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



### 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 deferent 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	20mA $\pm$ 0.2%	
Zero measured output	4mA $\pm$ 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	600 $\Omega$ with 24 V	
Influence of excitation	0.01% FSO/V	
Reverse polarity	Protected	
Shock resistance	No change in performance after 20Gs	
Vibration	0.1g max.	
Response time (10~90%)	$\pm$ 500 mSec.	
Adjustment range	Free	
Performance specification		
Accuracy	$\pm$ 0.2% FSO	
Non-linearity	Better than $\pm$ 0.10% FSO	
Repeatability	Better than $\pm$ 0.05% FSO	
Long term stability	Better than $\pm$ 0.05% FSO per month	
Cutoff frequency	$\pm$ 1kHz	
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	

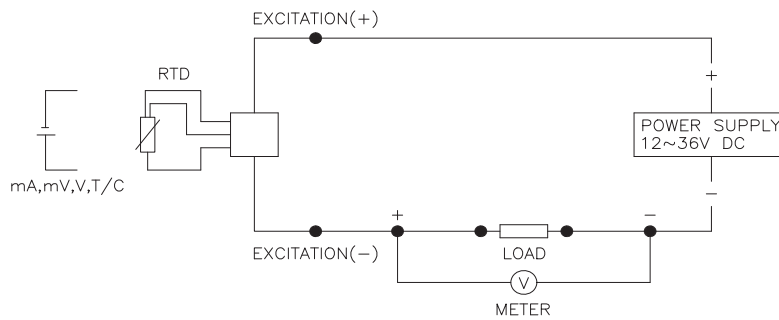
## Sensor type, range, accuracy

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	

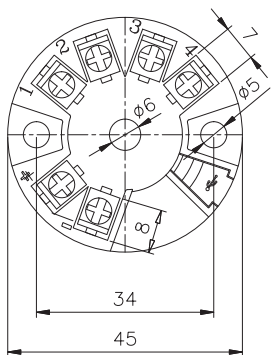
## Specification

Thermocouple elements (T/C)				
Input	Measuring range	Min. measured 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. measured 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)			

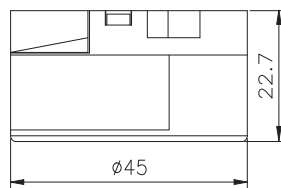
## System connection for 2-wire transmitter



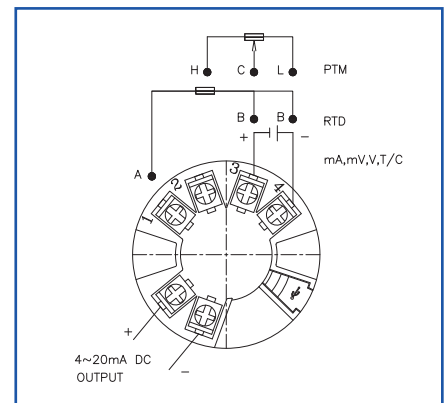
## Dimension (mm)



## Transmitter



## Electrical connection



## 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	N Sample ordering code
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