

## GENERAL

**ALIATEMP** The ATT1000 Series two-wire input temperature transmitter is a high performance device that receives Thermocouple / RTD / W / 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

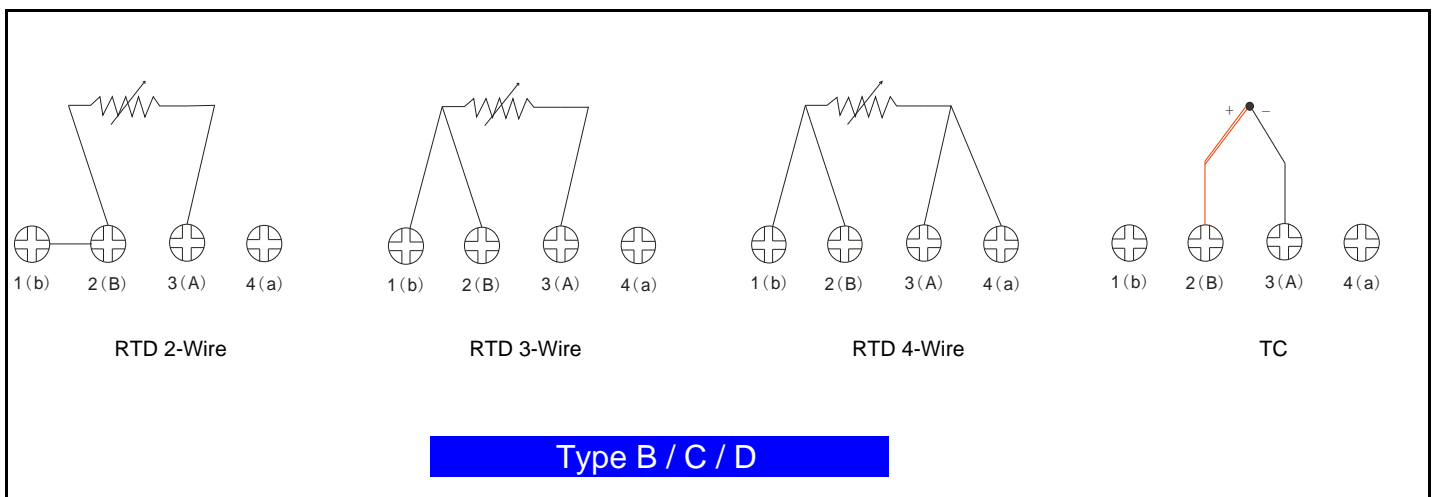
- Inputs : Universal Input
  - Thermocouple : T/C (K, S, B, E, J, T, R, N).....
  - RTD : CU50 / PT100, 2 / 3 / 4-Wire.....
  - mV : -128~128 mV / -1000~1000 mV.....
  - Resistance : 0-600 Ω / 0-5000 Ω
- Accuracy : +/-0.1% of span
- Stability : +/-0.1% of span for 2 years
- Temperature Effect : +/-0.1% of span per 10 °C
- CJC Compensation : +/-0.5 °C
- Simulation Output : 4-20 mA
- Material
  - Wetted Parts : S.S. 304 / S.S. 316 / 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 : 0-100% Relative Humidity
- Ambient Temperature : -25~85 °C
- Vibration Effect : +/-0.05% of URL per g to 200 Hz in any axis
- EMI / RFI Effect : Follow SAMA PMC 33.1 from 20-1000 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 : °C / °F / °R / °K
- Setting Method
  - B Type : USB + PC software (windows system)
  - C Type : HART signal (Compatible)
  - D Type : HART signal (Compatible) & keypad
- Current Output : 4-20 mA 2-Wire with HART Signal
  - Load : Rohm = (VDC-9) \* 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 480 VDC
- Power Supply Effect : +/-0.005 of Span per V
- Weight : 60 g (Converter only) with display  
30 g (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)



