



Gilflo ILVA Flowmeters System Overview

Description

The Spirax Sarco Gilflo ILVA flowmetering system consists of two major parts:

1. The Gilflo ILVA pipeline unit. This is installed in the line where the flow is to be measured. Using impulse pipework, this is connected to:
2. The M610 DP transmitter assembly. This measures the differential pressure across the Gilflo ILVA pipeline unit and converts it to a 4-20 mA output signal. This output signal can be used in a number of ways:
 - i- To act as a suitable input to an EMS/BEMS which can be programmed by the user to carry out the linearising of the output signal based on the calibration data that is supplied with each Gilflo ILVA flowmeter. Additional inputs from the EL2600 pressure transmitter and EL2271 temperature transmitter can be used to carry out density compensation for compressible flow applications.
 - ii- To supply an M750 display unit. This gives a non-compensated display of rate of flow and totalised flow. It is suitable for liquid, gas and steam applications where density compensation is not required.
 - iii- To supply a Spirax Sarco M850 flow computer. Use of the pressure and temperature transmitters enables automatic density compensation to be carried out for compressible flow applications. See the relevant TI for details of pressure/temperature limits for flow computers.

The Gilflo ILVA pipeline unit can be used to measure the flow of most industrial liquids, gases and vapours within the pressure and temperature limits detailed in the TI's.

Installation

Care must be taken to meet all the requirements of the Installation and Maintenance Instructions that are included with the equipment. Some installation points to watch are noted overleaf.

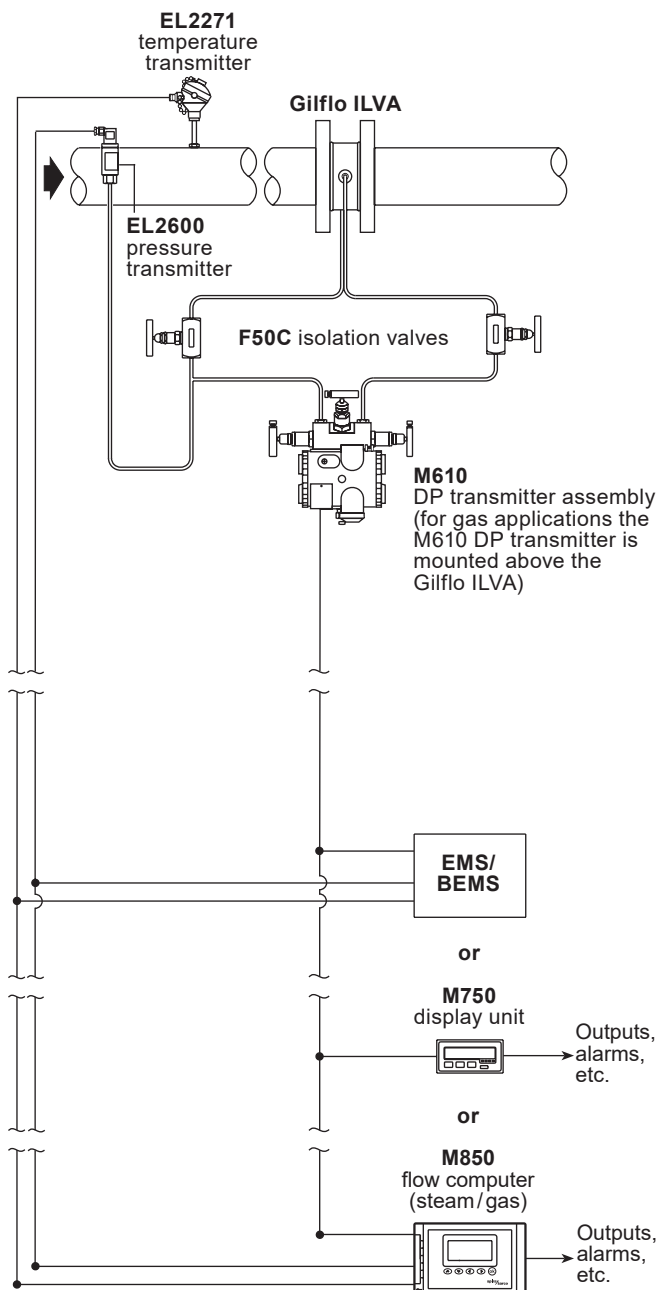
In addition, heat metering is possible on saturated steam systems by replacing the EL2600 pressure transmitter with an EL2271 temperature transmitter in the condensate return line (M850 system only).

Electrical wiring

All electrical wiring must be carried out to the appropriate standards. Full wiring interconnection details are included with the equipment.

Associated equipment

Item	Description
EL2271	Temperature transmitter
EL2600	Pressure transmitter
F50C	Isolation valve
Gilflo ILVA	Pipeline unit
M610	DP transmitter assembly
M750	Display unit
M850 Flow computer	Steam or gas flow computer



Installation points to watch:

1. Ensure that all pipework is adequately supported and properly aligned. Special care should be taken to ensure that the Gilflo ILVA pipeline unit is concentrically mounted in the line.
2. The Gilflo ILVA pipeline unit should be selected on capacity rather than line size. Where line size changes on steam systems are necessary, use eccentric reducers to avoid build-up of condensate.
3. The minimum recommended lengths of straight pipe upstream and downstream are 6 D and 3 D respectively. See other literature for more details concerning the Gilflo ILVA.
4. Take care to ensure the correct direction of flow as indicated by the arrow on the flowmeter body.
5. Take care to avoid reverse flow through the flowmeter.
6. Avoid installing the flowmeter downstream of a pressure reducing valve (especially on steam systems) as this may cause inaccurate readings. Similarly, avoid installing the flowmeter downstream of a partially open valve.
7. Remember that actuated valves may cause rapid pressure fluctuations which could cause damage.
8. On steam or liquid systems, the M610 DP transmitter assembly is mounted below the flowmeter. Take care to ensure that all impulse lines remain full to prevent damage to the DP transmitter through contact with steam or high temperature liquid.
9. For steam applications, care should be taken to ensure adequate line drainage, trapping etc., to avoid condensate slugs impacting the flowmeter. Where practicable, steam separators should be fitted. These should be drained using a float trap set.
10. For gas applications, the M610 DP transmitter assembly is installed above the pipework. Ensure that the impulse lines allow free drainage of moisture away from the DP transmitter and back into the pipeline.