

**Dual Display,  
Programmable,  
Digital Temperature Transmitter**

**2-wire Loop-powered  
Model : PR-T70**

**Loop-powered transmitter**  
**LED bar-graph & 4 digits dual display**  
**RTD & Thermocouple inputs**  
**Programmable digital temperature transmitter**  
**Compact field case**  
**Fully range adjustable**  
**Excellent accuracy & long term stability**  
**Designed for wide range of applications in ;**  
**Chemical, petrochemical & food process controls**  
**Hydraulic & pneumatic equipments**  
**LPG & LNG Transmission & storage tank monitoring**  
**Power plant**



**GENERAL DESCRIPTION**

PR-T70 Series Digital Temperature Transmitter는 Microprocessor를 내장한 고정도의 온도전송기이다. RTD나 Thermocouple입력을 전류 출력으로 전송하며 내습과 방폭구조로 설계되어 있다.

프로세스 콘트롤, 자동화설비와 유공압시스템에서의 다양한 용도의 온도측정에 적합하며 Element의 입력을 받아 아날로그 출력을 전송함으로 Indicator, Recorder, PLC & DCS시스템에 호환되어 사용할 수 있다. 또한 공장 출하시 온도범위는 설정되지만 사용자의 필요에 따라 현장에서 측정범위를 손쉽게 설정할 수 있으며 영점조정이나 Damping등도 조정이 가능하다. 본 기기는 Dual Display로 측정값을 실제값으로 LED 4-digits로 표시하며 Bar-graph는 측정값을 0~100%로 동시에 표시한다.

## TECHINCAL DATA

### Input

Element Type	Pt 100 ohm
	Thermocouple K, J, E, T type

### Output

Output Signal	4~20mA DC, 2-wire 1~5V DC, 3-wire(Optional)
Local Display	4 Digits, 7-segment digital LED 0~100% Bar-graph display

### Electrical Specification

Electrical Connection	Weater & explosion-proofed field case
Conduit Connection	1/2"PF,Female
Excitation Voltage	10~36V DC
Load Resistance max.@24V	700 ohm at 24V
Influence Of Excitation	0.01% FSO/V
Reverse Polarity	Protected
Response Time	≤2 milliseconds
Adjustment	Fully range adjustable

### Performance Specification

Accuracy	±0.25% FSO
Non-linearity	±0.10% FSO typical
Repeatability	±0.15% FSO typical
Hysteresis	±0.15% FSO typical
Long-term Stability	±0.25% FSO over 6 months
Ambient Temperature Limit	-20~80°C
Ambient Humidity Limit	5~100% R.H

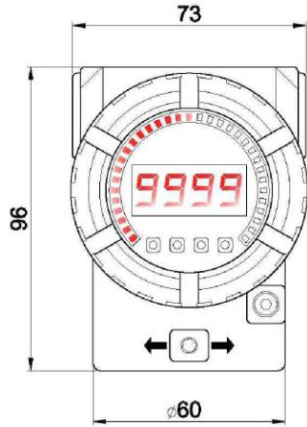
### Physical Specification

Process Connection	Thread Type : PT, NPT, PF, Compression fitting Thread Size : 1/4", 3/8", 1/2" Flange : JIS, ANSI, DIN
Process Media	Gases & liquids compatible with Stainless steel 316 Note : Wetted part teflon coating & lining available
Materials	Field case : ALDC Probe parts : Stainless steel 316
Enclosure Rate	IP67 Ex d IIB T6

