

PYROSPOT DSF 30NG/DSF 34NG

Pyrometer with fibre cable for glass industry



- **Digital pyrometer for 600 °C to 1800 °C**
- **Especially for glass industry**
- **High accuracy**
- **Integrated special air purge for optical head**
- **Extremely robust**

The digital pyrometers PYROSPOT DSF 30NG and DSF 34NG are especially designed for applications in glass industry. Temperature measurement from 600 °C to 1800 °C in glass tank, working end, forehearth and feeder is easily realisable.

The solid construction in robust cast housing with special mono fibre optics cable (up to 30 m) allows usage even under rough environmental conditions and ambient temperatures of up to 250 °C.

Several air purge units with inconel tubes of different lengths are available for the special optical head and can be mounted together. The lens can be easily cleaned or replaced.

The temperature linear standard output signal (DSF 30NG: 4 to 20 mA, DSF 34 NG: 0/4 to 20 mA) allows easy implementation in existing measuring and controlling systems.

The device is equipped with integrated, galvanically isolated interface (DSF 30NG: USB, DSF 34NG: RS485). Due to direct PC connection, parameters like emissivity, sub range and response time can be easily adjusted by using the comfortable parameterizing and evaluation software PYROSOFT Spot.

Typical application areas:

- Glass temperature measurement
 - in forehearth
 - in feeder
 - in glass tank
- Temperature measurement of brickworks
 - tank side walls
 - in regenerator
 - tank roof

Technical Data and Accessories

Technical data		
Type	DSF 30NG	DSF 34NG
Temperature range	600 °C to 1800 °C	600 °C to 1800 °C
Sub temperature range	adjustable within temperature range, minimum span 51 °C	
Spectral range	0.8 µm to 1.1 µm	0.8 µm to 1.1 µm
Optics	FOH-G, aperture diameter D = 11 mm	
Distance ratio	> 100 : 1	
Measurement uncertainty	0.3 % of meas. value ($T_U = 23\text{ °C}$, $\varepsilon = 1$, $t_{95} = 1\text{ s}$)	
Reproducibility	0.1 % of meas. value ($T_U = 23\text{ °C}$, $\varepsilon = 1$, $t_{95} = 1\text{ s}$)	
NETD ¹	0.1 °C ($T_U = 23\text{ °C}$, $\varepsilon = 1$, $t_{95} = 1\text{ s}$)	
Response time (t95)	10 ms, adjustable up to 10 s, default 200 ms	
Emissivity	0.05 bis 1.00, adjustable on the device	0.05 bis 1.00, adjustable via software
Output	4 to 20 mA, temperature linear, max. burden: 700 Ω at 24 V	0/4 to 20 mA ² , temperature linear, max. burden: 500 Ω
Interface	galvanically isolated USB interface	RS485, half duplex, galvanically isolated
Aiming	none	
Software	PYROSOFT Spot for Windows®	
Parameters	adjustable via interface and software (emissivity, response time, temperature unit °C or °F, sub range, test signal)	
Power supply	24 V DC ± 25 %	24 V DC ± 25 %
Power consumption	max. 0.6 W	max. 1.5 W
Operating temperature	0 °C to 70 °C (pyrometer), up to 250 °C (fibre cable and optical head)	
Storage temperature	-20 °C to 70 °C	
Weight	approx. 600 g (without fibre cable and optical head)	
Dimensions	approx. 110 mm x 70 mm x 30 mm	
Housing	cast housing	
Safety class	IP 65 (DIN 40 050)	
CE symbol	according to EU regulations (EN 50 011)	
Scope of delivery	PYROSPOT DSF 30NG or DSF 34NG, manual, inspection sheet, software PYROSOFT Spot for Windows® (without connecting cable, fibre cable and optical head, please order separately)	