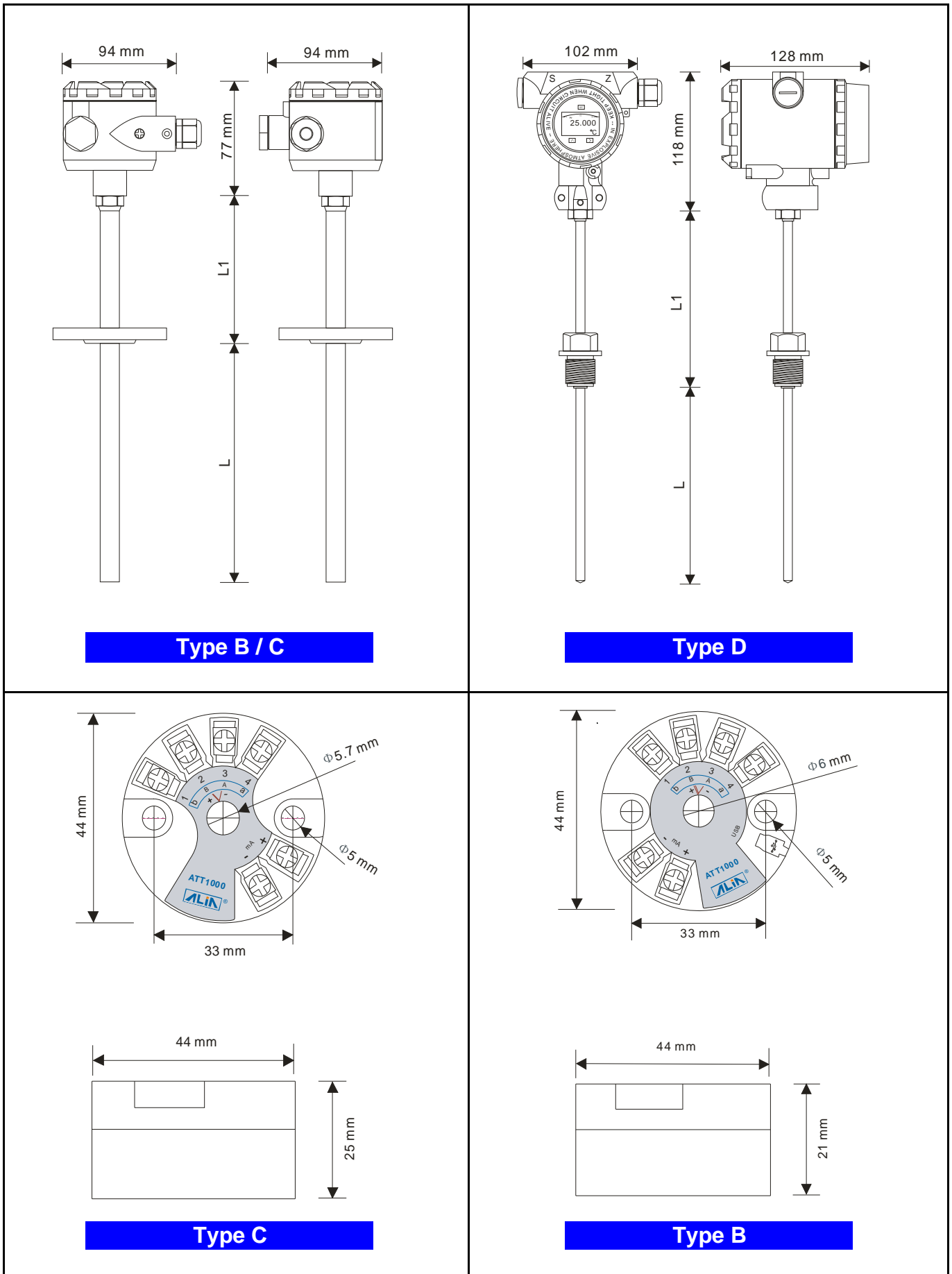
**MEASURING RANGE**

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)	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**



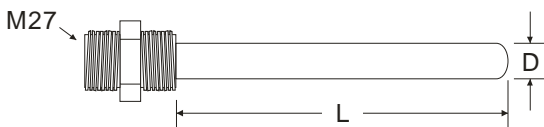
**➤ DIMENSIONS**



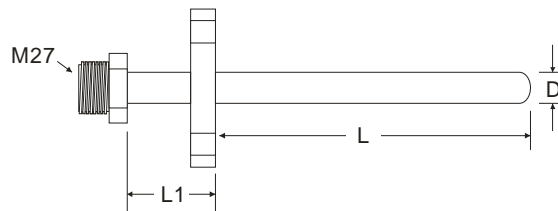
**MODEL SELECTION GUIDE**

ATT1000 Series							
Example: ATT1000-DH-NN6X + PT100 / ClassA / Has.C / 8.0 / 100 mm / 1/2" NPT / 50 mm / -50~300 °C							
ATT1000-	X	X	-X	X	X	X	Description
Type	B						Transmitter Only (Computer Setting) * Note 1
	C						Transmitter Only (Hart Signal Setting) (Compatible)
	D						Transmitter with Display & Keypad (Hart Signal Setting) (Compatible)
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 / S.S. 304
	6						2" Mounting Bracket / S.S. 316
Name Plate Material	N						Stainless Steel 304
	6						Stainless Steel 316
Protection Class	N						Intrinsically Safe, Eex ia IIC T5 (Standard)
	X						Explosion Proof, Ex d IIB T5
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	S.S. 304, S.S. 316, Inconel600, Has. C, PTFE, Ceramic etc.						
Sensor OD (D)	3.2 / 4.0 / 4.8 / 5.0 / 6.0 / 8.0 / 9.5 / 12 / 15 mm						
Sensor Length (L)	50-1500 mm						
Process Connection	1/2", 3/4", 1", 1-1/2" (15 mm, 20 mm, 25 mm, 40 mm)						
Screw / Flange	NPT, BSP, ANSI 150#, PN10, JIS 10K etc.						
Extension Length (L1)	0-1000 mm (Temp.>120 °C, L1>100 mm; Temp.>300, L1>150 mm...)						
Temperature Range	-200~1800 °C (Please make sure your temperature equal to 4-20 mA)						

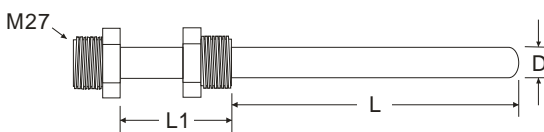
Note 1: Type B transmitter needs to be set by Alia Software & USB Cable.



Screw End without Extension



Flange End with Extension



Screw End with Extension