Data
Industrial ®

The Data Industrial Series 1520 Flow Monitor is a microprocessor based portable digital flow monitor. The Model 1520 is powered by two 9 volt alkaline batteries.

The two line x 8 character alphanumeric display can be configured by the user to display flow rate and flow total separately or simultaneously.

Like all Data Industrial flow monitors, the Model 1520 may be field calibrated by the user. Data Industrial sensors are calibrated by entering "K" and offset numbers, while other pulse or frequency output sensors may only use a "K" factor. The Model 1520 accepts pulse, sine wave, or an optional 4-20 mA analog input signal. All calibration information, units of measure, and flow totals are stored in non volatile memory.

Programming is menu driven. All data is entered using the LCD/keypad interface. A password gate is included to prevent unauthorized access to system parameters. Programming flexibility is extended to units of measure. The software contains eight flow rate and four total flow units of measure. There is also a provision for adding custom units for rate and total.

The Model 1520 can aid in the calibration of Data Industrial analog output devices. The Model 1520 calculates and displays a flow based on the input frequency from any Data Industrial analog output device (or flow sensor) and the proper "K" and offset numbers. When connected to the sensor terminals of the transmitter, the Model 1520 will display the full scale in the units chosen by the programmer, providing a visual indicator when adjusting the analog transmitter.

Two LEDs are located on the front panel. One is an indication of power. The other is programmed to represent impeller status, totalizer status, or alarm status.
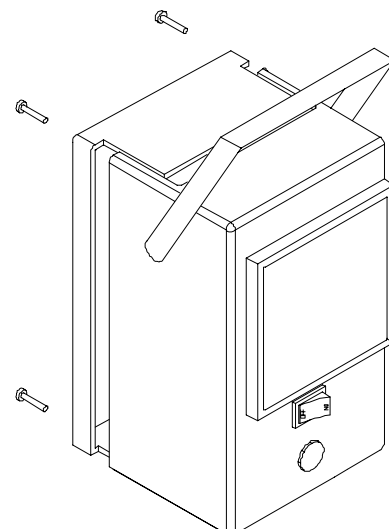
Options

- Analog input- allows the use of other flow devices with analog outputs.

Series 1520 Ordering Matrix

	EXAMPLE:	1500	-	x	x	x
SERIES						
Portable Calibrator		1520				
OPTION-TRANSMITTER						
No Option			0			
Analog Input 0-1 VDC			1			
Analog Input 0-5 VDC			2			
Analog Input 0-10 VDC			3			
Analog Input 4-20mA			4			
Analog Output 4-20mA			5			
OPTIONS-DIGITAL OUTPUT						
No Relays				0		
MOUNTING						
Standard Box Assembly					0	

Specifications: Series 1520

Power:
- power supply :
  (2) 9V Alkaline Batteries
- current draw:
  basic unit / 18VDC - 45mA
  analog input option - deduct 6mA
- Battery Life
  Greater than 15 Hrs

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:
- 4.25" W x 7.5"H x 3.75" D

Weight:
- 8.5 oz. maximum (panel mount with
  DIN draw mounting brackets)

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

Totalizer:
- range: 0.000001 to 1,000,000

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

Units Of Measure:

Flow total
- 4 standard, 1 custom programmable
- standard flow total units:

gallons	gallons
liters	liters
ft3	cubic feet
m3	cubic meters

  custom flow total unit:
  7 character label. 7 digit conversion

factor from gallons to custom unit
with a range from 0.000001 to 1,000,000

Flow rate
8 standard, 1 custom programmable
- standard flow rate units:

gpm	gallons/minute
gph	gallons/hour
l/sec	liters/second
l/min	liters/minute
ft3/sec	cubic feet/second
ft3/min	cubic feet/minute
m3/sec	cubic meters/second
m3/min	cubic meters/minute

  custom flow rate unit:
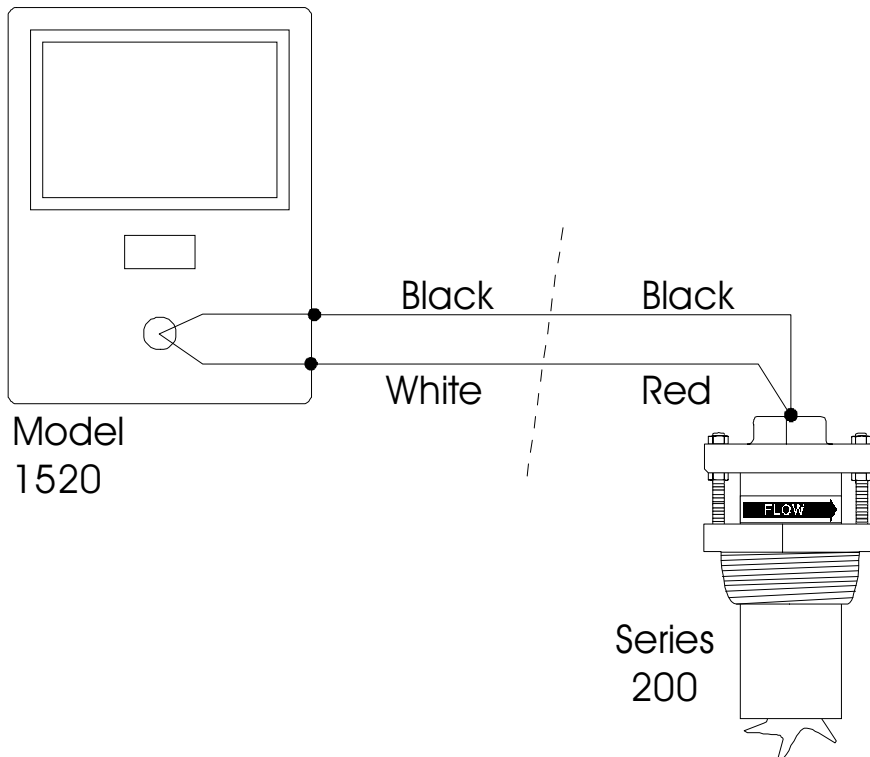 7 character label
  7 digit conversion factor from
  gallons/minute to custom unit with a
  range from 0.000001 to 1,000,000

Option Specifications:

Analog Input:
- Accepts linear signals : 0 - 1 VDC,
  0 - 5 VDC, 0 - 10 VDC, 4 - 20 mA
- Input impedance
  4 - 20 mA - 50 Ω
- Voltage inputs: 2 KΩ or greater

Model 1520 Wiring Example

Black   Black

White   Red

Model
1520

Series
200

Model 1520 Wiring Label

Data Industrial®
11 Industrial Drive
Mattapoisett, MA 02739

Model 1520

Flow Sensor Connections		
Monitor	**Series 200**	**Series 4000**
Red	N/A	Red
White	Red	White/Clear
Black	Black	Black