Flow Meter Station
Model Number: ST130
Version: 1.0

User's Manual
Revised October 7, 2018

Features

The ST130 Flow Meter Station allows you to remotely monitor flow rates from your flow meters. The Station counts pulses transmitted by the flow meter in order to track the flow rate. All information is sent to the Altrac cloud where it is displayed as instant flow rate as well as cumulative flow rate.

The Flow Meter Station can easily retrofit flow meters with a pulse output. The Altrac web app will estimate the instantaneous flow rate bases on the pulses from your flow meter.

The Altrac Flow Meter Station updates every 15 minutes while connected to a power source. If the flow meter outputs a pulse, the Altrac will immediately wake from sleep and transmit the data to the web app.

Please contact us if you have any questions.

Phone: (510) 248-4141

Email: support@altrac.io

General Specifications

Operating Temperature

-40°C to 80°C (-40°F to 176°F).

Cellular Network

Altrac equipment use LTE CATM1 (5G) networks on AT&T and T-Mobile. The Altrac will automatically pick the strongest signal for its connection.

Pulse Frequency

Ideal pulse frequency is 1 pulse every 5 seconds while water is flowing.
Maximum Pulse Frequency: 4 pulses per second
Minimum Pulse Frequency: If your pulse signal is infrequent (1 pulse per hour), it is difficult to determine instantaneous flow rate.

Accuracy

Pulse Output: ±5% of total pulses sent by flow meter. Flow meter errors not included.

When Ordering, specify:

Flow meter type: Pulse output needed. A photo of the flow meter is very helpful for Altrac to determine the proper part number.

Power supply type: The flow meter station can be powered by a power supply plugged into an outlet, or if power is not available, a solar powered unit. Additional information on page 5.

WARNING! This sensor is not to be used as the primary means of determining flow through your waterworks. It must not be used in the absence of redundant systems in critical applications where there may be significant safety risk or financial exposure in the event of over or underpumping.

Components

The Altrac Flow Meter Station comes with a cellular device (A) and a temperature probe (B).

A: The Altrac Station includes a cellular modem which connects your equipment to the internet. The Station includes 30 feet of wire for connecting to the flow meter.

B: The temperature probe plugs into the flow meter. It is not necessary for proper operation of the flow meter station. The standard temperature probe is 40 feet long and jacketed with loom tubing for protection. (Optional)
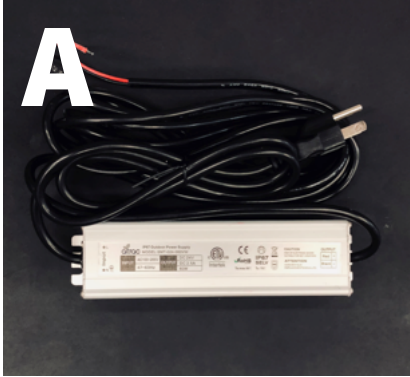
C: The directional antenna provides increased signal reception in areas with weak cellular service. It attaches directly to the coax plug on the bottom of the Altrac device. (Sold separately.)
Part Number: CN102

Power Supply Options

The Flow Meter Station can be powered with any DC voltage between 12-30 volts. Altrac provides two options for continuous power.

A: The 24VDC power supply connects directly to a 120VAC electrical outlet to provide power to the Altrac Station. The power supply is IP67 rated with a wire length of 12 feet.
Part number: PW200

B: The remote power unit uses a solar panel with a charge controller and 12 volt lead acid battery to provide uninturrupted 12VDC power.
Part number: PW400

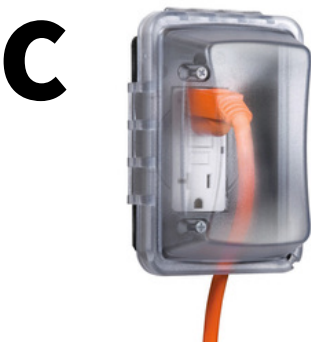# Installation Instructions - Pulse Only Output

