

1. INTRODUCTION

1.1 Product over View / Description:

- Universal temperature transmitter
- Input for resistance thermometers (RTD), thermocouples (TC) & mV
- Settable via PC-Programmable
- Isolation up to 1.5 KVAC
- The slim housing with 12.5 mm wide for DIN-rail mounting

1.2 Application Areas:

- Temperature Transmitter for converting various input signal into a scalable 4 to 20 mA analogue output signal
- **Input:**
 - Thermo couple(TC)
 - Resistance Thermometer(RTD)
 - Voltage Transmitter (mV)

1.3. Performance:

- Universal setting with PC-Programmable for various input signals
- 2 wire technology, 4 to 20 mA & 20 to 4 mA Analog output(selectable)
- High accuracy in total ambient temperature range
- Galvanic isolation
- An internal temperature sensor for active temperature compensation
- Wide voltage range
- Customer specific measurement range

2 .SAFETY AND WARNING NOTES

2.1. Safety Precautions:

Before installation or beginning of any troubleshooting procedures the power to all equipment must be switched off and isolated. Units suspected of being faulty must be disconnected and removed first and brought to a properly equipped workshop for testing and repair. Component replacement and interval adjustments must be made by a company person only.

2.2. Warning Precautions:

- ⚠ Before wiring, verify the label for correct model no. and options.
- ⚠ Wiring must be carried out by personnel, who have basic electrical knowledge and practical experience.
- ⚠ All wiring must confirm to appropriate standards of good practice and local codes and regulations. Wiring must be suitable for voltage, current, and temperature rating of the system.
- ⚠ Beware not to over-tighten the terminal screws.
- ⚠ Unused control terminals should not be used as jumper points as they may be internally connected, causing damage to the unit.
- ⚠ Verify that the ratings of the output devices and the inputs as specified in Chapter 3 are not exceeded.

3. SPECIFICATIONS

SPECIFICATION	DESCRIPTION	
Input	RTD : PT100 3-WIRE (0.1°C) (Automatic 3 wire Compensation) T/C : E, J, K,T,B,R,S,N (ANSI standard) LINEAR: 0-75mV/0 - 500 mV DC Potentiometer : 0 -2500Ω/0-5000 Ω	
Input Range	INPUT TYPE	INPUT RANGE
	E	-200 to 1000°C
	J	-200 to 1200°C
	K	-200 to 1370°C
	T	-200 to 400°C
	B	450 to 1820°C
	R	0 to 1750°C
	S	0 to 1750°C
	N	-200 to 1300 °C
	PT100	-200 to 850 °C
LINEAR	0-75mV/0 - 500mV	
Potentiometer	0-2500Ω/0-5000 Ω	
Accuracy	0.1% Full Span ± 1 Degree	
Resolution	16 bits	
Output	4-20 mA or 20-4 mA (user selectable)	
Sensor break o/p	< 3.8 or >21mA user selectable.	
Galvanic Isolation	1500VAC for 1 minute between input & output.	
Input impedance	>1MΩ	
Power supply	7.5-36 VDC	
Output load	R load= (V supply - 7.5)/0.021 Ohm	
Zero & Span adjustment	Through PC-Programmable S/W	
Calibration	<ul style="list-style-type: none"> • Zero and Span calibration for input via PC-Programmable. • CJC for T/C type input and 3-wire lead compensation for RTD sensor is automatic. • Instrument Warm-up Time approx. 30 Min. 	
BurnOut Current	<1 uA	
Ambient temperature	0 to 55 °C	
Humidity	30 % to 90 % RH (Non Condensing)	
Response time	< 1 sec.	
Ambient temp. effect	100ppm	
CMRR	120 dB	
NMRR	≈ 40 dB	
Linearization Method	Through S/W using micro controller	
Mechanical Specification	99X114.5X12.5 mm	
Body Construction	ABS plastic	
Case color	Green	
Weight	Approximately 0.90 Kg.	
Mounting	Din- Rail	

Table 1: Specification

O/P 4 to 20 mA:

- ⚠ 4 to 20 mA output is according to the range selection.
- ⚠ For example: RTD I/P low range: 0 °C
 High range: 800°C

PV	0 °C	800°C	-10°C (-1.25%)	840° C (+5%)	RTD Open
o/p mA	4mA	20mA	3.8mA	20.8 mA	<3.8 or>21m A (sel.)

4.2 Dimensions:

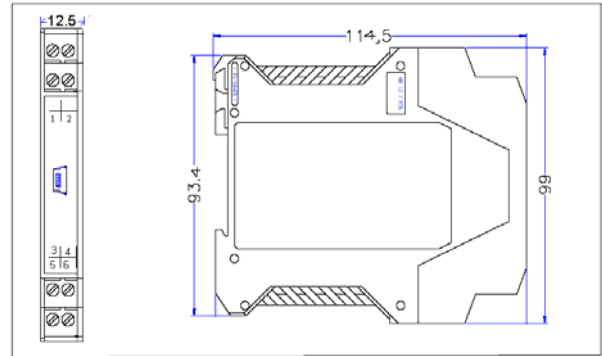


Figure 2: Dimension Details

4. INSTALLATION GUIDELINES

4.1 Terminal Connection

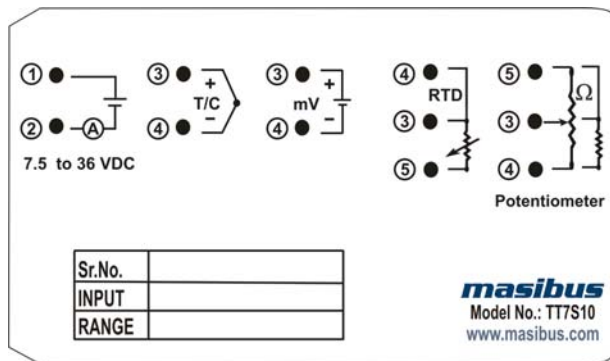


Figure 1: Terminal connection

1. Terminal 1 & 2:
 Power Supply Input (7.5-36VDC).
5. Terminal 3, 4 & 5:
 For RTD Input Only
6. Terminal 3 & 4:
 For T/C & Linear Input

Note:

- ⚠ **UNPACKING:** Upon receipt of the shipment remove the unit from the carton and inspect the unit for shipping damage. If any damage due to transit, report and claim with the carrier. Write down the model number, serial number, and date code for future reference, when communicating with our **Customer Support Division**.
- ⚠ Do not use this instrument in areas such as excessive shock, vibration, dirt, moisture, corrosive gases or rain. The ambient temperature of the areas should not exceed the maximum rating specified.

5. Maintenance:

- ⚠ As a precautionary step, please switch off the units before troubleshooting. Disconnect the Unit suspected of being faulty and bring it to workshop for testing and repair. Component replacement or any other change must be made by a company person only.

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