



## Thermocouple systems



- + Conventional Tc's based system for thermal mapping and validation
- + 60 (up to 120) channels simultaneously
- + Rugged data logger used in industrial harsh environment, real time data display
- + High accuracy Tc after pre-calibration ( $\pm 0.2^{\circ}\text{C}$ )
- + Complies with FDA 21 CFR Part 11
- + Network ready: multiple users, centralized, server database, active directory authentication

Sensors	Thermocouples	Order Reference Lives XpertVal 60
Sensor length	- standard: 10 m (33 feet) -customizable: custom length	
Sensor type	All type of thermocouples, most used : T, J, K	
Temperature range	- teflon: $-200^{\circ}\text{C}$ to $+200^{\circ}\text{C}$ - kapton: $-200^{\circ}\text{C}$ to $+400^{\circ}\text{C}$ - other: up to $+1200^{\circ}\text{C}$	
Accuracy	$\pm 0.2^{\circ}\text{C}$ after pre-calibration	
Memory capacity	Internal memory: 20 Mb Backup memory: USB storage device compatible	
TC Tip	Teflon: teflon tip to prevent moisture on the wire Kapton: no tip	
Sampling rate	120 channels - 5 sec 60 channels - 5 sec 20 channels - 2 sec 12 channels - 1 sec	
Software	21 CFR Part 11 compliant	
Module	Universal input module: 4 - 20 mA / 0-10 V / RTD (PT-100 2, 3 or 4 wires), thermocouples	
Communication	USB XpertVal to PC LAN 2.4 GHz, 802.11b/g/n	
Close loop calibration	Required when using thermocouples for thermal validation System uses temperature block and reference probe, software controlled reports generated automatically by the software	
Reference probes	RTD, Fluke 1502, Lives XpertRTD	
Dry blocks	Lives: PTC 125: $-90^{\circ}\text{C}$ to $+125^{\circ}\text{C}$ / RTC 157: $-45^{\circ}\text{C}$ to $+155^{\circ}\text{C}$ / RTC 159: $-100^{\circ}\text{C}$ to $+155^{\circ}\text{C}$ ® RTC 700: $+23^{\circ}\text{C}$ to $+700^{\circ}\text{C}$ Fluke 9190: $-90^{\circ}\text{C}$ to $+140^{\circ}\text{C}$ ; Fluke 9170: $-45^{\circ}\text{C}$ to $+140^{\circ}\text{C}$ ; Fluke 9172: $+35^{\circ}\text{C}$ to $+425^{\circ}\text{C}$	
Calibrations	Factory: NIST / COFRAC Users: close loop calibration using XpertLog® software	

XpertVal® Data Logger



Reference Probe  
Fluke 1502



Ametek Dry Blocks



Fluke Dry Blocks



Thermocouples



Pressure Transducer



Wireless Module



Reference Probe  
Xpert RTD



Fluke Oil Baths

