ACCUMAX
INSTRUMENTS PVT. LTD.

UNIVERSAL FLOW CONTROLLER

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MAKE IN INDIA

1.PRODUCT OVERVIEW:

Accumax offers a complete solution for flow meter devices. It provides accurate, cost effective and contemporary flow measurement and control system for modern industries.

Universal flow controller has wide applications and works on 5 different modes to achieve high measurement and control operation.

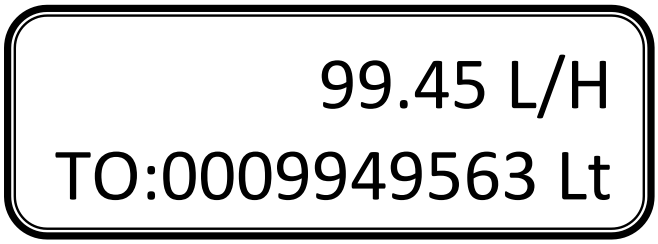
2.KEY FEATURES:

- RS485 Serial communication
- Completes batch even in power interrupt
- External Push-button provision
- Can operate using 5 modes
- A complete flow controller/monitor functionality
- Password-protected settings

3.APPLICATIONS:

- Chemical Industries
- Food & Sugar Industries
- Pharmaceutical Industries
- Textile Industries
- Ceramic Industries
- Paper Mills
- Industrial R.O.
- Water supply schemes
- Sewage treatment Plant

- **LCD Display:**



4.SOFTWARE SETTINGS

- Switch1 – Menu/Enter/↲
- Switch2 -- Increment/Start/↑
- Switch3 -- Shift/Stop/→
- Switch4 -- Cancel/**X**

- **Password Select Table**

Password (XXXX)	**Function**
1111	Basic configuration
2222	Calibration setting
9876	Resetting PWM

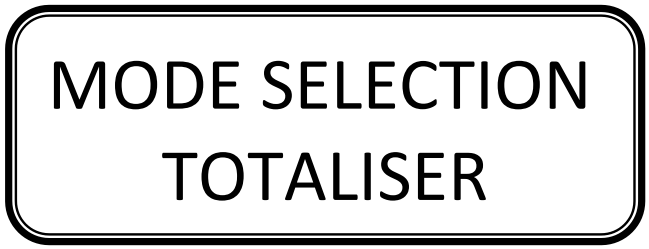
4.1Mode Select Table

Mode	**Function**
Totalizer	To Monitor current flow and Totalized
Batcher	To make batch of liquid
Flow comparator	To monitor two flow sensor (Inlet Vs. Outlet) and Alarm on reducing rate of recovery
Rate Switch	To monitor current flow and Alarm on crossing preset threshold level.
Pulsar	To operate specific task on completion of prefix volume. E.g. Dosing application.
PID controller	To control flow using 4-20mA

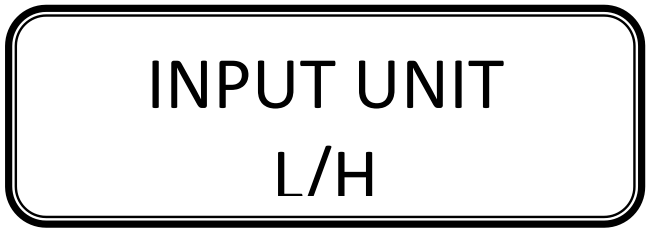
4.1.1 Totaliser Mode

- Press ↲ for 2 seconds for setting mode
- Press ↑ to enter number and → to shift cursor (Set password 1111)
- Press ↲ to Enter

- **Mode Select:**
  - Press ↑ to change Mode
  - Press ↲ to select.



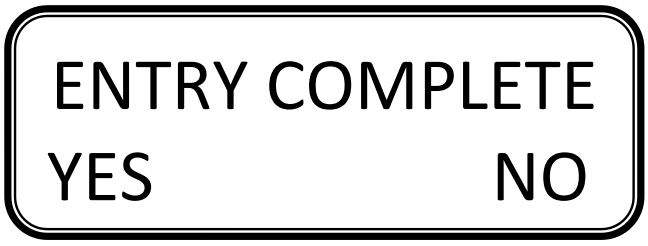
- **Select input Unit:**
  - Press ↑ to select Unit
  - Press ↲ to select.



