

# UWP 3.0 Driver Notes for Delta Static Var Generator (SVG), Active Power Filtering (APF) and Total Power Factor Correction (TPFC) Systems via Touch Panel HMI

## Using this manual

### Safety Precautions

#### **Authorised Personnel Only**

The product or system described in this documentation must be installed, operated, and maintained by qualified personnel only. NHP accept no responsibility for the consequences of the use of this equipment by unqualified personnel.

A qualified person is one with the necessary skills and knowledge of the construction and operation of the installation of electrical equipment and has been trained to identify and avoid risks.

#### **Appropriate use of NHP, Carlo Gavazzi / Delta Electronics products**

NHP, Carlo Gavazzi or Delta products are intended to be used only for the applications described in the catalogue and technical documentation, which is dedicated to them. If products and components from other manufacturers are used, they must be recommended or approved by NHP, Carlo Gavazzi or Delta Electronics.

Appropriate use of NHP, Carlo Gavazzi or Delta Electronics products during transport, storage, installation, assembly, commissioning, operation, and maintenance is necessary to ensure safe operation and without any problems.

The permissible ambient conditions must be met. The information contained in the technical documentation must be observed.

#### **Publication of responsibility**

The contents of this document have been reviewed to ensure that the reliability of the information is correct at time of publication.

NHP, Carlo Gavazzi or Delta Electronics is not responsible for printing or damage resulting from errors. NHP, Carlo Gavazzi or Delta Electronics reserves the right to make corrections and changes needed in subsequent edition.

## Firmware Notice

The firmware of the products at the creation of the driver is listed below. Errors experienced while using this document may be due to miss matched firmware version. If errors are experienced after a firmware upgrade has been completed, please contact NHP for the latest version of the driver.

This manual has been developed with UWP Firmware V8.4.0.3.



## Summary of Changes

This section highlights the details of changes made since the previous issue of this document.

The versioning convention used to track changes in this document follows the structure **Vx.y.z** where:

**x**: Major revision, where extensive changes are made which is generally incompatible with the previous version. Such changes may include new firmware upgrade and/or features, or removal of information which is no longer relevant or applicable to the previous version.

**y**: Minor revision, where changes made do not change the overall scope of the previous version but may include additional information which complements or corrects the previous version or provides additional clarity on an existing topic.

**z**: Patch version, where small changes are made to correct minor errors or adjust existing text, charts, figures and/or images, and which do not add or remove information from the previous version. Example changes may include spelling corrections, image re-sizing and adjustments, updated images, etc.

Version	Publication date	Changes	By
V 1.0.0		Initial release	J.N.



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## Introduction

The UWP 3.0 has the capability to centralise multiple meters and power components with Modbus RTU or TCP capability. It can act as a central point of information or a gateway to a larger building management or energy management system. To reduce UWP 3.0 commissioning time, drivers have been created for NHP's meters and power components.

This user manual outlines the variables available in the Delta static var generator (SVG), active power filtering (APF) and total power factor correction (TPFC) systems driver. The driver has been created for monitoring purposes only, no write functions have been included in this version. To obtain the write functionality offered by the Delta SVG, APF and TPFC systems, alternate products must be used.

Variables for the extra I/O modules, control functions, LED indications and communication settings of Delta SVG, APF and TPFC systems have been excluded from this version of the driver.

## Who Should Use This Manual?

This manual aims to provide users, electricians, panel builders and maintenance personnel with the technical information required for commissioning and operation of the NHP/Carlo Gavazzi UWP3.0 and NHP/Delta SVG/APF power quality system together.

Users of this document must have at minimum a basic understanding of the following:

- Modbus RTU communication
- Serial RS-485 wiring practices
- Electrical circuit protection

## Applicable Products

- UWP 3.0 Monitoring Gateway and Controller
  - UWP30RSEXXX
- Wall mount SVG systems:
  - PQ-SVGW-50-31-G-4-X-X-T-1A
  - PQ-SVGWM-100-30-G-4-X-X-T-1A
- Floor standing SVG system modules (Connected to UWP 3.0 through the cabinets)
  - PQ-SVGM-xxx-x-x-x-xx-x-xx
- Floor standing SVG and APF system cabinets
  - PQ-SVGC-xxx-xx-x-x-xx-x-xx
- Wall-mount APF systems:
  - PQ-APFW-50-31-G-4-X-X-T-1A
  - PQ-APFWM-100-30-G-4-X-X-T-1A
- Floor standing APF system modules (Connected to UWP 3.0 through the cabinets)
  - PQ-APFM-xxx-x-x-x-xx-x-xx

Wiring and installation instruction of these products can be found in the respective product's user manual. Please see additional resources section for links.



