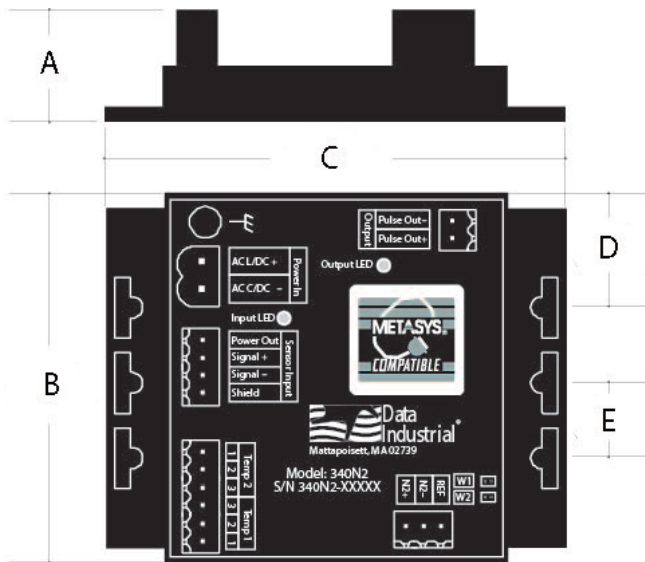
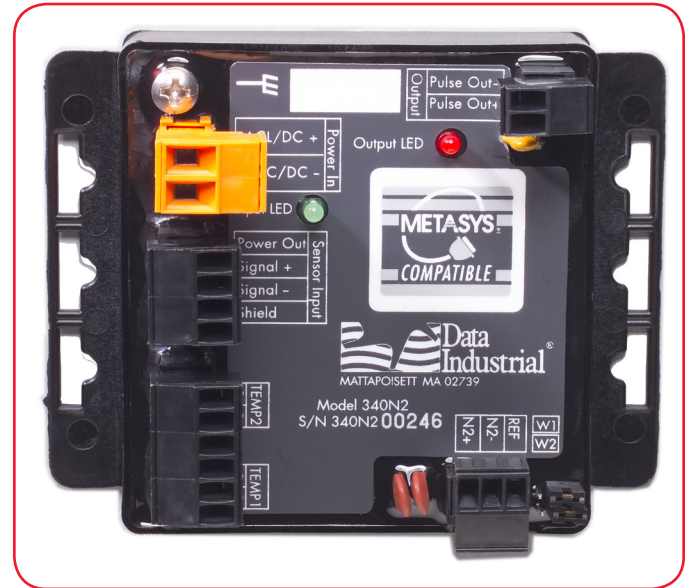


DESCRIPTION

The Model 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 Model 340N2 transmitter calculates thermal energy in a closed pipe hydronic system by integrating the flow and temperature inputs. The transmitter can accept the signal from most Badger Meter raw pulse flow sensors, 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 Model 340N2 transmitter is commissioned using Badger Meter Windows® based software. Calibration information for the flow sensor, type and pipe size can 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.



A	B	C	D	E
1.60 in.	2.95 in.	3.65 in.	.88 in.	.60 in.
41 mm	75 mm	93 mm	22 mm	15 mm

Figure 1: Transmitter dimensions

ORDERING MATRIX

EXAMPLE:			
Series	340N2	-	xx
Btu Transmitter	340N2		
Options			
Transmitter Only			00
w/ Metal Enclosure			02
w/ Plastic Enclosure			03
w/ DIN Rail Mounting Clips			04

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

The pulse output for the Model 340N2 transmitter 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 milliseconds to 5 seconds.

The N2 output is an RS-485 compliant signal.

The Model 340N2 transmitter operates on AC or DC power supplies ranging from 12...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...35V DC $\pm 5\%$	12...24V AC $\pm 10\%$
Current Draw	60 mA at 12V DC	
Flow Sensor Input		
All Sensors	Separate excitation voltage is provided for three wire sensors 7.9...11.4V DC with 270 Ω source impedance	
Pulse Type Sensors		
Signal Amplitude	2.5V DC threshold	
Signal Limits	$V_{in} < 35V$ (DC or AC peak)	
Frequency	0.4...1.0 kHz	
Pull-up	To 9.1V DC with 2 k Ω	
Sine Wave Sensors		
Signal Amplitude	10 mV p-p threshold	
Signal Limits	$V_{in} < 35V$ (DC or AC peak)	
Frequency	0.4...1.0 kHz	
Temperature Sensor Input	Two required: 10 k Ω thermistor, 2 wire, type II, 10 k Ω at 77° F (25° C)	
Pulse Output		
Opto-isolated solid state switch		
Operating voltage range	0... $\pm 60V$ (DC or AC peak)	
Closed (on) state	Load current, 700 mA max. over operating temperature range	
	On-resistance, 700 m Ω max. over operating temperature range	
Open (off) state	Leakage at 158° F (70° C) $< 1\mu A$ at 60V (DC or AC peak)	
N2 Output	RS-485 output compliant with EIA/TIA-485 standards	
Operating Temperature	-20...158° F	-29...70° C
Storage Temperature	-40...185° F	-40... 85° C
Weight	4.8 oz with headers installed	
Sensor Calibration		
Data Industrial	Use K and offset values provided in sensor owners manual	
Other Sensors	Check with factory	
Units of Measure		
Flow	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	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, XP or Vista and A302-20 programming kit	
Accessories	A302-20 programming kit	

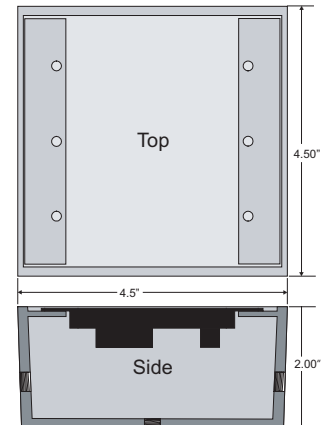


Figure 2: Metal box dimensions

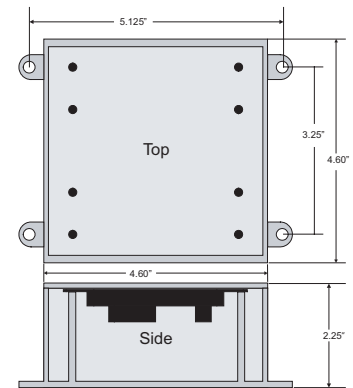


Figure 3: Plastic enclosure dimensions

Control. Manage. Optimize.

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