



FIBER OPTIC INFRARED THERMOMETER

FTK9 Series

Features

- Small converter size
- Close access to the target
- Measuring range 600~2,000°C
- Linear selectable analog output
- Easy set-up using parameter setting unit PWC1



MADE IN JAPAN

Description

FTK9 series infrared thermometers employ fiber optic cable designed for precise non-contact temperature measurement of otherwise inaccessible or moving targets. Thermometer consists of a remote sensor head, fiber optic cable and a converter unit. Infrared energy of the target is passed on from the lens to the converter unit through a fiber optic cable. The converter unit converts infrared energy into linear analog output signal for convenient display or recording by external devices like temperature indicator, controller, recorder or PLC. Analog output scaling is possible. Optional computer interface is available. Single point alarm output is provided.

Thermometer is equipped with a LED guide light for aiming at the target and for indication of the target spot size. It is also equipped with peak hold and smoothing function.



Parameter setting unit
PWC1

Reflection correction function is available in case of error caused by target surface is reflecting any external energy.

Sensor head and fiber optic cable can withstand ambient temperature up to 150°C allowing close access to target for precise temperature measurement under harsh environmental conditions. Length of the fiber optic cable can be chosen to keep the converter unit safely away from extreme environment. Converter unit also has robust design and work well at ambient temperature of up to 70°C.

Parameter setting unit

Various measurement parameters of thermometers such as emissivity correction, temperature measurement mode, measuring range, analog output scaling, alarm point and response time can be programmed into the converter unit using parameter setting unit.

Model/ specifications	FTK9-P300	FTK9-A600
Temperature range	300~2,000°C	600~2,000°C
Sensor	InGaAs	Si
Spectral response	0.8~1.6 μm	0.8~1.0 μm
Minimum spot size	φ1.8mm at 100mm	φ4.0mm at 300mm
Target spot/ distance	φ8.0mm at 200mm φ14mm at 300mm	φ13mm at 1,000mm φ49mm at 3,000mm
Accuracy (at emissivity = 1.0)	Below 800°C: ±4°C 800~1,200°C: ±0.5% of the measured value 1,200~2,000°C: ±1% of the measured value	
Repeatability	± 0.2% of measured value ±2°C	
Emissivity correction	Adjustable from 0.050 to 1.0 in steps of 0.001	
Response time	Adjustable from 0.001~600 seconds (95%)	
Measuring modes	Peak hold and smoothing	
Target sighting	LED marker indicating measured spot size	
Analog output	Selectable 0~20mA, 4~20mA, 0~1V or mV/°C, 0~5V & 0~10V (option)	
Digital output (option)	RS232C	
Alarm output	Open drain, single point	
Sensor head	Aluminium casing with 6mm lens	
Fiber optic cable	0.2mmφ stainless steel shielded cable, 1 meter long (standard)	
Ambient temperature	Sensor head and fiber optic cable: 150°C, Converter unit: 70°C	
Ambient humidity	35~85% rH, non-condensing	
Power supply	4.7~27 VDC, 0.1 A max.	
Dimensions	<p>Sensor head</p>	<p>Converter unit</p>
Typical applications	<p>Temperature measurement inside vacuum furnace</p>	<p>Temperature measurement of moving object</p>

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