SPECIFICATIONS

Input Contacts:
Up to 99,999,999 dry contact switch closures. Transient and static voltage protected. Optional optical or Hall effect device input.

Enclosure:
NEMA 4 rated

Display:
16 character 2 row backlit LCD

Input Power:
120 VAC via **GFI**

Output Signal:
Two independently isolated dry contact relays, 3 Amp max, resistive

Counting Speed:
Up to 20 Contacts/Second - 20 Hz

Memory:
non-volatile

4-20mA:
Electrically isolated up to 24VDC. Visual alarm LED when 20mA is exceeded. Capability for external loop voltage source.

CARLON
METER

06/19

For complete specifications, visit our website: www.carlonmeter.com

Programming and Operating Manual

Car-Logger
With 4-20mA

CARLON
METER

Leaders in water measurement and control

1710 Eaton Drive
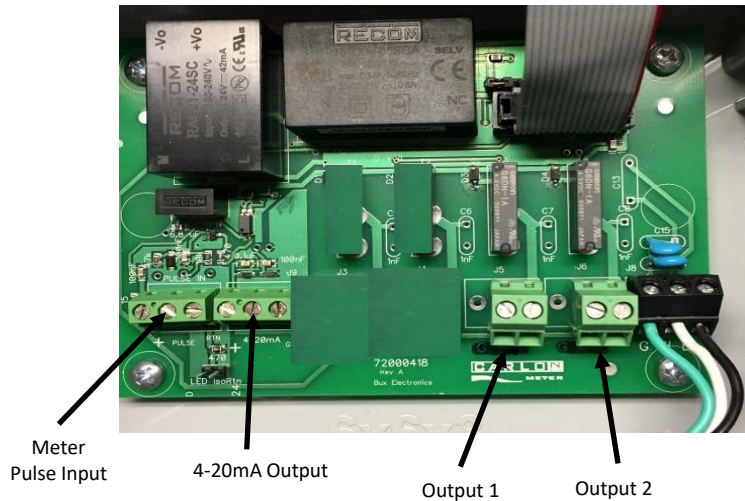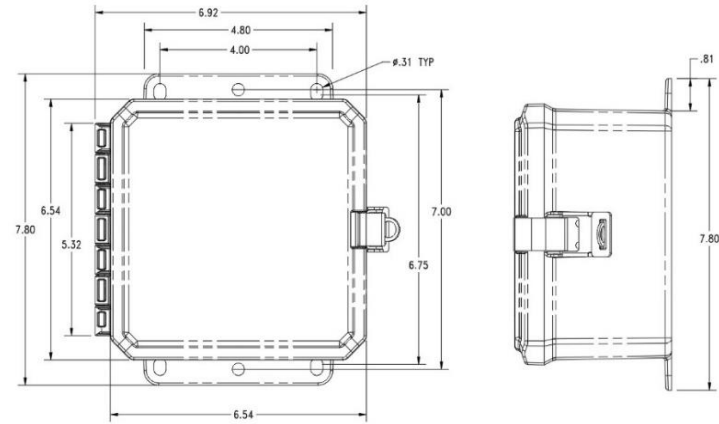Grand Haven, MI 49417

Ph: (616) 842-0420
Fax: (616) 842-1265
E-mail: carlon@carlonmeter.com
Website: www.carlonmeter.com

INSTALLATIONS INSTRUCTIONS:

1 Install the control in the desired location. Mount and keep unit in an area free from dust, moisture and extreme temperatures.

2 Remove the 4 screws securing the front panel of the Car-Logger and carefully push the left & right upper corners of the front panel with your thumbs exposing the terminal attachment blocks. Connect the meter signal wires providing a flow volume signal pulse to the terminal block on the leftside of the circuit board. For a typical dry contact switch, use the two left-most terminals. No polarity needs be observed as the inputs are optically isolated.

3 Connect the 4-20mA Output as shown to the right two terminals. The output is electrically isolated and provides up to 24VDC.

4 Connect the Output 1 and Output 2 relay contacts.

5 Plug the male power cord into a 120 volt, 60 cycle, **GFI outlet.**

Meter Pulse Input

4-20mA Output

Output 1

Output 2

Meter Pulse Input Diagram

JSJ			Cold Water Turbine			Hot Water Turbine			2 Wire Dry Contacts		
Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø
Red	Green	Black	Red	White	Black	Brown	Green	White	↑	↑	x

Meter Pulse Input

4-20mA Output
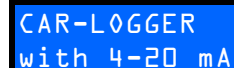
Output 1   Output 2   120VAC Input

USB Data Collection Memory Stick
Installation and Operating Instructions (If Equipped)

Information - This unit comes with a USB memory stick. If you need an additional memory stick, a name brand (i.e. SanDisk) with no more than 16G storage is recommended.

