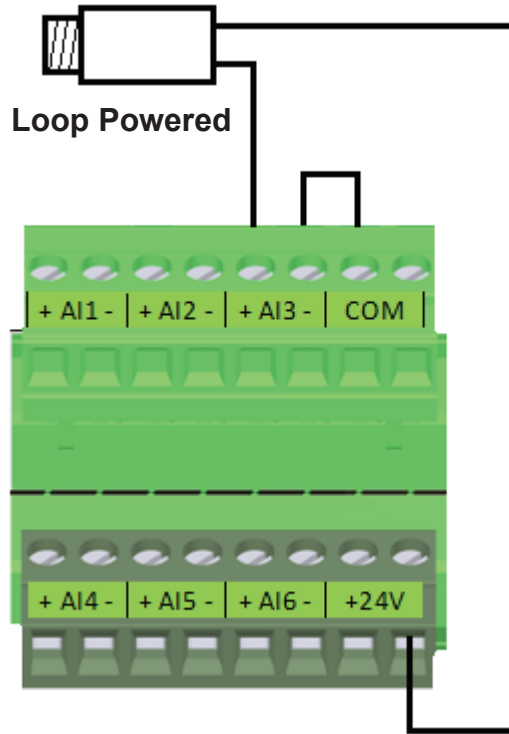


ANALOG INPUTS

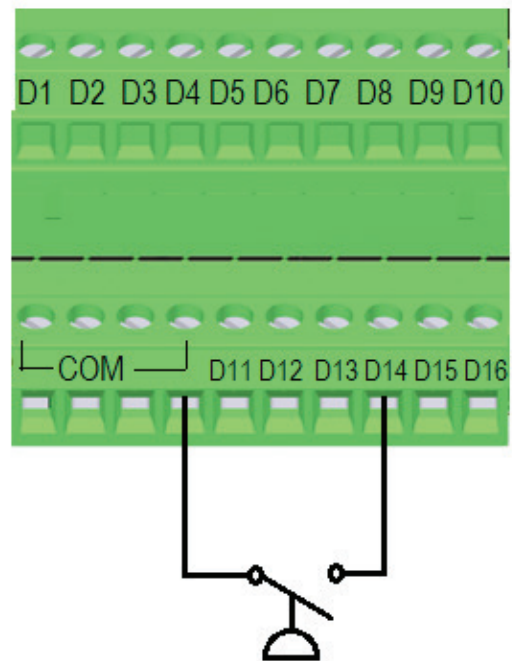
6 analog inputs: 4-20mA differential and optically isolated.
 12-bit resolution: (4-20mA = 800-4000 counts)
 For loop powered instruments, use the +24V terminal for excitation voltage.
 Connect the signal to AIx+, and connect the AIx-terminal to COM.



DIGITAL INPUTS

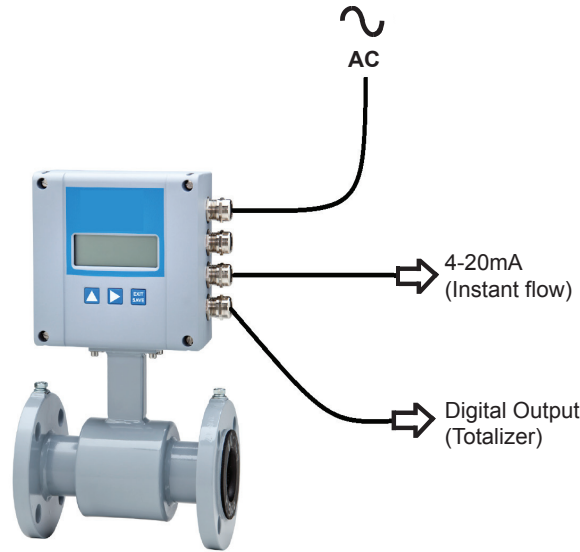
NPN circuitry. (Inputs are at 12Vdc, and COMs are Signal ground)
 Connect to COM to activate the input.
 Only use potential free contacts to trigger the inputs (dry contacts)
 Digital input assignments:

