

X Non-contact temperature measurement
with Infratherm pyrometers

impac[®]



IS 5 ■ IGA 5

Compact. Highly accurate. Fully digital.

Digital infrared pyrometers for non contact
temperature measurement between 250°C and 2500°C

- excellent accuracy
- long temperature ranges
- laser pilot or view finder
- analog and digital output
- integrated maximum value storage
- integrated TV camera or PID controller (options)



Materials:

- metal, steel
- ceramics, graphite
- glass, glass moulds
- alloys

Applications:

- annealing
- preheating
- hardening, sintering
- tempering, soldering
- rolling
- welding
- normalising
- shrinking, etc.

IMPAC - specialists in non-contact thermometry

IR detector:	Si (IS 5) or InGaAs (IGA 5) photoelement	adjustable parameters:	emissivity, response time, off-/online, 0/4...20 mA switch, pilotlight on/off
spectral response:	0.8...1.1 µm (IS); 1.45...1.8 µm (IGA)	additional parameters via interface:	analog output zoom to any subrange of the basic range, measured value, clear time or external clear for maximum value storage, inside temperature, address, baud rate
analog output:	0/4...20mA, switchable, linear in temperature, load independent DC	maximum value:	single or dual storage:
max load:	500 Ω with 24 V supply voltage	storage delete modes:	time, external, automatic, interface
accuracy:	< 350°C: 0.5% of reading/°C + 1°C	safety system:	IP 65 (acc. to DIN 40 050)
(ε = 1; 23°C)	< 1500°C: 0.3% of reading/°C + 1°C	connection:	12pin connector
	> 1500°C: 0.5% of reading/°C + 1°C	ambient temperature:	0...+70°C at housing
resolution:	digital: 0.1°C; analog: 0.025% of subrange	storage temperature:	-20...+70°C
repeatability:	0.1% of reading/°C + 1°C	housing:	stainl. steel, 102mm x 48mm (LxD without plug) 182 mm x 48 mm with view-finder
temp. dependence:	0.2°C per °C deviation from 23°C	weight:	0.55kg
response time t ₉₀ :	≤ 2 ms, adjustable up to 10 s	CE-mark:	corresponding to EU rules on immunity from electromagn. fields)
emissivity:	0.2 ... 1.00, adjustable		
power supply:	24 V DC ± 25%, ripple max 50 mV		
power consumption:	max. 2.5 W with active pilot light		
digital interface:	RS 232 or RS 485 addressable, half-duplex, 19.2 kBd,		
aperture D:	5 mm (IS), 8 mm (IGA)		
sighting system:	laser pilot light		

Temperature measuring ranges and reference numbers:

	Range	Ref. no.		Range	Ref. no.
IGA 5	MB 18: 350...1800°C	3 857 400	IS 5	MB 20: 600...2000°C	3 857 150
	MB 20: 250...2000°C	3 857 350		MB 25: 800...2500°C	3 857 200

All shorter measuring ranges being within the basic measuring ranges can be realised by the user via PC and the software InfraWin.

Optics: Both optics can be adjusted ex works to all measuring distances being within the distance ranges. Thus it is always guaranteed that the minimal spot size can be realised at a given distance. The distances given in the table are examples. The spot size for distances not given in the table can be calculated with interpolation of the mentioned spot sizes. All spot sizes are given in mm.

Optics N for short distances, 90...250 mm

Distance	MB 18 IGA 5	MB 20	MB 20 IS 5	MB 25
90 mm	0.7	1.1	1.0	0.5
150 mm	1.1	2.0	1.8	0.9
250 mm	1.8	3.6	3.1	1.6

Optics F for long distances, 220 mm ... ∞

Distance	MB 18 IGA 5	MB 20	MB 20 IS 5	MB 25
220 mm	1.0	2.0	2.0	1.0
500 mm	2.4	4.8	4.8	2.4
1300 mm	6.6	13.0	13.0	6.6

Options:

RS 485 instead of RS 232:
View finder instead of laser pilot light:
Integrated TV camera:
Integrated fast PID controller:

please add + **010** to the Ref.no. of the IS 5 / IGA 5
 please add + **020** to the Ref.no. of the IS 5 / IGA 5
 see additional data sheet
 see additional data sheet

Scope of delivery:

converter with laser pilot light and RS 232, optics to your choice, PC-software InfraWin, the cable is not included within the scope of delivery.

Order information:

To process your order as fast as possible, please give us the following data:

- measuring range and Ref.no.
- optics (e.g. "optics N") and the desired measuring distance (e.g. "measuring distance 110mm")
- option RS 485 or option through-lens-sighting, if needed, or add 010 or 020 to the pyrometer's Ref.no.



Accessories:

3 820 330	connection cable 5 m, straight connector options: 10 m; 15 m; 30 m	3 837 230	cooling jacket, heavy duty with integrated air purge
3 852 140	power supply NG 0	3 837 080	cooling jacket for temperatures < 170°C
3 852 150	power supply NG2, with 2 limit switches		accessories for cooling jacket, see drawing 3 837 032
3 890 640	LED indicator DA 4000-N	3 846 100	mounting tube
3 890 650	LED indicator DA 4000 with 2 limit switches	3 846 120	flange tube
3 890 560	LED indicator DA 6000-N with RS232	3 846 260	support for flange system
3 890 570	LED indicator DA 6000-N with RS485	3 846 290	support with quartz window for flange system
3 890 660	IP 65-front for LED-indicators	3 846 240	tube support with air purge and flange for flange system
3 835 160	air purge unit (keeps dust away from the optics)	3 846 280	ceramic tube 24 mm φ, 600 mm long for flange system
3 834 210	adjustable mounting support	3 890 110	line recorder 1-channel
		... 140	line recorder 4-channels

Service Guarantee: Our technical staff are always available to assist with your application.

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 Temperature Measurement

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