

# Immersion Temperature Sensor

TITAN Products immersion sensor is designed to measure temperature conditions in liquid flow lines. The sensor element is enclosed in a rigid stem which is mounted into a pocket with options for brass (standard) or stainless steel. The immersion pocket length is 125mm as standard with a shorter 65mm also available. Other lengths are available on request. Please contact the sale team for more information.

For chilled water applications the sensor stem, sensor element and terminal board are epoxy sealed to prevent the influence of condensation in low temperature conditions. The sensor is available with a range of temperature measurement elements and comes supplied with brass pockets as standard.

## Specification

|                        |   |   |
|------------------------|---|---|
| Material               | Body:   | Flame Retardant Polycarbonate                             |
|                        | Probe:  | Brass   |
|                        | Pocket:   | Brass or Stainless Steel                                  |
| Sensing Elements:      | See Below   |   |
| Accuracy :             | ±0.2°C @ 70°C Thermistor<br>±0.4°C 4-20mA<br>±0.5°C 0-10 volts  |   |
| Operating Temperature: | -40 to + 110°C (Standard Body)<br>-40 to + 150°C (Die cast body)  |   |
| Terminals:             | 1.0mm recommended 2.5mm max   |   |
| Location:              | Positioned to measure the controlled condition  |   |
| Dimensions             | Probe:  | 125mm as standard   |
|                        | Body:   | 60mm high, 65mm wide, 36mm deep<br>20mm cable gland entry |
| Protection:            | IP65  |   |
| Product Codes:         | See Below<br>State R for Chilled Water<br>State SS for Stainless Steel pocket option<br>State 65 for 65mm immersion pocket option |   |

## Product Codes

| Element Type | System Compatibility   | Product Code<br>(Standard 125mm brass pocket)                                  | Accuracy |
|--------------|--|--|----------|
| 1.8K7        | TAC  | TPTACIS  | ±0.2°C   |
| 2.2K3A1      | Johnsons / Ambiflex  | TPIS/2K2   | ±0.2°C   |
| 3K3A1        | Alerton  | TPTS-I/U   | ±0.2°C   |
| 10K3A1       | Trend / Jel / Honeywell Aquatrol 2000 / Ambiflex / Next / Smart / York | TPTIS  | ±0.2°C   |
| 10K4A1       | Andover / Automatrix / York / Siebe                                    | TPAIS  | ±0.2°C   |
| 20K6A1       | Honeywell  | TPHIS  | ±0.2°C   |
| 30K6A1       | Drayton  | TPDIS  | ±0.2°C   |
| 100K6A1      | York (> +40°C)   | TPIS/100K6   | ±0.2°C   |
| Satchwell    | Satchwell T Range  | TPSIS/1701   | ±0.2°C   |
| Satchwell    | Satchwell DR Range   | TPSIS/1204   | ±0.2°C   |
| Staefa T1    | Staefa T1  | TP-T1IS  | ±0.3°C   |
| Staefa T30   | Staefa T30   | TPT30IS  | ±0.3°C   |
| Ni1000       | Landis & Gyr   | TPIS/Ni1000  | ±0.3°C   |
| PT100        | PT100  | TPPT2IS  | ±0.3°C   |
| PT1000       | PT1000   | TPPT3IS  | ±0.3°C   |
| 4-20mA       | 2 Wire Loop Powered  | TPIS/40 (-10 to +40°C)<br>TPIS/110 (-10 to +110°C)<br>TPIS/160 (-10 to +160°C) | ±0.4°C   |
| 0-10V        | 3 Wire 24V Supply  | TPVIS/40 (-10 to + 40°C)<br>TPVIS/100 (0 to + 100°C)                           | ±0.5°C   |

## Wiring

2 wire  
NTC  
Ni 1000  
RTD



3 and 4 wire options  
available for RTD

3 wire  
0-10V  
24v AC/DC



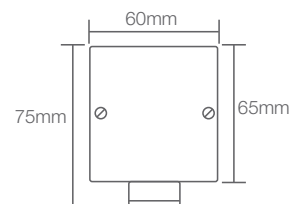
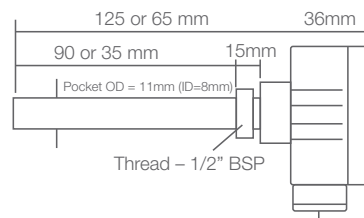
24V OV SIG

2 wire Loop Powered  
4-20mA (bi-directional)



Input Impedance >100ohms

## Dimensions



20mm cable entry

Sensor Probe = 8mm dia. x 120mm long  
Note: Other length available on request

Sensor is supplied without cable entry gland (TPCG20). If required, order separately.

\* State R for Chilled Water \*\* State 65 for 65mm probe \*\*\* State SS for Stainless Steel Pocket EG: TPTIS/SS/65