



IMMERSION-NO WELL, DUCT

BACnet™ Immersion, No Well & Duct Sensor

The BN Series Duct and Immersion networked temperature sensors are a cost effective, single point native BACnet™ 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 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. The reduced number of BACnet™ objects helps to lower the sensor cost and simplify your installation and programming time. The ABS plastic enclosure also features an easy open latch for quick set up and installation. Please contact ACI for more information regarding the BN Series communicating sensors.

Applications: Supply / Return / Discharge / Mixed Duct Air Temperature sensing, Chilled Water / Hot Water / Hydronic Heating Systems, Air / Gas Temperatures, Chillers, Boilers, Hot Water Heaters & Refrigeration Systems

PRODUCT SPECIFICATIONS

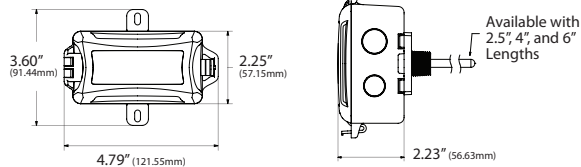
Supply Voltage:	12 to 36 VDC / 24 VAC +/- 10%, 50/60 Hz (Reverse Polarity Protected)
Current Consumption:	25 mA maximum (0.67 VA)
Temperature Measurement Range:	-40 to 302°F (-40 to 150°C)
Temperature Measurement Accuracy @ 77°F (25°C):	+/- 1.0°F (+/- 0.5°C)
Temperature Calibration Offset:	+/- 9°F (+/- 5°C) (Field Configurable)
Temperature Units:	°F (Factory Default), °C, °K (Field Configurable)
Resolution:	+/- 0.1° +/- 0.1%
Temperature Update Rate:	4 seconds
Communication Protocol:	BACnet MS/TP; 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)
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 mm ²) to 22 AWG (0.33 mm ²)
Operating Temperature Range:	35 to 122°F (1.5 to 50°C)
Storage Temperature Range:	-40 to 185°F (-40 to 85°C)
Operating Humidity Range:	10 to 95% RH, non-condensing
Probe Material Probe Diameter:	304 Stainless Steel 0.250" (6.35mm)
Immersion Thermowell Thread Size:	½" NPS Male Thread
Enclosure Color Material UL Flammability Rating:	Black ABS Plastic UL94-HB
Enclosure Temperature Rating Plenum Rating:	-22 to 194°F (-30 to 90°C) Plenum Rated
Foam Pad Material Flammability Rating:	Neoprene/EPDM/SBR Polymer UL94-HBF; FMVSS-302; MIL-R-6130C
Product Dimensions (L x W x D):	See Dimensional Drawings on Back
Product Weights:	See Dimensional Drawings on Back
Agency Approvals:	BTL Certified, CE, RoHS2, WEEE, China RoHS





DIMENSIONAL DRAWING, WEIGHTS

Immersion-No Well [PB]

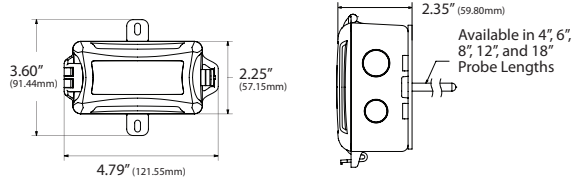


xx = Sensor Type | yy = Insertion Length

Immersion [PB] Weights

ACI Model #	2.5" (Insertion Length)	4" (Insertion Length)	6" (Insertion Length)
A/BN1110-INW-YY-PB	0.31 lbs. (0.141 kg)	0.35 lbs. (0.159 kg)	0.39 lbs. (0.178 kg)

Duct [PB]



Duct [PB] Weights

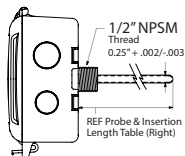
ACI Model #	4" (Probe Length)	6" (Probe Length)	8" (Insertion Length)
A/BN1110-D-YY-PB	0.31 lbs. (0.141 kg)	0.32 lbs. (0.145 kg)	0.33 lbs. (0.150 kg)

ACI Model #	12" (Probe Length)	18" (Probe Length)
A/BN1110-D-YY-PB	0.35 lbs. (0.159 kg)	0.37 lbs. (0.168 kg)

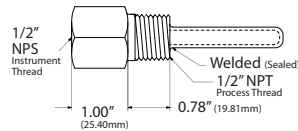
Front & Right Views

Product Weights

PROBE AND INSERTION LENGTH IMMERSION NO WELL



Pictured Below: welded two piece thermowell to show connection and depth reference. Thermowell not included with immersion no well (INW).



