Meter Control Manual

Item No. BUB-080 Version 101.2

Use with
Hall Effect Water Meters

Manufactured by:
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Rev. 8/2022

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Meter Control Manual

Description

Meter Control Unit

- Displayed real time flow rate, GPM
- Total accumulated flow, Gallons
- Records peak flow, GPM Peak
- Power On Green Light
- Adjustable threshold gallons prompt
- 80% Threshold Flashing Amber Light
- 90% Threshold Flashing Red Light
- 100% Threshold Audible alarm
- 100% Threshold 12 V AC Output

1" Flow Meter

- Set Volume/Set Time 12 V AC Output
- Flow Switch 12 V AC Output
- 4-20 mA Proportional Flow Rate Output
- 66 Pulses per Gallon
- 1-40 GPM +/- 5%
- Multiple Quick Connect fittings
- 1" High Flow Turbine Meter
- Glass Reinforced Polymer Housing

Application

The meter control unit reads a standard Hall Effect water meter output to display flow.

Installation (for default 1" flow meter)

- Connect standard 1" MNPT fitting kit (Item V3007-04) to water line.
    - Other fitting kits are available for copper, shark bite pex and PVC.

Instructions

The screen on the meter control unit displays the following information by pressing the corresponding buttons. These are (working from left to right across the display):

- Flow: Displays CURRENT flow rate, gal/min.
- Total Flow: Displays TOTAL gallons treated since last meter reset, gal.
- Peak Flow: Displays PEAK flow rate since last meter reset, gal/min.

Lights:

- Green Power Light: System is plugged in and fully functioning.
- Yellow Warning Light: Blinks when system is at 80% of threshold gallons.
- Red Expired Light: Blinks when system is at 90% of threshold gallons.

Alarm Beep:

- 3 Beeps every 15 seconds at 100% threshold gallons.
- Push any button to silence beep for two days.
- See **CLEAR MEMORY** section below to stop beep.
- Opt2 connection is powered with 12 V AC at 100% threshold gallons.

Clear Memory:

Clear Memory will stop the 100% Threshold Beep and zero out the Total Flow and Peak Flow values.
Be sure to write these values down and the date for future reference.

- Press all 3 buttons simultaneously and screen displays **CLR MEMORY NO**.
- Press Total Flow or Peak Flow button and screen displays **CLR MEMORY YES**.
- Press Flow button.
- Memory is cleared.

Programming

Press all three buttons of the display simultaneously for 3 seconds.

- Flow Button: Toggles to next screen, also acts as the **Enter** Button.
- Total Flow Button: Toggles the values **up**.
- Peak Flow Button: Toggles the values **down**.

Factory Settings:

Screen One: **CLR MEMORY YES / NO**

- **YES** to clear memory of Total Flow and Peak Flow.
- **NO** to continue on with programming.

CLR MEMORY
no

Screen Two: **SET PULSES** (see **Meter Selection and Pulse Setting** for pulse information, shown as 1" meter)

- Set pulses per gallon (PPG) for Hall Effect meter model.

SET PULSES
66

Screen Three: **SET THRESHOLD TOTAL 2** YES or NO

- **YES** to use threshold function.
- **NO** to turn off threshold function, skips screen four.

SET THRESHOLD
TOTAL yes

Screen Four: **SET THRESHOLD TOTAL 2** (factory set at 80)

- Set threshold gallons.
- Yellow light blinks at 80% threshold.
- Red light blinks at 90% threshold.
- Alarm beeps at 100% threshold.
- Opt2 connection is powered with 12 VAC at 100% threshold. (30 milliamps max.)

SET THRESHOLD
TOTAL 80 GAL
2 X1000

Screen Five: **SET GAL/MIN** (no factory setting)

- 4-20 mA proportional flow rate output
- Set GPM for the 20 milliamp output flow rate.
- Zero flow is a fixed 4 milliamp output.
- Verify polarity. 4-20mA output at J2 connection.

SET
5 GAL
MIN

Screen Six: **SET GAL 1**

- Set the gallon batch to energize Opt1 connection.
- Set between 1 and 990 gallons. Feed Pump setting is 1 gal for 10 gpm peak flow, 2 gal. for 20 gpm peak flow, 3 gal. for 30 gpm peak flow, and 4 gal. for 40 gpm peak flow
- A setting of zero energizes Opt1 like a flow switch, sensitive at .5 GPM.

