

Insertion Meter

Insertion Meters are cost effective stainless steel meters for measuring the flow of water, fuels and other low viscosity liquids in pipe sizes 1.5" – 100" (10 – 2500mm). Insertion Meters are a flexible, economic method to measure large flow rates with small pressure drops and low installation costs, with most applications battery powered with a totaliser. Applications include HVAC, hot and cold water, fire systems, water distribution (management and treatment), boiler feed water, waste water and hydrant flow testing.

Features / Benefits

- IP68 (NEMA6) submersible 316SS construction (cable connection only).
- Intrinsically safe option available.
- DP525 version suitable for "hot tap" installations.
- Quadrature pulse option available for bi-directional flow measurement.



Instruments Also Available

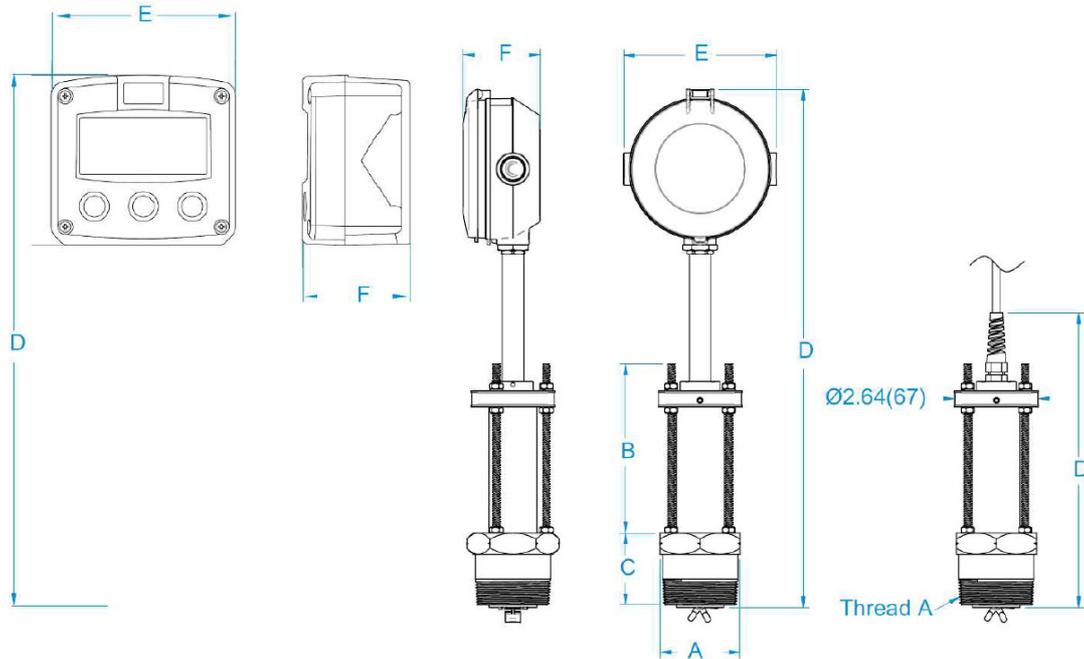
- Backlit flowrate totaliser with analogue and pulse outputs (RT14).
- Flowrate totaliser (RT40)
- Intrinsically safe flow rate totaliser with analogue and pulse outputs (RT12).

Specifications

Model prefix	DP490	DP525
Suits Pipe Sizes	1.5" - 35" (40 - 900mm)	2" - 100" (50 - 2500mm)
Pipe Connection	1.5" or 2" BSPT or NPT male thread	2" BSPT or NPT male thread
Flow Velocity Range	1 - 33 feet/sec (0.3 - 10 meters/sec)	
Linearity	typically $\pm 1.5\%$ 10 - 1m/sec Over Range typically $\pm 1.5\%$ 10 - 0.3m/sec Full Scale	
Temperature Range	-40°C ~ +150°C (-40°F ~ +300°F)	
Maximum Pressure	1160psig (80 bar)	
Materials	316ss body and rotor shaft	
Protection Class	IP68 (NEMA6), optional I.S. (Intrinsically Safe) Integral options	
Pulse Outputs		
Hall Effect	3 wire open collector, 5 - 24vDC, 20mA max. Nom 0 - 240Hz	
Reed*	30vDC, 200mA max. Nom 0 - 80Hz	
Voltage Pulse	Self Generated voltage. Nom 0 - 240Hz	
Non-magnetic Sensor	3 wire open collector, 5 - 24vDC, 20mA max. Nom 0 - 240Hz	
Optional Outputs**	4 - 20mA, scaled pulse, quadrature pulse	

* Reed Switch resolution is 1/3 of the NPN Hal Effect or Voltage Pulse Outputs.

