

ALL PURPOSE DUCT NETWORK TEMPERATURE SENSOR

TNAP Series

The single point, all purpose duct/immersion network temperature sensor utilizes a precision sensor that is encapsulated in a 6mm (0.236") OD, 304 series stainless steel probe and is available in various lengths. All probes are potted to provide excellent heat transfer, fast response and moisture resistance. A compact enclosure with a hinged and gasketed cover provides protection, security and ease of installation.

Features include a -40 to 100 °C (-40 to 212 °F) temperature measurement range, high accuracy and resolution, and auto-detect baud rate. The network temperature sensor includes network variables for the temperature reading, °C / °F units and a calibration offset.

PRODUCT HIGHLIGHTS

- Precision Thermistor sensing element
- High accuracy transmitter
- Compact ABS enclosure

ENGINEERING SPEC'S

- Shall be IP65 (NEMA 4X) with a UL94-V0 rated enclosure
- External mounting tabs must be slotted & tapered away from enclosure to ease field installation
- Enclosure shall be complete with neoprene gasket for duct to enclosure seal
- Probe – Enclosure connection shall be fully potted to eliminate probe condensation and guarantee IP65 (NEMA4X rating)
- Enclosure shall be complete with threaded (1/2 NPT and/or M16) conduit connection
- Cover must be hinged and securely attached in the open position
- Probe must be 6mm O.D 304 stainless steel, of different lengths to cover between 1/3 to 2/3 of duct width
- Sensing range must be -40 to 50°C (-40 to 122°F)
- Cover must contain security screw as extra protection from opening
- Product shall be CE approved



SPECIFICATIONS

DESCRIPTION	ENGINEERING SPEC
POWER SUPPLY	BACnet®: 24 Vac/dc $\pm 10\%$ (non-isolated half-wave rectified) Modbus: 24 Vac/dc $\pm 20\%$ (non-isolated half-wave rectified)
CONSUMPTION	BACnet®: 25 mA max @ 24 Vdc Modbus: 10 mA max @ 24 Vdc
PROTECTION CIRCUITRY	Reverse voltage protected, transient protected
OPERATING ENVIRONMENT	-40 to 50°C (-40 to 122°F), 5 to 95 %RH non-condensing
TEMPERATURE SENSOR	20 K Ω NTC thermistor
SENSOR ACCURACY	$\pm 0.2^\circ\text{C}$ ($\pm 0.36^\circ\text{F}$) @ 0 to 70°C (32 to 158°F)
PROBE SENSING RANGE	-40 to 100°C (-40 to 212°F)
RESOLUTION	0.1°C/°F
PROBE MATERIAL	304 series stainless steel
PROBE DIAMETER	6mm (0.236")
BACnet® INTERFACE	MS/TP, 2-wire RS-485
MODBUS INTERFACE	MS/TP (RTU), 2-wire RS-485
BAUD RATE	9600, 19200, 38400, 57600, 76800 or 115200 (auto-detect)
ADDRESS RANGE	BACnet®: 0 to 127 (switch selectable) Modbus: 1 to 255 (switch selectable)
SERIAL CONFIGURATION	8N1
MODBUS ERROR CHECKING	CRC-16 reverse (A001)
WIRING CONNECTION	Screw terminal block (14 to 22 AWG)
ENCLOSURE	ABS, UL94-V0, IP65 E style includes thread adapter (1/2" NPT to M16) and cable gland fitting
DIMENSIONS	82.5mm W x 76.2mm H x 52.0mm D (3.25" x 3.0" x 2.05")
PROBE LENGTHS	2, 4, 6, 8, 12, 18"
COUNTRY OF ORIGIN	Canada