SET
20 gal
1

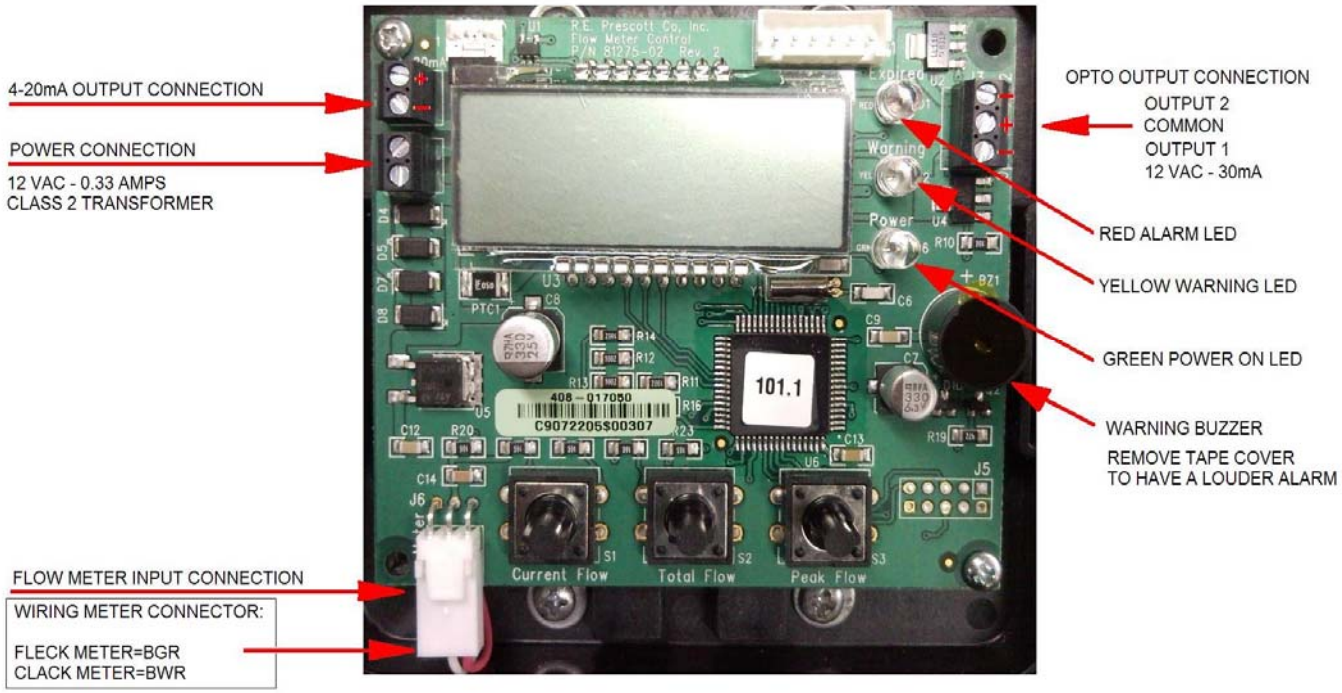
Screen Seven: **SET MIN 1**

- Set the minute batch for Opt1 connection:
- Set between 0.1 and 90 minutes. Feed Pump setting is 0.10 min.
- Opt1 is 12 VAC (30 milliamps max.)

