PYROSPOT DT 42L

DIAS Infrared Systems

Pyrometer for industrial application

Overview Pyrometer with emissivity adjustment

Features

- For temperature measurements between -40 °C and 1000 °C
- Digital 2-wire pyrometers
- temperature linear output 4 to 20 mA

- Spectral range 8 μm to 14 μm
- Adjustment of emissivity at the backside of the device
- Stainless steel housing

Description and applications

The digital pyrometers PYROSPOT DT 42L are especially designed for industrial purpose. The devices are suitable for temperature measurement from -40 °C to 1000 °C of many different nonmetallic or coated metallic surfaces.

The solid body in stainless steel housing allows usage even under rough environmental conditions. With a fast response time of only 100 ms (t95) these pyrometers are also suitable for fast measuring processes. Several fixed optic types realise measuring field diameters from 5.5 mm.

Emissivity can be adjusted directly at the device. The temperature linear standard output signal of 4 to 20 mA allows easy implementation in existing measuring and controlling systems.

The optional laser aiming light allows exact alignment to the measuring object.

Typical application areas:

- Nonmetals
- Coated metals
- Paper and packaging
- Building materials
- Food industry
- Plastics

Accessories 1

- Connecting cable (several lengths)
- Power suuply PSU 15 (24 V DC, 0,6 A)
- Digital display DD 200/210 (for installation frame, LED display)
- Mounting angle, fixed or adjustable
- Ball and socket mounting
- Air purge unit
- Sighting tube (for air purge unit, several lengths)
- Cooling jacket (stainless steel, integrated air purge unit)
- Vacuum flange (KF 16 with ZnSe window)
- Mirror 90° (incl. air purge unit)
- Window slide
- Protection window
- Emissivity enhancer
- Laser aiming light

¹ More accessories on request.



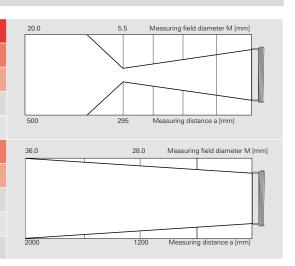
PYROSPOT DT 42L



Pyrometer for industrial application

Technical data					
Туре	DT 42L				
Temperature range	-40 °C to 1000 °C				
Sub temperature range	adjustable within temperature range, minimum span 50 °C				
Spectral range	8 μm to 14 μm				
Optics (Order numbers)	300 (4428242001), 2000 (4428246001)				
Measurement uncertainty 1	1.0 % of measured value in °C or 1 K ²				
Reproducibility 1	0.5 % of measured value in °C or 0.5 K ²				
NETD ³	< 0.1 K ⁴				
Response time (t95)	100 ms, optional adjustable up to 100 s (factory-provided)				
Emissivity	0.20 to 1.00, adjustable (factory setting: 1.00)				
Data storage	maximum/minimum value stortage, optionally adjustable ex works				
Output	4 to 20 mA, temperature linear, max. burden: 500 Ω at 24 V				
Aiming	laser aiming light (optional accessories)				
Power supply	24 V DC \pm 25 %, residual ripple 500 mV, for laser aiming light: 7 to 30 V DC, $<$ 200 mW				
Power consumption	max. 0.6 W (without laser aiming light)				
Operating temperature	0 °C to 70 °C				
Storage temperature	−20 °C to 70 °C				
Weight	appr. 450 g				
Dimensions	thread M40 \times 1,5, length 125 mm				
Housing	stainless steel with plug connector				
Safety class	IP 65 (according to DIN EN 60529 and DIN 40050)				
CE symbol	according to EU regulations				
Scope of delivery	PYROSPOT DT 42L with optics, manual, inspection sheet, two mounting screw nuts, connecting cable 5 m (5 pin), Other cable lengths on request.				
¹ Specifications for black body radia	ator, $T_u = 23$ °C, $\varepsilon = 1$, t95 = 1 s. ² Whichever is higher value. ³ Noise equivalent temperature difference. ⁴ $T_u = 23$ °C, $T_{Object DT 42L} = 100$ °C.				

Fixed optics 300 and 2000									
Optics 300 (sharp point at a = 295 mm), aperture \emptyset D = 15 mm									
Measuring distance a [mm]		100	200	260	295	400	500		
	Measuring field diameter M [mm]								
DT 42L (-40 °C to 1000 °C)	15.0	11.8	8.6	6.6	5.5	13.0	20.0		
Optik 2000 (sharp point at a = 2000 mm), aperture \varnothing D = 15 mm									
Measuring distance a [mm]		800	1200	1800	2000	3000	4000		
	Measuring field diameter M [mm]								
DT 42L (-40 °C to 1000 °C)	15.0	24.0	28.0	34.0	36.0	57.0	80.0		





We are certified for many years according to ISO 9001

Phone: +49 351 896 74-0 Fax: +49 351 896 74-99 E-Mail: info@dias-infrared.de Internet: www.dias-infrared.com DIAS Infrared GmbH Pforzheimer Straße 21 01189 Dresden Germany