

## BanksiaControls medium capacity flowmeters

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provide precise volumetric flow measurement of clean liquids found in a broad range of industries including automotive, aviation, mining, power, chemical, pharmaceutical, food, paint & petroleum. Applications include the distribution of fuels, fuel oils, lubricants, alcohols, solvents, blending of bio & ethanol fuels, metering of chemicals, grease, adhesives, ink, insecticides & non-conductive liquids either pumped or gravity fed.

### Features / Benefits

- High accuracy & repeatability, direct reading flowmeter
- No requirement for flow conditioning (straight pipe runs)
- Various rotor material options
- Measures high & low viscosity liquids
- Quadrature pulse output option & bi-directional flow
- Optional Exd approval (ATEX, IECEx).
- Optional IS/Exd approved Instruments (ATEX, IECEx)

### Meter selection

- Aluminium meters are used for petroleum product including oils and grease, fuels and fuel oils.
- Stainless steel meters are for the chemical, water based liquids or where aluminium is not suited or permitted.
- Blind pulse meters are available with reed switch & Hall Effect outputs. Quadrature pulse is optional.

### Integral instruments

BanksiaControls 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 and are also available with robust mechanical registers:

- BT LCD 5 digit reset, 8 digit cumulative totaliser.
- F112/F018 LCD 6 digit reset, cumulative totaliser & flow rate. Analogue and Pulse Outputs
- E112/E018 LCD 6 digit reset, cumulative totaliser & flow rate.
- Backlit display.
- EB LCD 6 digit 2 stage batcher & cumulative totaliser.
- M / V\* = Mechanical registers (see model numbering)

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

### General specification

Flow rates : 1 ~ 580 litres / min. (0.26~ 150 USgal/min.) \*

Sizes : 15~50mm (1/2"~2" NB)

Materials : Aluminium, 316 Stainless steel or Ryton (PPS)

