

X Non-contact thermometry best done with **INFRASENSOR®** pyrometers

impac®

Mikron Group



IN 510-N · IN 510 IN 520-N · IN 520

Small, compact, digital and highly precise

Digital infrared pyrometers for non-contact temperature measurement from -40 to 700°C with miniature sensor head

- ◆ Sensor head and cable usable in ambient temperature up to 85 or 180°C without cooling
- ◆ Sensor head exchangeable without recalibration
- ◆ Close focus lens for small objects
- ◆ Switchable digital interface RS232 / RS485
- ◆ Isolated relais contact
- ◆ Selectable analog output
- ◆ Setting of parameters via keyboard or interface

IN 510-N



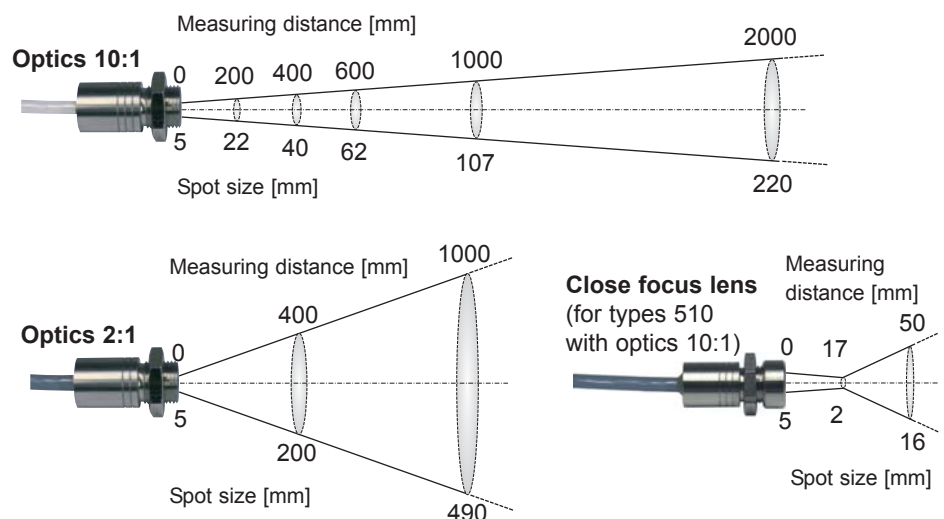
IN 520



INFRASENSOR® IN 510-N, IN 510, IN 520-N and IN 520 are digital pyrometers for non-contact temperature measurement of non-metallic or coated metallic objects.

The versions **IN 510** and **IN 520** are equipped with an illuminated LC display which shows the actual temperature reading. All available parameters can be set via the integrated keyboard. The types **IN 510-N** and **IN 520-N** do not have display and keyboard, they will be parametrized via interface.

All pyrometers are equipped with a stainless steel miniatur sensor head, the field of view is 10:1 or 2:1, they can be used in ambient temperatures up to 85°C or 180°C without cooling dependent on the type .



Technical Data

Temperature range:	-40 ... 700°C	Uncertainty:	0 ... 700°C: 0.8% of reading in °C or 1°C *) 0 ... -20°C: 2°C; -20 ... -40°C: 3°C T _K : 0,03%/°C oder 0,05%/°C (25°C). With thermocouple output: min. 2.5°C
Sub range:	Adjustable; min. range 51°C; ex works preadjusted to 0 ... 500°C	Repeatability:	0.5% of reading in °C or 0.5°C *)
Spectral range:	8 ... 14 µm	Max. Ambient temp. converter:	0 ... +65 °C (storage temperature: -20 ... +70 °C)
Optics:	10:1 or 2:1	Max. Ambient temp. sensor head:	0 ... 85°C (IN 510-N, IN 510) 0 ... 180°C (IN 520-N, IN 520) (storage temp.: -20...85°C / 180°C)
Power supply:	10 ... 30 V DC, ripple < 0.5 V, current consumption max. 60 mA	Relative humidity:	10 ... 95%, non condensing
Analog output:	Linear current (0/4 ... 20 mA), voltage (0 ... 5 V) or thermocouple (type "J" or "K")	protection class:	IP65 (converter, sensor head 10:1), IP20 (sensor head 2:1)
Output for sensor head temperature:	10 mV/°C	Weight:	320 g
Load:	Max. 700 Ω at 24 V power supply (for current output) (500 Ω / 20 V)	Housing:	Aluminium (converter), stainless steel (sensor head)
Output impedance:	100 Ω (for thermocouple or voltage output)	Dimensions:	
Relais contact:	Isolated relais contact; 50 V DC; 0.2 A; temperature and hysteresis adjustable	Converter	
Digital interface:	switchable RS232 / RS485	Sensorhead:	
Emissivity ε:	10 ... 120% adjustable in steps of 0.1%		
Max. / Min. value storage:	Clear time: OFF; 0.1 s; 0.25 s; 0.5 s; 1 s; 5 s; 25 s; extern; auto		
Response time t ₉₀ :	180 ms; switchable: 0.5 s; 1 s; 2 s; 5 s; 10 s or 30 s		
Temperature display (only IN 510 / 520):	LCD, 4 digit, 3 values per second, display illumination permanent		
Resolution:	1/10 °C (1/10 °F, 1°F >1000°F meas. temp.)		

*) The larger value is valid. The sensor head must be in constant ambient temperature for at least 15 min.

Reference numbers for instruments and accessories

Pyrometer	3 m cable	15 m cable		
IN 510-N optics 2:1 (85°C head)	3 874 160	3 874 170	3 835 410	Air purge (for sensor head 2:1)
IN 510-N optics 10:1 (85°C head)	3 874 260	3 874 270	3 834 250	Fixed mounting angle (for air purge with sensor head 2:1)
IN 510 optics 2:1 (85°C head)	3 874 360	3 874 370	3 834 260	Adjustable mounting angle (for air purge with sensor head 2:1)
IN 510 optics 10:1 (85°C head)	3 874 460	3 874 470	3 835 350	Cooling / purging unit 0.75 m for sensor head 10:1 (0 ... 200°C for types 510)
IN 520-N optics 10:1 (180°C head)	3 874 280	3 874 290	3 835 360	Cooling / purging unit 2.5 m for sensor head 10:1 (0 ... 200°C for types 510)
IN 520 optics 10:1 (180°C head)	3 874 480	3 874 490	3 835 420	Cooling / purging unit 0.75 m for sensor head 2:1 (0 ... 200°C for types 510)
			3 835 430	Cooling / purging unit 2.5 m for sensor head 2:1 (0 ... 200°C for types 510)
			3 835 340	90° mirror (only for sensor head 10:1)
			3 890 600	DIN-rail-power supply (230 V AC ⇒ 24 V DC)
			3 890 560	DA 6000-N: LED-digital display with possibility for pyrometer parameter setting; RS232 interface
			3 890 570	DA 6000-N with RS485 interface
			3 826 500	HT 6000: portable battery driven indicator and instrument for pyrometer parameter setting
			3 852 440	Protocol converter RS485 ⇒ Profibus DP (max. 1 instr.)
			3 852 460	Protocol converter RS485 ⇒ Profibus-DP (max. 32 instruments)



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Temperature Measurement

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Specifications are subject to change without notice