

# Multipulse - Medium Capacity

## Positive Displacement Flowmeters



The Multipulse range of positive displacement flowmeters offer a high level of accuracy and repeatability. These precision meters are used for flowrate measurement in flow monitoring and control applications and for totalising in dispensing and batching. Multipulse meters are suitable for use with a wide range of clean liquids including viscous lubricants, chemicals, food bases and non-conductive low viscosity solvents either pumped or gravity fed.

### FEATURES / BENEFITS

- Flows: 0.2~350 litres/min ( 0.05~90 US gal/min )
- Sizes: 15, 25, 40 & 50mm ( 1/2", 1", 1 1/2" & 2" ) connections\*
- High accuracy & repeatability, direct reading flowmeter
- No requirement for flow conditioning ( straight pipe runs etc )
- Intrinsically safe & explosionproof models available
- Quadrature pulse output option & bi-directional flow

\* see also Micropulse & Maxipulse data sheets for other size meters & flow ranges



### METER SELECTION

Meters are selected based on flow range, pressure, temperature, material compatibility and functionality.

- **Aluminum Multipulse meters** are ideal for petroleum products including oils and grease, fuels and fuel oils.
- **Stainless steel meters** are suited for chemicals, water based products and the food, cosmetic and pharmaceutical industries.
- **Multipulse meters** are available as blind meters with pulse output or with integral or remote totalisers, flow rate displays or preset batch controllers.
- **Pulse meter** outputs can be interfaced to most electronic displays or instrumentation.



### APPLICATIONS INCLUDE

chemicals, additives, resins, acids, alcohols, essences, edible oils, flavourings, food bases, perfumes, adhesives, emulsions, insecticide, paints, inks, oils, fuels, grease, solvents, lubricants.



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## Specifications

Model prefix :	MP015	MP025	MP040	MP050
Nominal size ( inches )	15mm (1/2")	25mm (1")	40mm (1 1/2")	50mm (2")
Flow range ( litres / min )	0.2 ~ 10	2 ~ 50	4 ~ 140	12 ~ 330
Flow range ( US gal / min )	0.05 ~ 2.7	0.5 ~ 13	1.1 ~ 37	3.2 ~ 90
Accuracy @ 3cp	±1% o.r. **		± 0.5% of reading	
Improved accuracy	± 0.2% of rate with optional RT12 using NLC			
Repeatability	typically ± 0.03%			
Temperature range	-40°C ~ +200°C ( -40°F ~ +390°F)			
Maximum pressure ( threaded meters )	bar ( PSI )			
aluminium	30 ( 440 )	80 ( 1200 )	30 ( 440 )	20 ( 300 )
316L stainless	100 ( 1500 )	100 ( 1500 )	100 ( 1500 )	38 ( 560 )
high pressure stainless	350 ( 5150 )	200 ( 2950 )	250 ( 3700 )	N/A
Protection class	IP66/67 (NEMA4X), optional Exd IIB T6 or I.S.			
Recommended filtering	150 microns ( 100 mesh ) minimum			
<b>Electrical - for pulse meters ( see also optional outputs )</b>				
Output pulse resolution ( nominal ) :	pulses / litre ( pulses / US gallon )			
Reed switch	200 ( 760 )	20 ( 76 )	7.3 ( 28 )	2.5 ( 9.5 )
Hall effect	400 ( 1520 )	100 ( 380 )	44 ( 167 )	20 ( 76 )
# Reed switch output	30Vdc x 200mA max.			
Hall effect output (NPN)	3 wire open collector, 5-24Vdc max., 20mA max.			
<b>Optional functions</b>				
Display	flowrate, total (accumulative & resettable)			
Preset batching	1 & 2 stage high speed batch control			
<b>Optional outputs</b>				
Flow	4 ~ 20mA, high & low flow rate alarms			
Pulse	scaled pulse (programmable) , pulse amplifier			
** Within nominal spans of MP015 ( 0.17-1.7, 1.7-5 & 5-10 litres/min )				
# Maximum thermal shock 10°C (50°F) / min. applies to the reed switch				