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



BLIND PULSE METER



WITH LCD REGISTER

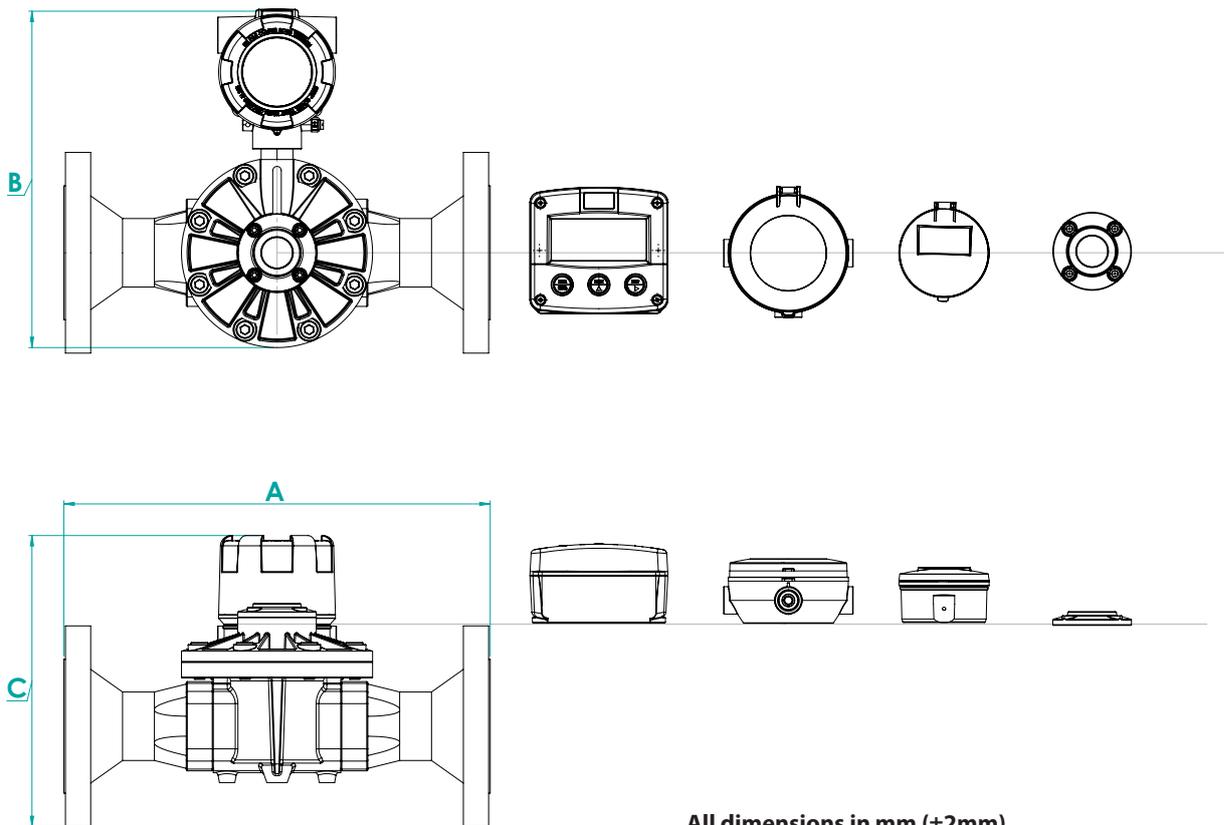


WITH 4 DIGIT MECHANICAL REGISTER

# Specifications

Model Prefix	OM015 (1/2")	OM025 (1")	OM040 (1.5")	OM050 (2")
Nominal size ( inches )	15mm (1/2 ")	25mm (1")	40mm (1.5")	50mm (2")
*Flow range - (litres/min)	1 ~ 40	10 ~ 150	15 ~ 250	30 ~ 500 with PPS rotors
(US gal/min)	.26 ~ 10.6	2.6 ~ 40	2.6 ~ 66	8 ~ 132 with PPS rotors
**Accuracy @ 3cp	± 0.5% of reading ( accuracy is ± 0.2% of reading with optional RT/F/E series with non-linearity correction )			
Repeatability	typically ± 0.03% of reading			
Temperature range	-40°C ~ +120°C ( -40°F ~ +250°F ) ( Note: +150°C (302°F) max temp option available with Hall only output )			
Maximum pressure pulse meter	(Threaded meters) bar (PSI)			
Aluminium meters	68 (990)	68 (990)	30 (435)	20 (285)
Intermediate press. AL	-	138 (2000)	-	-
316 stainless steel meters	68 (990)	68 (990)	30 (435)	38 (550)
Intermediate press. SS	100 (1450)	100 (1450)	50 (725)	50 (725)
***high pressure models	400 (5800)	400 (5800)	400 (5800)	300 (4350)
Maximum pressure Mechanical Meter	(Threaded meters) bar (PSI)			
Aluminium Meters	40 (580)	40 (580)	30 (435)	20 (285)
316 stainless steel	40 (580)	40 (580)	30 (435)	20 (285)
<b>Electrical - for pulse meters ( see below for optional outputs )</b>				
Output pulse resolution	Pulses / litre (pulses / US gallon) - nominal			
Reed switch	84 (318)	27 (102)	14 (53)	6.5 (25)
Hall effect	168 (636)	107 (405)	56 (212)	26 (99)
Quadrature Hall option	168 (636)	54 (204)	28 (106)	13 (49)
Reed switch output	30Vdc x 200mA max. ( maximum thermal shock 10°C (50°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			
<b>Physical</b>				
Protection class	IP66/67 (NEMA4X) - for Pulse Meter, IP65 (NEMA 4) - for Mechanical Series. Optional Exd/Exia integral ancillaries can be supplied. Refer to separate approvals for details.			
Overall dimensions	Refer Below			
Recommended filtration	150 microns (100 mesh)			
* Maximum flow is to be reduced as viscosity increases, see flow de-rating guide. Max. Recommended pressure drop is 100Kpa. (15 psi).				
**Accuracy ± 1% of reading with M - Series mechanical registers and accuracy ± 0.5% of reading with V-series mechanical register.				
*** OP & PF Options are not available with High Pressure Meters.				

