MAG - 650

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Tel.: +91 8691009127/26 Email: filtraw@gmail.com Website: www.ewatertreatmentindia.com

TECHNICAL SPECIFICATIONS

INDICATOR						
1. Physical dimensions	160 x 160 x 90 mm					
2. Enclosure	Cast Aluminum Weather proof					
3. Mounting	Field (Direct on sensor)					
4. Supply power	230V A.C ± 15%					
5. Display range	0-999999.9 m^3/0-9999999 liters					
6. Flow rate sampling	2 seconds					
7. Resolution	0.01/0.1 depending on range					
8. Accuracy	± 0.5 % of FSD					
9. Alarms/Control relays	NA					
10. Display	16 X 2 Alphanumeric LCD					
11. Calibration/Set point	Using front panel keypad.					
12. Input	From sensor					
13. Output	4-20mA Current RS-485 } Optional					
Sensor						
1.Type	Full bore Electro-magnetic					
2.Fluid	Water					
3.S.G of medium	1					
4.Max operating pressure	5.0 Kg/cm^2					
5.Max operating Temp	60° C					
6.Linning	**Rubber**					
7.Conductivity	> 5 µs/cm					
8.Size	1"	1.5"	2"	2.5"	3"	
9.Face to face dim.(mm)	165	175	175	185	185	
10.Range (m^3/hr)	.2-10	1-20	2-35	4-60	6-90	
11.End connection	BSTD Flange					

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12.Viscocity	200 cp max
13.Cable	3 mtr 3 core

*** Suitable onlyfor conductive Liquids or slurries flowing in The closed pipe..**

**** Each sensor is calibrated with specific meter. Hence use the sensor & meter as a single set.**

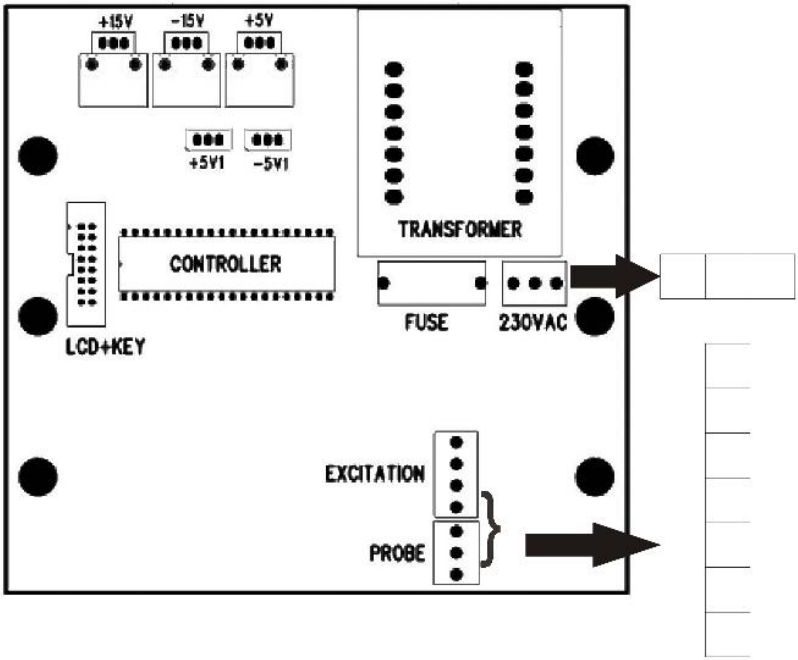
GETTING AQUAINTED WITH THE METER:

This meter is user friendly & easy to understand. Its operation will be clear when we go through all the parts of the meter.

1. SENSOR: It is the main part of the meter. The sensor works on the Principle of Faraday's law of Electromagnetic induction. A magnetic Field is generated by the Instrument in the flow tube, the fluid flowing through this magnetic field generates a voltage that is proportional to the flow velocity. The voltage is measured by the electronics and a Corresponding output is provided

2. Meter : This is the unit that processes the information received from sensor and displays

WIRING CONNECTIONS :



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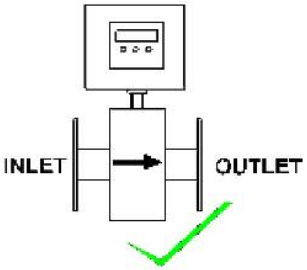
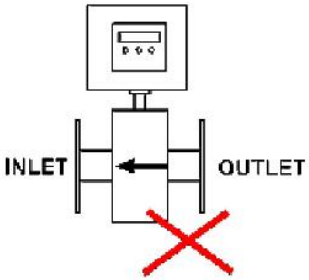
INSTALLATION GUIDELINES:

It is very important that all the personnel working with the equipment have read and understood the instructions given in the manual and follow the instructions and directions as given below.

