TRH-555
TEMPERATURE & HUMIDITY TRANSMITTER

**Features**

- Highly accurate Digital technology sensor gives fast and reliable output.
- Temperature range is -40 to 120ºC with accuracy of ± 0.5 ºC.
- Relative Humidity range is 0 to 100%RH with accuracy of ± 2%RH.
- Long term stable output for both Temperature and RH.
- Calculated Dew point measurement based on measurement of Temperature and Humidity.
- User selectable Temperature, RH & Dew point outputs.
- Digital Alphanumeric display with configurable backlit option.
- Standard 4-20mA signal outputs with configurable range.
- Easy handling & programming with 3 keys for WP Models.
- Can be programmed using Remote Control upto 10 meters line of site distance.
- Non-intrusive programming for Flameproof models using Magnetic Pen.
- Password protected programming with password changing facility.
- Software calibration for both Temperature & Humidity.
- Optional Alarm relay contacts with two configurable Alarm levels & one relay for fail safe relay.
- Optional Range Lock set points can be configured for both Temperature & Humidity.
- Optional RS-485 communication port with MODBUS RTU Protocol.

**Applications**

- Clean Rooms
- Swimming Pool
- Pharmaceutical
- Hospitals / Labs
- Enthalpy Control
- Museums / Archives
- Refrigeration Control
- Indoor Air Quality (IAQ)
- HVAC / Buildings Controls
- Energy Management System (EMS)

MUST FOR YOUR PROCESS
TECHNICAL SPECIFICATIONS

**General**

Detection Method: Advanced CMOSens Technology.

Range:
- For Temperature: -40 to 120°C
- For Relative Humidity: 0 to 100% RH

Display: 8 x 2 Alphanumeric LCD with configurable backlit option. 8 LEDs to indicate status of instrument.

Control Action:
- i) Two independent Alarm set points with Latch & Non-latch facility.
- ii) User selectable Hysteresis and Logic option.
- iii) Configurable Range Lock set points for Temp. & RH (optional)

Setting: By using 3 Keys on front panel for WP Model
- By using Magnetic pen for Flameproof model
- By using Remote Control for both WP/FLP models (Optional)

**Performance**

Measurement Accuracy:
- ± 0.5°C for Temperature
- ± 2% RH for Relative Humidity

Response Time: Approx 30 Seconds

Start-up Time: Approx 30 Seconds

**Electrical**

Supply Voltage: (18 to 36 VDC); Typically 24 VDC

Power Consumption: Less than 3.5 Watts

Cable: 3 Wires (1.5 mm) Flexible or Armoured Shielded Cable.

**Weatherproof Housing**

Protection Class: IP-65

Cabinet Material: Polycarbonate, grey colour

Cable Entry: Thermostatic cable gland (IP 68)

Dimension: 218 mm (H) x 119 mm (W) x 57 mm (D)

Mounting: Wall Mounting / Stand Mounting / Duct Mounting

Weight: Approx 400 Grams.

**Output Signal**

Standard: Two 4-20mA Current Outputs with configurable range selection.

Optional: Three SPDT Relays (one for failsafe and two for Alarm Condition) of rating “120VAC/2A, 24VDC/2A”

Optional: RS-485 Communication port with MODBUS RTU protocol.

**Error Monitoring**

During Sensor break / open, the Display shows ‘SENSOR OPEN’ & 4-20mA output goes down to 3.7mA.

**Environmental**

Operating Temperature: -40 to +120°C

Storage Temperature: -50 to +130°C

Humidity: Below 95% Non-Condensing

**Accessories (Optional)**

- Certified 24 VDC Power supply.
- RS-232 to RS-485 converter
- Canopy Mounting stand.
- Hooter Cum Flasher.
- SCADA Software.
- RS-485 to USB converter
- Remote Control.

**Flameproof Housing**

Protection Class: IP-65 for Gas Gr. IIA, IIB, IIC & CMRI approved enclosure, CCOE(Optional).

Cabinet Material: Cast Aluminium alloy, LM-6

Cable Entry: Double compression cable gland (Ex-Proof), ¾” ET-type

Dimension: 248 mm (H) x 242 mm (W) x 126 mm (D)

Mounting: Wall Mounting / Stand Mounting / Duct Mounting

Weight: Approx 2.0 Kg

**Display**

8 x 2 Alphanumeric LCD with configurable backlit option.

8 LEDs to indicate status of instrument.

**Error Monitoring**

During Sensor break / open, the Display shows ‘SENSOR OPEN’ & 4-20mA output goes down to 3.7mA.

**ORDERING INFORMATION**

**TRH**

A) Model No.
- 1)-555

B) Enclosure
- 1) FLP (Flameproof)
- 2) WP (Weatherproof)

C) Retransmission Output
- 1) None
- 2) 4 to 20mA

D) Relay Output
- 1) None
- 2) 3 Relays
- 3) RS-485 Serial Port

E) Communication Port
- 1) None
- 2) Remote Control (Optional)

F) Programming Interface
- 1) Remote Control (Optional)

G) Sensor Housing
- 1) PVC material
- 2) Teflon
- 3) Stainless Steel (SS316)

* Before placing order please refer the above ordering information or Contact us for assistance.

**DEALERS:**

Ambetronics Engineers Pvt. Ltd.
17-B, Tarun Industrial Estate, Mögra Pada, New Nagardas Road, Andheri (East), Mumbai - 400069, India.
- Mob: 9324571143 • 9324154646 • Tel.: +91-22-61673000, 28371143 • Fax: +91-22-28226570
- E-mail: sales1@ambetronics.com • sales9@ambetronics.com • Web: www.ambetronics.com

Version 1.0 2K 01.04.13