



# AcuRev 2020 Power & Energy Meter Web Manual



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Please read this manual carefully before installation, operation and maintenance of the AcuRev 1310 series meter. The following symbols in this manual are used to provide warning of danger or risk during the installation and operation of the meters.



**Electric Shock Symbol: Carries information about procedures which must be followed to reduce the risk of electric shock and danger to personal health.**



**Safety Alert Symbol: Carries information about circumstances which if not considered may result in injury or death.**

Prior to maintenance and repair, the equipment must be de-energized and grounded. All maintenance work must be performed by qualified, competent accredited professionals who have received formal training and have experience with high voltage and current devices. Accuenergy shall not be responsible or liable for any damages or injuries caused by improper meter installation and/or operation.

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*AcuRev 2020* Power & Energy Meter

## Chapter 1: Introduction

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## Chapter 2: Functional Description of Ethernet



## Chapter 1 - Introduction to Ethernet

Ethernet was originally developed by Xerox and then further developed by DEC and Intel. This networking technology uses Carrier Sense Multiple Access with Collision Detection (CDSM/CD) protocol and provides transmission speeds up to 100Mbps.

Ethernet is not a network but more of a standard. It is the most current communication standard Local Area Network(LAN). This standard defines the type of cable that is used and the method of Signal Processing.

## Chapter 2 - Functional Description of Ethernet Module

Please read the Technical Data and specifications of the Ethernet module in the Appendix prior to using it.

The AcuRev 2020-WEB supports the **Modbus-TCP** protocol. The meter is a slave device that can only respond to queries. The default value for the *Modbus Port* is 502. The user defined range is 2000~5999.

The AcuRev 2020-WEB supports the SMTP protocol. It has the ability to send emails based on a time interval or when there is a triggered event. It can send mail from encrypted servers and servers that use different SMTP ports.

The HTTPS protocol is also supported. It is used as an HTTPS server and the default value of the protocol port is 443.

Using the HTTPS protocol, the AcuRev 2020-WEB meter can send post requests to both HTTP and HTTPS servers.

*The following are all the protocols supported by the AcuRev 2020-WEB:*

- **Modbus TCP**
- **BACnet-IP**
- **SNMP V3**
- **SMTP**
- **SNTP**
- **HTTP/HTTPS**
- **FTP**
- **SFTP**
- **WiFi WPA**



*AcuRev 2020* Power & Energy Meter

## Chapter 3: Appearance & Dimensions

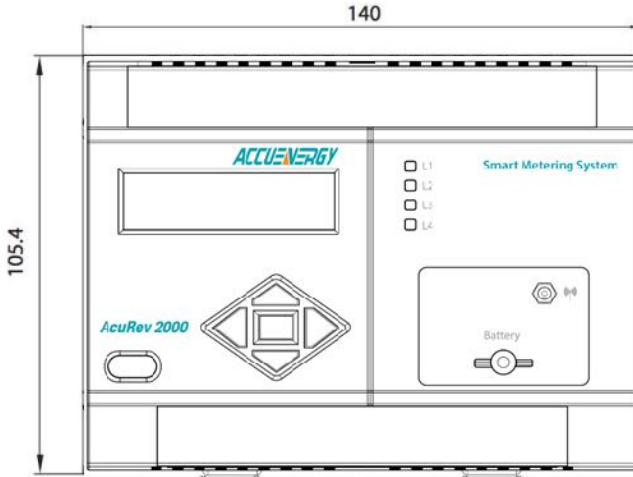
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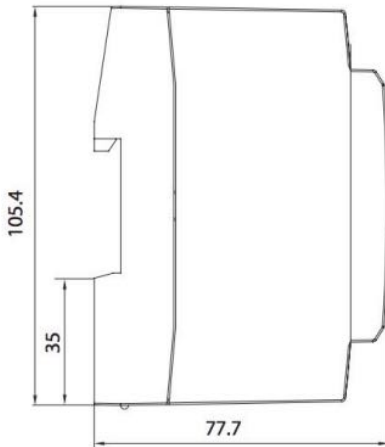
## Chapter 3 - Appearance & Dimensions

All units listed below are in millimeters (mm)

### Base unit:

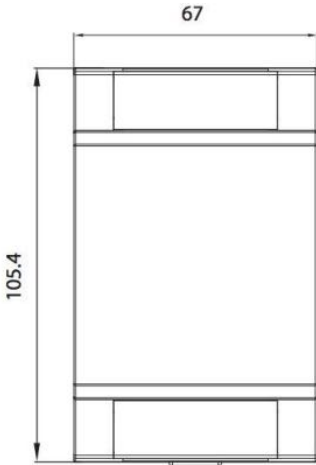


Front View

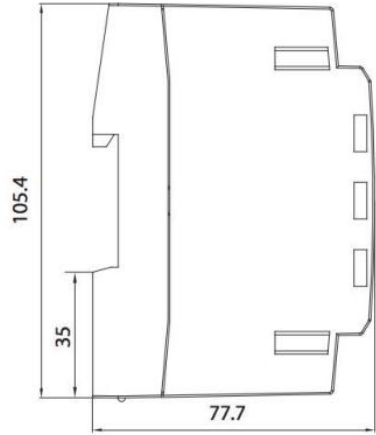


Side View

EM module:

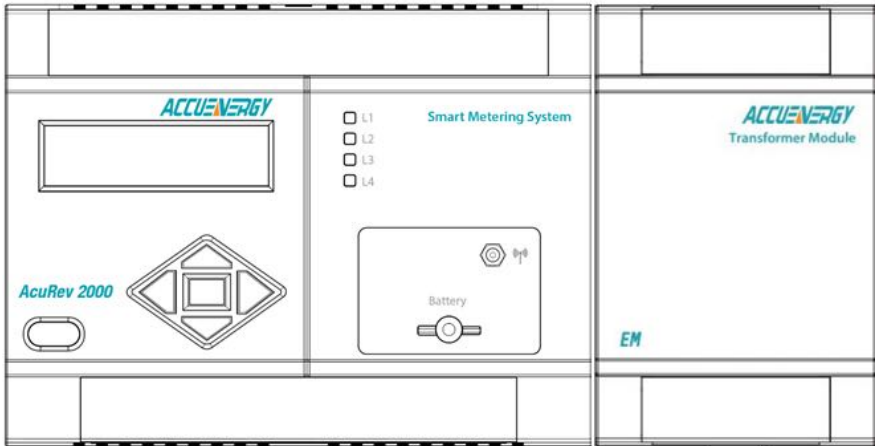


Front View

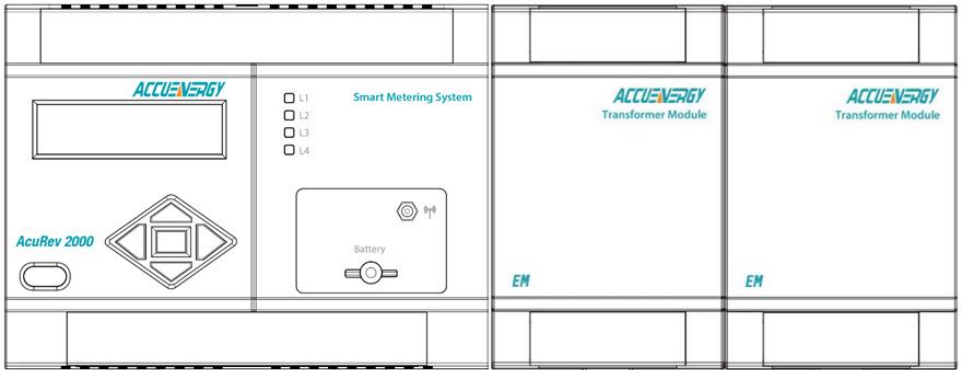


Side View

Meter with 1EM module:



Meter with 2EM module:



*AcuRev 2020* Power & Energy Meter

## Chapter 4: Installation

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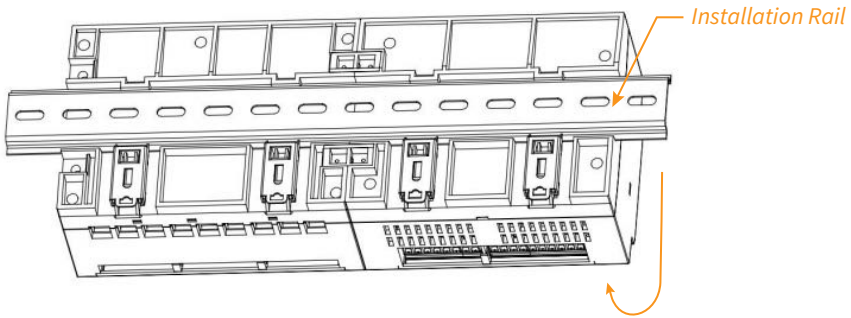
## Chapter 5: Definition of RJ45



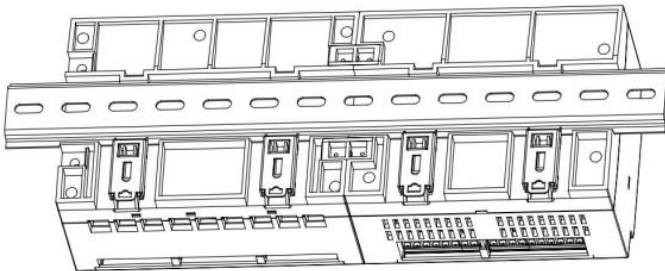
## Chapter 4 - Installation

The AcuRev 2020-WEB meter is a DIN rail mounted meter, which fits 35 mm standard rails.

1. Insert the meter groove all the way into the rail, and flip the meter case as Figure below shows, making the meter mounted into the rail.

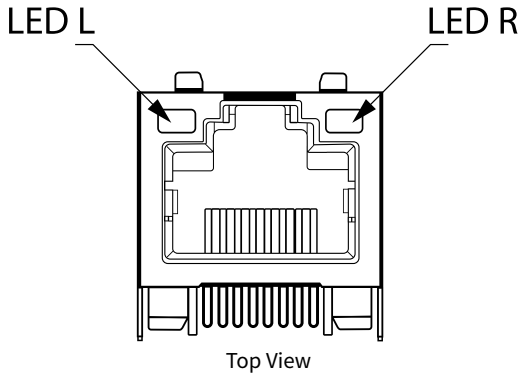


2. Use the metal clips to tighten the rail and installation will be completed.



## Chapter 5 - Definition of RJ45

The AcuRev 2020-WEB uses a standard RJ45 connector to access the Ethernet network. The mechanical and electrical characteristics of the connector are consistent with the requirements of IEC 603-7.



