



**TECHNICAL SPECIFICATION**

**INPUT SPECIFICATION:**

Input Types	NPN Proximity PNP Proximity Input Pulse: 5V DC, 12V DC, 24V DC
Resolution	Decimal Point Selectable: 9999999.9/999999.99/99999.999/ 99999999. (For Total Flow) 9999./999.9/99.99/9.999 (For Flow rate)
Range Limits	0 to 99999999 For Total Flow 0 to 9999 For Flow Rate

**DISPLAY AND KEYS:**

Display	Upper: 8 digit, 7 seg, 0.4" Red (For Total Flow) Lower: 4 digit, 7 seg, 0.4" Green (For Flow rate)
Keys	SET, SHIFT, BATCH, TOTAL, INC, ENT/RST

**DIMENSION:**

Size	96 (H) x 96 (W) x 52 (D) mm
Panel Cutout	92 (H) x 92 (W) mm

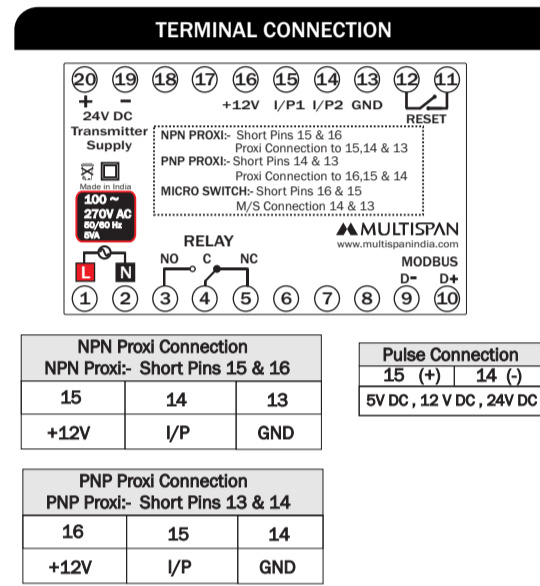
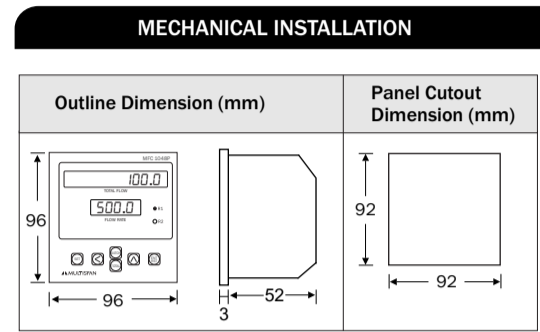
**INDICATION:**  
8 digit Totalizer & 4 digit Flow Rate

**GENERAL SPECIFICATION:**

Memory	Non Volatile
Reset Option	Front Panel Reset Terminal Reset

**OUTPUT SPECIFICATION:**

<b>Relay Output</b>	
Relay	1 nos.
Relay Type	1 C/O (NO-C-NC)
Rating	5A, 230V AC
<b>Transmitter supply</b>	
Supply Voltage	24 V DC, 30 mA
<b>AUXILIARY SUPPLY:</b>	
Supply voltage	100 to 270V AC, 50-60Hz
Power consumption (VA RATING)	Approx 5 VA @ 230V AC MAX
<b>ENVIRONMENT CONDITION:</b>	
Operating Temp.	0 °C to 55 °C
Relative Humidity	UP to 95% RH (non-condensing)
Protection Level	IP-65 (Front side) As per IS/IEC 60529 : 2001



**KEY OPERATION**

FUNCTION	PRESS KEY
<b>OPERATOR MODE</b>	
To enter in parameter setting mode	(SET) + (←) (For Relay Run mode selection) (SET) (For selected Relay Run mode setting)
To Show No. Of Batch	(BATCH)
To View Grand Total	(TOTAL)
To Reset Batch Number	(BATCH) + (←)
To Reset Grand Total	(TOTAL) + (←)
To set parameter value and move to next step	(SET)
It will select the digit to modify, when value is edited	(←)
To change parameter value	(→)
Set parameter to be save & exit	(ENT/RESET)

