

Flow Totalizer Meter

Equinox™



ELECTRO MAGNETIC FLOW



GAS FLOW



HYDRAULIC OIL FLOW



IRRIGATION WATER FLOW



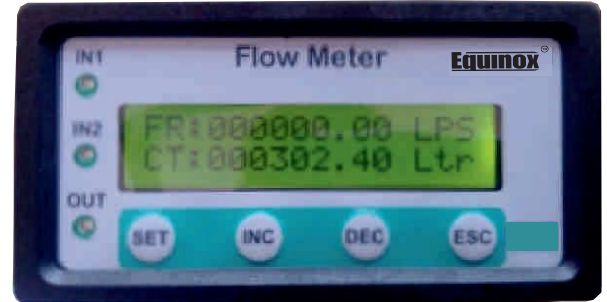
RIVER FLOW



STREAM FLOW

Flow Indicator Totaliser is compact and easy to use, designed for monitoring the continuous flow rate and total flow. The flow rate along with engineering units is displayed on the upper line of LCD display and the totalised flow is displayed on 8 digits on the second line. The Micro controller based design makes it more flexible and powerful compared to conventional flow totaliser.

The unit is suitable for use with any flow transmitter giving pulse or analog current output. The display has floating decimal point position, which is programmable from the front panel. The unit has inbuilt relay outputs for Flow rate and Totaliser of alarm or control application.



Model : EQ - FLW - 101

Features :

- ▶ LCD Display
- ▶ User friendly programmable with 4 keys
- ▶ IN & OUT Flow NPN Type inputs
- ▶ 4-20mA Re-Transmission output
- ▶ Two Alarm relay output
- ▶ RS485 Modbus-RTU Output
- ▶ Accuracy better than $\pm 0.5\%$ of the full scale

Applications :

- ▶ Remote Flow Measurement in Pipeline
- ▶ Chemical Batching in hazardous Areas
- ▶ Tank Farm Level Monitoring
- ▶ Effluent Discharge Metering
- ▶ Storage Tank

Specifications :

| | |
|-----------------------|--|
| Display | LCD Display |
| Resolution | 1 Digit (0.01% of Full Scale) |
| Counts | 0 - 999999 / +199999 Counts |
| Operating Temperature | 0 - 50 °C |
| Operating Supply | 95 - 280VAC/50-60 Hz |
| Analogue Input | 12V DC Pulse NPN Logic Input |
| Analogue Output | 4 - 20mA Re- Transmission solid state Output |
| Serial Communication | RS485 Modbus RTU Output |
| AI1 Relay | Potential Free 1 NO Contact's Rated 5A@ 250 V AC |
| AI2 Relay | Potential Free 1NOContact Rated 5A@ 250V AC |
| Temperature | Ambient @ 25 °C , Operating Voltage : 230VAC |
| Power Consumption | < 3VA |
| Enclosure Size | 96 x 48 x 60mm ABS Front Panel Mounting |