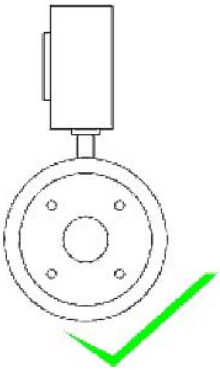
1) The flow through the sensor should be in the same direction as the arrow indicated on the sensor.



2) Avoid installing the sensor as shown below.



3) Always install the sensor Upright as shown.



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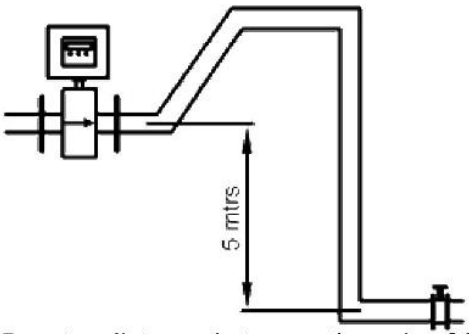
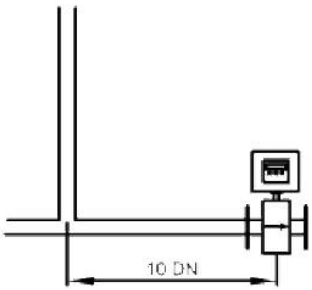
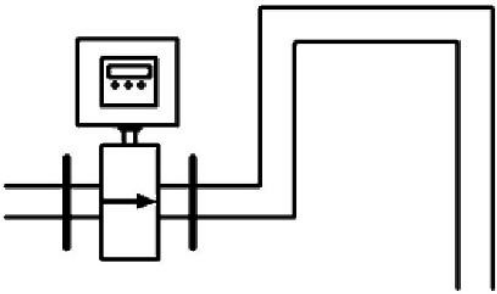


Maintain 5 meter distance between the axis of flowmeter and gate valve located downstream.



Incase of 'T' section please respect 10 DN of distance upstream the flowmeter



This arrangement will keep the sensor always filled with fluid

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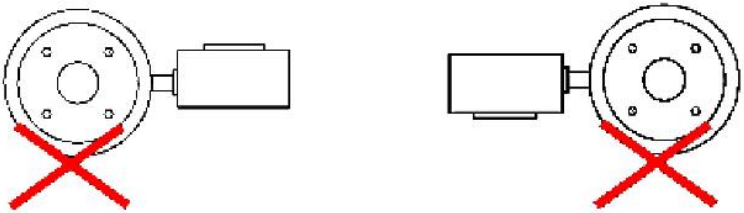
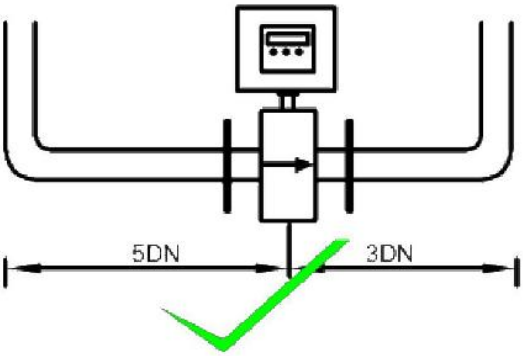
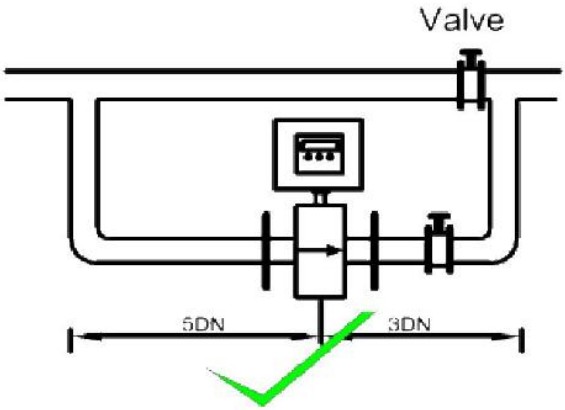
INSTALLATION GUIDELINES:

4) Avoid following positions.



5) For Precise reading refer following positions .