Probe & Insertion Length

Probe Length	Insertion Length	ACI Part #	Thermowell Part #
4.5" (114.3 mm)	4.31" (109.5 mm) +/- 0.13" (±3.3 mm)	A/BN1110-INW-2.5-PB	A/2.5" or A/M2.5"
6" (152.4 mm)	5.81" (147.6 mm) +/- 0.13" (±3.3 mm)	A/BN1110-INW-4-PB	A/4" or A/M4"
8" (203.2 mm)	7.81" (198.38 mm) +/- 0.13" (±3.3 mm)	A/BN1110-INW-6-PB	A/6" or A/M6"





STANDARD ORDERING DUCT			Model # Example: A/BN1110-D-4-PB -OR- 143520
Model #	Item #	Description	
A/BN1110-D-4-PB	143520	BACnet™, Temperature, Duct (4"), Plastic Box Enclosure (PB)	
A/BN1110-D-6-PB	143521	BACnet™, Temperature, Duct (6"), Plastic Box Enclosure (PB)	
A/BN1110-D-8-PB	143522	BACnet™, Temperature, Duct (8"), Plastic Box Enclosure (PB)	
A/BN1110-D-12-PB	143523	BACnet™, Temperature, Duct (12"), Plastic Box Enclosure (PB)	
A/BN1110-D-18-PB	143524	BACnet™, Temperature, Duct (18"), Plastic Box Enclosure (PB)	

Note*: All Thermowells must be ordered separately

STANDARD ORDERING IMMERSION, NO WELL			Model # Example: A/BN1110-INW-2.5-PB -OR- 143530
Model #	Item #	Description	
A/BN1110-INW-2.5-PB*	143530	BACnet™, Temperature, Immerison (2.5"), Plastic Box Enclosure (PB)	
A/BN1110-INW-4-PB*	143531	BACnet™, Temperature, Immerison (4"), Plastic Box Enclosure (PB)	
A/BN1110-INW-6-PB*	143532	BACnet™, Temperature, Immerison (6"), Plastic Box Enclosure (PB)	

STANDARD ORDERING THERMOWELLS AND THERMAL GREASE			Model # Example: A/2.5" -OR- 128349
Model #	Item #	Description	
A/2.5"	128349	2.5" (63.5 mm) Insertion, 304 Stainless, 2 Part Welded, 1/2" NPT Thermowell	
A/4"	128350	4" (101.6 mm) Insertion, 304 Stainless, 2 Part Welded, 1/2" NPT Thermowell	
A/6"	128351	6" (152.4 mm) Insertion, 304 Stainless, 2 Part Welded, 1/2" NPT Thermowell	
A/M2.5"	128338	2.5" (63.5 mm) Insertion, 304 Stainless, Machined, 1/2" NPT Thermowell	
A/M4"	128343	4" (101.6 mm) Insertion, 304 Stainless, Machined, 1/2" NPT Thermowell	
A/M6"	128344	6" (152.4 mm) Insertion, 304 Stainless, Machined, 1/2" NPT Thermowell	
A/M2.5"-316SS	128352	2.5" (63.5 mm) Insertion, 316 Stainless, Machined, 1/2" NPT Thermowell	
A/M4"-316SS	128353	4" (101.6 mm) Insertion, 316 Stainless, Machined, 1/2" NPT Thermowell	
A/M6"-316SS	128354	6" (152.4 mm) Insertion, 316 Stainless, Machined, 1/2" NPT Thermowell	
NSG HEAT TRANSFER PASTE 2OZ	102595	Thermal Grease, 2 oz. Tube, Silicone Free, -40 to 320°F (-40 to 160°C)	
NSG HEAT TRANSFER PASTE 16OZ	140574	Thermal Grease, 16 oz. Jar, Silicone Free, -40 to 390°F (-40 to 198°C)	



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