

IMPAC IN 300

Digital pyrometer designed for temperature measurement of non-metallic surfaces between -20 to 600°C (-4 to 1112°F).



The Impac® IN 300 is a stationary pyrometer for non-contact temperature measurement of non-metallic surfaces or painted, coated, or anodized metals. The very small housing dimensions enable the integration of the pyrometer into compact production machines, the two-wire technique enables very easy electrical connection. The solid and robust design of the instrument guarantees high operational safety even in rough industrial environments.

PRODUCT HIGHLIGHTS

- Very small housing dimensions for easy installation, suitable for use in confined spaces
- Two-wire technique for current supply and temperature measurement at the same time
- Stainless steel housing
- Easy electrical and mechanical installation
- Suitable for food industry
- Ambient temperature up to 70°C without cooling

TYPICAL APPLICATIONS

- | | |
|------------|-----------------|
| ■ Plastics | ■ Fluids |
| ■ Rubber | ■ Painted parts |
| ■ Paper | ■ Asphalt |
| ■ Ceramics | ■ Wood |
| ■ Textiles | ■ Glass |
| ■ Food | ■ Coated metals |

AT A GLANCE

Temperature Ranges

0 to 100°C (32 to 212°F)
0 to 200°C (32 to 392°F)
0 to 500°C (32 to 932°F)
0 to 600°C (32 to 1112°F)
-20 to 300°C (-4 to 572°F)

Spectral Range

8 to 14 μm

Measurement Uncertainty

1.5% of measuring range

Repeatability

1% of measuring range

Optics

1 fixed optic: $a = 100 \text{ mm}$

Exposure Time t_{90}

300 ms

Output

4 to 20 mA

TECHNICAL DATA

Measurement, Communication, and Interface Specifications

Temperature Range	0 to 100°C (32 to 212°F)
	0 to 200°C (32 to 392°F)
	0 to 500°C (32 to 932°F)
	0 to 600°C (32 to 1112°F)
	-20 to 300°C (-4 to 572°F)
Spectral Range	8 to 14 μm
Optics	Ge lens
Measurement Uncertainty ($\epsilon = 1$, $t_{90} = 1$ s, $T_{\text{amb.}} = 23^\circ\text{C}$)	1.5% of measuring range in $^\circ\text{C}$
Repeatability ($\epsilon = 1$, $t_{90} = 1$ s, $T_{\text{amb.}} = 23^\circ\text{C}$)	1% of measuring range in $^\circ\text{C}$
Emissivity ϵ	0.4 to 1.0, adjustable
Analog Output	4 to 20 mA, load independent current, temperature linear
Response Time t_{90}	300 ms

Electrical Specifications

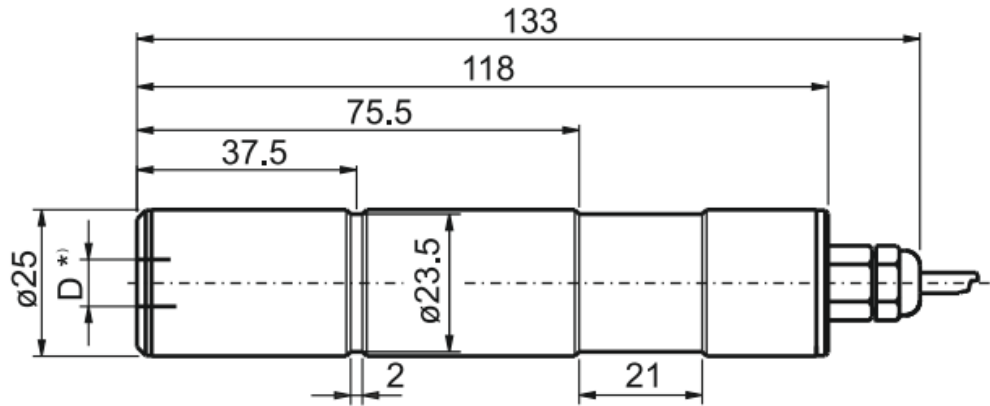
Power Supply	24 VDC $\pm$ 25%, ripple 500 mV
Power Consumption	Max 0.6 W
Max Load	500 Ω @ 24 V power supply
Connection Cable	2 m length, fixed

