

## Programmable Multi input temperature transmitter Model : T900 Series (Head mounting type)

**WISE**®

### Advantages

- Two wire 4-20 mA current output signals
- Universal input signals
  - RTD temperature sensor
  - T/C elements
  - mV, V, mA, DC signals
- Programmable function setting
  - Input signal type
  - Measuring range
  - Burnout Low/High setting
  - mA output offset
- Excellent accuracy and a long term stability
- Low cost effective



T900



Hand held  
Program loader



USB  
Program loader

### Applications

Applications for requiring an amplification of various signals to carry to a long distance or guard against heavy field electrical noise. Loader of the user can select and use a wide variety of separate inputs. For a direct interface with indicators, recorders, controllers, PLC and DCS systems can be used for a wide range of applications in its process control, automatic machinery and hydraulic or pneumatic system design.

### Descriptions

T900 series temperature transmitters are designed to fit into a standard molded terminal heads used on RTD and thermocouple assemblies to provide a 4~20 mA transmission signals.

It is a cost effective solution for all temperature measuring process. It is accurate, durable, and reliable. Numerous configurations for measurement in many different mediums are offered. Generally the transmitter produces a linear 4~20 mA output carried on a two-wire system. The transmitter is supplied factory calibrated, but also has zero and span potentiometers for a field adjustment.

## Specification

Input		
Temperature sensor type		See table "Sensor type, range and accuracy"
Signal source		See table "Sensor type, range and accuracy"
Output		
Current output		4 ~ 20 mA loop powered
Electrical connection type		2-wire technique
Full scale output signal		20 mA ± 0.2%
Zero measured output		4 mA ± 0.03%
Sensor burnout		High (20.5 mA DC) or Low (3.9 mA)
Electrical specification		
Excitation voltage		18 ~ 30 V DC (Noise range:20 mVp-p)
Load resistance max		600Ω with 24 V
Influence of excitation		0.01% FSO/V
Reverse polarity		Protected
Shock resistance		No change in performance after 20Gs
Vibration		0.1 g max.
Response time (10~90%)		±500 mSec.
Adjustment range		Free
Performance specification		
Accuracy		±0.2% FSO
Non-linearity		Better than ±0.10% FSO
Repeatability		Better than ±0.05% FSO
Long term stability		Better than ±0.05% FSO per month
Cutoff frequency		±1 kHz
Ambient temperature limits		-10 ~ 70 °C
Ambient humidity limits		10 to 90% RH
Physical specification		
Material	Case	ABS resin
	Cover	ABS resin
Dimension		45(W) x 22.7(H) mm
Mounting		2 x M3 screw
Weight		100 g max.
Options		Multi type program loader

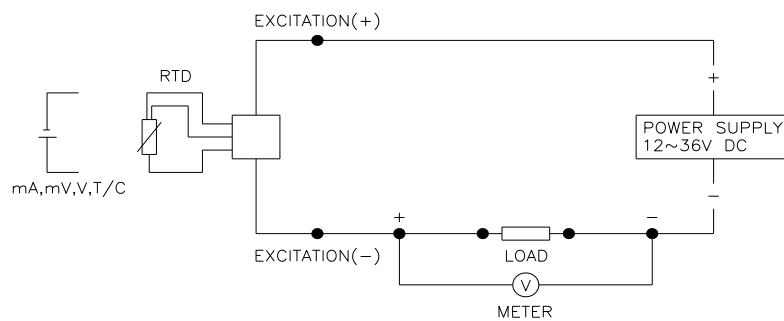
## Sensor type, range, accuracy

Resistance temperature detector (RTD)				
Input	Measuring range	Min. measured span	Calibration range	Analog output (mA) Error
Pt100	-200 ~ 850 °C	10 °C	-200 ~ 850 °C	0.2% of span
JPt100	-200 ~ 650 °C	10 °C	-200 ~ 650 °C	

