QUICK START INSTRUCTIONS

VFF SERIES FLOWMETER

THE METER MAY NOT BE DESIGNED FOR USE ON WATER – PLEASE CONSULT THE FACTORY if the meter has not been calibrated on water.

For detailed information please study document LM0333, LM0670 or LM0620 VFF series rotary flowmeters, the instruction manual for the display (if provided) and the calibration certificates for the flowmeter and display. Use the url or QR code on the right.

The flowmeter data and instrument data has been selected according to the specification of the order. Providing this is correct then there should be no need to enter the programming mode of the instrument.

Further information can be found by scanning the QR code or accessing the url including, manuals, wiring diagrams and calibration data. The url & QR code can be found on the flowmeter label e.g. www.lm.gs/abcd1234-12345.

Installation

The flowmeter should be installed in a horizontal line with the flow body vertical, i.e. with the display directly above the piping. Please note the flow direction arrow. Mounting holes are provided on the underside of flowmeters with threaded connections. The display is normally directly above the meter body but can be provided for remote mounting.

Care should be observed on start up to avoid high pressure drops across the flowmeter. The flowmeter can be specified with a number of rotor materials including carbon, brass and stainless steel. There is a risk of the rotor or chamber damage if a high pressure drop or a high acceleration across the flowmeter is experienced. Typically this may be caused by:

CAUTION

- **Air in the line**
- **A sudden introduction of fluid into an empty pipe**
- **Opening a valve too quickly**
- **Purging with compressed air**

To prove the flowmeter is functioning without being installed in the line, it is possible to blow gently through the meter. You should be able to hear the rotor rotate and see the flow display. **Please do not use an airline as the rotor may break.**

Take care that sealant or tape does not shred or get flushed through the system to block the rotor.

CAUTION

Application Warnings:

Do not exceed the maximum or minimum temperature stated in the client data sheet.

Do not exceed the maximum pressure stated in the client data sheet. End user must ensure that a suitable device is fitted to prevent it from being exceeded. No pressure surges to be allowed exceeding the maximum pressure stated in the client data sheet.

Only when correctly installed should the system be started. Operability must not be compromised during installation. Misuse can be avoided. Please be aware of the following common hazards: pressure surges, corrosion, fluid leaks etc – *see 333 or 620 or 670 for further guidance and advice*.

Signal WIRING

Summary: Further detail is available in the flowmeter/instrument manuals/diagrams

FlowPod Exd 2 wire or 4 wire

Power is required for the unit to function.

Field Wiring

The 4-20mA output option enables the unit to transmit a flow rate signal. All sensor and Field connections are made to a terminal board mounted in the base of the enclosure. Terminals are two-part and can be removed for ease of assembly. Where supplied as a system with a flowmeter, or where a specific sensor type has been specified, the device will be configured for the appropriate sensor. When safe to do so, field connections can be accessed by removing the front cover of the enclosure and removing the LCD module. Consult LM0662 and wiring diagram C7310.

Exi version with grey plastic display and 3 push buttons

The battery powered versions designated PB or PC do not require external power.

Field Wiring

The 4-20mA output option enables the unit to transmit a flow rate signal. This is available either through the M20 threaded hole on the side or through a gland hole (to be drilled) on a face of the display back box. This should be wired up as follows:

1. Remove the four counter-sunk screws on the display front.
2. Pull out the green 7-way adaptor plug (2 wires, usually coloured blue and pink, will be connected to this plug; this is the signal input).
3. Feed the external cable through the gland into the back box area and connect to the terminal plug (see page 38 of the display instructions for a wiring diagram of the display; Section 5 Configuration Example 3).
4. Re-engage the 7-way adaptor plug and re-secure the instrument front with the four counter-sunk screws. The flowmeter is now ready for operation.

Exd version with blue aluminium enclosure or stainless steel enclosure

Power is required for the unit to function.

Field Wiring

This should be wired up as follows:

1. When safe to do so remove the round front cover.
2. 24Vdc is required to be attached to terminals marked 24V and 0V.
3. Feed the external cable through the gland and connect to the terminals. Other terminal functions are illustrated on drawings C5782 or C6017 (Flow alarm version uses drawing C5898), or on drawing C6187 (*blue enclosure with Fieldbus*). C6169 is a simplified version of C6095. Or other drawing as found within documentation.
4. Re-secure the cover. The flowmeter is now ready for operation.

Exi version with round direct mount aluminium enclosure (VRC)

Power is required for the unit to function.

Field Wiring

This should be wired up as follows:

1. When safe to do so remove the round front cover.
2. 24Vdc is required to be attached to terminals marked 1 and 2.
3. Other terminal functions are illustrated within the manual.
4. Re-secure the cover. The flowmeter is now ready for operation.

To prove the flowmeter is functioning without being installed in the line, it is possible to blow gently through the meter. You should be able to hear the rotor rotate and see the flow display. Please do not use an airline as the rotor may be damaged.

Further information can be found by scanning the QR code or accessing the url including, manuals, wiring diagrams and calibration data. The url & QR code can be found on the flowmeter and instrument label.