Badger Meter Europa

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Model 340

Btu transmitter

Features

- Can be combined with all flow sensors

Description

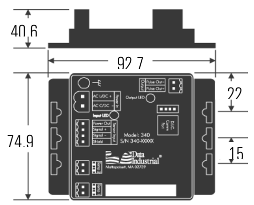
The series 340 Btu transmitter is an economical, compact device for submetering applications. The 340 calculates thermal energy by measuring liquid flow in a closed pipe system and measuring temperature at the inlet and outlet points. The 340 requires two 10 kΩ thermistors for temperature input. The 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 340 is programmed using the Windows® based software and a A301 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.

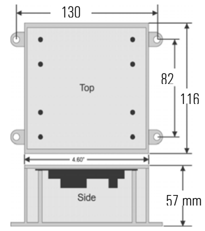
*Data Industrial is a Badger Meter, Inc. company.

Dimensions

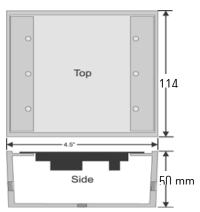
Transmitter only



Plastic enclosure dimensions



Metal enclosure dimensions



Technical data

Power	
Power supply options	12-24 VDC 12-24 VAC
Current draw	60 mA @ 12 VDC
Flow sensor input	
All sensors	Excitation voltage 3 wire sensors: 7.9 – 11.4 VDC 270 Ω source impedance
Pulse type sensors	
Signal amplitude	2.5 VDC threshold
Signal limits	Vin < 35 V (DC or AC peak)
Frequency	0-10 kHz
Pull-up	2 kΩ
Sine wave sensors	
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 kΩ thermistor, 2 wire, type II, 10 KΩ @ 25°C
Pulse output	
Pulse width	Programmable from 50 mS to 5 Sec in 50 mS increments
Pulse frequency	Max of 10 Hz @ 50 mS pulse width programmable to scaling requirements of connected device
Opto-isolated solid state switch	
Operating voltage range	0 - ±60 V (DC or AC peak)
Closed (on) state	Load current – 700 mA max. over operating temperature range On-resistance – 700 mΩ max. over operating temperature range
Open (off) state	Leakage @ 70°C < 1 μA @ 60 V (DC or AC peak)
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
Sensor calibration	
Data Industrial	Use "K" and "offset" 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, ft^3/sec, ft^3/min, ft^3/hr, m^3/sec, m^3/min, m^3/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 9x, ME, NT, 2000, XP A-340 programming kit containing software and A301 programming cable

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

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.

Series 340 ordering matrix

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