

OM-Series Medium Capacity Electronic Flowmeter

FLOMEC® OM-Series Medium Capacity Electronic Flowmeters

Volumetric flow measurement of clean liquids or low flows used in automotive, aviation, mining, power, chemical, pharmaceutical, food, paint, petroleum industries and environmental applications. For distribution of fuels, fuel oils, lubricants, alcohols, solvents, blending of bio and ethanol fuels, metering of chemicals, grease, adhesives, ink, insecticides and pumps or gravity fed non-conductive liquids.

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/IB approval (ATEX, IECEx)
- Only two moving parts

General Specifications

- Flow Rates: 1 - 500 L/min [0.26 - 130 USG/min] *
- Sizes: 1/2" - 2" [15mm - 50mm]
- Materials: Aluminium, 316 Stainless steel, PPS (025P)

* See also Small and Large 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

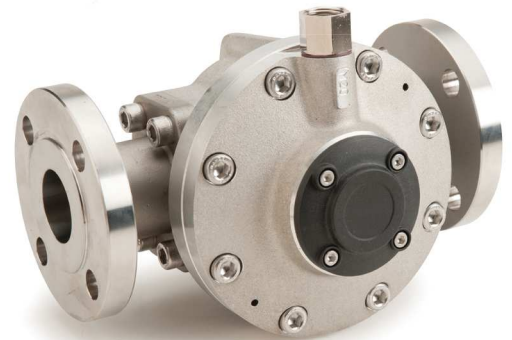
Integral Instruments

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 8-digit reset, cumulative totaliser, analogue and pulse outputs with backlit display
 - RT40 LCD 6-digit reset, cumulative totaliser and flow rate. Backlit Display
 - EB10 LCD 6-digit 2 stage batcher and cumulative totaliser
- (Available for remote mounting and with I.S. approvals)

NMI Approved Meters

Meters 1" and above available with optional NMI pattern approval and quadrature pulse output. National Measurement Institute (NMI) Weights and Measures Approval -Australia



OM-Series Medium Capacity Electronic Flowmeter

Model Specification

Model	OM015	OM025	OM040	OM050
Nominal size	1/2" [15mm]	1" [25mm]	1.5" [40mm]	2" [50mm]
*Nominal Flow range @3cP	1 – 40 L/min	10 – 150 L/min	15 – 250 L/min	30 – 500 [^] L/min
	[0.26 – 10.6 USG/min]	[2.6 – 40 USG/min]	[4 – 66 USG/min]	[8 – 130 [^] USG/min]
Accuracy	±0.5% of reading (±0.2% of reading with optional RT14)			
Repeatability	Typically ±0.03% of reading			
Ambient Temp. Range (AI and SS meters)	-40°C - +120°C [-40°F - +250°F]			
Ambient Temp. Range (PPS meter)	n/a	-40°C - +80°C [-40°F - +176°F]	n/a	n/a
Optional Temperature Range	-40°C - +150°C [-40°F - +300°F]			
Max. Pressure (PPS meters)	n/a	5 Bar [70 psi]	n/a	n/a
Max. Pressure (AI meters)	68 Bar [990 psi]	68 Bar [990 psi]	30 Bar [435 psi]	20 Bar [285 psi]
Max. Pressure (SS meters)	68 Bar [990 psi]	68 Bar [990 psi]	30 Bar [435 psi]	38 Bar [550 psi]
Protection Class	IP66/67 (NEMA4XL, optional Exd I/ 118 T4/T6, integral ancillaries can be supplied I.S. (intrinsically safe)			
Recommended filtration	100 mesh (150 microns)			
Output Pulse Resolution - Pulse per Litre [Pulse per USG] - Nominal				
Reed Switch	84 [318]	27 [102]	14 [53]	6.5 [25]
Hall Effect	168 [636]	107 [405]	56 [212]	26 [99]
QP Quadrature Hall Effect	168 [636]	54 [204]	28 [106]	13 [49]
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 stage batch control			

