

Trimec 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 MG008 meter)
- Measures high & low viscosity liquids
- Quadrature pulse output option & bi-directional flow
- Optional Exd I/II approval (ATEX, IECEx)
- Only two moving parts



General specification

Flow rates: 1 - 550 litres/hr (0.26 - 145 US gal/hr) *

Sizes: 4 - 8mm (1/8" - 3/8")

Materials: Aluminum, 316 Stainless steel

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

Meter selection

- **Aluminum** meters are used for petroleum products including oils and grease, fuels and fuel oils.
- **Stainless steel** meters are for chemicals, cosmetic, food and pharmaceutical industries, water base liquids or where aluminum is not suited or permitted.
- **Blind pulse** meters are available with reed switch & Hall Effect outputs. Quadrature pulse outputs and Integral 4-20mA are optional.



Integral instruments

Trimec 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:

- FRT LCD 7 digit flow rate, total, accumulated total, alarm values and preset totalisers.
- RT12 LCD 8 digit reset, cumulative totaliser, analogue and pulse outputs.
- RT40 LCD 6 digit reset, cumulative totaliser & flow rate. Backlit display.
- EB10 LCD 6 digit 2 stage batcher & cumulative totaliser.

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

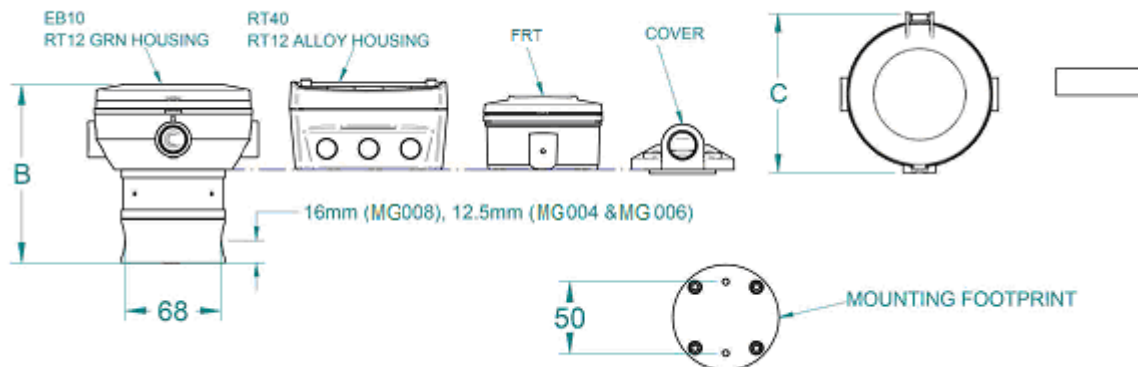
Specifications

Nominal size (inches):	4mm (1/8")	6mm (1/4")	8mm (3/8")
*Flow range - (LPH) litres/hr	1 - 36	2 - 100	15 - 550
- (GPH) US gal/hr	0.26 - 9.5	0.5 - 26.4	4 - 145
Accuracy @ 3cp	± 1% of reading (± 0.2% of reading with optional RT12)		
Repeatability	typically ± 0.03% of reading		
Temperature range	-30°C - +120°C (-22°F - +250°F)		
Maximum pressure	(Threaded meters) bar (PSI)		
Aluminium meters	15 (220)		
316 stainless steel	34 (495)		
Intermediate pressure S/S meter	100 (1450)		
High pressure S/S meter	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)
Quadrature Hall Effect	2800 (10600)	1050 (3975)	710 (2690)
High Resolution Hall Effect	11200 (42400)	4200 (15900)	-
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 (NEMA4XI, optional Exd I/IB T4/T6, integral ancillaries can be supplied I.S. (intrinsically safe)		
Recommended filtration	75 microns (200 mesh)		

Over all Dimensions:

Dimensions (±2mm)

