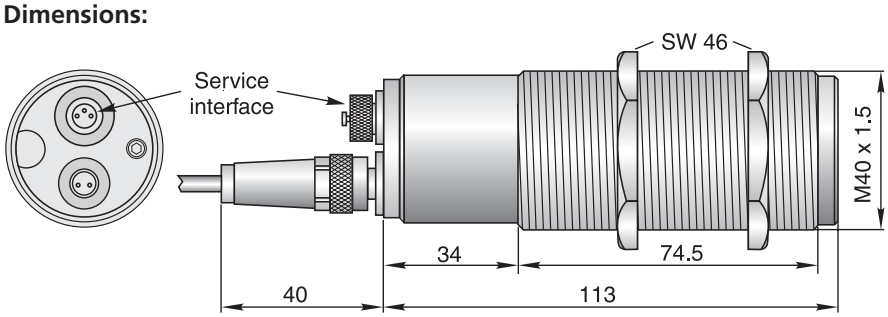
The IN 210 is a stationary pyrometer for non-contact temperature measurement of non-metallic surfaces or painted, coated or anodized metals.

The instruments are operating as digital two wire pyrometers. This technique 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 and response time 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 instrument guarantees high operational safety even in rough industrial environments.

Dimensions:



Technical Data

Temperature range:	-32 ... 900 °C
Spectral range:	8 to 14 µm
Accuracy:	1% of reading in °C + 1°C (ε =1, T_{amb}=25°C, t_{90}= 1 s)
Repeatability:	0.5% of reading in °C + 1°C (ε =1, T_{amb}=25°C, t_{90}= 1 s)
Resolution:	0.1 °C
Parameters [1]:	Sub range, emissivity, response time
Response time t_{90}:	120 ms, adjustable up to 10 s via service interface
Emissivity ε:	0.2 to 1.0 adjustable via service interface

[1] 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)

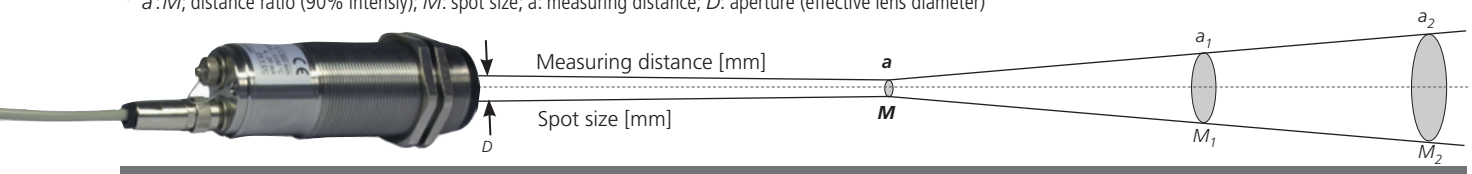
Output:	4 to 20 mA, linear; max. load 700 Ohm at 24 V
Power supply:	24 V DC ± 25%; ripple ≤ 500 mV
Power consumption:	Max. 0.6 W
Aperture:	15 mm
Protection class:	IP65 (according to DIN 40 050)
Ambient temp.:	0 to 70 °C
Storage temp.:	-20 to 70 °C
Weight:	Approx. 450 g
CE-label:	According to EU directives about electromagnetic immunity

Optical Data

The pyrometers are equipped ex works with one of the following optics. These optics are fixed to a certain distance, i.e. at these distances each optic achieves its smallest spot size in relation to the measuring distance. The spot size will change in any other distance (shorter or longer). Please note that the measuring object must be at least as big as the spot size.

Optics	*a*: *M* [*)]	*a* [mm]	*M* [mm]	a_1 [mm]	M_1[mm]	a_2 [mm]	M_2 [mm]	*D* [mm]
100	50:1	100	2	200	18	300	35	15
300	50:1	300	6	600	22	1000	45	
800	50:1	800	16	1500	36	2500	68	

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



Reference Numbers

Instruments:

3 819 540	IN 210; -32 to 900 °C, optics a = 100 mm
3 819 550	IN 210; -32 to 900 °C, optics a = 300 mm
3 819 560	IN 210; -32 to 900 °C, optics a = 800 mm

Accessories:

3 821 ...	Connection cable:						
	2 m	5 m	10 m	15 m	20 m	25 m	30 m
	...820	...830	...840	...850	...860	...870	...880
3 826 500	Portable battery driven setup device HT 6000						
3 821 600	Connecting cable to HT 6000						

3 826 660	USB adapter + adjustment software InfraWin
3 890 640	Digital display DA 4000-N with 2 wire form power supply
3 890 650	Digital display DA 4000 with 2 wire form power 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
3 827 110	Battery driven laser targeting light

Overview:

Mounting angle fixed | Mounting angle adjustable | Laser targeting light | Water cooling jacket | DA 4000 DA 4000-N | USB adapter | HT 6000

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