## Additional resources

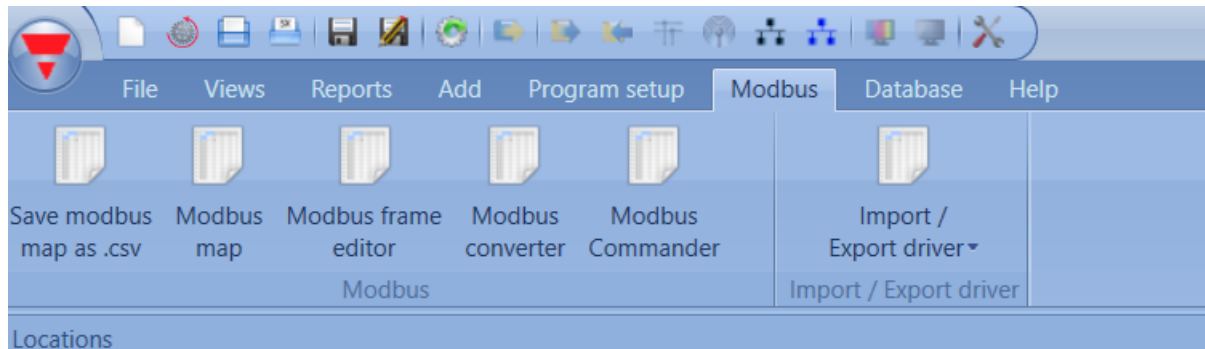
The following resources contain additional information which should be read in conjunction with this document.

Resource	Description
Delta PQC Series APF and SVG Modbus Mapping Guide	Modbus mapping guide, including connection and communication settings for APF and SVG series
UWP 3.0 Installation Manual	Information on installing, mounting, wiring the UWP 3.0 Module.
UWP 3.0 Tool User Manual	Information on configuring and commission the UWP 3.0 Module.
UWP 3.0 WebApp User Manual	Information on setting up the monitoring page, reoccurring reports, and alarms UWP 3.0 Module.

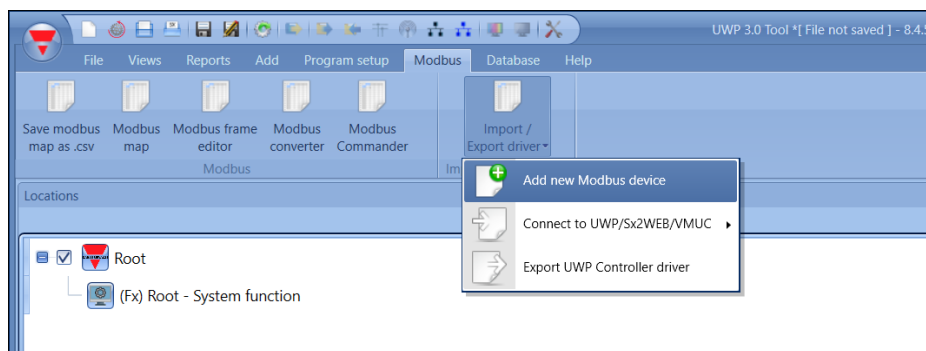
## Adding the Driver to UWP 3.0 Software

1. Download G\_Delta\_APF\_\_SVG\_\_TPFC\_Vx\_y.xml file from the [NHP Energy management website](#).

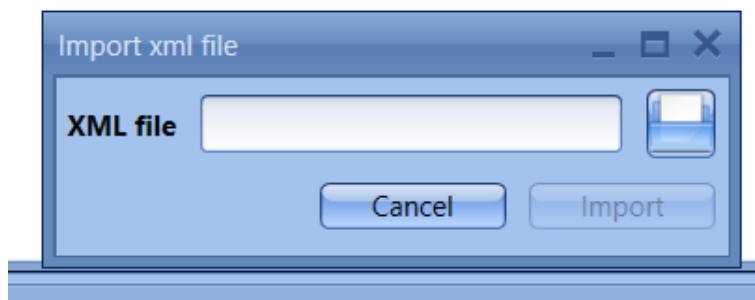
2. In the UWP Tool, go to the Modbus tab, then Import/Export Driver.



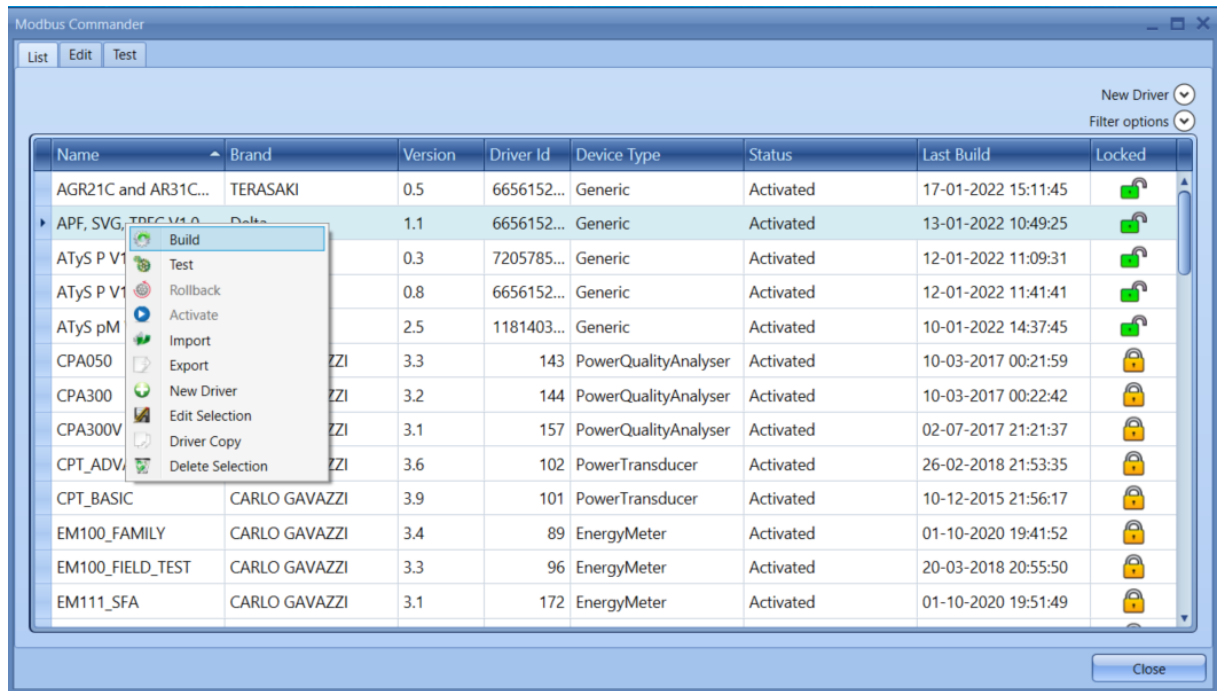
3. Select, Add new Modbus device.



