Data Industrial®
A BadgerMeter, Inc. Company

Series 1550 Energy Monitor

The Data Industrial 1550 Energy Monitor is an economical full featured compact unit designed for sub-metering applications.

The 1550 provides a display of energy rate, energy total, or flow rate on a two line x 8 character alphanumeric LCD. The 1550 display can be configured by the user to display energy rate in kBtu/hr or kW, energy total in Btu, kBtu, MBtu, kWh, MWh, or kJ, and flow rate in gpm or lpm.

The unit requires two 10 kΩ thermistors for temperature input. The flow sensor input can be any Data Industrial sensor or any other pulse or sine wave signal flow sensor.

The user programs the flow sensor from the front panel by entering a “K” and offset or only a “K” factor, depending on the flow sensor used.

All user programming is menu driven by the 1550. Following displayed directions, the user enters all data from the four button front panel. A password lockout feature is standard on all units. This lockout restricts access to calibration and troubleshooting routines. The lockout routines include (a.) totalizer reset, (b.) flow sensor, energy pulse and analog output calibrations, (c.) a feature allowing zero calibration of the two temperature inputs to any equilibrium temperature and (d.) display of the two temperature inputs (in user selected °F or °C units of measure).

The 1550 uses an Infinite Impulse Response Filter (IIRF) feature to smooth the calculation of flow, temperature and energy. Data Industrials use of this proprietary smoothing software provides the most accurate energy calculations considering the wide variety of application variables.

Standard output is a 50mS to 5 second pulse, user programmed to transmit energy total.

Optional energy total outputs include a relay contact closure or opto-isolated open collector signal. Additional options include analog energy rate outputs, either a 0-10VDC non-isolated signal or an isolated 4-20mA loop powered signal. All output options are also user programmable from the front panel.

Series 1550 Ordering Matrix

EXAMPLE:	1550	-	x	x	x
SERIES					
Btu Meter	1550				
OPTION-TRANSMITTER ENERGY RATE					
No Option			0		
Analog Output- Isolated 4-20mA Loop			1		
Analog Output- Non-Isolated 0-10 VDC			2		
OPTIONS-PULSE ENERGY TOTAL					
No Relays- Open Collector Output				0	
1 Relay				1	
1 Totalizer Opto-Isolater				2	
MOUNTING					
Panel Mount, NEMA 4X Front Panel					0
Wall Mount, NEMA 4X					1

An additional feature of the 1550 is its permanent storage of the last calculated energy total in the event of a power failure. This total can be read out of the unit before restarting the system.

Like the Data Industrial Series 1500 Flow Monitor, the Series 1550 Energy Monitor operates from a 12 to 24 VDC supply. As a panel meter the unit has a NEMA 4X rated front panel and conforms to DIN standard 96mm x 96mm dimensions, for meter sizes and cutouts. The 1550 is also available in a NEMA 4X wall or sensor mount version.

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

101602
Not a controlled document.

Specifications

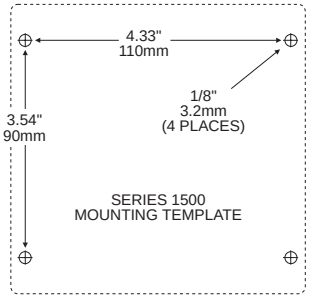
Power:
- power supply :
  +12-24 VDC (10.5 to 26 VDC)
  with voltage analog output option
  +15-26 VDC
- current draw:
  basic unit / 12VDC - 50mA
  basic unit / 24VDC - 60mA
  analog output option - add 30mA
  relay output option - add 40mA
  opto-isolated output option - add 10mA

