

DUAL DISPLAY, PROGRAMMABLE, DIGITAL TEMPERATURE SWITCH & TRANSMITTER

FEATURES

- Adjustable 2 switch points
- Loop-powered transmitter
- LED bar-graph & 4 digits dual display
- RTD & Thermocouple inputs
- Programmable pressure switch & transmitter
- Compact field case
- Fully range adjustable
- Excellent accuracy & long term stability

APPLICATIONS

- A wide range of application in ;**
- Chemical & petrochemical process
- Food & drug process controls
- Hydraulic & pneumatic equipments
- Machines tools & automatic machinery
- LPG & LNG transmission & storage controls
- Engine monitoring & control
- Pump & motor controls

GENERAL DESCRIPTION

KT-30 Series microprocessor based digital temperature switch combined analog output signal is ideal for the applications that require high accurate process control and monitoring. KT-30 with its built-in piezoresistive silicon pressure cell, 4 digit digital LED & bar-graph display, 2 switching points, 4~20mA analog output signal and a front function keys, offers the user all the advantages of a modern electronic temperature measurement. External adjustments allow the user to set the ranges, switch points, damping, zero & span calibration, etc. The pressure to be measured acts through thin corrosion resistant stainless steel 316L diaphragm on a piezoresistive silicon measuring element. The transmitting medium of pressure is oil. The measuring element contains diffused piezoresistive resistors which are connected into a Wheatstone bridge. The output signal of



TECHINCAL DATA

Input

Element Type	Pt 100 ohm Thermocouple K, J, E, T type
Out-diameter	1.0, 1.6, 2.3, 3.2, 4.8, 6.4, 8, 10, 12

Output

Output Signal	Digital temperatype gauge(Without output signal) 2 Relay points(High/Low) 4~20mA Analog output signal 4~20mA Analog output signal & 2 Relay points(High/Low)
Local Display	4 Digits, 7-segment digital LED LED Bar-graph(Red) 2 alarm lamps Unit for process value

Electrical Specification

Electrical Connection	Weater & explosion-proofed field case
Conduit Connection	1/2"PF,Female
Excitation Voltage	10~36V DC
Load Resistance max.@24V	750 ohm at 24V
Influence Of Excitation	0.01% FSO/V
Reverse Polarity	Protected
Response Time	≤2 miliseconds
Adjustment	Fully range adjustable

Performance Specification

Accuracy	±0.2% FSO
Non-linearity	±0.10% FSO typical
Repeatability	±0.05% FSO typical
Hysteresis	±0.05% FSO typical
Long-term Stability	±0.3% FSO over 6 months
Ambient Temperature Limit	-20~80 °C
Ambient Humidity Limit	5~100% R.H

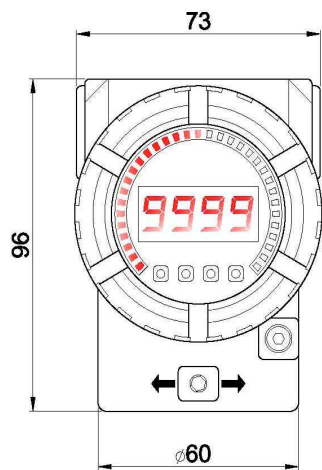
Physical Specification

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

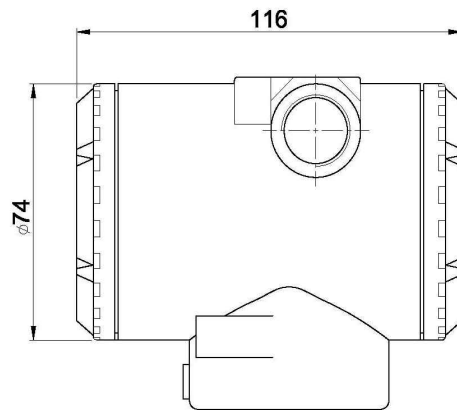
DIMENSION

Terminal Head

Front View

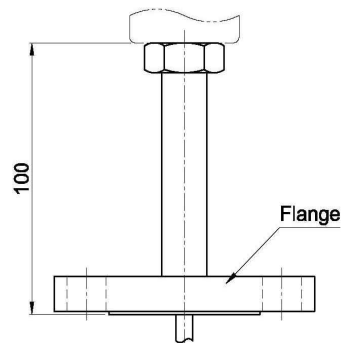
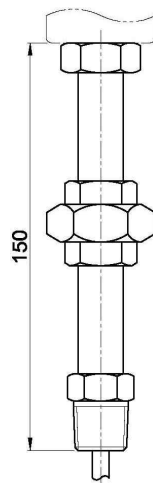
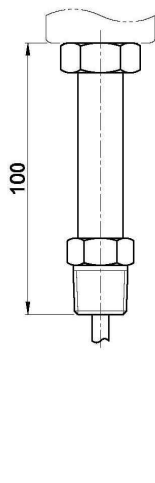
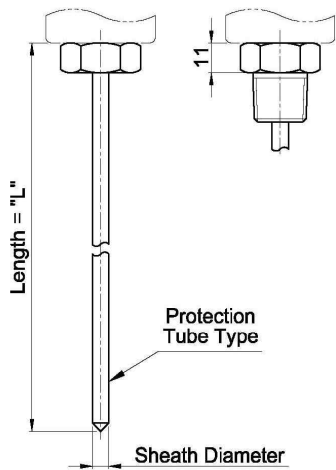


Side View

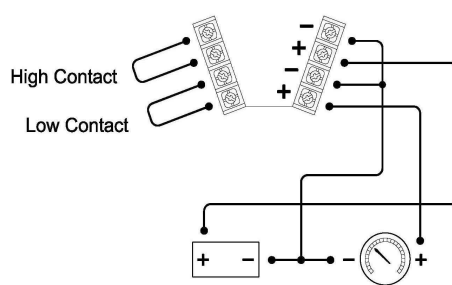
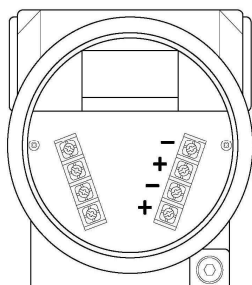


Wetted Parts Connection

None con'n Thread type Nipple type Union type Flange type



Electrical Connection



ORDERING INFORMATION

		Order Code
Model		KT-30
Input Signal	R : Pt 100ohm	R
(Sensing Element)	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 next page	ACB
Range(℃)	110 : -50~0	115
	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 : ℃	A
	B : °F	
Output Signal	0 : None-output(Only digital gauge)	1
	1 : 4~20mA DC, 2-wire	
	2 : 1~5V DC, 3-wire(Optional)	
Element specification	x : Refer to Table No.2 on next page	AABFC
Option	0 None	0
	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	

- Note**
- 1) Other ranges are available on request.
 - 2) Please describe the specification in details, if you need Thermo-well assembly.

Specifications subject to change without notice.

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

