

MAG - 650



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 } Optional RS-485 }
Sensor	
1. Type	Full bore Electro-magnetic
2. Fluid	Water
3. S.G of medium	1
4. Max operating pressure	≤ 0 Kg/cm ²
5. Max operating Temp	60° c
6. Lining	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)	0.2-10 1-20 10-35 4-60 6-90
11. End connection	BSTD Flange

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

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

"" Each sensor is calibrated with specific meter. Hence use the aensor & meter aaa single aet.

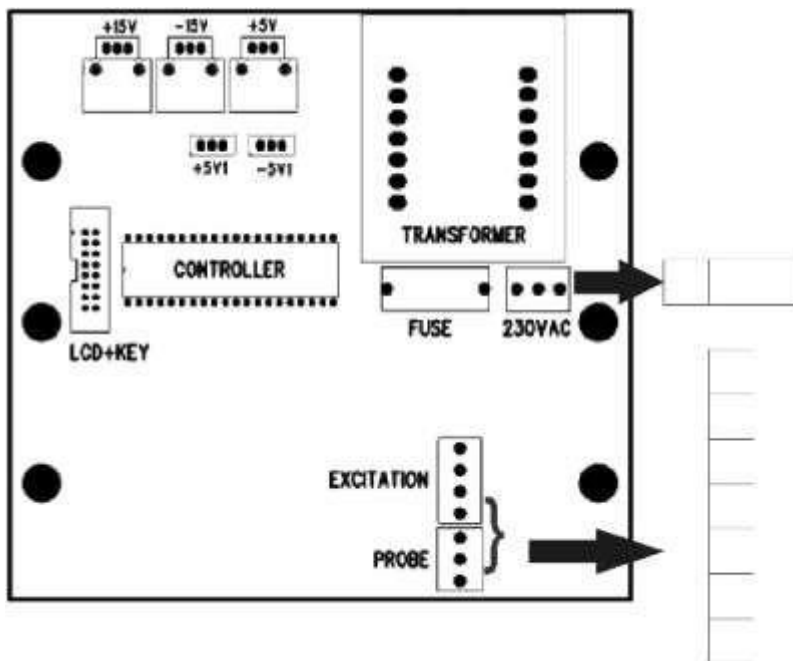
GETTING AouAz TED WITH THE IfiETER:

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

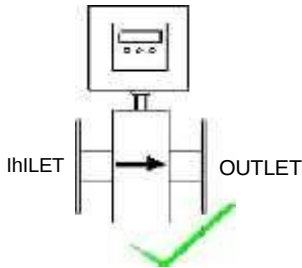
WIRING CONNECTIONS :



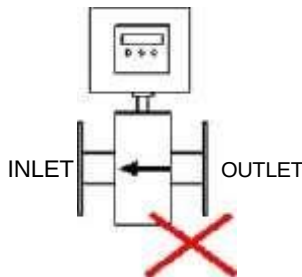
INSTALLATION GUIDELINES:

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.

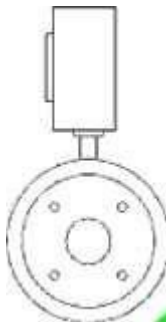
- 1) The flow through the sensor should be in the same direction as the arrow indicated on the sensor.

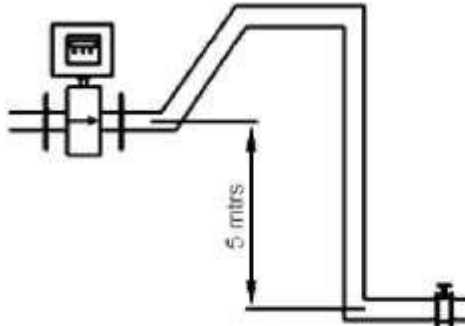


- 2) Avoid installing the sensor as shown below.

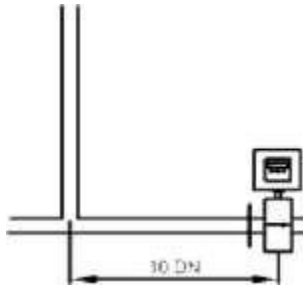


- 3) Always install the sensor Upright as shown.

