



NON-CONTACT INFRARED TEMPERATURE SENSOR TF-2000

DIGITAL INFRARED SENSOR FOR TEMPERATURE MEASUREMENT BETWEEN- 32°C UND + 900 °C

with 4-20 mA analog output and interface output for PC connection with USB

Built-in air purge unit to keep clean the lens in dusty environments

Easy installation and connecting

Stainless steel housing with PG 11 thread for easy mounting

Very small housing dimensions, suited for use in confined spaces

Up to 70°C operating temperature without cooling

The small housing dimensions enable the integration of the instruments in compact production machines; the solid and robust design of the instrument guarantees reliability even in rough industrial environments.

With the built-in air purge the lens can be protected from contamination with dust and moisture. This enables the instrument to be adapted to various measuring tasks.

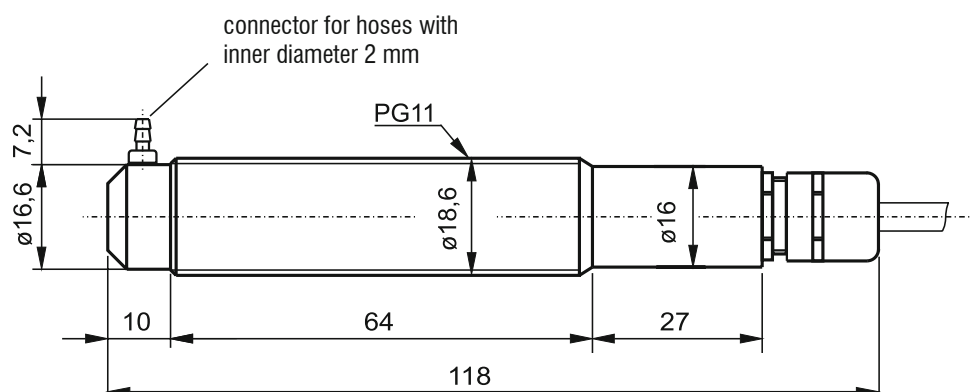


TYPICAL APPLICATIONS / MEASUREMENTS ON

- Plastics
- Textile
- Asphalt
- Rubber
- Paint
- Glass
- Wood
- Varnish
- Ceramic
- Paper
- Liquids
- Food
- Painted metals
- Coated metals
- Anodized metals

STANDARD DELIVERY

- TF with 2m cable
- inspection sheet
- User Guide



TECHNICAL DATA

MEASURING RANGES	-32 ... 900°C
SUB RANGE	any range adjustable within the temperature range, minimum span 51°C
SPECTRAL RANGE	8 ... 14 μm
INTERNAL SIGNAL PROCESSING	Digital
POWER SUPPLY	15 ... 30 V DC
OUTPUT	Analog output 4 ... 20 mA, digital output for connecting an USB adapter
LOAD	max. 375 Ω at 15 V ... max. 1125 Ω at 30 V
RESOLUTION	0,1°C on interface, <0,025% of temperature range at the analog output
EMISSIONITY ϵ	10,0 ... 100,0% (adjustable via interface)
TRANSMISSIONSGRAD T	10,0 ... 100,0% (adjustable via interface)
EXPOSURE TIME t_{90}	95 ms (adjustable to 0,5 ... 120s)
INTERFACE PARAMETERS	Temperature display in °C or °F, Emissionity ϵ , exposure time t_{90} , settings of the max. / minimal value storage, temperature sub range, ambient temperature compensation, adresse, baud rate
MAX./MINI. VALUE STORAGE	Clear times t_{clear} = OFF; 0,1 ... 25s or automatically with the next measuring object
UNCERTAINTY	1% of measuring value + 1°C ¹⁾ ($\epsilon = 1$, $T_{\text{amb.}} = 15 \dots 40^\circ\text{C}$) 1,4% of measuring value + 1°C ¹⁾ ($\epsilon = 1$, $T_{\text{amb.}} = 0 \dots 15^\circ\text{C}$ bzw. $40 \dots 70^\circ\text{C}$)
REPATABILITY	<0,3% of measuring value ($\epsilon = 1$)
NOICE (NETD, $\sigma = 1$)	<0,2°C ($\epsilon = 1$, $t_{90} = \text{min}$, $T_{\text{amb.}} = 23^\circ\text{C}$)
AMBIENT TEMPERATURE	0 ... 70°C
STORAGE TEMPERATURE	-20 ... 70°C
RELATIVE HUMIDITY	no condensing conditions
HOUSING	Stainless steel
WEIGHT	150 g
MOUNTING POSITION	any
CONNECTION CABLE	2 m
AIR PURGE UNIT	for connecting hose with 2mm inner diameter
PROTECTION CLASS	IP65 (DIN 40 050)
CE-LABEL	According to EU directives about electromagnetic immunity

1) The instrument must be at a constant ambient temperature for a minimum of 15 minutes and has to be connected to the power supply.

The optics is fixed to a distance of 50 mm, i.e. at this distance the optic achieves its smallest spot size in relation to the measuring distance. The spot size will enlarged in any other distance (shorter or longer). Please note that the measuring object must be at least as big as the spot size.

