

# Micropulse Gear - Small Capacity Positive Displacement Flowmeters



The Micropulse 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. Micropulse 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: 0.5~550 litres/hr ( 0.13~145 US gal/hr )
- Sizes: 4, 6 & 8mm ( 1/8", 1/4" & 3/8" process connections)\*
- High accuracy & repeatability, direct reading flowmeter
- No requirement for flow conditioning ( straight pipe runs etc )
- Stainless steel rotors and ceramic bearings
- Intrinsically safe & explosionproof models available
- Quadrature pulse output option & bi-directional flow

\* see also Multipulse & 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 Micropulse 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.
- **Micropulse meters** are available as blind meters with pulse output or with integral or remote totalisers, flow rate displays or preset batch controllers.

## APPLICATIONS INCLUDE

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



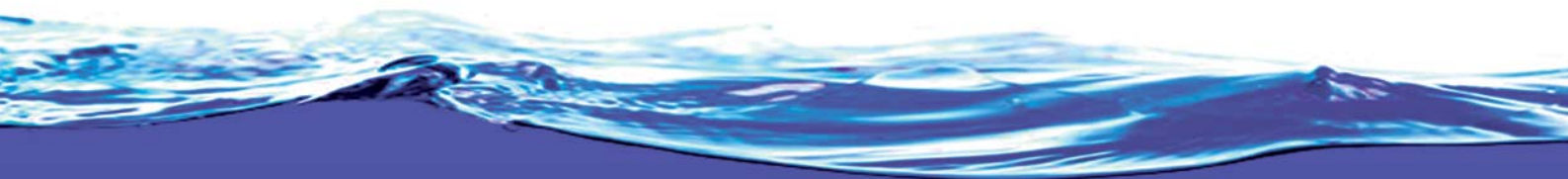
totaliser



pulse meter



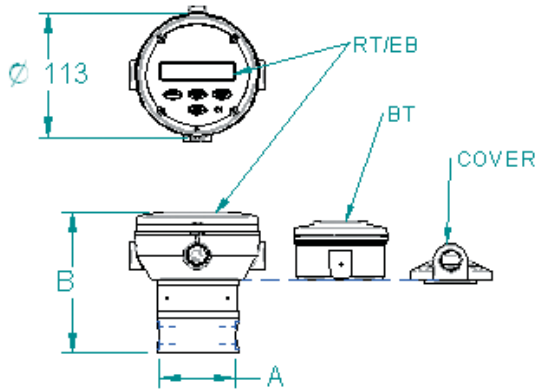
rate totaliser



## Specifications

Model prefix :	MG004	MG006	MG008
Nominal size ( inches )	4mm ( 1/8" )	6mm ( 1/4" )	8mm ( 3/8" )
Flow range - litres / hr ( US gal./hr )	0.5 ~ 36 ( 0.13 ~ 9.5 )	2 ~ 100 ( 0.5 ~ 27 )	15 ~ 550 ( 4 ~ 145 )
Accuracy @ 3cp	±1% o.r. ( ± 0.2% with optional RT12 using NLC )		
Repeatability	typically ± 0.03%		
Temperature range	-20°C ~ +120°C ( -4°F ~ +250°F )		
Maximum pressure	bar ( PSI )		
aluminium	15 ( 220 )		
316L stainless	34 ( 500 )		
high pressure stainless	refer factory		
Protection class	IP66/67 ( NEMA4X ), optional Exd IIB T6 or I.S.		
Recommended filtering	75 micron ( 200 mesh ) minimum		
<b>Electrical - for pulse meters ( see also optional outputs )</b>			
Output pulse resolution	pulses / litre ( pulses / US gallon ) - nominal		
Reed switch	2890 ( 10940 )	2100 ( 7950 )	355 ( 1345 )
Hall effect	2890 ( 10940 )	2100 ( 7950 )	710 ( 2690 )
** 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		
* Max. flow is to be reduced as viscosity increases, max. press. drop 100Kpa. (15 psi)			
** Maximum thermal shock 10°C (50°F) / min. applies to the reed switch			

## DIMENSIONS



ALL DIMENSIONS IN MILLIMETERS +/- 2

Thread	A	Configuration	B	B
B.S.P.	68	RT/EB REGISTER	122	129
N.P.T.	68	BT REGISTER	113	120
		COVER	92	99

## INTEGRAL AND REMOTE INSTRUMENTS



Integral Instruments



Panel Instruments



Dual Totaliser



Preset  
Batcher

Rate  
Totaliser

## Model coding

MG004	4mm ( 1/8" )
MG006	6mm ( 1/4" )
MG008	8mm ( 3/8" )

### Body material

A	Aluminium
S	316 Stainless Steel
H	High Pressure 316 stainless steel

### Rotor material

5	316 stainless steel
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### Bearing type

1	Ceramic
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### 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

2	120°C ( 250°F ) - see note 1
5	120°C ( 250°F ) - see note 2

### Process connections

1	BSP female threaded
2	NPT female threaded

### Cable entries

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

Model No. Example

MG006	S	5	1	1	-	5	1	2	R2
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### Integral options

glass reinforced nylon ( GRN )		GRN terminal cover ( std. )
	AL	Aluminium 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	E0	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°F )

## Recommended strainers

ST004S1	4mm ( 1/8" ) - 316SS
ST006S1	6mm ( 1/4" ) - 316SS
ST008S1	8mm ( 3/8" ) - 316SS

