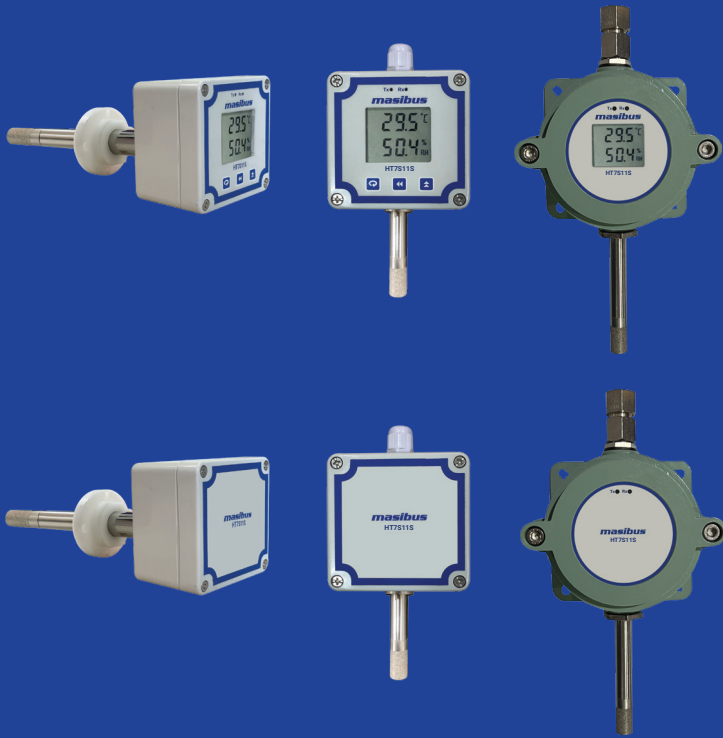




HT7S11S

Humidity and Temperature Transmitter



Digital Measurement



Robust



Accurate



PC based Configuration



Isolated

HT7S11S transmitter is designed for excellent accurate humidity and temperature measurement and signal conditioning for a wide range of industrial, pharmaceutical and building automation applications.

HT7S11S transmitter is available in options like wall mount, duct mount, Ex-Proof wall mount for both loop and aux. powered to suite various industrial environments. Transmitter provides linear output signals proportional to relative humidity and temperature.

It provides better than $\pm 2.5\%$ (for 0 to 90% RH) , $\pm 3.5\%$ (for 90 to 100% RH) RH accuracy, $\pm 0.4^\circ\text{C}$ temperature accuracy and having digital sensor with fully calibrated, linearized and temperature compensated output. All these devices provide high performance in a compact design loop power transmitter available with or without display and aux. powered version available with display. Transmitter with display is equipped with configuration mode using which user can set zero and span values of input as well as output.

Loop powered 4-20 mA DC output signals can be fed as input to remote display, recorder, controller or PLC/DCS, over a long distance. In aux. power devices, data acquisition can be done on SCADA/ PLC application through RS-485 using modbus protocol.

Two-wire connections allow easy installation directly into air ducts or within a controlled area. Most importantly, the right choice of the filter cap enables usage in harsh environmental conditions.

Loop power model generates 2 nos. 2-wire output that can be assigned to RH or temperature using output mapping configuration.

Features

- Wide loop supply voltage range from 10VDC to 36VDC
- Custom built LCD display
- Configurable temperature unit measurement in celsius/fahrenheit/kelvin
- Available in wall and duct mount
- Configurable by front keypad (Available in device with display)
- High reliability and long-term stability
- High accuracy
- Advanced digital RH+T sensor technology
- Calibration not required for digital RH+T sensor
- PC based software for configuration, calibration & monitoring
- Linearized analog 4-20mA signal output
- In loop power model, output can be configured for 2 x RH outputs, 2 x temperature outputs, or 1 x RH + 1 x T output
- Both output are isolated in loop power model
- Isolated RS-485 communication with aux. powered model
- Ex-Proof protection for gas groups IIA/IIB (for Ex-Proof model)

Applications

- Ideal for HVAC application
- Building automation
- Pharmaceutical labs/industry
- Clean rooms
- Air quality monitor
- Research laboratories
- Green house monitor
- Weather telemetry
- Blood stations, pharmacies
- Data acquisition, analysis and processing

TECHNICAL SPECIFICATIONS

Input			Communication		
Input Type	Humidity	Temperature		Loop Powered	Aux. Powered
Integral	Yes	Yes	Interface	TTL	RS-485
Measurement Range	0-100%RH	0 to 60 °C / 32 to 140 °F 273 to 333 K	Protocol	Modbus RTU	
			Baud Rate	4800, 9600, 19200 bps	
Accuracy@25 °C	±2% (0 to 90% RH) ±3% (90 to 100% RH)	±0.4 °C	Power Supply		
Accuracy Over Temp. 0 to 60 °C	±2.5% (0 to 90% RH) ±3.5% (90 to 100% RH)	±0.6 °C	Loop Powered Model	10 to 36VDC with reverse polarity protection	
Repeatability	0.25%	0.24 °C	Aux. Powered Model	18 to 36 VDC with reverse polarity protection <0.5W Power consumption	
Hysteresis	0.8%	X	Isolation		
Resolution	0.1%	0.1 °C	Loop Powered Model	1000Vrms for 1 minute between loop output-1 and output-2	
Response Time	12 Sec. typically		Aux. Powered Model	1000Vrms for 1 minute between supply and RS-485 output	
Long Term Drift	< 0.25% RH/year typical	< 0.03 °C/ year			
Display & Keys (Optional)					
Process Value	2 x 4 digit,7 - segment 0.39" LCD				
Keys	Push button: ENT, ESC, INC for configuration and calibration (Not available in Ex-Proof model)				
Output (for loop power model)					
No. of Output	2 (Isolated from each other)				
Signal	4-20mA (Direct or reverse user configurable)				
Accuracy	±0.1% of FS				
Temp. Co-Efficient	≤100 ppm				
Load	Rload = ((loop supply voltage–10)/0.021) Ohm				
Sensor Break Output	<3.6 or >21mA programmable				
			Physical		
			Mounting	Wall Mount	Duct Mount
			Weight	~ 300 gms	~ 500 gms
			Enclosure Dimension (mm)	80(H) x 82(W) x 55(D)	140(H) x 145(W) x 80(D)
			Length of Pipe with Filter (mm)	68mm	213mm
			Enclosure Material	ABS	Aluminium alloy LM-6
			Enclosure Gas Group Protection	-	IIA/IIIB
			IP (Ingress Protection)	IP-65	
			Cable Entry Gland	PG 7	M20 Double compression
			Cable Terminal Type	2.5 mm2 , AWG 14 wire, screw type	
			Pipe Material	SS304	
			Duct Pipe Flange	Nylon (Optional)	
			Filter Material	Sintered SS316 filter	
			Environmental		
			Operating Temperature	0 to 60°C	
			Storage Temperature	-10° to 70°C	
			Humidity	0% to 100% RH (Non-condensing)	

Ordering Code

Model	Power		Display		Mounting Type		Duct Mounting Flange	
HT7S11S	X		X		XX		X	
	L	Loop	Y	Yes	WO	Wall Mount	N	No
	A	Aux.	N*	No	DO	Duct Mount	Y	Yes
					WX	Ex. Proof Wall Mount		

*Applicable for Loop Power Model

Cable Accessory for Loop Power Model (Extra Cost)

Part No.	Description
TTS7CC	Configuration cable