Pin number	Name	Description
1	TX+	Tranceive Data+
2	TX-	Tranceive Data-
3	RX+	Receive Data+
4	n/c	Not connected
5	n/c	Not connected
6	RX-	Receive Data-
7	n/c	Not connected
8	n/c	Not connected

**LED\_L (Yellow):** Displays the speed status. When the LED is 'ON' it indicates 100Mbps, when the LED is 'OFF' it represents a speed of 10Mbps.

**LED\_R (Green):** Displays the link and activity status. When the LED is 'ON' it indicates the link status. When the LED is flashing it indicates that there is activity.

*AcuRev 2020* Power & Energy Meter

## Chapter 6: Initializing the Ethernet module

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## Chapter 7: Cable





## Chapter 6 - Initializing the Ethernet module

The *default settings* in the AcuRev 2020-WEB series meter are as followed:

IP Address: 192.168.1.254

Subnet Mask: 255.255.255.0

Gateway: 192.168.1.1

Primary DNS Server: 8.8.8.8

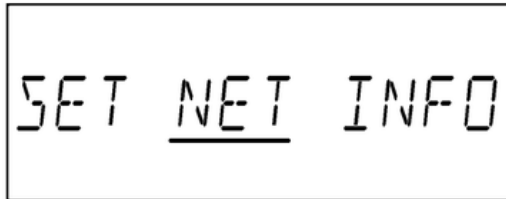
Secondary DNS Server:8.8.4.4

Modbus Port: 502

HTTP Port:80

This information can be found by using the buttons from the meter display. The following is how to configure the Ethernet module settings from the display:

- From the main menu display, press the **>** key until the **NET** menu is reached. Press **OK** to enter the NET settings.



- A password screen will appear. Enter the password if there is one configured, otherwise this can be left as the default and press **OK** to continue.



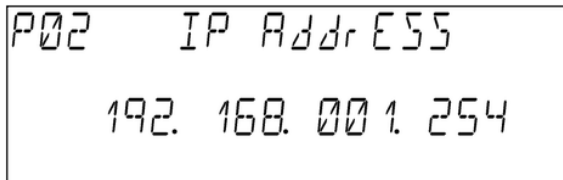
- The first screen is the **P01 DHCP setting** page. By default this is set to **MANU**. To change the setting to **AUTO** press the **OK** button to enter edit mode, then press **>** to change the setting and then **OK** to confirm.



**Note:** If the DHCP is selected as Auto, the Ethernet module needs to be rebooted before it can be assigned with the new IP address.

Press **>** to navigate to the next page which is **P02 IP Address**. This displays the meters IP address that will be used to access the web interface of the AcuRev 2020-Web meter. If the DHCP is set to Auto, this is where the IP address will be generated from the network. Users can configure the IP address if the DHCP is set to Manual. To configure the IP address:

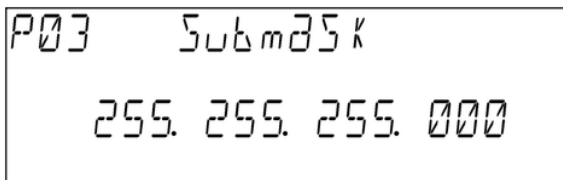
- Press **OK** to enter the edit mode, the first digit will be flashing.
- Use the **^** and **v** arrow keys to increase and decrease the digit value.
- Use the **>** and **<** arrow keys to navigate to different digits.
- Once the IP address is set press **OK** to confirm the setting.



The image shows a rectangular LCD display with a black border. The text is displayed in a monospaced font. The top line reads "P02 IP ADDRESS" and the bottom line reads "192. 168. 001. 254".

Press **>** to move to the next page which is **P03 Submask**. This is the meters submask setting. If the DHCP is set to Auto, the submask will be generated by the network. If the DHCP is set to Manual, the following steps can be used to configure the submask:

- Press **OK** to enter the edit mode, the first digit will be flashing.
- Use the **^** and **v** arrow keys to increase and decrease the digit value.
- Use the **>** and **<** arrow keys to navigate to different digits.
- Once the submask is set press **OK** to confirm the setting.



The image shows a rectangular LCD display with a black border. The text is displayed in a monospaced font. The top line reads "P03 Submask" and the bottom line reads "255. 255. 255. 000".

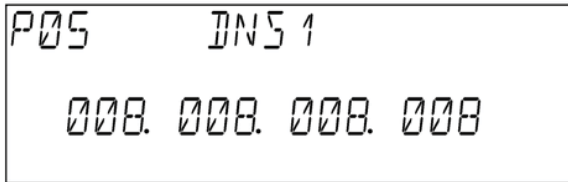
Press > to move to the next page which is **P04 Gateway**. This is the meters gateway IP setting. If the DHCP is set to Auto, the gateway IP will be generated by the network. If the DHCP is set to Manual, the following steps can be used to configure the gateway:

- Press **OK** to enter the edit mode, the first digit will be flashing.
- Use the ^ and v arrow keys to increase and decrease the digit value.
- Use the > and < arrow keys to navigate to different digits.
- Once the gateway is set press **OK** to confirm the setting.



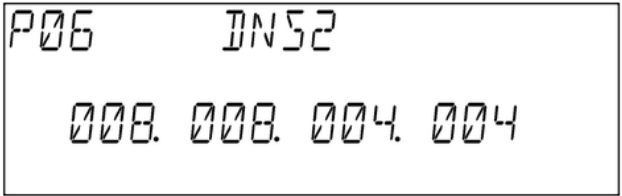
Press > to move to the next page which is **P04 Gateway**. This is the meters gateway IP setting. If the DHCP is set to Auto, the gateway IP will be generated by the network. If the DHCP is set to Manual, the following steps can be used to configure the gateway:

- Press **OK** to enter the edit mode, the first digit will be flashing.
- Use the ^ and v arrow keys to increase and decrease the digit value.
- Use the > and < arrow keys to navigate to different digits.
- Once the DNS1 is set press **OK** to confirm the setting.



Press > to move to the next page which is **P06 DNS2**. This is the meters DNS Secondary Server setting. To configure the DNS2 setting:

- Press **OK** to enter the edit mode, the first digit will be flashing.
- Use the ^ and v arrow keys to increase and decrease the digit value.
- Use the > and < arrow keys to navigate to different digits.
- Once the DNS2 is set press **OK** to confirm the setting.



Press > to move to the next page which is **P07 Modbus TCP/IPPort** screen. This is the meters Modbus Port setting. By default it is set to port 502. To change the Modbus Port setting:

- Press **OK** to enter the edit mode, the first digit will be flashing.
- Use the ^ and v arrow keys to increase and decrease the digit value.
- Use the > and < arrow keys to navigate to different digits.
- Once the Modbus Port is set press **OK** to confirm the setting.



Press > to move to the next page which is **P08 Http Port**. This is the meters HTTP Port setting. By default the meters HTTP Port is set to 80. To change the HTTP Port setting:

- Press **OK** to enter the edit mode, the first digit will be flashing.
- Use the ^ and v arrow keys to increase and decrease the digit value.
- Use the > and < arrow keys to navigate to different digits.
- Once the HTTP Port is set press **OK** to confirm the setting.

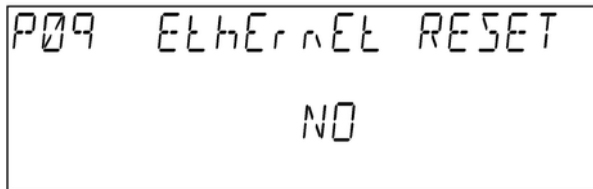


Press > to move to the next page which is **P09 Ethernet RESET**. From this page the user can reset the communications module or reset the communications module back to its default settings.

How to perform a module reset:

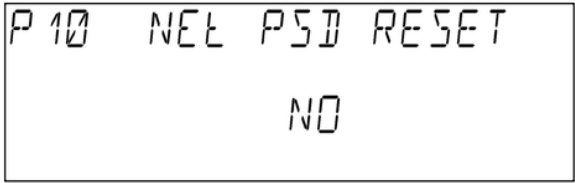
- Press **OK** to edit the setting, the setting will be flashing.
- Press the ^ and v arrow until you reach the **YES**.
- Press **OK** to confirm the reset.

***NOTE:** A module reset must be performed if any of the meters network settings are modified or changed in order for the meter to save the settings.*



Press > to move to the next page which is **P10 PSD RESET**. From this page the user can reset the network password back to default. To change this setting:

- Press **OK** to edit the setting, the setting will be flashing.
- Press the ^ and v arrow until you reach the **YES**.
- Press **OK** to confirm the reset.



## Chapter 7 - Cable

An RJ45 cable is needed to connect the meter to the network.

A shielded twisted pair cable(standard 568A or standard 568B) is recommended as reference to the EIA/TIA standard.

