

Pulses offer a simple way to output the amount of energy that has been measured by a meter (electrical, thermal, gas, water, etc). Pulses are brief bursts of DC (direct current) voltage, with each burst having an abrupt beginning (or rise) and an abrupt ending (or decay), and their output is typically proportional to energy consumed (e.g. 1 pulse = 10kWh).

This posts documents how to change the pulse input voltage threshold on your Wattics Octopus Gateway. The voltage threshold defines the reference value that must be crossed to count a burst of DC voltage as a pulse, as a way to filter out noise and avoid interference. As depicted in the [Pulse wiring instructions](#), the Octopus provides a 24VDC voltage reference to allow pulsed meters to deliver 0-24VDC pulses to any of the Octopus pulse inputs. The Octopus is also configured to count as pulses any voltage transition over a 1.5VDC threshold.

In some occasions, when 3rd party power supplies are used or when a voltage baseline exists, the meter may not deliver clean 0-24V bursts of DC voltage, and may instead deliver bursts of DC voltage from a baseline voltage over the 1.5VDC threshold, e.g. 3-24V bursts. In such a situation, no pulses are counted by the Octopus, and the voltage threshold of the pulse input to which that meter is connected to must be increased to be over the baseline voltage. The following describes the steps to update the voltage threshold for specific pulse inputs of your Octopus device.

#### STEP 1:

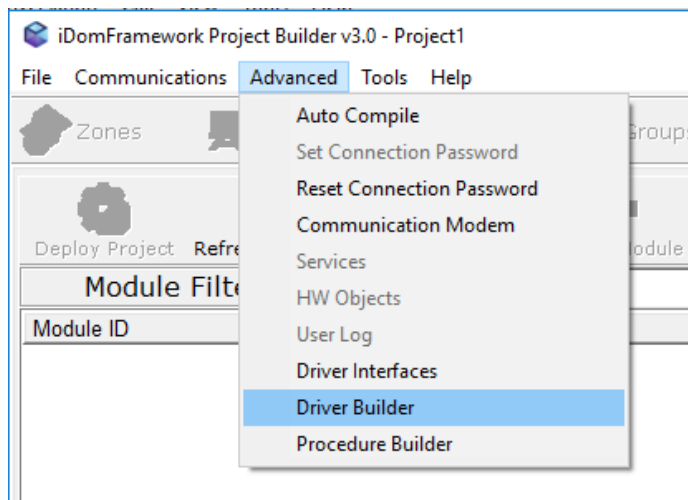
Go to the IDOMPROJECT subfolder (or Sys subfolder) and double click on the iDomProject executable file to run the Firmware Updater software.

PC > Desktop > WATTICS TOOL > WATTICS\_TOOL\_V1.6.1 > WATTICS > IDOMPROJECT

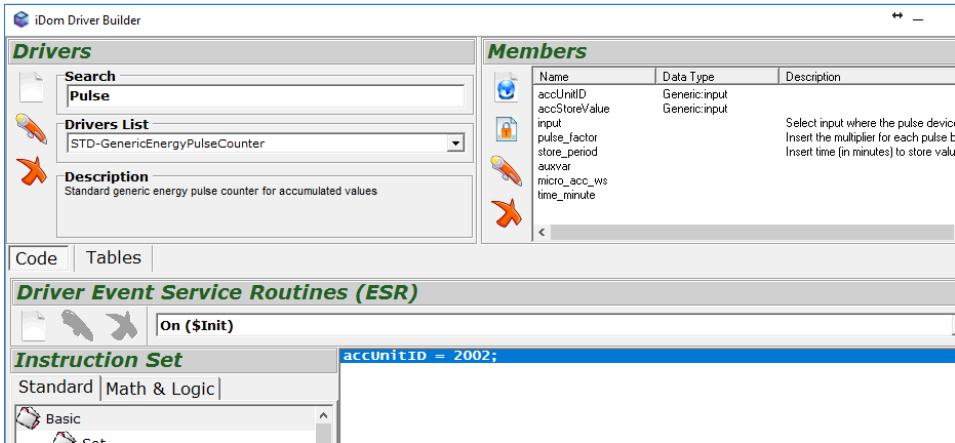
Name	Date modified	Type	Size
datafiles	8/24/2016 12:52 PM	File folder	
datatypes	8/23/2016 2:31 PM	File folder	
debug	5/16/2016 4:16 PM	File folder	
drivers	8/23/2016 2:31 PM	File folder	
firmware	8/23/2016 2:35 PM	File folder	
modules	5/16/2016 4:16 PM	File folder	
plugins	8/23/2016 2:31 PM	File folder	
procedures	8/23/2016 2:31 PM	File folder	
projects	5/31/2016 10:19 AM	File folder	
iDomMulticast.dll	11/16/2012 12:27 ...	Application extens...	163 KB
iDomProjectR705	8/17/2016 7:32 PM	Application	14,167 KB
iDomProtocol32g.dll	9/16/2014 8:20 PM	Application extens...	362 KB

