

## TEMPERATURE CONTROLLER

**FRONT VIEW**



SIZE : 96(W) X 48(H) X 120(D) in mm.  
 CUTOUT : 92(W) X 44(H) in mm.

**BACK VIEW**

BACK VIEW	O/P						TX - TX +	
	RELAY-1						RS 485	
9	10	11	12	13	14	15	16	
230 VAC			RELAY-1			RELAY-2		BACK VIEW
P	N	E	NO1	C1	NC1	C2	NC2	
MODEL NO.:				INPUT :				
SR. NO. :				SUPPLY : 230VAC				
AMBETRONICS (ISO 9001-2000 CO.)				Email: ambetronics@vsnl.com				
TEL: 022-28371143 FAX 022-28226570				Website: www.ambetronics.com				

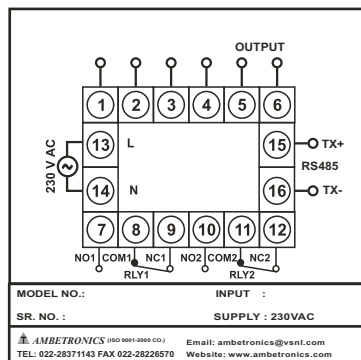
### CLASSIC FEATURES:-

- \* Based on state of art latest microcontroller technology with Watchdog feature for fail safe operation.
- \* Inputs RTD(PT100), J, K, R, S, T, E, B, N Thermocouples 4-20mA, 0-10VDC factory settable.
- \* Automatic cold junction compensation for thermocouples.
- \* Automatic wirelength compensation for long wire RTD inputs.
- \* Very high accuracy 0.25%, with software linearization.
- \* Easy on-line field calibration to user by front keys.
- \* Reading offset facility to compensate the field error.
- \* Two independents set point with individual relay output with hysteresis settable
- \* Programmable latch OR non-latch facility for relay output.
- \* Isolated RS485 communication with MODBUS RTU Protocol
- \* Isolated retransmission output for process value with programmable range can be set by user.
- \* Flameproof version is available on request.



**FRONT VIEW**

SIZE : 72(W) X 72(H) X 120(D) in mm.  
 CUTOUT : 68(W) X 68(H) in mm.



**BACK VIEW**

### APPLICATIONS:-

The TC-303 is part of TC series intelligent microcontroller based Temperature controller instrument for realization of economic solution of process control problem.

It is mostly used in,

- \* Oven control
- \* Food processing.
- \* Cold storage & Chilling plants.
- \* Constant temp. Bath & Environmental chamber.
- \* Plastic / Packaging / Rubber & metal industry.

## TECHNICAL SPECIFICATIONS:-

### \* INPUT & RANGE :-

INPUT	RANGE		RESOLUTION	ACCURACY
	Minimum	Maximum	NORMAL	FULL SCALE
PT-100 (3 WIRE)	- 200°C	400.0°C	0.1	0.25%
J Type (FE-CON)	- 50.0°C	600.0°C	0.1	0.25%
K Type (Cr-Al)	- 50.0°C	500.0°C	0.1	0.25%
K Type (Cr-Al)	- 50°C	1200°C	1	0.25%
R(PT-13%Rh/PT), S(PT-13%Rh/PT)	0°C	1750°C	1	0.25%
T Type (Cu/Con)	-50.0°C	400.0°C	0.1	0.25%
N , E - Type (Cr/Con)	0°C	1300°C	1	0.25%
B - Type (PT 6% Rh / PT 30% Rh)	400°C	1820°C	1	0.25%
4 to 20mA / 0 to 20mA	- 999	9999	Programmable By user	0.25%
Voltage (0 to 1VDC, 0 to 10mVDC)	- 999	9999		0.25%

- Compensation** : Automatic Cold Junction Compensation for all thermocouples.  
Automatic wirelength compensation for long wire RTD inputs.
- Sensor break** : Temperature sensor break OR sensor open, display shows 'dPEr' indication.  
Under Range 'U ndr' Over range 'd uEr' indication for 4 - 20mA & 0 - 10VDC.
- Display** : 4 digits of 13 mm. height L.E.D for process value display.  
4 L.E.D.s for RL1, RL2. TX, RX.
- Setting** : By 3 keys on front panel i.e.    Keys.
- Set Point** : Two independents set point with individual relay output with hysteresis settable. Programmable latch OR non-latch facility for both relay output
- Control Action** : High & Very high, High & low, Low & Very low programmable by user.
- Relay Output** : 1 NO/C/NC Relay contact rated 230V/5A for Relay1 (RL1) & Relay2 (RL2).
- Supply** : 230VAC +/-10%, 110VAC +/-10%, 24VDC.
- Mounting** : Panel mounting / Wall mounting type for Flameproof model.
- Dimension** : 96(W) X 48(H) X 120(D) in mm. OR 72(W) X 72(H) X 120(D) in mm
- Cutout** : 92(W) X 44(H) in mm. OR 68(W) X 68(H) in mm.
- Cabinet** : ABS Plastic.
- Optional** : a) Isolated RS485 Serial port with MODBUS RTU Protocol output for PC interface. Powerful SCADA Software is available.  
b) Isolated 4 - 20mA / 0 - 1VDC retransmission programmable output for recorder or PLC proportional to selective range.  
c) Flameproof version is available on request for hazardous application.
- Weight** : 1 Kg.

## Ambetronics Engineers Pvt. Ltd.

17-B, Tarun Industrial Estate, Mogra Pada, New Nagardas Road,  
Andheri (East), Mumbai-400069, India.

Tel. : +91-22-66995525, 28371143, Fax : +91-22-28226570

Mob. : 09324571143, Website: [www.ambetronics.com](http://www.ambetronics.com)

E-mail : [sales@ambetronics.com](mailto:sales@ambetronics.com), [ambetronics@vsnl.com](mailto:ambetronics@vsnl.com)

DEALERS :