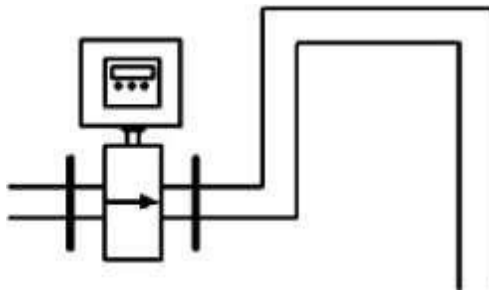




1. Maintain 5 meter distance between the axis of flowmeter and gate valve located downstream.



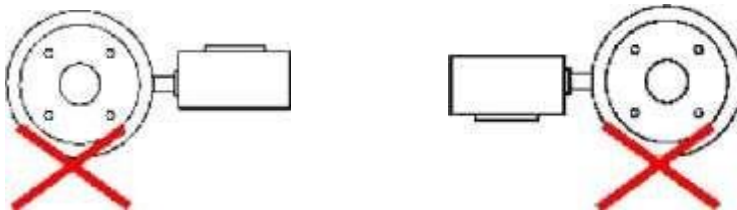
In case of 'T' section please respect 10 DN of distance upstream the flowmeter



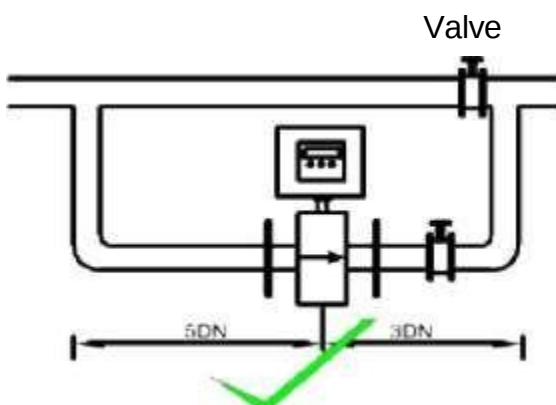
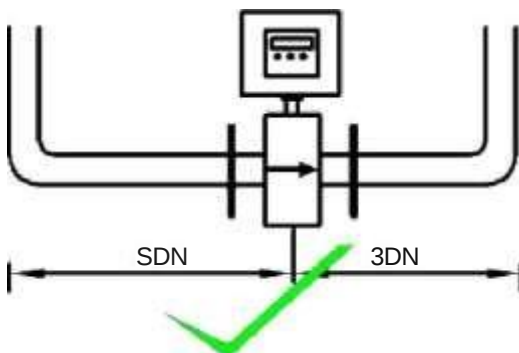
This arrangement will keep the sensor always filled with fluid

INSTALLATION GUIDELINES:

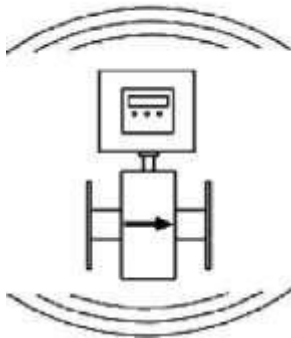
4) Avoid following positions.



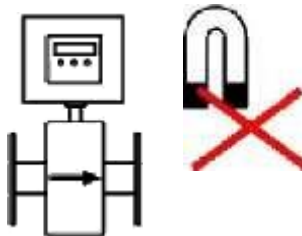
5) For Precise reading refer following positions .



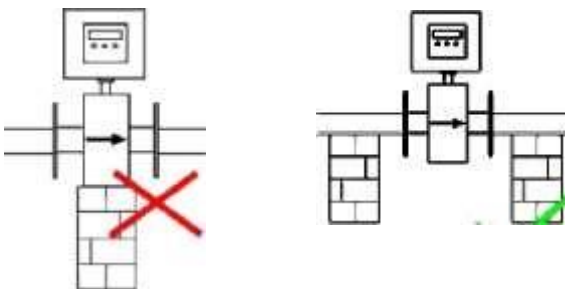
Important Generic indications for installation:



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 .

Chanoino 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 3.23 using scroll & select ch keys	
FLOW CONST	
previous ly set value	
Increase or Decrease the CONST value to match with the actual flow using scroll & select ch keys	
E X I T S	

H T O R E O S E W T T H E T O T A L I S E R R E A D I N G :

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

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:

To change the SPAN settings follow below guideline:

Scroll & select ch simultaneously	PASSWORD :000
Enter the password 67B 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 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	t 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	

TROUBLESHOOTING:

TROUBLE	PROBABLE CAUSE	ACTzON
Display remains zero even if flow is there.	Flow less than the minimum sensing value required	w Check 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	w Connect the wires as per wiring diagram. V 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 «g• Check If IOV/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

Quick Reference :

Sr.No.	Password	Feature	Page no.
1	123	Calibration	09
2	456	Reset readings	09
3	676	Span settings	10
6	237	Peter address (In case of RS 485 O/P only)	10

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