

GENERAL

ALIATEMP ATT1000 two-wire input temperature transmitter is a high performance device that receives Thermocouple/RTD/ohm/ mV input and output mA with HART communication protocol. Three internal keys to set parameter. Zero span calibration can be achieved either by HART or keypad.

FEATURES

- Updating time of output current in 90 ms
- Backlit LCD display rotatable to any angle
- Two years stability of 0.1%
- Accuracy +/-0.1% of Span
- Parameter setting by keypad directly
- 4-20 mA output plus direct digital HART communication
- Automatic zero calibration by press-button
- Explosion proof and weather proof housing

STANDARD SPECIFICATION

- Inputs : Universal Input
- Thermalcouple : T/C (K, S, B, E, J, T, R, N).....
- RTD : CU50 / PT100, 2/3/4 wire.....
- mV : -128 to +128mV / -1000 to +1000mV.....
- Resistance : 0-600 Ω / 0-5000 Ω
- Accuracy : +/- 0.1% of span
- Stability : +/- 0.1% of span for 2 years
- Temperature Effect : +/- 0.1% of span per 10 $^{\circ}$ C
- CJC compensation : +/- 0.5 $^{\circ}$ C
- Simulation Output : 4-20 mA
- Material
 - Wetted Parts : SUS304 / SUS316 / Has. C / Tantalum etc
 - Housing : Low copper aluminum alloy (Sprayed with light blue polyurethane paint)
 - Module Housing : Flame-resistant PC
 - Name / Tag Plate : Stainless Steel 304 / Stainless Steel 316
- Process Connection : Threads / Flanges
- Over Temp. Limit : 120% of Full Scale
- Mounting : Direct mounting or bracket on 2" Pipe
- Humidity Limit : 0 to 100% Relative Humidity
- Ambient Temperature : -25 to +85 $^{\circ}$ C
- Vibration Effect : +/-0.05% of URL per g to 200 Hz in any axis
- EMI / RFI Effect : Follow SAMA PMC 33.1 from 20 to 1000 MHz and for field strengths up to 30 V/m



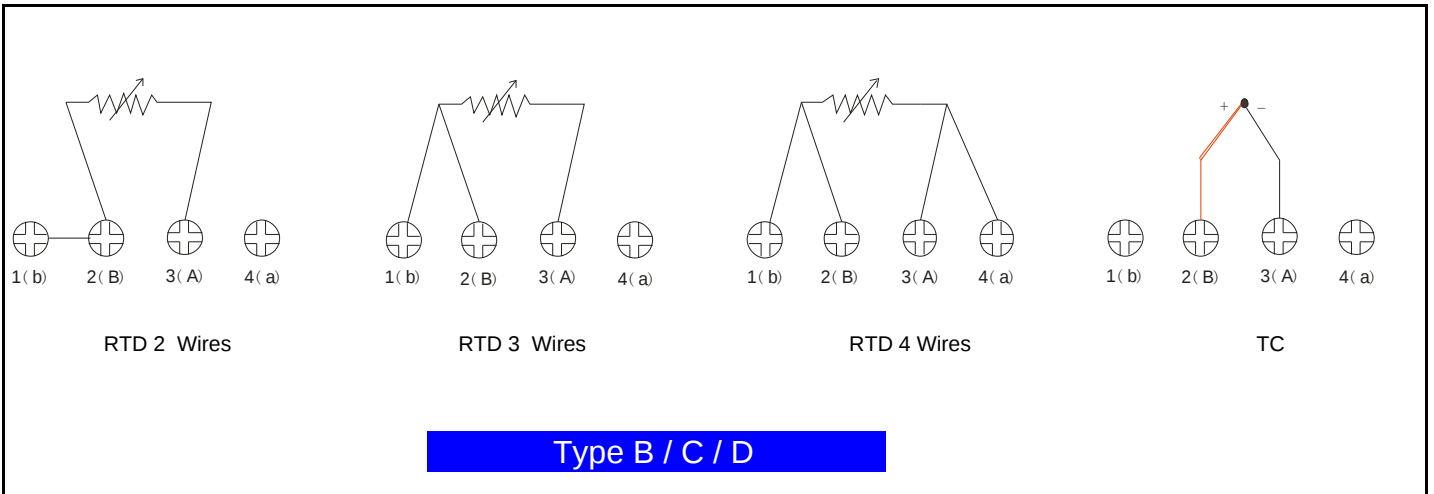
- Display : Backlit LCD rotatable to any angle
- Display Function : 5 Digits programmable & 0-100% Bargraph
- Display Unit : $^{\circ}$ C / $^{\circ}$ F / $^{\circ}$ R / $^{\circ}$ K
- Setting Method :
 - B Type : USB+PC software (windows system)
 - C Type : HART signal
 - D Type : HART signal & keypad
- Current Output : 4 - 20 mA 2 wires with HART Signal
- Load : Rohm = (Vdc-9) x 50
- Power Supply : 9 ~ 36 VDC
- Digital Communication : HART Protocol
- Cable Entry : M20 Conduit Threads / 1/2" NPT (Female)
- Damping : 0 - 32 seconds
- Response Time : 100 mS
- Turn on Time : 2 Seconds with minimum damping
- Zero Calibration : Automatic zero calibration by press-button
- Isolation : Input/Output/GND isolated to 480VDC
- Power Supply Effect : +/-0.005 of Span per V
- Weight : 60g (Converter only) with display
30g (Converter only) without display
- Protection Class : IP67 (Standard)
Intrinsically Safe EEx ia IIC T5 (Standard)
Explosion proof Ex D IIB T5
- Sensor Connection : M27*2 (Female)



