

Remote-Mount High-Temperature T+RH Transmitter

STH 304

-40 to 120 °C & 0 to 100 %RH

'RS485 + Current' & 'RS485 + Voltage' Output Versions

10 to 30 VDC Supply Voltage

Process Precision Instruments

Vasai Road (E), Dist. Palghar - 401210,
Maharashtra, India

www.ppiindia.net

Applications

Suitable for Extreme Environments from -40°C to 120°C

Industrial & Harsh Environments

- Cold Storage, Deep Freezers & Blast Freezing Systems
- Heat Treatment, Drying & Curing Chambers
- Ovens, Sterilization Tunnels & Autoclave Areas
- Boiler Rooms or High-Temperature Utility Enclosures

Transportation & Storage

- Refrigerated Vehicle & Cold Chain Logistics
- Temperature-Controlled Warehouses & Storage Systems

Agricultural & Environmental

- Greenhouses & High-Temperature Cultivation Zones
- Composting Operations & Drying Environments
- Weather Monitoring in Extreme Climates



Salient Features

- High Precision, Long Term Stability & Good Anti-Interference
- Wide Working Temperature Range : -40 to 120 °C
- SS Probe with SS Sintered Filter
- Output Versions
 - ❖ 4 to 20 mA + RS485
 - ❖ 0 to 5 VDC + RS485
 - ❖ 0 to 10 VDC + RS485
- Factory Configurable Analog Output Scaling
 - ❖ Standard : Full Range (-40 to 120 °C and 0 to 100 %RH)
 - ❖ On Request : User-Defined Span
- 15 Bit Resolution Analog Output (mA/V)
- RS485 Port Supports 0.1 / 0.01 Resolution & °F Selection
- Industrial Grade ESD Protection & Reverse Polarity Protection
- Over-Current Protection
- Wide Supply Voltage Range : 10 to 30 VDC
 - ❖ 24 VDC Nominal for 0 to 10 VDC Output
 - ❖ 12 VDC Nominal for other Output Types

General Information

Product Type Remote-Mount High Temperature T+RH Transmitter

Ordering Code



Example : STH 304-C
Output : 4 to 20 mA + RS485

Quantity 1 Unit

Accessories Mounting Screw Sets

Remote-Mount High-Temperature T+RH Transmitter

General Specifications

Housing Material	Shell : Polycarbonate Probe : Stainless Steel Filter : Sintered SS
Power Supply	10 to 30 VDC (24 VDC Nominal for 0 to 10 VDC Output and 12 VDC Nominal for other Output Types)
Working Environment	-20 to +60°C, 5 to 95%RH (Non-condensing) (For PC Shell Housing Electronics Circuit)
Cable Length	Probe : 5 ft (Approx 1.5 Meters) Power & Output Signals : 4 ft (Approx 1.35 Meters)

%RH (Relative Humidity)

Measuring Range	0 to 100%RH
Accuracy	± 3% for 60 %RH @ 25 °C
Response Time	≤ 8 Seconds (1 m/s Wind Speed)
Output	4 to 20 mA (Max Load : 500 Ω) + RS485 MODBUS RTU OR 0 to 5/10 VDC (Min Load : 2 KΩ) + RS485 MODBUS RTU

Temperature

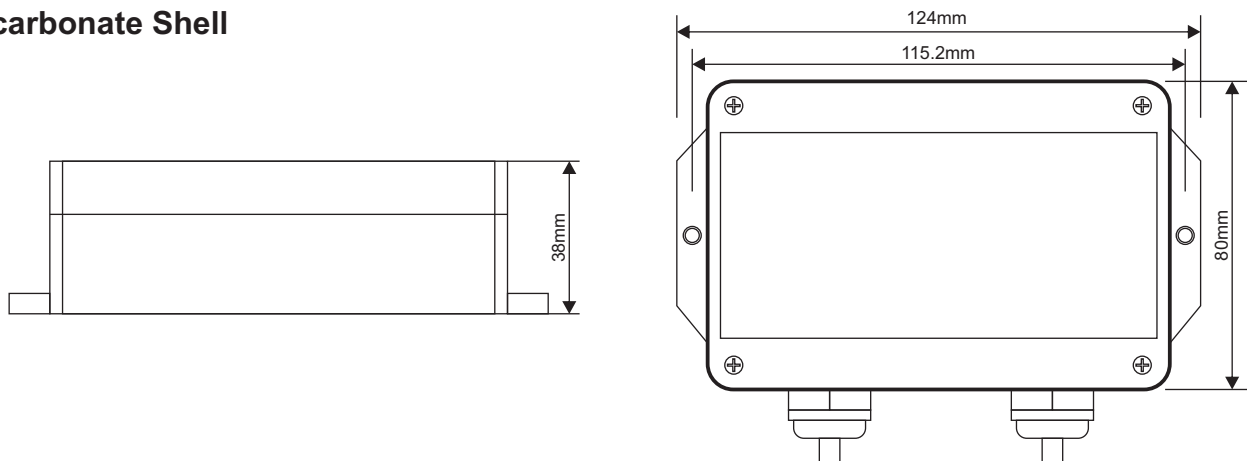
Measuring Range	-40 to 120 °C
Accuracy	± 0.3°C @ 25 °C
Response Time	≤ 15 Seconds (1 m/s Wind Speed)
Output	4 to 20 mA (Max Load : 500 Ω) + RS485 MODBUS RTU OR 0 to 5/10 VDC (Min Load : 2 KΩ) + RS485 MODBUS RTU

Serial Communication

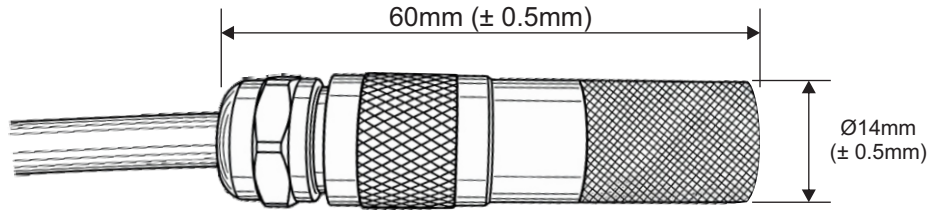
Port	RS485, 2-wire, Half Duplex, Start-Stop Synchronized
Protocol	MODBUS RTU (Slave)
Slave ID	Settable : 1 to 247 (Default : 1)
Baud Rate	Settable : 1200, 2400, 4800, 9600, 19200, 115200 bps (Default : 9600)
Parity	None
Data Format	1 Start Bit + 8 Data Bits + 1 Stop Bit
Temperature & %RH Values	16 Bit Signed Integer (0.1 / 0.01 °C & 0.1 / 0.01 %RH Resolution)

Dimensions (mm)

Polycarbonate Shell



SS Probe with Filter



Wiring Instructions

Function	Wire Color	Signal Description
Power Supply	Red	+VDC Supply Input
	Black	Supply Common (GND)
Analog (mA/V) Temperature Output	Brown	Temperature Signal (+)
	Blue	Temperature Signal Return (-)
Analog (mA/V) Humidity Output	Grey	Humidity Signal (+)
	White	Humidity Signal Return (-)
Digital RS485 MODBUS RTU	Yellow	A+
	Green	B-

Process Precision Instruments (An ISO 9001 : 2008 Company)

📍 101, Diamond Industrial Estate, Navghar, Vasai Road (E), Dist. Palghar - 401210, Maharashtra, India

☎ Sales : 8208199048 / 8208141446 Support : 07498799226 / 08767395333

✉ sales@ppiindia.net 🖱 www.ppiindia.net