

Operating Manual

FloReader DIGITAL FLOW METER



Technical specification of FloReader

Function: flow Rate indicator Indicator & totalizer.

Flow Rate Range: 0.5 to 5 m/s (1.6 to 16.4 ft./s)

Pipe Size Range: 15 NB to 300 NB (0.5 to 12 in.)

Display : 7 digit numeric customis LCD display

Input Supply: 2 X 1.5 VDC Duracell battery

Accuracy: ± 2.5% of full scale deflection

Min. Reynolds Number Required: 4500

Material of Const. Plastic ABS

Housing: Polypropylene (black)

Sensor Body Viton

O-rings: Hastelly C

Rotor Pin: Black PVDF.

Protection Rating: IP 65 (weather proof enclosure)


Operating Pressure: 5 bar(145 psi) maximum

Operating Temperature: 55° C maximum

Line Size selection chart

Line Size (NB)	15	25	40	50	65	80	100
Min. Flow (m3/ hr)	0.26	0.88	2.04	3.50	6.30	8.0	14.0
Max. Flow (m3/ hr)	2.60	8.80	20.4	35.0	63.0	80.0	140

Trouble shooting

Problem	Possible Causes	Suggested Solutions
Display remains zero even when actual flow is there	Flow less than the minimum flow rate.	Check if any downstream valve is closed. Open valve. Remove sensor from the fitting & check change in reading by physically rotating the paddle. If meter shows reading check the actual flow rate. Change the fitting if the normal flow is lower than the minimum
	Sensor not inserted in the correct plane.	Ensure that the arrow on the sensor is in direction of flow.
	Rotor not moving freely	Remove the sensor, clean Rotor & Pin and ensure free movement of the Rotor.
	Wrong sensor wiring. (mainly applicable for panel mounted meters or field mounted units where sensor wire is extended.)	Connect the sensor wires as per wiring connection details in the manual / on the meter.
Reading getting displayed but not correct.	Meter & sensor serial number are not matching.	Ensure that the meters are connected to its corresponding sensor & fitting only.
	Adequate straight run is not provided on inlet & outlet side of sensor. Presence of a pressure reducing valve before the sensor can result in error.	Provide straight run as per guide lines. OR adjust the scale factor to match the actual flow. Provide a bend between the valve & the sensor. Refer installation guide line for proper placement of sensor.
	Set scale factor disturbed.	Check scale factor. Correct factor as per mentioned on meter or sensor.
Meter is malfunctioning / not given any output.	Flow meter setting disturbed.	Correct meter setting as per operating manual.
No display / display flash battery symbol 	LOW Battery	Display flash battery symbol means battery is low. Change the battery.
	Micro-Controller hanged	Switch off supply for 1 minute and then switch On the supply again



Press key to select rate of flow unit as
M3/hr / LPM / LPH / GPM UK / GPM USA / GPH UK / GPH USA
Than press key display shows set unit for Total.



Press key to select Total unit as
M3 / LITRES / GALLONS UK / GALLONS USA
than press Key, display shows averaging time for rate in sec.



Press & keys to set averaging time in seconds
0.1 sec to 30.0 seconds Max (Default time is 6 seconds)

Than press key, Then the display returns to normal reading.

How to reset Total

Press key for 3 seconds display shows SET PASSWORD



Press & keys to set password as **1600**
than press key display show set scale

Than press to reset existing total value, else press key to exit without change.

Then the display returns to normal reading.

Read Before Installation

FloReader is combination of flow sensor & display unit, do not separate

Before Installation please check liquid media compatibility against parameters like Chemical compatibility, temperature, Pressure.

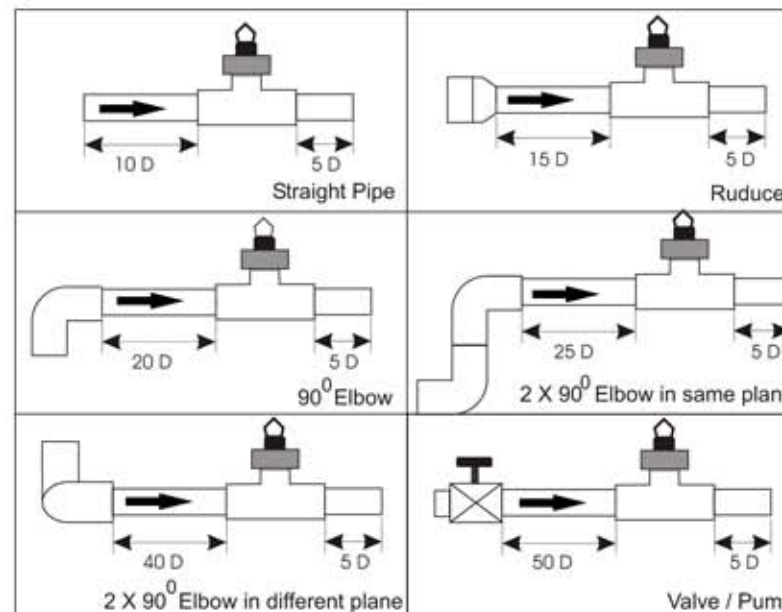
Do not pass sensor cable close to power cable. Always keep sensor cable in separate conduit pipe.

Extension of sensor cable is on your won risk.

FlowReader has a limited warranty of 6 months.

