Wide-Application Handheld Thermocouple Meters & Probes

- NIST units include a certificate of calibration

Handheld thermocouple meters are used with different probes to measure surface and ambient temperatures, as well as for immersion and penetration applications. Can be used to measure contact temperature inputs on motors, insulation, breakers, pipes, connections, liquids, and wires with J-, K-, or T-type thermocouple temperature sensors. Commonly used for general preventative maintenance in industrial, HVAC, and electrical applications.

Data-logging meters can be used with compatible devices such as PCs or smartphones.

Type K Probes—Compression-fitting probes securely mount temperature sensors that measure liquid, air, and gas. Built with strong 316 stainless steel components that resist high temperatures and corrosion. Commonly used with pyrometers for measuring the temperature of fuel and exhaust gas in extreme temperatures and harsh environments.

Direct-connect probes do not have a cord or cable and are not intended for permanent or fixed installations. Also known as quick-disconnect probes, they consist of a sensor and 3-pin connection type. Often used where quick installation and removal are important requirements of the measuring device.

Flex-wire probes have an insulated cable with a beaded junction on the sensing end. The terminal end is connected to a meter or receiver.

Handheld probes have a straight or coiled cable with a terminal connection like a mini plug or 3-pin connector that pairs them with a meter or receiver. Commonly used for manual inspection, maintenance, and other general temperature measurements.

4YV90

6MRN1

6RGL2

For Thermocouple Type	Temp. Range (F)	Res.	Accuracy	Data Output Type	Included Probes	No. of Channels	Brand	STANDARD Item No.	NIST Item No.
Wide-Application Handheld Thermocouple Meters									
Type K	-100° to 500°	0.1°, 1°	±0.9°F/±0.5°C	None	MicroNeedle Probe Model 55040	—	Cooper Atkins	—	3LZC5
		0.1°, 1°	±0.9°F/±0.5°C	None	DuraNeedle Probe Model 55032	—	Cooper Atkins	—	3LZA6
	-100° to 999°	0.1°	±0.5°F/±0.3°C	None	50209-K Probe	—	Cooper Atkins	—	3LZA2
		0.1°, 1°	±0.5°F/±0.3°C	None	—	—	Cooper Atkins	—	3TPP5
	-200° to 1999°	0.1°	±0.3% +2°F/1°C	None	(2) Type K Bead Wire Temperature Probe	2	Extech	1ZKY2	1ZKY4
Type E, Type J, Type K, Type T	Type E -418° to 1832°, Type J -346° to 2192°, Type K -328° to 2501°, Type T -418° to 752°	0.1°C, 1°C	±0.05% + 0.3°C	USB	(2) 80PK-1 Bead Probe	—	Fluke	4YV90	4YV89
		0.1°C, 1°C	±0.05% + 0.3°C	USB	(1) 80PK-1 Bead Probe	—	Fluke	4YV88	4YV87
Type J, Type K	Type J -328° to 1922°, Type K -328° to 2498°	0.2°F/0.1°C	±0.05% +0.6°F/0.3°C	None	(2) Type K Bead Temperature Probe	2	Extech	4PC60	6RGK5
	Type J -346° to 2012°, Type K -328° to 2501°	0.1°, 1°	±0.15% +1°C	None	Type K Bead Wire Temperature Probe	1	Extech	5GCD1	5GCD2
Data-Logging Wide-Application Handheld Thermocouple Meters									
Type K	-58° to 1999°	0.1°, 1°	±0.3% +2°F/1°C	None	Type K Bead Wire Temperature Probe	1	Extech	1LYR5	1LYR6
Type E, Type J, Type K, Type N, Type R, Type S, Type T	Type E -200° to 1598°, Type J -200° to 1994°, Type K -200° to 1999°, Type N -200° to 1999°, Type R 32° to 1999°, Type S 32° to 1999°, Type T -200° to 752°	0.1°	±0.05% +1.5°F/+0.75°C (Types J, K, E, T, N), ±0.05% +4°F/+2°C (Types R, S)	RS-232, SD Card	(2) Type K Bead Wire Temperature Probe	2	Extech	3WU66	6RGL2
	Type E -238° to 1832°, Type J -346° to 2192°, Type K -328° to 2501°, Type N -328° to 2372°, Type R 32° to 3212.6°, Type S 32° to 3212.6°, Type T -418° to 752°	0.1°C, 1°C	±0.05% + 0.3°C	USB	(1) 80PK-1 Bead Probe	—	Fluke	6MRN0	6MRN2
		0.1°C, 1°C	±0.05% + 0.3°C	USB	(2) 80PK-1 Bead Probe	—	Fluke	6MRN1	6MRN3

Temperature Range	Probe Length	Probe Diameter	Cable Material	Cable Length	Item No.
Compression Fitting Thermocouple Probes					
Air, Liquid					
-40° to 400°F/-40° to 205°C	7.3 in	0.188 in	Flexible Stainless Steel Armored Sheath	30 in	3PEX6
Direct Connect Thermocouple Probes					
Air, Gas, Liquid					
-325° to 2,280°F/-200° to 1,250°C	6 in	0.125 in	Magnesium Oxide Insulation	6 in	36GL14
	12 in	0.125 in	Magnesium Oxide Insulation	12 in	36GK71
	18 in	0.125 in	Magnesium Oxide Insulation	18 in	36GK72
	24 in	0.125 in	Magnesium Oxide Insulation	24 in	36GK79
Flex-Wire Probes					
Air, Gas					
-328° to 400°F/-200° to 205°C	15 ft	0.188 in	FEP Outer Jacket	15 ft	3PEY8
-100° to 500°F/-73° to 260°C	4 in	0.125 in	Polyurethane Outer Jacket	12 in (Coiled)/48 in (Extended)	3PEY3
Air, Gas, Liquid					
-100° to 600°F/-73° to 316°C	2.13 in	0.25 in	Stainless Steel Overbraid	43 in	3PEX9
Air, Liquid					
-40° to 500°F/-40° to 260°C	5.5 in	0.188 in	Stainless Steel Overbraid	35 in	3PEY7
Air, Liquid, Surface					
-40° to 400°F/-40° to 204°C	4 ft	0.188 in	Teflon	4 ft	3LRX6
Handheld Thermocouple Probes					
Air, Surface					
-40° to 400°F/-40° to 205°C	4 in	0.125 in	Silicone Outer Jacket	24 in	3PEV9
-40° to 500°F/-40° to 260°C	4.5 in	0.375 in	Polyurethane Outer Jacket	12 in (Coiled)/48 in (Extended)	3PEW9
-40° to 1,202°F/-40° to 650°C	4 in	0.438 in	Polyurethane Outer Jacket	12 in (Coiled)/48 in (Extended)	3PEY1
	5 in	0.438 in	Polyurethane Outer Jacket	12 in (Coiled)/48 in (Extended)	3PEY2
Surface					
-58° to 932°F/-50° to 500°C	7.9 in	0.5 in	Polyurethane Jacket	39 in	161D92
-4° to 450°F/-20° to 232°C	5 in			36 in	4YKT1