Thermocouples



General Applications Tube and Wire

Watlow® is a world class supplier of temperature measurement products, with more than 90 years of manufacturing, research and design expertise.

Companies engaged in critical process control of food and metals rely on Watlow thermocouples. Watlow designs and manufactures sensors to meet customers' industrial and commercial equipment needs.

Watlow has developed an extensive line of thermocouples to meet a broad range of sensing needs.

Performance Capabilities

 Fiberglass insulated thermocouples can reach temperatures up to 900°F (480°C) for continuous operation

Features and Benefits

Standard products including:

- 32 standard sheath lengths
- Lead lengths from six to 360 inches
- Stainless steel braid or hose protection
- J, K, T and E calibrations
- · Grounded, ungrounded and exposed junctions
- Flat and drill point
- Epoxy sealed cold ends
- Adjustable depths
- Flexible extensions
- Washers, nozzles and clamp bands
- PFA coated and stainless steel sheaths
- Straight, 45° bend or 90° bend
- Locking bayonet caps in standard
- 300 series stainless tubing

Typical Applications

- Food processing equipment
- De-icing
- Plating baths
- Industrial processing
- Medical equipment
- · Pipe tracing control
- Industrial heat treating
- Packaging equipment
- · Liquid temperature measurement
- Refrigerator temperature control
- Oven temperature control



Construction and Tolerances

Thermocouples feature flexible SERV-RITE® wire insulated with woven fiberglass or high temperature engineered resins. For added protection against abrasion, products can be provided with stainless steel wire braid and flexible armor. ASTM E230 color-coding identifies standard catalog thermocouple types.

The addition of a metal sheath over the thermocouple provides rigidity for accurate placement and added protection of the sensing junction. Mounting options include springs, ring terminals, specialized bolts, pipe style clamps and shims.

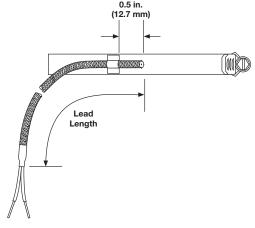
Thermocouples

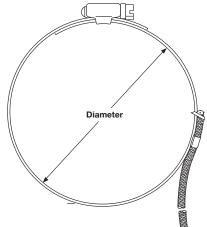


General Applications Tube and Wire

Pipe Clamp Style 72







The stainless steel clamp allows temperature measurement without drilling or tapping, which is ideal for measuring pipe temperatures.

Ordering Information

Part Number

| 1 2 | 3 | 4 | 5 | 6 | 7 | 8 9 10 | 11 |
|-----------------|----------|-------------|--------------------|----------|-----------------------------|----------------|-------------------|
| Const. Style | Diameter | Calibration | Lead Protection | Junction | Clamp Band Dia. Range | Lead Length | Term./ Options |
| 72 | Х | | | G | | | |

| 1 2 | Construction Style | | | |
|---------------------|---|--|--|--|
| 72 = | Pipe clamp thermocouple | | | |
| 3 | Diameter | | | |
| X = | Not applicable | | | |
| 4 | Calibration | | | |
| J = | Type J | | | |
| K = | Type K | | | |
| T = | Type T | | | |
| E = | Type E | | | |
| (5) Lead Protection | | | | |
| S = | Fiberglass with stainless steel overbraid (24 gauge stranded) | | | |
| B = | Fiberglass with stainless steel overbraid (20 gauge stranded) | | | |

| _ | | 1,700 = |
|-----|---|---|
| | | |
| (5) | | Lead Protection |
| . ~ | | Lead Froteodon |
| S | = | Fiberglass with stainless steel overbraid (24 gauge stranded) |
| В | = | Fiberglass with stainless steel overbraid (20 gauge stranded) |
| U | = | PFA with stainless steel overbraid (24 gauge stranded) |
| W | = | PFA with stainless steel overbraid (20 gauge stranded) |

| 6 Junction | | | | | | | |
|---|--|--|--|--|--|--|--|
| G = Grounded | | | | | | | |
| ② Clamp Band Diameter Range (in.) | | | | | | | |
| A = | ¹¹ / ₁₆ to 1 ¹ / ₄ | | | | | | |
| B = | 1 ¹ / ₄ to 2 ¹ / ₄ | | | | | | |
| C = | $2^{1}/4$ to $3^{1}/4$ | | | | | | |
| D = | $3^{1}/4$ to $4^{1}/4$ | | | | | | |
| E = | $4^{1}/4$ to 5 | | | | | | |
| F = | 5 to 6 | | | | | | |
| G = | 6 to 7 | | | | | | |
| 8 9 | 0 10 Lead Length (in.) | | | | | | |
| Available lengths: 006 to 360 in., over 360 in. contact factory | | | | | | | |
| ① Termination/Options | | | | | | | |
| A = | Standard, 2 ¹ / ₂ in. split leads | | | | | | |
| B = | 2 ¹ / ₂ in. split leads with #6 spade lugs | | | | | | |
| C = | 21/2 in. split leads with #6 spade lugs and BX connector | | | | | | |
| D = | Standard male plug, quick disconnect | | | | | | |

E = Standard female jack, quick disconnect F = Miniature male plug, quick disconnect G = Miniature female jack, quick disconnect

 $H = \frac{1}{4}$ in. push-on connector