## Overall Dimensions:



All dimensions in mm (±2mm)

PROCESS	DIM A	DIM A	DIM A	DIM A	OPTION	DIM C	DIM C	DIM C	DIM C	DIM B	DIM B	DIM B	DIM B
Connections	OM015	OM025	OM040	OM050		OM015	OM025	OM040	OM050	OM015	OM025	OM040	OM050
ANSI 150 Flange	189	213	*	300	E-Series	168	182	168	235	321	321	321	321
ANSI 300 Flange					F-Series	165	179	205	227	120	120	162	180
DIN 16 Flange	189	213	*	300	RT-Series	149	168	200	212	124	124	162	180
BSP Screwed	110	152	234	236	BT11	136	155	188	200	110	120	162	180
NPT Screwed	110	152	234	236	Cap	113	208	165	177	110	120	162	180

# Model Coding - BanksiaControls Pulse Meters

Meter Size	
OM015	15mm (1/2") 1-40 L/min 0.26-10.6 GPM
OM025	25mm (1") 10-150 L/min 2.6-40 GPM
OM040	40mm (1 1/2") 15-250 L/min 4-66 GPM
OM050	50mm (2") 30-500 L/min (PPS) 8-132 GPM (PPS)
Body material	
A	Aluminium
M	Intermediate pressure aluminium meter (Only OM025 = 138 Bar [2000psi] max.)
S	316/L Stainless Steel OM015N
N	Intermediate press. 316/L SS meter (Om015N ~ 025N = 100bar [1450 PSI] OM040N-050N = 50bar [725PSI] max.)
H	High pressure 316/L SS (OM025H ~ 040H = 400bar [5800psi] max. OM050H = 300bar [4350PSI] max.)
Rotor material	
0	PPS-Teflon Filled (Polyphenylene Sulfide)
1	Keishi cutting of PPS rotors (for high viscosity liquids)
5	Stainless Steel rotors
7	Keishi cutting of Stainless Steel rotors (for high viscosity liquids)
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 silicone - application specific; -40°C (-40°F) 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), for O-Ring Code 1 or 3
5	*120°C (250°F) max. (Includes integral cooling fin) see note 2
Process connections*(3)	
1	BSP female threaded
2	NPT female threaded
3	*Tri-clamp hygienic ferrules
4	ANSI-150 RF Flanges
5	ANSI-300 RF Flanges
6	PN16 DIN flanges
7	JIS10kg/cm2 flanges
9	Customer nominated
Cable entries	
0	3~6mm cable gland (high pressure meter only)
1	M20 x 1.5mm
2	1/2" NPT
Integral options	
	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 I/II B T4/T6 (stainless meters only)
QP	Quadrature pulse (2NPN phased outputs)
Q1	Explosion proof Exd (with quadrature pulse, na with HP meters)
HR	High resolution Hall effect output (Hall Effect only)
H1	Explosion proof - Exd with HR Hi-res. Hall option
PF	Pulsating flow option (Hall effect output only)
P1	Explosion proof - Exd with PF pulsating flow option
E0	EB10 Batch Controller
R5	RT14 Flow Rate Totaliser with all outputs (GRN Housing)
R3	Intrinsically safe RT12 (I.S.) (GRN Housing)
F1	F112 in GRP Encl, Non IS, Battery, DC and LP 4to20mA, Linearisation, OC Pulse
F2	F112 in GRP, IS, Battery, DC and LP 4to20mA, Linearisation, OC Pulse
F10	F112 in Alu, Non IS, Battery, DC and LP 4to20mA, Linearisation, OC Pulse
F11	F112 in Alu, IS, Battery, DC and LP 4to20mA, Linearisation, OC Pulse
F12	F112 in SS, Non IS, Battery, DC and LP 4to20mA, Linearisation, OC Pulse
F13	F112 in SS, IS Appr, Battery, DC and LP 4to20mA, Linearisation, OC Pulse
F18	F018 in Alu, IS, Battery, DC and LP 4to20mA, Linearisation, OC Pulse, HART
F19	F018 in SS, IS, Battery, DC and LP 4to20mA, Linearisation, OC Pulse, HART
E10	E112 in Alu, Exd, Battery, DC and LP 4to20mA, Linearisation, OC Pulse
E11	E112 in SS, Exd, Battery, DC and LP 4to20mA, Linearisation, OC Pulse
E18	E018 in Alu, Exd, Battery, DC and LP 4to20mA, Linearisation, OC Pulse, HART
E19	E018 in SS, Exd, Battery, DC and LP 4to20mA, Linearisation, OC Pulse, HART
B2	BT11 dual totaliser (with scaleable pulse output)
B3	I.S. intrinsically safe BT 11 including output
SB	Specific build requirement