## Chapter 8: Connection Method

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### 8.1 Direct Ethernet Connection Method

### 8.2 Direct Connect to Router/Switch

### 8.3 WiFi Connection Method



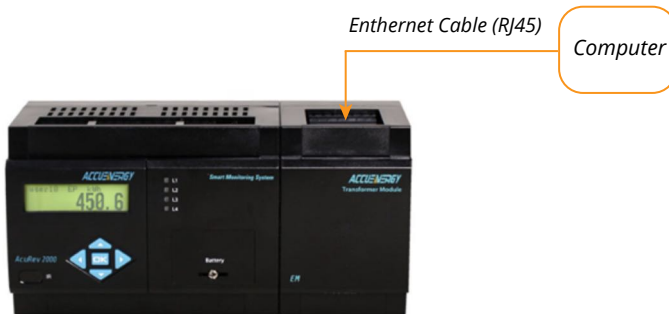


## Chapter 8 - Connection Method

### 8.1 Direct Ethernet Connection Method

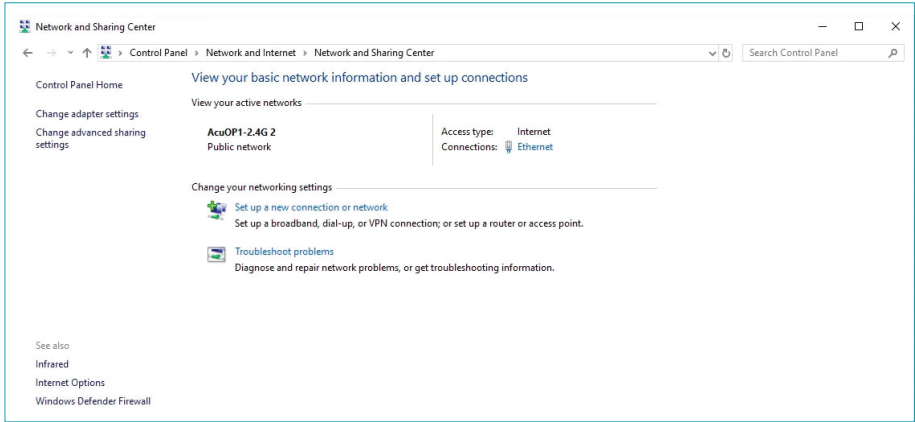
The AcuRev 2020-WEB can be connected to a computer using a crossover cable(standard 568A). The AcuRev 2020-WEB meter supports Modbus-TCP and HTTPS Functions for this method of connection.

*Physical Connection:*

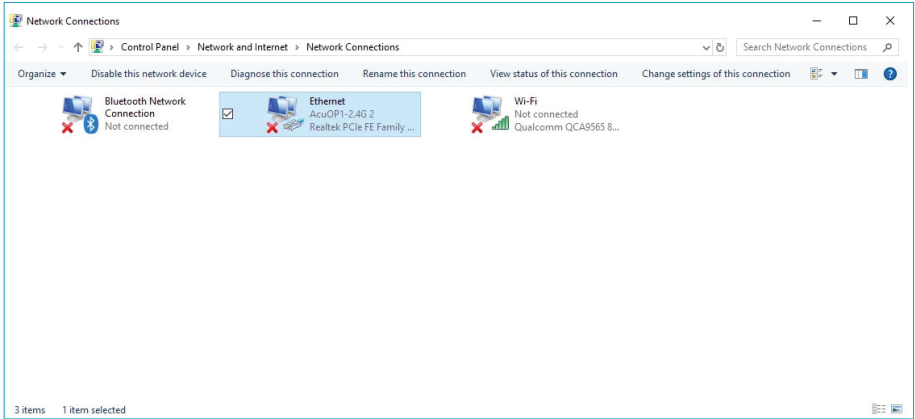


To connect meter directly to the computer, the following can be done using a computer running the Windows OS:

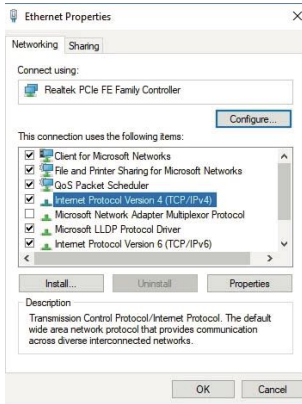
- Manually connect the meter via Ethernet cable to the computer
- Open the control panel of your computer, and select **Network and Internet**.
- Next Select **Network Sharing Center**.



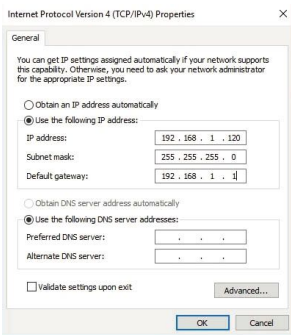
- On the left panel of the screen, select 'Change adapter settings'!
- Right click on 'Ethernet' and select properties.



- Select **Internet Protocol Version 4 (TCP/IPv4)** and click on **Properties**.



- Click on **Use the following IP address** and enter in an IP number so that meter and computer are in the same local network range. For example, if the meter has IP address of 192.168.1.254, then the computer must be assigned with a IP 192.168.1.xxx, where xxx can be any number but cannot be the same as the value the meter has.



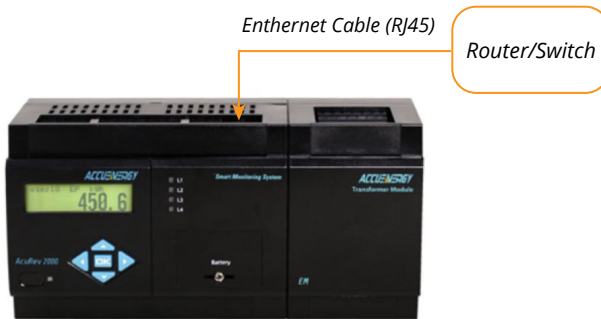
- Once you have entered in the IP address, enter in the subnet mask, it should be set to 255.255.255.0.
- Click **OK** to save the settings.

Now that the computers IP is configured within the same subnet as the meters IP, you can access the meters web server by entering the meters IP address into a web browser.

## 8.2 Direct Connect to Router/Switch

The AcuRev 2020-WEB can be connected to a router or switch using a patch cable. The DHCP can be configured to Auto where the router assign the meter with an IP address or the DHCP can be configured to Manual to set an IP address. Refer to chapter 6 for the steps on changing the settings from the meters display.

*Physical Connection:*

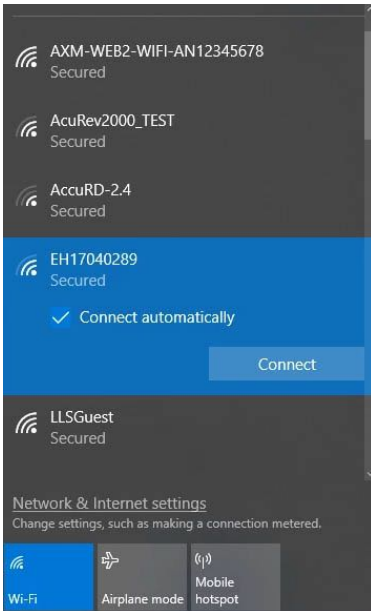


Once the router/switch assigns the meter an IP address, enter that IP address into a web browser to access the meters web interface.

### 8.3 WiFi Connection Method

The AcuRev 2020-WEB can be connected through a WiFi network.

Once powered on the AcuRev 2020 will appear in the list of WiFi networks available with the SSID or name of the wireless network as the **serial number of the AcuRev 2020 meter**. By default the network key or password will be **accuenergy**.



By default the AcuRev 2020 will be in Access Point mode with a default IP address of 192.168.100.1.

- Once connected to the AcuRev wireless network, open an internet browser and type in the IP address of the AcuRev 2020: **192.168.100.1**.
- Log in at Admin access level, using the default password of **admin**.

## Chapter 9: Description of Modbus-TCP Protocol

---

9.1 Protocol

9.2 Format of communication

9.3 Read Status of Relay (Function code 01)

9.4 Read the Status of DI (Function Code 02)

9.5 Read Holding Registers (Function Code 03)

9.6 Control Relay (Function Code 05)

9.7 Preset/Reset Multi-Register (Function Code 16)

## Chapter 9 - Description of Modbus-TCP Protocol

The Modbus-TCP protocol is used as one of the communication protocols in the AcuRev 2020-WEB. The protocol establishes a master and slave connection in Ethernet. The master device (client) first sets up a TCP-IP link with slave device (server). The master device then sends a request to the slave device and the slave device in return sends a response to the master device.

The figure below shows how the Modbus-TCP protocol works.



### 9.1 Protocol

#### 9.1.1 Data Frame Format

MBAP	Header	Data
7x8 bits	8-bits	Nx8 bits

#### 9.1.2 Modbus Application Header (MBA Header) Field

Modbus application header field is the start of the data frame, and consists of seven bytes.

MBAP Header	Function	Data
Transaction Identifier	2 Bytes	Identification of a Modbus Request/Response transaction
Protocol Identifier	2 Bytes	Modbus Protocol = 0
Length	2 Bytes	Number of following bytes
Unit Identifier	1 Byte	Slave address, in the range of 0-247 decimal

### 9.1.3 Function Field

The function code field of a message frame contains eight bits. Valid codes are in the range of 1-255. When a message is sent from a client to a server device, the function code field tells the server what kind of action to perform.

Code	Meaning	Data
01	Read Relay Output Status	Obtain current status of Relay Output
02	Read Digital Input (DI) Status	Obtain current status of Digital Input
03	Read Data	Obtain current binary value in one or more registers
05	Control Single Relay Output	Force Relay to a state of ON or OFF
16	Write Multiple Registers	Place specific value into a series of consecutive multiple registers

### 9.1.4 Data Field

The data field is constructed using sets of two hexadecimal digits, in the range of 00 to FF. The data field of messages sent from a master to slave contains additional information which the slave must use to take the action defined by the function code. This can include information such as the register addresses, the quantity of registers to query and the count of the actual number of data bytes. For example, if the master requests a slave to read a group of holding registers (function code 03), the data field specifies the starting register and how many registers are to be read.

If the master needs to write to a group of registers in the slave (function code 10 hexadecimal), the data field specifies the starting register, how many registers to write, the count of data bytes to follow in the data field and the data to be written into the registers.



## 9.2 Format of communication

### 9.2.1 Explanation of frame

Transaction identifier hi	Transaction identifier lo	Protocol identifier hi	Protocol identifier lo	Length	Length	Unit identifier
00H	00H	00H	00H	00H	06H	01H

Function Code	Data start register hi	Data start register lo	Data # of registers hi	Data # of registers lo
03H	40H	00H	00H	48H

The meaning of each abbreviated field above is:

**Transaction identifier hi:** High byte of transaction identifier

**Transaction identifier lo:** Low byte of transaction identifier

**Protocol identifier hi:** High byte of protocol identifier

**Protocol identifier low:** Low byte of protocol identifier

**Length hi:** High byte of length

**Length lo:** Low byte of length

**Unit identifier:** Slave address

**Fun:** Function code

**Data start register hi:** High byte of starting register address

**Data start register lo:** Low byte of starting register address

**Data #of registers hi:** High byte of number of registers

**Data #of registers lo:** Low byte of number of registers

### 9.3 Read Status of Relay (Function code 01)

This function code is used to read the relay output status in the AcuRev 2020-WEB series meter.

