

---

**Temperature Transmitter**  
**Model : T158 (General Head)**  
**T159 (Explosion Proof Head)**

**WISE**®

---

**Advantages**

- Two wire 4~20mA current output signal
- RTD and thermocouple inputs
- Measuring ranges from -50 to 500°C
- Loop powered 4~20mA
- Explosion protection Ex d IIC T6
- Excellent accuracy and long term stability

**Applications**

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



T158

T159

**Descriptions**

T15X series temperature transmitters are designed to fit into standard weather or explosion-proofed terminal heads used on RTD or thermocouple 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 are offered.

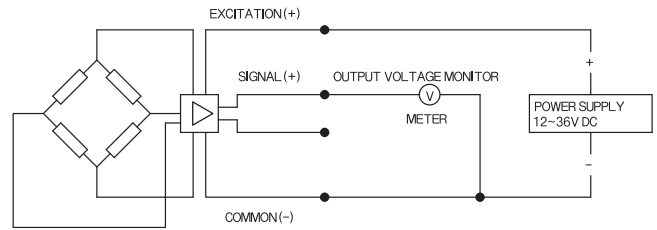
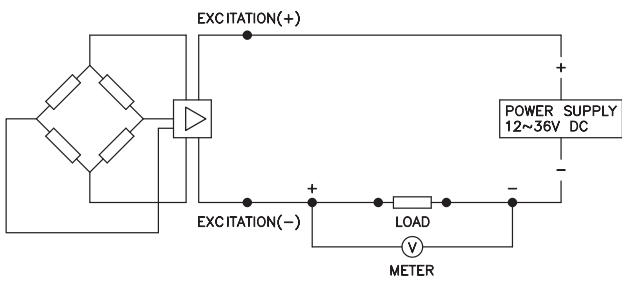
Generally the transmitter produces a linear 4~20mA output carried on a two-wire system and optional voltage range of 1~5V DC can also be available. The transmitter is supplied factory calibrated, but also has zero and span potentiometers for field adjustment or calibration.

T15X provides a loop powered 4~20mA/2-wire and in the hazardous environment, explosion protected terminal head can be also available.

# Specification

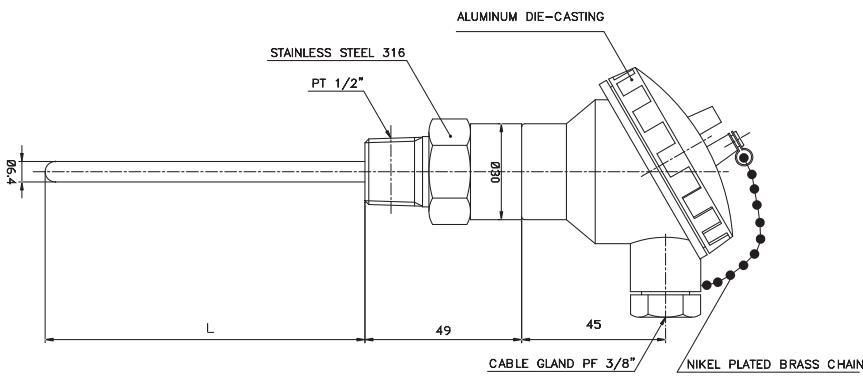
Input		
Measuring range	PT100 ohm, JIS-C-1604-1981	
Thermocouple	-50~500°C	
Output		
	Current output	
Electrical connection type	2-wire technique	
Full scale output signal	20mA	±0.2%
Zero measured output	4mA	±0.03%
	Other output signal available on request	
Electrical Specification		
Excitation voltage	12~36V DC	
Load resistance max@24V	500 $\Omega$ at 24V	
Influence of excitation	0.01% FSO/V	
Burnout	Upscale(approx. 23mA DC) or downscale(approx. 4mA DC)	
Reverse polarity	Protected	
Shock resistance	No change in performance after 10Gs for 11ms	
Vibration	5g (10~2000Hz)	
Response time(10~90%)	±2 milliseconds	
Adjustment range	±20% FSO/zero and span	
Performance Specification		
Accuracy	±0.25% 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	-20~70°C	
Ambient humidity limits	5 to 100% R.H	
Physical Specification		
Process connection	PT1/2" male thread	
	Flange & other connections available on request	
Process media	Gases and liquids compatible with stainless steel 316	
Materials wetted by process	Stainless steel 316L and others available on request	
Material of terminal head	Aluminum die-casting	
Enclosure rating	IP65	
Explosion protection	Ex d IIC T6 (T159)	
Influence of mounting position	Not critical	
Option	Protection well	

**System connection for 2-wire transmitter    System connection for 3-wire transmitter**

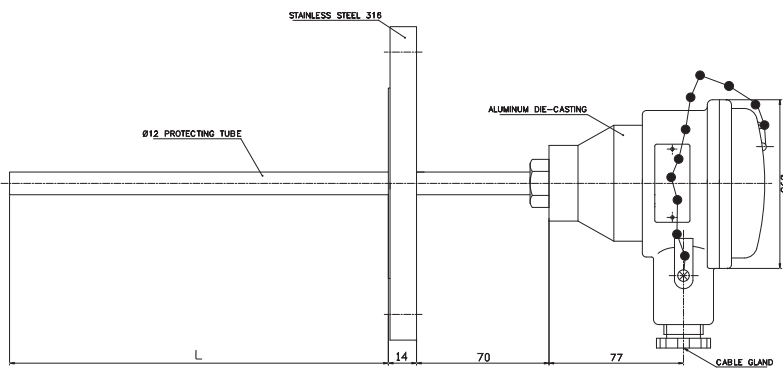
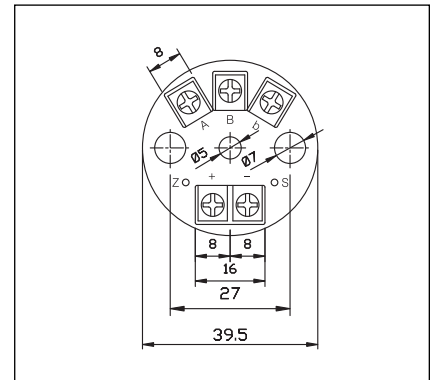


**Dimension(mm)**

**Electrical connection**



**Terminal head**



\* L : Sheath Length(mm)

## Ordering Information

### Temperature Transmitter

T158									Terminal head
T159									Terminal head with Ex-protection
	P								Input signal PT 100 $\varnothing$
		M							Process connection : Male thread mounted
		F							Flange mounted
			T						PT thread
			J						Flange per JIS
			D						Flange per DIN
			A						Flange per ANSI
			X						Other process connection available on request
				1					1/2"
				2					1"
				3					2"
				X					Specify the flange unit clearly
									Other size available on request
					S				With protection thermo-well
					N				Without protection thermo-well
						01			Measuring range -50~0°C
						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
						xx			Other calibration ranges available on request
							C		Calibration in Celsius scale°C
							F		Calibration in Fahrenheit scale°F
							N		None options

T158	P	M	T	1	N	01	C	N	Sample ordering code
------	---	---	---	---	---	----	---	---	----------------------

Specifications subject to change without notice