D1	PUMP 1 RUNNING (RUN TIMES/CYCLES)
D2	PUMP 2 RUNNING (RUN TIMES/CYCLES)
D3	PUMP 3 RUNNING (RUN TIMES/CYCLES)
D4	PUMP 4 RUNNING (RUN TIMES/CYCLES)
D5	FLOW TOTALIZER 1
D6	FLOW TOTALIZER 2
D7	ALARM 1
D8	ALARM 2
D9	ALARM 3
D10	ALARM 4
D11	ALARM 5
D12	ALARM 6
D13	ALARM 7
D14	ALARM 8
D15	ALARM 9
D16	ALARM 10



FLOWMETER CONNECTION

It is possible to monitor both the instantaneous flow (4-20mA) and the accumulated volume (Digital inputs D5, D6). Below is a connection example of a magnetic flowmeter. Please refer to your flowmeter manual and/or contact your supplier for setup and wiring assistance.

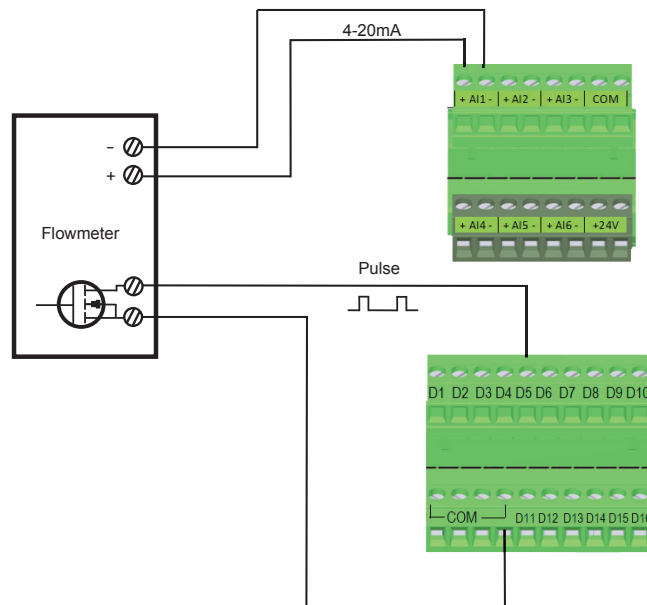


The **4-20mA signal** can be connected to any of the open Analog inputs (AI1~AI6). This signal from the flowmeter is typically not loop powered.

A **pulse** output from the flowmeter is required for volume totalization.

There are 2 digital inputs on the iON28 Module (D5 & D6) designed for volume totalizer derived from a **gallons/pulse** signal (example 100 gal = 1 pulse). The max input frequency is 100 Hz. The minimum pulse width is 0.5ms.

Note: These 2 inputs are not for monitoring a frequency output proportional to the flow. When the wiring and flowmeter configuration is complete, the value for the **gallons/pulse** found in "Parameters" screen on the web portal must also be changed to match the flowmeter.



Flowmeter Wiring Example

RELAY OUTPUTS

Rated for 250V, 5A (resistive)*

R5 and R6 are Normally Closed (NC) and open upon activation.

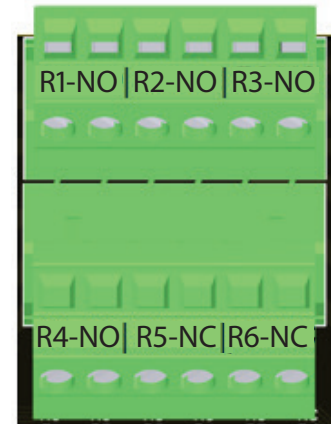
Each relay will only activate for 2 seconds (momentary) when the button is pressed on the web portal.

! CAUTION/DANGER

Machine may start unexpectedly and cause serious injury or death. You must have confirmation that all personnel are free and clear from moving parts and the electrical panel before activating the relay remotely.

Only allow qualified operators to remotely activate the relay. The relay remote operation must be part of a fail safe electrical circuit that would shutdown the equipment before failing or cause damage/injury.

