

Flomec small capacity flowmeters provide precise volumetric measurement of small quantities of liquids or low flows found in a broad range of industries including automotive, aviation, mining, power, chemical, pharmaceutical, food, paint, petroleum & environmental. Applications include the metering of additives for fuel, consumer products, water treatment & flotation cells, corrosion inhibitors, catalysts, emulsifiers, oils, grease, fragrances, adhesives, solvents, ink & insecticides.

Features / Benefits

- High accuracy & repeatability, direct reading flowmeter
- No requirement for flow conditioning (*straight pipe runs*)
- Stainless Steel rotors (Optional PPS Rotor for OM008 meter)
- Measures high & low viscosity liquids
- Quadrature pulse output option & bi-directional flow
- Integral 4-20mA output option
- Optional Exd I/IIB approval (ATEX, IECEx)
- PF option available for metering pulsating flows

Meter selection

- **Aluminium** meters are used for petroleum product including oils and grease, fuels and fuel oils.
- **Stainless steel** meters are for the chemical, cosmetic, food and pharmaceutical industries & water based liquids.
- **Blind pulse** meters are available with reed switch & Hall Effect outputs. Quadrature pulse & Integral 4-20mA outputs are optional.

Integral instruments

Flomec meter options include integral LCD totalisers, flow rate totalisers & batch controllers. These instruments provide monitoring & control outputs including 4~20mA, scaled pulse, alarms & batch control. Instruments include:

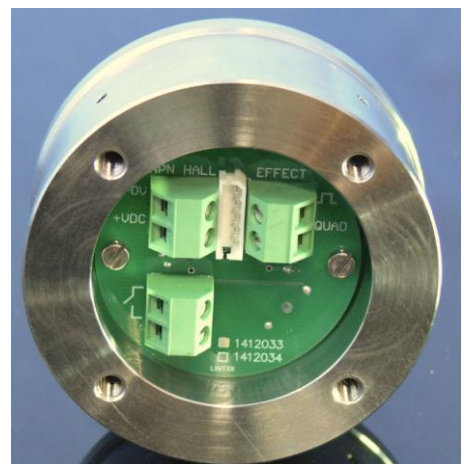
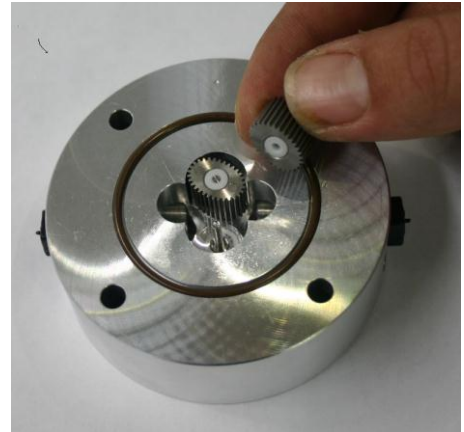
- BT LCD 5 digit reset, 8 digit cumulative totaliser.
- RT12 LCD 6 digit reset, cumulative totaliser & flow rate, analog and pulse outputs.
- RT40 LCD 6 digit reset, cumulative totaliser & flow rate. Backlit Display
- EB LCD 6 digit 2 stage batcher & cumulative totaliser.

(Instruments also available for remote mounting and with I.S. approvals)

General specification

Flow rates : 0.5 ~ 550 litres / hr. (0.16~ 145 USgal/hr.) *
 Sizes : 4~8mm (1/8"~3/8" NB)
 Materials : Aluminium, 316 Stainless steel

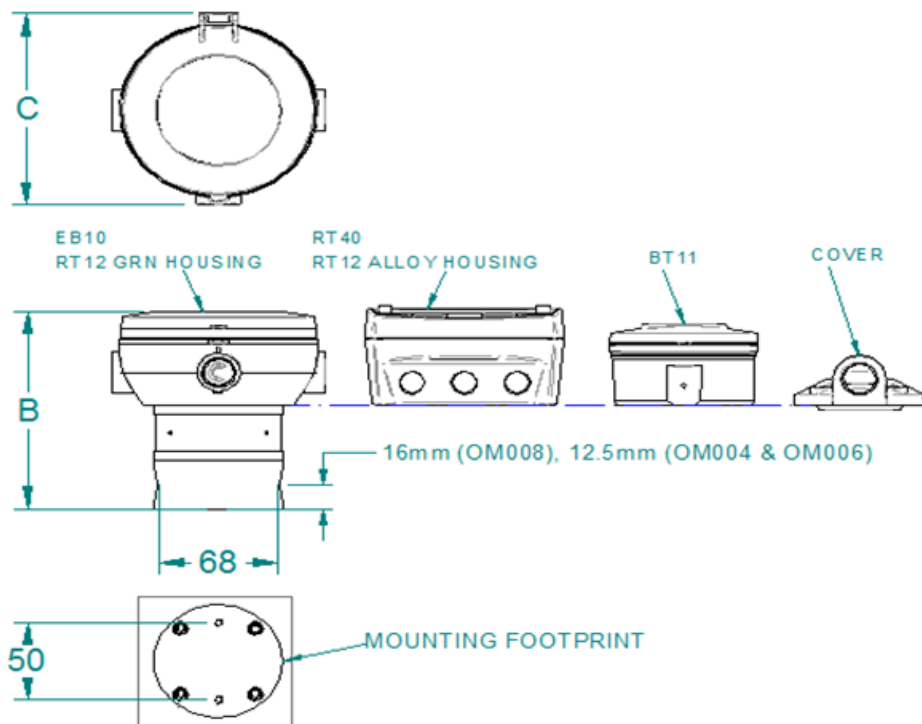
* see also **medium & large capacity** data sheets for other size meters