List of units for selection

✓ L/S	✓ L/M	✓ L/H
✓ M^3/S	✓ M^3/M	✓ M^3/H
✓ KL/S	✓ KL/M	✓ KL/H
✓ KG/S	✓ KG/M	✓ KG/H

- **Save changed Setting:**
  - Press ↲ to accept changes done.
  - Press **X** to discard changes.



4.1.2 Batcher Mode

- Press ↲ for 2 seconds for setting mode
- Press ↑ to change number and → to shift cursor (Set password 1111)
- Press ↲ to Enter

- **Mode Select:**
  - Press ↑ to change Mode
  - Press ↲ to select.

MODE SELECTION
BATCHER

- **Select input Unit:**
  - Press ↑ to select Unit
  - Press ↵ to select.

INPUT UNIT
L/H

List of units for selection

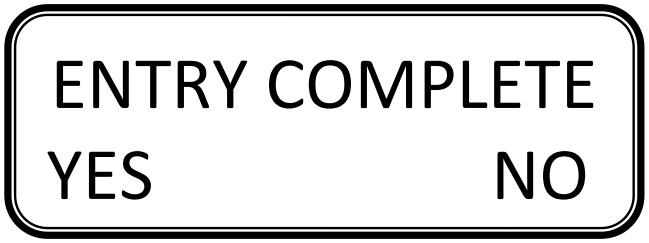
✓ L/S	✓ L/M	✓ L/H
✓ M^3/S	✓ M^3/M	✓ M^3/H
✓ KL/S	✓ KL/M	✓ KL/H
✓ KG/S	✓ KG/M	✓ KG/H

- **Set Limit:**
  - Press ↑ to change number and → **to** shift cursor.
  - Press ↵ to Enter.

SET LIMIT
0003000 Lt

- **Batch Order:**
  - Press ↲ to select increment order.
  - Press **X** to select decrement order.

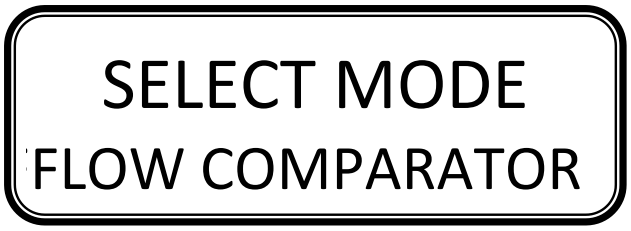
- **Save changed Setting:**
  - Press ↲ to accept changes done.
  - Press **X** to discard changes



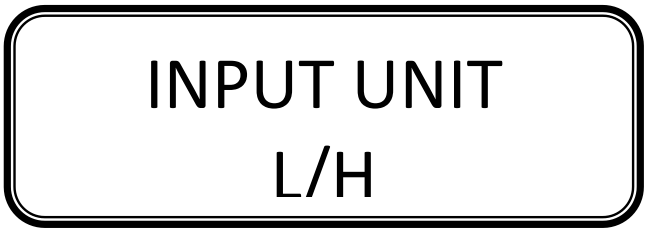
4.1.3 Flow comparator Mode

- Press ↲ for 2 seconds for setting mode
- Press ↑ to change number and → to shift cursor (Set password 1111)
- Press ↲ to Enter

- **Mode Select:**
  - Press ↑ to change Mode
  - Press ↲ to select.



- **Select input Unit:**
  - Press ↑ to select Unit
  - Press ↲ to select.

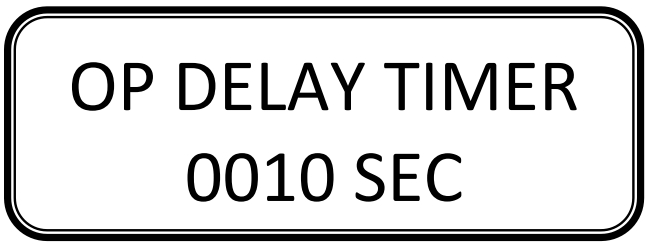


List of units for selection

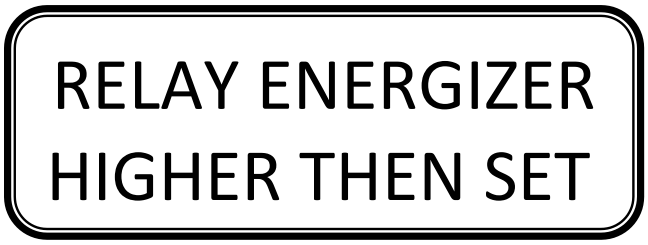
✓ L/S	✓ L/M	✓ L/H
✓ M^3/S	✓ M^3/M	✓ M^3/H
✓ KL/S	✓ KL/M	✓ KL/H
✓ KG/S	✓ KG/M	✓ KG/H

