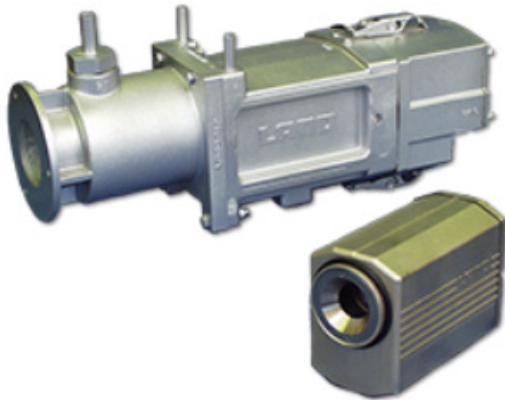


FTS – Furnace



A two-sensor temperature monitoring system designed to continuously measure true load temperatures in reheat furnace applications especially in the challenging heating sections.



Using AMETEK Land's leading-edge infrared sensing to measure both furnace load and background temperature, the Furnace Thermometer System (FTS) links to the advanced Landmark Graphic signal processor for a true temperature of the reheat furnace load unaffected by reflections from a hotter background.

Using a two-sensor system that compensates for background radiation temperatures, FTS ensures the corrected true load temperature is continuously displayed by the dedicated signal processor. Monitored correctly, this data can produce significant savings in operational costs.

A dual measurement system measures both the apparent furnace load temperature - which is affected by radiation from the hot background - and the background furnace temperature, enabling the computation of the true load temperature for a highly accurate, real-time result. The selected waveband detectors enable the system to operate in conditions with high furnace background temperatures it also avoids the effects of hot CO₂ and H₂O in the furnace atmosphere.

FTS is designed for use in gas-fired reheat furnaces in the [steel](#) and metals processing industries, and is also suitable for other furnace applications in the [hydrocarbon processing](#) and [power generation](#) industries.

A TRUE MEASUREMENT

The system measures both the apparent furnace load temperature and the hot background. The signal processor takes both signals and subtracts the effects of reflections from the hot surroundings providing a true load temperature.

VERSATILE TO USE

High system measurement accuracy (typically better than +20 °C / +36 °F at 1000 °C / 1830 °F) is obtained in gas-fired (natural/blast furnace/coke oven) steel reheat furnaces - even in the first heating zone. High accuracy measurement can also be achieved in many furnaces fired with light or heavy oil.

SYSTEM 4 COMPATABILITY

FTS uses our full range of System 4 accessories, including the Landmark Graphic signal processor. The range includes an air purge, protection jacket and back cap, for safe use of the thermometer in hostile locations.

AMETEK Land's FTS is specifically designed to measure the true load temperature in steel reheat furnaces.

Specifications-

	FTS 500/2000C	FTS 900/3600F
Temperature Range	500 to 2000 °C	900 to 3600 °F
Wavelength	Narrow band centred on 3.9µm	
Response Time	100ms (to 95%)	
Field of View	100:1	
Focus Range	0.5m to infinity variable focus	19.5in to infinity variable focus
Min. Target Diameter	5mm	0.2in
Target Size	>98% energy within graticule image	
Accuracy		
Interchangeability	<2K	
Repeatability	<2K	
Absolute	0.5%K over core range of 800 to 1250 °F	0.5%K over core range of 1500 to 2300 °F
	1%K over full range of 500 to 2000 °C	1%K over full range of 900 to 3600 °F
Stability	<0.025%T(K)/°C	<0.014%T(K)/°F
Vibration	3g any axis, 10 to 300Hz	

Humidity	0 to 99% non condensing	
Sealing	To IP65 requirements	To NEMA 4X requirements
Ambient Temperature	0 to 70 °C	32 to 158 °F
Weight	1.7kg	3.75lb
CE	EN 50-082-2 (immunity), EN 50-081-1 (emission), IEC 1010 (safety)	



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