

HUMIDITY & TEMPERATURE CONTROLLER



**TRH - 307
PANEL MOUNTING**

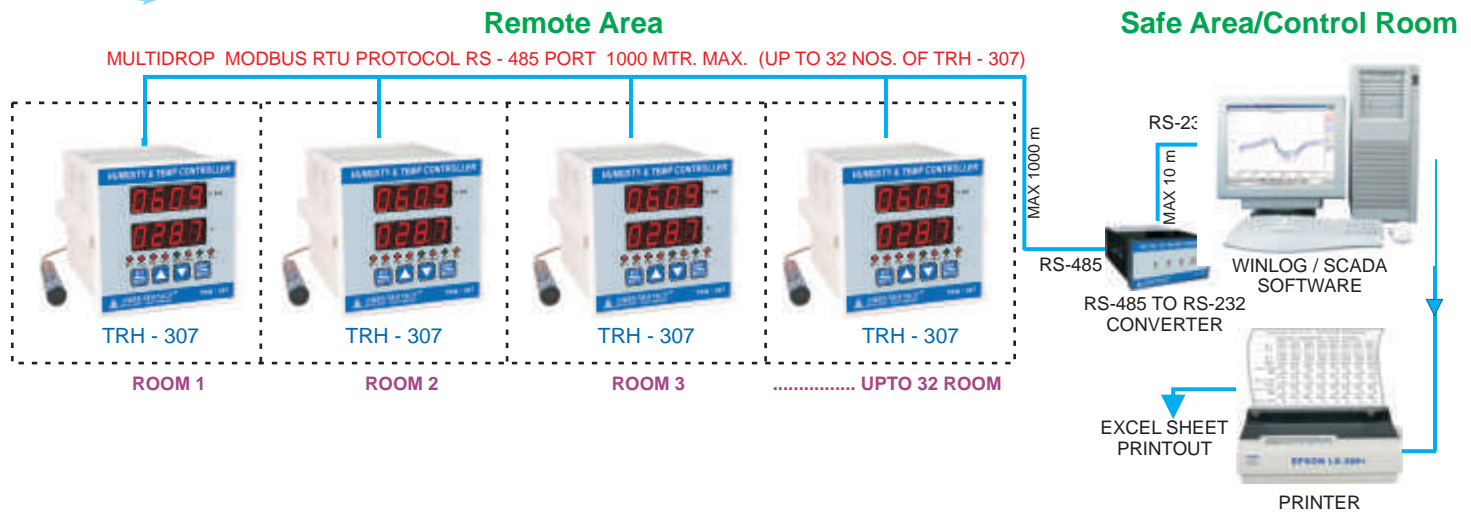


**TRH - 307 - WP
WEATHERPROOF**



**TRH - 307 - FL
FLAMEPROOF**

ILLUSTRATION



FEATURES

- ✦ Highly Accurate, Fast & Reliable Sensing Technology
- ✦ User Programmable With Password Protection
- ✦ Easy Programming With Front Panel Push Buttons
- ✦ No Calibration Required
- ✦ 4 Digit Dual L.E.D Display : Upper Display For % RH
: Lower Display For Temp
- ✦ Excellent Long-Term Stability & Spike Protected
- ✦ Two Relay O/Ps, One Each For Humidity & Temperature
- ✦ Adjustable Time Delay For Operation Of The Relays
- ✦ Two 4 - 20 mA O/Ps, One Each For Humidity & Temp.
- ✦ Modbus RTU Protocol with Isolated RS-485 Communication

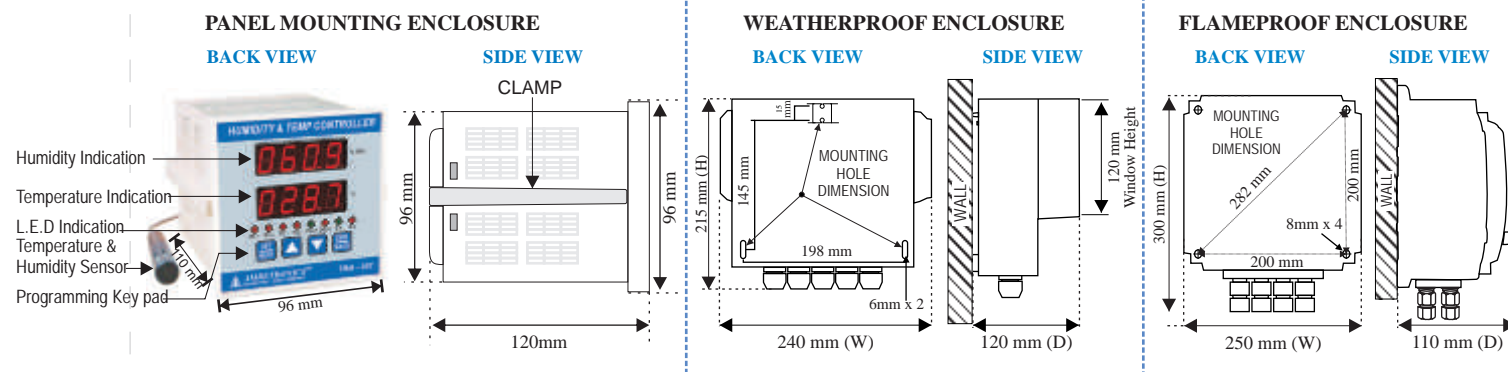
APPLICATIONS

- ✦ Storage, warehouse and cold storage
- ✦ Building management / HVAC Systems
- ✦ Energy Management & Energy Saving Systems
- ✦ Clean Room Monitoring & Validation, In Pharmaceutical, Laboratories, Bioscience
- ✦ Climate Test Chambers
- ✦ Computer Server Rooms
- ✦ Green Houses, Agriculture farms
- ✦ Meteorological, Weather Forecast Applications
- ✦ Healthcare, Hospitals, Shopping Malls
- ✦ Climate Control in Museums, Libraries