**1=On 0=Off**

There are 8 relay outputs in the AcuRev 2020 series meter and they start at address 0000H.

The following query is to read 2 relay output status of the AcuRev 2020 series at address 1.

#### Query

Transaction identifier hi	Transaction identifier lo	Protocol identifier hi	Protocol identifier lo	Length hi	Length lo	Unit identifier
00H	00H	00H	00H	00H	06H	01H

Function Code	Data start register hi	Data start register lo	Data # of registers hi	Data # of registers lo
01H	00H	00H	00H	02H

#### Response

The AcuRev 2020 series meter responds back with MBAP Header, function code, quantity of data byte and the data.

An example of response to read the status of the first 2 relay outputs starting at 0000H is shown below. The status of relay output 1 and 2 corresponds to the last 2 bits of data.

**Relay 1: bit0    Relay 2: bit1**

Transaction identifier hi	Transaction identifier lo	Protocol identifier hi	Protocol identifier lo	Length hi	Length lo	Unit identifier
00H	00H	00H	00H	00H	06H	01H

Function Code	Byte Count	Data
01H	00H	00H

The content of the data is:

7	6	5	4	3	2	1	0
0	0	0	0	0	0	1	0

**MSB**

**LSB**

**(Relay 1 = OFF,**

**Relay 2 = ON)**

### 9.4 Read the Status of DI (Function Code 02)

**Query**

This function code is used to read the status of the Digital Input (DI).

1=On 0=Off

There are 8 Digital Inputs on the AcuRev 2020-WEB series meter. The DI register start from 0000H (i.e. DI1=0000H, DI2=0001H, DI3=0002H, etc)

The following query reads the status of DI1 to DI4 with slave address of 1.

Transaction identifier hi	Transaction identifier lo	Protocol identifier hi	Protocol identifier lo	Length hi	Length lo	Unit identifier
00H	00H	00H	00H	D4H	89H	01H

Function Code	Data start register hi	Data start register lo	Value hi	Value lo
02	00H	00H	00H	03H

**Response**

The AcuRev 2020 series meter responds back with MBAP Header, function code, quantity of data byte and the data.

Each DI utilizes one bit (1=ON, 0=OFF).

Transaction identifier hi	Transaction identifier lo	Protocol identifier hi	Protocol identifier lo	Length hi	Length lo	Unit identifier
00H	00H	00H	00H	D4H	89H	01H

Function Code	Byte Count	Data
02H	01H	03H

**Data Bytes**

0	0	0	0	DI4	DI3	DI2	DI1
0	0	0	0	0	0	1	1

**MSB**

**LSB**

## 9.5 Read Holding Registers (Function Code 03)

### Query

This function code allows user to obtain the measurement of the Acuvim II series meter. Below is an example to read the device clock of the meter, starting at 1054H.

Transaction identifier hi	Transaction identifier lo	Protocol identifier hi	Protocol identifier lo	Length hi	Length lo	Unit identifier
00H	00H	00H	00H	00H	06H	01H

Function Code	Data start register hi	Data start register lo	Data # of registers hi	Data # of registers lo
03H	10H	54H	00H	06H

### Response

This example reads the time (2006-12-18-14:15:20).

Transaction identifier hi	Transaction identifier lo	Protocol identifier hi	Protocol identifier lo	Length hi	Length lo	Unit identifier
00H	00H	00H	00H	00H	0FH	01H

Function Code	Byte Count	Data1 hi	Data1 lo	Data2 hi	Data2 lo	Data3 hi	Data3 lo	Data4 hi	Data4 lo	Data5 hi	Data5 lo	Data6 hi	Data6 lo
03H	0CH	07H	D6H0	00H	0CH	00H	12H	00H	0EH	00H	0FH	00H	14H

### 9.6 Control Relay (Function Code 05)

**Query**

This function code enables the control of a single relay output in the AcuRev 2020 series meter. Any relay output in the AcuRev 2020 series meter can be controlled on or off starting at 0000H. Sending the data 'FF00H' will set they relay output on and sending '0000H' will turn it off; all other values are illegal and will not affect they relay output status.

The example below is a request to a AcuRev 2020series meter to turn on relay output 1.

Transaction identifier hi	Transaction identifier lo	Protocol identifier hi	Protocol identifier lo	Length hi	Length lo	Unit identifier
00H	00H	00H	00H	00H	06H	01H

Function Code	Data start register hi	Data start register lo	Value hi	Value lo
05H	00H	00H	FFH	00H

**Response**

The normal response to the command request is to retransmit the message as received after the relay output status has been altered.

Transaction identifier hi	Transaction identifier lo	Protocol identifier hi	Protocol identifier lo	Length hi	Length lo	Unit identifier
00H	00H	00H	00H	00H	06H	01H

Function Code	Data start register hi	Data start register lo	Value hi	Value lo
05H	00H	00H	FFH	00H

### 9.7 Preset/Reset Multi-Register (Function Code 16)

#### Query

This function code allows the user to modify the contents of a register. The example below is a request to an AcuRev 2020 series meter with device address 1 to preset the CT1(500) setting register. The CT1 data address for Channel input 1 is 889H.

Transaction identifier hi	Transaction identifier lo	Protocol identifier hi	Protocol identifier lo	Length hi	Length lo	Unit identifier
00H	00H	00H	00H	00H	0BH	01H

Function Code	Data Start reg hi	Data start reg lo	Data # of regs hi	Data # of regs lo	Byte Count	Value hi	Value lo
10H	08H	89H	00H	02H	02H	01H	F4H

#### Response

The normal response to a preset Multi-Register request including the MBAP Header, function code, data start register and the number of registers is shown below.

Transaction identifier hi	Transaction identifier lo	Protocol identifier hi	Protocol identifier lo	Length hi	Length lo	Unit identifier
00H	00H	00H	00H	00H	06H	01H

Function Code	Data start register hi	Data start register lo	Data # of registers hi	Data # of registers lo
10H	08H	89H	00H	02H

## Chapter 10 Web Interface Readings

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10.1 User Access Login

10.2 Metering



## Chapter 10 Web Interface Readings and Parameter Settings

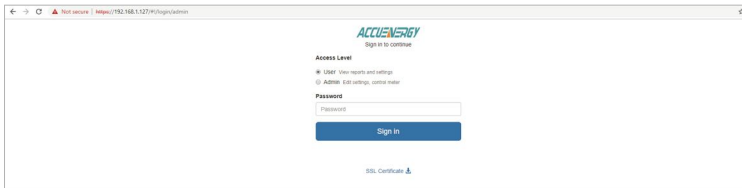
The AcuRev 2020-WEB series meter supports the HTTPS protocol to allow for the use of a web interface. The user will need to access the AcuRev 2020-WEB web interface to configure the module and use its functions. The web interface allows for remote initial setup of the AcuRev 2020 meter.

The web interface allows for different user access levels.

In the following cases, the IP address of the meter will be "192.168.1.127".

### 10.1 User Access Login

Enter the correct IP address of the meter in the search bar of the internet browser to access the web interface of the AcuRev 2020-WEB.



**NOTE:** Depending on the internet browser that is used, the user may be prompted with a screen that says the connection is not secure. If the user is prompted with this screen click on 'proceed to website'.

The user will be redirected to a web page prompting to select the Access Level and appropriate password for that level. There are two types of Access Levels to choose from, either **User** or **Admin**.

- The **User** level is ideal for users who need only to take readings and view status from the meter. The default password for the User level is **view**.

It is recommended that no more than 4 users are logged in at the same time for this level to ensure optimal performance of web interface.

- The **Admin** level is ideal for users who need access to configurations on the meter or the web interface and to view readings. The default password for the Admin level is **admin**.

The web interface for the AcuRev 2020-WEB will only allow one admin to be logged in at a time. If another user logs in at this access level, the previous user will be logged out.

Access Level	Default Password	Read Parameter/Status	Configure Settings
User	view	Yes	No
Admin	admin	Yes	Yes



## 10.2 Metering

### 10.2.1 Real-Time Metering

The real-time metering is the first page the user will see once they have entered the correct password for the appropriate access level. The user will find the tabs to access different pages in the web interface such as **Metering**, **Status**, and **Settings**.

The Real-Time Metering webpage includes the data of real-time parameters for AcuRev 2020 series meter. This includes the Line Voltages, Phase Voltages, Current, Active, Reactive and Apparent Power, Power Factor, Frequency and Load Nature.

The values displayed on this web page will depend on the wiring configuration mode of the meter. The main table on the top shows the real-time total/average values for all the circuits connected to the AcuRev 2020 meter.

Metering <small>Real Time</small>					
System Parameter	A	B	C	Total	Average
Line-to-Neutral Voltage V	118.504	118.508	118.507	---	118.576
Line-to-Line Voltage V	0.000	0.000	0.000	---	0.000
Line Current A	121.026	121.748	121.501	---	121.094
Active Power kW	14.783	14.810	14.729	35.322	---
Reactive Power kVar	-3.668	-3.876	-3.832	-11.177	---
Apparent Power kVA	14.415	14.435	14.405	43.254	---
Power Factor	0.917	0.918	0.914	0.917	---
Load Nature	C	C	C	C	---
Frequency Hz	---	---	---	60.007	---

Select a Channel

AcuRev 2020-WEB series support multi channel circuits. You can select the input channel to see the single-phase real-time readings such as Line Current, Power Factor, Load Nature, Active, Reactive and Apparent Power. You can view the single phase circuits by selecting the appropriate channel from the **Select a Channel** drop down menu. Depending on the model of your meter users can select from channels 1-9 or 1-18. All single phase inputs are tagged as **Input Channels** in the AcuRev 2020 meter, for example if users wish to view circuit 14 they would select **Input Channel 14**.

