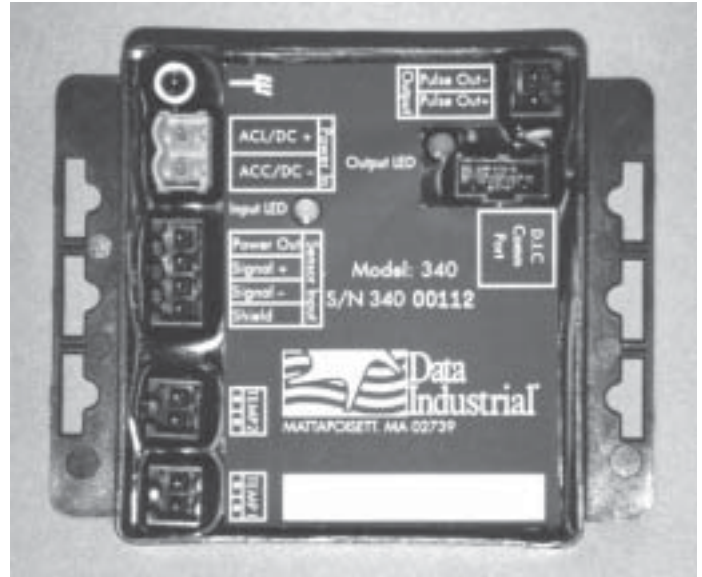# Model 340
Btu Transmitter

The Data Industrial Series 340 Btu transmitter is an economical, compact device for sub-metering 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 any Data Industrial sensor and many other pulse or sine wave signal flow sensors.
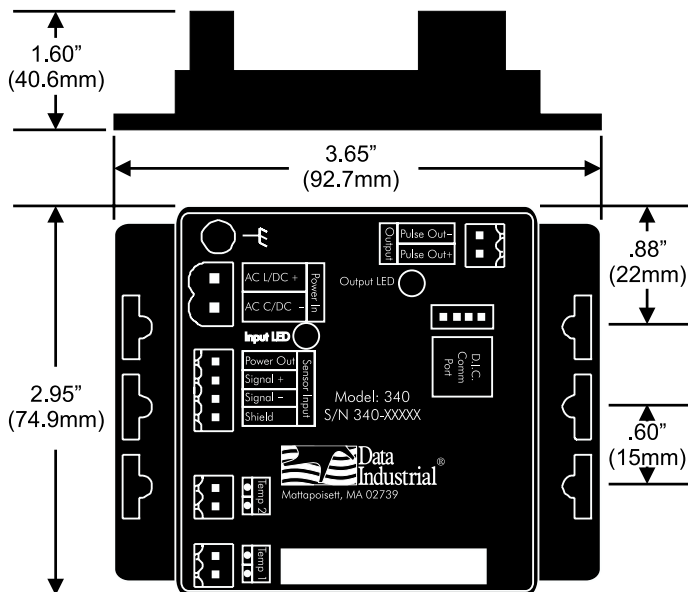
The onboard microcontroller and digital circuitry make precise measurements and produce accurate drift-free outputs. The 340 is programmed using Data Industrial's Windows® based software and a Data Industrial A301 programming cable. Calibration information for the flow sensor, units of measurement and 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.

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

The Series 340 transmitter features two LED's 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 from 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 3.65"(93mm) x 2.95"(75mm) and can be easily mounted on panels, DIN rails or enclosures.

Transmitter Only

Data Industrial Corporation, 11 Industrial Drive, P.O. Box 740, Mattapoisett, MA 02739, Telephone: (508) 758-6390 Fax: (508) 758-4057
web site: www.dataindustrial.com email: sales@dataindustrial.com

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Specifications

Power
Power supply options:
 12-24 VAC
 12-24 VDC
Current Draw:
 60 mA @ 12 VDC

Flow Sensor Input
All sensors:
 Excitation voltage 3 wire sensors:
  7.9 – 11.4 VDC 270Ω source impedance
Pulse type sensors:
 Signal amplitude:
  2.5 VDC threshold
 Signal limits:
  Vin < 35V (DC or AC peak)
 Frequency:
  0-10kHz
 Pull-up:
  2 kΩ
Sine Wave Sensors:
 Signal amplitude:
  10 mV p-p threshold
 Signal limits:
  Vin < 35V (DC or AC peak)
 Frequency:
  0-10kHz

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 50mS increments
Pulse frequency:
 Max of 10Hz @ 50mS pulse width programmable to scaling requirements of connected device
Opto-isolated solid state switch
Operating Voltage range:
 0 - ±60V (DC or AC peak)
Closed(on) state:
 Load Current - 700mA max. over operating temperature range
 On-resistance - 700mΩ max. over operating temperature range
Open(off) state – leakage @ 70°C
  <1µA @ 60V (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
 4.8 oz. 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, 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
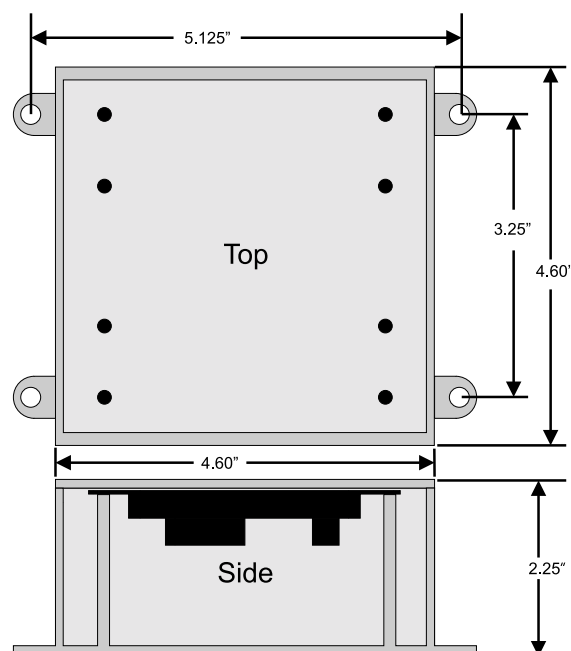 Btu, kBtu, MBtu, kWh, MWh, kJ, MJ

Temperature Units
 Fahrenheit, Centigrade

PROGRAMMING
Requires PC or laptop running Windows® 9x, ME, NT, 2000, XP

Data Industrial A-340 programming kit containing software and A301 programming cable

Plastic Enclosure Dimensions

Metal Enclosure Dimensions

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