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Magnetic Turbine Series 3000 Meters *Installation/Start-up Instructions*

INTRODUCTION

The Turbine Series 3000 is designed for high volume water flow measurement. Produced in sizes from 1 ½" to 12", it is available in iron or bronze body construction.

Water passes through the meter without a change in flow direction, driving a helical vane rotor in direct proportion to the quantity of water passing through the meter.

Rotor resolutions are converted to engineering units by a gear reduction system, and magnetically coupled to a sealed register. Register calibrated in US Gallons, Cubic Feet or Cubic Meters.

INSTALLATION

The meter must be installed in a clean pipeline, free from any foreign materials.

Install the meter with the direction of flow as indicated by the arrow cast in the meter case. The meter can be installed in horizontal, vertical or inclined lines; however, the meter cannot be installed upside down. The meter location should allow a minimum of 10 straight pipe diameters upstream and 5 straight pipe diameters downstream. Gaskets and adjacent pipe must match the meter size.

When purging the line on start-up, turn on the flow gradually. The air in the line will be expelled slowly and will not damage the mechanism due to excessive revolution of the rotor.

WITH MRA 4910 (LRP) LOW RESOLUTION PULSER (2 WIRE)

The transmitting element is a 4-watt rated reed switch, giving a contact closure rate as follows:

	US Gallons	CuFt	M3
1 ½" – 2"	1 cont/gallon	10 cont/CuFt	1 cont/10 litre
3" – 4"	n/a	n/a	1 cont/10 litre
3" – 8"	1 cont/10 gallons	1 contact/CuFt	n/a
6" – 12"	n/a	n/a	1 cont/100 litre
10" – 12"	1 cont/100 gallons	1 contact/10 CuFt	n/a

To be wired in series with no regard to polarity. Requires power from an external source.

NOTE: If you use:

48 VAC, do not exceed .0833 Amps
 24 VAC, do not exceed .1666 Amps
 12 VAC, do not exceed .3333 Amps
 6 VAC, do not exceed .6666 Amps

WITH MRA 4911 (HRP) HIGH RESOLUTION PULSER (3 WIRE)

The transmitting element is a slotted disc – opto vane switch, which requires 6-15 VDC power from an external source, giving a contact closure rate as follows:

	US Gallons	CuFt	M3
1 ½" – 2"	10 cont/US gallon	100 cont/1 CuFt	1 cont/1 litre
3" – 4"	n/a	n/a	1 cont/1 litre
3" – 8"	1 cont/US gallon	10 cont/1 CuFt	n/a
6" – 12"	n/a	n/a	1 cont/10 litre
10" – 12"	1 cont/10 US gallons	1 cont/1 CuFt	n/a

To be wired as follows:

Red: 6-15 VDC
 White: Output
 Black: Ground VDC

NOTE: When using the HRP Pulser with an R420, a 12 volt Zener Diode (1 watt rated) must be installed in series between 24 VDC out and the red (6-15 VDC) power in line.

WITH DIGITAL REGISTER PULSER FOR ALL BRONZE METERS TO REMOTE COUNTER

Available with plastic (inside) or glass lens (outside).

Note: These units are not repairable.

Electrical ratings: Max Voltage 50VDC
 Max Current 50mA

The transmitting element is a dry contact reed switch rated at 10 watts.

Duty Cycle 50+ -15% (closed/open)

To be wired in series: Plastic – use black & red connections
 Glass – use black & red wires
 See wiring on specification sheet #DR-T3000

Contact Closure:	US Gallon	CuFt	M3
1 ½" – 4"	1 cont = 10 USG	1 cont = 1 CuFt	1 cont = 100 litres
6" – 12"	1 contact = 100 USG	1 contact = 10 CuFt	1 cont = 1000 litres