System Parameter	A	B	C	Total	Average
Line-to-Neutral Voltage V	118.770	118.736	118.737	---	118.748
Line-to-Line Voltage V	0.000	0.000	0.000	---	0.000
Line Current A	121.954	122.058	121.921	---	121.978
Active Power kW	11.703	11.757	11.554	35.114	---
Reactive Power kVar	-3.721	-3.673	-3.789	-11.184	---
Apparent Power kVA	14.472	14.492	14.403	43.428	---
Power Factor	0.809	0.911	0.806	0.909	---
Load Nature	C	C	C	C	---
Frequency Hz	---	---	---	60.021	---

Select a Channel

Input Channel 1

Channel Parameter	Readings
Line Current A	16.021
Active Power kW	1.531
Reactive Power kVar	-0.429
Apparent Power kVA	1.900
Power Factor	0.807
Load Nature	C

If users are monitoring three-phase circuits, they can view the real-time data of the three-phase channel under the **User Channel** tag. The AcuRev 2020-WEB can have a maximum of 6 three-phase circuits, the web interface will display the data of each circuit from User Channel 1 to User Channel 6. Users can also view the individual phases for each User channel by select the corresponding Input channel.

System Parameter	A	B	C	Total	Average
Line-to-Neutral Voltage V	118.192	118.157	118.144	—	118.164
Line-to-Line Voltage V	0.000	0.000	0.000	—	0.000
Line Current A	123.582	123.763	123.545	—	123.637
Active Power kW	11.831	11.881	11.799	35.511	—
Reactive Power kVar	-3.661	-3.975	-3.780	-11.916	—
Apparent Power kVA	14.607	14.627	14.587	43.831	—
Power Factor	0.810	0.812	0.808	0.810	—
Load Nature	C	C	C	C	—
Frequency Hz	—	—	—	60.007	—

Select a Channel  
User Channel 1




Channel Parameter	A	B	C	Total
Line Current A	16.079	16.133	16.151	—
Active Power kW	1.552	1.560	1.556	4.668
Reactive Power kVar	-0.467	-0.443	-0.451	-1.361
Apparent Power kVA	1.901	1.907	1.909	5.729
Power Factor	0.817	0.818	0.815	0.815
Load Nature	C	C	C	C

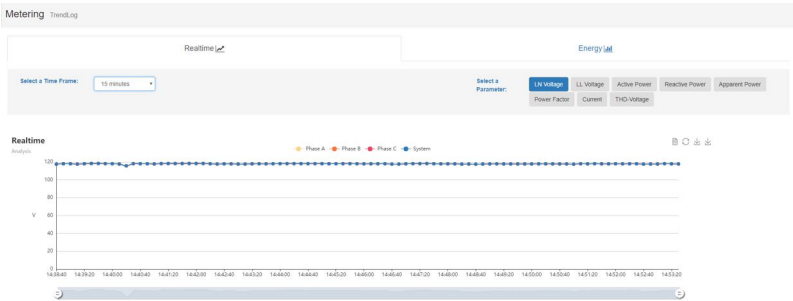
The following table describes what phases will be seen in the Select a Channel drop-down menu, this is dependent on how the meter is wired and the wiring mode is configured in the settings. This table is valid for Real-time metering, demand, and energy pages.

Input Channel	(1LN) Single Phase 2 wire	(2LN) Single Phase 2 wire system	Three Phase 3/4 wire system (3LN)
1	1th Single Phase Circuit	Phase A of 1st 2LN circuit	Phase A of 1st 3LN circuit
2	2nd Single Phase Circuit	Phase A of 2nd 2LN circuit	Phase A of 2nd 3LN circuit
3	3rd Single Phase Circuit	Phase A of 3rd 2LN circuit	Phase A of 3rd 3LN circuit
4	4th Single Phase Circuit	Phase B of 1st 2LN circuit	Phase B of 1st 3LN circuit
5	5th Single Phase Circuit	Phase B of 2nd 2LN circuit	Phase B of 2nd 3LN circuit
6	6th Single Phase Circuit	Phase B of 3rd 2LN circuit	Phase B of 3rd 3LN circuit
7	7th Single Phase Circuit	Unused channel in 2LN	Phase C of 1st 3LN circuit
8	8th Single Phase Circuit	Unused channel in 2LN	Phase C of 2nd 3LN circuit
9	9th Single Phase Circuit	Unused channel in 2LN	Phase C of 3rd 3LN circuit
10	10th Single Phase Circuit	Phase A of 4th 2LN circuit	Phase A of 4th 3LN Circuit
11	11th Single Phase Circuit	Phase A of 5th 2LN circuit	Phase A of 5th 3LN Circuit
12	12th Single Phase Circuit	Phase A of 6th 2LN circuit	Phase A of 6th 3LN Circuit
13	13th Single Phase Circuit	Phase B of 4th 2LN circuit	Phase B of 4th 3LN Circuit
14	14th Single Phase Circuit	Phase B of 5th 2LN circuit	Phase B of 5th 3LN Circuit
15	15th Single Phase Circuit	Phase B of 6th 2LN circuit	Phase B of 6th 3LN Circuit
16	16th Single Phase Circuit	Unused channel in 2LN	Phase C of 4th 3LN Circuit
17	17th Single Phase Circuit	Unused channel in 2LN	Phase C of 5th 3LN Circuit
18	18th Single Phase Circuit	Unused channel in 2LN	Phase C of 6th 3LN Circuit
User Channel 1	Unused for Single Phase	Total for 1st 2LN Circuit	Total for 1st 3LN Circuit
User Channel 2	Unused for Single Phase	Total for 2nd 2LN Circuit	Total for 2nd 3LN Circuit
User Channel 3	Unused for Single Phase	Total for 3rd 2LN Circuit	Total for 3rd 3LN Circuit
User Channel 4	Unused for Single Phase	Total for 4th 2LN Circuit	Total for 4th 3LN Circuit
User Channel 5	Unused for Single Phase	Total for 5th 2LN Circuit	Total for 5th 3LN Circuit
User Channel 6	Unused for Single Phase	Total for 6th 2LN Circuit	Total for 6th 3LN Circuit

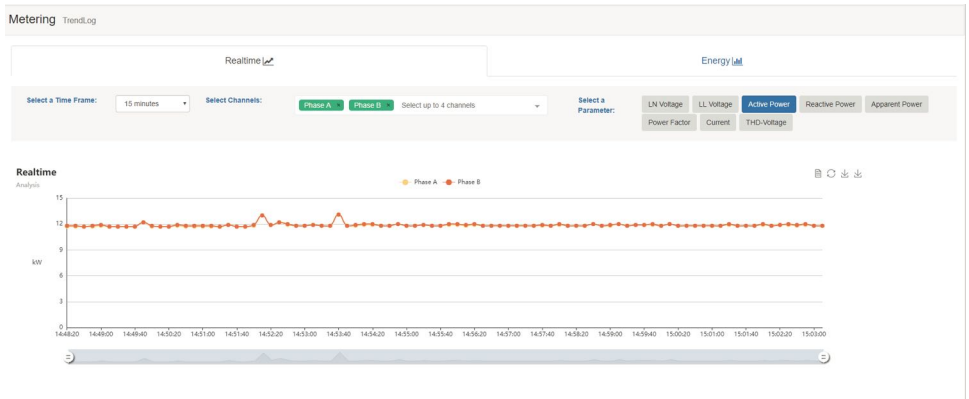
### 10.2.2 TrendLog

The TrendLog web page includes the real-time and energy trend diagram. The real-time trendlog diagram can be selected to show the phase voltage, line voltage, current, active power, reactive power, apparent power and power factor for each phase. The energy trendlog can show the imported and exported active energy, reactive energy, total energy, net energy and apparent energy. The trend log time frame can be selected as either 15 minutes or 1 hour.

The data of the trendlog can be previewed and downloaded as a .csv file by clicking the 'Data Review'  and 'Data'  icons on the top right side of the diagram. The trendlog diagram can also be saved as an image by clicking the 'Image'  icon.



For the current and power parameters, the user can select up to 4 different channels to view the trend log.



### 10.2.3 Demand

The demand web page shows the current demand, active power demand, reactive power demand and apparent power demand for three phases. Users can also select the demand of the corresponding channel they wish to view.

The demand readings page also displays the peak demand and the time it occurred, as well as the demand predictions based on the previous demand data recorded. The demand table on the top of the page refers to the total demand for all circuits connected to the meter. If users want to see the demand for individual circuits/phases then the user or input channel must be selected at the bottom of the page.

Metering Demand					
	System Parameter	Demand	Demand Peak	Demand Peak Time	Prediction
A	Current Demand A	123.128	1200.306	2018-11-06 16:20:50	122.869
	Active Power Demand kW	11.860	171.977	2018-11-06 16:16:50	11.796
	Reactive Power Demand kvar	-3.579	-31.149	2018-11-05 19:58:50	-3.497
	Apparent Power Demand kVA	14.543	144.314	2018-11-06 16:20:50	14.441
B	Current Demand A	123.342	301.096	2018-10-31 16:21:50	123.084
	Active Power Demand kW	11.896	39.701	2018-10-31 16:21:50	11.847
	Reactive Power Demand kvar	-3.529	-4.435	2018-12-09 13:30:59	-3.440
	Apparent Power Demand kVA	14.563	35.712	2018-10-31 16:21:50	14.461
C	Current Demand A	123.101	300.546	2018-10-31 16:21:50	122.844
	Active Power Demand kW	11.816	29.562	2018-10-31 16:21:50	11.750
	Reactive Power Demand kvar	-3.701	-4.664	2018-12-09 13:30:59	-3.609
	Apparent Power Demand kVA	14.534	35.642	2018-10-31 16:21:50	14.432
Total	Active Power Demand kW	35.572	329.823	2018-11-06 16:16:50	35.402
	Reactive Power Demand kvar	-10.809	-39.955	2018-11-05 19:58:50	-10.556
	Apparent Power Demand kVA	43.640	214.027	2018-11-06 16:16:50	43.421

Select a Channel

## Single-phase channel

Select a Channel

Input Channel 1

Channel Parameter	Demand	Demand Peak	Demand Peak Time	Prediction
Current Demand A	16.101	52.910	2018-10-31 16:21:50	16.079
Active Power Demand kW	1.553	5.222	2018-10-31 16:21:50	1.559
Reactive Power Demand kVar	-0.460	-0.760	2018-11-05 19:58:50	-0.462
Apparent Power Demand kVA	1.901	6.277	2018-10-31 16:21:50	1.890