4. Select the folder to browse your documents for the downloaded file. Then click import.



5. Open the Modbus Commander. Select the newly imported driver from the list. Right-click to Build and Activate.

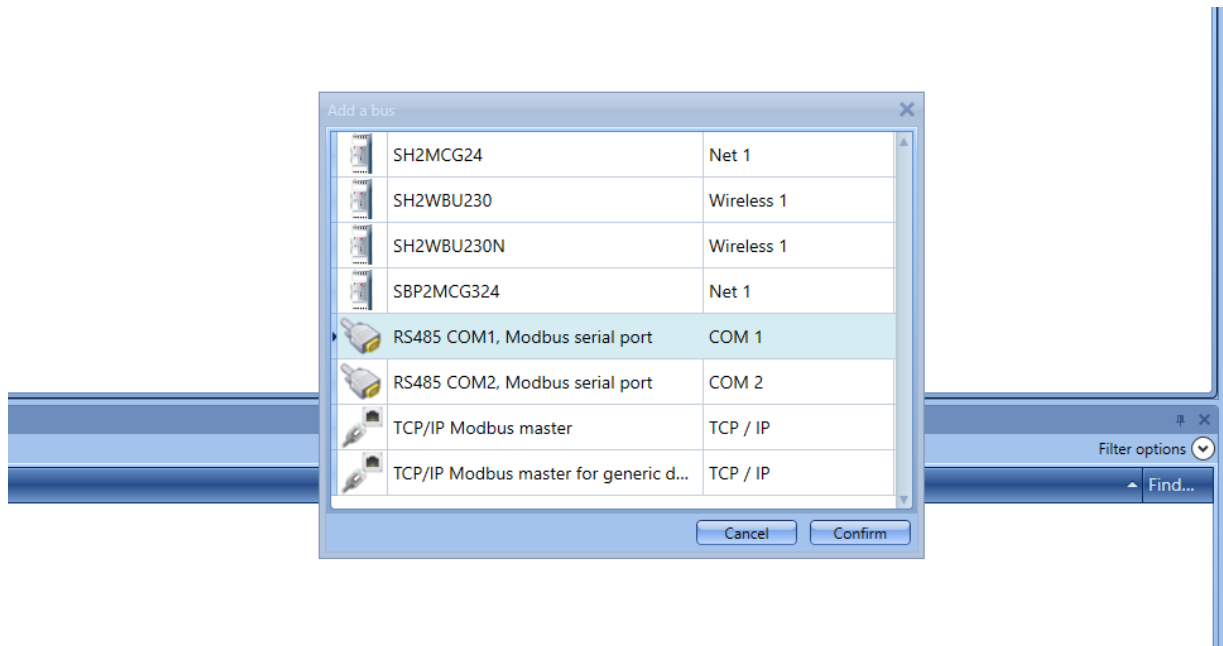


It is now available to be added as a Modbus RTU module into the project.

