

Infrared - measuring transducer IR-CT 20

non-contact temperature measuring from -50 to 975°C



- one of the smallest infrared sensor heads with 20:1 optical resolution
- rugged and applicable without cooling up to 180°C ambient
- adjustable emission factor
- freely scaleable analogue output 0(4)-20mA, 0-10V, thermocouple type J or K
- illuminated liquid crystal display
- large range of supply voltage

Precision infrared transducer

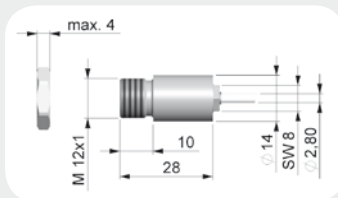
IR-CT 20 -50 ... +975°C, optic 20:1

Scope of supply: electronics-box with LCD, stainless steel sensor head (M12) incl. screw nut, 1m high temperature sensor head cable, manual

Specification

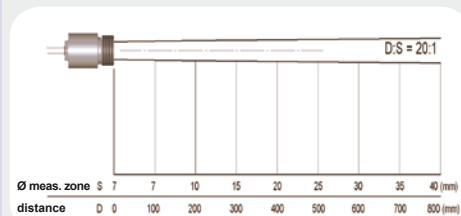
Measuring range:	-50 ... +975°C freely scaleable via programming keys
Spectral sensitivity:	8 - 14 µm
Optic resolution:	20:1 (precision glass optics)
System accuracy:	± 1% or ±1°C (higher value applicable)
Repeat accuracy:	±0,5% or ±0,5°C (higher value applicable)
Nominal temperature:	23 ± 5°C
Temperature coefficient:	0,05% or 0,05°C/K (higher value applicable)
Temperature resolution:	0,1°C
Response time:	150 ms (95%)
Emission-, transmission factor:	adjustable from 0.100 to 1.100
Output signals:	0-20mA, 4-20mA, 0-5V, 0-10V thermocouple type J or K
Output impedance:	mA max. 500Ohm (at 8-36VDC) V min. 100 kOhm load resistance
Thermo couple:	20 Ohm
Supply voltage:	8 - 36 VDC
Power consumption:	max. 100 mA
Cable length:	1m (standard), 3m, 15m

IP rating:	IP65 (NEMA-4)
Ambient temperature:	
Measuring head:	-20 ... +180°C
Electronic box:	0 ... +65°C
Storage temperature:	
Measuring head:	-40 ... +180°C
Electronic box:	-40 ... +85°C
Relative humidity:	10 - 95%RH, non condensing
Vibration (meas. head):	
IEC 68-2-6:	3G, 11-200 Hz, each axis
Shock (meas. head):	
IEC 68-2-27:	50G, 11ms, each axis
Weight (meas. head / elec. box):	40g / 420g
Dimensions electronic box:	120 x 70 x 30mm

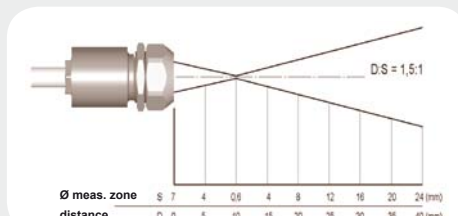


Further special design types (e.g. for metal processing, or with other optics) up on request

Optic resolution (standard)



Optic resolution (with option CF)



Option

- **CB3** 3m sensor head cable
- **CB15** 15m sensor head cable
- **CF** auxiliary lens for measuring of smallest objects
measuring zone dia 0,6mm @10mm, in long distance 1,5:1

Calibration

- **WPS** calibration certificate
23°C, 110°C, 510°C

Mechanical accessories

- **MW** mounting bracket, fixed
- **MB** mounting bolts with M12x1 thread
- **MG** mounting fork, adjustable in 2 axis with M12x1 mount
- **FVS** standard blow clear header
- **FVL** laminar blow clear header

Temperature Switch



TF1 ...

General

A totally sealed bimetal thermostat opens or closes when the pre-fixed switch value is over-rated or undercut.

Sensor has to be fully wetted. Switch value is indicated for increasing temperature 2K/min.

TF1 thermostats just monitor the temperature. A regulation is due to the huge hysteresis not possible.

- optional installation
- compact dimensions
- n.o. or n.c. position
- metering substances: water, gas/air, oil

Specifications

Switch value: (declared when placing order)

40°C	Order Nr.: TF1 40
50°C	Order Nr.: TF1 50
60°C	Order Nr.: TF1 60
70°C	Order Nr.: TF1 70
80°C	Order Nr.: TF1 80
90°C	Order Nr.: TF1 90
100°C	Order Nr.: TF1 100
110°C	Order Nr.: TF1 110
120°C	Order Nr.: TF1 120
130°C	Order Nr.: TF1 130

Hysteresis: 10 ... 20 K

Accuracy: ±10 K

Media Temp.: max. switch value +50°C

Connection: G1/2A male thread socket brass

Pressure (PN): 100 bar

Electr. data: NO (NC upon request)

250 V AC, 10 A

plug EN 175301-803/A

Weight: 120 g

Protection class: IP65