## Three-phase channel

Select a Channel

User Channel 1

Channel Parameter	Demand	Demand Peak	Demand Peak Time	Prediction
Current Demand A	16.106	52.910	2018-10-31 16:21:50	16.048
Active Power Demand kW	1.553	5.222	2018-10-31 16:21:50	1.550
Reactive Power Demand kVar	-0.459	-0.760	2018-11-05 19:58:50	-0.464
Apparent Power Demand kVA	1.901	6.277	2018-10-31 16:21:50	1.892
Current Demand A	16.113	52.865	2018-10-31 16:21:50	16.055
Active Power Demand kW	1.559	5.217	2018-10-31 16:21:50	1.554
Reactive Power Demand kVar	-0.438	-0.721	2018-11-05 19:58:50	-0.435
Apparent Power Demand kVA	1.901	6.270	2018-10-31 16:21:50	1.893
Current Demand A	16.135	52.927	2018-10-31 16:21:50	16.077
Active Power Demand kW	1.561	5.213	2018-10-31 16:21:50	1.555
Reactive Power Demand kVar	-0.440	-0.724	2018-11-05 19:58:50	-0.442
Apparent Power Demand kVA	1.904	6.277	2018-10-31 16:21:50	1.895
Active Power Demand kW	4.673	15.652	2018-10-31 16:21:50	4.659
Reactive Power Demand kVar	-1.337	-2.205	2018-11-05 19:58:50	-1.341
Apparent Power Demand kVA	5.706	18.824	2018-10-31 16:21:50	5.691

### 10.2.4 Energy

The energy web page shows the import active energy, import reactive energy and apparent energy for three phases. Users can also check the current and previous month To view the individual circuit or three-phase energy choose the corresponding input/user channel at the bottom of the page.

From the energy page users can also check the current and previous month TOU if users have configured the TOU function on the meter. The TOU schedule can be divided into four different tariffs as sharp, peak, valley, and normal.

**NOTE: The TOU function must be configured from the Acuvision software.**

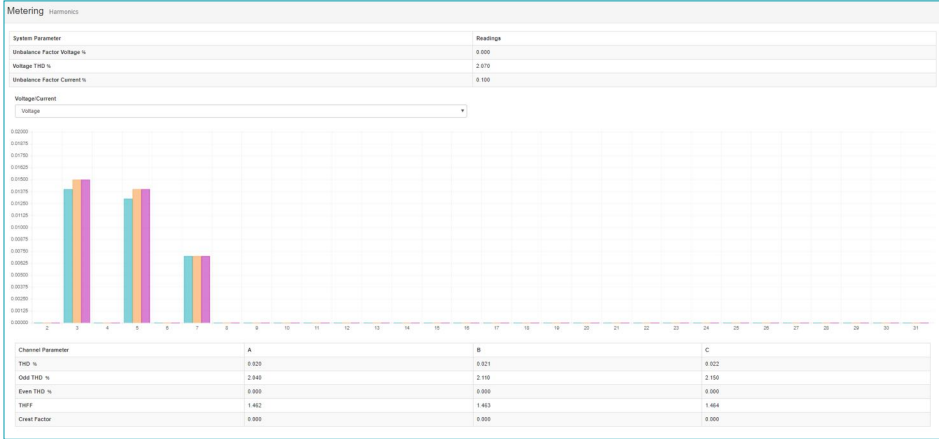
Metering Energy				
Real-Time				
System Parameter	A	B	C	Total
Import Active Energy kWh	125383.602	25107.699	24918.199	175409.500
Import Reactive Energy kvarh	40945.500	8325.500	6665.900	57936.696
Apparent Energy kVAh	156747.094	31801.301	31722.500	220271.406
Current Month TOU				
System Parameter	A	B	C	Total
Sharp	12375.100	1688.900	1675.900	15739.900
Peak	21707.000	4440.600	4409.700	30557.301
Valley	66339.297	13914.200	13805.600	94059.102
Normal	24962.199	5064.000	5027.000	35053.199
Total	123383.602	25107.699	24918.199	175409.500
Prior Month TOU				
System Parameter	A	B	C	Total
Sharp	12375.100	1688.900	1675.900	15739.900
Peak	21313.400	4045.500	4017.500	29376.400
Valley	65133.602	12704.500	12604.900	90443.000
Normal	24539.500	4640.100	4606.100	33785.699
Total	123361.602	23079.000	22904.400	169345.000
Select a Channel				

### 10.2.5 Harmonics

The interface of the AcuRev 2020-WEB supports voltage and current harmonics. Users can view power quality parameters such as voltage and current THD, individual voltage and current harmonics up to 31st order, voltage crest factor, current K factor, voltage and current unbalance.

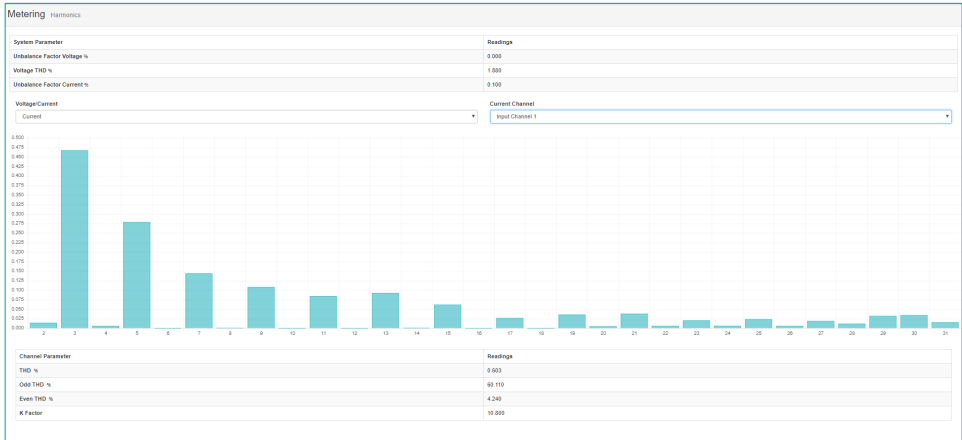
**NOTE: Only AcuRev 2020-333mV-WEB model supports the harmonics readings.**

### Voltage harmonics



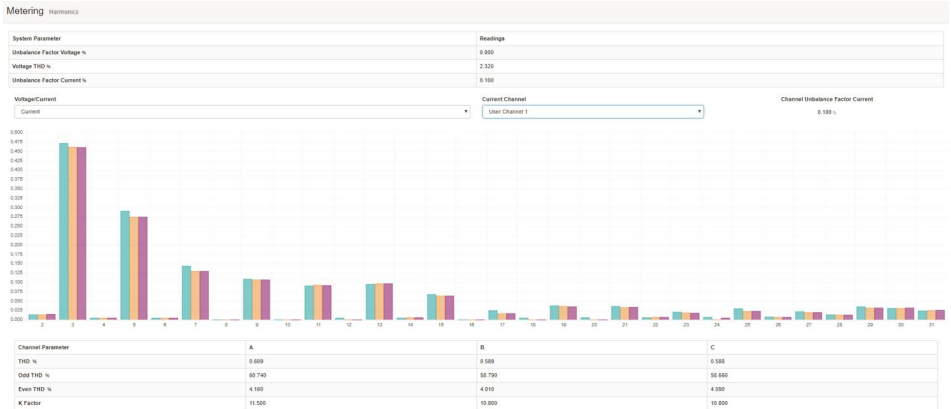
### Current Harmonics

Users can specify which current input channel to view from the **Current Channel** drop down option.





### 3-phase Current Harmonics



### 10.2.6 I/O

There are 8 digital inputs for AcuRev 2000 series meter. Each digital input channel can be programmed as either a status indicator or a DI pulse input counter. Users can view the pulse count or digital status as well as reset the DI count from this page.

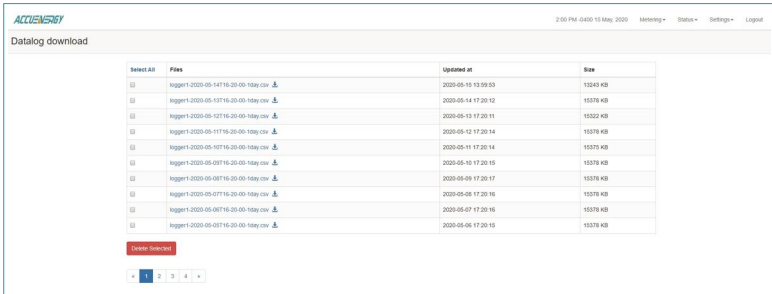
**NOTE:** The DI settings must be configured on the Acuviv software.













### 10.2.7 Datalog

The data log web page includes all the data log files. The log file for the data log will show on the screen with the update time and file size.

To download the file, click on the download icon  to save the file in the computer. The data log will be saved as a .csv file. The data log configuration can be seen later in the section.



Select	Files	Update At	Size
<input type="checkbox"/>	logger1-2020-05-14T16:20-00-1day.csv 	2020-05-15 13:59:53	13243 KB
<input type="checkbox"/>	logger1-2020-05-13T16:20-00-1day.csv 	2020-05-14 17:20:12	15378 KB
<input type="checkbox"/>	logger1-2020-05-12T16:20-00-1day.csv 	2020-05-13 17:20:11	15322 KB
<input type="checkbox"/>	logger1-2020-05-11T16:20-00-1day.csv 	2020-05-12 17:20:14	15378 KB
<input type="checkbox"/>	logger1-2020-05-10T16:20-00-1day.csv 	2020-05-11 17:20:14	15375 KB
<input type="checkbox"/>	logger1-2020-05-09T16:20-00-1day.csv 	2020-05-10 17:20:15	15378 KB
<input type="checkbox"/>	logger1-2020-05-08T16:20-00-1day.csv 	2020-05-09 17:20:17	15378 KB
<input type="checkbox"/>	logger1-2020-05-07T16:20-00-1day.csv 	2020-05-08 17:20:16	15378 KB
<input type="checkbox"/>	logger1-2020-05-06T16:20-00-1day.csv 	2020-05-07 17:20:16	15378 KB
<input type="checkbox"/>	logger1-2020-05-05T16:20-00-1day.csv 	2020-05-06 17:20:15	15378 KB

Select All

Delete Selected

1 2 3 4

### Deleting Data Logs

The data log files can also be deleted from the web interface, users can click on the checkbox beside the file they wish to delete or can you the Select All button to select all data log files. Once the files are selected click on **Delete Selected** to remove the files. A warning message will be prompted to verify the data log removal.

