| **Test Name** | Pump Controller timer is cancelled on alarm condition. |
| --- | --- |
| **Use Case Tested:** |  |
| **Test Description:** | This test verifies the pump controller timer is cancelled when an alarm is raised. |
| **Pre-conditions** | * Pump Controller is plugged into a USB port. * Arduino IDE is running. * Serial monitor is open, can communicate with pump controller. * Pump is not running. * No active alarms. |
| **Post-conditions** | * Pump is not running. |
| **Notes:** | This test is conducted entirely on the feather. Look for the status messages in the serial monitor. |

|  | **TEST STEP** | **EXPECTED TEST RESULTS** |
| --- | --- | --- |
|  | Issue the ‘T’ command to the pump controller. | The pump controller logs messages to say the pump has started and a 2-minute timer has been set.  Feather LED lights up. |
|  | Before the timer switches the pump off, ground the no flow pin. | The pump controller logs messages to say the pump has been switched off. |
|  | Wait for 2 minutes. | Nothing happens because the timer was cancelled. A scheduled status message may be sent, that is ok. |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test Data Table** | | | | | |
|  | **1** | **2** | **3** | **4** | **5** |
| [Data field 1] | [data set 1 input value for field 1] |  |  |  |  |
| [Data field 2] | [data set 1 input value for field 2] |  |  |  |  |
| [Data field 3] | [data set 1 input value for field 3] |  |  |  |  |

**Results**

10/09/2020

Passed.

Step1.

16:02:23.852 -> Issuing a pump on message with timer value.

16:02:23.852 -> callback got data 3

16:02:23.852 -> Switched pump on.

16:02:23.852 -> Starting one-shot timer.

16:02:23.852 -> Timer in minutes: 2

16:02:23.885 -> Sending status due to state change.

16:02:23.885 -> LoRaWAN will encode and send this message: {'pumpRunning':1,'boreLowLevel':0,'softStartFail':0,'pumpOverload':0,'controllerRestart':0,'highPressure':0,'noFlow':0}

16:02:23.885 -> Sending status byte: 01

16:02:26.010 -> EV\_TXCOMPLETE (includes waiting for RX windows)

Step 2.

16:02:34.016 -> Sending status due to state change.

16:02:34.016 -> Stopping pump due to no flow

16:02:34.016 -> Switched pump off.

16:02:34.050 -> Sending status due to state change.

16:02:34.050 -> LoRaWAN will encode and send this message: {'pumpRunning':0,'boreLowLevel':0,'softStartFail':0,'pumpOverload':0,'controllerRestart':0,'highPressure':0,'noFlow':1}

16:02:34.050 -> Sending status byte: 40

16:02:36.160 -> EV\_TXCOMPLETE (includes waiting for RX windows)

No timer switching pump off messages after a few minutes.