

Remote Meters With 4-20mA Output

Reliably and affordably measuring and monitoring the actual gas flow through a vacuum feed system has always been a challenge—until now. Hydro Instruments' innovative approach to this process has seen the development of the industry's first variable area gas flow meter with a 4-20mA analog output.

The remote meter visually indicates the gas feed rate as well as outputs a 4-20mA signal proportional from zero to full scale. The analog output is representative of the actual gas feed rate based on the physical location of the float in the graduated glass tube.

Features

- 4-20mA output for remote feed rate monitoring
- Calibration is not effected by changes in temperature or pressure
- Chemical never touches electronic components
- Excellent accuracy and repeatability
- Includes feed rate valve for manual adjustment of gas feed
- Can be used with automatic control valves
- Rugged design with solid machined parts for durability and long life
- Available for Chlorine or Sulfur Dioxide



Operation

Hydro Instruments' remote meters with 4-20mA output work like any other variable area gas flow meter, but incorporate technology that allows the remote monitoring of gas feed without the complications that other flow measurement methods are prone to.

The principal operation of a variable area gas flow meter is that as gas flow increases or decreases it applies a certain amount of force to the float inside the meter tube lifting it up or allowing it to fall, changing the area between it and the glass wall of the meter tube until enough gas can get around the float and an equilibrium is reached. The flow rate can then be determined based on calibrated markings on the glass meter tube.

Hydro Instruments has taken this concept and incorporated magnetic fields. A neodymium magnet of appropriate size and weight is placed inside the meter tube float and behind the meter tube itself are sensors able to detect the magnetic field. As the magnet passes these sensors the floats physical location in the meter tube can be determined and a mA current generated based on its position.

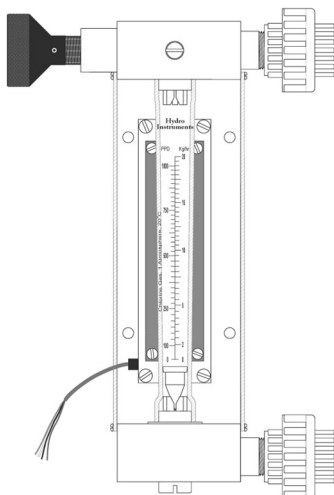
Specifications

Capacities & Connections:

Capacity	Tube Length	Inlet/Outlet
100 PPD / 2 Kg/h	6"	1/2" FPT
250 PPD / 5 Kg/h	6"	1/2" FPT
500 PPD / 10 Kg/h	6"	1/2" FPT
1,000 PPD / 20 Kg/h	12"	1" NPT, PVC Union
2,000 PPD / 40 Kg/h	12"	1" NPT, PVC Union
3,000 PPD / 60 Kg/h	12"	1" NPT, PVC Union
4,000 PPD / 80 Kg/h	20"	1.5" NPT, PVC Union
6,000 PPD / 120 Kg/h	20"	1.5" NPT, PVC Union
8,000 PPD / 160 Kg/h	20"	1.5" NPT, PVC Union
10,000 PPD / 200 Kg/h	20"	1.5" NPT, PVC Union

Note: All meters have a 1/4in FPT port for connecting a vacuum gauge or differential pressure regulator

Accuracy: 5% of scale
Power: 12-24 VDC, 2-wire
Output: 4-20mA DC, 2-wire
Feed Control: Manual feed rate valve included
Warranty: 1 year limited



Output (4-20mA)		Input (12-24VDC)	
GREEN	WHITE	BLACK	RED
AO+	AO-	V-	V+