- **Flow Recovery Percentage:**
  - Press ↑ to change number and → **to** shift cursor.
  - Press ↲ to Enter.

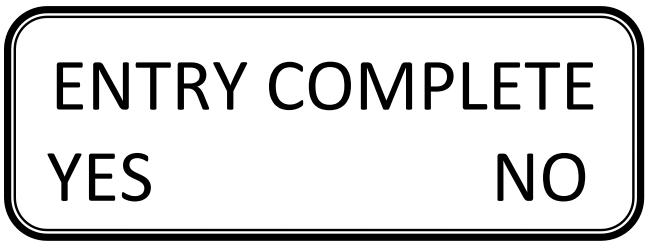
- **Output delay timer (Seconds):**
  - Press ↑ to change number and → **to** shift cursor.
  - Press ↵ to Enter.



- **Relay Energizer:**
  - Press ↑ to change option.
  - Higher then set: Relay On when recovery rate is high than present.
  - Lower then set: Relay On when recovery rate is lower than present.
  - Press ↵ to Enter.



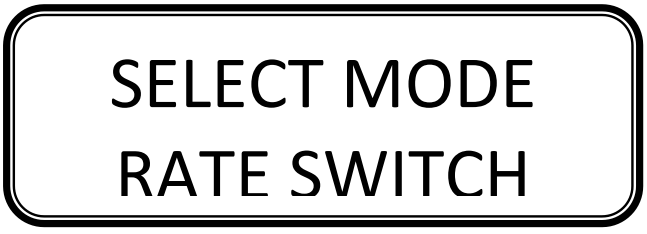
- **Save changed Setting:**
  - Press ↵ to accept changes done.
  - Press **X** to discard changes.



4.1.4 Rate Switch Mode

- Press ↲ for 2 seconds for setting mode
- Press ↑ to change number and → to shift cursor (Set password 1111)
- Press ↲ to Enter

- **Mode Select:**
  - Press ↑ to change Mode
  - Press ↲ to select.



- **Select input Unit:**
  - Press ↑ to select Unit
  - Press ↲ to select.

INPUT UNIT
L/H

List of units for selection

✓ L/S	✓ L/M	✓ L/H
✓ M^3/S	✓ M^3/M	✓ M^3/H
✓ KL/S	✓ KL/M	✓ KL/H
✓ KG/S	✓ KG/M	✓ KG/H

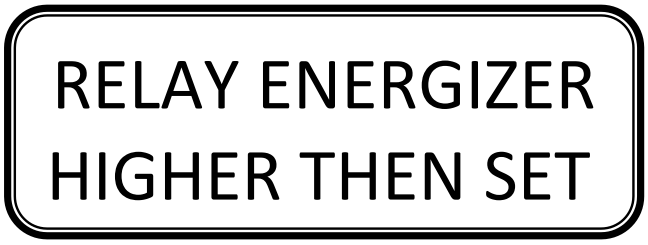
- **RELAY SELECTION MODE**
  - **Mode Select:**
    - Press ↑ to change Mode
    - Press ↵ to select.

OUTPUT SELECTION
ONE

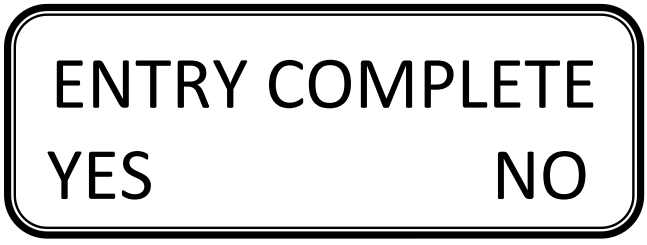
- **Set Cut off flow:**
  - Press ↑ to change number and → **to** shift cursor.
  - Press ↵ to Enter.