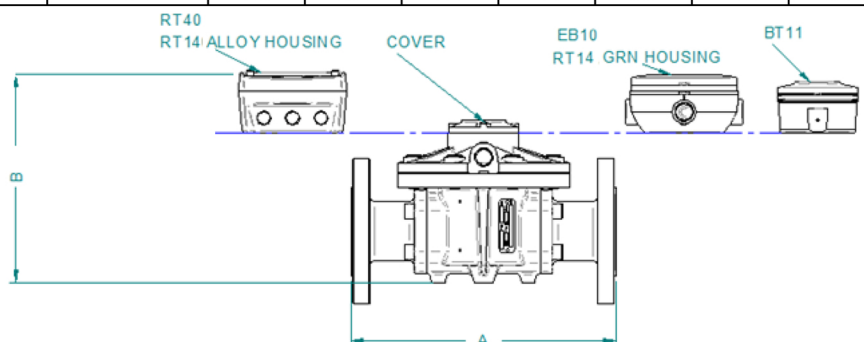
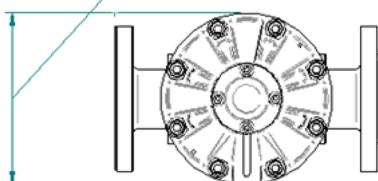
* Maximum flow reduces as viscosity increases, see flow de-rating guide. Max. recommended pressure drop is 1 Bar [14.5psi]

[^]PPS rotors (Max. flow rate for SS rotors is 450 L/min [120 USG/min])

Dimensions (±2mm)

Modular	A					Configuration	B							
	Fitting	OM015	OM025 A	OM025 S	OM040		OM050	OM015 A	OM015 S	OM025 A/P	OM025 S	OM040 A	OM040 S	OM050
Flanged		189	198	237	252	277	EB10 / RT14 GRN Housing	154	148	168	165	203	194	218
							BT11	145	139	160	157	198	186	210
Threaded		110	137	176	188	212	RT40	157	151	171	168	206	197	221
							Cover	106	100	123	117	155	146	170

Ø160 (OM040) Ø180 (OM050)
Ø110 (OM015) Ø120 (OM025)



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Model Coding

OM015	1/2"	(15mm)	1 - 40 L/min	[0.26 - 10.6 USG/min]
OM025	1"	(25mm)	10 - 150 L/min	[2.6 - 40 USG/min]
OM040	1.5"	(40mm)	15 - 250 L/min	[4 - 66 USG/min]
OM050	2"	(50mm)	30 - 500 L/min	[8 - 130 USG/min]

Body material				
A	Aluminium			
S	316L Stainless Steel			
P	PPS (OM025) (only available with PPS rotors)			
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		
5	1	Stainless steel / Carbon Ceramic		
7	1	Keishi cut stainless steel (for high viscosity liquids) / Carbon Ceramic		
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)		
-	5	*120°C [250°F] max. (includes integral cooling fin)		
-	8	*80°C [176°F] max. (meters with integral instruments and OM025P)		
Process connections				
0	No fittings (025 - 050)			
1	BSPP (G) female threaded			
2	NPT female threaded			
3	Tri-clamp ferrules (1/2" larger than meter size)			
4	ANSI-150 RF flanged			
5	ANSI-300 RF flanged			
6	PN16 DIN flanged			
Cable entries				
0	3-6mm cable gland or no cable entry (025P)			
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			
E1	Explosionproof Exd IIB T4/T6 (aluminium & stainless meters)			
E2	Explosionproof Exd I/IIB T4/T6 (stainless meters only)			
E3	ANZEx certified Exd IIB T4/T7			
E4	ANZEx certified Exd I/IIB T4/T6 (mines approval, SS meters only)			
QP	Quadrature pulse (2 NPN phased outputs)			
Q1	Explosionproof Exd (with quadrature pulse but n/a with HP meter)			
B2	* [#] BT11 totaliser with pulse output			
B3	* [#] BT11 Intrinsically Safe totaliser with pulse output			
R3	* [#] RT12 Intrinsically Safe rate totaliser with all outputs (GRN housing)			
R4	* [#] RT40 backlit rate totaliser (Alloy housing with fascia protector)			
R5	* [#] RT14 backlit rate totaliser with all outputs (GRN housing)			
E0	* [#] EB10 batch controller			
E18	*ATEX/IECEX Exd E018 backlit rate/tot, pulse, 4-20mA, lin, HART (Al), Incl. Line Bushing (not 015)			
E19	*ATEX/IECEX Exd E018 backlit rate/tot, pulse, 4-20mA, lin, HART (SS), Incl. Line Bushing (not 015)			
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

Exclusive to B2,B3 options

IECEX & ATEX approved
 IECEX & ATEX mines approved
 ANZEx approved
 ANZEx mines approved

IECEX & ATEX approved
 with scaleable pulse output
 IECEX & ATEX approved
 IECEX & ATEX approved
 scaleable pulse output, backlight
 scaled pulse, alarms, 4-20mA, backlight
 2 stage DC batcher & totaliser