**INSTALLATION GUIDELINES**

- This equipment, being built-in-type, normally becomes a part of main control panel and in such case the terminals do not remain accessible to the end user after installation and internal wiring.
- Do not allow pieces of metal, wire clippings, or fine metallic fillings from installation to enter the product or else it may lead to a safety hazard that may in turn endanger life or cause electrical shock to the operator.
- Circuit breaker or mains switch must be installed between power source and supply terminal to facilitate power 'ON' or 'OFF' function. However this mains switch or circuit breaker must be installed at convenient place normally accessible to the operator.
- Use and store the instrument within the specified ambient temperature and humidity ranges as mentioned in this manual.

- MECHANICAL INSTALLATION GUIDELINES**
- Prepare the panel cutout with proper dimensions as shown above.
  - Fit the unit into the panel with the help of clamp given.
  - The equipment in its installed state must not come in close proximity to any heating source, caustic vapors, oils steam, or other unwanted process byproducts.
  - Use the specified size of crimp terminal (M3.5 screws) to wire the terminal block. Tightening the screws on the terminal block using the tightening torque of the range of 1.2 N.m.
  - Do not connect anything to unused terminals.

- MAINTENANCE**
- The equipment should be cleaned regularly to avoid blockage of ventilating parts.
  - Clean the equipment with a clean soft cloth. Do not use isopropyl alcohol or any other cleaning agent.
  - Fusible resistor must not be replaced by operator.

**SAFETY PRECAUTION**

All safety related codifications, symbols and instructions that appear in this operating manual or on the equipment must be strictly followed to ensure the safety of the operating personnel as well as the instrument.

