

# Vantage 4600



technical brief

## Description:

The Eastech Flow Controls Vantage 4600 is a transit time ultrasonic flow meter to be used on full pipe applications from 1 inch to 300 inch pipes. The 4600 comes complete with a graphic LCD display for flow, totals (forward and reverse), velocity and programmed parameters. The 4600 is enclosed in a NEMA 4X enclosure with viewing window and has two 4-20mADC outputs, three relays, RS-232 and RS485 Modbus™ protocol serial outputs. The 4600 also has a built-in data logger and software for downloading the stored data.

## Applications:

The Vantage 4600 can be applied to full pipes of water, wastewater and industrial process fluids.

- **Water:** Influent/effluent of WTP, distribution monitoring, billing and water wells.
- **Wastewater:** Lift stations, WWTP influent/effluent, clarifier effluents, clarifier underflows and sludges (RAS, WAS).
- **Industrial process:** In plant monitoring, transportation lines, HVAC.
- **Irrigation:** Turnouts, aqueduct flows.

## Enclosure:

The Model 4600 comes standard with a NEMA 4X/IP66 enclosure. The enclosure has a hinged viewing window and a separate compartment for wiring. There are three conduit holes in the bottom of the enclosure for 1/2" conduit fittings. Enclosure options are heater and thermostat for cold weather outdoor use and keylock for the hinged window.

## Sensor Styles:

- Strap on Sensors with mounting rails. (V30L, V30S)
- Internal Wetted Sensors (WFF-2, WR-2)
- Thru-Wall Wetted Sensors (HS3 & V20WT Hot Shot)
- Fabricated Spools (WD-1)

See associated technical brief for sensor specifications.



## Programming:

The Vantage 4600 is easily calibrated to the user's application data. The 16 button keypad and the menu driven information on the display will allow the user to program or adjust various parameters in the field.

Programming features:

- Main screen 4 page step through consisting of:
  - Flow & total, meter status, signal strength, measurement parameters including Reynolds #.
- Review last 8 days of totals.
- Listing of most pipes and wall schedules for application programming.
- Three programmable relay assignable for high/low alarms, remote totalizer, loss of signal, etc.
- 8 Channel data logger with selectable logging intervals of 1, 5, 10, 15, 30 or 60 minutes.

## Features:

- **High Accuracy and Reliability**
- **Fast and Simple Programming**
- **Sensors for All Types of Pipes**
- **Forward and Reverse Flow Measurement**
- **Internal Data Logger**
- **18 Month Warranty**

**eastech**  
FLOW CONTROLS



## Vantage 4600 General Specifications:

### Enclosure:

Standard: Nema 4X polycarbonate  
 Optional: Nonincendive Class I&II, Grps. A-D Div.2  
 Explosion proof, Aluminum, Class I, Grps. C & D, Class II, Grps. E,F,G Div. 1 & 2  
 Accessories: Heater and thermostat, Door Lock, Modem

Temperature:  
 Standard: -4° F to 158° F (-20° C to 70° C)  
 With Heater: -40° F to 158° F (-40° C to 70° C)

### Electronics:

Outputs:  
 4-20 mA Two separate analog isolated into 800 ohms max, monitored to detect open circuits. RFI and gas discharge surge protection and two fuses.

Relay Alarms 3 standard, SPDT relay (plug-in)  
 0.25A @ 120 VAC or 0.50A @ 24 VDC

Serial Ports: 1200-38400 Baud, Slave IDs 1 to 128  
 RS232 Modbus™ RTU protocol.  
 RS485 Optically isolated, Modbus™ RTU protocol.

DC power Out 12 VDC, 100 mA maximum

Display: 4 line, 20 character backlit LCD  
 16 button programming keypad

Power: 80 to 240 VAC, 50/60 Hz  
 12 to 28 VDC @ 480mA  
 50 watts std. W/heater 60 watts

Power Supply: High immunity: Approvals CE, UL, CSA

Data Logger: Programmable 8 channel with storage of up to 32768 records in non-volatile flash memory. Programmable logging intervals of 1, 5, 10, 15, 30 or 60 minutes.

Daily Summary: Daily summary of the total flows for the past 8 days from the display through menu selection.

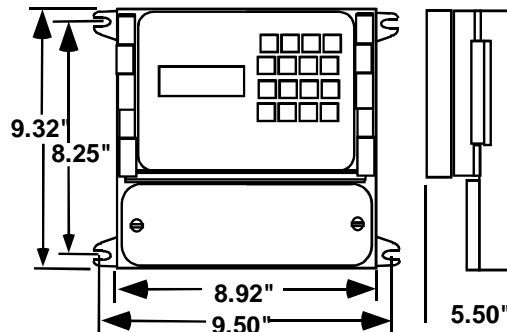
Accuracy: Up to +/- 0.5% of actual flow above 1 FPS

Linearity: +/- 0.25%

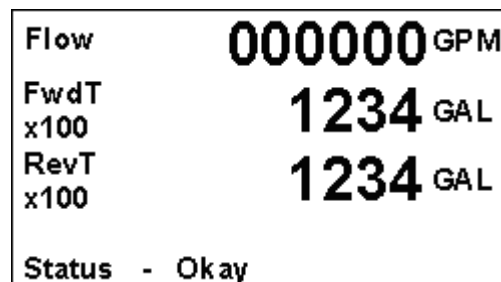
Repeatability: 0.25%

Range: 40 to 0.1 ft./sec.

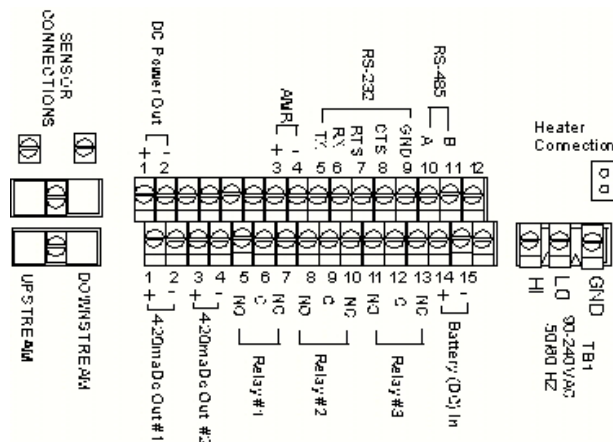
Turndown: 400:1



Enclosure Mounting Dimensions



Graphic Display



Wiring Diagram