SET CUTOFF FLOW
0003000L/H

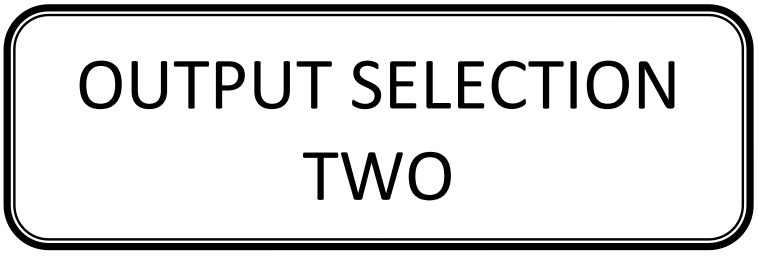
- **Relay Energizer:**
  - Press ↑ to change option.
  - Higher then set: Relay On when flow rate is high than present.
  - Lower then set: Relay On when flow rate is lower than present.
  - Press ↵ to Enter.



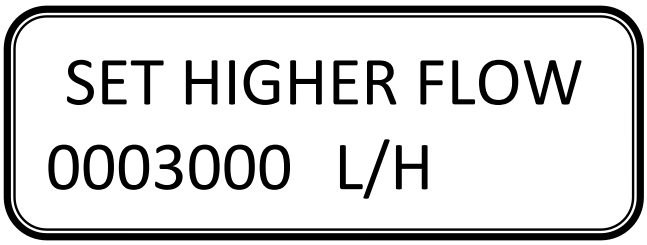
- **Save changed Setting:**
  - Press ↵ to accept changes done.
  - Press **X** to discard changes.



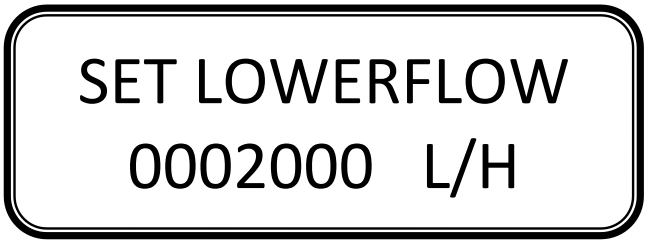
- **Mode Select:**
  - Press ↑ to change Mode
  - Press ↵ to select.



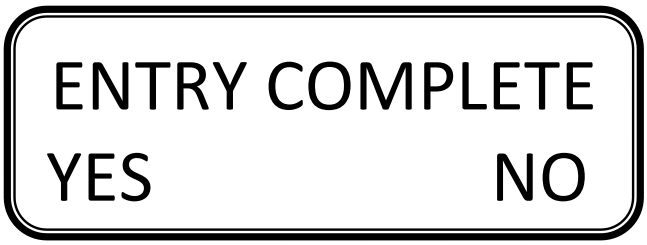
- **Set higher flow:**
  - Press ↑ to change number and → **to** shift cursor.
  - Press ↵ to Enter.



- **Set lower flow:**
  - Press ↑ to change number and → **to** shift cursor.
  - Press ↵ to Enter.



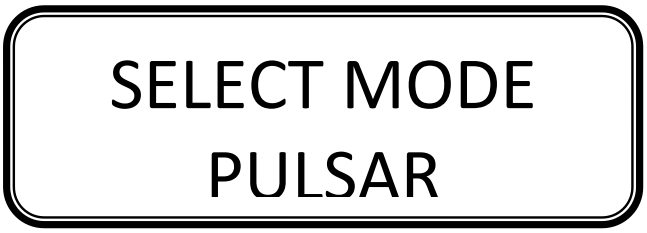
- **Save changed Setting:**
  - Press ↵ to accept changes done.
  - Press **X** to discard changes.



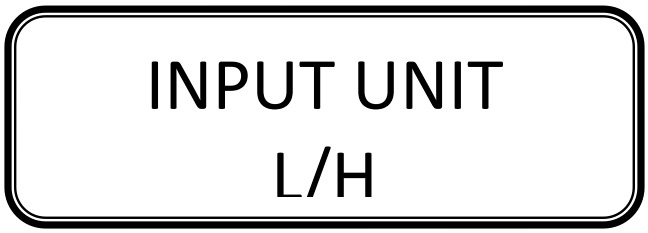
4.1.5 Pulsar Mode

- Press ↲ for 2 seconds for setting mode
- Press ↑ to change number and → to shift cursor (Set password 1111)
- Press ↲ to Enter

- **Mode Select:**
  - Press ↑ to change Mode
  - Press ↲ to select.