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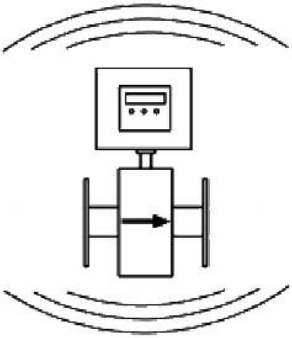
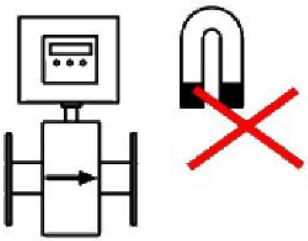
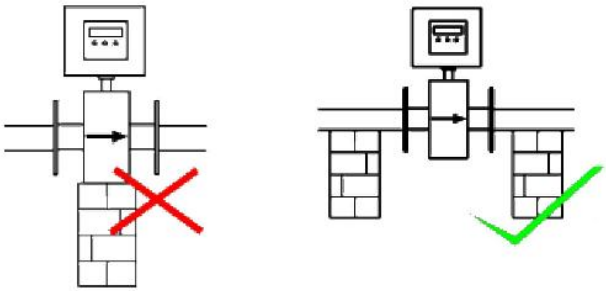
Important Generic indications for installation:



Do not expose the meter to excessive vibration / movement which may affect its performance, Install any dampening if necessary.



Avoid exposure to strong or near by magnetic field.



Do not use sensor as a support .

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Changing Flow Constant:

Note: The instrument has been calibrated at the factory under standard conditions

KEY TO BE PRESSED	DISPLAY
Scroll & select ch simultaneously	PASSWORD :000
Enter the password **123** using scroll & select ch keys	
	FLOW CONST
	previously set value
Increase or Decrease the CONST value to match with the actual flow using scroll & select ch keys	
	EXIT

HOW TO RESET THE TOTALISER READING:

By using this function we can reset values of Totaliser

KEY TO BE PRESSED	DISPLAY
Scroll & select ch simultaneously	PASSWORD :000
Enter the password 456 using Scroll & Select ch keys.	
	CLR TOTALISER ?
Menu	

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IN CASE OF 4-20mA OUTPUT:

In case of transmitter,meter takes the sensor input & gives 4-20mA output current.Factory settings for ZERO (value of flow at which transmitter would give 4 mA current) & SPAN (value of flow at which transmitter would give 20 mA current) are:

Reading	Current Output(mA)
00.00	4mA
	20mA

To change the SPAN settings follow below guideline:

Scroll & select ch simultaneously	PASSWORD :000
Enter the password **678** using scroll & select ch keys	
Menu	SPN
Menu	000.00 m3/hr. previously set value
Required value can be set by scroll & select ch key	

IN CASE OF RS-485 OUTPUT:

In case of Flow meter with RS-485 output,if number of instruments are connected through same wire then each instrument should have it's specific address(called as meter address).To set the meter address follow the below guideline.

KEY TO BE PRESSED	DISPLAY
VIEW & ACK	PASS
Enter Password 237 using Scrol and Select Ch. / Ack keys	
MENU	485 Output?
MENU	NO
Select Ch. / Ack	YES
MENU	SET BAUDRATE
Using Select Ch. / Ack key choose the baudrate from 4800 or 9600	
MENU	DEVICE ID
Using Select Ch. / Ack key set the Device ID Press MENU to Save and Exit	

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TROUBLESHOOTING:

TROUBLE	PROBABLE CAUSE	ACTION
Display remains zero even if flow is there.	Flow less than the minimum sensing value required	➡ Chech if the downstream valve is closed.Remove the Magflow from the line, Check if it shows reading in air. If meter shows reading, check whether there is actual flow
Meter shows error in reading	Wrong wiring	➡ Connect the wires as per wiring diagram. ➡ Recalibrate the meter
	Adequate straight run is not provided at upstream, downstream of sensor.	➡ Provide straight run as per guidelines. ➡ Provide a bend between the valve and the sensor.
	Scale factor disturbed	➡ Check factor. Correct factor as mentioned on sensor.
No display	High voltage	➡ Check input supply & make proper connections ➡ Check MOV/FUSE; if it is burnt then replace it with new one
Frequent Fuse failure	MOV short	➡ Replace MOV* as well as FUSE**

*MOV – 14mm Dia. and 320V AC ** FUSE - 630mA

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Quick Reference :

Sr.No.	Password	Feature	Page no.
1	123	Calibration	09
2	456	Reset readings	09
3	678	Span settings	10
6	237	Meter address (In case of RS 485 O/P only)	10

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