## Datasheet

## TPC Fabricated Thermocouple Sensor with Crimp Seal Supplied with Heatshrink Strain Relief

Low-cost, fabricated thermocouple sensors available as standard with a 3.0mm, 4.0mm, 4.5mm, 6.0mm or 8.0mm diameter probe. The 316 stainless steel rigid probe has a plain crimped end seal with a PVC heatshrink seal which also acts as a cable strain relief. The temperature rating of the sensor is governed by the temperature rating of the extension cable. For example, a sensor with PVC cable is suitable for use up to  $\pm 105^{\circ}$ C; a sensor with fibreglass cable is suitable for use up to  $\pm 400^{\circ}$ C.

- 3.0 mm, 4.0mm, 4.5mm, 6.0mm or 8.0mm Ø probe
- Accuracy to IEC 60584.2 Class 2 (Class 1 also available)
- · IEC 60584.3 colour coded extension cables and connectors
- Ex-stock options available
- In-house calibration service also available

|  |   |  |   | Note: Type K therm   | nocouple shown for illu | ustrative purposes of |  |
|--|---|--|---|----------------------|-------------------------|-----------------------|--|
|  | Sensor Type   |  |   |                      |                         | Code                  |  |
|  | Fabricated Thermocouple Sensor with Crimp Seal and Heatshrink Strain Relief                   |  |   |                      |                         |                       |  |
|  | Conductor/Thermocouple Type (   | IEC 60584 2)                             | Conductor 1                                   | Cemperature Ran      | ne                      | Code                  |  |
| K  | Nickel Chromium vs. Nicke   |  | Conductor Temperature Range<br>0°C to +1100°C |                      |                         | K                     |  |
| J  | Iron vs. Constantan   | Auminum                                  | -50°C to +750°C                               |                      |                         | J                     |  |
| Т  |   |  |   |                      |                         | J<br>T                |  |
|  | Copper vs. Constantan   |  | -200°C to +350°C                              |                      |                         |                       |  |
|  | Nicrosil vs. Nisil  | 0°C to +1200°C                           |   |                      | N                       |                       |  |
| E  | E Nickel Chromium vs. Constantan -200°C to +900°C   |  |   |                      |                         | E                     |  |
|  | Metal Sheath Materia  | Temperature Range                        |   |                      | Code                    |                       |  |
|  | 316 Stainless Steel   | 0°C                                      | 0°C to +800°C                                 |                      | 316                     |                       |  |
|  | Probe Diameter (D1)   |  |   |                      |                         | Code                  |  |
|  | 3.0mm   |  |   |                      |                         | 3.0                   |  |
|  | 4.0mm   |  |   |                      |                         | 4.0                   |  |
|  | 4.5mm   |  |   |                      |                         | 4.5                   |  |
|  | 6.0mm   |  |   |                      |                         | 6.0                   |  |
|  | 8.0mm   |  |   |                      |                         | 8.0                   |  |
| Imperia  | mperial sizes also available. Contact sales for further information.                          |  |   |                      |                         | 0.0                   |  |
|  | Sensing Junction  |  | Number of C                                   | hannels              |                         | Code                  |  |
|  | Sensing surrectori  |  |   | Inanineis            | _                       | I                     |  |
|  | Insulated (isolated, ungrounded)  |  |   |                      |                         |                       |  |
| <u> </u>   |   |  | Simplex/insulated example                     | 5                    | Simplex                 |                       |  |
|  | Grounded (non-isolated)   |  |   |                      |                         | G                     |  |
|  | Grounded (non-isolated)   | Simplex/grounded example                 |   |                      | Ũ                       |                       |  |
|  |   | Brobo Longt                              | h (mm) (1.1)                                  |                      |                         | Code                  |  |
