Badger Meter

Data Industrial® Series 340N2

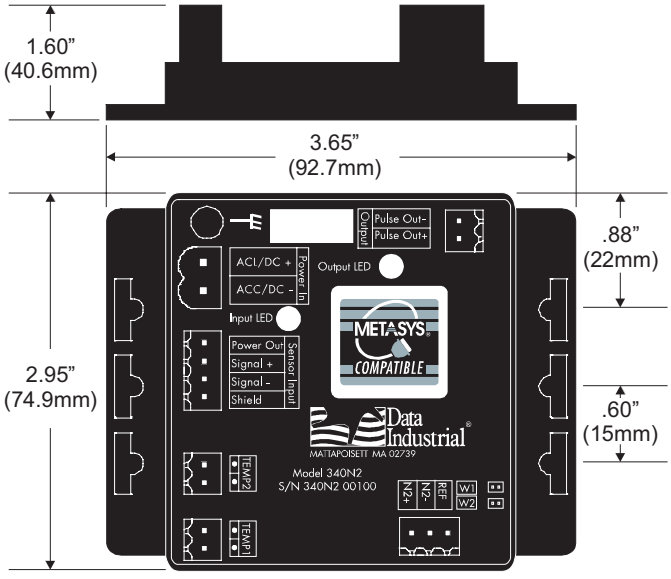
Btu Transmitter with Pulse and N2 Communication

OVERVIEW

The Data Industrial Series 340N2 Btu Transmitter from Badger Meter is an economical, compact device for sub-metering applications using Johnson Controls Metasys® Network Companion and Facilitator Supervision System.

The Series 340N2 calculates thermal energy in a closed pipe hydronic system by integrating the flow and temperature inputs. The Series 340N2 can accept the signal from any Data Industrial raw pulse flow sensor, as well as many other pulse and sine wave devices. Temperature inputs are accepted from standard 10 kΩ (Type II) thermistors.

The onboard microcontroller and digital circuitry make precise measurements and produce accurate, drift-free outputs. The Series 340N2 is commissioned using Badger Meter Windows® based software. Calibration information for the flow sensor, type and pipe size may be pre-selected or entered in the field. When a PC or laptop computer is connected, the same data that is transmitted across the N2 network is shown in real time. This includes flow rate, flow total, energy rate, energy total, supply and return temperatures, and Delta T.



Transmitter Only

EXAMPLE:	340N2	-	xx
SERIES			
Btu Transmitter	340N2		
OPTIONS			
Transmitter Only			00
W / Metal Enclosure			02
W / Plastic Enclosure			03
W / DIN rail Mounting Clips			04

Series 340N2 Ordering Matrix

The Series 340N2 features two LEDs to verify input and output signals.

The pulse output for the Series 340N2 is an isolated solid state switch closure that is user programmed for units of energy or flow. The output pulse width is adjustable from 50 ms to 5 sec.

The N2 output is an RS-485 compliant signal.

The Series 340N2 operates on AC or DC power supplies ranging from 12 to 24 volts.

The compact cast epoxy body measures 3.65 x 2.95 inches (93 x 75 mm) and can be easily mounted on panels, DIN rails or in enclosures.

SPECIFICATIONS

Power

Power Supply Options

12 to 35 VDC, ±5%

12 to 24 VAC, ±10%

Current Draw

60 mA at 12 VDC

Flow Sensor Input

All Sensors

Separate excitation voltage is provided for three wire sensors 7.9 to 11.4 VDC with 270 Ω source impedance

Pulse Type Sensors

Signal amplitude

2.5 VDC threshold

Signal limits

Vin < 35V (DC or AC peak)

Frequency

0 to 10 kHz

Pull-up

To 9.1 VDC with 2 kΩ

Sine Wave Sensors

Signal amplitude

10 mV p-p threshold

Signal limits

Vin < 35V (DC or AC peak)

Frequency

0 to 10 kHz

Temperature Sensor Input

Two required

10 kΩ thermistor, 2 wire, type II, 10 kΩ at 25ºC

Pulse Output

Opto-isolated solid state switch

Operating voltage range

0 to ±60V (DC or AC peak)

Closed (on) state

Load current, 700mW max. over operating temperature range

On-resistance, 700mW max. over operating temperature range

Open (off) state, leakage at 70ºC

<1 µA at 60V (DC or AC peak)

N2 Output

RS-485 output compliant with EIA/TIA - 485 standards

Operating Temperature

-29ºC to 70ºC

-20ºF to 158ºF

Storage Temperature

-40ºC to 85ºC

-40ºF to 185ºF

Weight

4.8 oz with headers installed

Sensor Calibration

Data Industrial

Use K and offset values provided in sensor owner's manual

Other Sensors

Check with factory

Units of Measure

Flow Measurement

Rate

gpm, gph, l/sec, l/min, l/hr, ft3/sec, ft3/min, ft3/hr, m3/sec, m3/min, m3/hr

Total

gallons, liters, cubic feet, cubic meters

Energy Measurement

Rate

kBtu/min, kBtu/hr, kW, MW hp, tons

Total

Btu, kBtu, MBtu, kWh, MWh, kJ, MJ

Temperature Units

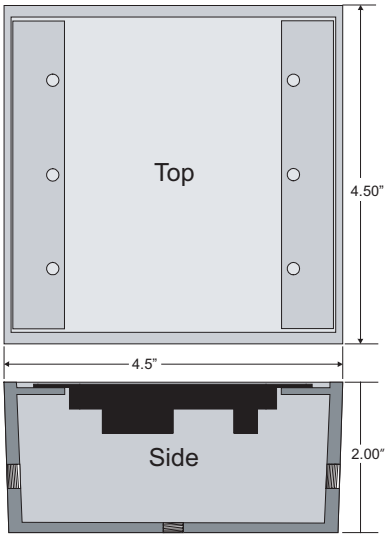
Fahrenheit, centigrade

Programming

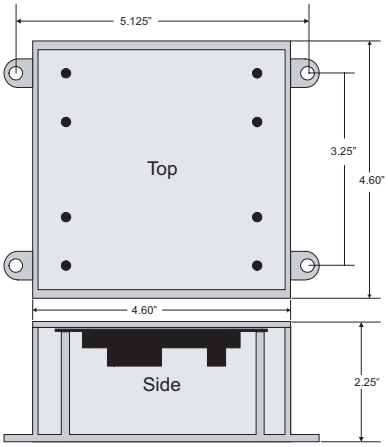
Requires PC or laptop running Windows® 7, 9x, ME, NT, or 2000 and Data Industrial A301-20 Programming Kit

Accessories

Data Industrial A301-20 Programming Kit



Metal Box Dimensions



Plastic Enclosure Dimensions

Please see our website at www.badgermeter.com for specific contacts.

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