
Temperature Transmitter with Digital Switch

**Model : T800S (General head)
 T800 (Explosion Proof head)**

**WISE
SENSOR**

Advantages

- Micro-processor based digital temperature switch/transmitter for industrial applications
- Adjustable switch points allow the user to obtain various temperature settings for each of the 2 switches and span
- Measuring ranges from -50 to 500 °C
- RTD input
- Excellent accuracy and long term stability
- 4 digit LED local display
- 2switching points with analog output
- Measuring range turn down maximum 10 : 1

Applications

The T800, T800S micro-processor based digital temperature switch with analog output signal can be used for a wide range of applications in process control, automatic machinery and hydraulic or pneumatic system design.

- Chemical, petrochemical, food and drug process controls
- Hydraulic and pneumatic equipments
- Machine tools and automatic machinery
- LPG and LNG transmission control and storage tank monitoring
- Engine monitoring and control

Descriptions

T800 Series micro-processor based digital temperature switch addresses all the fundamental issues of industrial temperature sensing that require highly accurate process control and monitoring. The T800S/P800, with its built-in RTD , a 4-digit digital display, 2 switching points, 4~20mA analog output signal and a front function keys, offer the user all the advantages of a modern electronic temperature measurement. External adjustments allow the user to set the measuring ranges, switch points, dead band and zero or span calibration, etc. It has a water resistant, aluminum die-cast housing for complete protection from harsh environments and its 4~20mA current output is ideal for remote monitoring of both primary and secondary process variables. It has been designed as an advanced device for measuring temperature in industrial applications.

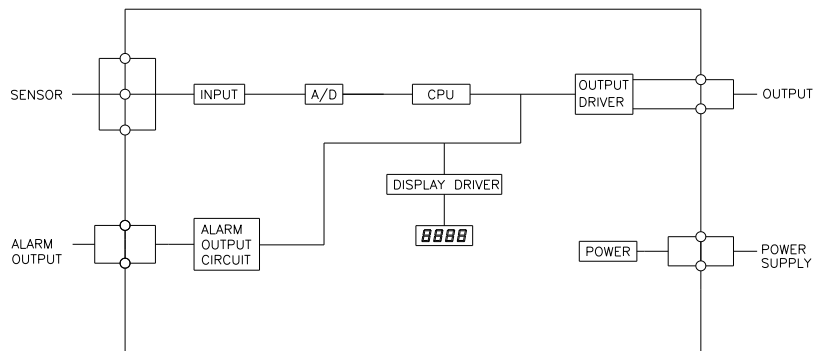


T800 / T800S

Specification

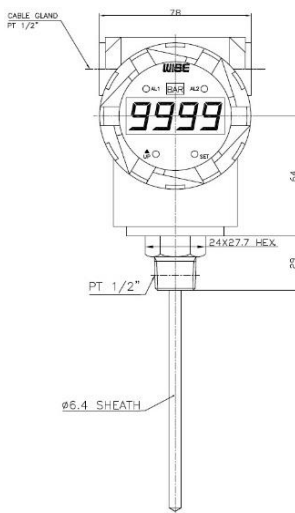
| Input | |
|--------------------------------|--|
| Technology | RTD (PT100 ohm, IEC, DIN, JIS-C-1604-1981) |
| Measuring range | -50~500 °C |
| Output | |
| Output signal | 4~20mA analog output / Optional 1~5V DC available on request 2 switching points with 4~20mA analog output |
| Local display | LED 4 digit |
| Electrical connection type | Terminal Head |
| Electrical Specification | |
| Excitation voltage | 24V DC (12~36V DC) , 85~260V AC (Optional) |
| Load resistance max @ 24V | 500 Ω at 24V |
| Influence of excitation | 0.01% FSO/V |
| Power ripple | \leq 500mV P-P |
| Reverse polarity | Protected |
| Shock resistance | No change in performance after 10Gs for 11ms |
| Vibration | 0.1G (1 m/s/s) maximum |
| Response time(10~90%) | \pm 500 mSec. |
| Switching current | Maximum 1.2A |
| Adjustment range | Zero and span can be fully adjustable using front keys |
| Performance Specification | |
| Accuracy | $\leq \pm 0.2\%$ FSO |
| Non-linearity | $\pm 0.2\%$ FSO |
| Repeatability | $\pm 0.1\%$ FSO |
| Long term stability | Better Than 0.05% FSO per month |
| Storage temperature range | 0 ~ 70 °C |
| Ambient temperature range | -20 ~ 70 °C |
| Ambient humidity limits | 5 to 100% R.H |
| Thermal sensitivity shift | $\leq \pm 0.05\%$ FSO in reference to 35 °C typical |
| Thermal zero shift | $\leq \pm 0.05\%$ FSO in reference to 35 °C typical |
| Thermal hysteresis | $\leq \pm 0.1\%$ FSO in reference to 35 °C typical |
| Physical Specification | |
| Process connection | PT1/2" male thread (standard) Flange & other connections available on request |
| Electrical connection | PF3/8" female(T800S), PT1/2" female(T800) |
| Process media | Gases and liquids compatible with stainless steel 316 |
| Materials wetted by process | Probe : stainless steel 316 Housing : Aluminum Die-casting terminal head |
| Local display range | 4 digit |
| Enclosure rating | IP65 |
| Explosion protection | Ex d IIC T6 (Only T800) |
| Influence of mounting position | Not critical |
| Options | Protection well |