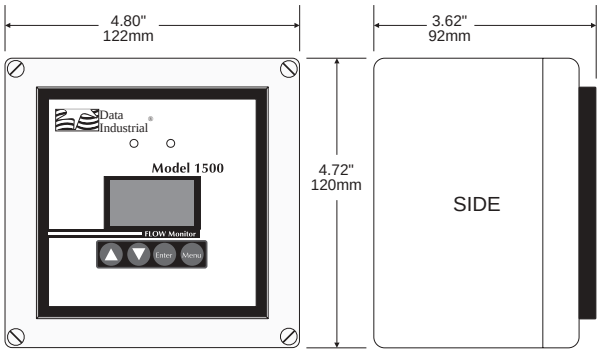
Display:
- 8 characters by two lines, alphanumeric, dot matrix LCD display with variable contrast
- STN (Super-Twisted Nematic) display

Operating Temperature:
-4°F to +158°F (-20°C to +70°C)

Storage Temperature:
-40°F to +185°F (-40°C to +85°C)

Dimensions:
- Panel Mount
  3.78"W x 3.78"H x 3.23"D
  (96mm x 96mm x 63mm)
- Wall Mount
  4.80"W x 4.72"H x 3.63"D
  (120mm x 120mm x 92mm)





Wall Mount

Weight:
- Panel Mount 8.5 oz. maximum
- Wall Mount 19 oz. maximum

Sensor Input:
Digital Sensors:
- signal amplitudes:
  2.5 VDC threshold
- signal limits:
  -24 volts < V in < V (power supply)
- frequency input range:
  0.4 to 160 Hz
- Pull-up :
  2KΩ

Sine Wave Sensors:
- signal amplitude:
  10 mV p-p threshold
- signal limits:
  -24 volts < V in < V (power supply)
- frequency:
  0.4 to 160 Hz
- input impedance:
  10 KΩ

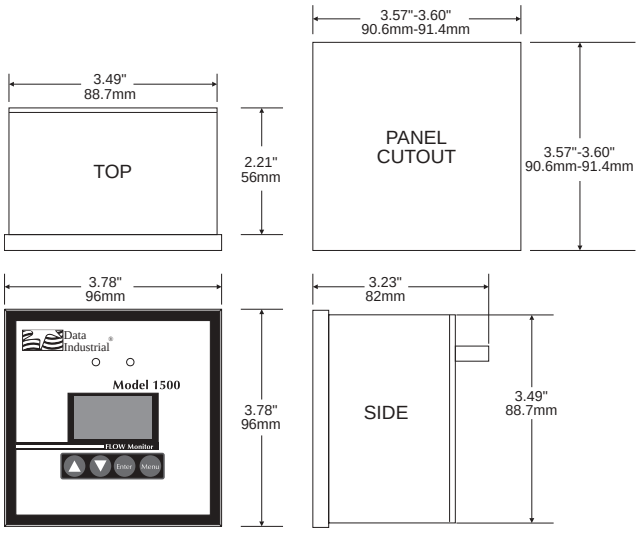
Sensor Calibration:
- Data Industrial "K" and offset

Other Sensors:
- "K" or "K" and offset

Temperature Sensors
- 10 kΩ Thermistor - 2 required

Totalizer (energy total):
- range: 0.000001 to 9,999,999

Data Update Rate:
- **slow**, **medium**, or **fast** corresponding to 2 sec, 1 sec, and instantaneous.



Panel Mount

Pulse Output: (Energy Total)
- open collector transistor pulse user configurable to any units
- adjustable 50 mS to 5.0 second pulse output width in 50 mS increments
- maximum sinking current:
  150 mA @ +24 VDC

Units Of Measure:
Energy Total
- user selectable as Btu, kBtu, MBtu, kWh, MWh, or kJ with one pulse set to .000001 to 9,999,999

Energy Rate
- user selectable as kBtu/hr or kW

Flow Rate
- user selectable as GPM or LPM

Temperature
- user selectable as °F or °C

Option Specifications:
Relay (Energy Total Only):
- Relay output
  SPST 3.0 amps @ 250VAC
- Opto-isolated open collector

Analog Output: (Energy Rate Only)
- 4-20mA loop powered isolated
  Minimum voltage: 7 VDC
  Maximum voltage: 30 VDC
- 0 - 10 VDC non isolated

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

101602
Not a controlled document.