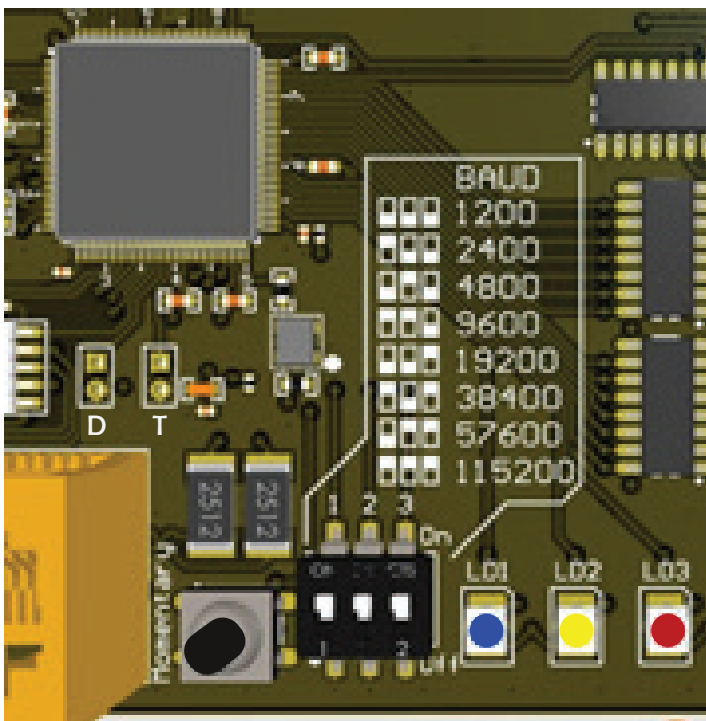
Local and National safety codes must be followed.



RS 485 PORT BAUD RATE

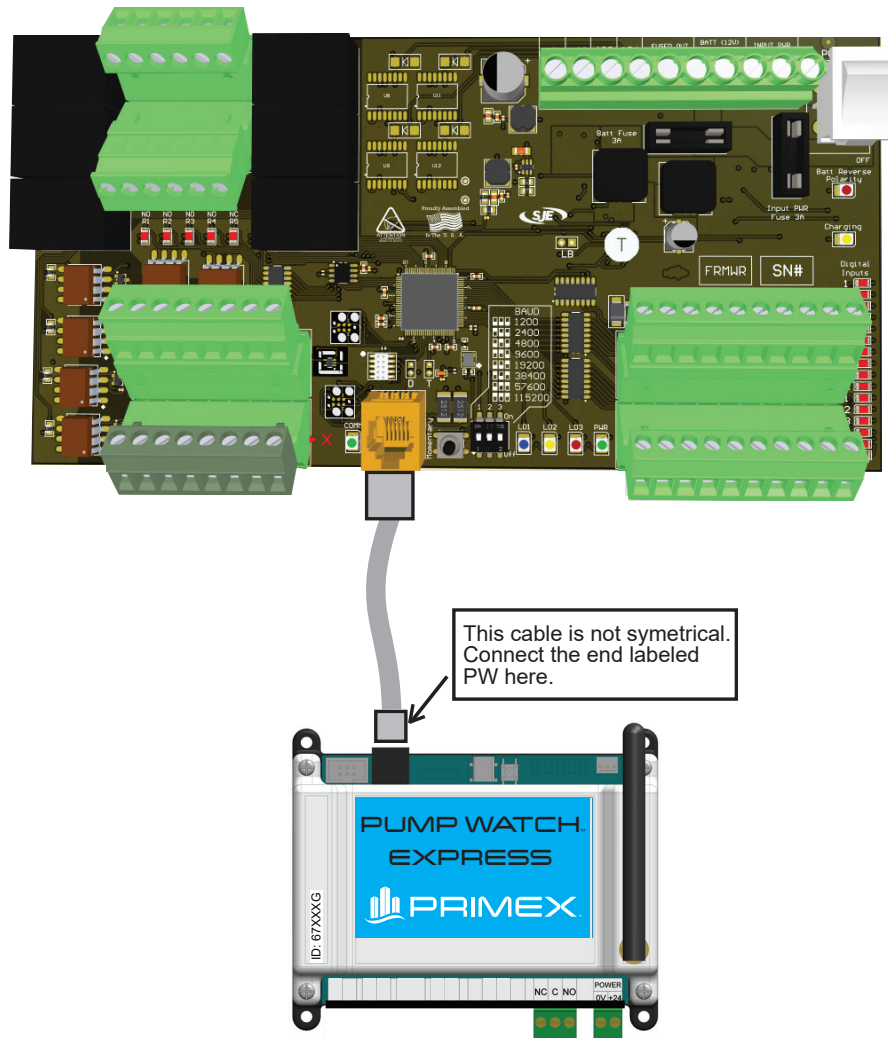
The baud rate can be set via the dip switches on the iON28 Module.