**STEP 2:**

In the top menu, click on **Advanced > Driver Builder**.

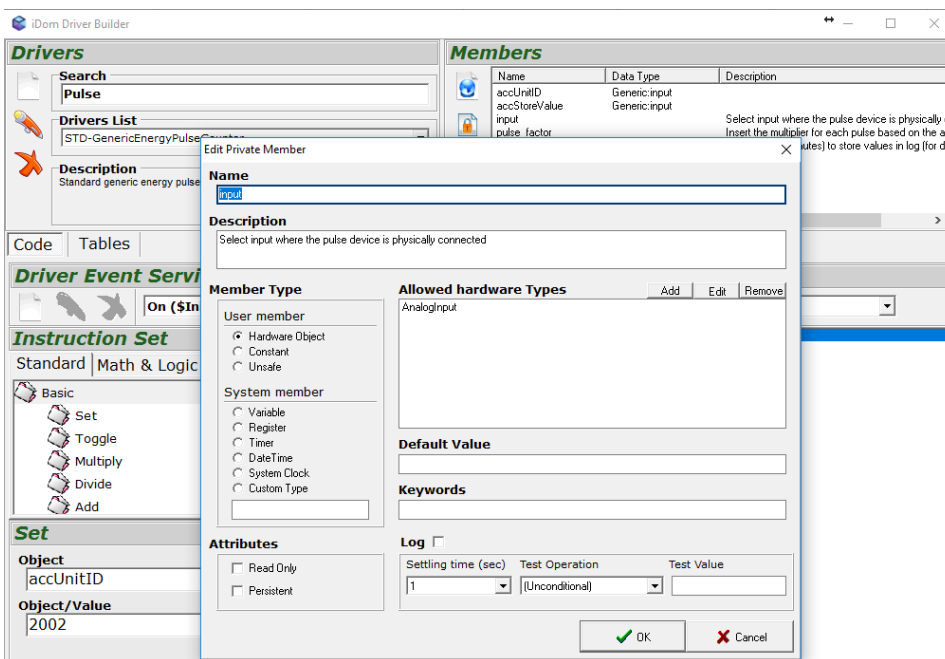
**STEP 3:**

Search for **Pulse**.