1. Insert the memory stick into the USB port located behind the Meter Input and 4-20mA Output on the left underside of the Car-Logger controller. A solid green LED light will illuminate to acknowledge. If the green LED light does not stay on solid, remove and re-insert the memory stick. (If a red LED flashes, turn the unit off and re-start).

2. Once the run mode has been started, the unit will store on two different files. One file will be stored on the hour while the other will store on the half hour - Carlon 1.txt and Carlon 2.txt.

3. When the green LED light is flashing, it means that it is recording data. If the memory stick is removed while the unit is writing the data, all information will be LOST. Use care and only remove the memory stick when the green LED light is on solid, not flashing.

4. Record the data on your computer. The data will come as a text file. To understand the data being recorded, you must multiply the meter's pulse output (i.e. Gallons per Contact-GPC) by the number recorded. If your meter is sending a signal every gallon (1GPC), then the number will be a direct readout. If your meter is sending a signal every 10 gallons (10GPC), then you must add a zero to the recorded number to know the total number of gallons that passed through the meter.

5. Once you have downloaded the recording from the memory stick, erase it and be ready for the next data collection.

PROGRAMMING/OPERATION INSTRUCTIONS:

Connect the power plug to the 120VAC GFI. The display shows the initial screen.

```
CAR-LOGGER
with 4-20 mA
```

Pressing the START button immediately initiates the RUN mode using the current stored settings.

Pressing the MENU key allows selection of one of three modes:

1. Setup
2. Run
3. Stored Values

```
Setup      ↵
Run
```

```
Run        ↵
Stored values
```

Use the Up/Down keys to position the Enter Key prompt. Pressing 'Enter' activates the selected mode.
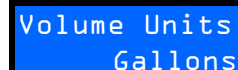
SETUP MODE

Choice for selection of CARLON METER product used with this CAR-LOGGER is displayed. Use the Up/Down arrow keys to select the appropriate model, then press the Enter button to store setting.
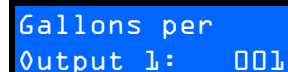
```
Select a model
        JSJ062
```

Volume units selections: Gallons, Cubic Feet or Liters.

```
Volume Units
        Gallons
```

Output #1 is energized briefly each time the volume reaches reaches the desired volume set. Units are consistent with the selection above.

```
Gallons per
Output 1:   001
```

```
Gallons per
Output 2:   012
```

SETUP MODE Continued

The total accumulated input pulses from the Carlon Meter is next retrieved from memory and displayed.The counts may be adjusted to any desired value. Use the Up/Down & Left/Right arrow keys to enter the appropriate value then press the Enter button to store settings in the non-volatile memory. Pressing Enter without modification saves the displayed setting prior to returning to the Home screen.

```
Accumulated
Counts:   1234
```

RUN MODE

Selecting RUN briefly displays the selected Carlon meter then displays current flow and total flow volume.

```
2.5 GPM
39 Gallons
```

In the event no flow is occuring (no meter input pulses) the display will show "no flow detected".

```
no flow detected
```

At any time, pressing the Cancel button aborts the current operation, turning OFF all outputs and returns to the Home screen.

STORED VALUES MODE

Current stored values are displayed with the selection of Stored values. Use the Up/Down Arrows to advance display.

The current meter model selected is briefly displayed.

```
JSJ062
```

Flow volume that produces a pulse on output 1:

```
Gallons per
Out 1  pulse: 1
```

Flow volume that produces a pulse on output 2. In this instance, every 12 gallons produces a pulse on output 2.

```
Gallons per
Out 2 pulse: 12
```

The maximum flow rate for the selected Carlon meter is displayed.

```
Maximum GPM
          20
```

Each input pulse is accumulated with the total displayed. This is a live display and updates with each input pulse.

```
Accumulated
Counts:   1234
```

Associated with this is the total volume. This is also a live display and updates continuously

```
Total Volume
30 Gallons
```

Additional information displayed is serial number, manufacture date and software version.

```
Serial Number
    CL100000
```

```
Manufacture Date
   12/1/2018
```

```
Software Version
   1.00.000
```