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| Sr.No | ACTIONS | MENU | DISPLAY | RANGE / OPTIONS / COMMENTS |
|-------|--|---------------|-------------------------------------|---|
| 1 | Press SET key to enter menu's. Enter Password using 1) Edit digits – ESC Key. 2) Increment – INC Key. 3) Decrement - DEC Key. After correct password press SET Key. | PASSWORD | XXXXXXXXXX Factory setting: 1000 | USER PASSWORD ENTRY Range:0-9999 |
| 2 | 1) Edit digits – ESC Key. 2) Increment – INC Key. 3) Decrement - DEC Key. After required Value press SET Key save and press INC/DEC to goto next menu. | IN-Pulse/Ltr | XXXXXXXXXXLtrs Factory setting: | Pulse/Litre input entry for INPUT(IN1) input sensor. Range:0.01-999999.99 |
| 3 | 1) Edit digits – ESC Key. 2) Increment – INC Key. 3) Decrement - DEC Key. After required Value press SET Key save and press INC/DEC to goto next menu. | IN-Flowrate | XXXXXXXXXXLPS Factory setting: | Flow Rate Display for INPUT(IN1) input sensor LPS/LPM/LPH selection(. Range:0.01-999999.99 |
| 4 | 1) Edit digits – ESC Key. 2) Increment – INC Key. 3) Decrement - DEC Key. After required Value press SET Key save and press INC/DEC to goto next menu. | OUT-Pulse/Ltr | XXXXXXXXXXLtrs Factory setting: | Pulse/Litre input entry for OUTPUT(IN2) input sensor. Range:0.01-999999.99 |
| 5 | 1) Edit digits – ESC Key. 2) Increment – INC Key. 3) Decrement - DEC Key. After required Value press SET Key save and press INC/DEC to goto next menu. | OUT-Flowrate | XXXXXXXXXXLPS Factory setting: | Flow Rate Display for OUTPUT(IN2) input sensor LPS/LPM/LPH selection. Range:0.01-999999.99 |
| 6 | 1) Edit digits – ESC Key. 2) Increment – INC Key. 3) Decrement - DEC Key. After required Value press SET Key save and press INC/DEC to goto next menu. | RESET | XXXXXXXXXX Factory setting: | RESET Function: NONE/CT1/CT2/CTD/RT1 CT1 : INPUT(IN1) Cumu- Total Reset. CT2 : OUTPUT(IN2) Cumu- Total Reset. CTD : Dif- Cumulative Total reset. RT1 : Run Time Total reset. |
| 7 | 1) Edit digits – ESC Key. 2) Increment – INC Key. 3) Decrement - DEC Key. After required Value press SET Key save and press INC/DEC to goto next menu. | ALARM1-ON | XXXXXXXXXX Factory setting: | Alarm Relay 1 (AI1) "ON" Threshold Level Set Value. Range:0.01-999999.99 |
| 8 | 1) Edit digits – ESC Key. 2) Increment – INC Key. 3) Decrement - DEC Key. After required Value press SET Key save and press INC/DEC to goto next menu. | ALARM1-OFF | XXXXXXXXXX Factory setting: | Alarm Relay 1 (AI1) "OFF" Threshold Level Set Value. Range:0.01-999999.99 |
| 9 | 1) Edit digits – ESC Key. 2) Increment – INC Key. 3) Decrement - DEC Key. After required Value press SET Key save and press INC/DEC to goto next menu. | ALARM2-ON | XXXXXXXXXX Factory setting: | Alarm Relay 2 (AI2) "ON" Threshold Level Set Value. Range:0.01-999999.99 |

| | | | |
|-----------|---|--|---|
| <p>10</p> | <p>1) Edit digits – ESC Key. 2) Increment – INC Key. 3) Decrement - DEC Key. After required Value press SET Key save and press INC/DEC to goto next menu.</p> | <p>ALARM2-OFF → XXXXXXXXX Factory setting:</p> | <p>Alarm Relay 2 (AI2) "OFF" Threshold Level Set Value. Range:0.01-999999.99</p> |
| <p>11</p> | <p>1) Edit digits – ESC Key. 2) Increment – INC Key. 3) Decrement - DEC Key. After required Value press SET Key save and press INC/DEC to goto next menu.</p> | <p>ALARM1-MODE → XXXXXXXXX Factory setting:</p> | <p>Alarm Relay 1 (AI1) Function selection. Range : FUNC1/FUNC2/FUNC3 (Ref Relay Function Chart)</p> |
| <p>12</p> | <p>1) Edit digits – ESC Key. 2) Increment – INC Key. 3) Decrement - DEC Key. After required Value press SET Key save and press INC/DEC to goto next menu.</p> | <p>ALARM2-MODE → XXXXXXXXX Factory setting:</p> | <p>Alarm Relay 2 (AI2) Function selection. Range : FUNC1/FUNC2/FUNC3 (Ref Relay Function Chart)</p> |
| <p>13</p> | <p>1) Edit digits – ESC Key. 2) Increment – INC Key. 3) Decrement - DEC Key. After required Value press SET Key save and press INC/DEC to goto next menu.</p> | <p>Flow Rate 4mA → XXXXXXXXX Factory setting:</p> | <p>Flow rate Threshold for Output 4mA Re-Transmission. Range:0.01-999999.99</p> |
| <p>14</p> | <p>1) Edit digits – ESC Key. 2) Increment – INC Key. 3) Decrement - DEC Key. After required Value press SET Key save and press INC/DEC to goto next menu.</p> | <p>Flow Rate 20mA → XXXXXXXXX Factory setting:</p> | <p>Flow rate Threshold for Output 20mA Re-Transmission. Range:0.01-999999.99</p> |
| <p>15</p> | <p>1) Edit digits – ESC Key. 2) Increment – INC Key. 3) Decrement - DEC Key. After required Value press SET Key save and press INC/DEC to goto next menu.</p> | <p>DEVICE ID → XXXXXXXXX Factory setting:</p> | <p>RS485 MODBUS RTU DEVICE ID Range: 1 - 255</p> |
| <p>16</p> | <p>1) Edit digits – ESC Key. 2) Increment – INC Key. 3) Decrement - DEC Key. After required Value press SET Key save and press INC/DEC to goto next menu.</p> | <p>BAUDRATE → XXXXXXXXX Factory setting: 9600</p> | <p>RS485 MODBUS RTU Baudrate selection Range: 9600(Fixed)</p> |
| <p>17</p> | <p>1) Edit digits – ESC Key. 2) Increment – INC Key. 3) Decrement - DEC Key. After required Value press SET Key save and press INC/DEC to goto next menu.</p> | <p>PASSWORD → XXXXXXXXX Factory setting: 1000</p> | <p>Password selection Range: 0 - 9999</p> |

