

# IMPAC IN 300

Digital pyrometer designed for temperature measurement of glass surfaces and quartz glass 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 mm

### Exposure Time $t_{90}$

300 ms

### Output

4 to 20 mA

TECHNICAL DATA

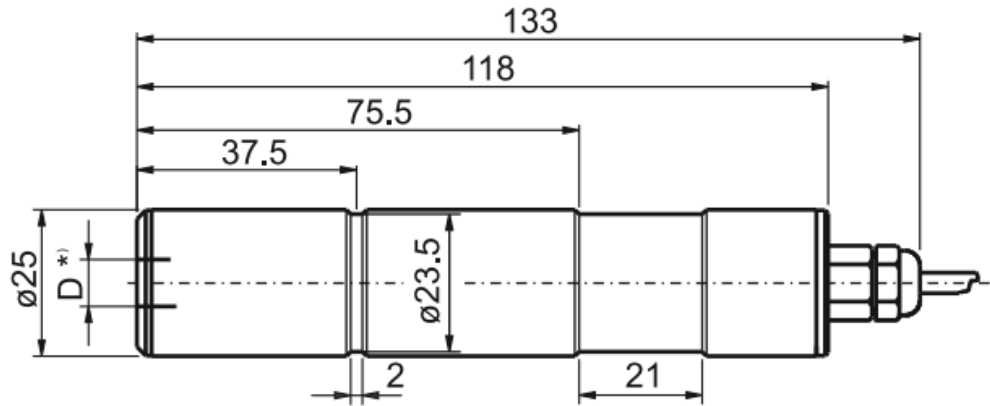
Measurement, Communication, and Interface Specifications	
Temperature Range	0 to 100°C (32 to 212°F)
	0 to 200°C (32 to 392°F)
	0 to 500°C (32 to 932°F)
	0 to 600°C (32 to 1112°F)
	-20 to 300°C (-4 to 572°F)
Spectral Range	8 to 14 μm
Optics	Ge lens
Measurement Uncertainty ( $\epsilon = 1$ , $t_{90} = 1$ s, $T_{amb.} = 23^\circ\text{C}$ )	1.5% of measuring range in °C
Repeatability ( $\epsilon = 1$ , $t_{90} = 1$ s, $T_{amb.} = 23^\circ\text{C}$ )	1% of measuring range in °C
Emissivity $\epsilon$	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 $\Omega$ @ 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

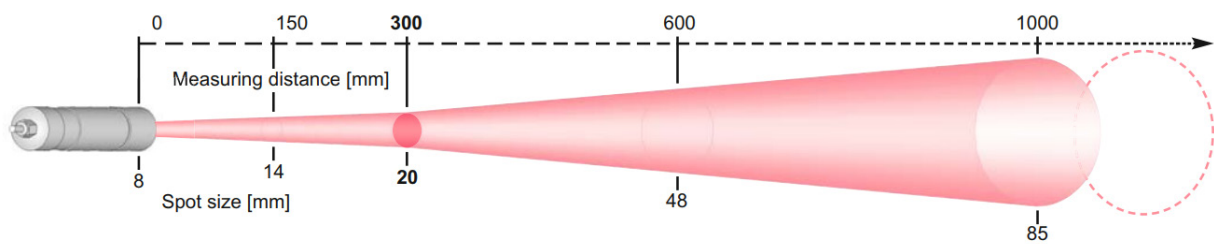
<sup>1</sup> The determination of the technical data of this pyrometer is carried out in accordance with VDI/VDE IEC TS 62942-2, the calibration / adjustment in accordance with VDI/VDE 3511, Part 4.4.

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



For international contact information,  
visit [advancedenergy.com](http://advancedenergy.com).

[sales.support@aei.com](mailto:sales.support@aei.com)  
+1 970 221 0108

PRECISION | POWER | PERFORMANCE

Specifications are subject to change without notice. Not responsible for errors or omissions. ©2020 Advanced Energy Industries, Inc. All rights reserved. Advanced Energy®, Impac®, and AE® are U.S. trademarks of Advanced Energy Industries, Inc.



ENG-IN300-235-02 6.20