

## PRODUCT CONFIGURATION



### QSE MAG FLOWMETER

The QSE Mag Series is a dependable highly accurate electromagnetic flowmeter designed for flow and usage monitoring in commercial applications.

The Noryl™ housing and flow tube offer a lightweight, easy-to-install Mag Meter that is resistant to heat and compatible with many water-based liquid solutions.

The QSE Mag Meter monitors flow rate and total flow in a wide variety of applications including: HVAC, Turf/ Irrigation and other water reclamation applications.

### FEATURES / BENEFITS

- Low investment and operating costs
- ± 0.5% Accuracy of Reading (from 0.25 fps to 15 fps [0.08 to 4.6 m/s])
- Wide turndown ratio of 60:1
- Non-intrusive, no moving parts to wear out, maintenance, repair costs low and tolerates high flows without damage
- The slightly modified bore permits unobstructed flow and minimizes flow disturbances and straight pipe requirements
- 7 line sizes (½" to 4") ½", ¾", 1", 1-½", 2", 3", & 4"
- Housing ported with "Thermal Well Supports" for sensors (Energy Management)
- Compatible with GPI 09 Electronics Display or FLOMEC QSI I/O Board

### PRODUCT IDENTIFIER 1

**QSE** = Electro-Magnetic Flow Meter

### SIZE 2

**05** = 1/2" (15 mm)  
**07** = 3/4" (20 mm)  
**10** = 1" (25 mm)  
**15** = 1-1/2" (40 mm)  
**20** = 2" (50 mm)  
**30** = 3" (80 mm) (Flange only)  
**40** = 4" (100 mm) (Flange only)

### FITTING 3

**NPT** = NPT (Male) (½" to 2" Only)  
**BSP** = BSPP (Male) (ISO 228) (½" to 2" Only)  
**FAP** = ANSI Flange - Polymer (3" & 4" Only)

### ELECTRONIC CHOICE 4

**09** = 2-Button Integral Display, Field Configurable (Cumulative, Batch & Rate) and Integral Pulse Transmitter (Open Collector Square Wave), Includes Four Strain Reliefs

**QB** = Integral Pulse Transmitter (Open Collector Square Wave), Includes Four Strain Reliefs

### COMMUNICATION CHOICE 5

**Q1 = Integrates with Any Electronic Choice** QSI Module: Bluetooth®, Coil/Digital Pulse Input, Pulse Output (Flow or Energy & Scalable), RS485 (Modbus RDU or BACnet® MS/TP), Temperature Inputs, BTU Calculator. Energy Use Computation Note: Energy Use Computation Requires Temperature Sensor Probes (Select Probes Below)

**Q2 = Integrates with Any Electronic Choice** QSI Module: Bluetooth®, Coil/Digital Pulse Input, Pulse Output (Flow or Energy & Scalable), Temperature Inputs, BTU (Heat) Calculator. Energy Use Computation Note: Energy Use Computation Requires Temperature Sensor Probes (Select Probes Below)

**Q3 = Integrates with Any Electronic Choice** QSI Module: Bluetooth®, Coil/Digital Pulse Input, Pulse Output (Scalable), 4-20mA.

**XX** = No Communication Suite

### TEMPERATURE SENSOR PROBES 6

**1 = Integrates with QSI Communications Choice for Energy Use Computation** (2ea) 1" (25 mm) Long Temperature Sensor Probes w/Cables (10 ft. [3 m]) (Customer Installed), Used with 1/2" through 2" Meters

**2 = Integrates with QSI Communications Choice for Energy Use Computation** (2ea) 2" (50 mm) Long Temperature Sensor Probes w/Cables (10 ft. [3 m]) (Customer Installed), Used with 3" and 4" Meters

**X** = No Temperature Probes

### PACKAGING (Auto Select) 7

**A** = 1/2" - 2" Meters

**B** = 3" Meter

**C** = 4" Meter

# SPECIFICATIONS

|                                                                                                                                                        |                                                |                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|----------------------------------|
| <b>Fitting Type:</b>                                                                                                                                   | NPT, BSP, ANSI Flanged                         |                                  |
|                                                                                                                                                        | 1/2" to 2" - NPT (Male), BSPP (Male) (ISO 228) |                                  |
|                                                                                                                                                        | 3" & 4" 150# ANSI Flanged - Polymer Flange     |                                  |
| <b>Recommended Plastic Flange Bolt Torque:</b>                                                                                                         | 25 ft.-lbs. (33.9 N-m)                         |                                  |
| <b>Pipe Sizes:</b>                                                                                                                                     | 1/2", 3/4", 1", 1-1/2", 2", 3", 4"             |                                  |
| <b>Pressure Rating:</b>                                                                                                                                | 150 psi @ 73° F (10 bar @ 23° C)               |                                  |
| <b>Velocity:</b>                                                                                                                                       | 0.25 to 15 fps (0.08 to 4.6 m/s)               |                                  |
| <b>Flow:</b>                                                                                                                                           | 1/2" (05)                                      | 0.16 - 10 GPM (0.63 - 38 L/min)  |
|                                                                                                                                                        | 3/4" (07)                                      | 0.3 - 20 GPM (1.27 - 76 L/min)   |
|                                                                                                                                                        | 1" (10)                                        | 0.6 - 40 GPM (2.52 - 151 L/min)  |
|                                                                                                                                                        | 1-1/2" (15)                                    | 1.3 - 80 GPM (5.05 - 303 L/min)  |
|                                                                                                                                                        | 2" (20)                                        | 2.5 - 150 GPM (9.47 - 568 L/min) |
|                                                                                                                                                        | 3" (30)                                        | 5 - 300 GPM (19 - 1136 L/min)    |
|                                                                                                                                                        | 4" (40)                                        | 10 - 600 GPM (38 - 2271 L/min)   |
| <b>Accuracy</b>                                                                                                                                        |                                                |                                  |
| ±0.5% of Reading between 0.25 fps and 15 fps (0.08 m/s and 4.6 m/s)<br>(Reference Owner's Manual for complete accuracy and uncertainty specifications) |                                                |                                  |