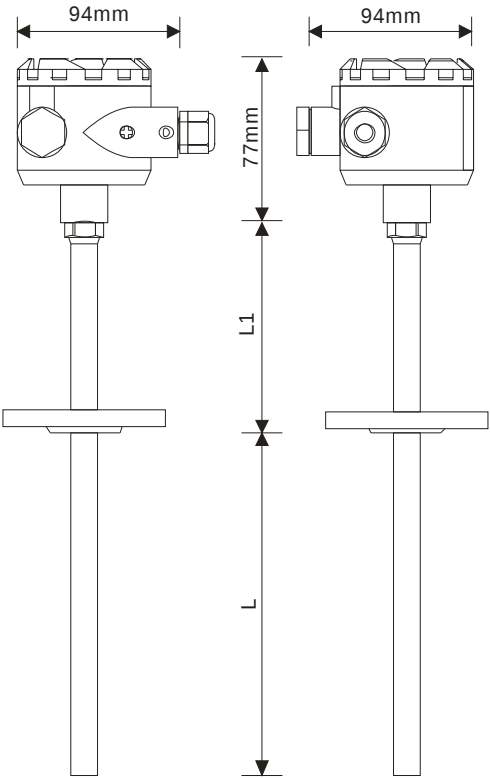
MEASURING RANGE

Input Type		Range (°C)			Range (°F)			Standards	Apply to ATT1000
T/C	K	-200.0	to	1372.0	-328.0	to	2501.6	IEC 584-1 (ITS-90)	Type B Type C Type D
	S	0.0	to	1768.0	32.0	to	3214.4	IEC 584-1 (ITS-90)	
	B	100.0	to	1820.0	212.0	to	3308.0	IEC 584-1 (ITS-90)	
	E	-200.0	to	1000.0	-328.0	to	1832.0	IEC 584-1 (ITS-90)	
	J	-200.0	to	1200.0	-328.0	to	2192.0	IEC 584-1 (ITS-90)	
	T	-200.0	to	400.0	-328.0	to	752.0	IEC 584-1 (ITS-90)	
	R	0.0	to	1768.0	32.0	to	3214.4	IEC 584-1 (ITS-90)	
	N	-200.0	to	1300.0	-328.0	to	2372.0	IEC 584-1 (ITS-90)	
	DIN L	-200.0	to	900.0	-328.0	to	1652.0	DIN 43710	Type D
	DIN U	-200.0	to	600.0	-328.0	to	1112.0	DIN 43710	
	W5Re26	0.0	to	2000.0	32.0	to	3632.0	ASTM E 988-96	
	GOST L	-200.0	to	800.0	-328.0	to	1472.0	GOST R 8.585-2001	
RTD	CU10	-50.0	to	250.0	-58.0	to	482.0	Edison Copper Winding No.15	Type D
	CU50	-50.0	to	200.0	-58.0	to	392.0	GOST 6651-94(0.00426)	Type B, D
	CU50	-185.0	to	200.0	-301.0	to	392.0	GOST 6651-94(0.00428)	Type D
	CU100	-50.0	to	200.0	-58.0	to	392.0	GOST 6651-94(0.00426)	Type B, D