- **Select input Unit:**
  - Press ↑ to select Unit
  - Press ↲ to select.



List of units for selection

✓ L/S	✓ L/M	✓ L/H
✓ M^3/S	✓ M^3/M	✓ M^3/H
✓ KL/S	✓ KL/M	✓ KL/H
✓ KG/S	✓ KG/M	✓ KG/H

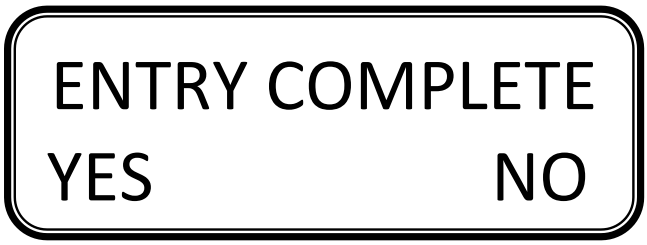
- **Set Quantity:**
  - Press ↑ to change number and → to shift cursor.
  - Press ↵ to Enter

SET QUANTITY
00030.00Lt

- **Relay on Time:**
  - Press ↑ to change number and → **to** shift cursor.
  - Press ↵ to Enter.

RELAY ON TIME
05 SEC

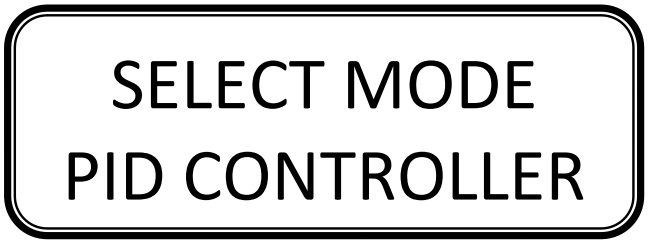
- **Save changed Setting:**
  - Press ↵ to accept changes done.
  - Press **X** to discard changes.



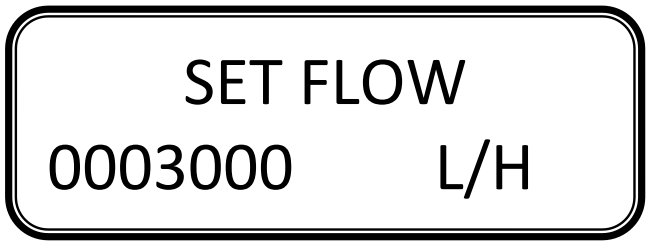
4.1.6 PID Controller

- Press ↲ for 2 seconds for setting mode
- Press ↑ to change number and → to shift cursor (Set password 1111)
- Press ↲ to Enter

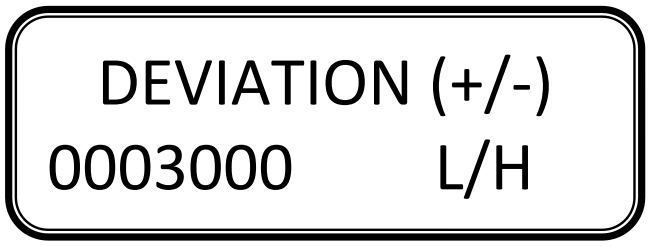
- **Mode Select:**
  - Press ↑ to change Mode
  - Press ↲ to select.



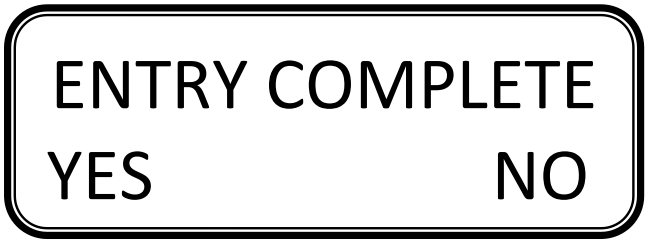
- **Set Flow:**
  - Press ↑ to change number and → to shift cursor.
  - Press ↲ to Enter



- **Deviation:**
  - Press ↑ to change number and → to shift cursor.
  - Press ↵ to Enter



- **Save changed Setting:**
  - Press ↵ to accept changes done.
  - Press **X** to discard changes.