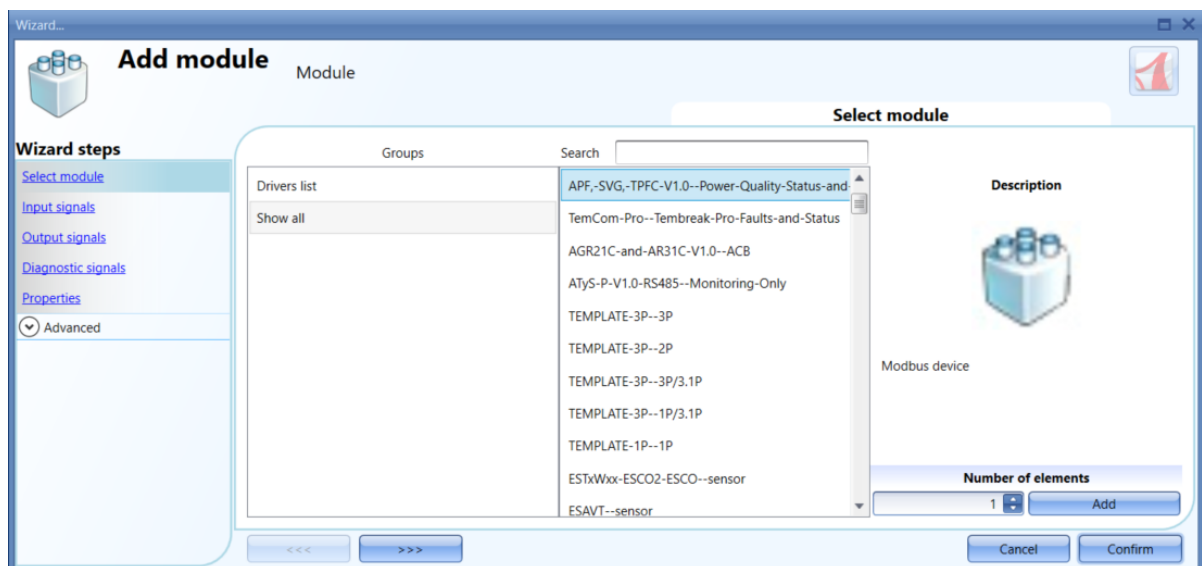


## Adding the APF, SVG, TPFC module as a module to your project

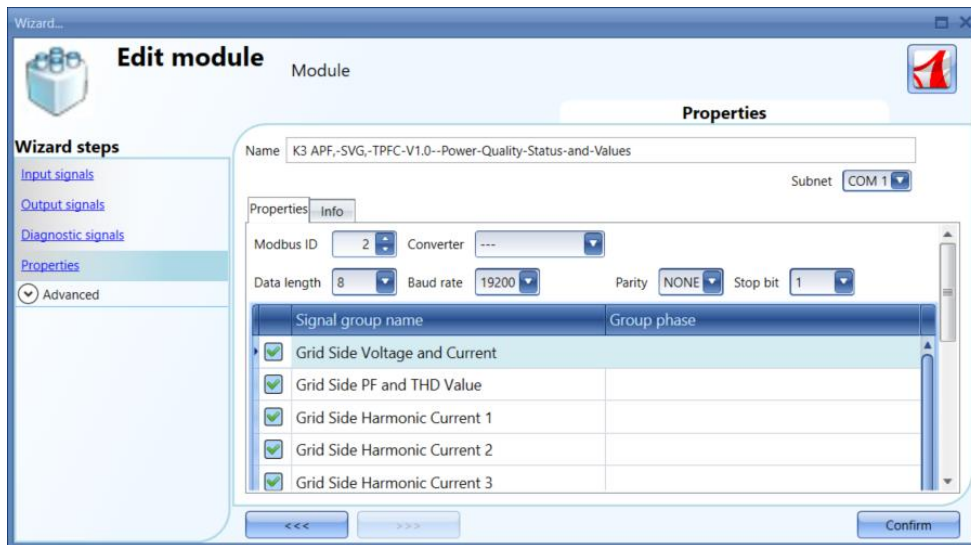
- Go to Add, then Bus – Name the bus and click confirm. Using Modbus RTU RS485 in this example:



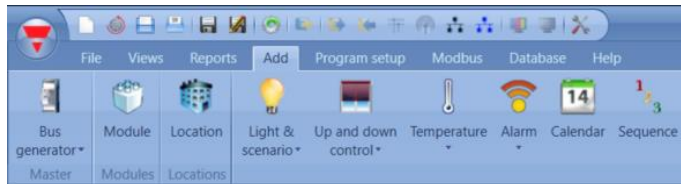
- Select the new bus and click Module. Select the Power Quality driver



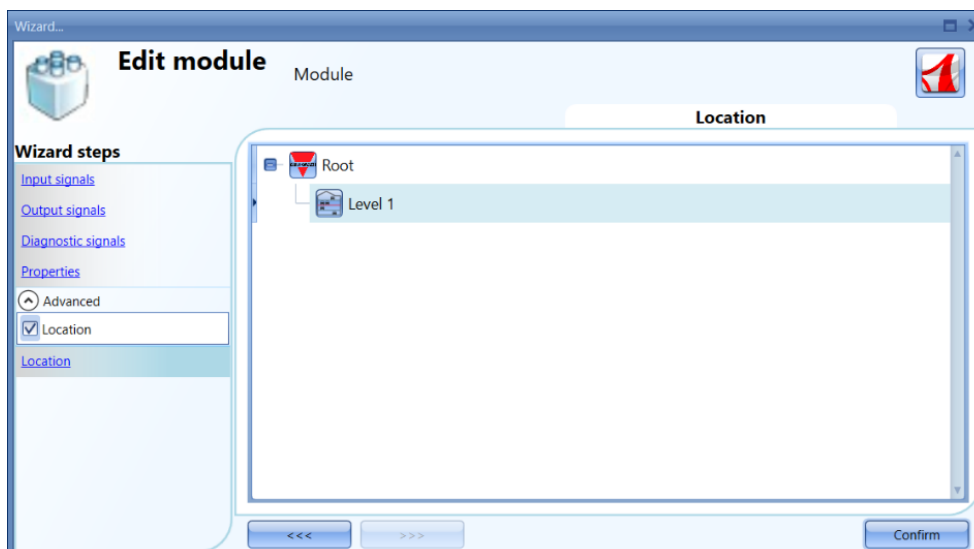
8. Before clicking on confirm go to properties and check the Modbus ID matches that of the applicable device (power system, module, or touchscreen HMI). Refer to Delta PQC Series APF and SVG Modbus Mapping Guide for communication address and designation details. Click confirm.