	CU100	-185.0	to	200.0	-301.0	to	392.0	GOST 6651-94(0.00428)	Type D
	PT50	-200.0	to	550.0	-328.0	to	1022.0	GOST 6651-94(0.00391)	Type C, D
	PT50	-200.0	to	550.0	-328.0	to	1022.0	IEC751 (ITS-90)(0.00385)	Type D
	PT100	-200.0	to	850.0	-328.0	to	1562.0	IEC751 (ITS-90)(0.00385)	Type B, C, D
	PT100	-200.0	to	645.0	-328.0	to	1193.0	JIS 1604(0.003916)	Type D
	PT100	-200.0	to	550.0	-328.0	to	1022.0	GOST 6651-94(0.00391)	
	PT200	-200.0	to	850.0	-328.0	to	1562.0	IEC751 (ITS-90)(0.00385)	Type D
	PT500	-200.0	to	850.0	-328.0	to	1562.0	IEC751 (ITS-90)(0.00385)	Type C, D
	PT1000	-200.0	to	850.0	-328.0	to	1562.0	IEC751 (ITS-90)(0.00385)	
Ni 120	-70.0	to	300.0	-94.0	to	572.0	Edison Curve No.7	Type D	
Ohm		0.0 Ω to 600.0 Ω						Type C, D	
		0.0 Ω to 5000 Ω							
mV		-128.0 mV to 128.0 mV						Type C	
		-1024 mV to +1024 mV							
		-120.0 mV to 120.0 mV						Type D	
		-1000 mV to +1000 mV							

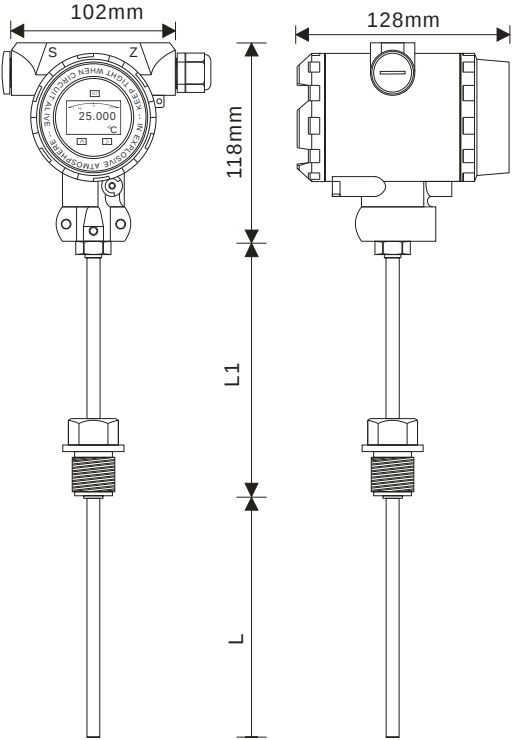
WIRING DIAGRAM



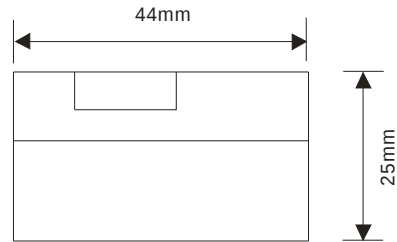
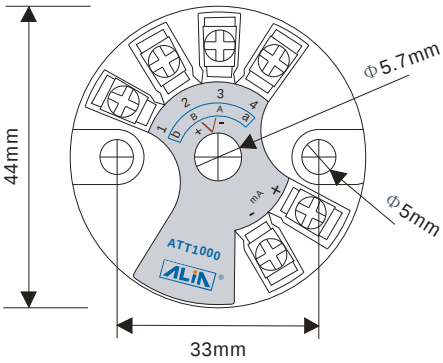
DIMENSIONS