**Warning**

Are you sure you want to delete the following files:

logger1-2020-05-07T16-20-00-1day.csv

### 10.2.8 Alarm Status

The alarm status web page shows the alarm log of the meter. It will show the status of up to 20 alarm events indicating the alarm ID, status, parameter, value and timestamp of the alarm event. Once all 20 alarm events are full, the newest alarm event will then wrap around to alarm 1.

The parameters in this web page are updated every 10 seconds.

**NOTE:** The alarms can be configured from the Acuvision software.

Status Alarm Status				
Alarm ID	Status	Alarm Channel	Value	Timestamp
2	ON	Input Channel 1 Line Current	43 %	2019-01-09 17:06:18:523
1	ON	Phase A Line-to-Neutral Voltage	53 %	2019-01-09 17:06:18:520

### 10.2.9 SOE Log

The SOE web page will display the Sequence of Event log for the enabled I/O module that is attached to the AcuRev 2000 series meter with timestamps. It will display the DI status for up to 20 events.

The parameters in this web page are updated every 10 seconds.

Status SOE									
Timestamp	DI1 Status	DI2 Status	DI3 Status	DI4 Status	DI5 Status	DI6 Status	DI7 Status	DI8 Status	DI9 Status
2020-03-05 15:41:56.611	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2020-03-05 15:41:21.817	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
2020-03-05 15:36:19.300	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2020-03-05 15:36:17.478	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
2020-02-25 16:08:32.377	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2020-02-25 16:08:24.614	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON

# Chapter 11: Meter Settings & Communications

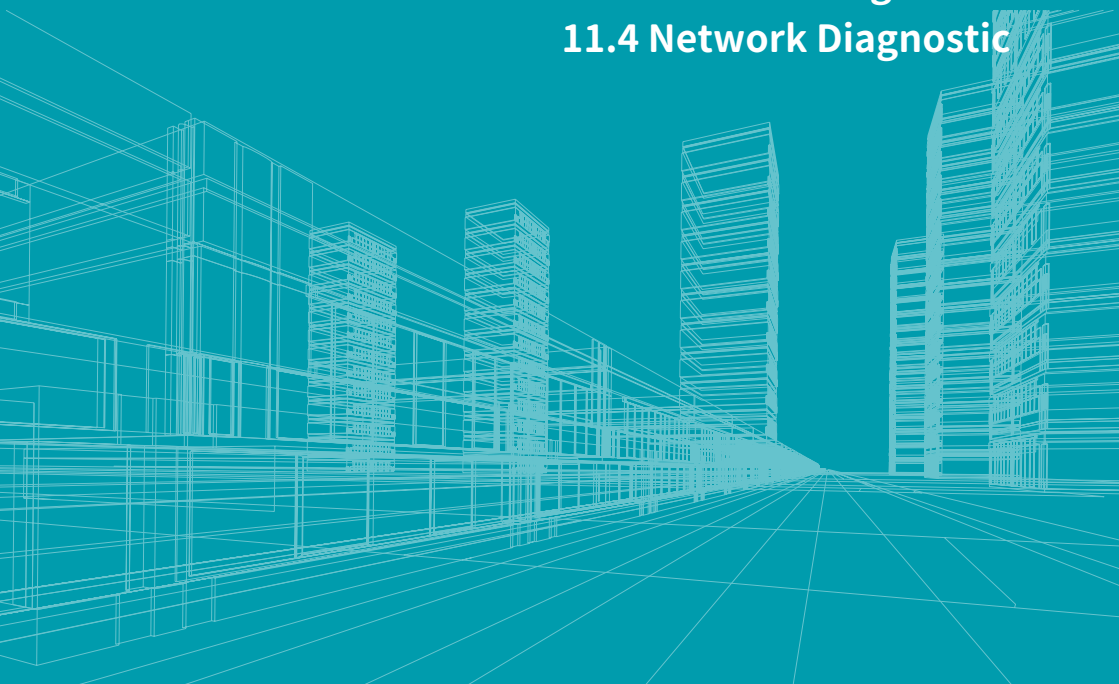
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11.1 Meter Setting

11.2 Communications

11.3 Management

11.4 Network Diagnostic



## Chapter 11- Meter Settings & Communications

### 11.1 Meter Setting

The meter settings web page will allow the user to configure basic meter settings in order for the meter to measure the voltage and current and display it correctly. This includes the wiring and the current ratio settings of the meter.

**Wiring of Three Phase User:** Select the correct wiring configuration for the user, either single-phase or three-phase. The AcuRev 2020-WEB series supports 18 single-phase circuits or 6 three-phase circuits.

**1LN** - Single Phase 2 wire circuits

**2LN** - Single Phase 3 wire circuits

**3LN** - Three Phase 3/4 wire circuits (supports both 3 phase delta and wye systems)

**CT Model:** This is where the user will enter the CT ratio for each channel. Enter the rated current on the primary side of the CT for each channel.

**NOTE:** For the three-phase circuits channel, phase A is represented by channel 101, phase B is represented by channel 104, and phase C is represented by channel 107.

Settings Manual Save

Wiring

Wiring of Three Phase User

© B.N. (Two Element) 3 Phase 3 Wire  
 © 2,3,4 (Two Element) 3 Phase 3 Wire 3 Wire  
 © 2,3,4 (Two Element) 3 Phase 3 Wire

CT Model

Channel 101  
 A

Channel 102  
 A

Channel 103  
 A

Channel 104  
 A

Channel 105  
 A

Channel 106  
 A

Channel 107  
 A

Channel 108  
 A

Channel 109  
 A

Channel 110  
 A

Channel 111  
 A

Channel 112  
 A

Channel 113  
 A

Channel 114  
 A

Channel 115  
 A

Channel 116  
 A

Channel 117  
 A

Channel 118  
 A

Save

## 11.2 Communications

The communication setting web page will allow the user to configure settings related to the Ethernet networks and the Wireless network. The AcuRev 2020-WEB supports different communication protocols which can be configured from this web page by selecting the corresponding tabs. These tabs include WiFi, DHCP, Emails, Time/Date , Datalog, AcuCloud Post for communicating with the AcuCloud software, BACnet-IP and SNMP.

### 11.2.1 Wi-Fi

AcuRev 2020-WEB supports WiFi communication. There are two WIFI modes that the AcuRev 2020-WEB meter can be configured as

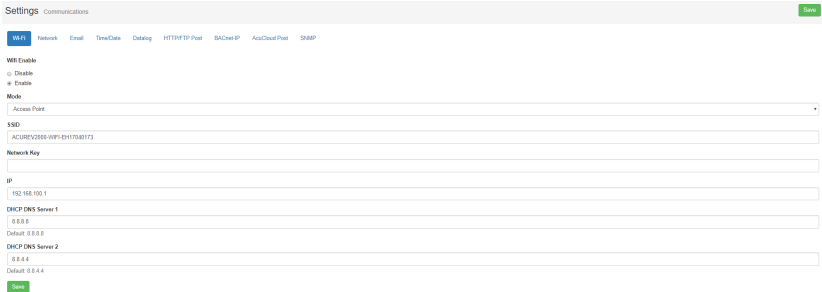
1. Access Point(AP)
2. Station mode

#### Access Point Mode

By default the AcuRev 2020-WEB has its WIFI mode set as AP (Access Point) mode, where the AcuRev 2020-WEB acts as a wireless access point allowing wireless devices to connect and access the meter.

- In Access Point mode, users can configure the SSID, Network Key, and IP of the module as well as the DNS servers

**NOTE:** When the IP address or SSID is changed in AP mode then users will be prompted to enter the network key or password of the SSID when clicking the Save button. After entering the network key, click save once more.



## Station Mode

The module will behave like a wireless client and bridge to another wireless network that is available.

- In Station Mode, users can select the wireless network to connect to in Connect to SSID. Click on **Select from Available Networks** and enter the Network Key for the wireless network that the module will bridge to.
- In Station Mode, the DHCP can be configured as either manual or auto. If manual, users can configure the IP, Subnet Mask, Gateway and DNS servers. If auto, users can check the meter's display to get the IP address and all other network configurations assigned by the wireless network. The user can also configure the DNS in DHCP is on auto.
- For connecting to an unencrypted open wireless network, please leave the Network Key field blank.

**NOTE:** After configuring any of the WIFI settings, the communications module must be rebooted in order for the settings to take affect.

WiFi
Network
Email
TimeDate
Display
HTTP/FTP Post
BACnet-IP
AcuCloud Post
SNMP

**DHCP**

Manual  
 Auto

**IP Address**

Default: 192.168.1.254

**Subnet Mask**

Default: 255.255.255.0

**Gateway**

Default: 192.168.1.1

**DHCP DNS Server 1**

Default: 0.0.0.0

**DHCP DNS Server 2**

Default: 0.0.0.0

**HTTPS Port**

Default: 443, Range: 6000-9999

**Modbus TCP Port**

Default: 502, Range: 2000-9999

**Proxy Server Enable**

No  
 Yes

Save



### 11.2.2 Network

The Network page is where the user can configure the network settings of the meter. The following settings can be configured:

**DHCP:** It can be configured as a Manual or Automatic.

- **Manual** - allows users to manually configure the IP address, subnet mask, and gateway for the meter.
- **Auto** - allows the meter to get its IP address, subnet mask, and gateway assigned automatically.