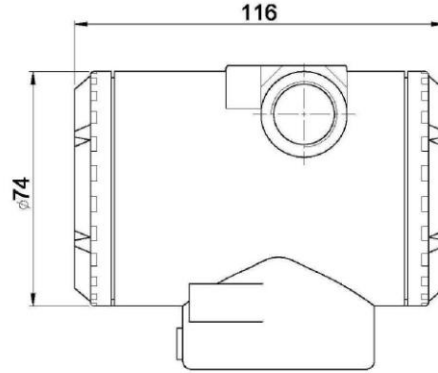
## DIMENSION

### Terminal Head

Front View



Side View



### Wetted Parts Connection

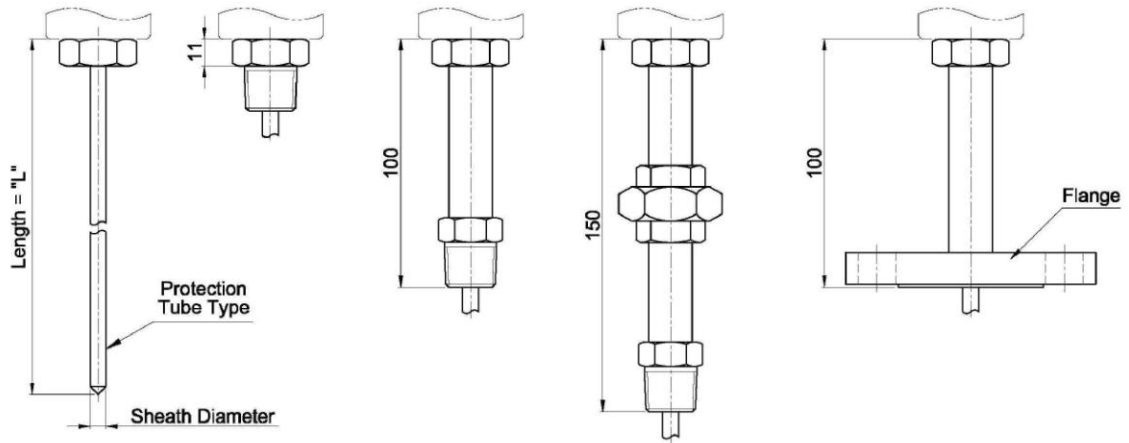
None con'n

Thread type

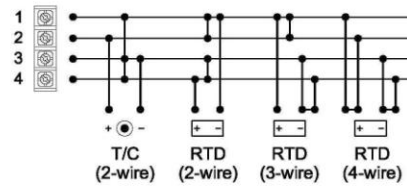
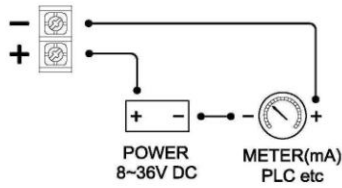
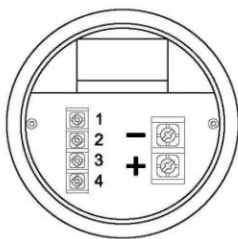
Nipple type

Union type

Flange type



### Electrical Connection



## ORDERING INFORMATION

### Model

PR-T70

Exd II T6 : KT-70

#### Input Signal(Sensing Element)

R : Pt 100ohm  
 K : Thermocouple "K" Type  
 J : Thermocouple "J" Type  
 E : Thermocouple "E" Type  
 T : Thermocouple "T" Type

#### Process Connection Type

X : Refer to Table No.1 on page 28

#### Range(°C)

110 : -50~0  
 111 : -50~50  
 112 : -50~80  
 113 : -50~100  
 114 : 0~50  
 115 : 0~100  
 116 : 0~150  
 117 : 0~200  
 118 : 0~300  
 119 : 0~400  
 120 : 0~500  
 121 : 0~800  
 xxx : Other ranges available on request

#### Unit

A : °C  
 B : °F

#### Output Signal

0 : None-output(Only digital gauge)  
 1 : 4~20mA DC, 2-wire  
 2 : 1~5V DC, 3-wire(Optional)

#### Element specification

x : Refer to Table No.2 on page 28

#### Option

0 None  
 1 Wetted part teflon coating  
 2 Wetted part teflon lining  
 3 Thermo-well  
 4 Thermo-well with teflon coating  
 5 Thermo-well with teflon lining  
 X Other options on request

PR-T70	R	ACB	115	A	1	AABFC	0
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Note 1) Other ranges are available on request.

Note 2) Please make details, if you need Thermo-well assembly according to Table No.3 on page 29

**Table No.1 For Process Connection**

1'st character		2'nd character			3'rd character			
Mounting type		Connection size			Connection type			
Code	Type	Code	Size		Code	Type	Code	Type
A	Fixed thread	A	1/4"	8A	A	PF	F	JIS10K RF
B	Nipple	B	3/8"	10A	B	PT	G	JIS10K FF
C	Union & nipple	C	1/2"	15A	C	NPT	H	JIS20K RF
D	Comp.fitting	D	3/4"	20A	D	UNF	I	JIS20K FF
E	Flange	E	1"	25A	E*	C.F	J	JIS30K RF
F	None	F	1 1/4"	32A			K	JIS30K FF
		G	1 1/2"	40A			L	ANSI 150# RF
		H	2"	50A			M	ANSI 150# FF
		I	2 1/2"	65A			N	ANSI 300# RF
		J	3"	80A			O	ANSI 300# FF
		K	4"	100A			P	ANSI 600# RF
							Q	ANSI 600# FF

Note E\* : Compression fitting  
Other process connection available on request

**Table No.2 For Element specification**

1'st character		2'nd character		3'rd character		4'th character		5'th character	
Element		Material		Grade		Out-diameter(mm)		Probe length(mm)	
Code	Element	Code	Material	Code	Class	Code	Diameter	Code	Length
A	Single	A	316 SS	A	0.4 / A	A	1.0	A	50
B	Double	B	Inconel	B	0.75 / B	B	1.6	B	75
						C	2.3	C	100
						D	3.2	D	150
						E	4.8	E	200
						F	6.4	F	250
						G	8.0	G	300
						H	10.0	H	500
						I	12.0	I	750
						J	14.0	J	1000
						K	15.0	K	1500
						L	17.3	L	2000
						M	21.7	M	2500
								N	3000
								O	3500
								P	4000

Note : Special length available on request