

Multipulse

Positive Displacement Flowmeters



Multipulse flowmeters provide high levels of accuracy & repeatability for flowrate measurement or totalizing for dispensing & batching. These meters suit a wide range of liquids including extremely viscous lubricants, chemicals & food bases to 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: 15mm (1/2"), 25mm (1"), 40mm (1 1/2") & 50mm (2")
(See also *Micropulse* & *Maxipulse* data sheets for other sizes & flow ranges)
- High accuracy & repeatability, direct reading flowmeter
- No requirement for flow conditioning (*straight pipe runs etc.*)
- Simple to install, Easy to service (*low number of parts*)
- Measures high & low viscosity liquids
- Measures conductive & non-conductive clean liquids

Meter selection

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

- *Aluminium*: Multipulse meters are ideal for lubricants 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.
- *Pulse meters* have two outputs which can be interfaced to most electronic instrumentation. The reed switch is ideal for rate measurement and does not require external power. The open collector hall effect output produces high resolution pulses ideal for precise dispensing and preset batch control.
- *Multipulse* is available with integral or remote totalisers, flow rate totalisers and preset batch controllers.

Applications include:

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



TRIMEC INDUSTRIES

1/19 Northumberland Road, Caringbah NSW 2229
PO Box 2444 Taren Point NSW 2229 Sydney Australia
Ph: +61 2 9540 4433 Fax: +61 2 9525 9411
email: sales@trimecind.com.au
www.trimecind.com

TRIMEC
INDUSTRIES

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 (gal / min)	0.05 ~ 2.7	0.5 ~ 13	1.1 ~ 37	3.2 ~ 90
* Maximum flow (fuels)	12 L / min (3.2 gpm)	80 L / min (21 gpm)	160 L / min (42 gpm)	350 L / min (92 gpm)
Accuracy @ 3cp	± 0.5% of rate (± 0.2% with optional RT12)			
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)	250 (3700)	250 (3700)	
Materials				
Body materials	aluminium or 316L stainless steel (PVDF also available)			
Terminal cover materials	GRN (std.), optional stainless steel or aluminium			
Piston materials	PEEK (polyetheretherketone) or carbon filled teflon			
O-ring materials	viton, nitrile (Buna-N), EPR or teflon encapsulated viton			
Electrical				
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. (max. temp. shock 10°C (50°F) / min)			
Hall effect output	3 wire NPN open collector, 5~24Vdc max., 20mA max.			
Electrical entry port	M20 x 1.5mm pitch or 1/2" NPT female entries			
Physical				
Process connections	BSPP or NPT female, ANSI or DIN flanges, hygienic			
Protection class	IP66/67 (NEMA4X) optional Explosionproof Exd IIB T6			
Dimensions	refer <www.trimecind.com>			
Pressure drop chart	refer <www.trimecind.com>			
Chemical resistance chart	refer <www.trimecind.com>			
Recommended filtering	≤150 micron (100 mesh)	≤250 micron (50 mesh)	≤500 micron (25 mesh)	

* Maximum flow on fuels may be maintained for intermittent periods of refuelling.

* Maximum flow is to be reduced as viscosity increases, max. pressure drop 280Kpa.

Ordering information

Meter size

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

Body material

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

Piston material

2	PEEK - 150°C max. (300°F)
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 (std.)

O-ring material

1	Viton (s td.) - 200°C max. (400°F)
2	EPR - 150°C max. (300°F)
3	Teflon encapsulated - 150°C (300°F)
4	Buna-N (nitrile) - 100°C max. (212°F)

Temperature limits

1	- 40 to 60°C (-40°F ~ 140°F)
2	120°C (250°F) - see note 1
3	150°C (300°F) - PEEK piston
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
9	Customer nominated

Cable entries

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 - 5 1 2 R1

Integral options

	Integral options	(glass reinforced nylon)
GRN terminal cover	AL	
Aluminium terminal cover	SS	
Stainless terminal cover	QP	(2 Hall effects)
Quadrature pulse output	EX	120°C max. (250°F)
Explosion proof ~ Exd	B0	(accum. & reset totals)
BT10 dual totaliser	B1	(scaled pulse output)
BT11 (BT10 with pulse output)	R1	(flow rate & totals)
RT11 Flow Rate Totaliser	R2	(alarms & 4~20mA)
RT12 (RT11 with outputs)	E0	(Ecobatch)
EB10 batch controller	SB	(consult factory)
Specific build requirement		

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

(2) Cooling fin is fitted with BT, RT or EB integral options for operation between 80~120°C (180~250°F)

Optional functions (with RT, BT & EB instruments)

Flow rate display : 8 digit, programmable engineering units
 Resettable total : 5 & 8 digit, programmable eng. units
 Accumulated total : 8 digit, programmable eng. units
 Preset batching : 1 or 2 stage high speed batch control

Optional outputs (with RT, BT & EB instruments)

Analog : 4~20mA programmable zero & span
 Scaled pulse : programmable (eg. 1 pulse/litre, /10 gal etc)
 Flowrate alarms : programmable high & low flow rate alarms

Integral and Remote Electronics



Preset batcher (refer EB data sheet)



Battery totaliser (refer BT data sheet)



Rate totaliser (refer RT data sheet)

Distributed by:

TRIMEC
INDUSTRIES

Data sheet No. SLMU000-0905