



DUCT

RH-Temperature BACnet™ MS/TP | Modbus RTU

The BN Series Temperature and Humidity Duct networked sensors are a cost effective, single or dual point native BACnet™ or Modbus sensing solution designed to reduce the need for additional input modules or building management controllers when a limited number of input points are available. The BN series offers both BACnet™ and Modbus protocols in one device, providing great flexibility with various systems. The BTL Certification provides confidence that these sensors may be used in any new or retrofit installation using a BACnet™ MS/TP controller with third party BACnet™ devices. These sensors incorporate a conformally coated printed

circuit board mounted inside a waterproof enclosure for long-term reliability. The enclosure features a twist off cover for easy access to the wiring and internal dip switches for quick setup and installation. Please contact ACI for more information regarding the BN Series communicating sensors.

Applications: Monitoring Supply / Discharge / Return Temperature and humidity, Dehumidification and Humidification Processes, Clean Rooms, Data Centers, Return Air in Pool Environments, Economizer Control, Air Handlers, Roof Top Units, Process Control Applications

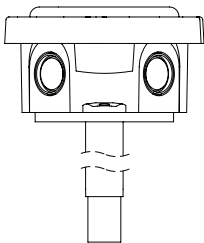
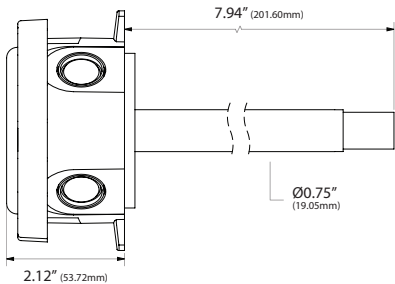
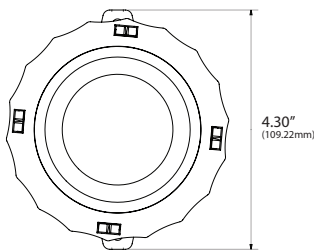
The ACI BN Series BACnet™ sensors are covered by ACI's Five (5) Year Limited Warranty. The warranty can be found in the front of ACI's Sensors & Transmitters catalog, as well as on ACI's website, www.workaci.com

PRODUCT SPECIFICATIONS

Supply Voltage:	12 to 36 VDC / 24 VAC +/- 10%, 50/60 Hz (Reverse Polarity Protected)
Current Consumption:	25 mA maximum (0.67 VA)
Temperature Measurement Range:	-40 to 176°F (-40 to 80°C)
Temperature Measurement Accuracy @ 77°F (25°C):	+/- 1.0°F (+/- 0.5°C)
Temperature Calibration Offset:	+/- 9°F (+/- 5°C) (Field Configurable)
Temperature Units:	°F (Factory Default), °C, °K (Field Configurable)
RH Measurement Range:	0 to 100%
RH Measurement Accuracy @ 77°F (25°C):	+/- 2% from 10 to 90% RH
RH Calibration Offset:	+/- 10% RH (Field Configurable)
Resolution:	+/- 0.1° +/- 0.1%
Temperature / RH Update Rate:	4 seconds
Communication Protocol:	BACnet™ MS/TP or Modbus RTU = Field Selectable; EIA RS-485
Sensor Addresses:	0 = Factory Default 1-127 = Field Selectable
Supported Baud Rates:	Auto Baud (Factory Default) 9600, 19200, 38400, 57600, 76800, 115200 (Field Selectable)
Parity (Modbus RTU):	None/Even/Odd = Field Selectable
Stop Bits (Modbus RTU):	1 or 2 = Field Selectable
Databits (Modbus RTU):	8
Maximum Distance:	4000 ft (1219 m)
End of Line Termination Resistance:	120 Ohms Termination Resistance (Field Selectable)
Tri-Color Status LED:	Connection Status
Connections Wire Size:	Screw Terminal Blocks 16 AWG (1.31 mm²) to 22 AWG (0.33 mm²)
Transmitter Operating Temperature Range:	-40 to 176°F (-40 to 80°C)
Storage Temperature Range:	-40 to 185°F (-40 to 85°C)
Operating Humidity Range:	10 to 95% RH, non-condensing
Sensing Probe and Filter Material Probe Diameter:	304 Stainless Steel 0.750" (19.05 mm)
Enclosure Material UL Flammability Rating:	ABS Plastic UL94-HB
Enclosure Temperature Rating:	-40 to 140°F (-40 to 60°C)
Foam Pad Material Flammability Rating:	Neoprene/EPDM/SBR Polymer UL94-HBF; FMVSS-302; MIL-R-6130C
Product Dimensions (Length x Diameter):	10.06" (255.53 mm) x 4.30" (109.22 mm)
Product Weights:	1.30 lbs. (0.59 kg)
Agency Approvals:	BTL Certified, CE, RoHS2, WEEE, China RoHS



DIMENSIONAL DRAWING



Front & Right Views

Top View

STANDARD ORDERING

Model # Example: BN2120-D -OR- 146541

Model #	Item #	Description
BN2120-D	146541	BACnet™ MS/TP, Modbus RTU, Relative Humidity, Duct, Euro Enclosure
BN2130-D	146531	BACnet™ MS/TP, Modbus RTU, Relative Humidity and Temperature, Duct, Euro Enclosure



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