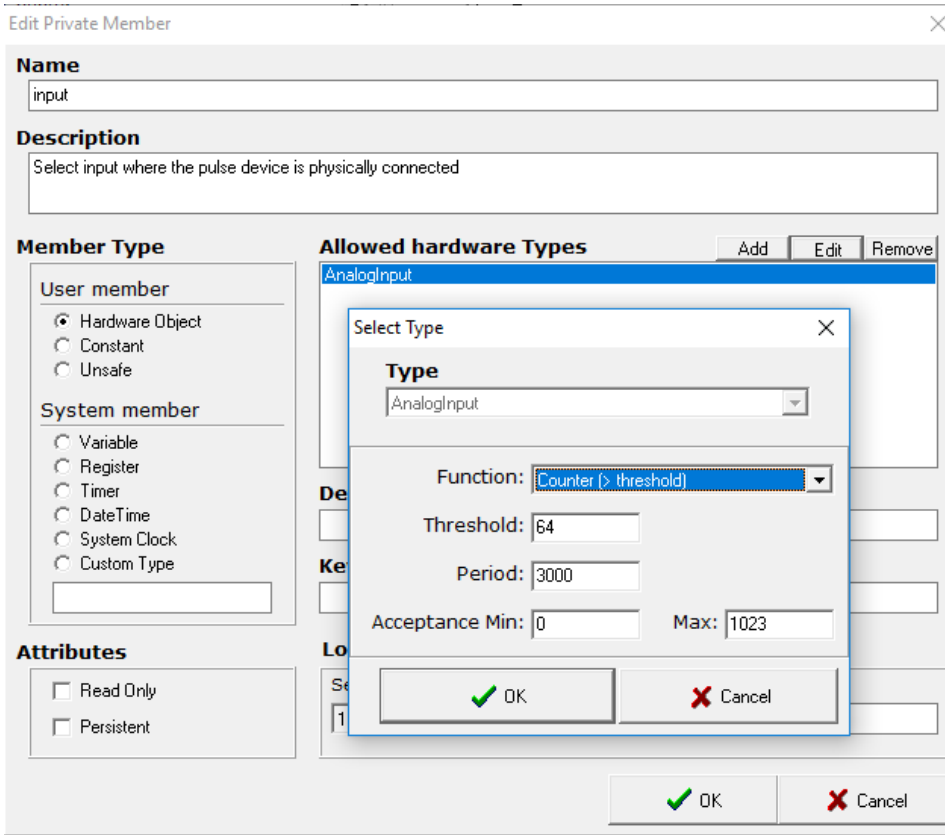
## STEP 4:

Select **STD-GenericEnergyPulseCounter** and double click on **input** in the Members list on the right end side.



## STEP 5:

Select AnalogInput and click on Edit



**Edit Private Member**

**Name**  
input

**Description**  
Select input where the pulse device is physically connected

**Member Type**

- User member
  - Hardware Object
  - Constant
  - Unsafe
- System member
  - Variable
  - Register
  - Timer
  - DateTime
  - System Clock
  - Custom Type

**Attributes**

- Read Only
- Persistent

**Allowed hardware Types** Add Edit Remove

AnalogInput

**Select Type**

Type: AnalogInput

Function: Counter (> threshold)

Threshold: 64

Period: 3000

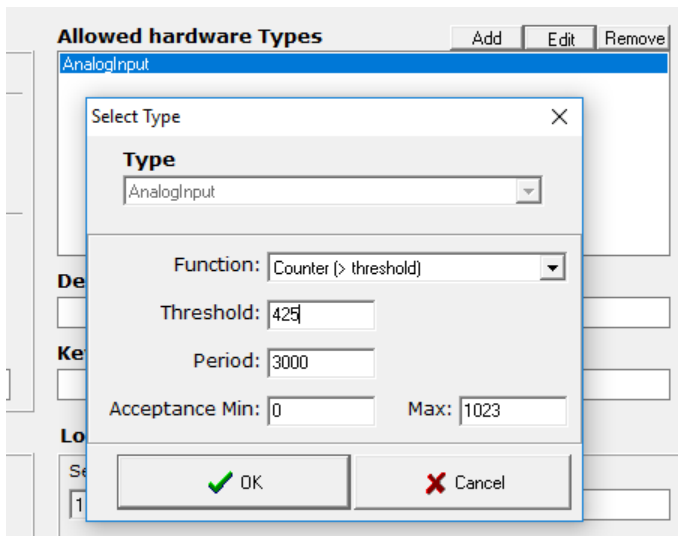
Acceptance Min: 0 Max: 1023

OK Cancel

OK Cancel

**STEP 6:**

Set a new threshold value between 0 and 1023, with 1023 being 24VDC. For instance, a value of 511 would set a threshold at 12VDC.



### STEP 7:

Click OK twice to save the changes, close the IDomProject application, reload your project in the WatticsTool and deploy the project on the Octopus. The project will be compiled with the new voltage threshold onto the Octopus.