



TI-P335-10  
MI Issue 7

## M610 Series II DP Transmitter Assembly

### Description

The M610 Series II DP transmitter assembly is designed to accept a differential pressure input from a primary flow element such as an orifice plate or Gilflo flowmeter and convert it into an analogue 4-20 mA output signal. The standard version comes with digital communications in the form of HART® 5.2 which is superimposed on the 4-20 mA output. The 3-way manifold which is supplied already assembled to the DP transmitter acts as a means of secondary isolation and as a pressure equalisation valve to check the zero of the DP transmitter.

The M610 Series II DP transmitter assembly consists of two items:

- A high accuracy (0.1%) differential pressure transmitter.
- A 3-way carbon steel isolation manifold.

**Note:** These items are supplied already assembled.

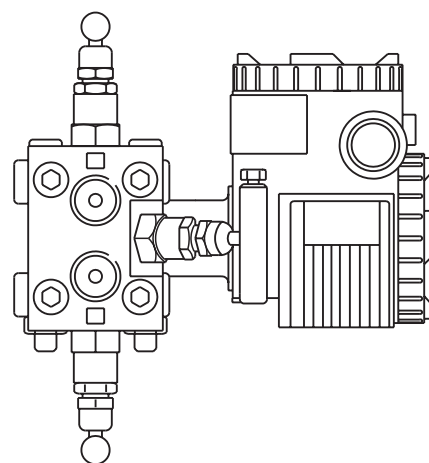
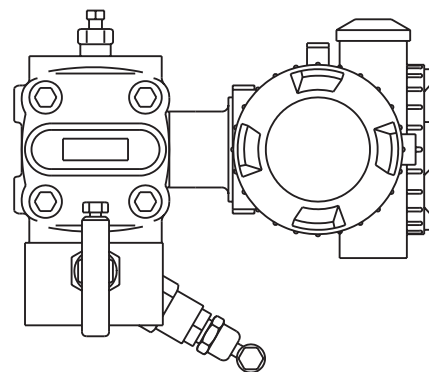
### Pipe connections

The process ports on the 3-way manifold are threaded ½" NPT at 54 mm centres.

**Electrical connections** - M20 x 1.5 screwed terminals.

### M610 Series II technical data

<b>Span</b>	0 - 1326 mm H <sub>2</sub> O (0 -13 kPa) minimum
	0 - 13256 mm H <sub>2</sub> O (0 -130 kPa) maximum
<b>Output</b>	4 - 20 mA dc and HART® protocol 5.2
<b>Power supply</b>	16 V to 45 Vdc (for non-certified application)
	16 V to 28 Vdc (for E Ex ia 11c T4 / T5)
<b>Pressure limits</b>	-1 to 140 bar g
<b>Temperature limits</b>	-40 °C to + 85 °C (ambient for non-certified application)
	-40 °C to + 100 °C (process)
<b>Accuracy</b>	±0.1% of calibrated span to include effects of linearity, hysteresis and repeatability
<b>Materials of construction</b>	Body - Stainless steel
	Diaphragm - Austenitic stainless steel 316L
	3-way manifold - Carbon steel
	Fluid fill - Silicone oil
<b>Intrinsic safety</b>	ATEX Ex II 1GD - E EX ia 11c T4/T5 Ga Ex ia 111C T100 °C/T135 °C Da
<b>Enclosure rating</b>	IEC IP67 (NEMA 6/6P)
<b>EMC emissions and immunity</b>	To BS EN 61326:1997



**Note:** If HART® communications are required in intrinsically safe applications, barriers must be used which are designed to pass the HART® signal.

### Calibration

The M610 Series II DP transmitter assembly is supplied with a span factor set to suit a particular application. However, should load conditions and/or details of actual installation change, the range of the M610 can be adjusted within the limits 0 - 1326 mm H<sub>2</sub>O (0 - 13 kPa) and 0 - 13256 mm H<sub>2</sub>O (0 - 130 kPa) as described in the Installation and Maintenance Instructions supplied with the product.

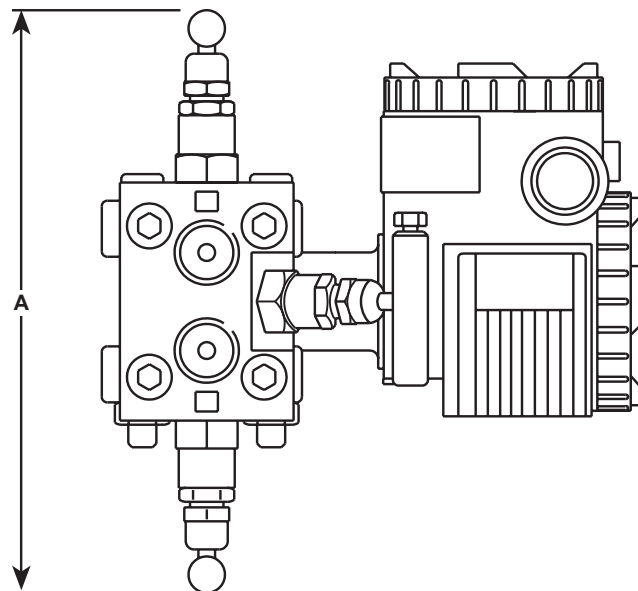
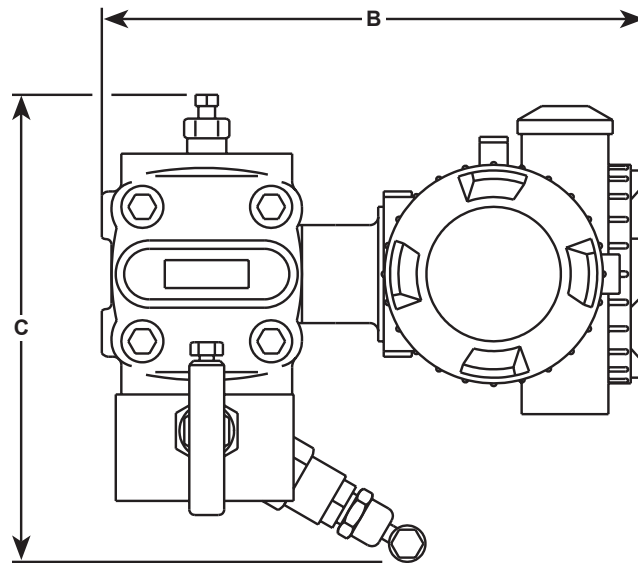
### Installation

Full installation details are given in the literature that accompanies the M610 Series II DP transmitter assembly.

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**Dimensions / weights** (approximate) in mm and kg

A	B	C	DP transmitter	3-Way manifold	M610 assembly
220	193	175	6.5 kg	1 kg	7.5 kg



**How to order**

**Example:** 1 off Spirax Sarco M610 Series II DP transmitter assembly calibrated to give an output of 20 mA at an applied differential pressure of specified value.

**Associated equipment:**

- Orifice plate flowmeter
- Gilflo flowmeter system