The default is 9600 (required for communication with the Pump Watch™ Express Gateway).



* To meet UL 508A, a Class 2 circuit must be used.

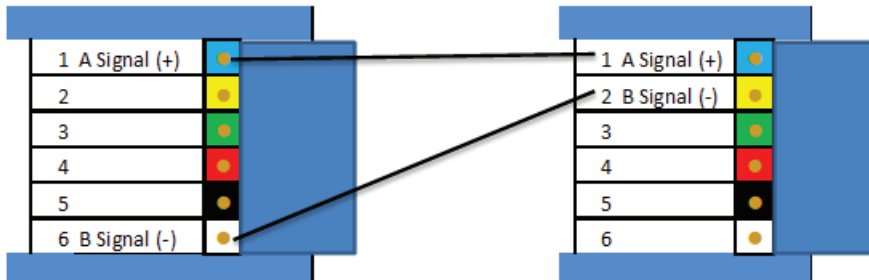
CONNECTING TO THE CELLULAR GATEWAY MODEL



CABLE CONFIGURATION

I/O Board RJ11
MODBUS Slave

PUMPWATCH RJ11
MODBUS MASTER




Baud: 9600
Parity: None
Data bits: 8
Stop bit: 1
Node Address: 1


Serial cable Part Numbers:
1038522 CABLE ASSY, PUMP WATCH, SERIAL 6 ft
1038335 CABLE ASSY, PUMP WATCH, SERIAL 6"


Main
Reports
Setup
Documents
Back To Dashboard


Main > Control > Main > IO Board test unit(64047)
Last update 06/04/2019 02:46:22 PM

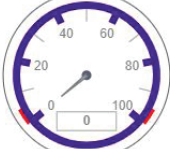
Get Status

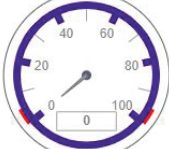

 AI1 - Description


 AI2 - Description


 AI3 - Description


 AI4 - Description


 AI5 - Description


 AI6 - Description

● POWER

● LOW BATTERY

	Run	Cycles	Minutes	
DI1 - Pump 1	<input type="radio"/>	3	0.1	10HP, 230V, 27A
DI2 - Pump 2	<input type="radio"/>	2	0	10HP, 230V, 27A
DI3 - Pump 3	<input type="radio"/>	2	0	Spare
DI4 - Pump 4	<input type="radio"/>	2	0	Spare




DI5 - Flow 1	0	RESET
DI6 - Flow 2	0	RESET

DI7 - Alarm 1 <input type="radio"/> DI8 - Alarm 2 <input type="radio"/> DI9 - Alarm 3 <input type="radio"/> DI10 - Alarm 4 <input type="radio"/> DI11 - Alarm 5 <input type="radio"/> DI12 - Alarm 6 <input type="radio"/> DI13 - Alarm 7 <input type="radio"/> DI14 - Alarm 8 <input type="radio"/> DI15 - Alarm 9 <input type="radio"/> DI16 - Alarm 10 <input type="radio"/>	<p style="text-align: center; margin-top: 0;">RELAYS</p> <p>SET R1 Relay 1 Operation</p> <p>SET R2 Relay 2 Operation</p> <p>SET R3 Relay 3 Operation</p> <p>SET R4 Relay 4 Operation</p> <p>SET R5 Relay 5 Operation</p> <p>SET R6 Relay 6 Operation</p>
--	---

INPUT SCAN TIMES (How often are the input values updated for alarm notification?)

The odd number analog inputs AI1, AI3, AI5 have a scan time of 30s or less from the Pump Watch™ Express Gateway. The even number analog inputs AI2, AI4, AI6 have an update time of 90~120s update time. Choose even number AIs for alarms requiring a longer time delay. Digital inputs have a 10s or less scan time. Digital inputs also have a programmable time delay function that can be accessed in the "Parameters" screen.

