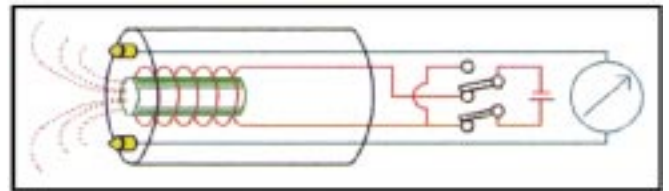


# MAGNUM IC

## Universal Digital Flowmeter

Magnum IC is a magnetic flowmeter for measuring the flow of conductive liquids in pipes. The sensor creates a pulsating, alternating magnetic field on the inside of a pipe. The liquid in the pipe will move through this magnetic field and generate a signal current proportional to its velocity. This information is collected by the electrodes and then processed by the Magnum's microprocessor to provide the user with the desired flow information.



Magnum IC houses a full featured digital transmitter inside the sensor housing itself. All features of the basic flowmeter, plus a number of possible optional additions, including pressure and temperature sensing, as well as data-logging, are enclosed within the compact submersible package.



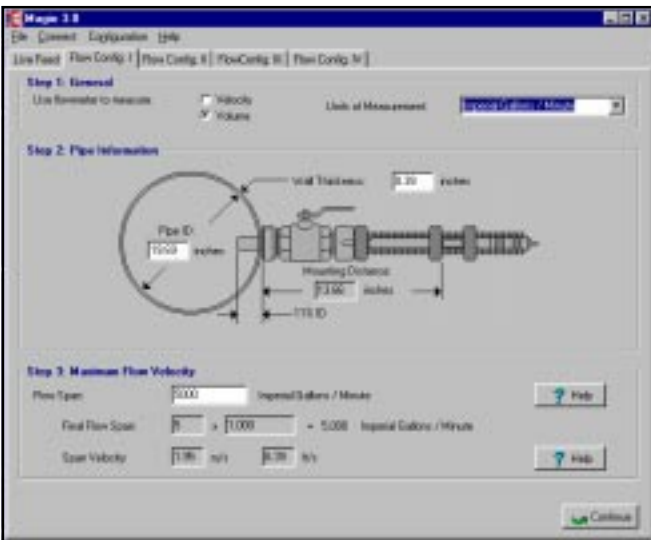
**MSR Magmeter**  
P.O. Box 32170  
Edmonton, Alberta, Canada  
T6K 4C2





Magnum is an entirely digital instrument. All internal functions of the flowmeter are controlled by software. Setup and configuration for applications are handled by the new Magio 3.0 software interface, which runs on Win95/98 based PCs. Setup can be done in the field on a laptop or in the office at a desktop PC.

Once the setup is completed the instrument can be installed. The only requirements are cabling for power in (12 VDC) and signal out (4-20mA). This makes it ideally suited for SCADA type applications which may require numerous measurement points at remote locations. The Magnum IC also features optional hardware for data-logging, as well as additional inputs, such as pressure and temperature.



## MAGNUM IC

### Universal Digital Flowmeter

- |    |                                   |                                      |
|----|-----------------------------------|--------------------------------------|
| 01 | online service mounting mechanism |                                      |
| 02 | mounting base                     | 316 Stainless Steel                  |
| 03 | mounting nipple                   | anodized aluminum                    |
| 04 | o-rings                           | Buna or Viton                        |
| 05 | lock nut                          | galvanized brass                     |
| 06 | position nut                      | galvanized brass                     |
| 07 | position ring                     | SS316                                |
| 08 | snap ring                         | spring steel                         |
| 09 | sensor type                       | cylindrical probe                    |
| 10 | sensor body                       | SS316 or other                       |
| 11 | electrode type                    | conical protruding                   |
| 12 | electrode mat.                    | Hastelloy                            |
| 13 | sensor tip                        | Kynar or PEEK                        |
| 14 | grounding type                    | integral body                        |
| 15 | internal transmitter              | micro-processor                      |
| 16 | analog output                     | 0/4 to 20mA                          |
| 17 | impedance                         | 800 ohm                              |
| 18 | protection                        | isolated                             |
| 19 | pulsed output                     | pulse/unit                           |
| 20 | communication                     | RS 232                               |
| 21 | signal quality                    | signal/noise ratio                   |
| 22 | indications                       | insertion depth                      |
| 23 |                                   | reverse flow                         |
| 24 |                                   | empty pipe/air                       |
| 25 | user selectable                   | engineer units                       |
| 26 |                                   | pipe dimension                       |
| 27 |                                   | flow rate span                       |
| 28 |                                   | auto ranging                         |
| 29 |                                   | digital filtering                    |
| 30 | power supply                      | 12 V DC                              |
| 31 | enclosure class                   | NEMA 4x, 6P<br>(submersible)         |
| 32 | cable connection                  | water tight plug                     |
| 33 | options                           | additional inputs                    |
|    |                                   | pressure                             |
|    |                                   | temperature                          |
| 34 |                                   | data-logging                         |
|    |                                   | 20,000. samples                      |
| 35 | utilities                         | output simulation                    |
| 36 | line size                         | 3 up to 120 inch                     |
| 37 | line material                     | all types                            |
| 38 | connection                        | 2 inch NPT                           |
| 39 | connection valve                  | 2 inch full bore                     |
| 40 | liquid                            | conductive                           |
| 41 | max. velocity                     | unlimited                            |
| 42 | min. velocity                     | .25 inch/s                           |
| 43 | temperature                       | up to 200 deg. F                     |
| 44 | pressure                          | up to 1500 psi                       |
| 45 | precision                         | 0.5% of velocity<br>at 100% of range |
| 46 | repeatability                     | 99. 5%                               |



EN 50081-1 (Emission)  
EN 50082-2, Performance  
Criterion C (Immunity)



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