## Specification

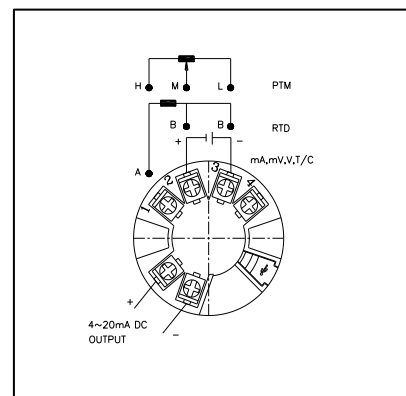
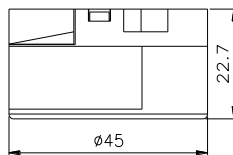
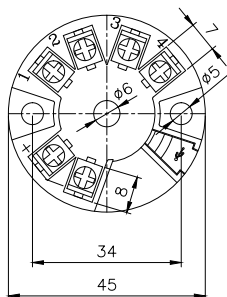
Thermocouple elements (T/C)				
Input	Measuring range	Min. mea sured span	Calibration range	Analog output (mA) Error
Type B	100 ~ 1820 °C	300 °C	100 ~ 400 °C	0.2% of span
		100 °C	400 ~ 1820 °C	
Type E	-200 ~ 1000 °C	50 °C	-200 ~ 1000 °C	
Type J	-200 ~ 1200 °C	50 °C	-200 ~ 1200 °C	
Type K	-200 ~ 1370 °C	50 °C	-200 ~ 1370 °C	
Type N	-200 ~ 1300 °C	50 °C	-200 ~ 1300 °C	
Type R	0 ~ 1760 °C	100 °C	0 ~ 1760 °C	
Type S	0 ~ 1760 °C	100 °C	0 ~ 1760 °C	
Type T	-200 ~ 400 °C	40 °C	-200 ~ 400 °C	
mV, V, mA sensor				
Input	Measuring range	Min. mea sured span	Calibration range	Analog output (mA) Error
mV	0 ~ 999 mV	2 mV	0 ~ 999 mV	0.2% of span
V	0 ~ 10 V	1 V	0 ~ 10 V	
mA	0 ~ 30 mA	4 mA	0 ~ 30 mA	
	Input resistor : 250 Ω (External)			

## System connection for 2-wire transmitter



## Dimension (mm)      Electrical connection

### Transmitter



## Ordering information

### Programmable temperature transmitter

T900							Head mounting type multi input 2wire transmitter			
	N						Normal input (Standard)			
	O						Order input			
		PT					Input signal RTD	Pt 100 Ω		
		JP						JPt 100 Ω		
		TR					Thermo couple	R type		
		TK						K type		
		TE						E type		
		TJ						J type		
		TT						T type		
		TB						B type		
		TS						S type		
		TN						N type		
		mV					Signals	mV Input		
		mA						mA Input		
		DV						Voltage Input		
			01				Measuring range	-50 ~ 0℃		
			02					-50 ~ 50℃		
			03					-20 ~ 80℃		
			04					-50 ~ 150℃		
			05					0 ~ 100℃		
			06					0 ~ 200℃		
			07					0 ~ 300℃		
			08					0 ~ 400℃		
			09					0 ~ 500℃		
			10					0 ~ 600℃		
			11					0 ~ 700℃		
			12					0 ~ 800℃		
			13					0 ~ 900℃		
			14					0 ~ 1000℃		
			XX				Other calibration ranges available on request			
				C			Calibration in celsius scale °C			
				F			Calibration in fahrenheit scale °F			
					C		Output signal	DC 4 ~ 20 mA current		
					V			DC 1 ~ 5 V Voltage		
					N			Non-output		
					X		Other signal available on request			
						N	None option			
						L	Hand held program loader			
						U	USB type program loader			
T900	N	PT	01	C	C	N	0	0	0	Sample ordering code