



DP SERIES INSERTION IMPELLER METERS

FLOMEC® 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 – 2500 mm). 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 FLOMEC totalizer. 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

PRODUCT IDENTIFIER 1

DP490 = Insertion Meter for 1.5 to 36" (40-900 mm)

DP525 = Insertion Meter for 2 to 100" (50-2500 mm) suitable for "hot-tap" installations (valve not included)

BODY MATERIAL 2

S = 316 Stainless Steel

ROTOR/SHAFT MATERIALS 3

- 2 = PVDF/316 stainless steel (260°F [120°C])
- 3 = PEEK/tungsten carbide (300°F [150°C])

O-RING MATERIAL 4

- $1 = Viton^{TM} 5^{\circ}F to + 300^{\circ}F (-15^{\circ}C + 150^{\circ}C)$
- **4** = Buna-N (Nitrile), -40°F to + 260°F (-40°C to + 125°C)

TEMPERATURE RATING 5

- 2 = 260° F (125° C) max. (available with electrical connections 5 & 6)
- 3 = 300° F (150° C) max. (only available with rotor/shaft type 3, pick-up type 2, electrical connection type 5, & Viton™ O-Ring)
- 5 = 212° F (100° C) max. (standard temperature rating)

PROCESS CONNECTIONS 6

- 1 = 1-1/2" BSPT male thread
- 2 = 1-1/2" NPT male thread
- 3 = 2" BSPT male thread
- 4 = 2" NPT male thread

PICK-UP TYPE 7

- 1 = NPN open collector & voltage pulse (standard)
- 2 = NPN open collector only
- 3 = Reed switch only (not suitable for Temp code 3)
- 9 = Quadrature pulse output (requires F15 option for bi-directional flow capability)

ELECTRICAL CONNECTIONS 8

- **C** = Flying cable (5 ft [1.5 m] on DP490, 3 ft [1 m] on DP525)
- 2 = Flying cable 33 ft (10 m)
- **5** = Terminal box on stem kit IP67
- 6 = Stem kit %" NPT x M16 thread (required for integral instruments)

INTEGRAL OPTIONS 9

R4 = RT40 backlit rate totalizer in Aluminum housing

R5 = RT14 backlit rate totalizer with 4-20mA and pulse outputs, in GRN housing

R6 = RT14 IECEx/ATEX Instrinsically Safe rate totalizer with 4-20mA and pulse outputs, in GRN housing (requires pickup type 3)

R7 = RT40 backlit rate totalizer in GRN housing

F15 = F115 bi-directional flow rate totalizer, 4-20mA and pulse outputs, HART communications

F18 = F018 backlit rate totalizer, 4-20mA and pulse outputs, HART communications

F19 = F018 Intrinsically Safe backlit rate totalizer, 4-20mA and pulse outputs, Hart communications (requires pick-up type 3)

CALIBRATION (for integral display models only) 10

= Display in Litres (DEFAULT)

G = Displays in US Gallons

1 2 3 4 5 6 7 8 9 10 --->>> DP490 S 2 1 5 - 1 1 6 R5

SPECIFICATIONS

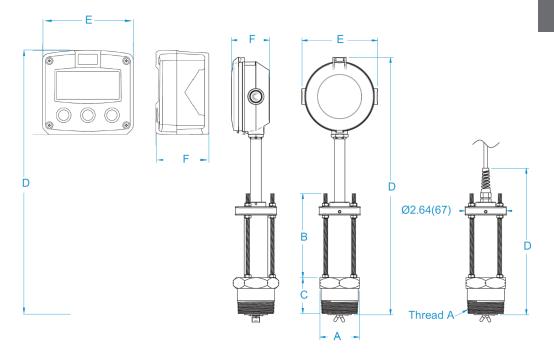
| | DP490 | DP525 | | |
|---------------------------|---|----------------------------|--|--|
| Suits Pipe Sizes | 1.5 - 35" (40-900 mm) | 2 - 100" (50-2500 mm) | | |
| Pipe Connection | 1.5" or 2" BSPT or NPT male thread | 2" BSPT or NPT male thread | | |
| Flow Velocity Range | 3 - 33 ft/sec (1 -10 m/s) | | | |
| Linearity % of Reading | Typically ± 1.5% | | | |
| Temperature Range: | -40°F to 300°F (-40°C to 150°C) | | | |
| Max. Pressure: | 1160 psi (80 bar) | | | |
| Materials | 316SS body and rotor shaft | | | |
| Protection Class: | IP68 (NEMA 6), optional I.S (Instrinsically Safe) Intergral options | | | |
| Pulse Outputs | | | | |
| Hall Effect | 3 wire open collector, 5-24v (dc), 20mA max. Nom 0 -240Hz | | | |
| Reed* | 30v (dc), 200mA max. Nom 0 - 80Hz | | | |
| Voltage Pulse | Self Generated voltage, Nom 0 - 240Hz | | | |
| Non-Magnetic Sensor | 3 wire open collector, 5 - 24V (dc), 20mA max. Nom 0 - 240Hz | | | |
| Optional Outputs** | 4-20mA, scaled pulse, quadrature pulse | | | |

^{*}Reed Switch resolution is 1/3 of the NPN Hall Effect or Voltage Pulse outputs **Optional Integral option is required

| Flying Cable Option | DP490 | DP525 |
|---------------------|-----------------------|-----------------|
| A- Thread | 1.5" or 2" BSP or NPT | 2" BSP or NPT |
| A - Dimension | 2.36" (60 mm) | 2.52" (64 mm) |
| В | 7.8" (198 mm) | 17.48" (444 mm) |
| С | 1.5" (38 mm) | 2.28" (58 mm) |
| D | 9.33" (237 mm) | 16.69" (424 mm) |

| Integral Option | DP490 | DP525 | |
|-----------------|-----------------------|-------------------|--|
| A- Thread | 1.5" or 2" BSP or NPT | 2" BSP or NPT | |
| A - Dimension | 2.36" (60 mm) | 2.52" (64 mm) | |
| В | 7.8" (198 mm) | 17.48" (444 mm) | |
| С | 1.5" (38 mm) | 2.28" (58 mm) | |
| D - RT12/RT14 | 16.34" (415 mm) | 35.43 in (900 mm) | |
| D - RT40 | 14.96" (380 mm) | 34.06" (865 mm) | |
| D - F018/F115 | 16.26" (413 mm) | 35.35" (898 mm) | |
| E - RT12/RT14 | 0.47" (122 mm) | | |
| E - RT40 | 4.45" (113 mm) | | |
| E - F018/F115 | 5.12" (130 mm) | | |
| F - RT12/RT14 | 2.40" (61 mm) | | |
| F - RT40 | 2.48" (63 mm) | | |
| F - F018/F115 | 2.95" (75 mm) | | |

DIMENSIONS



APPLICATIONS

- HVAC
- · Hot and Cold Water
- Fire Systems
- Water Distribution (Management and Treatment)
- · Boiler Feed Water
- Waste Water
- Hydrant Flow Testing

Service & Warranty: For technical assistance, warranty replacement or repair contact your FLOMEC® or GPI® distributor: In North or South America: 888-996-3837 / FLOMEC.net Outside North or South America: +61 2 9540 4433 / FLOMEC.net

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