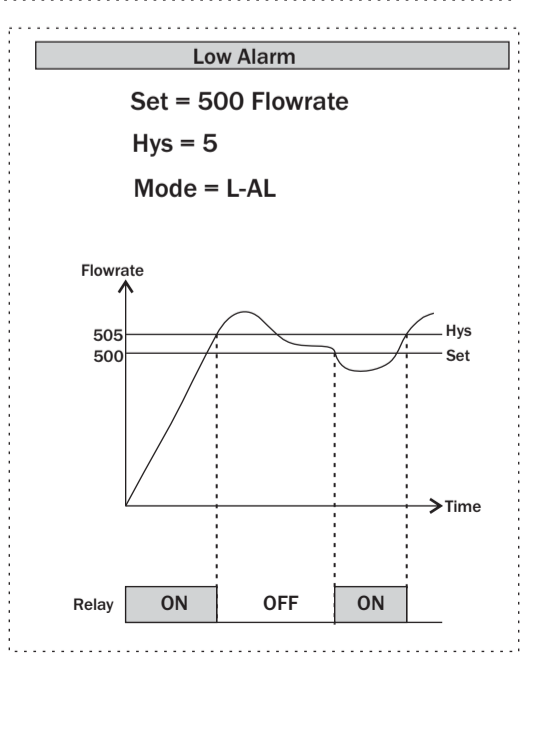
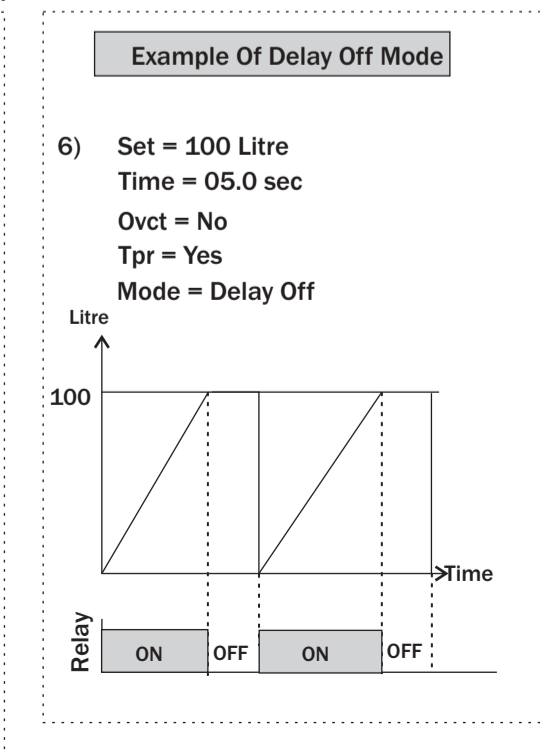
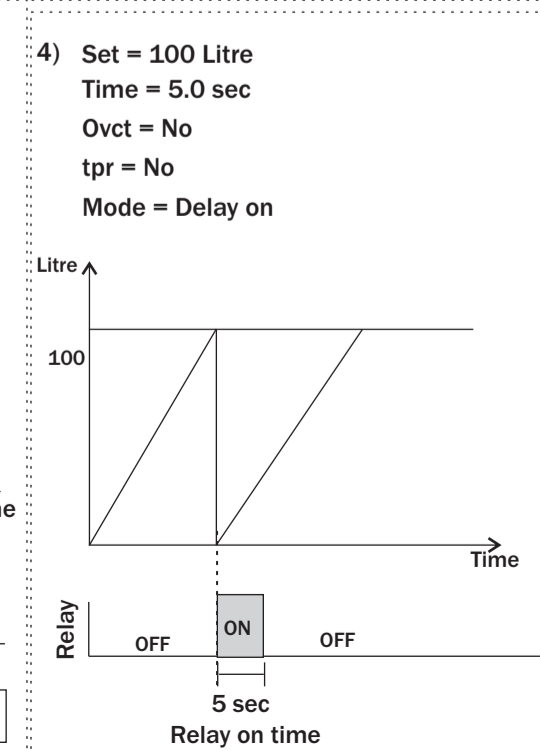
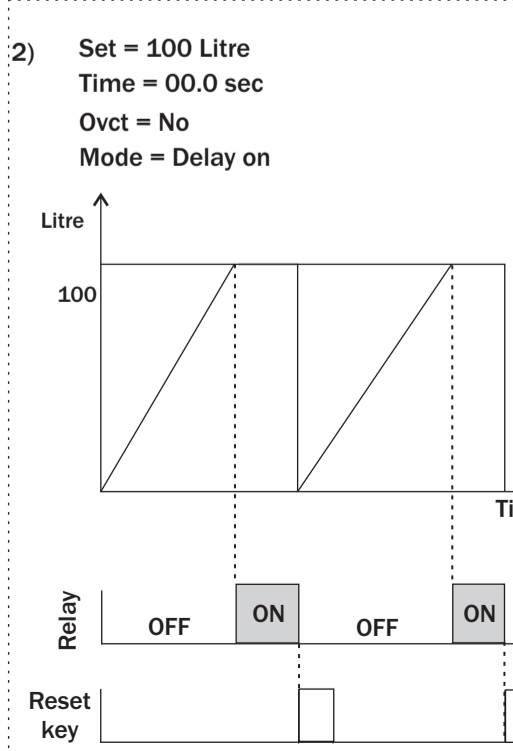
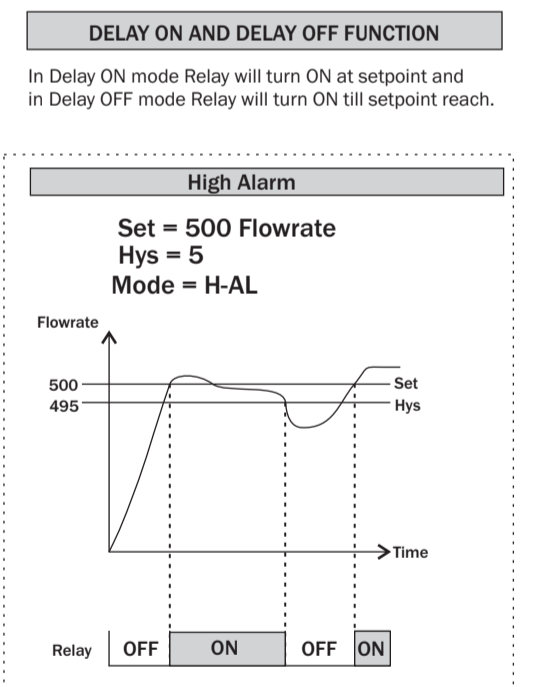
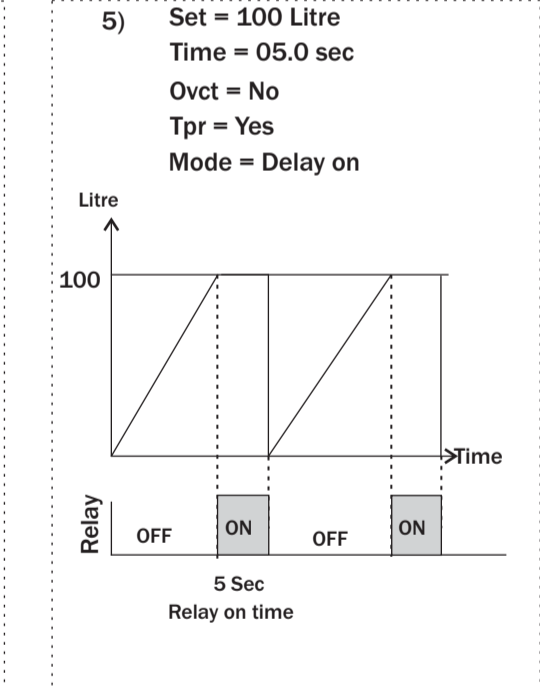