Fitting Installation Condition

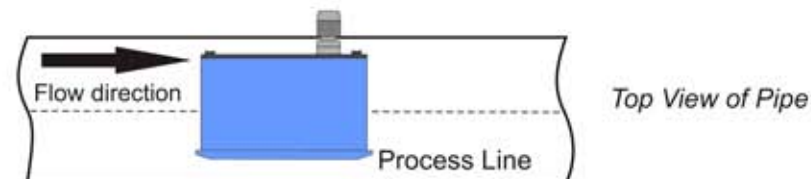
All type of flow meter require straight run, as per site condition following straigh pipe lengths must be provided for best result.



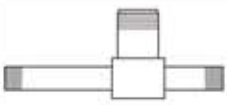
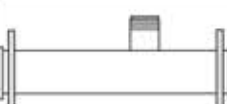

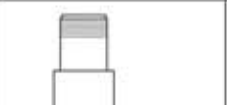

D is inner diameter of pipe

Sensor Mounting position & Installation

- 1) For Horizontal pipe line for best performance sensor mount in the upright position.
- 2) For Vertical pipe line sensor mount in any orientation , Upward flow is preferred to ensure full pipe.
- 3) Lubricate the sensor O-ring with a silicon gress.
- 4) Insert the sensor into the fitting, for field mounting unit sensor must be mounted such that the display becomes parallel to the pipe line .



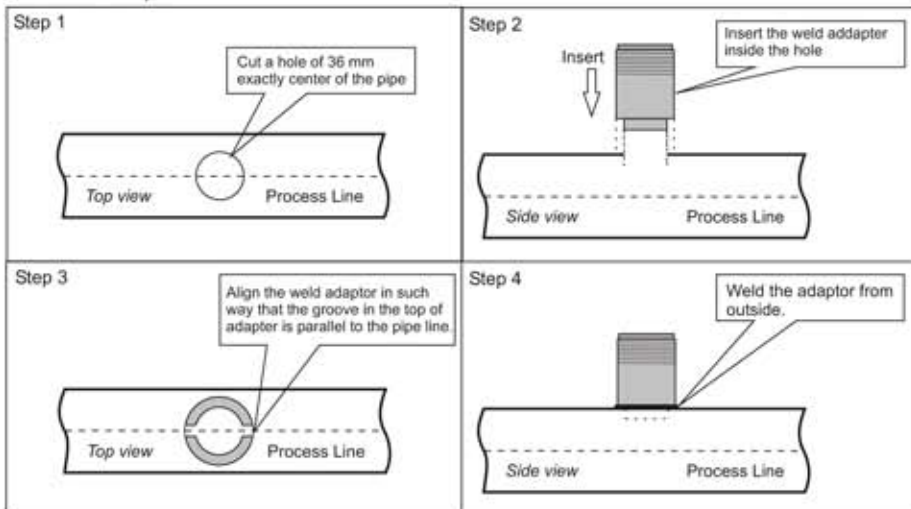
- 5) Engage one thread of the sensor cap then turn the sensor until the alignment Pine is seated in the fitting groove. Hand tighten the sensor cap. DO NOT use wrenches or any other tools for tightening the sensor cap.

	<p>S. S. T fitting threaded end</p> <ul style="list-style-type: none"> •Use for 15 NB to 40 NB line size •Threading as per BSP standard
	<p>S. S. T fitting Stub end</p> <ul style="list-style-type: none"> •For 50 NB to 100 NB line size •Loose MS flanges as per Bs10 table D
	<p>S. S. T fitting Welded flange end</p> <ul style="list-style-type: none"> •For 50 NB to 100 NB line size •Flanges as per requirement
	<p>Block Fitting</p> <ul style="list-style-type: none"> •Use for 15NB & 25NB line size •Remove sensor at the time of welding
	<p>Weld adapter</p> <ul style="list-style-type: none"> •Use for 50 NB to 300 NB line size •Cut 36 mm hole weld directly on line •Remove sensor at the time of welding

Weld adapter installation

Remove sensor from weld adapter before start welding.

The weld adaptor supplied can be directly welded on to any MS / SS pipe line as per following instruction steps



- Insure that at the time of welding there is no welding bur on the threading of the weld adaptor.
- Insert the flow sensor as per the sensor mounting guidelines.

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Authorised Dealer



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Two 1.5 VDC DURACELL alkaline batteries, AA-size are installed in the FloReader.

1. Un screws four screws & Remove back plate of FloReader .
2. Place new batteries as per polarity mention on circuit board.
 Note: **Observe polarity!** Both batteries should face on opposite direction.
3. When the "low battery" indicator **LOW** blink on the display, both batteries should be replaced within 30 days.


Programing of FloReader




Press  key to switch ON display if display is in sleep mode.

Press  key to toggle between flow rate & totalizer.


Display ON time selection

Press  key for 3 seconds display shows SET PASSWORD


SET PASSWORD 0000
 Press  &  keys to set password as 1606
 than press  key display show

SET 01
 Press  key to set display ON time in minutes, time can be selected from 01 to 10 / Constant **On** / Auto mode **AU**

- 1) If we select 01 to 10 the display will remain ON for 01 to 10 minutes
- 2) If we select **On** the display remains ON forever
- 3) If we select **AU** the display remains ON till there is input pulse, as soon as the input pulse stop, the unit switch OFF after 1 minute.

Than press  key to store changes

Calibration & unit selection

Press  key for 3 seconds display shows SET PASSWORD

SET PASSWORD 0000
 Press  &  keys to set password as 1603
 than press  key display show set scale

For re-calibration of flow meter the previously programmed scale factor can be increased in proportion to the difference in the reading between the actual flow rate and the displayed reading.

SET SCALE 0.10000
 Press  &  keys to change scale factor value if you required.
 Than press  key display shows set unit for flowrate

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