MagneW Two-Wire PLUS

Versatile Two-Wire Magnetic Flowmeter Slashes Installation Costs

Measurement instrumentation has evolved from "end of the line" hardware to play an integral role in the overall control strategy. But improved operation efficiency can take a toll on the bottom line. Whether upgrading to improve existing two-wire flow instrument performance or designing a new control strategy, long four-wire cable runs significantly escalate installation and maintenance expenses.

The Yamatake MagneW Two-Wire PLUS (TWP) magnetic flowmeter series consistently delivers reliable, accurate performance at a fraction of traditional four-wire installation costs. Now you can cost-effectively replace alternate technology two-wire flow measurement instruments to improve performance and reduce maintenance.

Since the output loop provides the low voltage operating power, only one single pair of wires is needed – greatly reducing costly cable runs and simplifying overall installation and maintenance.

Although two-wire flowmeter installation cost is generally 4 to 5 times less than four-wire models, this is only one of the benefits of the MagneW TWP series. The series also features:

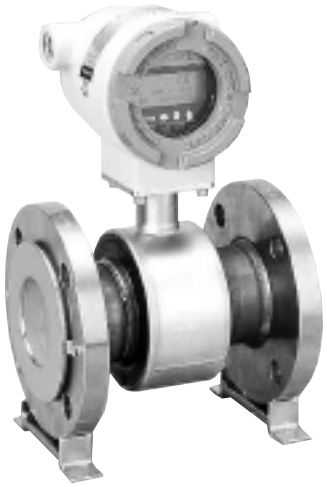
- **broad size range from 0.1 to 8 inch diameter (2.5 to 200mm)**
- **integral and remote mounting styles**
- **stable output - no external filters required**
- **reliable performance accuracy**
- **patented smooth lining finish for adhesive applications and long performance life**
- **unique electrode shape to reduce deposits**
- **DE and HART® communications capability**
- **flange or lower cost wafer process connections**
- **fully welded stainless steel detector body**
- **LCD converter display with data setting switches**
- **low power consumption**
- **FM Explosion Proof certification**

Backed by Yamatake Corporation's world-wide reputation for design innovation, high-quality products and precision manufacturing, the MagneW Two-Wire PLUS is well suited for processes in:

- **biochemistry**
- **chemical**
- **food and beverage**
- **metal and steel**
- **municipal utilities**
- **pharmaceutical**
- **pulp and paper**

The MagneW TWP can be effectively employed in most applications that measure flow rates for:

- **caustic or corrosive liquid**
- **chemical solutions**
- **cooling water**
- **medical fluids**
- **drainage and waste liquid**
- **industrial or sea water**



Reliable, Repeatable Measurement

Reference accuracy – Dependable flow measurement is essential to product quality and productivity. The MagneW TWP series typically provides ± 0.5% of rate at normal flow rates.

Noise susceptibility causing inconsistent and erroneous output has been an issue with some two-wire flowmeters. The innovative, patented excitation method reduces noise susceptibility enabling the TWP series to deliver accurate, reliable data.

Installation Flexibility

Mounting – MagneW Two-Wire PLUS flowmeters are available in integral or remote mounting styles. Remote mounting expands measurement capabilities in space constrained production areas simplifying installation and reducing costs. Remote mounting also simplifies maintenance and reduces equipment and plant personnel from exposure to hazardous environments.

Pipe connection – Flange or wafer units are both available in the series. If your application doesn't require a flange connection, the lower cost wafer and simplified installation are advantageous.

Easy Operation Converter

Four converter switches make data setting fast and easy. Communications is simple too, with both HART and DE communications available. The converter display shows three simultaneous values:

- **Percent flow rate (%)**
- **Actual flow rate (GPM)**
- **Totalized value**

Durable, Long-life Detector Operation

Lining and electrode – The patented mirror finish PFA lining and the unique shaped electrodes resist fluid particle build up, making the MagneW TWP series an outstanding choice for chemical applications where adhesive properties of the process fluid can cause detector coating.

Detector housing – The detector body is fully welded stainless steel, much more impervious to corrosion and leakage than painted steel units. Manufactured to withstand corrosive chemical environments, the stainless detector body ensures virtually maintenance free operation.

MagneW TWP Converter Specification Overview *

Type	Integral/Remote
Loop Power	15.6 to 42 VDC
Structure	IEC IP67, NEMA 4X
Output	4-20 mA DC, Pulse, Contact, DE
Communication	DE/HART
Display	Backlit LED main display 7 segments 8 digits, subdisplay 2 lines, 16 digits, simultaneous displays % flow rate, actual flow rate, totalized value
Data Setting	4 key switches, communications
Housing	Aluminum alloy with baked acrylic or epoxy paint
Ambient Temp.	-4 to +140°F (-20 to +60°C)
Ambient Humidity	10 to 90% RH
Mounting	Integral/Wall/2 in. (50mm) pipe
Elec. Conductivity	10 µS/cm minimum
Functions	Data setting protection, low flow cutoff setting, dropout setting
Accuracy	± 0.5% of rate

*These MagneW TWP Converter and Detector specifications are a summary. Contact Yamatake America Inc. to request publication SS2-MTG200-0100 for complete specifications.

MagneW TWP Detector Specification Overview *

Diameter	0.1, 0.2, 0.5, 1, 1.5, 2, 2.5, 3, 4, 6, 8 inch (2.5, 5, 10, 15, 25, 40, 50, 80, 100, 150, 200 mm)
Type	Integral/Remote
Structure	IEC IP67, NEMA 4X
Approvals	FM Explosion-proof**
Pipe Connections	Flange/Wafer ANSI 150/300, JIS 10/20/30K, DIN PN 10/16/25
Electrodes	SS316L, Hastelloy C, Titanium, Zirconium, Tungsten carbide, Tantalum, Platinum/Iridium, others
Grounding Rings	SS316, Hastelloy C, Titanium, Zirconium, Tantalum, Platinum/Iridium, others
Lining	PFA
Housing	304 Stainless Steel
Fluid Temp.	-4 to +266°F (-20 to +130°C)
Fluid Pressure	-14.2 to 426 PSI (-0.098 to 2.94 MPa)
Ambient Temp.	-4 to +140°F (-20 to +60°C)
Ambient Humidity	10 to 90% RH

**Pending at time of this printing.

Broad Portfolio

In addition to the MagneW Two-Wire PLUS Yamatake also offers a broad range of quality four-wire electromagnetic flowmeters from 0.1 to 44 inch (2.5 to 1100mm) diameters. The high energy noise resistant (HENRI) models specifically address slurry and dense particle suspension applications requiring noise immunity.