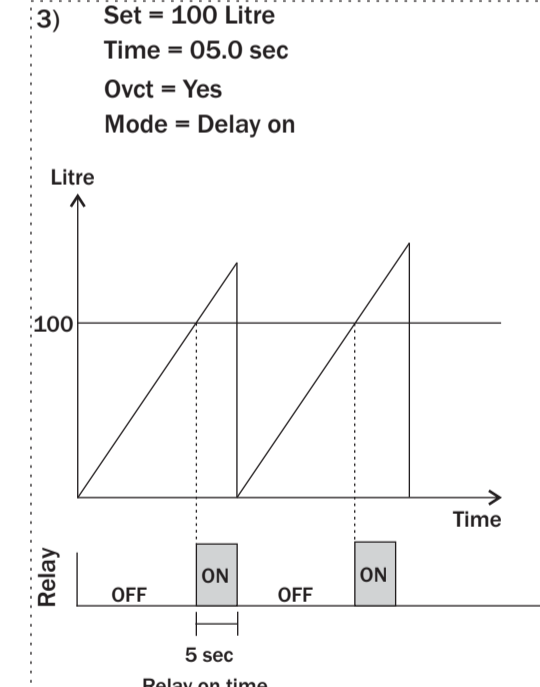
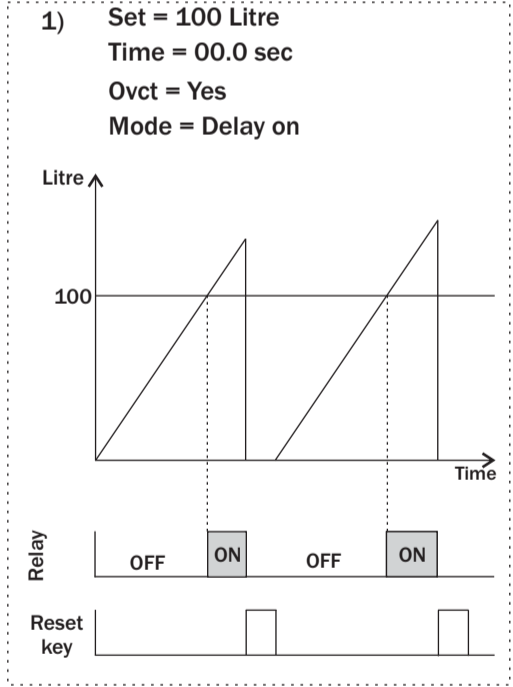
If all the equipment is not handled in a manner specified by the manufacturer, it might impair the protection provided by the equipment.

