



## IS 5/F

Digital flame pyrometers for non-contact temperature measurement of flames between 600°C and 3000°C

The compact, high exact, completely digital infrared converter

- highest accuracy
- wide ranges
- through lens sighting
- analog and digital output
- built-in maximum value storage
- bus control of all parameters about interface



### for:

- shining flames
- flames with varying soot factor

### Applications:

- burner plants
- incinerating plants
- coaldust plants
- oil heated plants

## Technical Data:

Spectral range:	0.70...1.15 $\mu\text{m}$
Accuracy:	< 1500°C: 0.5% of the measured value in °C $\pm$ 2K > 1500°C: 1.0% of the measured value in °C
Resolution:	< 1°C
Temperature dependence:	0.25 K per K deviation of the ambient temperature from 23°C
Repeatability:	0.2% of measured value in °C $\pm$ 2K
Response time:	< 10 ms, adjustable up to 10 s
Soot factor:	n: 0,5 ... 2,5
Parameters:	<i>adjustable at the converter's rear side:</i> soot factor, response time, 0 or 4...20 mA analog output, switch to intensity output online/offline <i>adjustable and readable via interface:</i> soot factor, response time, parametrizing the analog output, temperature subrange, clear time and external clear of the maximum value storage, address, baud rate <i>only readable:</i> measured value, optical thickness, spectral temperature and internal temperature of the instrument
Sighting system:	through lens sighting
Maximum value storage:	single or dual storage, clear by time, external clear contact, interface or automatic „hot object mode“, RS 232
Max load:	$\leq$ 3 VA (inclusive active laser-pilot light)
Interface:	RS 232 or RS 485 addressable, half duplex, baud rate up to 38,4 kBd
Power supply:	24 VDC $\pm$ 25%, stabilised, ripple < 50 mV
Safety class:	I according VDE 0411
Safety system:	IP 65 (according to DIN 40050)
Storage temperature:	-20...70°C
Operating temperature:	0...70°C at housing
Isolation:	power supply and digital and analog output galvanically isolated
CE-Sign:	according to EU directives about electromagnetic immunity
Weight:	550 g

## Basic measurement range:

		Ref.No.:			Ref.No.:
MB 14	600 ... 1400°C	<b>3 853 160</b>	MB 18	700 ... 1800°C	<b>3 853 260</b>
MB 25	800 ... 2500°C	<b>3 853 360</b>	MB 30	1000 ... 3000°C	<b>3 853 460</b>

**Optics:** Spot diameter M [mm] at the measuring distance a [mm] for 90% of the radiation.

Measuring range	MB 14: 600 ... 1400°C	MB 18: 700 ... 1800°C	MB 25: 800 ... 2500°C	MB 30: 1000 ... 3000°C
Apertur D [mm]	8.0	8.0	8.0	5.0
Distance a:				
250 mm	6.0	3.0	1.5	1.5
300 mm	8.0	4.0	2.0	2.0
500 mm	11.0	5.5	2.8	2.8
800 mm	16.0	8.0	4.0	4.0
1300 mm	26.0	13.0	6.5	6.5
2000 mm	40.0	20.0	10.0	10.0

The spot diameter between the above mentioned distances can easily be calculated by interpolation.

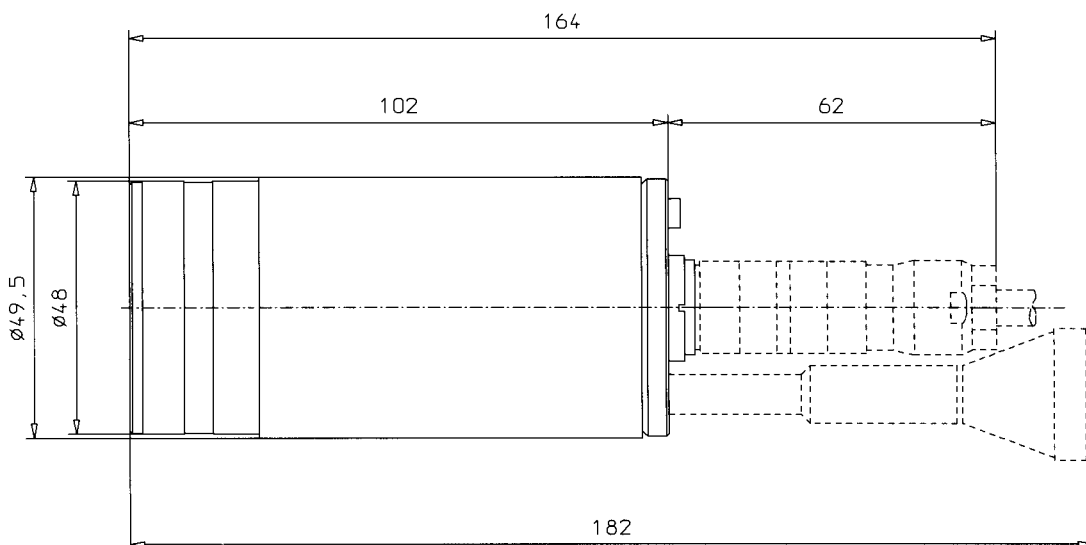
**Options:** RS 485 instead of RS 232: + 010  
 add option number to the unit's ref. no.  
 e.g.  
 IS 5/F with RS 232, MB 18: 3 853 260  
 IS 5/F with RS 485, MB 18: 3 853 270

**Scope of delivery:** Converter and objective,  
 PC-software InfraWin  
 The connecting cable is not included in the scope of delivery and has to be ordered separately with ref no. 3 820 330.

**Details of order:** To proceed your order quickly, please give us the following data:

- Measurement range or ref. no.
- Optics: requested measuring distance (e.g. "measurement distance 250 mm")
- Option RS 485 or RS 232
- Connection cable (3 820 330)

**Dimensions:**



## Accessories:

3 820 330	Connection cable 5m
3 852 140	Power supply NG 0 in a standard carrier rail housing
3 834 210	Adjustable mounting support
3 890 640	LED-display DA 4000-N
3 890 650	LED-display DA 4000 with 2 limit switches
3 890 660	IP 65-front cover for DA 4000-N, DA 4000
3 835 160	Air purge unit
3 837 080	Cooling jacket for ambient temperature up to 170 °C
3 835 080	Mounting angle for cooling jacket 3 837 080
3 835 070	Mounting flange for cooling jacket 3 837 080
3 835 100	Coupling flange for cooling jacket 3 837 080
3 835 090	Mounting sleeve for cooling jacket 3 837 080
3 846 100	Installation tube
3 846 120	Flange tube

Please see also separate drawing 3 837 031 for mechanical accessories.

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

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IMPAC Infrared GmbH  
Temperature Measurement

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The logo for IMPAC, featuring the word "impac" in a lowercase, rounded, green font. The letters are stylized with thick strokes. A registered trademark symbol (®) is located at the top right of the letter 'c'.

Specifications are subject to change without notice