Environmental Specifications

Protection Class	IP 65 (DIN 40 050)
Ambient Temperature	0 to 70°C (32 to 158°F)
Storage Temperature	-20 to 70°C (-4 to 158°F)
Housing	Stainless steel
Weight	~215 g (~0.474 lb)
CE Label	According to EU directives about electromagnetic immunity

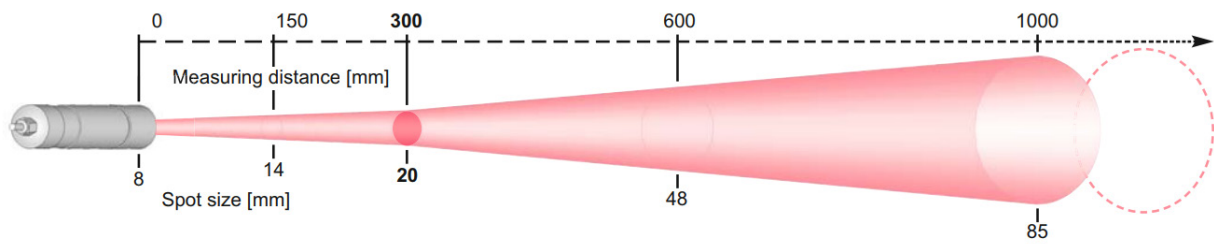
¹ The determination of the technical data of this pyrometer is carried out in accordance with VDI/VDE IEC TS 62942-2, the calibration / adjustment in accordance with VDI/VDE 3511, Part 4.4.

DIMENSIONS



Dimensions in mm

OPTICS



REFERENCE NUMBERS

IN 300

PN	Description
3 856 310	IN 300, 0 to 100°C (32 to 212°F), Optics a = 300
3 856 320	IN 300, 0 to 200°C (32 to 392°F), Optics a = 300
3 856 330	IN 300, -20 to 300°C (-4 to 572°F), Optics a = 300
3 856 350	IN 300, 0 to 500°C (32 to 932°F), Optics a = 300
3 856 360	IN 300, 0 to 600°C (32 to 1112°F), Optics a = 300

Scope of Delivery

Instrument, works certificate, and operation manual.

ACCESSORIES

PN	Description
3 852 290	Power supply NG DC for DIN rail mounting; 100 to 240 VAC ⇒ 24 VDC, 1 A
3 852 550	Power supply NG 2D for DIN rail mounting; 85 to 265 VAC ⇒ 24 VDC, 600 mA with 2 settable limit switches
3 890 640	DA 4000-N, Digital display, with integrated 2-wire power supply
3 890 650	DA 4000: LED-display, 2-wire power supply, 2 limit switches (relay contacts), 230 VAC
3 890 520	DA 6000: LED digital display, digital and analog input, 2 limit switches, maximum value storage, analog output, RS232
3 890 530	DA 6000: like the DA 6000-N, but with analog input and 2 limit switches for the RS485 interface
3 890 610	Galvanic separator for measuring output (carrier rail mounting housing)
3 863 010	Converter IW 5-C (4 to 20 mA in 0 to 20 mA)
3 834 230	Adjustable mounting support
3 846 170	Mounting tube
3 835 180	Air purge unit, stainless steel
3 835 220	Air purge unit, stainless steel, short version
3 835 240	Air purge unit with 90° mirror
3 827 070	Laser targeting light
3 827 100	Twin laser targeting light
3 837 160	Stainless steel water cooling jacket with integrated air purge unit
3 834 210	Adjustable mounting support



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