Display Home Pages : There are 3 type of page for Cumulative Total-IN/OUT, DIF, FlowrateIN/OUT,Run Time.
To change home page press&release INC Key.

Reset : To Reset Cumulative Total - Press INC Key and ESC Key Simultaneously and Release.

RS485 MODBUS RTU REGISTER MAP

| Address | Data Type | Register | Range | |
|---------|-----------|-------------------|------------------|-----|
| 40000 | Float | DEVICE ID | 0-255 | R/W |
| 40002 | Float | Baud Rate | 9600 | R |
| 40004 | Float | IN-Total | 0.01 - 999999.99 | R |
| 40006 | Float | IN Flow Rate LPS | 0.01 - 999999.99 | R |
| 40008 | Float | IN Flow Rate LPM | 0.01 - 999999.99 | R |
| 40010 | Float | IN Flow Rate LPH | 0.01 - 999999.99 | R |
| 40012 | Float | IN Pulses/Litre | 0.01 - 999999.99 | R/W |
| 40014 | Float | OUT-Total | 0.01 - 999999.99 | R |
| 40016 | Float | OUT Flow Rate LPS | 0.01 - 999999.99 | R |
| 40018 | Float | OUT Flow Rate LPM | 0.01 - 999999.99 | R |
| 40020 | Float | OUT Flow Rate LPH | 0.01 - 999999.99 | R |
| 40022 | Float | OUT Pulses/Litre | 0.01 - 999999.99 | R/W |
| 40024 | Float | Cum Total DIF | 0.01 - 999999.99 | R |
| 40026 | Float | Run Time Hours | 0 - 999999 | R |
| 40028 | Float | Run Time Minutes | 0 - 60 | R |
| 40030 | Float | Run Time Seconds | 0 - 60 | R |
| 40032 | Float | Reset | 0 - 2 | R/W |
| | | | | |

OUTPUT ALARM RELAY FUNCTION

| | |
|--------------|---|
| <p>FUNC1</p> | <p>ON Alarm Output</p> <p>OFF</p> <p>TOTAL >= ALARM ON</p> <p>TOTAL = 0/ESC Key Pressed</p> |
| <p>FUNC2</p> | <p>ON Alarm Output</p> <p>OFF</p> <p>TOTAL >= ALARM ON</p> <p>TOTAL >= ALARM ON + ALARM OFF</p> |
| <p>FUNC3</p> | <p>ON Alarm Output</p> <p>OFF</p> <p>TOTAL >= ALARM ON</p> <p>OFF Time</p> |

Connection Terminal Details

