Multipulse 50mm (2") Positive Displacement Flowmeters



Features

- IP67 (Nema 4X) 316L stainless steel or aluminium construction
- Nominal flow range 700 - 20000 lph (3 - 88 USGPM)
- Performance independent of flow profile or mounting orientation
- Single moving part
- Pressure to 100 bar (1500 psi)
- Temperature to 150°C (300°F)
- Both open collector and reed switch outputs as standard
- Measures low and high viscosity liquids up to 1,000,000 centipoise
- Adaptable to hygienic applications

Options

- Threaded, flanged or hygienic process connections
- Explosionproof or intrinsically safe operation
- Integral or remote self powered flow rate-totaliser with scaled pulse, analog and flow alarm outputs (see separate data sheet)
- Integral or remote high speed preset batch controller (see separate data sheet)

Overview

Multipulse PD flowmeters utilise's the widely accepted oscillating piston design principle with the performance enhanced by the use of modern engineering materials to provide a cost effective and reliable solution for a wide range of industrial flow measurement applications.

Design Simplicity

Its simple and robust design offers the advantage of only one moving part with both high resolution open collector and reed switch outputs as standard.

As each piston rotation passes a known liquid volume, the inherent repeatability of the Multipulse positive displacement flowmeter makes it particularly suited to batching and dispensing duties.

Application Flexibility

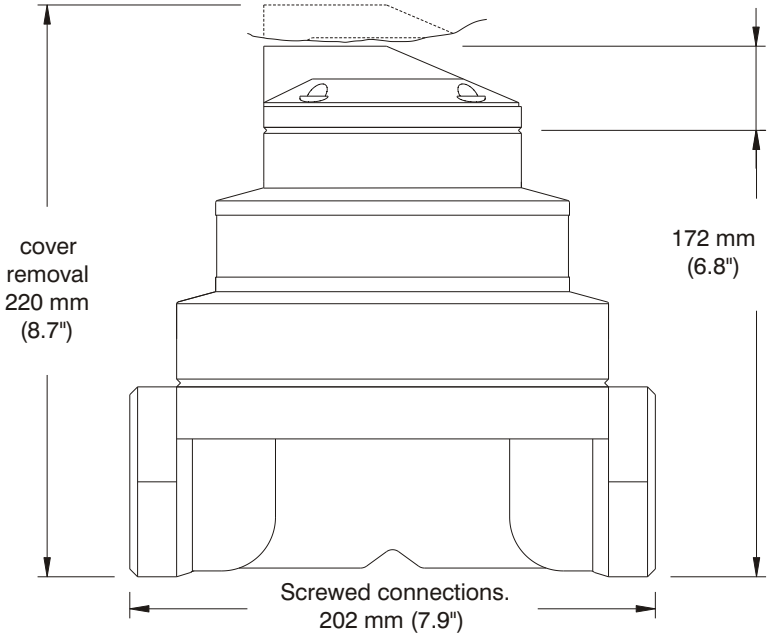
Commonly metered liquids range from non conductive low viscosity solvents through to extremely viscous lubricants, chemicals and food bases.

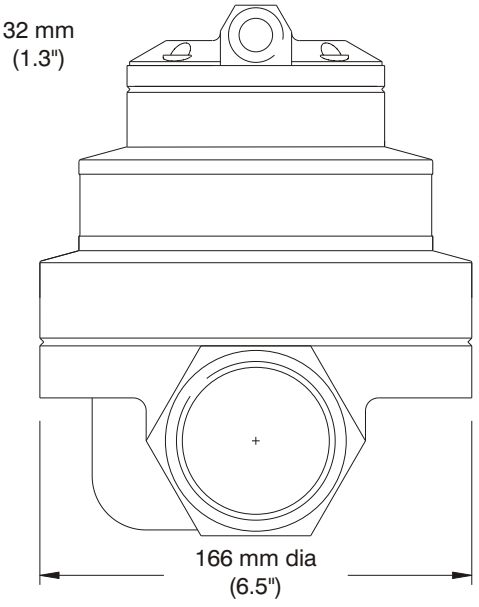
Application flexibility is further enhanced as meter performance is independent of flow profile eliminating the restrictive need for straight pipe runs required with most alternate metering technologies.

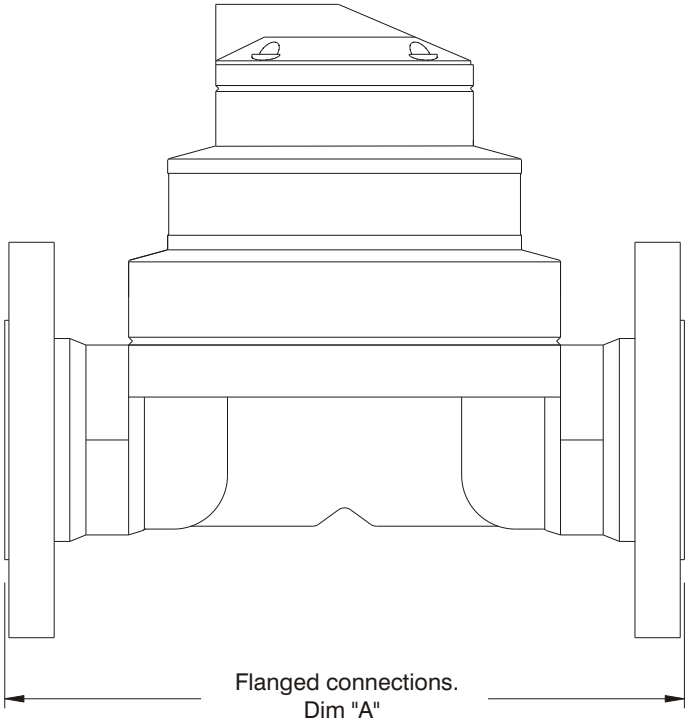
Multipulse has no stagnate chambers to harbor contaminants. There is no restrictions on mounting orientation and the flowmeter may be operated under vacuum flow, pumped flow or gravity flow conditions.