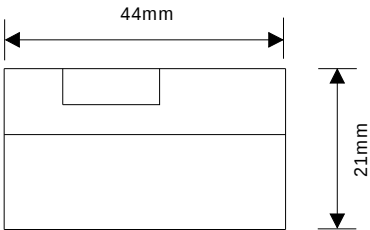
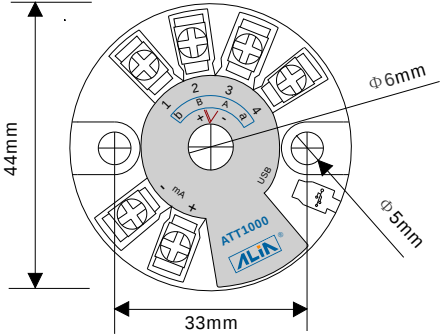
Type B / C



Type D



Type C

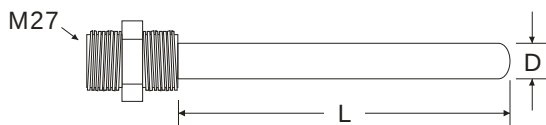


Type B

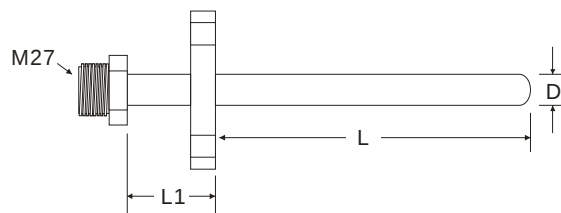
MODEL SELECTION GUIDE

ATT1000 Series									
Example: ATT1000-DH-NN6X + PT100/ ClassA/ Has.C/8.0/100mm/ 1/2" NPT/ 50mm/ -50 to +300 °C									
ATT1000-	X	X	-X	X	X	X	Description		
Type	B						Transmitter Only (Computer Setting) *Note 1		
	C						Transmitter Only (Hart Signal Setting)		
	D						Transmitter with Display & Keypad (Hart Signal Setting)		
Housing	N						Without Housing		
	S						Type B / C with Housing		
	H						Type D with Housing		
If choose Type BN or CN, model is up to here.									
Cable Entry	-N						M20 Conduit Threads		
	-P						1/2" NPT (Female)		
	-Z						Other		
Mounting Bracket	N						None (Direct Connection with Temperature Sensor)		
	C						2" Mounting Bracket / Carbon Steel		
	4						2" Mounting Bracket / SUS 304		
	6						2" Mounting Bracket / SUS 316		
Name Plate Material	N						Stainless Steel 304		
	6						Stainless Steel 316		
Protection Class	N						Intrinsically Safe		
	X						Explosion Proof, Ex d IIC T6		
If you need to buy Temperature Sensor from Alia, please choose extension model as below:									
Sensor Type		T/C (K, S, B, E, J, T, R, N), CU50, PT100, PT500, PT1000							
Sensor Accuracy Class		RTD (Class A, Class B), T/C (Class I, Class II)							
Wetted parts Material		SUS304, SUS316, Inconel600, Has. C, PTFE, Ceramic ...etc							
Sensor OD (D)		3.2 / 4.0 / 4.8 / 5.0 / 6.0 / 8.0 / 9.5 / 12 / 15mm							
Sensor Length (L)		50mm-1500mm							
Process Connection		1/2" , 3/4", 1" , 1-1/2" (15mm, 20mm, 25mm, 40mm)							
Screw / Flange		NPT, BSP, ANSI 150 , PN10, JIS 10K...etc							
Extension Length (L1)		0mm-1000mm (Temp.>120 °C , L1>100mm; Temp.> 300, L1>150mm ...)							
Temperature Range		-200 °C ~ +1800 °C (Please make sure your temperature equal to 4-20 mA)							

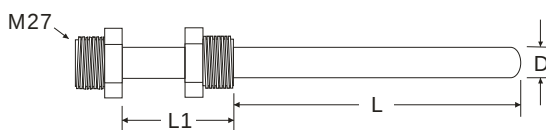
Note 1: Type B transmitter needs to be set by Alia Software & USB Cable.



Screw End without Extension



Flange End with Extension



Screw End with Extension