** Optional Integral option is required.



Flying Cable Option	Millimetres (Inches)	
	DP490	DP525
A-Thread	1.5" or 2", BSP or NPT	2" BSP or NPT
A-Dimension	60 (2.36)	64 (2.52)
B	198 (7.8)	444 (17.48)
C	38 (1.5)	58 (2.28)
D	237 (9.33)	424 (16.69)

Integral Option	Millimetres (Inches)	
	DP490	DP525
A-Thread	1.5" or 2" BSP or NPT	2" BSP or NPT
A-Dimension	60 (2.36)	64 (2.52)
B	198 (7.8)	444 (17.48)
C	38 (1.5)	58 (2.28)
D-RT12/RT14	415 (16.34)	900 (35.43)
D-RT40	380 (14.96)	865 (34.06)
E-RT12/RT14	122 (0.47)	
E-RT40	113 (4.45)	
F-RT12/RT14	61 (2.40)	
F-RT40	63 (2.48)	



Ordering information

Model Size

DP490	1.5 to 36" pipes (40 - 900mm)
DP525	2 to 100" pipes (50 - 2500mm) suitable for "hot tap" installations (valve not included)

Body material

S	316 Stainless Steel
----------	---------------------

Rotor / Bearing materials

1	PEEK / 316 stainless steel (150°C max. (300°F))
2	PVDF / 316 stainless steel (125°C max. (260°F))

O-ring materials

1	Viton (-15°C ~ +150°C (5°F ~ +300°F))
4	Nitrile (-40°C ~ +125°C (-40°F ~ +260°F))

Temperature limits

2	125°C (260°F) (available with electrical connections 5 & 6)
3	150°C (300°F) (only available with pick-up type 2, electrical connection 5, PEEK rotor & viton O-ring)
5	100°C (212°F) - standard temperature rating
8	80°C (176°F) (for non-magnetic pick-up type 4)

Process connections

1	1 1/2" BSPT male thread (not available on DP525)
2	1 1/2" NPT male thread (not available on DP525)
3	2" BSPT male thread
4	2" NPT male thread

Pick-up type

1	NPN open collector & voltage pulse (standard)
2	NPN open collector only
3	Reed Switch only (may be used with an I.S. barrier or instrument in hazardous areas)
4	Non-magnetic rotor with NPN output (for liquids with ferrous impurities, needs power)
9	Quadrature pulse output

Electrical connections

C	Flying cable (1.5m (5ft) on DP490, 1m (3ft) on DP525)
2	Flying cable - 10m (33ft)
5	Terminal box on stem kit - IP67
6	Stem kit 3/8" NPT x M 16 thread (required for integral instruments)

Model No. Example

DP490	S	2	1	5	1	1	6	R5
--------------	----------	----------	----------	----------	----------	----------	----------	-----------

Integral options

		Nil
No output - display only	F1	FRT-00 Flow Rate Totaliser
4-20mA output proportional to flowrate & scaled pulse output	F2	FRT-AP Flow Rate Totaliser
Alarm and/or scaled pulse output	F3	FRT-ALP Flow Rate Totaliser
2 stage batch control	F4	FRT-BC Flow Rate Totaliser
	R2	RT 12 rate to totaliser with all outputs (GRN housing)
IECEX & ATEX approved	R3	Intrinsically Safe RT 12 rate to totaliser with all outputs (GRN housing)
Scaled pulse + backlighting	R4	RT40 backlit rate to totaliser (Alloy housing with fascia protector)
Scaled pulse, alarms & 4-20mA, backlight	R5	RT 14 backlit rate totaliser with all outputs (GRN housing)

DSIM - 1809

Trimec Europe Ltd
 Unit 2, The Old Grain Store
 Ditchling Common Industrial Estate
 Ditchling, East Sussex
 BN6 8SG
 Phone: +44 1444 248777
 Fax: + 44 1444 243750
 sales@trimec-europe.com

Distributed by: