OM-Series Large Capacity Electronic Flowmeter

FLOMEC® OM-Series Large Capacity Electronic Flowmeters

Volumetric flow measurement of clean liquids or low flows used in receipt verification, loading, unloading and distribution management at petroleum plants, mine sites, marine and aviation facilities.
For pumped or gravity fed distribution of fuels, fuel oils, lubricants, alcohols and solvents.

Features / Benefits

- High accuracy and repeatability, direct volumetric reading
- No requirement for flow conditioning (straight pipe runs)
- Measures high and low viscosity liquids
- Quadrature pulse output option and bi-directional flow
- Optional Exd I/IIB approval (ATEX, IECEx)
- Only two moving parts

General Specifications

- Flow Rates: 35 - 1500 L/min [10 - 400 USG/min] *
- Sizes: 3" - 4" [80mm - 100mm]
- Materials: Aluminium, 316 Stainless steel (080 only)

* See also Small and Medium Capacity data sheets for other size meters

Meter Selection

- Aluminium meters for petroleum products (oils and grease, fuels and fuel oils)
- Stainless steel meters for the chemical, cosmetic, food and pharmaceutical industries (water based liquids)
- Blind pulse meters available with reed switch and Hall Effect outputs. Optional Quadrature pulse and Integral 4-20mA outputs available

Integral Instruments

Options include integral LCD totalisers, flow rate totalisers and batch controllers (4-20mA, scaled pulse, alarms and batch control)

- BT11 LCD 5-digit reset, 8-digit cumulative totaliser
- RT14 LCD 6-digit reset, cumulative totaliser and flow rate, analogue and pulse outputs
- RT14 LCD 8-digit reset, cumulative totaliser, analogue and pulse outputs with backlit display
- EB10 LCD 6-digit 2 stage batcher and cumulative totaliser

(Available for remote mounting and with I.S. approvals)

NMI Approved Meters

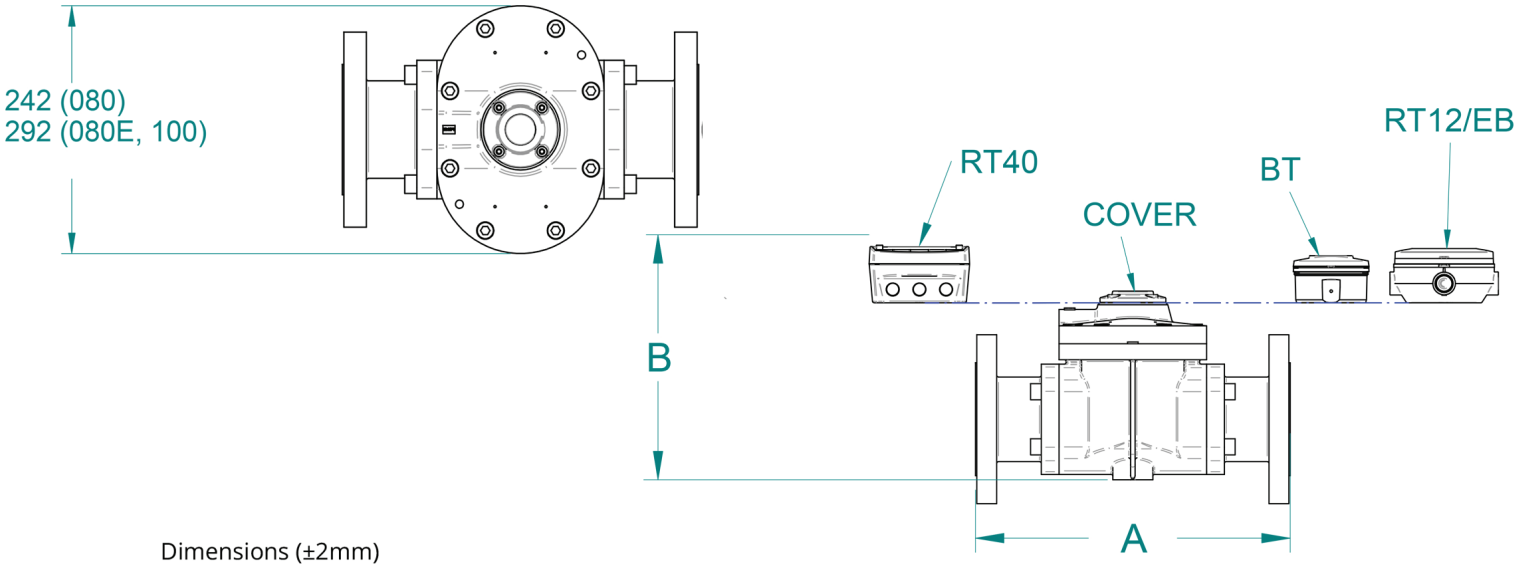
Available with optional NMI pattern approval and quadrature pulse output.
National Measurement Institute (NMI) Weights and Measures Approval -Australia

OM-Series Large Capacity Electronic Flowmeter

Model Specification

Model	OM080	OM080E	OM100
Nominal size	3" [80mm]	3" [80mm]	4" [100mm]
*Nominal Flow range @3cP	35 – 750 L/min	50 – 1000 L/min	75 – 1500 L/min
	[10 – 200 USG/min]	[13 – 260 USG/min]	[20 – 400 USG/min]
Accuracy	±0.5% of reading (±0.2% of reading with optional RT14)		
Repeatability	Typically ±0.03% of reading		
Ambient Temperature Range	-40°C - +120°C [-40°F - +250°F]		
Optional Temperature Range	-40ºC - +150ºC [-40ºF - +300ºF]		
Max. Pressure (Al meters)	12 Bar [175 psi]	12 Bar [175 psi]	10 Bar [145 psi]
Max. Pressure (SS meters)	12 Bar [175 psi]	n/a	n/a
Protection Class	IP66/67 (NEMA4Xl. optional Exd I/ 118 T4/T6, integral ancillaries can be supplied I.S. (intrinsically safe)		
Recommended filtration	40 mesh (350 microns)		
Output Pulse Resolution - Pulse per Litre [Pulse per USG] - Nominal			
Reed Switch	2.65 [10.0]	1.55 [5.68]	1.10 [4.15]
Hall Effect	10.7 [40.5]	6.00 [22.7]	4.40 [8.30]
QP Quadrature Hall Effect	5.33 [20.0]	3.00 [11.4]	2.20 [4.15]
Reed Switch Output	30Vdc x 200mA max. (maximum thermal shock 10°C [18°F]/ minute)		
Hall Effect Output	3 wire open collector. 5-24Vdc max ., 20mA max.		
Optional Outputs	4-20mA, scaled pulse, quadrature pulse, flow alarms or two staqe batch control		

* Maximum flow reduces as viscosity increases, see flow de-rating guide. Max. recommended pressure drop is 1 Bar [14.5psi]



Dimensions (±2mm)

Modular	A			Configuration	B			
Fitting	OM080	OM080E	OM100		OM080A	OM080S	OM080E	OM100
Flanged	354	382	388	EB10 / RT14 GRN Housing	260	257	277	322
				BT11	252	259	269	314
Threaded	266	294	294	RT40	264	260	281	326
				Cover	213	206	229	274

OM-Series Large Capacity Electronic Flowmeter

Model Coding

OM080	3"	(80mm)	35 - 750 L/min	[10 - 200 USG/min]
OM080E	3" Extended Flow	(80mm)	50 - 1000 L/min	[13 - 260 USG/min]
OM100	4"	(100mm)	75 - 1500 L/min	[20 - 400 USG/min]

Body material

A	Aluminium
E	Extended flow aluminium
S	316L Stainless Steel (080 only)

Rotor material / Bearing Type

0	**0**	PPS (not available for 150°C meters) / No bearing
1	**0**	Keishi cut PPS (for high viscosity liquids) (not available for 150°C meters) / No bearing

O-ring material

1	Viton (-15°C min. [5°F])
3	Teflon encapsulated Viton (includes KALREZ shaft seals on 080 to 100 sizes) (-15°C min. [5°F])
4	Nitrile, (-40°C min. [-40°F])

Temperature limits

-	**2**	120°C [250°F] max.
-	**3**	150°C [300°F] max. (Hall only) (Includes SS terminal cover) (080 only)
-	**5**	*120°C [250°F] max. (includes integral cooling fin)
-	**8**	#80°C [176°F] max. (meters with integral instruments)

Process connections

0	No fittings
1	BSPP (G) female threaded
2	NPT female threaded
4	ANSI-150 RF flanged
6	PN16 DIN flanged

Cable entries

1	M20 x 1.5mm (M16 x 1.5mm for R4 option)
2	1/2" NPT Adaptor
6	3 x 16mm drilled holes (for F instruments only)

Integral options

		Nil
	SS	Stainless steel terminal cover
	RS	Reed Switch only - to suit Intrinsically Safe installations
IECEx & ATEX approved	**E1**	Explosionproof Exd IIB T4/T6 (aluminium & stainless meters)
IECEx & ATEX mines approved	**E2**	Explosionproof Exd I/IIB T4/T6 (stainless meters only)
ANZEx approved	**E3**	ANZEx certified EXd IIB T4/T7
ANZEx mines approved	**E4**	ANZEx certified EXd I/IIB T4/T6 (mines approval, SS meters only)
	QP	Quadrature pulse (2 NPN phased outputs)
IECEx & ATEX approved	**Q1**	Explosionproof Exd (with quadrature pulse but n/a with HP meter)
with scaleable pulse output	**B2**	*#BT11 totaliser with pulse output
IECEx & ATEX approved	**B3**	*#BT11 Intrinsically Safe totaliser with pulse output
IECEx & ATEX approved	**R3**	*#RT12 Intrinsically Safe rate totaliser with all outputs (GRN housing)
scaleable pulse output, backlight	**R4**	*#RT40 backlit rate totaliser (Alloy housing with facia protector)
scaled pulse, alarms, 4~20mA, backlight	**R5**	*#RT14 backlit rate totaliser with all outputs (GRN housing)
2 stage DC batcher & totaliser	**E0**	*#EB10 batch controller
	F18	#F018 backlit rate/tot, pulse out, 4-20mA, 10 pt lin, HART
	F19	#F018 Intrin. Safe backlit rate/tot, pulse, 4-20mA, 10 pt lin, HART
		* 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

Model No. Example

OM025	**5**	**5**	**1**	**1**	-	**5**	**1**	**1**	**R5**