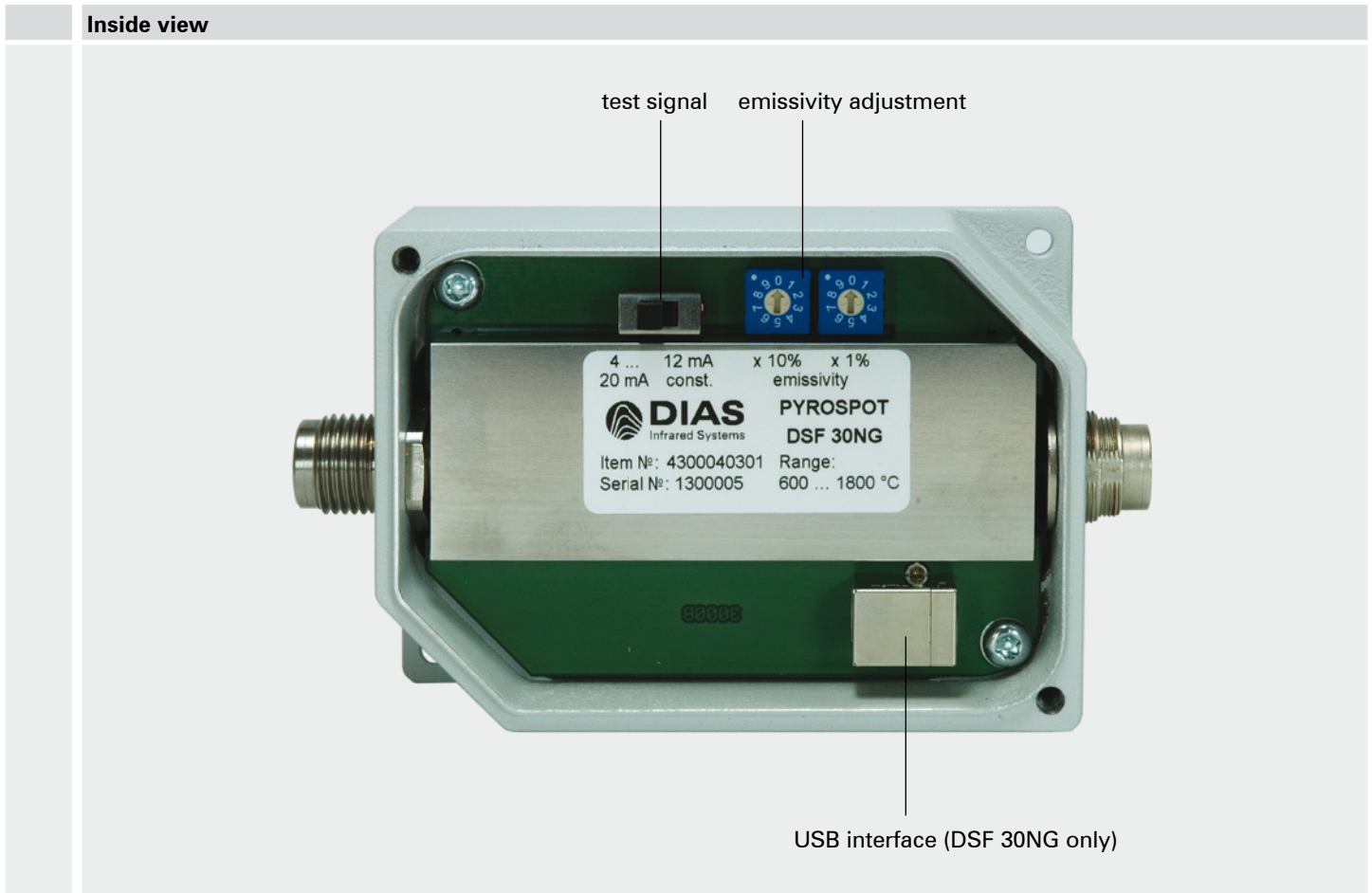
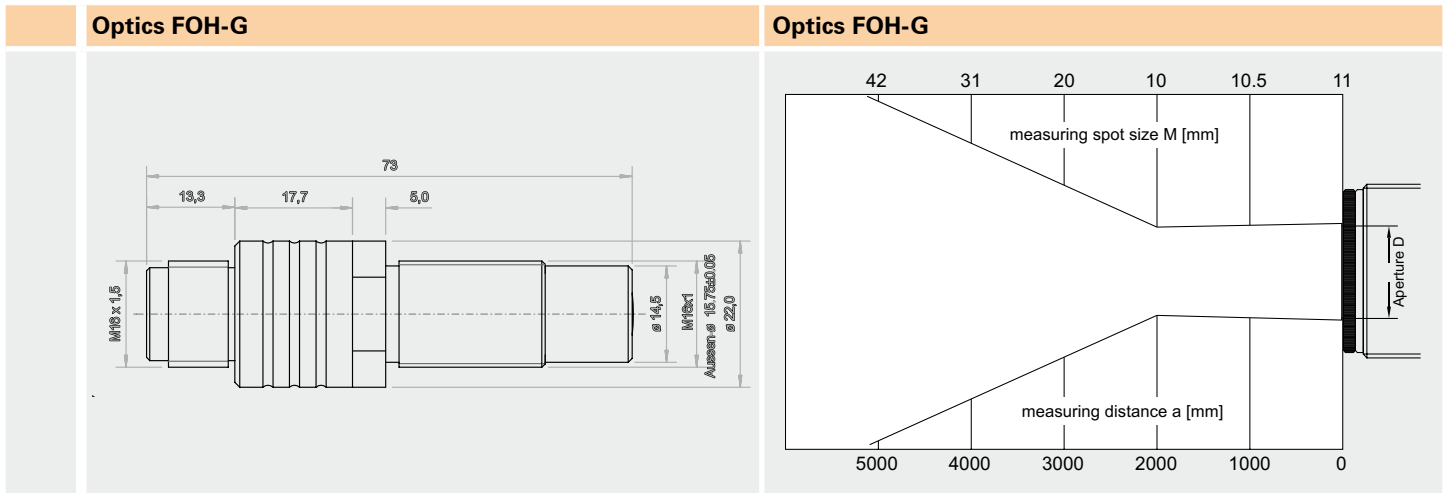
¹ Noise equivalent temperature difference. ² Adjustable via software.

