

IR temperature sensor with sensor and signal box



- Advantages:**
- One of the smallest infrared sensors worldwide with 20:1 optical resolution (optional)
 - Robust and used without cooling to 180° C ambient temperature
 - Separate electronics with easily accessible programming keys and backlite CD display
 - Selectable analog output: 0/4-20 mA, 0-10 V, thermocouple type K or J
 - USB, RS485, RS232 interface and two potential free relay outputs optional
 - Installation of max. 32 sensors in a network (with RS485)

Item-No: 5202116

General parameters	
Protection class	IP 65 (NEMA-4)
Ambient temperature	Sensor: -20°C to 180°C (130°C at 2:1)
	Electronic: 0°C to 65°C
Storage temperature	Sensor: -40°C to 180°C (130°C at 2:1)
	Elektronik: 0°C to 85°C
Relative humidity	10 – 95%, noncondensing
Vibration (sensor)	IEC 68-2-6: 3 G, 11 – 200 Hz, each axis
Shock (sensor)	IEC 68-2-27: 50 G, 11 ms, each axis
Gewicht	Sensor: 40g
	Electronic: 420g
Electrical parameters	
Analog outputs	Channel 1: 0/4 – 20 mA, 0 – 10 V, Thermocouple type J and type K
	Channel 2: sensor temperature (-20 to 180°C at 0 – 5 V or 0 – 10 V), Alarm output
optional	Relay 2x60VDC/42 VAC _{eff.} , 0,4 A ; potential free
Digital outputs (optional)	USB, RS232, RS485 (optional)
Output impedance	mA max. 500 Ω (at 8 – 36 VDC)
	mV min. 100 kΩ Load resistance
	Thermocouple 20 Ω
Inputs	Programmable functional inputs for external emissivity setting, background radiation compensation, trigger (reset of hold function)
Cable length	1 mtr (standard), 3 mtr, 15 mtr
Power consumption	max. 100 mA
Power supply	8 – 36 VDC

Measurement parameters	
Temperature range (scalable via programming keys or software)	-40°C to 900°C (20:1)
	-40°C to 600°C (15:1)
	-40°C to 600°C (2:1)
Spectral range	8 – 14 μm
Optical resolution	20:1 (Precision class optics)
	15:1 (Precision class optics), (standard)
	2:1 (Precision class optics)
CF-Vorsatzlens (optional)	0,6 mm @ 10 mm (with 20:1)
	0,8 mm @ 10 mm (with 15:1)
	2,5 mm @ 23 mm (with 2:1)
System accuracy (at ambient temperature: 23 +/- 5 °C)	+/- 1 % or +/- 1°C ¹
Reproducibility (at ambient temperature r: 23 +/- 5°C)	+/- 0,5 % or +/- 0,5°C ¹
Temperature coefficient	0,05 % or 0,05°C/K ^{1,2}
Temperature resolution	0,1°C
Response	150 ms (95 %)
Emissivity/Gain (einstellbar über Programmirtasten oder Software)	0,100 – 1,100
Transmissionsgrad (scalable via programming keys or software)	0,100 – 1,100
Signal processing (scalable via programming keys or software)	Maximum, minimum hold, average, extended hold function with threshold and hysteresis
Calibration certificate	optional

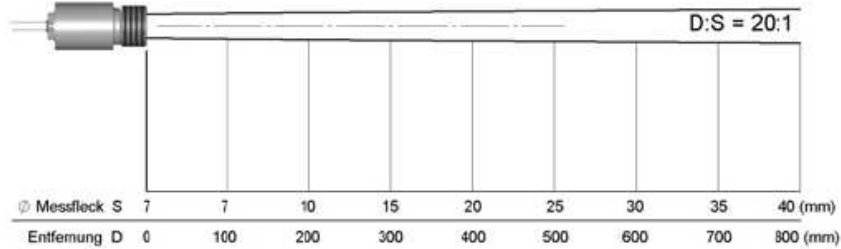
¹ whichever is greater

² on sensor temperature 0°C to 180°C (130°C on 2:1)

