AMBIENT & PROCESS Humidity & Temperature Sensor with Modbus output MBRTU-ATH

SKU: MBRTU-ATH

Doc No: MBRTU-ATH-DS-EN-10

Introduction

MBRTU-ATH Humidity and Temperature Sensor utilizes digital temperature sensor delivers high accuracy measurement in range -40 to + 85 oC for ambient version or -40 to + 120 oC for Process version. Output is Modbus RTU for easily integrating with any PLC, controller, SCADA, BMS or IoT gateway.

- Digital sensor technology;
- High accuracy;
- Standard ModbusRTU output;
- Plug & Play.

Typical Applications

MBRTU-ATH can be used widely in the followings:

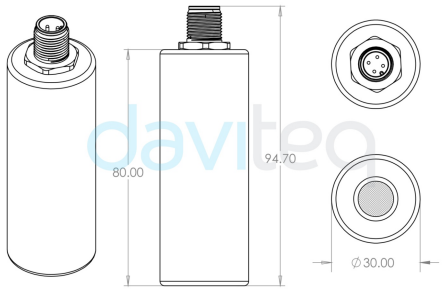
- Ambient Humidity and Temperature Monitoring for Factory, Building, Warehouse, Datacenter, HVAC...
- Process Humidity and Temperature Monitoring for Food processing....

AMBIENT HUMIDITY & TEMPERATURE SENSOR
WITH MODBUS OUTPUT
MBRTU-ATH



MBRTU-ATH-H1.PNG

DIMENSION DRAWING OF MODBUS OUTPUT SENSOR
(Unit: mm)



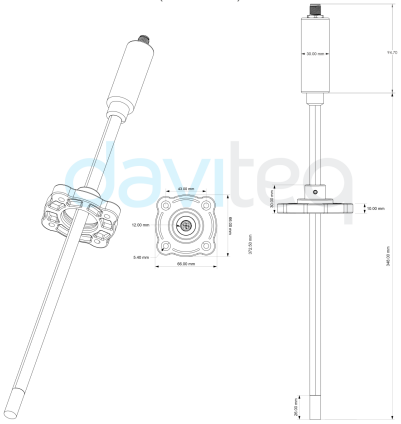
MBRTU-ATH-H2.PNG

PROCESS HUMIDITY & TEMPERATURE SENSOR
WITH MODBUS OUTPUT

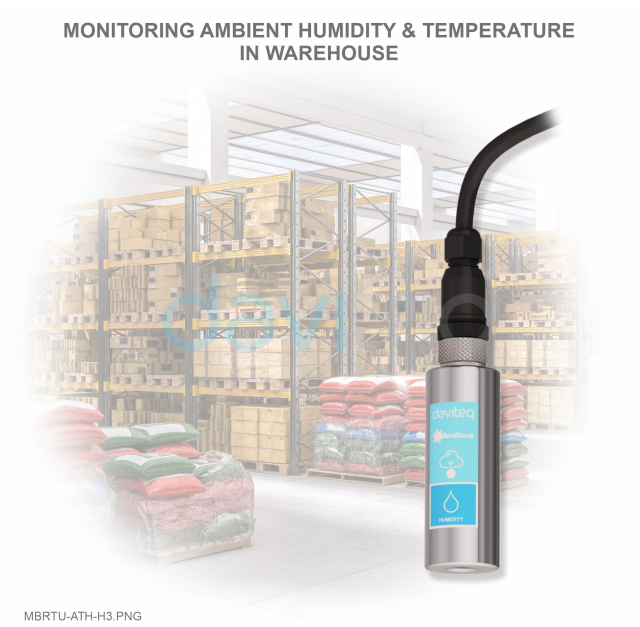


MBRTU-ATH-H4.PNG

DIMENSION DRAWINGS OF
PROCESS HUMIDITY & TEMPERATURE SENSOR
MBRTU-ATH-15-...
(Unit: mm)