Read complete instructions prior to installation and operation of the unit.

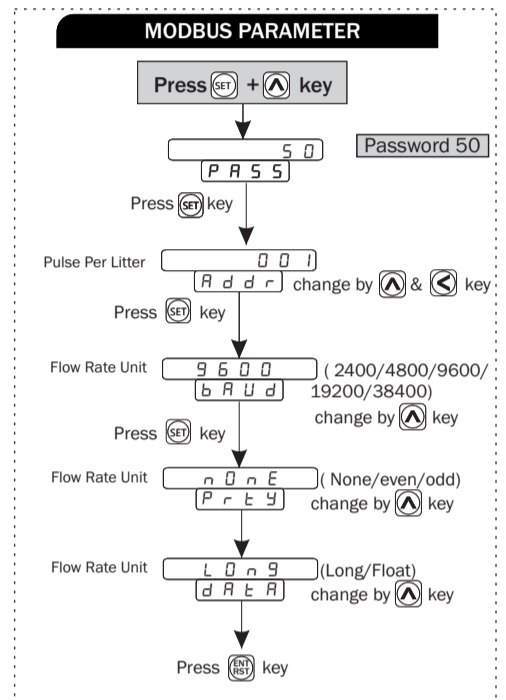
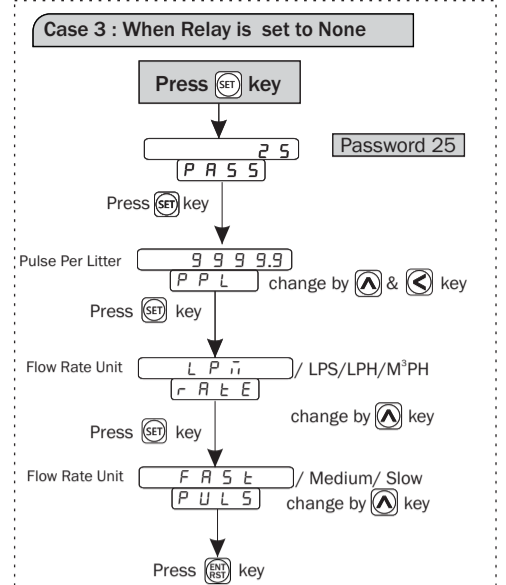
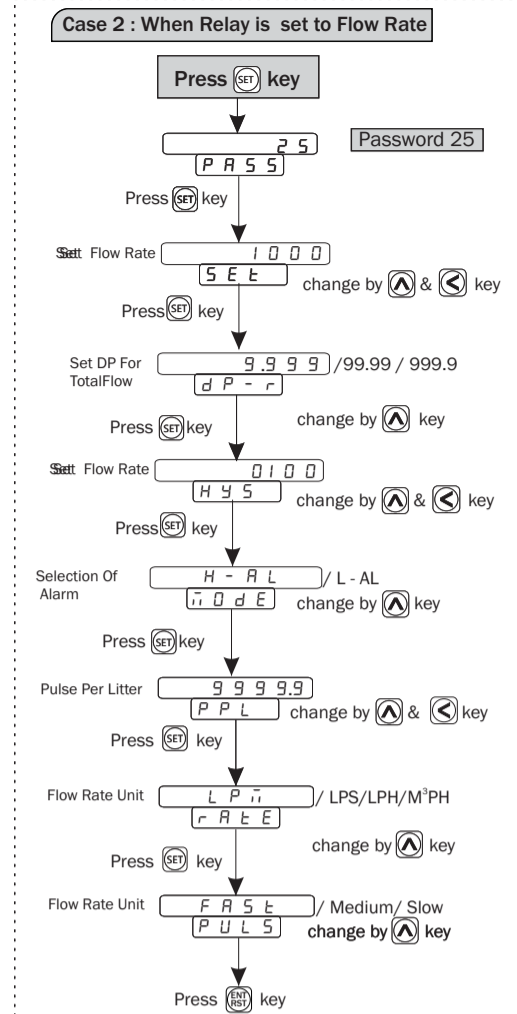
