# 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 (210°F [99°C]) 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)
**FAS** = ANSI Flange - Steel (3" & 4" Only)
**FDS** = DIN Flange - Steel (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: Blue Tooth®, Coil/Digital Pulse Input, Pulse Output (Flow or Energy & Scalable), RS485 (MODbus RTU), 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: Blue Tooth®, Coil/Digital Pulse Input, Pulse Output (Flow or Energy & Scalable), Data Logger, 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: Blue Tooth®, Coil/Digital Pulse Input, Pulse Output (Scalable), Data Logger, 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

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| >>>> | QSE | 30 | FAP | 09 | Q1 | 2 | B |

## SPECIFICATIONS

| | | |
|---|---|---|
| **Fitting Type:** | NPT, BSP, ANSI Flanged, DIN Flanged | |
| | 1/2” to 2” - NPT (Male), BSPP (Male) (ISO 228) | |
| | 3” & 4” 150# ANSI Flanged - Polymer Flange | |
| | 3” & 4” ANSI Flanged - Steel Flange | |
| | 3” & 4” DIN Flanged - Steel Flange | |
| **Recommeded Plastic Flange Bolt Torque:** | 25 ft.-lbs. (33.9 N·m) | |
| **Pipe Sizes:** | 1/2”, 3/4”, 1”, 1-1/2”, 2”, 3”, 4” | |
| **Pressure Rating:** | 150 psi @ 73° F (10 bar @ 23° C) | |
| **Velocity:** | 0.25 to 15 fps (0.08 to 4.57 m/s) | |
| **Flow:** | 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) |
| **Accuracy** | | |
| ±0.5% of Reading between 0.25 fps and 15 fps (0.08 m/s and 4.57 m/s) (Reference Owner's Manual for complete accuracy and uncertainty specifications) | | |

| | | |
|---|---|---|
| **Operating Temperature Range:** | | 1/2"-2": 32° F to 210° F (0° C to 99° C) |
| | | 3"-4": 32° F to 180° F (0° C to 82° C) |
| **Ambient Temperature Range:** | | 0° F to 140° F (-18° C to 60° C) |
| **Typical K-Factor:** | 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) |
| **Power Supply:** | Externally Powered | |
| | Voltage Supply (Min): 12V (dc or ac) | |
| | Voltage Supply (Max): 30V (dc or ac) | |
| **Consump-tion:** | Max current consumption (QSE with QSB): 75mA | |
| | Max current consumption (QSE with QSI): 150mA | |
| **Wetted Materials:** | Body | Noryl™ |
| | Electrodes | 316L SS |
| | Seals | EPDM O-Rings |
| **Frequency Range:** | All Sizes | 10 Hz Minimum - 1,000 Hz Maximum (with 09 Display) |
| | | 10 Hz Minimum - 3,000 Hz Maximum (with Blind Pulse Out) |
| **Calibration Report:** | | Standard |
| | | N.I.S.T. Available |

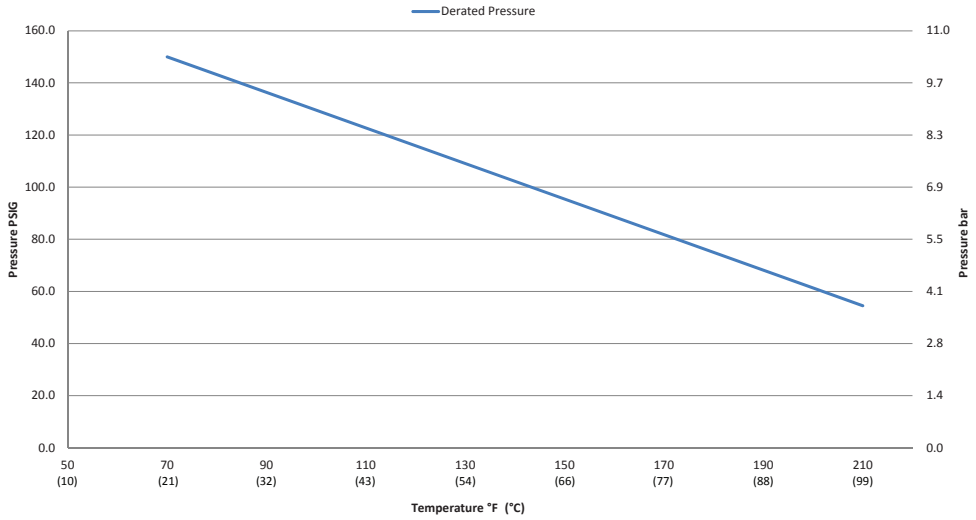
## APPLICATIONS

- 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.)

## APPROVALS

**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**

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