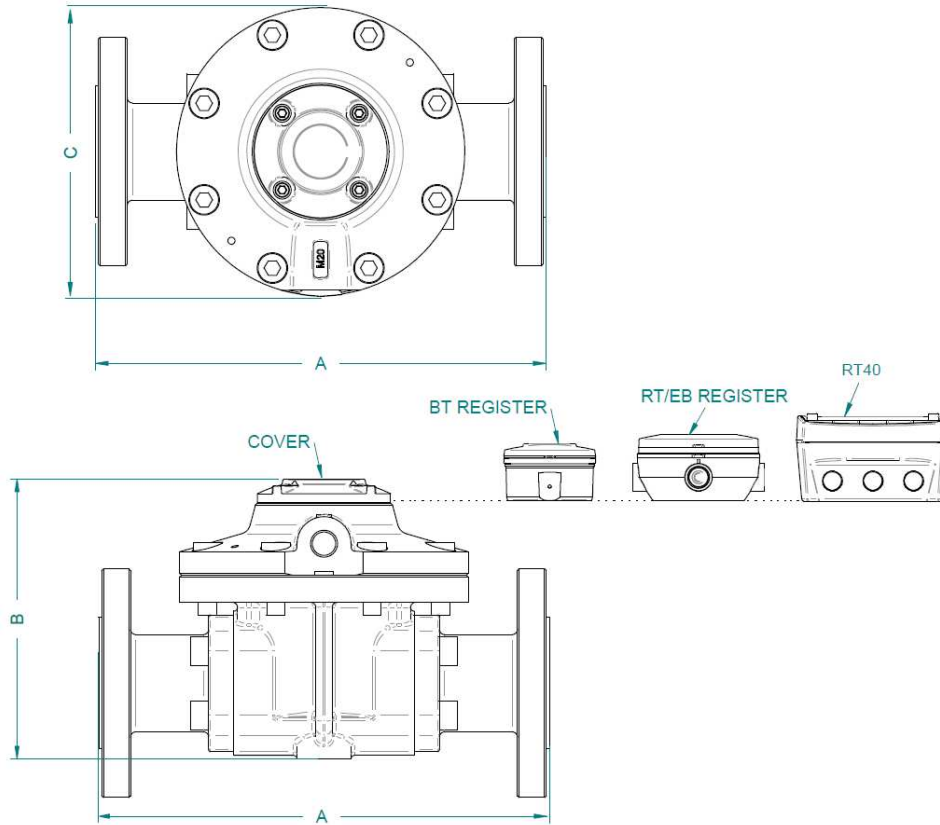
IECEX & ATEX approved
 IECEX & ATEX approved

Model No. Example

OM025	S	5	1	1	-	5	1	1	R5
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OM-Series Medium Capacity Electronic Flowmeter

OM-Series Medium Capacity Dimensions



Size	Millimetres [Inches]						
	A		Cover	B			C
	Flanged	Threaded		BT11	RT14/EB10	RT40	
OM015 (SS)	189 [7.44"]	110 [4.33"]	100 [3.94"]	139 [5.47"]	145 [5.71"]	151 [5.95"]	110 [4.33"]
OM015 (AL)	189 [7.44"]	110 [4.33"]	106 [4.17"]	145 [5.71"]	154 [6.06"]	157 [6.18"]	110 [4.33"]
OM025 (SS)	237 [9.33"]	176 [6.93"]	117 [4.61"]	157 [6.18"]	165 [6.50"]	168 [6.61"]	120 [4.72"]
OM025 (AL)	198 [7.80"]	137 [5.39"]	123 [4.84"]	160 [6.30"]	168 [6.61"]	171 [6.73"]	120 [4.72"]
OM040 (SS)	252 [9.92"]	186 [7.32"]	146 [5.75"]	186 [7.32"]	194 [7.64"]	197 [7.76"]	160 [6.30"]
OM040 (AL)	252 [9.92"]	186 [7.32"]	155 [6.10"]	198 [7.80"]	203 [7.99"]	206 [8.11"]	160 [6.30"]
OM050 (SS)	277 [10.91"]	212 [8.35"]	170 [6.69"]	210 [8.27"]	218 [8.58"]	221 [8.70"]	180 [7.09"]
OM050 (AL)	277 [10.91"]	212 [8.35"]	170 [6.69"]	210 [8.27"]	218 [8.58"]	221 [8.70"]	180 [7.09"]