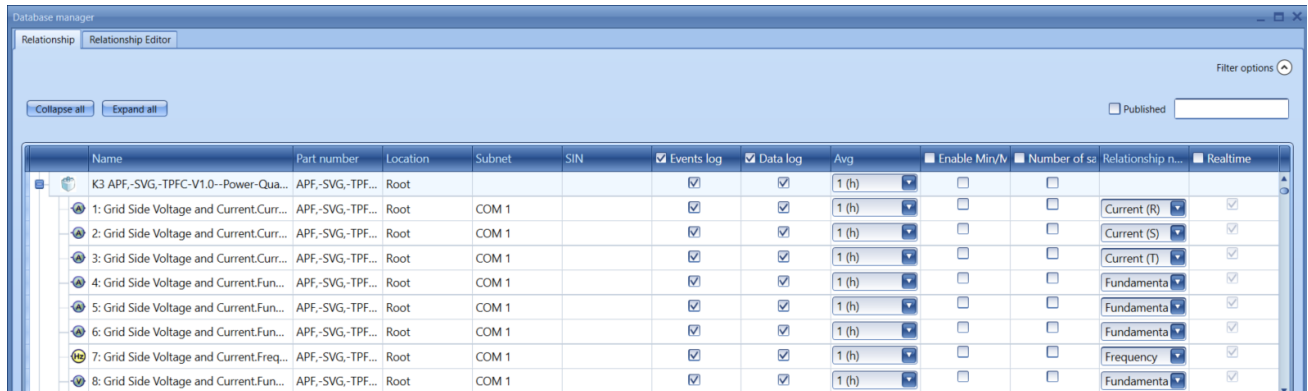
9. For ease of monitoring and future maintenance, the location and naming conventions of the module can be changed at this stage.
  - a. To add a location, click Location. Name and select the location type - you can choose room or building names. Here we have chosen to represent the module by levels. Click confirm.



- b. Once the location is added, click on the module icon.
  - c. Go to advanced → tick location → select the location for the module to be assigned to. Click confirm.



10. Before the setup can be compiled and sent to the controller, you will need to choose how often the data needs to be read.
  - a. Under the Database tab, go to Database Management
  - b. Tick events and data log for the variables to be read and pick a sampling time (1 hour)
  - c. Confirm



Name	Part number	Location	Subnet	SIN	Events log	Data log	Avg	Enable Mir/M	Number of sa	Relationship n...	Realtime
K3 APF,-SVG,-TPFC-V1.0--Power-Qua...	APF,-SVG,-TPF...	Root			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1 (h)	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
1: Grid Side Voltage and Current.Curr...	APF,-SVG,-TPF...	Root	COM 1		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1 (h)	<input type="checkbox"/>	<input type="checkbox"/>	Current (R)	<input checked="" type="checkbox"/>
2: Grid Side Voltage and Current.Curr...	APF,-SVG,-TPF...	Root	COM 1		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1 (h)	<input type="checkbox"/>	<input type="checkbox"/>	Current (S)	<input checked="" type="checkbox"/>
3: Grid Side Voltage and Current.Curr...	APF,-SVG,-TPF...	Root	COM 1		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1 (h)	<input type="checkbox"/>	<input type="checkbox"/>	Current (T)	<input checked="" type="checkbox"/>
4: Grid Side Voltage and Current.Fun...	APF,-SVG,-TPF...	Root	COM 1		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1 (h)	<input type="checkbox"/>	<input type="checkbox"/>	Fundamenta	<input checked="" type="checkbox"/>
5: Grid Side Voltage and Current.Fun...	APF,-SVG,-TPF...	Root	COM 1		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1 (h)	<input type="checkbox"/>	<input type="checkbox"/>	Fundamenta	<input checked="" type="checkbox"/>
6: Grid Side Voltage and Current.Fun...	APF,-SVG,-TPF...	Root	COM 1		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1 (h)	<input type="checkbox"/>	<input type="checkbox"/>	Fundamenta	<input checked="" type="checkbox"/>
7: Grid Side Voltage and Current.Freq...	APF,-SVG,-TPF...	Root	COM 1		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1 (h)	<input type="checkbox"/>	<input type="checkbox"/>	Frequency	<input checked="" type="checkbox"/>
8: Grid Side Voltage and Current.Fun...	APF,-SVG,-TPF...	Root	COM 1		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1 (h)	<input type="checkbox"/>	<input type="checkbox"/>	Fundamenta	<input checked="" type="checkbox"/>

11. Under the File menu, compile the project and download to controller.

## Modbus Communication Address Map

The grouping of the variables has been changed from the original map for the ease of monitoring and grouping on the UWP WebApp. The descriptions in this document are more detailed than the driver as this can be used as a reference.