Main > Control > Parameters > Water Treatment(670002)

Get Status

Save

Parameter	Value	Unit
DI 1 Alarm Delay	2	Sec
DI 2 Alarm Delay	2	Sec
DI 3 Alarm Delay	2	Sec
DI 4 Alarm Delay	2	Sec
DI 5 Alarm Delay	2	Sec
DI 6 Alarm Delay	2	Sec
DI 7 Alarm Delay	2	Sec
DI 8 Alarm Delay	2	Sec
DI 9 Alarm Delay	2	Sec
DI 10 Alarm Delay	2	Sec
Power Loss Alarm Delay	2	Sec

Pulse Flow Meter Setup **Save**

Parameter	Value	Unit
FM1 Gallons Per Pulse	100	G/Pulse
FM2 Gallons Per Pulse	100	G/Pulse

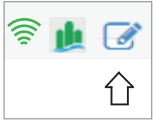
PRIMEX®

6

iON28 Module

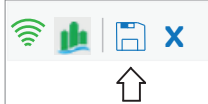
SCALING THE ANALOG INPUTS

The raw data range is 800-4000 counts. To scale the input, click on the edit symbol then on the gauge.



Properties	Edit	
Name	AI2 Tank (Psi)	Edit the name of the gauge
Min. Value	0	Set the Gauge display Min Value (Does not scale the input)
Max. Value	100	Set the Gauge display Max Value (Scales the input value for 20mA)
Step	20	Sets the number of ticks around the dial. (Max-Min)/Step

Click to save.



SETTING UP HIGH & LOW ALARMS FOR EACH ANALOG INPUTS

Click on the gauge and the window below will appear.

Gauge Alerts X

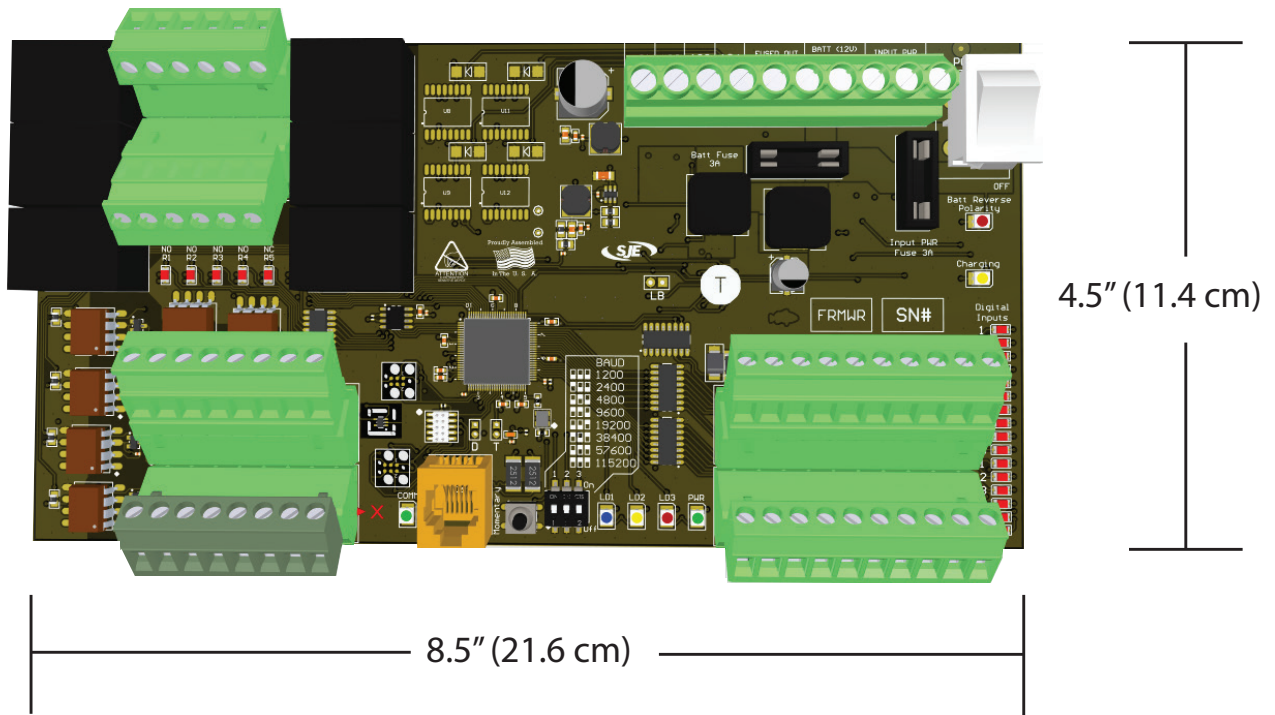
Properties	Edit	
Min. threshold	60.25 Select Users	Low Limit Alarm Setpoint
Min. threshold alert text	AI2 Tank Low Pressure	Low Limit Alarm Message
Max. threshold	71.5 Select Users	High Limit Alarm Setpoint
Max. threshold alert text	AI2 Tank High Pressure	High Limit Alarm Message
Show percentage threshold	<input type="checkbox"/>	
Account	▼	

