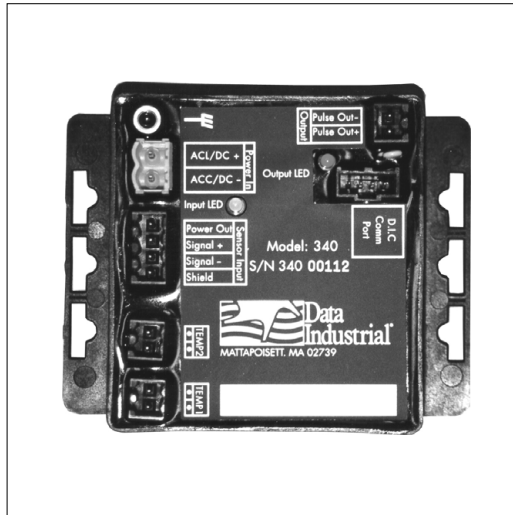




## Model 340N2 Btu transmitter



### Features

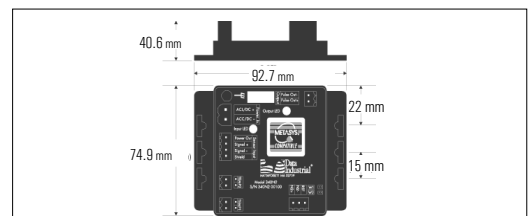
- Signal conversion to Johnson Controls Metasys® networks

### Description

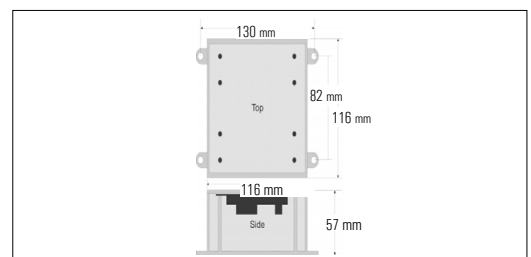
The series 340N2 Btu transmitter is an economical, compact device for submetering applications using Johnson Controls Metasys® Network Companion™ and Facilitator™ Supervision system. The 340N2 calculates thermal energy by measuring liquid flow in a closed pipe system and measuring temperature at the inlet and outlet points. The 340N2 requires two 10 kΩ thermistors for temperature input. The flow input may be provided by and sensor and many other pulse or sine wave signal flow sensors. The onboard microcontroller and digital circuitry make precise measurements and produce accurate drift free outputs. The 340N2 is commissioned using Windows® based software and a A302 programming cable. Calibration information for the flow sensor, units of measurement and output scaling may be downloaded prior to installation or in the field. While the unit is connected to a PC or laptop computer, real-time flow rate, flow total, both temperature readings, energy rate and energy total are available.

### Dimensions

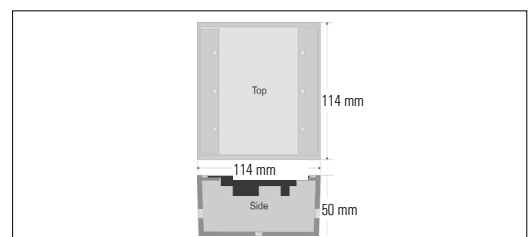
#### Transmitter only



#### Plastic enclosure dimensions



#### Metal enclosure dimensions



\*Data Industrial is a Badger Meter, Inc. company.



## Specifications

<b>Power</b>	
Power supply options	12-24 VDC +/- 5% 12-24 VAC +/-10%
Current draw	60 mA @ 12 VDC
<b>Flow sensor input</b>	
All sensors	Excitation voltage 3 wire sensors: 7.9 – 11.4 VDC 270 $\Omega$ source impedance
<b>Pulse type sensors</b>	
Signal amplitude	2.5 VDC threshold
Signal limits	Vin < 35 V (DC or AC peak)
Frequency	0-10 kHz
Pull-up	2 k $\Omega$
<b>Sine wave sensors</b>	
Signal amplitude	10 mV p-p threshold
Signal limits	Vin < 35 V (DV or AC peak)
Frequency	0-10 kHz
Temperature sensor input	2 required: 10 k $\Omega$ thermistor, 2 wire, type II, 10 K $\Omega$ @ 25°C
<b>Pulse output: Opto-isolated solid state switch</b>	
Operating voltage range	0 - $\pm$ 60 V (DC or AC peak)
Closed (on) state	Load current – 700 mA max. over operating temperature range On-resistance – 700 m $\Omega$ max. over operating temperature range
Open (off) state	Leakage @ 70°C < 1 $\mu$ A @ 60 V (DC or AC peak)
N2 output	RS485 output compliant with EIA / TIA – 485 standards
Operating temperature	-29°C to +70°C (-20°F to +158°F)
Storage temperature	-40°C to +85°C (-40°F to +185°F)
Weight	136 g with headers installed
<b>Sensor calibration</b>	
Data Industrial	Use “K” and “offset” provided in sensor owner’s manual
Other sensors	Check with factory
<b>Units of measure</b>	
Flow measurement	Rate: Gpm, gph, l/sec, l/min, l/hr, ft <sup>3</sup> /sec, ft <sup>3</sup> /min, ft <sup>3</sup> /hr, m <sup>3</sup> /sec, m <sup>3</sup> /min, m <sup>3</sup> /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 <sup>®</sup> 9x, ME, NT, 2000, XP A-340N2 programming kit containing software and A302 programming cable

The series 340N2 transmitter features two LEDs to verify input and output signals. The standard output for the series 340N2 is an isolated solid state switch closure that is user programmed for units of energy. The output pulse width is adjustable from 50 mS to 5 seconds. The secondary output is an RS485 compliant signal.

The series 340 Btu transmitter operates on AC or DC power supplies ranging from 12 to 24 Volts. The compact cast epoxy body measures 93 mm (3.65”) x 75 mm (2.95”) and can be easily mounted on panels, DIN rails or in enclosures.

## Series 340N2 ordering matrix

	Example:	340N2	---	xx
<b>Series</b>	Btu transmitter with N2 output	340N2		
<b>Options</b>	Transmitter only			00
	W/ metal enclosure			02
	W/ plastic enclosure			03
	W/ DIN rail mounting clips			04