If the original Delta-PQ Modbus map is required, please contact your local NHP representative.

### Events

Function 3 Code (read only)

Hex. Address	Word count	Description	Unit
2002	1	Event 1 day + Hour	
2003	1	Event 1 Minute + Second	
2001	1	Event 1 Year + Month	
2F9F	1	Event 1000 Minute + Second	
2000	1	Event Code 1	
2004	1	Event Code 2	

### Grid Side Harmonic Current 1

Function 3 Code (read only)

Hex. Address	Word count	Description	Unit
0120	1	Grid R H2 current	A
0121	1	Grid S H2 current	A
0122	1	Grid T H2 current	A
0123	1	Grid R H3 current	A
0124	1	Grid S H3 current	A
0125	1	Grid T H3 current	A
0126	1	Grid R H4 current	A
0127	1	Grid S H4 current	A
0128	1	Grid T H4 current	A
0129	1	Grid R H5 current	A
012A	1	Grid S H5 current	A
012B	1	Grid T H5 current	A
012C	1	Grid R H7 current	A
012D	1	Grid S H7 current	A
012E	1	Grid T H7 current	A
012F	1	Grid R H9 current	A
0130	1	Grid S H9 current	A
0131	1	Grid T H9 current	A
0132	1	Grid R H11 current	A
0133	1	Grid S H11 current	A
0134	1	Grid T H11 current	A
0135	1	Grid R H13 current	A
0136	1	Grid S H13 current	A
0137	1	Grid T H13 current	A

## Grid Side Harmonic Current 2

Function 3 Code (read only)

Hex. Address	Word count	Description	Unit
0138	1	Grid R H17 current	A
0139	1	Grid S H17 current	A
013A	1	Grid T H17 current	A
013B	1	Grid R H19 current	A
013C	1	Grid S H19 current	A
013D	1	Grid T H19 current	A
013E	1	Grid R H23 current	A
013F	1	Grid S H23 current	A
0140	1	Grid T H23 current	A
0141	1	Grid R H25 current	A
0142	1	Grid S H25 current	A
0143	1	Grid T H25 current	A
0144	1	Grid R H29 current	A
0145	1	Grid S H29 current	A
0146	1	Grid T H29 current	A
0147	1	Grid R H31 current	A
0148	1	Grid S H31 current	A
0149	1	Grid T H31 current	A
014A	1	Grid R H35 current	A
014B	1	Grid S H35 current	A
014C	1	Grid T H35 current	A
014D	1	Grid R H37 current	A
014E	1	Grid S H37 current	A
014F	1	Grid T H37 current	A

## Grid Side Harmonic Current 3

Function 3 Code (read only)

Hex. Address	Word count	Description	Unit
0150	1	Grid R H41 current	A
0151	1	Grid S H41 current	A
0152	1	Grid T H41 current	A
0153	1	Grid R H43 current	A
0154	1	Grid S H43 current	A
0155	1	Grid T H43 current	A
0156	1	Grid R H47 current	A
0157	1	Grid S H47 current	A
0158	1	Grid T H47 current	A
0159	1	Grid R H49 current	A
015A	1	Grid S H49 current	A
015B	1	Grid T H49 current	A

## Grid Side PF and THD Value

Function 3 Code (read only)

Hex. Address	Word count	Description	Unit
0107	1	Grid R Active power	kW
0108	1	Grid S Active power	kW
0109	1	Grid T Active power	kW
010A	1	Grid R Reactive power	kvar
010B	1	Grid S Reactive power	kvar
010C	1	Grid T Reactive power	kvar
010D	1	Grid R Apparent power	kVA
010E	1	Grid S Apparent power	kVA
010F	1	Grid T Apparent power	kVA
0110	1	Grid R Power factor	
0111	1	Grid S Power factor	
0112	1	Grid T Power factor	
0113	1	Grid R current THD	%
0114	1	Grid S current THD	%
0115	1	Grid T current THD	%
0119	1	Grid R current THDi (R)	
011A	1	Grid S current THDi (S)	
011B	1	Grid T current THDi (T)	
00FA	1	Grid Voltage THDv (R)	%
00FB	1	Grid Voltage THDv (S)	%
00FC	1	Grid Voltage THDv (T)	%

## Grid Side State

Function 3 Code (read only)

Hex. Address	Word count	Description	Unit
0365	1	Bus Fault	
0366	1	Converter Fault	
0364	1	Grid Fault State	
0368	1	Hardware Fault	
0367	1	Other Faults	

## Grid Side Voltage and Current

Function 3 Code (read only)

Hex. Address	Word count	Description	Unit
0100	1	Grid R current	A
0101	1	Grid S current	A
0102	1	Grid T current	A
00FD	1	Grid frequency	Hz
0104	1	Grid R Fundamental current	A
0105	1	Grid S Fundamental current	A
0106	1	Grid T Fundamental current	A
00F7	1	Grid RS Fundamental Voltage (RMS)	V
00F8	1	Grid ST Fundamental Voltage (RMS)	V
00F9	1	Grid TR Fundamental Voltage (RMS)	V
00F0	1	Grid RS Voltage (RMS)	V
00F1	1	Grid ST Voltage (RMS)	V
00F2	1	Grid TR Voltage (RMS)	V

