

PYR Series - Introduction



- **Wide Temperature range from 600°C to 1800°C**
- **Loop-powered sensor with 4-20mA output**
- **Simple installation and operation**
- **High accuracy**
- **Robust air purge design for maintenance-free operation**
- **Digital RS485 communication**

Digital pyrometer MTW-PYR30 is especially designed for industrial applications. This pyrometer is ideal for temperature measurement in tanks and feeders.

The robust cast housing with flanged tabs allows for ease of installation and can be located up to 98ft (30m) from the optical lens assembly. The special mono fiber optic cable is rated for ambient temperatures of up to 482°F (250°C).

A rugged stainless steel air purge with mounting bracket allows for operation in dirty environments. The optical lens can be easily cleaned or replaced.

The MTW-PYR30 produces a linear 4-20mA output signal that can be easily incorporated into existing measurement and control systems.

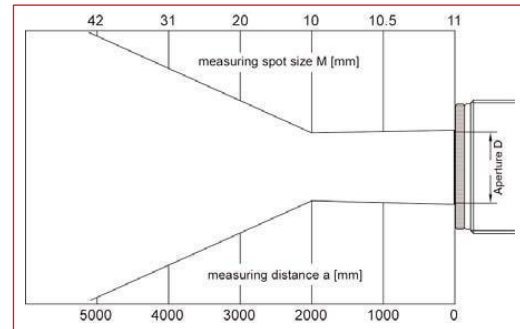
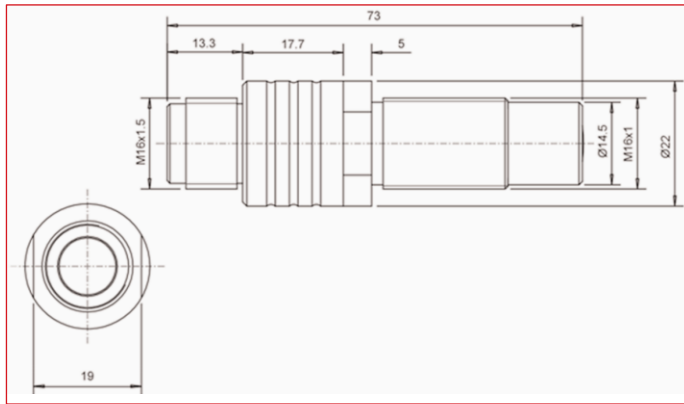
The MTW-PYR30 features an RS485 interface connection. IR sensor parameters such as emissivity, sub range, response time and peak picking can be easily adjusted by software.

PYR Series – Technical Specifications

TYPE	MTW-PYR30
Temperature range	600°C to 1800°C
Sub temperature range	adjustable temperature range, minimum span 51°C
Spectral range	0.8 μm to 1.1 μm
Optics	FOH-G, aperture diameter D=0.43" (11mm)
Distance ratio	> 100:1
Measurement uncertainty	0.3% of measurement value ($T_u=23^\circ\text{C}$, $\epsilon=1$, $t_{95}=1\text{s}$)
Repeatability	0.1% of measurement value ($T_u=23^\circ\text{C}$, $\epsilon=1$, $t_{95}=1\text{s}$)
Response time (t_{95})	< 10ms, adjustable up to 10s
Emissivity	0.05 bis 1.00, adjustable
Storage	maximum value storage, adjustable via communication interface
Output	4...20 mA, temperature linear, max. burden: 700 Ω at 24V
Interface	RS485, half duplex, galvanically isolated
Parameters	adjustable via interface and software (emissivity, response time, temperature unit $^\circ\text{C}$ or $^\circ\text{F}$, storage, sub range, test signal 12 mA)
Power supply	24V DC \pm 25%
Power consumption	max 0.6 W
Operating temperature	0°C to 70°C (pyrometer), up to 250°C (fiber cable and optical head)
Storage temperature	-20°C to 70°C
Weight	approx 600 g (without fiber cable and optical head)
Dimensions	approx 4.33" x 2.76" x 1.18" (110 mm x 70 mm x 30 mm)
Housing	Aluminum cast housing
Safety class	IP 65 (DIN 40 050)
CE-Symbol	according to EU regulations (EN 50 011)
Accessories, mechanical, electrical and optical	
Connecting cable 3-pin	Length 16.4'(5m), 32.8'(10m), 49.2'(15m), 65.6'(20m), 82.0'(25m), or 98.4'(30m) (for SF-30NG)
Fiber cable (stainless steel sheathed)	Length 16.4'(5m), 19.7'(6m), 24.6'(7.5m), 32.8'(10m), 49.2'(15m), 65.6'(20m) or 98.4'(30m)
Power supply	24 VDC/1A

PYR Series – Optical Specifications

Optics	Measuring distance (a)								
in inches (mm)	0 (0)	19.69 (500)	39.37 (1000)	78.74 (2000)	118.11 (3000)	157.48 (4000)	196.85 (5000)		
Measuring spot size M in mm									
MTW-PYR30 (600°C to 1800°C)	0.43 (11)	0.42 (10.7)	0.41 (10.5)	0.39 (10)	0.79 (20)	1.22 (31)	1.65 (42)		



PYR Series – Dimensions