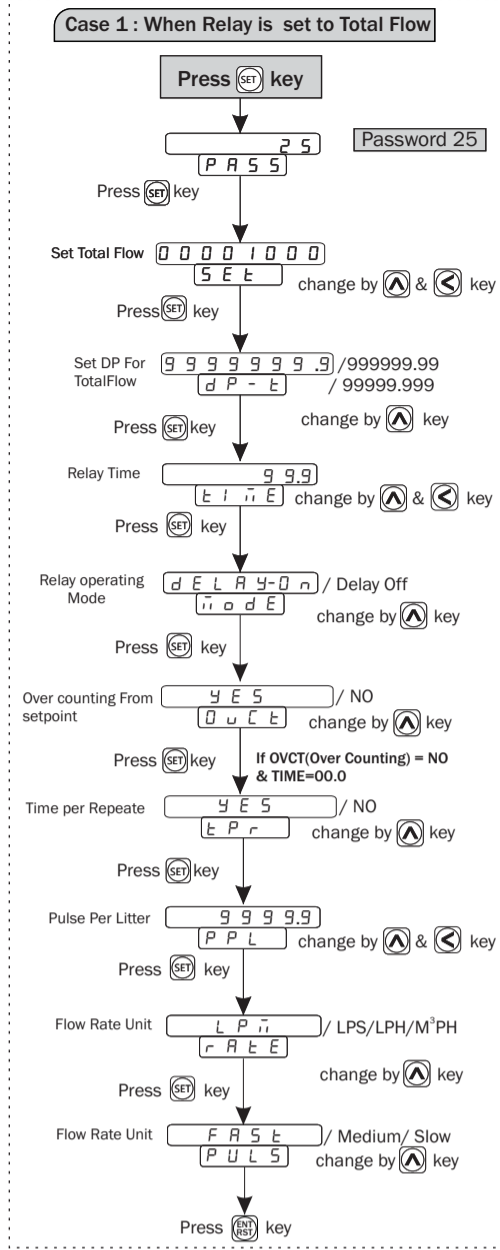
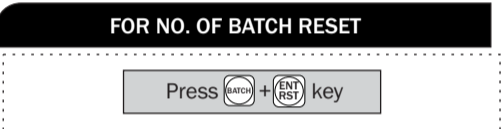
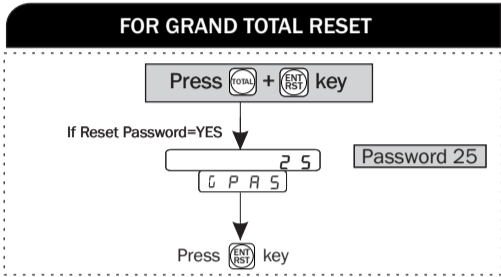
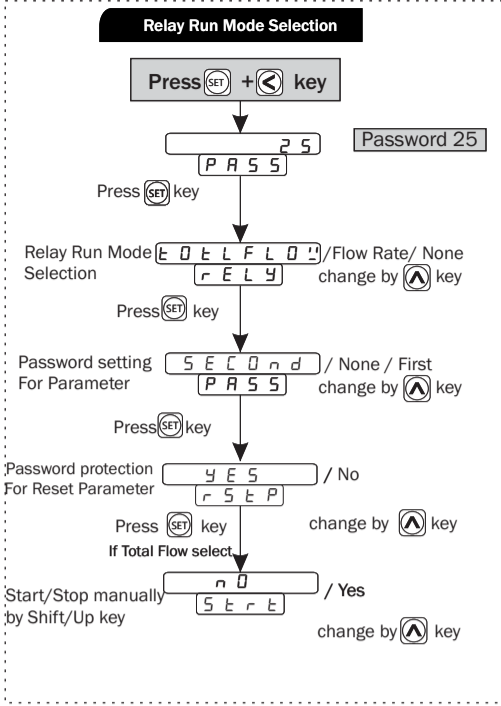
**WARNING : Risk of electric shock.**