## Load Side Harmonic Current 1

Function 3 Code (read only)

Hex. Address	Word count	Description	Unit
0220	1	Load R H2 current	A
0221	1	Load S H2 current	A
0222	1	Load T H2 current	A
0223	1	Load R H3 current	A
0224	1	Load S H3 current	A
0225	1	Load T H3 current	A
0226	1	Load R H4 current	A
0227	1	Load S H4 current	A
0228	1	Load T H4 current	A
0229	1	Load R H5 current	A
022A	1	Load S H5 current	A
022B	1	Load T H5 current	A
022C	1	Load R H7 current	A
022D	1	Load S H7 current	A
022E	1	Load T H7 current	A
022F	1	Load R H9 current	A
0230	1	Load S H9 current	A
0231	1	Load T H9 current	A
0232	1	Load R H11 current	A
0233	1	Load S H11 current	A
0234	1	Load T H11 current	A
0235	1	Load R H13 current	A
0236	1	Load S H13 current	A
0237	1	Load T H13 current	A

## Load Side Harmonic Current 2

Function 3 Code (read only)

Hex. Address	Word count	Description	Unit
0238	1	Load R H17 current	A
0239	1	Load S H17 current	A
023A	1	Load T H17 current	A
023B	1	Load R H19 current	A
023C	1	Load S H19 current	A
023D	1	Load T H19 current	A
023E	1	Load R H23 current	A
023F	1	Load S H23 current	A
0240	1	Load T H23 current	A
0241	1	Load R H25 current	A
0242	1	Load S H25 current	A
0243	1	Load T H25 current	A
0244	1	Load R H29 current	A
0245	1	Load S H29 current	A
0246	1	Load T H29 current	A
0247	1	Load R H31 current	A
0248	1	Load S H31 current	A
0249	1	Load T H31 current	A
024A	1	Load R H35 current	A
024B	1	Load S H35 current	A
024C	1	Load T H35 current	A
024D	1	Load R H37 current	A
024E	1	Load S H37 current	A
024F	1	Load T H37 current	A

## Load Side Harmonic Current 3

Function 3 Code (read only)

Hex. Address	Word count	Description	Unit
0250	1	Load R H41 current	A
0251	1	Load S H41 current	A
0252	1	Load T H41 current	A
0253	1	Load R H43 current	A
0254	1	Load S H43 current	A
0255	1	Load T H43 current	A
0256	1	Load R H47 current	A
0257	1	Load S H47 current	A
0258	1	Load T H47 current	A
0259	1	Load R H49 current	A
025A	1	Load S H49 current	A
025B	1	Load T H49 current	A



## Load Side PF and THD Value

Function 3 Code (read only)

Hex. Address	Word count	Description	Unit
0207	1	Load R Active power	kW
0208	1	Load S Active power	kW
0209	1	Load T Active power	kW
020A	1	Load R Reactive power	kvar
020B	1	Load S Reactive power	kvar
020C	1	Load T Reactive power	kvar
020D	1	Load R Apparent power	kVA
020E	1	Load S Apparent power	kVA
020F	1	Load T Apparent power	kVA
0210	1	Load R Power factor	
0211	1	Load S Power factor	
0212	1	Load T Power factor	
0213	1	Load R current THD	0.1%
0214	1	Load S current THD	0.1%
0215	1	Load T current THD	0.1%
0219	1	Load R current Cosphy	
021A	1	Load S current Cosphy	
021B	1	Load T current Cosphy	

## Load Side Voltage and Current

Function 3 Code (read only)

Hex. Address	Word count	Description	Unit
0200	1	Load R current	A
0201	1	Load S current	A
0202	1	Load T current	A
0204	1	Load R Fundamental current	A
0205	1	Load S Fundamental current	A
0206	1	Load T Fundamental current	A

## Output

Function 3 Code (read only)

Hex. Address	Word count	Description	Unit
0300	1	Output R current	A
0301	1	Output S current	A
0302	1	Output T current	A
0304	1	Output R Fundamental current	A
0305	1	Output S Fundamental current	A
0306	1	Output T Fundamental current	A

## Output Harmonic Current 1

Function 3 Code (read only)

Hex. Address	Word count	Description	Unit
0320	1	Output R H2 current	A
0321	1	Output S H2 current	A
0322	1	Output T H2 current	A
0323	1	Output R H3 current	A
0324	1	Output S H3 current	A
0325	1	Output T H3 current	A
0326	1	Output R H4 current	A
0327	1	Output S H4 current	A
0328	1	Output T H4 current	A
0329	1	Output R H5 current	A
032A	1	Output S H5 current	A
032B	1	Output T H5 current	A
032C	1	Output R H7 current	A
032D	1	Output S H7 current	A
032E	1	Output T H7 current	A
032F	1	Output R H9 current	A
0330	1	Output S H9 current	A
0331	1	Output T H9 current	A
0332	1	Output R H11 current	A
0333	1	Output S H11 current	A
0334	1	Output T H11 current	A
0335	1	Output R H13 current	A
0336	1	Output S H13 current	A
0337	1	Output T H13 current	A

## Output Harmonic Current 2

Function 3 Code (read only)