System connection for digital switch

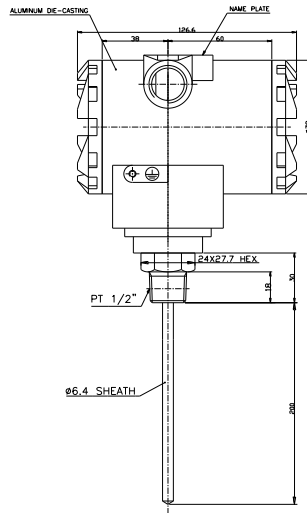


Dimension (mm)

P800 Front view

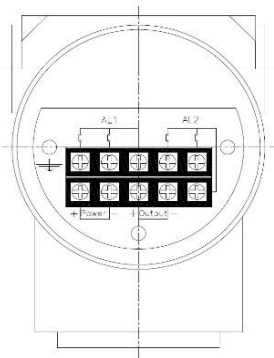


P800 Side view



Electrical connection

P800 Terminal



Ordering Information

Temperature Transmitter with Digital Switch

1. Base model

| | | | | | | | | | |
|-------|--|--|--|--|--|--|--|--|---------------------------|
| T800 | | | | | | | | | General Head |
| T800S | | | | | | | | | Explosion Proof Type Head |

2. Input signal

| | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|---|
| P | | | | | | | | | RTD (PT 100 Ω) |
| O | | | | | | | | | Other Input signal available on request |

3. Process connection

| | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|---------------------|
| 1 | | | | | | | | | Male thread mounted |
| 2 | | | | | | | | | Flange mounted |

4. Process connection type

| | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|
| T | | | | | | | | | PT thread as standard |
| J | | | | | | | | | Flange per JIS |
| D | | | | | | | | | Flange per DIN |
| A | | | | | | | | | Flange per ANSI |
| X | | | | | | | | | Other process connections available on request |

5. Process connection size

| | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|---------------------------------|
| 1 | | | | | | | | | 1/2" |
| 2 | | | | | | | | | 1" |
| 3 | | | | | | | | | 2" |
| X | | | | | | | | | Specify the flange unit clearly |

6. Thermo-well

| | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--------------------------------|
| S | | | | | | | | | With protection thermo-well |
| N | | | | | | | | | Without protection thermo-well |

7. Measuring range

| | | | | | | | | | |
|----|--|--|--|--|--|--|--|--|---|
| 01 | | | | | | | | | -50 ~ 0 °C |
| 02 | | | | | | | | | -50 ~ 50 °C |
| 03 | | | | | | | | | -20 ~ 80 °C |
| 04 | | | | | | | | | -50 ~ 150 °C |
| 05 | | | | | | | | | 0 ~ 50 °C |
| 06 | | | | | | | | | 0 ~ 100 °C |
| 07 | | | | | | | | | 0 ~ 150 °C |
| 08 | | | | | | | | | 0 ~ 200 °C |
| 09 | | | | | | | | | 0 ~ 300 °C |
| 10 | | | | | | | | | 0 ~ 400 °C |
| 11 | | | | | | | | | 0 ~ 500 °C |
| xx | | | | | | | | | Other calibration ranges available on request |

8. Unit

| | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|------------------------------------|
| C | | | | | | | | | Calibration in Celsius scale °C |
| F | | | | | | | | | Calibration in Fahrenheit scale °F |

9. Output signal / Electrical connection type

| | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|---|
| S | | | | | | | | | 2 switching points / only available local display |
| C | | | | | | | | | 4~20mA Current output signal |
| D | | | | | | | | | 2 switching points with analog output signal / only available local display |
| X | | | | | | | | | Other signal available on request |

10. Option

| | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|------------------------------|
| A | | | | | | | | | AC 220V, 4 wire system |
| D | | | | | | | | | DC 12~36V, 4 wire system |
| M | | | | | | | | | 2 inch pipe mounting bracket |
| N | | | | | | | | | None |

| | | | | | | | | | | |
|-------|---|---|---|---|---|----|---|---|---|----------------------|
| T800S | P | 1 | T | 1 | N | 06 | C | S | N | Sample ordering code |
|-------|---|---|---|---|---|----|---|---|---|----------------------|

Specifications subject to change without notice