Option	B			C
	MG004	MG006	MG008	
EB10 / RT12 GRN Housing	122	122	129	124
RT40	125	125	132	96
FRT	113	113	120	94
Cover	92	92	99	72



Model Coding

Meter size

MG004	4mm (1/8")	1 - 36 l/hr	0.26 - 9.5 GPH
MG006	6mm (1/4")	2 - 100 l/hr	0.5 - 27 GPH
MG008	8mm (3/8")	15 - 550 l/hr	4 - 145 GPH

Body material

A	Aluminum
S	3 1/6 stainless steel
N	Intermediate pressure 3 1/6 SS meter (MG004N - MG008N = 10.0 bar (1450 PSI) max.)
H	High pressure 3 1/6 SS (MG004H - MG008H = 400 bar (5800 PSI) max.)

Rotor material / Bearing type

0 0	PPS (008 only) (not available for 150 °C meters) / No bearing
5 1	Stainless Steel / Carbon Ceramic
7 1	Keishi cutting of stainless steel (for high viscosity liquids) (008 only) / Carbon Ceramic

O-ring material

1	Viton (standard) -15 - +200°C (-5 - +400°F)
3	Teflon encapsulated viton - application specific, -15 °C min
4	Buna-N (Nitrile) -40 - +100°C (-53 - +212°F)

Temperature limits

2	120°C (250°F) - max.
3	150 °C (300°F) max. - (Hall Effect output only) (Includes SS terminal cover)
5	*120 °C (250°F) max. (Includes integral cooling fin)
8	*80°C (176°F) max. (Meters with integral instruments, MG008 with PPS rotors)

Process connections

1	BSPP female threaded
2	NPT female threaded
B	Bottom entry manifold mount (SS body only)
9	Customer nominated

Cable entries

0	M 16 x 1.5mm (exclusive to FRT Rate Totaliser) or no cable entry
1	M 20 x 1.5mm (M 16 x 1.5mm for R4 option)
2	1/2" NPT (MG004 - MG008) 1/2" NPT adaptor used for other sizes

Integral options

00	Nil
SS	Stainless steel terminal cover
RS	Reed Switch only - to suit Intrinsically Safe installations
E1	Explosion proof ~ Exd IIB T4/T6 (aluminium & stainless meters)
E2	Explosion proof ~ Exd IIB T4/T6 (stainless meters only)
QP	Quadrature pulse (2NPN phased outputs)
Q1	Explosion proof Exd (with quadrature pulse but n/a with HP meter)
HR	High resolution Hall Effect output (Hall Effect only, 004 - 006 only)
H1	Explosion proof - Exd with HR Hi-res. Hall option (004 - 006 only)
F1	**FRT-00 Flow Rate Totaliser
F2	**FRT-AP Flow Rate Totaliser
F3	**FRT-ALP Flow Rate Totaliser
F4	**FRT-BC Flow Rate Totaliser
R2	**RT12 Flow Rate Totaliser with all outputs (GRN housing)
R3	**Intrinsically safe RT12 (I.S.) (GRN housing)
R4	**RT40 backlit rate totaliser (Alloy housing with facia protector)
R5	**RT14 backlit rate totaliser with all outputs (GRN housing)
E0	**EB10 batch controller
420	Loop powered 4 ~ 20mA analog output
SB	Specific build requirement

IECEx & ATEX approved

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MG004:1200ppL, MG006:4200ppL

IECEx & ATEX approved

No output - display only

4-20mA output proportional to flowrate & scaled pulse output

Alarm and/or scaled pulse output

2 stage batch control

Scaled pulse, alarm, 4 ~ 20mA

IECEx & ATEX approved

Scaled pulse + backlighting

2 stage DC batcher and totaliser

Model No. Example

MG006 **S** **5** **1** **1** **8** **1** **1** **R2**

(refer factory for model availability)

* Temp code 5 required when operating temperature is between 80 °C (180°F) and 120 °C (250°F).

^ Temp code 8 required for all integral instruments.