Hex. Address	Word count	Description	Unit
0338	1	Output R H17 current	A
0339	1	Output S H17 current	A
033A	1	Output T H17 current	A
033B	1	Output R H19 current	A
033C	1	Output S H19 current	A
033D	1	Output T H19 current	A
033E	1	Output R H23 current	A
033F	1	Output S H23 current	A
0340	1	Output T H23 current	A
0341	1	Output R H25 current	A
0342	1	Output S H25 current	A
0343	1	Output T H25 current	A
0344	1	Output R H29 current	A
0345	1	Output S H29 current	A
0346	1	Output T H29 current	A
0347	1	Output R H31 current	A
0348	1	Output S H31 current	A
0349	1	Output T H31 current	A
034A	1	Output R H35 current	A
034B	1	Output S H35 current	A
034C	1	Output T H35 current	A
034D	1	Output R H37 current	A
034E	1	Output S H37 current	A
034F	1	Output T H37 current	A

## Output Harmonic Current 3

Function 3 Code (read only)

Hex. Address	Word count	Description	Unit
0350	1	Output R H41 current	A
0351	1	Output S H41 current	A
0352	1	Output T H41 current	A
0353	1	Output R H43 current	A
0354	1	Output S H43 current	A
0355	1	Output T H43 current	A
0356	1	Output R H47 current	A
0357	1	Output S H47 current	A
0358	1	Output T H47 current	A
0359	1	Output R H49 current	A
035A	1	Output S H49 current	A
035B	1	Output T H49 current	A

## Output PF and THD Value

Function 3 Code (read only)

Hex. Address	Word count	Description	Unit
0307	1	Output R Active power	kW
0308	1	Output S Active power	kW
0309	1	Output T Active power	kW
030A	1	Output R Reactive power	kvar
030B	1	Output S Reactive power	kvar
030C	1	Output T Reactive power	kvar
030D	1	Output R Apparent power	kVA
030E	1	Output S Apparent power	kVA
030F	1	Output T Apparent power	kVA
0310	1	Output R Power factor	
0311	1	Output S Power factor	
0312	1	Output T Power factor	
0313	1	Output R current THD	0.1%
0314	1	Output S current THD	0.1%
0315	1	Output T current THD	0.1%

## Power Module 1 (PM1) State

Function 3 Code (read only)

Hex. Address	Word count	Description	Unit
0465	1	PM1 Bus Fault	
0466	1	PM1 Converter Fault	
0464	1	PM1 Grid Fault	
0468	1	PM1 Hardware Fault	
0467	1	PM1 Other Fault	

## Power Module 2 (PM2) State

Function 3 Code (read only)

Hex. Address	Word count	Description	Unit
0565	1	PM2 Bus Fault	
0566	1	PM2 Converter Fault	
0564	1	PM2 Grid Fault	
0568	1	PM2 Hardware Fault	
0567	1	PM2 Other Fault	

## Power Module 3 (PM3) State

Function 3 Code (read only)

Hex. Address	Word count	Description	Unit
0665	1	PM3 Bus Fault	
0666	1	PM3 Converter Fault	
0664	1	PM3 Grid Fault	
0668	1	PM3 Hardware Fault	
0667	1	PM3 Other Fault	

## Power Module 4 (PM4) State

Function 3 Code (read only)

Hex. Address	Word count	Description	Unit
0765	1	PM4 Bus Fault	
0766	1	PM4 Converter Fault	
0764	1	PM4 Grid Fault	
0768	1	PM4 Hardware Fault	
0767	1	PM4 Other Fault	

## Power Module 5 (PM5) State

Function 3 Code (read only)

Hex. Address	Word count	Description	Unit
0865	1	PM5 Bus Fault	
0866	1	PM5 Converter Fault	
0864	1	PM5 Grid Fault	
0868	1	PM5 Hardware Fault	
0867	1	PM5 Other Fault	

## Power Module 6 (PM6) State

Function 3 Code (read only)

Hex. Address	Word count	Description	Unit
0965	1	PM6 Bus Fault	
0966	1	PM6 Converter Fault	
0964	1	PM6 Grid Fault	
0968	1	PM6 Hardware Fault	
0967	1	PM6 Other Fault	

## Power Module 7 (PM7) State

Function 3 Code (read only)

Hex. Address	Word count	Description	Unit
0A65	1	PM7 Bus Fault	
0A66	1	PM7 Converter Fault	
0A64	1	PM7 Grid Fault	
0A68	1	PM7 Hardware Fault	
0A67	1	PM7 Other Fault	

## Power Module Temperatures

Function 3 Code (read only)

Hex. Address	Word count	Description	Unit
036E	1	PM0 Ambient Temperature	°C
046E	1	PM1 Ambient Temperature	°C
056E	1	PM2 Ambient Temperature	°C
066E	1	PM3 Ambient Temperature	°C
076E	1	PM4 Ambient Temperature	°C
086E	1	PM5 Ambient Temperature	°C
096E	1	PM6 Ambient Temperature	°C
0A6E	1	PM7 Ambient Temperature	°C

## Power Module Communication Status

Function 3 Code (read only)

Hex. Address	Word count	Description	Unit
003A	1	Communication Status	