

# WALL PLATE

## BACnet™ MS/TP | Modbus RTU Stainless Wall Plate

The BN Series Wall Plate temperature and humidity 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. A foam pad is included to insulate the sensor from thermal drafts within the wall, since they are designed to be mounted over a standard single gang junction box or directly over a hole in the wall with the use of drywall anchors to monitor ambient air temperatures in a space. These sensors incorporate a conformally coated printed circuit board for long-term reliability. Please contact ACI for more information regarding the BN Series communicating sensors.

**Applications:** Ambient Air Temperature/Humidity Sensing, Office Buildings, Schools, Clean Rooms, Pharmaceutical Labs, Hospitals, Data Centers & Retail Stores

**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](http://www.workaci.com)**

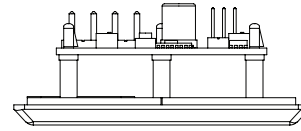
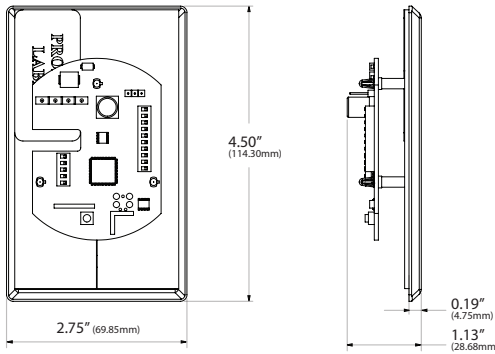
### PRODUCT SPECIFICATIONS

|  |   |
|--|---|
| <b>Supply Voltage:</b>                                 | 12 to 36 VDC / 24 VAC +/- 10%, 50/60 Hz (Reverse Polarity Protected)                      |
| <b>Current Consumption:</b>                            | 25 mA maximum (0.67 VA)   |
| <b>Temperature Measurement Accuracy @ 77°F (25°C):</b> | +/- 1.0°F (+/- 0.5°C)   |
| <b>Temperature Calibration Offset:</b>                 | +/- 9°F (+/- 5°C) (Field Configurable)  |
| <b>Temperature Units:</b>                              | °F (Factory Default), °C, °K (Field Configurable)   |
| <b>RH Measurement Range:</b>                           | 0 to 100%   |
| <b>RH Measurement Accuracy @ 77°F (25°C):</b>          | +/- 2% from 10 to 90% RH  |
| <b>RH Calibration Offset:</b>                          | +/- 10% RH (Field Configurable)   |
| <b>Sintered Filter Material:</b>                       | 304 Series Stainless Steel  |
| <b>Resolution:</b>                                     | +/- 0.1°   +/- 0.1%   |
| <b>Temperature / RH Update Rate:</b>                   | 4 seconds   |
| <b>Communication Protocol:</b>                         | BACnet™ MS/TP or Modbus RTU = Field Selectable; EIA RS-485                                |
| <b>Sensor Addresses:</b>                               | 0 = Factory Default   1-127 = Field Selectable  |
| <b>Supported Baud Rates:</b>                           | Auto Baud (Factory Default)   9600, 19200, 38400, 57600, 76800, 115200 (Field Selectable) |
| <b>Parity (Modbus RTU):</b>                            | None/Even/Odd = Field Selectable  |
| <b>Stop Bits (Modbus RTU):</b>                         | 1 or 2 = Field Selectable   |
| <b>Databits (Modbus RTU):</b>                          | 8   |
| <b>Maximum Distance:</b>                               | 4000 ft (1219 m)  |
| <b>End of Line Termination Resistance:</b>             | 120 Ohms Termination Resistance (Field Selectable)  |
| <b>Tri-Color Status LED:</b>                           | Connection Status   |
| <b>Connections   Wire Size:</b>                        | Screw Terminal Blocks   16 AWG (1.31 mm²) to 22 AWG (0.33 mm²)                            |
| <b>Transmitter Operating Temperature Range:</b>        | -40 to 176°F (-40 to 80°C)  |
| <b>Storage Temperature Range:</b>                      | -40 to 185°F (-40 to 85°C)  |
| <b>Operating Humidity Range:</b>                       | 10 to 95% RH, non-condensing  |
| <b>Wall Plate Material:</b>                            | 430 Stainless Steel (Brushed Stainless Steel Finish)                                      |
| <b>Foam Material   Foam Thickness:</b>                 | Cross-linked LPDE (White)   0.25" (6.35 mm)   |
| <b>Foam Flammability Rating:</b>                       | FMVSS-302   |
| <b>Product Dimensions (L x W x D):</b>                 | 4.51" (114.56 mm) x 2.76" (70.10 mm) x 1.25" (31.75 mm)                                   |
| <b>Product Weight:</b>                                 | 0.235 lbs. (0.107 kg)   |
| <b>Agency Approvals:</b>                               | BTL Certified, CE, RoHS2, WEEE, China RoHS  |

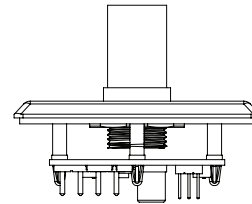
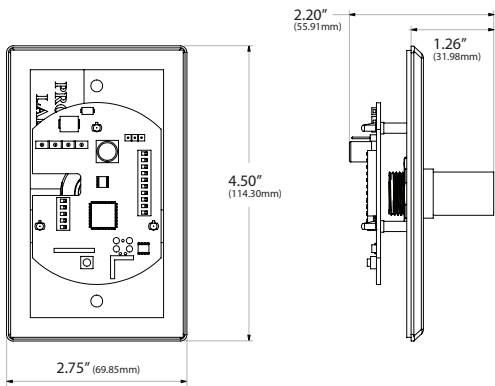


**DIMENSIONAL DRAWING**

**BN2110-SP**



**BN2120-SP  
BN2130-SP**



**Front & Right Views**

**Bottom View**

**STANDARD ORDERING**

Model # Example: **BN2120-SP** -OR- **146600**

| Model #          | Item # | Description  |
|------------------|--------|--|
| <b>BN2110-SP</b> | 146601 | BACnet™ MS/TP, Modbus RTU, Temperature, Wall Plate, SS                       |
| <b>BN2120-SP</b> | 146600 | BACnet™ MS/TP, Modbus RTU, Relative Humidity, Wall Plate, SS                 |
| <b>BN2130-SP</b> | 146530 | BACnet™ MS/TP, Modbus RTU, Relative Humidity and Temperature, Wall Plate, SS |



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