- WARNING GUIDELINES**
- WARNING : Risk of electric shock.**
- To prevent the risk of electric shock, power supply to the equipment must be kept OFF while doing the wiring arrangement. Do not touch the terminals while power is being supplied.
  - To reduce electro magnetic interference, use wire with adequate rating and twists of the same of equal size shall be made with shortest connection.
  - Cable used for connection to power source, must have a cross section of 1mm or greater. These wires should have insulations capacity made of at least 1.5kV.
  - A better anti-noise effect can be expected by using standard power supply cable for the instrument.

**OPERATING MODE FUNCTION**



PARAMETER SETTING



PARAMETER MESSAGE DESCRIPTION

PRSS	Password
SEt	Setpoint for total flow or flowrate
dP-r	Decimal point for total flow
dP-r	Decimal point for flowrate
t r E	Relay time
n 0 d E	Relay operating mode
H Y S	Hysteresis
P P L	Pulse per litre
r A t E	Flow rates unit
0 u t	Over counting
t P r	Time per repeat
P U L 5	Pulse speed selection
r E L Y	Relay working on Total flow Or Flow Rate
r 5 t P	Password protection For Reset Parameter
5 t r t	Start/Stop manually by Shift/Up key
b A t C	Show number of batch
6 0 t	Show grand total flow
0 u E r	Flow rate over value
4 E 5	Yes
n 0	No
d E L A Y - 0 n	Relay works on delay on mode
d E L A Y - 0 F	Relay works on delay off mode
H - A L	High alarm mode
L - A L	Low alarm mode
L P S	Liter per second
L P L	Liter per minute
L P H	Liter per hour
m 3 P H	Meter Cube per hour
S L 0	Slow speed
m e d	Medium speed
F R S t	fast speed
n 0 n E	None : No Password For Parameter Setting
F i r 5 t	First : Password High Priority For Parameter Setting
S E C 0 n d	Second : Set Point After Password For Parameter Setting
6 P R S	Grand Total Password
E 0 t L F L 0	Relay works on Total flow
F L 0 r A t E	Relay works on Flow Rate
n 0 n E	No Relay Working

MODBUS

Slave Address :	1 to 127
Baudrate :	2400,4800,9600,19200,38400 bps
Parity :	None,Even,Odd
Datatype :	Long, Float
Read Function Register :	0x03,0x04
Write Function Register :	0x10

Note :  
When Parameter 11111111 = Parameter not available

Sr.No	Access Type	Parameter	Register Data Type Address
1	R	Total Flow Value	0
2	R	Total Flow DP	2
3	R	Flow Rate	4
4	R	Flow Rate DP	6
5	R	Grand Total Flow	8
6	R	Grand Total Flow DP	10
7	R	Relay 1 Status	12
8	R	Number Of Batch	14
9	R/W	DP selection for Total Flow Set	16
10	R/W	Set Total Flow	18
11	R/W	Total Flow Time	20
12	R/W	Total Flow mode	22
13	R/W	Total Flow Over Count	24
14	R/W	Time Per Repeat	26
15	R/W	DP selection for Flow Rate	28

Sr.No	Access Type	Parameter	Register Data Type Address
16	R/W	Set Total Flow	30
17	R/W	Set Flow Rate Hysteresis	32
18	R/W	Mode	34
19		NA	36
20		NA	38
21	R/W	Pulse Per Litter (PPL)	40
22	R/W	Flow Rate Unit	42
23	R/W	Pulse Speed	44
24	R/W	Address	46
25	R/W	Baudrate	48
26	R/W	Parity	50
27	R/W	Data Type	52
28	R/W	Relay Working	54
29	R/W	Password Priority	56
30	R/W	Reset Password	58

Sr.No	Access Type	Parameter	Register Data Type Address
31	R/W	Start Stop Selection	60

Data type = Long, show value as per following

Parameter	Actual Value	DP Show/DP Selected
Total Flow, Flow Rate, Grand Total Flow	Value/1	0
	Value/10	1
	Value/100	2
	Value/1000	3
Time	Value/100	Fix DP, DP=2
Hysteresis	Change as per Flow Rate DP change	-
PPL	Value/10	Fix DP, DP=1