## Model coding

MP015	1/2" ( 15mm )
MP025	1" ( 25mm )
MP040	1 1/2" ( 40mm )
MP050	2" ( 50mm )

### Body material

A	Aluminum
S	316 Stainless Steel
H	High Pressure 316 stainless

### Piston material

1	Ertalyte - std. in alum. MP meters - 120°C (250°F) max.
2	PEEK - std. in SS MP meters - 150°C (300°F) max.
3	CFT - 120°C max. (250°F)
9	Special - eg. 200°C (400°F)

### Partition material

1	Ceramic ( for abrasive liquids )
2	316 Stainless Steel ( standard )

### O-ring material

1	Viton ( standard ) -15~+200°C (-5~+400°F)
2	Ethylene Propylene Rubber -150°C (300°F) max.
3	Teflon encapsulated viton -150°C (300°F) max.
4	Buna-N (Nitrile) -65~+100°C (-53~+212°F)

### Temperature limits

- 1	60°C ( 140°F)
- 2	120°C ( 250°F ) - see note 1
- 3	150°C ( 300°F ) - PEEK piston, NPN output
- 5	120°C ( 250°F ) - see note 2
- 6	200°C ( 400°F ) - coil output

### Process connections

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

### Cable entries

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

\* Triclamp ferrules are 1/2" larger than the meter size

Model No. Example

MP015 S 2 2 1 1 - 2 1 2 R2

	Integral options
glass reinforced nylon ( GRN )	GRN terminal cover (std.)
	AL Aluminum terminal cover
	SS Stainless terminal cover
2 NPN open collector phased outputs	QP Quadrature pulse output
IECEX & ATEX approved	E1 Explosion proof ~ Exd
IECEX & ATEX approved	Q1 Exd with Quadrature pulse
accum. & reset totals, pulse output	B2 BT11 dual totaliser
IECEX & ATEX approved	B3 Intrinsically safe BT11 (I.S.)
flow rate, totals & all outputs	R2 RT12 Flow Rate Totaliser
IECEX & ATEX approved	R3 Intrinsically safe RT12 (I.S.)
dc 2 stage batch controller	EO EB10 batch controller
consult factory	SB Specific build requirement

(1) 120°C (250°F) rating of the pulse meter, 80°C (180°F) rating with BT, RT & EB options. See temperature code 5 for higher temperature with BT, RT, & EB

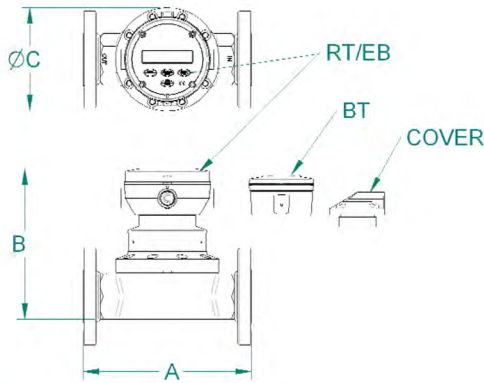
(2) Cooling fin is fitted with integral instruments for operation from 80-120°C (180-250°)

## Recommended strainers ( air eliminators available )

ST015S1	15mm ( 1/2" ) - 316SS
ST025S1	25mm ( 1" ) - 316SS
ST040S1	40mm ( 1 1/2" ) - 316SS
ST050S1	50mm ( 2" ) - 316SS



## DIMENSIONS



### ALL DIMENSIONS IN MILLIMETERS +/- 2

Modular Fitting	A	A	A	A	Configuration	B	B	B	B
A.N.S.I. 150	132	152	224	253	RT/EB REGISTER	143	179	201	234
A.N.S.I. 300	145	170	239	268	BT REGISTER	134	170	192	225
EN60PN16	140	165	235	258	COVER	111	147	169	204
EN60PN40	144	173	253	270					
B.S.P.	100	117	179	202		C	C	C	C
N.P.T.	100	117	179	202	DIA	75	98	140	168

## INTEGRAL AND REMOTE INSTRUMENTS



Integral Instruments



panel instruments



Dual Totaliser



Preset Batcher

Rate Totaliser

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