

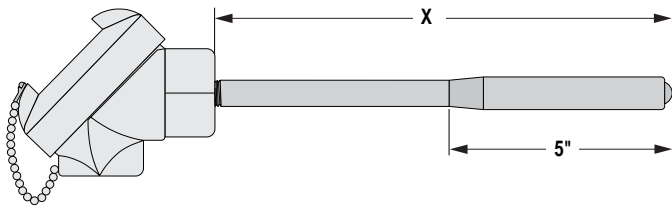
# SPECIAL PURPOSE

# ABRASION RESISTANT THERMOCOUPLES

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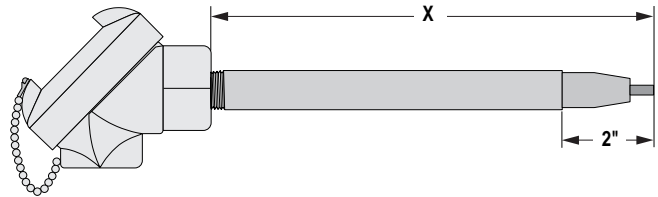
The **hardened tip** aggregate temperature sensor assemblies illustrated in figures 1, 2, and 3 below are typically used to measure the temperature of severely abrasive materials found in asphalt aggregate mixers and in other granular material mixing and drying processes. Three styles of hardened tip constructions are offered to resist destructive abrasion and wear. Figure 4 illustrates an **open end tube** style thermocouple assembly used to measure the temperature of hot sand and other similar free flowing materials on conveyors, or at drop chutes, where abrasion is not as severe, but where product temperature response time is important.

FIGURE 1



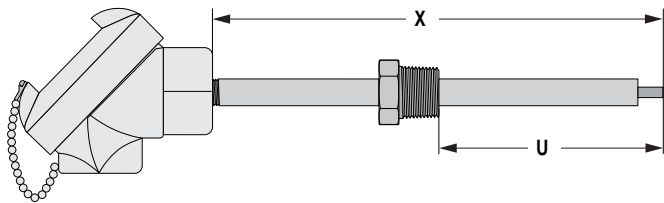
Flame sprayed tungsten carbide tip

FIGURE 2



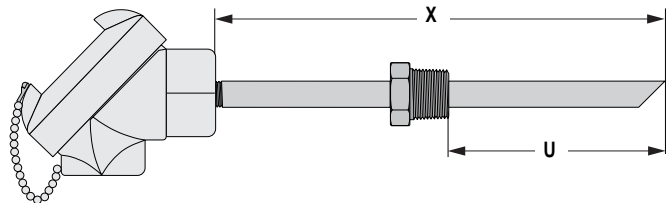
Ruggedized bullet nosed hardened tool steel with carbide tip

FIGURE 3



Small diameter heavy wall tube with carbide tip

FIGURE 4



Beveled tip open end tube

EXAMPLE ORDER NUMBER: **J29GA1** - **18** - **10** - **6D12**

1

| THERMOCOUPLE STYLES |          |                |                                |          |
|---------------------|----------|----------------|--------------------------------|----------|
| ORDER CODE          | T/C TYPE | NOM. TUBE DIA. | MEASURING TIP CONSTRUCTION     | FIG. NO. |
| J29GA1              | J        | .560"          | Flame sprayed tungsten carbide | 1        |
| J29GA2              | J        | .840"          | Tool steel with carbide tip    | 2        |
| J29GA3              | J        | .540"          | Carbide tip                    | 3        |
| J14CS               | J        | .540"          | Open end tube                  | 4        |

*For ungrounded junctions, change 'G' in above order code to 'U'. Consult factory for availability of other thermocouple types and duplex elements.*

4

| OPTIONS    |                                                                                 |
|------------|---------------------------------------------------------------------------------|
| ORDER CODE | DESCRIPTION                                                                     |
| 6C(U)      | 1/2" NPT welded steel bushing<br><i>(for use with figures 1, 3, and 4 only)</i> |
| 6D(U)      | 3/4" NPT welded steel bushing                                                   |
| 6E(U)      | 1" NPT welded steel bushing                                                     |
| H          | Adjustable steel mounting flange                                                |

*Substitute length in inches from hot tip to bottom of bushing for "U" above*

2

| LENGTH "X" |           |                              |           |
|------------|-----------|------------------------------|-----------|
| ORDER CODE | LENGTH    | ORDER CODE                   | LENGTH    |
| 12         | 12 Inches | 20                           | 20 Inches |
| 14         | 14 Inches | 24                           | 24 Inches |
| 18         | 18 Inches | <i>Specify other lengths</i> |           |

3

| HEAD TERMINATIONS |                                |
|-------------------|--------------------------------|
| ORDER CODE        | DESCRIPTION                    |
| 02                | No head w/2" leads beyond tube |
| 10                | Aluminum head                  |
| 20                | Cast iron head                 |
| 30                | 316L stainless steel head      |
| 50                | Delrin head (grey)             |