Ok Cancel

WEB PORTAL UPDATE FREQUENCY

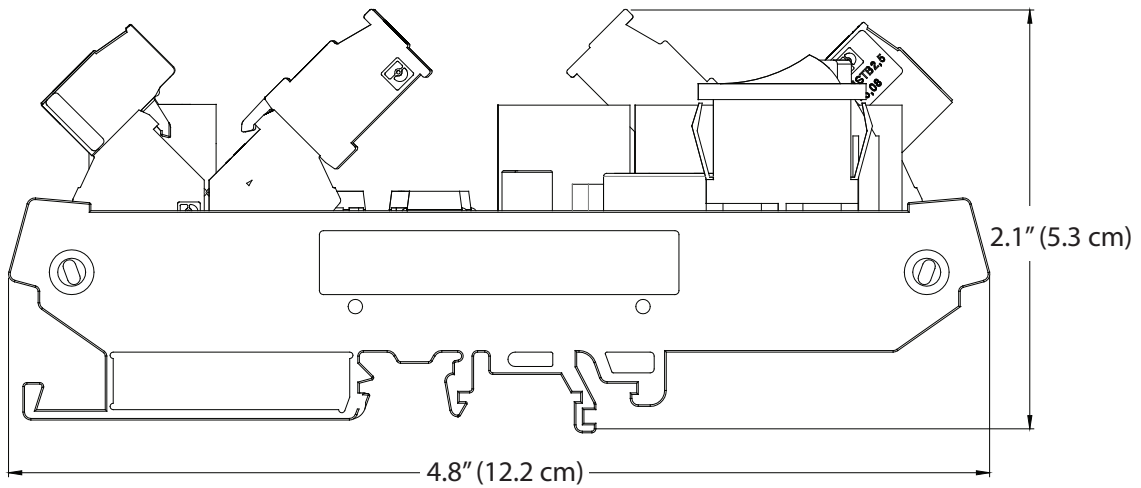
The data is sent from the Gateway to the cloud server via cellular communication every 10 minutes for updating the values on the portal and for data logging. This time period is interrupted if there is an alarm or if the user presses "Get Status" on the web portal, in which case the data is sent immediately.