|                                     |                                              |                                  |
|-------------------------------------|----------------------------------------------|----------------------------------|
| <b>Operating Temperature Range:</b> | 32° F to 180° F (0° C to 82° C)              |                                  |
| <b>Ambient Temperature Range:</b>   | 0° F to 140° F (-18° C to 60° C)             |                                  |
| <b>Typical K-Factor:</b>            | 1/2" (05)                                    | 4347 PPG (1158.5 Pulses/L)       |
|                                     | 3/4" (07)                                    | 1937 PPG (511.8 Pulses/L)        |
|                                     | 1" (10)                                      | 1089 PPG (287.7 Pulses/L)        |
|                                     | 1-1/2" (15)                                  | 484.1 PPG (127.9 Pulses/L)       |
|                                     | 2" (20)                                      | 400 PPG (105.7 Pulses/L)         |
|                                     | 3" (30)                                      | 121 PPG (32.0 Pulses/L)          |
|                                     | 4" (40)                                      | 68.1 PPG (18.0 Pulses/L)         |
| <b>Power Supply:</b>                | Externally Powered                           |                                  |
|                                     | Voltage Supply (Min): 12V (dc)               |                                  |
|                                     | Voltage Supply (Max): 36V (dc)               |                                  |
| <b>Consumption:</b>                 | Max current consumption (QSE with QSB): 75mA |                                  |
|                                     | Max current consumption (QSE with QS): 150mA |                                  |
| <b>Wetted Materials:</b>            | Body                                         | Noryl™                           |
|                                     | Electrodes                                   | 316L SS                          |
|                                     | Seals                                        | EPDM O-Rings                     |
| <b>Output Frequency Range:</b>      | All Sizes                                    | 10 Hz Minimum - 1,000 Hz Maximum |
| <b>Calibration Report:</b>          | N.I.S.T. - Standard                          |                                  |

# APPLICATIONS

- Agriculture Irrigation
- Turf Irrigation Systems
- Micro Irrigation Systems
- HVAC
- EMS (Energy Management Systems)
- BAS (Building Automation Systems)
- Chilled water
- Domestic water (hot and cold)
- Energy sub-metering (BTU hot and cold)
- Process (blow down, make up, boiler feed, etc.)

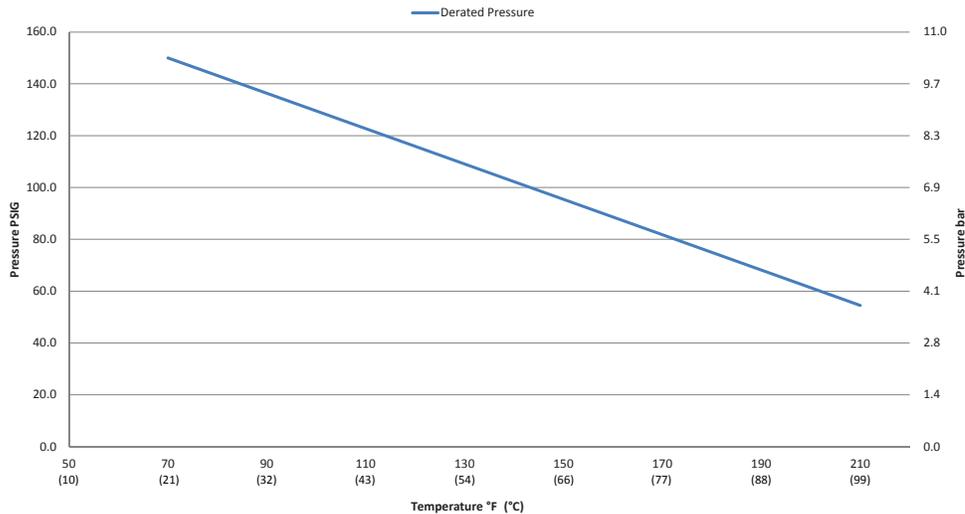
# CERTIFICATIONS

**NEMA 6P**  
(pending)

**IP67**



**Derated Pressure Curve for QSE (Pressure vs Temperature)**



**Service & Warranty:** For technical assistance, warranty replacement or repair contact your **FLOMEC®** or **GPI®** distributor: In North or South America: **888-996-3837 / FLOMEC.net**  
Outside North or South America: **+61 2 9540 4433 / FLOMEC.net**

Wichita · Sydney

GREAT PLAINS INDUSTRIES

