

Edge Core -50 to 900°C

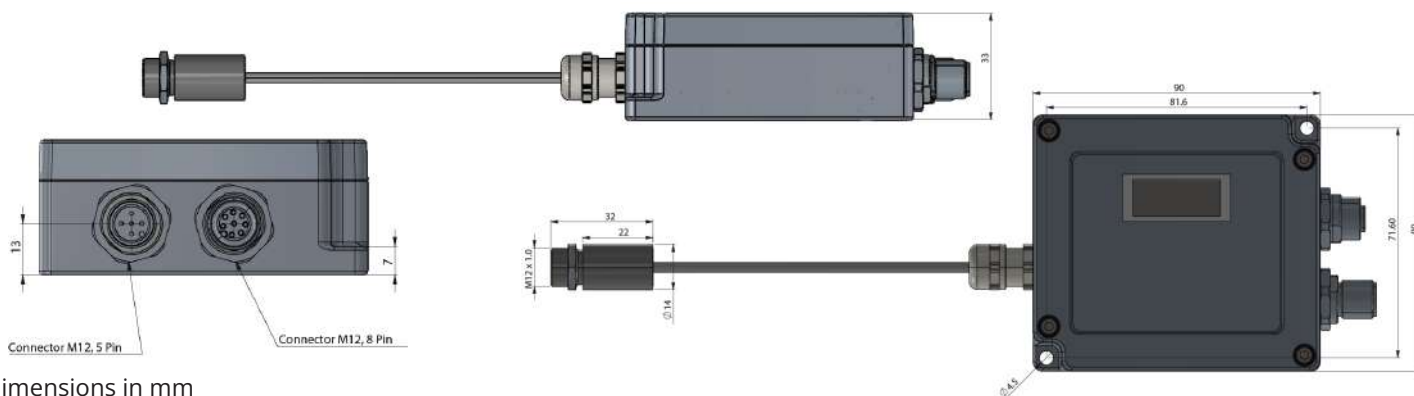
*High-performance
industrial pyrometer*



Features

- An ultra-compact infrared sensor head with a high 22:1 optical resolution.
- Built for harsh environments, sensor head operates at ambient temperatures up to 180 °C without cooling.
- Robust pyrometer consisting of stainless steel sensor head and controller in die-cast aluminum housing
- Can be operated without a PC via keys and two line display
- Powerful two alarm relays for controlling external devices
- TTL (UART) and RS485 interface on board for digital communication
- IP-rated housing for dust and moisture protection.
- Analog output 4...20mA, 0...20mA, 0...10V/0...5V, user selectable

Pyrometer Drawing



Spot Sizes

Standard Focus (in mm)

SF02	2:1	7	53.8	102.5	151.3	200	251.3	302.5	353.8	405		
Distance		0	100	200	300	400	500	600	700	800		
SF15	15:1	7	11.5	14	18	23.5	29.5	35.5				
Distance		0	100	200	300	400	500	600				
SF22	22:1	7	14	12	18.5	23	28	33	36.5	38.5	40	41.5
Distance		0	60	110	210	310	410	510	610	710	810	910

Close Focus (when using the screwable CF lens, in mm)

CF02	2:1	6.5	3.9	2.8	2.5	4.8	6.4	8
Distance		0	10	20	25	30	35	40
CF15	15:1	6.5	3.7	0.8	4.1	5	6.8	8.8
CF22	22:1	6.5	3.4	0.6	4	4.5	6.2	8
Distance		0	5	10	15	20	25	30

 = smallest spot size / focal point (mm)
The ratio D:S (example 2:1, see table) describes the ratio Distance (distance from the front edge of the sensor to the measuring object) to Spot size (measurement spot size)

Technical Specifications

Model	Core-F02	Core-F15	Core-F22
Optical resolution	2:1	15:1	22:1
Measuring range ^[1]	-50 to 600°C		-50 to 900°C (1000°C)
Spectral range	8 to 14 µm		
System accuracy ^[2]	±1.0 % or ±1.0 °C		
Repeatability ^[2]	±0.5 % or ±0.5 °C		
Temperature resolution (NETD) ^[3]	50 mK		
Response time ^[4]	120 ms		
Emissivity	0.100 to 1.100		
Transmittance	0.100 to 1.100		
Signal processing	Intelligent averaging, Min/Max, Hold function with threshold/hysteresis (adjustable via software and buttons)		
Supply voltage	5 ... 36 VDC		
Max. current consumption	< 150 mA		
Digital interface	Rs485 / USB (3.3V-LVTTL)		
Analog output ^[5]	0 (4) ... 20 mA / 0 ... 5 V / 0 ... 10 V (freely scalable within the measuring range)		
Switching output	2x relays for alarm (min/max); 400 mA (short-circuit proof)		
Connection	Sensor	Integrated cable, standard length 3 m, optional 1 m, 8 m or 15 m possible	
	Controller ^[6]	Supply/digital and relay output: 8-pin M12 plug connector (socket) Supply/analog output: 5-pin M12 plug connector (plug)	

Model			Core-F02	Core-F15	Core-F22
Mounting		Sensor	Direct fastening via integrated M12x1 thread or fastening using the hexagon nut included in the scope of delivery		
Temp. range	Sensor	Storage	-40 ... 85°C		
		Operation	-20 ... 120°C	-20 ... 180°C	
	Controller	Storage	-40 ... 85°C		
		Operation	-20 ... 80°C		
Humidity			10 % RH ... 95% RH (non-condensing)		
Shock (DIN EN 60068-2-27)			50g, 11 ms, each axis		
Vibration (DIN EN 60068-2-6)			3g / 11 ... 200 Hz, each axis		
Protection class (DIN EN 60529)	Sensor	IP65			
	Controller	IP65			
Material	Sensor	Stainless steel (1.4404)			
	Controller	Aluminum die-cast			
Weight	Sensor	approx. 20 g			
	Controller	approx. 280 g			
Control and indicator elements ^[7]			LCD display & membrane keypad for button operation; optional operation via InfraSoft		

- [1]** Measuring range can optionally be extended to 1000 °C (only F22)
[2] At ambient temperature of 24±2 °C; whichever is greater (ε=1)
[3] With a time constant of 200 ms and an object temperature of 200 °C
[4] 0 - 90 % energy; adjustable via software
[5] Depends on supply voltage
[6] The supply via the optional USB cable (VCC = 5 V) and the supply up to 36 V can be connected at the same time; the higher voltage supply is used in each case.
 When operating without a USB cable, the power supply up to 36 V can be connected to one of the two M12s.
[7] Access with InfraSoft requires USB adapter (see accessories)

Optional Accessories

TM-AP8 Air purge collar with 8 mm hose connection 	TM-APL Air purge collar laminar 	TM-AB-UC Mounting bracket, adjustable in 2 axes 
TM-MF-UC Mounting Fork 	TM-AP Air purge collar 	TM-MB-UC Mounting Bolt with M12x1 thread and Nut 
TM-USB A 1. RS485 to USB Converter 2. TTL to USB Converter 	TM-DC8/1/5-M12 Digital signal cable, 1 m & 5 m, M12 plug 	TM-PC5/5-M12 Analog signal and supply cable 5 m 