DIMENSIONS



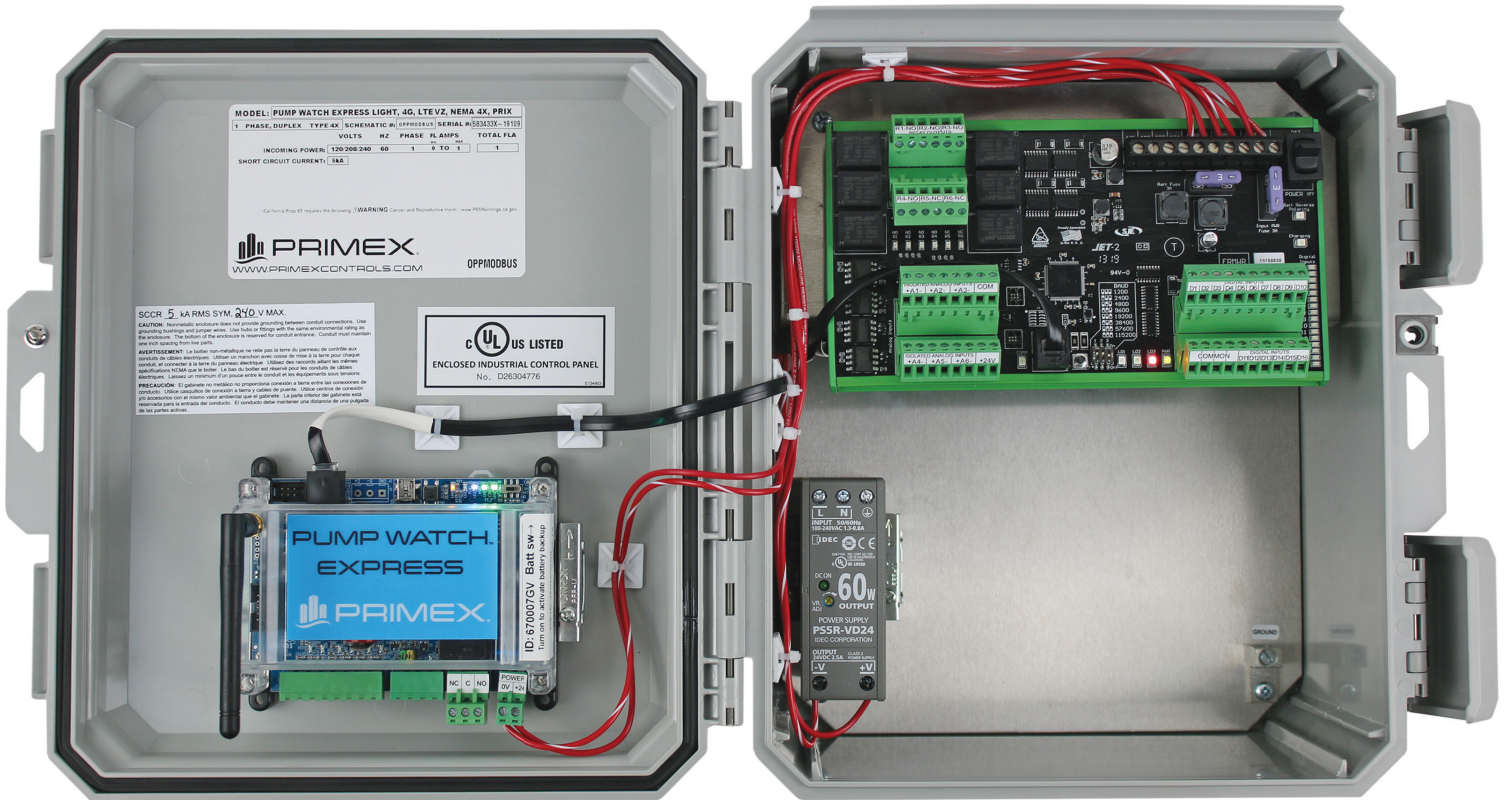
MOUNTING

Din rail mount.



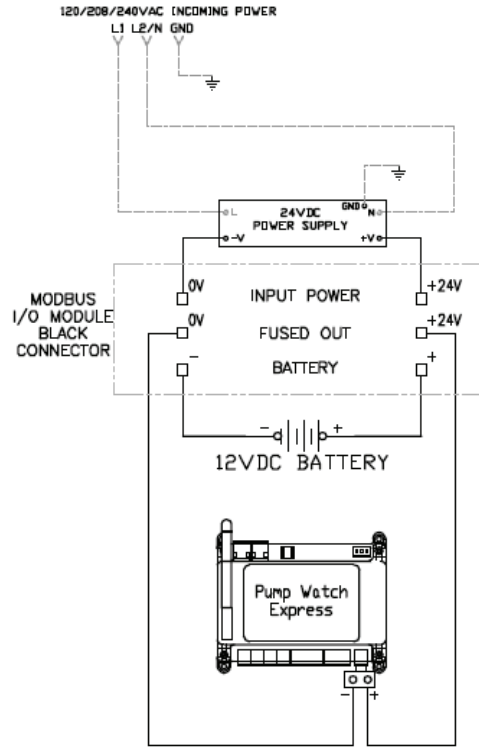
NEMA 4X PANEL

The iON28 Module is available in a NEMA 4X enclosure with the cellular Gateway, power supply and battery backup.



WIRING

SCHEMATIC



MODBUS I/O MODULE