To connect the Altrac Station to your flow meter we recommend trenching PCV from your flow meter to the Altrac device. If you use PVC pipe add a junction box to terminate connection near the flow meter.
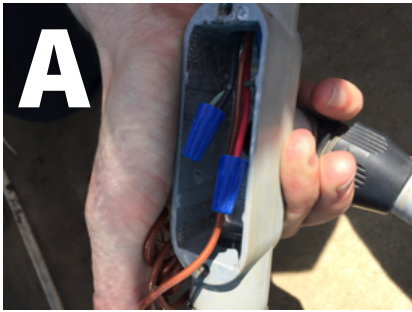
A: Connect the 'Pulse +' wire from your flow meter to the red wire (IN 1) on the Altrac cable. Connect the 'Pulse -' wire from your flow meter to the black wire (Ground) on the Altrac cable. Connect the foil shield to earth ground.
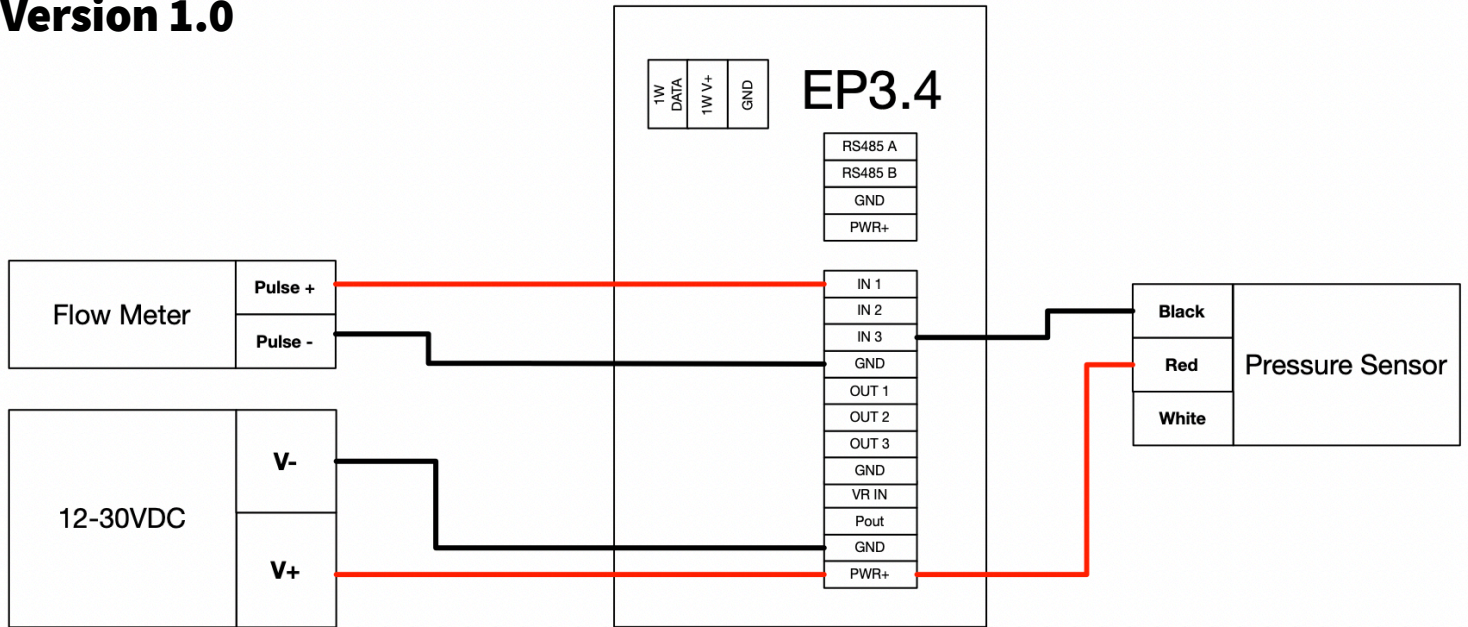
B: The default calibration for the Altrac is 100 gallons per pulse. Check your flow meter settings to determine the proper gallons per pulse calibration value. You may need to use a magnet to view the menu. If the value is differs from 100 gallons per pulse contact Altrac to update your Flow Meter Station.

C: Plug the Altrac into a power source.

Schematic - Pulse Output

Version 1.0

EP3.4

| 1W DATA | 1W V+ | GND |

RS485 A
RS485 B
GND
PWR+

IN 1
IN 2
IN 3
GND
OUT 1
OUT 2
OUT 3
GND
VR IN
Pout
GND
PWR+

Flow Meter
Pulse +
Pulse -

12-30VDC
V-
V+

Pressure Sensor
Black
Red
White

EP3.5
PCB Wiring: Universal
Control Line: WH200_2.1
Enclosure: 1.2B

PWR+
GND
Pout — 4
VRin — 2
GND
OUT3
OUT2
OUT1 — 5
GND
IN3 — 5
IN2 — 1
IN1 — 4

PWR+ — 1
GND — 2
B — 3
A — 3

6 6
GND
V+ 1 Wire
DATA 1 WIRE