

Thermocouples

Mineral Insulated

Watlow's mineral insulated thermocouples are fast-responding, durable, and capable of handling high temperatures.

These thermocouples are manufactured with best-in-class XACTPAK®, Watlow's trademark for metal sheathed, mineral insulated (MI) thermocouple material. XACTPAK responds fast because the protective metal outer sheath allows the use of smaller diameter thermocouple conductors. The rock hard compacted MgO insulation further enhances the sensor's ability to "read" temperature by transferring heat quickly to the measuring junction.

The XACTPAK protecting sheath and compacted insulation outperforms bare wire thermocouples in most applications.

Performance Capabilities

- Easily handles temperatures up to 1200°C (2200°F)
- Meets or exceeds initial calibration tolerances per ASTM E 230

Features and Benefits

Special mineral insulation

- Protects thermocouple from moisture and thermal shock
- Permits operation in high temperature, high pressure environments

Diameters as small as 0.010 in. (0.25 mm)

- Ideal when physical space or extremely fast response are critical

Flexibility of the XACTPAK material

- Allows you to form and bend the thermocouple, without risk of cracking, to meet your design requirements



Outer sheath

- Protects the wires from oxidation and hostile environments

Wide range of sheath materials, diameters, and calibrations

- Meet specific requirements

In-house manufacturing of XACTPAK material

- Rigid quality control procedures
- Assures high standards are met
- Single source reliability

Custom capabilities

- Include options such as special lead lengths, lead wires and terminations

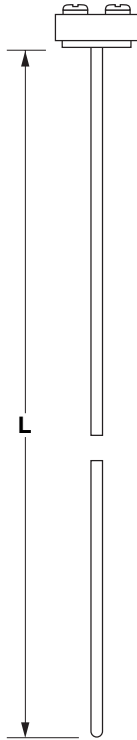
Applications

- Heat treating
- Furnaces/kilns
- Turbines
- Bearing temperature
- Power stations
- Steam generators
- Diesel engines
- Nuclear reactors
- Atomic research
- Jet engines and test cells
- Rocket engines
- Semiconductor manufacturing
- Refineries/oil processing
- Catalytic reformers
- Food processing

Thermocouples

Mineral Insulated

Wafer Head Style AS



The Style AS thermocouple features a “wafer” head, which allows quick access to terminal screws for wiring. This thermocouple is an economical choice because the termination is attached directly to the XACTPAK sheath.

Performance Capabilities

Cold end termination temperature rating up to 540°C (1000°F).

Features

Termination directly to sheath

- Allows quick hookup and disassembly

Terminal head

- Available in a wide range of materials in both single and dual configurations

Custom Ordering Information—Items in **Bolded Green Type** are preferred with shorter lead times.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	A	S		C		0								0	0

3. Sheath O.D. (inch)
G = 0.125 **J = 0.250**
 H = 0.188

4. Cold End Termination
 C = Ceramic 540°C (1000°F)
 1 1/8 inch diameter x 1/8 inch thick

5. Fittings, Weld Pads
 If required, enter order code from pages 39-40. If none, enter “0”.

6. Enter “0”

7. Sheath Material
 A = 304 SS F = 316 SS
Q = Alloy 600 (Type K)

8-9. Sheath Length “L” (whole inches)
04, 06, 12, 18, 24
 Available lengths: 01 to 99, over 99 consult factory

10. Sheath Length “L” (fractional inch)
0 = 0 3 = 3/8 6 = 3/4
 1 = 1/8 4 = 1/2 7 = 7/8
 2 = 1/4 5 = 5/8

11. Junction

	Grounded	Ungrounded	Exposed
Single	G	U	E
Dual	H	W (isolated)	D (isolated)

12. Calibration

	E	J	K	N	T
Standard limits	E	J	K	N	T
Special limits	2	3	4	—	8

13-14. Enter “00”

15. Special Requirements
0 = None
 X = Special requirements, consult factory