Accessories, mechanical, electrical and optical ¹	
Connecting cable 3-pin	length 5 m, 10 m, 15 m, 20 m, 25 m or 30 m (for DSF 30NG)
Connecting cable 12-pin	length 5 m, 10 m, 15 m, 20 m, 25 m or 30 m (for DSF 34NG)
USB-connecting cable	length 1.8 m (for DSF 30NG)
Fibre cable	length 5 m, 6 m, 7.5 m, 10 m, 15 m, 20 m or 30 m, special stainless steel clad, anti-swiveling
Power supply	24 V DC/0.6 A
Air purge unit for FOH-G	without tube, incl. mounting angle
Air purge unit for FOH-G	with inconel tube, 140 mm, incl. mounting angle
Air purge unit for FOH-G	with inconel tube, 600 mm, incl. mounting angle
Air purge unit for FOH-G	with ceramic tube, 300 mm, open, incl. mounting angle
Air purge unit for FOH-G	with ceramic tube, 600 mm, open, incl. mounting angle

¹ Other accessories on request.

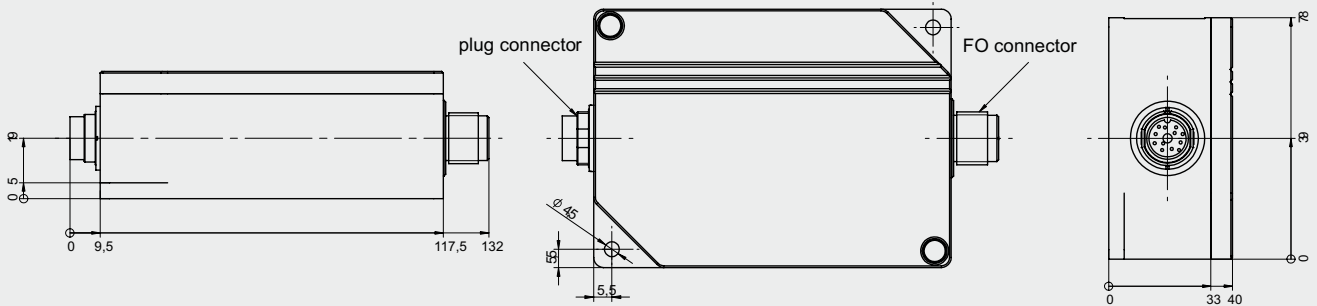
Optics Type FOH-G

Optics FOH-G							
Measuring distance a in mm	0	500	1000	2000	3000	4000	5000
Measuring spot size M in mm							
DSF 30NG (600 °C to 1800 °C)	11	10.7	10.5	10	20	31	42
DSF 34NG (600 °C to 1800 °C)	11	10.7	10.5	10	20	31	42



Dimensions, Accessories and Applications

Dimensions pyrometer

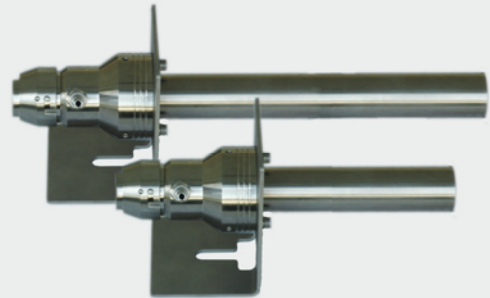


Accessories

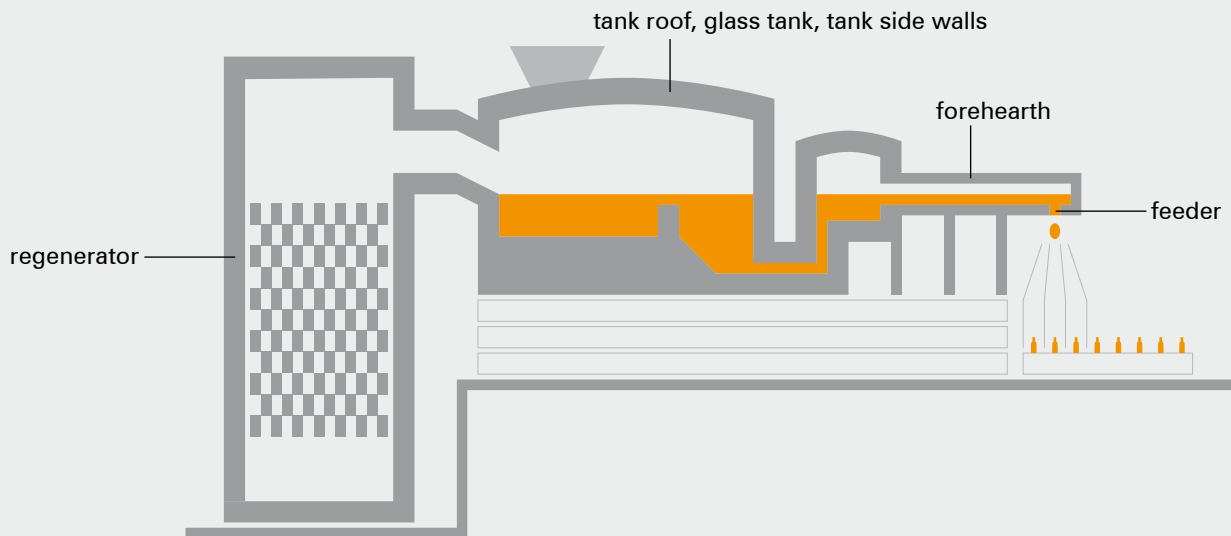
Mounting angle with air purge unit



Mounting angle with air purge unit and inconel tube



Typical applications of the pyrometers



Technical details are subject to change without notice. April 2009.

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