Specifications

| Model Prefix: | OM004 (1/8") | OM006 (1/4") | OM008 (3/8") |
|---|--|--------------|--------------|
| Nominal size (inches): | 4mm (1/8") | 6mm (1/4") | 8mm (3/8") |
| *Flow range - (LPH) | (0.5 ~ 36) | (2 ~ 100) | (15 ~ 550) |
| - (GPH) | (0.13~9.5) | (0.5~27) | (4~145) |
| **Accuracy @ 3cp | ± 1% of reading (accuracy is ± 0.2% of reading with optional RT12 with non-linearity correction) | | |
| Repeatability | typically ± 0.03% of reading | | |
| Temperature range | -20°C ~ +120°C (-4°F ~ +250°F), refer factory for lower temperature | | |
| Maximum pressure | (Threaded meters)bar (PSI) | | |
| aluminium meters | 15 (220) | | |
| 316 stainless steel | 34 (495) | | |
| Intermediate press. SS meter | 100 (1450) | 100 (1450) | 100 (1450) |
| high pressure models | 400 (5800) | 400 (5800) | 400 (5800) |
| Electrical - for pulse meters (see below for optional outputs) | | | |
| Output pulse resolution | pulses / litre (pulses / US gallon) - nominal | | |
| Reed switch | 2800 (10600) | 1050 (3975) | 355 (1345) |
| Hall effect | 2800 (10600) | 1050 (3975) | 710 (2690) |
| QP-Quadrature Hall option | 2800 (10600) | 1050 (3975) | 710 (2690) |
| PF-Pulsating Flow (Hall Effect) | 2800 (10600) | 1050 (3975) | 178 (675) |
| HR-High resolution Hall effect | 11200 (42400) | 4200 (15900) | N/A |
| Reed switch output | 30Vdc x 200mA max. (maximum thermal shock 10°C (18°F) / minute) | | |
| Hall effect output (NPN) | 3 wire open collector, 5~24Vdc max., 20mA max. | | |
| Optional outputs | 4~20mA, scaled pulse, quadrature pulse, flow alarms or two stage batch control | | |
| Physical | | | |
| Protection class | IP66/67 (NEMA4X), optional Exd I / IIB T4/T6, integral ancillaries can be supplied I.S. (intrinsically safe) | | |
| Overall dimensions | Refer Below | | |
| Recommended filtration | 75 microns (200 mesh) | | |
| * Maximum flow is to be reduced as viscosity increases, see flow de-rating guide. Max. recommended pressure drop is 100Kpa. (14.5 psi). | | | |
| ** QP & PF Options are not available with High Pressure Meters | | | |

Over all Dimensions:



ALL DIMENSIONS IN MILLIMETERS ±2mm

| OPTION | B | B | B | C |
|-------------------------|-------|-------|-------|-----|
| | OM004 | OM006 | OM008 | |
| EB10/RT12 GRN HOUSING | 122 | 122 | 129 | 124 |
| RT40/RT12 ALLOY HOUSING | 125 | 125 | 132 | 96 |
| BT | 113 | 113 | 120 | 94 |
| COVER | 92 | 92 | 99 | 72 |

Model Coding - Flomec Pulse Meters



Meter Size

| | | | |
|--------------|--------------|-------------|--------------|
| OM004 | 4mm (1/8") | 0.5-36 L/hr | 0.13-9.5 GPH |
| OM006 | 6mm (1/4") | 2-100 L/hr | 0.5-27 GPH |
| OM008 | 8mm (3/8") | 15-550 L/hr | 4-145 GPH |

Body material

| | |
|----------|--|
| A | Aluminum |
| S | 316 stainless steel |
| N | Intermediate press. 316 SS meter (OM004N ~ OM008N = 100bar max.) |
| H | High pressure 316 SS (OM004H ~ OM008H = 400bar [5800psi] max.) |