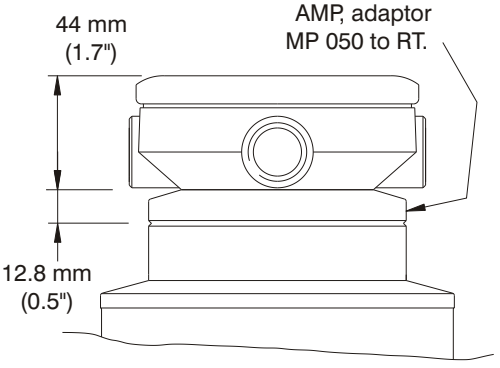
Data Sheet No.SLMP050-0601

DIMENSIONS









Optional integral electronic register.

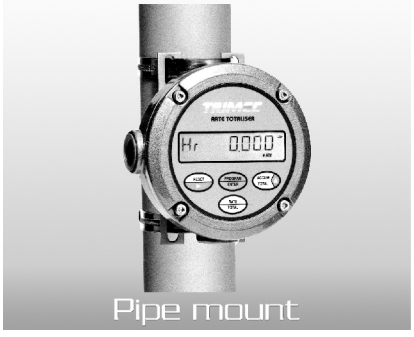
Flange size and type	Dim "A"
2" ANSI 150 RF	253 mm, (9.9")
2" ANSI 300 RF	268 mm, (10.6")
DN50PN16	258 mm, (10.2")
DN505PN40	270 mm, (10.7")

Note: All dimensions are nominal.
Drawing not to scale.

SPECIFICATIONS

	MP050S	MP050A	MP050H
Model Prefix			
Body Material	316L stainless steel	Aluminium	316L stainless steel
Nominal Flow Range*	700 to 20000 lph (3 to 88 USGPM) ** Turndown (flow range) varies in accordance with effective viscosity of metered liquid*		
Accuracy	±0.5% of rate *Accuracy and turndown can be improved utilising the linearisation feature of the Trimec RT flow rate totaliser*		
Repeatability	Typically ±0.03% under steady flow conditions		
Maximum Pressure	38 Bar (560 psi)	20 Bar (300 psi)	100 Bar (1500 psi)
Temperature Range	Three ranges covering operation from - 40 to 150°C (- 40 to 300°F) *limited to 80°C (176°F) with integral electronic register*		
Piston Material	PEEK (polyetheretherketone), optional carbon filled teflon *For special materials - consult factory*		
O-Ring Material	viton, EPR (EPDM), teflon encapsulated viton or nitrile (Buna-N)		
Reed Switch Output	30vdc maximum voltage, 20mA maximum current **Pulse resolution:** nominally 2.5 pulses / litre (9.5 pulses / US gallon)		
Open Collector Output	5 to 24vdc (25vdc maximum) 3 wire NPN (sinking current) 20mA maximum current - 1000 metres (3300 ft) maximum transmission **Pulse resolution:** nominally 20 pulses / litre (76 pulses / US gallon)		
Electrical Connection	M20 x 1.5 or ½" NPT female entries		
Process Connections	2" BSPP or NPT 2" ANSI 150/300RF flanges DN50 PN16/40 flanges 65mm triclamp hygienic *(others on request)*	2" BSPP or NPT *(Lap Joint Flanges on request)*	2" BSPP or NPT *(others on request)*
Environmental Protection	IP67 (Nema 4X), optionally flameproof to Exd IIB T4 (Class 1, Groups C & D)		
Recommended Filtering	500 microns (25 mesh)		

Remote Mounting Options for 100 Series Electronics







IN THE INTERESTS OF PRODUCT DEVELOPMENT TRIMEC RESERVES THE RIGHT TO ALTER THE DESIGN AND SPECIFICATIONS WITHOUT NOTICE ©

ORDERING INFORMATION

MP050

BODY MATERIAL

S	316L stainless steel
A	Aluminium
H	High pressure 316L stainless steel

PISTON & BEARING

2	PEEK (standard)
3	Carbon filled teflon

PARTITION MATERIAL

1	Ceramic (for non lubricating liquids)
2	316L stainless steel (standard)

O-RING MATERIAL

1	Viton (standard)
2	EPDM
3	Teflon encapsulated viton
4	Nitrile (Buna-N)

TEMPERATURE RANGE

- 1	-40 to 60°C (-40 to 140°F)
- 2	10 to 120°C (50 to 250°F) * see Note 1
- 3	60 to 150°C (140 to 300°F) * see Notes 1 & 2

PROCESS CONNECTIONS

1	2” (50mm) BSPP female
2	2” (50mm) NPT female
3	2½” (78mm OD) triclamp ferrule
4	2” ANSI-150 RF flanges
5	2” ANSI-300 RF flanges
6	DN50-PN16 flanges
7	DN50-PN40 flanges
9	Customer nominated (special)

CONDUIT ENTRY

1	M20 x 1.5 female
2	½” NPT female

OPTIONS (integrally mounted)

- 00	None
- EX	Flameproof (Exd)
- R1	RT11 rate / totaliser (scaleable pulse output & NLC*)
- R2	RT12 rate / totaliser (RT11 + 4-20 mA output & alarms)
- EB	Ecobatch high speed preset batch controller
-	

Note 1 : Optional electronic register must be remotely mounted if the operating temperature exceeds 80°C (176°F)

Note 2 : PEEK piston & open collector output only

*NLC : MULTI POINT NON LINEARITY CORRECTION

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