General Purpose Temperature Transmitter
Model : T155 (Circular Connector)
T156 (DIN Connector)
T157 (Flying Leads)
T158 (General Head)

WISE SENSOR

Advantages

- Two wire 4~20mA current output signal
- RTD inputs
- Measuring ranges from -50 to 500°C
- Loop powered 4~20mA
- Excellent accuracy and long term stability

T155

T156

Applications

These are recommended in applications requiring amplification of low level mV / RTD signals to carry to a long distance or guard against heavy field electrical noise. The transmitter converts RTD inputs to an analog signal for direct interface with indicators, recorders, controllers, PLC, DCS systems can be used for a wide range ofapplications in process control, automatic machinery and hydraulic or pneumatic system design.

T157

T158

Descriptions

T150 series temperature transmitters are designed to fit into standard weather terminal heads used on RTD assemblies to provide a 4~20mA transmission signal. It is a cost effective solution for all temperature measurement and accurate,durable and reliable. Numerous configurations for measurement in many different mediums areoffered.

Generally the transmitter produces a linear 4~20mA output carried on a 2-wire system andoptional voltage range of 1~5V DC can also be available.

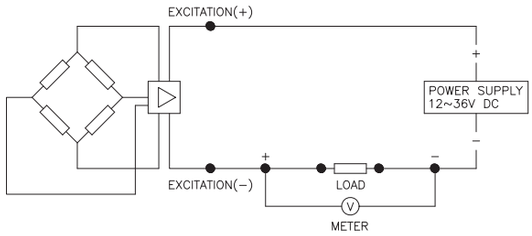
The transmitter is supplied factorycalibrated, but also has zero and span potentiometers for field adjustment or calibration.

T150 provides a loop powered 4~20mA / 2-wire and in the harzadous environment, explosionprotected terminal head can be also available.

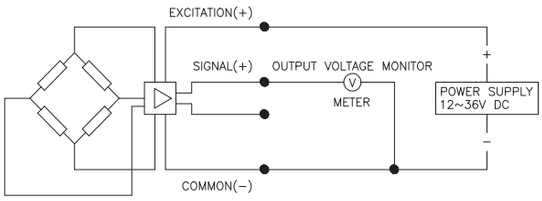
Specification

Input				
Measuring range	PT100 ohm, JIS-C-1604-1981			
Thermocouple	-50~500°C			
Output				
	Current output		Voltage output	
Electrical connection type	2-wire technique		3 or 4-wire technique	
Full scale output signal	20mA	± 0.2%	5V	± 0.2%
Zero measured output	4mA	± 0.03%	1V	± 0.03%
	Other signals available on request			
Electrical Specification				
Excitation voltage	24V DC (12~36V DC)			
Load resistance max @ 24V	500Ω at 24V			
Influence of excitation	0.01% FSO/V			
Burnout	Upscale (approx. 23mA DC) or downscale (approx. 3mA DC)			
Reverse polarity	Protected			
Shock resistance	No change in performance after 10Gs for 11ms			
Vibration	5g (10~2000Hz)			
Response time (10~90%)	± 500 mSec.			
Adjustment	± 20% FSO / zero and span			
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 (-3 d B)	± 2KHz			
Ambient temperature limits	-20~85°C			
Ambient operating humidity	5~100% RH			
Physical Specification				
Process connection	PT, NPT male thread			
	Other connections available on request			
Process media	Gases and liquids compatible with stailess steel 316			
Materials wetted by process	Stainless steel 316 and others available on request			
Enclosure rating	IP65			
Influence of mounting position	Not critical			
Options	Protection well			