TECHNICAL SPECIFICATIONS

Input	Temperature	Humidity	
Range	- 40 To 120 °C	0 To 100 % RH	
Resolution	0.1°C	0.1% RH	
Accuracy	± 0.3 % of Full Scale	± 1.8 % of Full Scale	
Sensor type	i) Band gap temperature sensor for Temperature ii) Capacitive polymer sensing for Relative Humidity		
Sensor Cable Length	Standard 1 meter, can extend upto 15 m on request		
Display	Upper : 4 Digit, 0.56" (13 mm), 7 segment RED L.E.D display for Humidity Lower : 4 Digit, 0.56" (13 mm), 7 segment RED L.E.D display for Temperature		
L.E.D. Indication	TD1 & TD2 for Time Delay, RL1 & RL2 for Relays, TX & RX for Communication, PRG to show 'User' in Programming mode, DEW to show Lower display shows 'Dew point'		
Set Point	Two independent set points, one each for RL1 & RL2 with programmable Latch & Non-Latch facility		
Hysteresis	0 To 10, Independent setting for RL1 & RL2		
Control Action	LO - HI, HI - LO, LO - Very LO, HI - Very HI; programmable by user		
Time Delay	0 To 9999 sec, Independent setting for RL1 & RL2 to operate after the 'Process Value' crosses 'Set point Value'		
Relay Contact Type	1 NO - C - NC Relay contact Rated 230 VAC/5A for RL1 & RL2		
Configuration Of Relay	RL1 operates for Humidity, RL2 operates for Temperature		
Fault Condition	In 'Under', 'Over' OR 'Open' condition i.e. fault condition, Relay can be made OFF or ON; programmable by user		
Setting	Setting by 4 keys on front panel i.e. 'SET / NEXT', 'UP', 'DOWN' & 'DEW / BACK' NOTE : If you press 'DEW / BACK' key, Lower Display shows 'Dew Point'		
Monitoring : Sensor Open / Under / Over	i) By Display : Sensor 'Break / Open' shows 'oPEn' Indication ii) By Retransmission current O/Ps : Up scale current : 21 mA, Down scale current : 3 mA; programmable by user		
Retransmission Output	i) 2 No, 4 - 20 mA OR 20 - 4 mA programmable with max load 750 ohms for Temp & Humidity ii) Range: - 999 To 9999, Low range & High range : Anywhere in the range (High range > Low range)		
Communication	Modbus RTU protocol with Isolated RS-485 communication		
Supply Voltage	230 VAC ± 10 % OR 110 VAC ± 10 % OR 24 VDC		
Operating Temperature	- 40 To 85 °C		
Relative Humidity	Below 95% non condensing		
Sensor Housing	P.V.C. / SS316, Please specify while ordering		
Enclosure Detail	PANEL MOUNTING (PM)	WEATHERPROOF (WP)	FLAMEPROOF (FLP)
Protection Class	IP - 40	IP - 65	IP-65, CMRI Approved for IIA & IIB Gas group
Cabinet Material	ABS Plastic, Black / white Colour	Polycarbonate, grey colour	Cast Al. alloy, LM-6 / C.I. Enclosure
Cable Entry	Terminal connector for connection	Thermoplastic cable gland (IP - 68)	Double compression cable gland (Ex-Proof), ¾" ET-type
Dimension	96(H) X 96 (W) X 120 (D) in mm	215 (H) X 240 (W) X 120 (D) in mm	300 (H) X 250 (W) X 110 (D) in mm
Cutout	92(H) X 92 (W) in mm	----	----
Mounting	Panel mounting	Wall Mounting / Stand Mounting	Wall Mounting / Stand Mounting
Weight	Approx. 1.0 Kg	Approx. 2.5 Kg	Approx. 4.0 Kg

DIMENSIONS



ORDERING INFORMATION

TRH - 307

A

- A) Enclosure**
 1) Panel mounting (PM)
 2) Weatherproof (WP)
 3) Flameproof (FLP)

B

- B) Input**
 1) Built in Sensor
 2) Specify sensor cable length between Instrument & sensor while ordering (Max 15 meters) e.g. 2 - 10 (for 10 meters cable)

C

- C) Relay Output**
 1) None
 2) 1 Relay
 3) 2 Relay

D

- D) Retransmission output**
 1) None
 2) 1 No, 4 - 20 mA
 3) 2 No, 4 - 20 mA

E

- E) Communication**
 1) None
 2) RS - 485 port
 3) USB port
 4) Wireless Port (100 Meters)
 5) Ethernet Port

F

- F) Sensor housing**
 1) PVC material
 2) Stainless Steel (SS316)

G

- G) Power supply**
 1) 230 VAC ± 10%
 2) 110 VAC ± 10%
 3) 24 VDC

NOTE : For any customize requirement contact factory

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DEALERS :