MBRTU-ATH-H5.PNG



MBRTU-ATH-H3.PNG

Specification

AMBIENT VERSION MBRTU-ATH-11 or MBRTU-ATH-12-...	
Sensor	Digital type, factory calibrated, output both Humidity & Temperature values
Humidity measuring range	0 .. 100 %RH
Humidity accuracy in Ambient temperature 0 .. 60 oC	Typical +/- 2.0% RH in 10..80%RH, otherwise +/- 3.0% RH
Humidity repeatability	+/- 0.1% RH
Humidity resolution	0.1%
Temperature measuring range	-40 .. + 85 oC
Temperature accuracy	Typical +/- 0.2 oC in range 5 oC to 60 oC
Temperature repeatability	+/- 0.1 oC
Temperature resolution	0.1 oC
Sensor Filter	PTFE (for integrated version) OR 20um Alloy sintered filter (for sensor with cable)
PROCESS VERSION MBRTU-ATH-15	
Sensor	Digital type, factory calibrated, output both Humidity & Temperature values
Humidity measuring range	0 .. 100 %RH
Humidity accuracy	+/- 1.8% RH typical in 30-70%RH range and 0-80 oC
Humidity resolution	0.1%
Temperature measuring range	-40 .. + 120 oC
Temperature accuracy	+/- 0.5 oC in 0-100 oC range

Temperature resolution	0.1 oC
Sensor Filter	20um Alloy sintered filter (for sensor with cable)
Sensor Probe	12mm diameter, 304SS with sliding flange Probe length: 300mm, 600mm, 900mm
Working pressure	atmosphere
TRANSMITTER SPECIFICATION	
Communication Port	RS485, ModbusRTU protocol, max 19200 baud
Power supply	7..48VDC, avg. < 200mA
Connector	M12-male 4-pin Code A
Working temperature and humidity	-40 .. 85 oC, 0 .. 100% RH
Housing and Rating	304SS, IP67
Dimension and Weight	H100xD30 (without sensor cable), < 200 grams
Mounting	AMBIENT: SS304 L type bracket for wall mounting PROCESS: integral on probe
Certification	CE

Ordering Code

Item code	**Descriptions**
MBRTU-ATH-11	**INDOOR AMBIENT** HUMIDITY AND TEMPERATURE SENSOR, INTEGRATED TYPE, -40 .. + 85 C, RS485/MODBUSRTU, 7..48VDC SUPPLY, M12-MALE
MBRTU-ATH-12-300	**INDOOR AMBIENT** HUMIDITY AND TEMPERATURE SENSOR, CABLE TYPE 300MM, -40 .. + 85 C, RS485/MODBUSRTU, 7..48VDC SUPPLY, M12-MALE
MBRTU-ATH-15-300	**PROCESS** HUMIDITY AND TEMPERATURE SENSOR, -40 .. +120 C, 300MM PROBE, ALL 304SS MATERIAL, SLIDING-FLANGE, RS485/MODBUSRTU, 7..48VDC SUPPLY, M12-M CONNECTOR
MBRTU-ATH-15-600	**PROCESS** HUMIDITY AND TEMPERATURE SENSOR, -40 .. +120 C, 600MM PROBE, ALL 304SS MATERIAL, SLIDING-FLANGE, RS485/MODBUSRTU, 7..48VDC SUPPLY, M12-M CONNECTOR
MBRTU-ATH-15-900	**PROCESS** HUMIDITY AND TEMPERATURE SENSOR, -40 .. +120 C, 900MM PROBE, ALL 304SS MATERIAL, SLIDING-FLANGE, RS485/MODBUSRTU, 7..48VDC SUPPLY, M12-M CONNECTOR
Please select below M12 cable with different lengths	
2M-FM12CAB4X0.25	M12 4PIN FEMALE ASSEMBLY CONNECTOR WITH SOLDERING TERMINALS AND CODING A AND CONTROL CABLE CU/PVC/OS/PVC 4X0.25MM2, L=2M, ROHS, SHIELD 80%
5M-FM12CAB4X0.25	M12 4PIN FEMALE ASSEMBLY CONNECTOR WITH SOLDERING TERMINALS AND CODING A AND CONTROL CABLE CU/PVC/OS/PVC 4X0.25MM2, L=5M, ROHS, SHIELD 80%
10M-FM12CAB4X0.25	M12 4PIN FEMALE ASSEMBLY CONNECTOR WITH SOLDERING TERMINALS AND CODING A AND CONTROL CABLE CU/PVC/OS/PVC 4X0.25MM2, L=10M, ROHS, SHIELD 80%

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