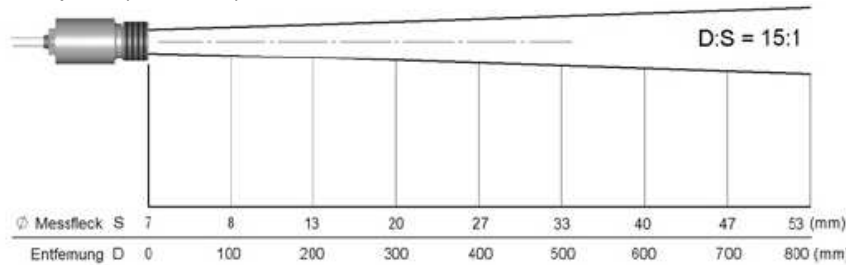
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Optical parameters

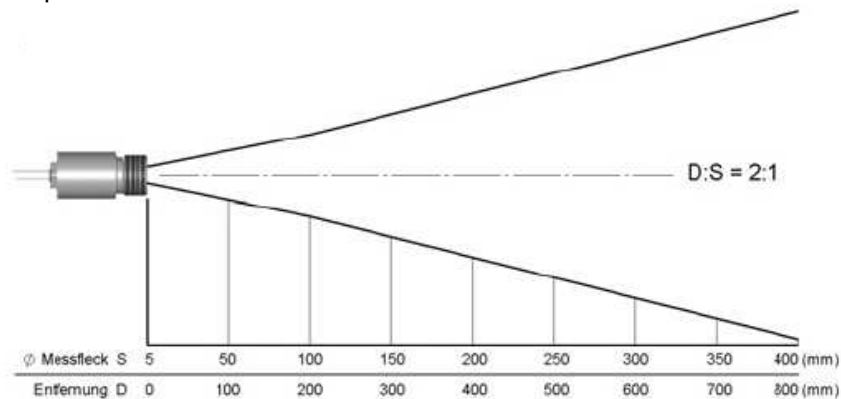
20:1 Optics



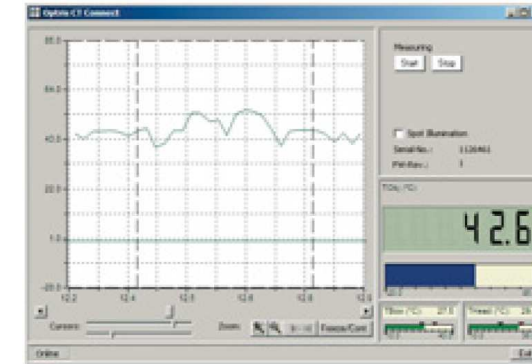
15:1 Optics (standard)



2:1 Optics

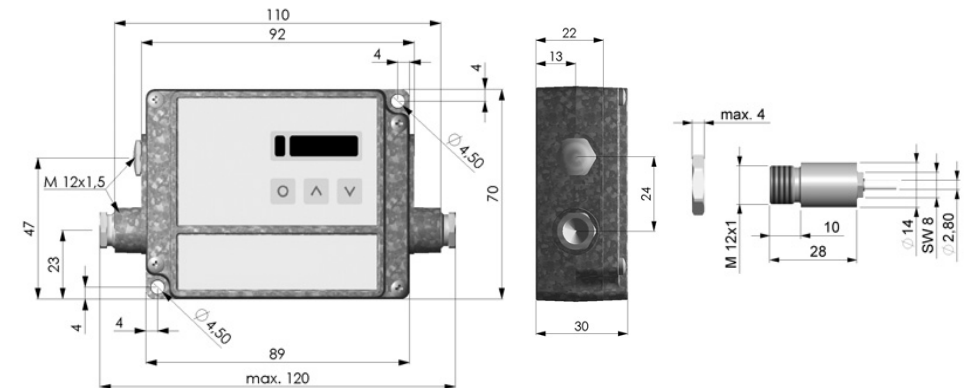


Software



- Simple setup and remote monitoring of the sensor
- Automatic data logging for analysis and documentation
- Graphical representation of temperature gradients
- Recruitment of advanced signal processing functions
- Programming of the analog and digital input for external emissivity setting and ambient temperature compensation
- Parameter setting of alarm output for sensor and object temperature
- Address up to 32 sensors in a network

Dimensions



IR temperature sensor with sensor and signal box

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