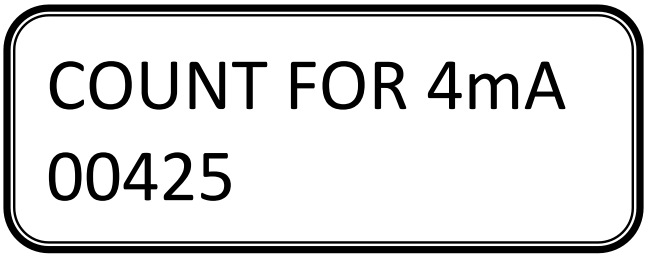


4.2 Calibration Setting

- Press ↵ for 2 seconds for setting mode
- Press ↑ to change number and → to shift cursor (Set password 2222)
- Press ↵ to Enter

4.2.1 Count for 4mA

- Press switch(M) to increase count
- Press switch(S) to decrease crease count
- Press Switch(E) to enter



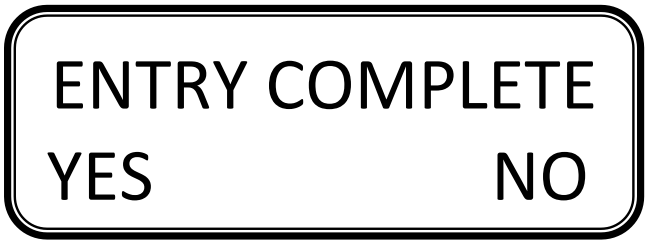
At this instance check 4 mA at output port of hardware. And increase/decrease accordingly

4.2.2 Count for 20mA

- Press switch(M) to increase count
- Press switch(S) to decrease crease count
- Press Switch(E) to enter

At this instance check 20mA at output port of hardware. And increase/decrease accordingly.

- **Save changed Setting:**
  - Press ↵ to accept changes done.
  - Press **X** to discard changes.



5.HARDWARE CONNECTION:

- ## 5.1 Version 1.0.0

P: Phase
N: Neutral
E: Earth
D+: RS485 MODBUS (+)
D-: RS485 MODBUS (-)
START: Push switch for start batch
STOP: Push switch for stop batch
G: common terminal for switch
NO/NC/COM: Relay output terminals

1	2	3	4	5	6	7	8	9
D-	D+					START	G	STOP
MODBUS INPUT						SWITCH CONNECTIONS		
MODEL: **Batch Controller** (MODBUS RS485)								
SR. NO.: BCMMYY-SR							RANGE: 1 Km	
230V AC							RELAY OUTPUT	
P	N	E					NO COM	NC
10	11	12	13	14	15	16	17	18

- ## 5.1 Version 1.0.1

P: Phase
N: Neutral
E: Earth
D+: RS485 MODBUS (+)
D-: RS485 MODBUS (-)
I+: 4-20mA O/P
G: common terminal for switch
NO/NC/COM: Relay output terminals

1	2	3	4	5	6	7	8	9
D-	D+	SW1	SW2	I+	GND	12V	S1	S2
MODEL: **Universal Flow Controller** (UFC 0620-000)								
			Low				High	
230V AC			RELAY1 OUTPUT				RELAY2 OUTPUT	
P	N	E	NO	COM	NC	NO	COM	NC
10	11	12	13	14	15	16	17	18

TROUBLESHOOTING

- **No Power: Check Power cord, Mains supply across P&N**
- **No RS485 Data:**
  a. **Check D+ & D- connection,**
  b. **Check Device ID & Output Format**

For More Information Please Contact ACCUMAX INSTRUMENTS PVT. LTD.

1. STANDARD TESTS

Each finished product is thoroughly checked to establish the product completeness and compliance with the manufacturer's quality assurance standards. Subsequently the product functions are tested according to specifications of the approved test directions and subject to at least 24-hour burn-in operation cycle.

2. CALIBRATION AND VERIFICATION TESTS

The ACCUMAX INSTRUMENTS PVT. LTD. flow meters are supplied from the manufacturing plant calibrated.