System connection for 2-wire transmitter

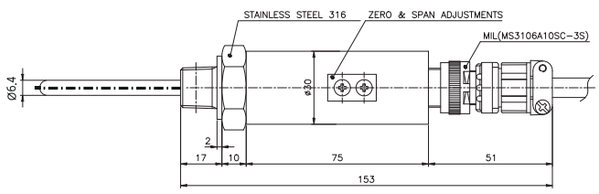


System connection for 3-wire transmitter

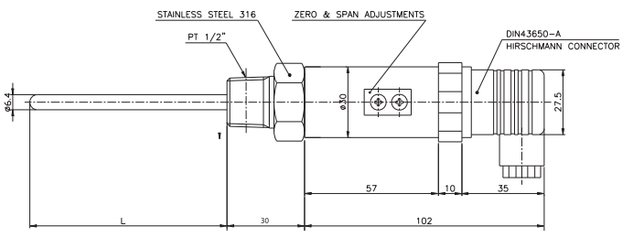


Dimension (mm)

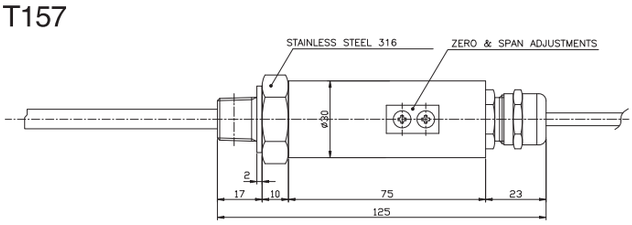
T155



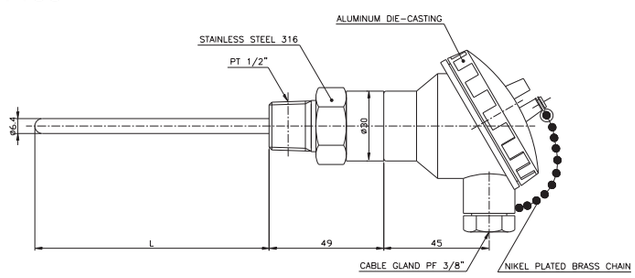
T156



T157



T158



Electrical connection

E : Excitation
S : Signal
C : Common

Circular connector

System / Color	2-Wire	3-Wire	4-Wire
Red	E +	E +	E +
Black	E -	C -	E -
Green		S +	S +
White			S -
GND	Shielded	Shielded	Shielded

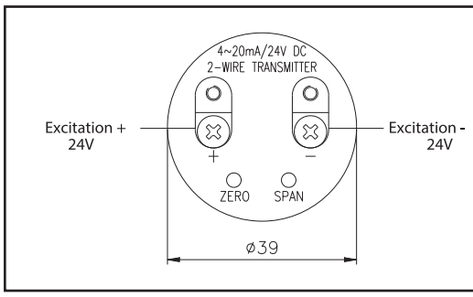
DIN connector

System / Color	2-Wire	3-Wire	4-Wire
1	E +	E +	E +
2	E -	C -	E -
3		S +	S +
GND	Shielded	Shielded	S -

Flying Lead

System / Color	2-Wire	3-Wire	4-Wire
Red	E +	E +	E +
Black	E -	C -	E -
Green		S +	S +
White			S -
GND	Shielded	Shielded	Shielded

General head



Ordering Information

General Purpose Temperature Transmitter

1. Base model

T155								Circular Connector
T156								DIN Connector
T157								Flying lead (1.5m cable)
T158								General Head

2. Input signal

P								PT100Ω
N								None signal

3. Process connection type "1"

M								Male thread
F								Flange mounted

4. Process connection type "2"

T								PT thread as standard
J								Frange per JIS
D								Frange per DIN
A								Frange per ANSI
X								Other process connection available on request

5. Process connection size

1								1/2″
2								1″
3								2″
X								Other size available on request

6. Thermo-well

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

7. Measuring range

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

8. Unit

K								Calibration in Celsius scale (°C)
A								Calibration in Fahrenheit scale (°F)

9. Output

N								None options

T156	P	M	T	1	N	01	K	N	Sample ordering code

Specifications subject to change without notice