## Model No. Example

**OM025 A 4 4 1 - 5 1 1 F2**  
(Refer factory for model availability)

## Notes:

\* (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, F series

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

\* (3) OM015 meter size available as wafer style body and can be used with wafer style flange adaptors.



## Recommended strainers

(air eliminators available)

**YS015S41** 15mm (1/2"), 316SS, 100mesh, BSP  
**YS025S11** 25mm (1"), 316SS, 50mesh, BSP  
**YS040S11** 40mm (1 1/2"), 316SS, 50mesh, BSP  
**YS050S11** 50mm (2"), 316SS, 50mesh, BSP

## Model Coding - BanksiaControls Oval Mechanical Meter

		<b>Meter Size</b>			
	OM015	1/2"	15mm	1~40 L/min	0.26~10.6 GPM
	OM025	1"	25mm	10~150 L/min	2.6~40 GPM
	OM040	1 1/2"	40mm	15~250 L/min	4~66 GPM
	OM050	2"	50mm	30~500 L/min (PPS)	8~132 GPM (PPS)
<b>Body material</b>					
A	Aluminium				
S	316/L Stainless Steel				
<b>Rotor material</b>					
0	PPS-Teflon Filled (Polyphenylene Sulfide) (Not available for OM050E)				
1	Keshi cutting of PPS rotors (for high viscosity liquids)				
5	Stainless Steel				
7	Stainless Steel - keishi cut for high viscosity liquids				
<b>Bearing type</b>					
0	No bearing (PPS rotors only)				
1	Carbon-Ceramic (Stainless Steel rotors only)				
<b>O-ring material</b>					
1	Viton (standard); -15°C (+5°F) minimum				
2	(EPR) Ethylene Propylene Rubber; -40~+120°C (-40°F~250°F)				
3	Teflon encapsulated silicone - application specific; -40°C (-40°F) minimum				
4	Buna-N (Nitrile), -40°C~+100°C (-40°F~+212°F)				
<b>Temperature limits</b>					
8	*80°C (180°F) max.				
<b>Process connections</b>					
1	BSP (RP) female threaded				
2	NPT female threaded				
3	*Tri-clamp hygienic ferrules				
4	ANSI-150 RF Flanges				
5	ANSI-300 RF Flanges				
6	PN16 DIN flanges				
7	JIS10kg/cm2 flanges				
9	Customer nominated				
<b>Cable entries</b>					
0	no cable entry				
<b>Integral options</b>					
<b>Totaliser Capacities</b>					
	<b>OM015 ~ 025</b>	<b>OM040~50E</b>			
	9999.9 litres	99999 litres	M3	4 digit mechanical totaliser - litres	
	9999.9 gal.	99999 gal.	M4	4 digit mechanical totaliser - U.S Gallons	
	<b>Om050~050E</b>		<b>Large digit mechanical registers</b>		
	999999 litres		V1	5 digit mechanical reset register - litres	
	999999 litres		V3	5 digit register + 7888 ticket printer - litres	
	999999 litres		V5	5 digit register + preset batch register - litres	
	999999 litres		V7	5 digit register + preset + 7888 printer - litres	
			SB	Specific build requirement	

**Model No. Example**  
**OM050 A 4 4 1 - 8 1 0 M3**