Rotor material

| | |
|----------|--|
| 0 | PPS*-Teflon Filled (Polyphenylene Sulfide)* Only available with OM008 size |
| 5 | Stainless steel (all standard OM004 ~ OM008 meters) |
| 7 | Keishi cutting of stainless steel rotors (for high viscosity liquids) (Only available with 008 size) |

Bearing type

| | |
|----------|--|
| 0 | No Bearing-PPS rotors only |
| 1 | Carbon-Ceramic (Stainless steel rotors only) |

O-ring material

| | |
|----------|--|
| 1 | Viton (standard) -15°C (5°F) minimum |
| 2 | Ethylene Propylene Rubber (EPR); -40~+120°C (-40~+250°F) |
| 3 | Teflon encapsulated viton - application specific -15°C minimum |
| 4 | Buna-N (Nitrile) -40~+100°C (-40~+212°F) |

Temperature limits

| | |
|----------|--|
| 2 | 120°C (250°F) - see note 1 |
| 3 | *150 °C (300°F) max. - (Hall Effect output only); O-Ring code 1 or 3 |
| 5 | *120 °C (250°F) max. (Includes integral cooling fin) see note 2 |
| 8 | *80 °C (180°F) max. (For OM008 with PPS rotors) |

Process connections

| | |
|----------|---------------------|
| 1 | BSP female threaded |
| 2 | NPT female threaded |
| 9 | Customer nominated |

Cable entries

| | | |
|--------------------|----------|-------------------|
| with B2/B3 options | 0 | 3-6mm cable gland |
| | 1 | M20 x 1.5mm |
| | 2 | 1/2" NPT |

Integral options

| | | |
|--|-----------|--|
| Not available with high press models | 00 | Nil |
| IECEX & ATEX approved | SS | Stainless Steel Terminal Cover |
| IECEX & ATEX mines approved | RS | Reed Switch only -to suit Intrinsically safe installations (I.S.) |
| IECEX & ATEX approved | QP | Quadrature pulse (2 NPN Phased outputs) |
| OM004: 11200ppL, OM006: 4200ppL | E1 | Explosion proof ~ Exd IIB T4/T6 (Aluminium & stainless meters) |
| IECEX & ATEX approved | E2 | Explosion proof ~ Exd I/IB T4/T6 (stainless meters only) |
| for injected combustion engines | Q1 | Exd with Quadrature pulse (not available with high press. meter) |
| IECEX & ATEX approved | HR | High resolution hall effect output (only for OM004 & 006) |
| with scaleable pulse output | H1 | Exd with HR Hi-res. Hall Option (OM004 and OM006 only) |
| IECEX & ATEX approved | PF | Pulsating flow option (hall effect output only) |
| Scaled pulse, alarm, 4 ~ 20mA | P1 | Exd with PF pulsating flow option |
| Scaled pulse, alarm, 4 ~ 20mA | B2 | BT11 dual totaliser with pulse output |
| IECEX & ATEX approved | B3 | Intrinsically safe BT11 (I.S.) |
| Scaled pulse + Backlighting | R0 | RT12 Flow Rate Totaliser with all outputs (Alloy housing) |
| 2 stage DC batcher and totaliser | R2 | RT12 Flow Rate Totaliser with all outputs (GRN housing) |
| | R3 | Intrinsically safe RT12 (I.S.)(GRN housing) |
| | R4 | RT40 large LCD flow rate totaliser (Alloy housing) |
| | E0 | EB10 batch controller |
| | FI | Loop powered 4 ~ 20mA analog output; 80°C (180°F) max. |
| Not available with 008 High Press models | A1 | Exd with Loop powered 4-20mA Analogue Output. 80°C (180°F) max. |
| | FH | High resolution hall output with FI option (only for OM004 & 006) |
| | SB | Specific build requirement |

Model No. Example

| | | | | | | | | | |
|--------------|----------|----------|----------|----------|---|----------|----------|----------|-----------|
| OM006 | s | 5 | 1 | 1 | - | 5 | 1 | 1 | R2 |
|--------------|----------|----------|----------|----------|---|----------|----------|----------|-----------|

*(1) 120°C (250°F) rating for the pulse meter, 80°C (180°F) rating with BT, RT, EB & FI options.

See temperature code 5 for higher temperature with BT, RT, & EB

*(2) Cooling fin is fitted with LCD instruments for operation between 80~120°C (180~250°F)



Recommended Strainers

| | |
|----------------|--------------------------|
| ST006S1 | 6 mm (1/4")-316SS |
| ST008S1 | 8 mm (3/8")-316SS |

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Data sheet No. DSOMSML-0213