SET
0.33 min
1

END OF PROGRAMMING

Flow Meter Control Board



***For Fleck Meters, change meter wires from Black-Red-Green to Black-Green-Red (BRG to BGR)**

Meter Selection and Pulse Setting

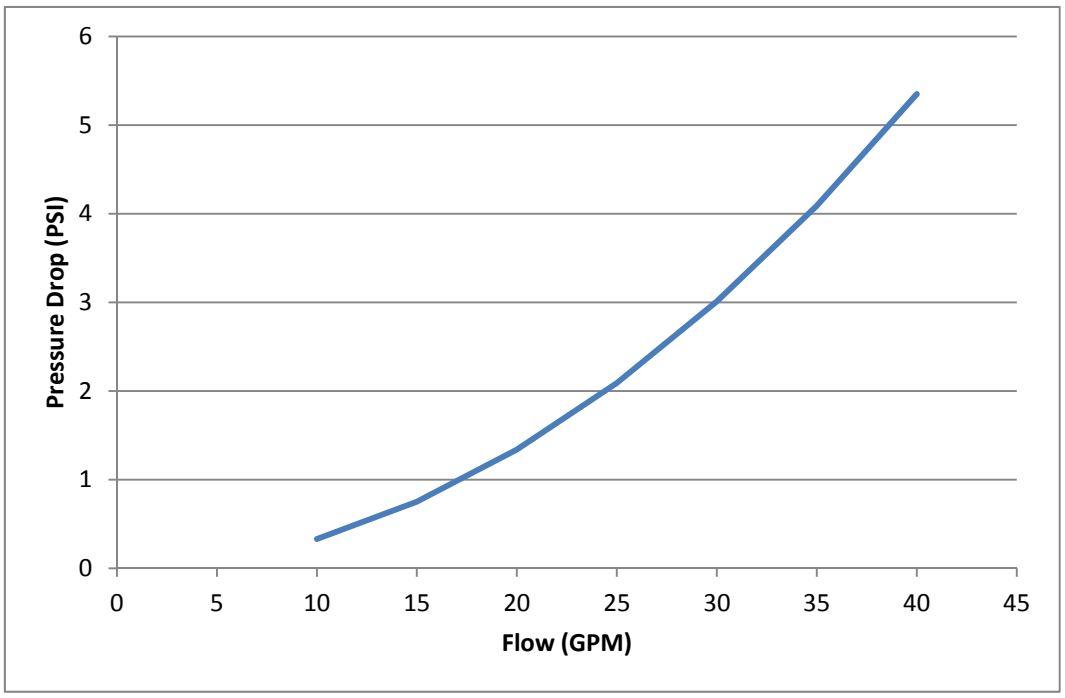
Model	Size	4-20mA range	PPG	Meter Wire Color Code
a. Bubble Up Meter	1” Male IPS Connections	0.5-25 GPM Max	83 PPG	BWR
b. Iron Gate Meter	1” Male IPS Connections	0.5-25 GPM Max	80 PPG	BWR
c. Monitor Meter	1” Male IPS Connections	0.5-25 GPM Max	80 PPG	BWR
d. BUB080-A In-Line Meter*	1” Male IPS #V3039	0.5-50 GPM Max	66 PPG	BWR
e. BUB080-B In-Line Meter	1.5” Female IPS #3040-15	0.5-60 GPM Max	37 PPG	BWR
f. BUB080-C In-Line Meter	2” F X M IPS #V3050	1.5-150 GPM Max	20 PPG	BWR
g. BUB080-D In-Line Meter	3” Female IPS #V3075	3.5-350 GPM Max	8 PPG	BWR
h. Fleck Meters - requires changing meter wires from BRG to BGR				BGR

B = Black Wire
W = White Wire
R = Red Wire
G = Green Wire

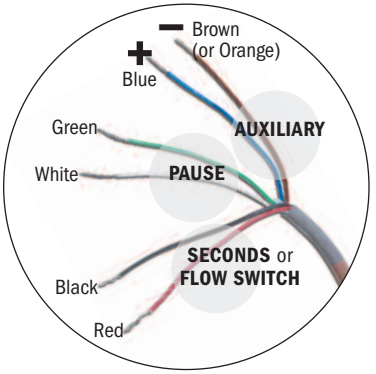
*** See pressure drop graph on next page**

Pressure Drop Graph

BUB080-A 1” Flow Meter



INSTALLATION for E20PHF w/ a BUB084-AUX



Auxiliary: Use

- Brown (or Orange)
+ Blue

1. Connect signal wires as required by the installation:

SECONDS Black & Red

FLOW SWITCH Black & Red

PAUSE Green & White

AUXILIARY Brown (or Orange) & Blue

- For AC signal, there is no polarity.
- For DC signal, blue wire is connected to signal positive (+) and brown (or orange) is connected to signal negative (—).

NOTE: If polarity is reversed when connecting a DC signal to the AUX input, the pump will not respond to the signal.

2. Cap all non-terminated wires.

NOTE: All non-terminated wires must be capped to prevent operational errors or damage to the pump.

3. Plug cord into receptacle. The cover must be removed to program the pump. Remove the self-tapping Phillips head screw and slide the cover off. To unlock the keypad, simultaneously press and hold (MODE) and (%) for 5 seconds.

4. Put the pump in standby. First, press and continue to hold (MODE), then press (STBY).

5. Program the pump for the desired operating mode and **%** setting, refer to Program Pump Settings in the manual. After programming, slide the cover on and reinstall the screw.

NOTE: Leave the unit in standby until the signal wires are connected and the pump is ready for priming.