|  | Probe Length (mm) (L1)<br>As required to suit your application (stock sensors also available) |  |   |                      |                         | e.g. 300              |  |
|  | As required to suit your application (stock sensors also available)                           |  |   |                      | e.g. 300                |                       |  |
| Ex   | Extension Cable Length (mm) (L2)  |  | Cable Insulation                              |                      |                         | Code                  |  |
|  | As required to suit your application<br>(e.g. 500mm)  | Heat Resistant PVC, 7/0.2mm Ø (+105°C) * |   |                      | CP10                    |                       |  |
| As   |   |  | PFA, 7/0.2mm Ø (+260°C)                       |                      |                         | CT45                  |  |
|  |   | Fibreglass, 7/0.2mm Ø (+400°C)           |   |                      |                         | CG32                  |  |
|  |   |  |   |                      |                         | CG39                  |  |
| See pa   | ages 44-51 for our full range of Thermocouple   | cable.                                   |   |                      | * 6.0mm and 8.0mr       | n probe diameters     |  |
|  | Optional Ther   | mocouple Connec                          | tor (supplied attached to ca                  | able)                |                         | Code                  |  |
|  |   |  | niature Thermocouple Plug (K, J, T, N, E)     |                      |                         |                       |  |
|  |   |  | Miniature Thermocouple Socket (K, J, T, N, E) |                      |                         | FMJ                   |  |
|  |   |  | Standard Thermocouple Plug (K, J, T, N, E)    |                      |                         | RSP                   |  |
|  |   |  | andard Thermocouple Socket (K, J, T, N, E)    |                      |                         | RSJ                   |  |
| See pa   | See pages 53-58 for our full range of Thermocouple connectors.                                |  |   |                      |                         |                       |  |
|  | Optional 31   | 6 Stainloss Stool (                      | Compression Fittings                          |                      | Code                    |                       |  |
|  | (to suit probe diar   |  |   | 1/8" BSPT            | 1/4" BSPT               | 1/2" BSPT             |  |
|  |   | 3.0mm                                    |   | CF30AS               | CF30CS                  | CF30ES                |  |
|  |   | 4.0mm                                    |   | CF30AS<br>CF40AS     | CF30CS<br>CF40CS        | CF40ES                |  |
|  |   | 4.5mm                                    |   | CF40AS<br>CF45AS     | CF40CS<br>CF45CS        | CF40ES<br>CF45ES      |  |
|  |   | 6.0mm                                    |   | CF45AS<br>CF60AS     | CF45CS<br>CF60CS        | CF45ES<br>CF60ES      |  |
|  | 9 8   | 6.0mm<br>8.0mm                           |   | CFOUAS               | CF80CS                  | CF60ES<br>CF80ES      |  |
| O.UIIIII O.UUIIII O.UUIIII O.UUIIII O.UUIIII O.UUIIII O.UUIIIII O.UUIIIII O.UUIIII O.UUIIIII O.UUIIII O.UUIIII O.UUIIII O.UUIIIII O.UUIIIII O.UUIIII O.UUIIIII O.UUIIIII O.UUIIIII O.UUIIIII O.UUIIIII O.UUIIIII O.UUIIIII O.UUIIIII O.UUIIIII O.UUIIIIII O.UUIIIII O.UUIIIII O.UUIIIII O.UUIIIII O.UUIIIII O.UUIIIII O.UUIIIIII O.UUIIIII O.UUIIII O.UUIIII O.UUIIIII O.UUIIIII O.UUIIII OUUIII OUUIII OUUIIIII OUUIIIII OUUIIIII OUUIIIII OUUIIIII OUUIIIII OUUIIIII OUUIIIII OUUIIIII OUUIIII OUUIIII OUUIIIII OUUIII OUUIII OUUIII OUUIII OUUIII  OUUIII  OUUIII  OUUIII  OUUIII OUUIII OUUIII OUUIII  OUUIII  OUUIII  OUUIII  OUUIII  OUUIII  OUUIII  OUUIII  OUUIII  OUUIII  OUUIII  OUUIII  OUUIII  OUUIIII  OUUIIII  OUUIIII  OUUIIII  OUUIIII |   |  |   |                      |                         | CF8UES                |  |
| 210330   | Important Note: the temperatur  |  | -   | rating of the outcom | ion cable (ontion 7)    |                       |  |
|  | important Note: the temperature   | e raung of the sensor                    | is governed by the temperature                | raing of the extens  | ion cable (option 7)    |                       |  |
| <b>.</b> .   | Code (example)  |  | 1 2 3 4                                       | 5 6                  | 7                       | 8 9                   |  |
|  |   |  | TPC - K - 316 - 6.0                           |                      |                         |                       |  |

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