*NOTE: After changing DHCP to Auto, check the display of the meter to obtain the new IP address that has been assigned after the module has completed its reboot and the router has assigned the meter with an IP address.*

**Routing Default Interface:** The AcuRev 2020-WEB supports a routing default interface setting which allows users to configure which port to use for primary routing to external networks. There are two possible routing options, Ethernet and WiFi. If the Routing Default Interface is configured as Ethernet, the meter will use Ethernet access (with cable) as its default network access method. If the WiFi is selected, then the default routing method will be WiFi. If the WiFi mode is set for Access Point, there will be no WiFi option and the routing interface will be Ethernet. The WiFi mode must be in station in order to have WiFi as a routing option.

*NOTE: If the WiFi mode is set for Access Point, the routing default interface setting will not appear in the network settings. In this case the routing default will be Ethernet.*

**IP Address:** If the DHCP is configured to Manual, the IP address can be configured from this page.

**Subnet Mask:** If the DHCP is configured to Manual, the Subnet Mask can be configured from this page.

**Gateway:** If the DHCP is configured to Manual, the Gateway can be configured from this web page.

**DHCP DNS Server 1:** Enter the address of the DNS 1 server on this page.

**DHCP DNS Server 2:** Enter the address of the DNS 2 server on this page.

**HTTPS Port:** Enter the HTTPS port number of the meter. By default, this setting is configured to 443. The range can be from 6000 to 9999.

**NOTE:** This setting should never be configured to 80.

**Modbus TCP Port:** Enter the Modbus port number of the meter. By default, this setting is configured to 502. The range can be from 2000 to 5999.

**Proxy Server Enabled:** Enable this setting so that the module can act as an intermediary to communicate with another server.

Click **Save** after changing any settings. Users will be prompted to reboot the module immediately or later. If later is chosen the module will need to be rebooted from the **Management** page.

The screenshot displays the 'Network' configuration page. At the top, there are navigation tabs: 'WiFi', 'Network' (selected), 'Email', 'TimeDate', 'DataLog', 'HTTP/FTP Post', 'BACnet-IP', 'AccuCloud Post', 'SNMP', and 'Remote Access'. The main content area is titled 'DHCP' and includes the following sections:

- DHCP:** Radio buttons for 'Manual' (selected) and 'Auto'.
- Routing Default Interface:** Radio buttons for 'Ethernet' (selected) and 'WiFi'.
- IP Address:** Text input field containing '192.168.1.127'. Below it, the default value is shown as 'Default: 192.168.1.254'.
- Subnet Mask:** Text input field containing '255.255.255.0'. Below it, the default value is shown as 'Default: 255.255.255.0'.
- Gateway:** Text input field containing '192.168.1.1'. Below it, the default value is shown as 'Default: 192.168.1.1'.
- DHCP DNS Server 1:** Text input field containing '8.8.8.8'. Below it, the default value is shown as 'Default: 8.8.8.8'.
- DHCP DNS Server 2:** Text input field containing '8.8.4.4'. Below it, the default value is shown as 'Default: 8.8.4.4'.
- HTTPS Port:** Text input field containing '443'. Below it, the default value and range are shown as 'Default: 443, Range 6000-9999'.
- Modbus TCP Port:** Text input field containing '502'. Below it, the default value and range are shown as 'Default: 502, Range 2000-5999'.
- Proxy Server Enable:** Radio buttons for 'No' (selected) and 'Yes'.

A green 'Save' button is visible at the bottom left of the form area.

### 11.2.3 Emails

The AcuRev 2020-WEB series supports the SMTP protocol where users can set up the email function on the meter to send emails based on a time interval, when an alarm occurs, or when an SOE event or a combination of both is triggered. Users must know their SMTP server provider and details regarding their SMTP server, which can be provided by the user's IT personnel.

There are three modes available for sending emails that the user can enable. The first mode is "Triggered Sending" where emails are sent immediately when there is a new alarm or SOE event. The second mode is "Timed Sending" where users can receive emails at a certain period of time based on the time interval configured and the email will include the data that is selected to be sent. The third mode is when both of the above are enabled.

Users can configure the mail function for their needs by clicking on the **Settings** menu and selecting **Communications**. Once redirected to the Communications web page, select the **Email** tab.

To use this function the following settings need to be configured:

- **SMTP Enabled:** Select **Yes** to enable and to further configure the settings related to the SMTP function.
- **SMTP Server:** Enter the URL of a valid SMTP server. I.E. [mail.accuenergy.com](mailto:mail.accuenergy.com) or [smtp.gmail.com](mailto:smtp.gmail.com)
- **SMTP Port:** Enter the port number associated with the SMTP server.
- **SMTP From:** Enter a name or phrase which will appear to let you know who the mail is from. I.E. 'Technical Support'
- **SMTP Subject:** Enter in the email subject.
- **Authentication:** Check off the authentication box and enter the email and password if email authentication is required.
- **TLS/SSL:** Users have the option to send emails using TLS/SSL protocols.
- **SMTP Username:** Enter the SMTP user name for the SMTP server set above.
- **SMTP Password:** Enter the SMTP user password for the user set above.
- **SMTP To Address 1;2;3:** Enter up to three recipients that you wish to have the email sent to in

*NOTE: Users will be able to test the addresses once the settings have been saved.*



Settings Communications

- WiFi
- Network
- Email**
- Time/Date
- Datalog
- HTTP/FTP Post
- BACnet/IP
- AcuCloud Post
- SNMP
- Remote Access

SMTP Enabled

- No
- Yes

Email Send Start Time

May 15, 2020 3:20 PM

SMTP Server

test.email.server

SMTP Port

587

SMTP From

test@accuenergy.com

SMTP Subject

AcuRev2020-WEB Readings

Authentication

SMTP Username

test@accuenergy.com

SMTP Password

\*\*\*\*

TLS/SSL

SMTP To Address 1

test@accuenergy.com

**Test Address 1**

SMTP To Address 2

**Test Address 2**

SMTP To Address 3

**Test Address 3**

After configuring the above settings, the next step is to select the content for the emails.

To enable emails to be sent based on a new Alarm or SOE Event, select **Yes** under **SMTP Triggered Sending Alarm Event** or **SMTP Triggered Sending SOE Event**.

To receive email reports at timed intervals, configure the following settings:

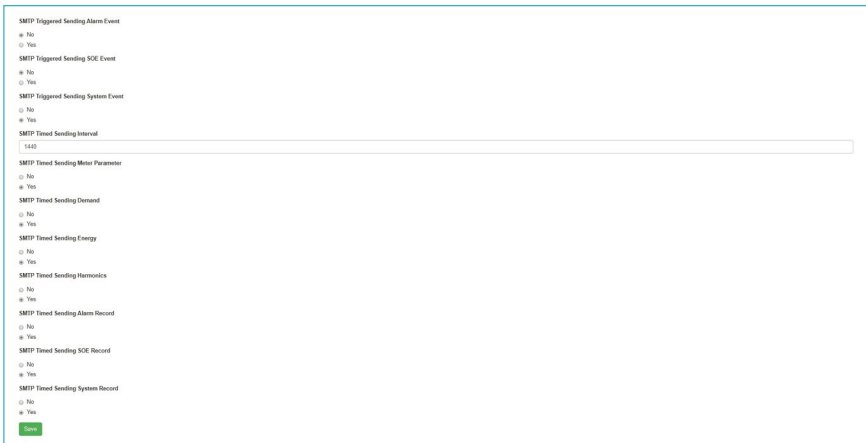
- **SMTP Timed Sending Interval:** Configure this setting with a value between 5-1440 min where 1440 minutes is equivalent to 1 day. This represents how often the emails will be sent.

To receive emails on specific groups of parameters select **Yes** under **SMTP Timed Sending xxx**

Where xxx can be for receiving emails on:

- **Metering:** Report on Real-time voltage, current, power and etc.
- **Energy:** Report on energy parameters.
- **Harmonics:** Report on the voltage and current harmonics from 2nd to 63rd.
- **Sequence:** Report on the positive, negative and zero components of the voltage and current waveform.
- **Min/Max:** Report on the maximum and minimum statistics that the meter has recorded since the lifetime of the meter or from the last reset of the min/max statistics.
- **Alarm:** Report of the alarm log.
- **SOE Record:** Report on the SOE log.

Click **Save** after changing any settings. Users will be prompted to reboot the module immediately or later. If later is chosen the module will need to be rebooted from the **Management** page.



### 11.2.4 Time/Date

The device clock of the AcuRev 2020-WEB series meter can be set through the web interface of the WEB module. The module also supports the SNTP (Simple Network Time Protocol) protocol so that the module can update the meter's device clock by synchronizing with a time server.

The module can synchronize with up to 3 time servers. If a time server is down, the module will synchronize with the second or third time server if they are configured.

The settings for the time and date can be found by clicking on the **Settings** tab and selecting **Communications**. Click **Time/Date** tab to access the web page.

**SNTP Enable:** Select 'Yes' to enable the function and to further configure the settings related to the SNTP function.

**Device Clock:** The device clock of the AcuRev 2020 series meter can be configured from this setting.

**Time Zone:** Select the time zone the meter is in or the time zone in which you would like the meter's time to be synchronized to from the drop down list.

**SNTP Interval:** Enter a number from 1 min to 6000 min to configure how often the meter will synchronize it's time with the time server.

**SNTP Server 1;2;3:** Enter up to 3 SNTP servers in the 'SNTP Server 1', 'SNTP Server 2' and 'SNTP Server 3' fields.

Examples of North American SNTP servers are:

0.us.pool.ntp.org

1.us.pool.ntp.org

2.us.pool.ntp.org

3.us.pool.ntp.org

For more NTP servers based on region, visit the following site:

<http://www.pool.ntp.org/en/>

Click **Save** after changing any settings. Users will be prompted to reboot the module immediately or later. If later is chosen the module will need to be rebooted from the **Management** page.

### 11.2.5 Datalog

The WEB module supports logging data onto its memory and has 4GB of memory that is used for data logging. Once enabled the module can log up to a day or month of data. The data can be downloaded as a .csv file using an sFTP client.

The module can log data at intervals of time ranging from 15 sec to 1 month.

The following settings need to be configured:

**Data Upload:** To use the data log function to log the data onto the module, select the Enable option to view and configure the settings that are applicable.

**Parameter Selection:** Users can select which parameters they want to log in to the file.

**Log Start Time:** Select a valid time for the meter to start logging the data.

**NOTE:** *The device clock of the meter should be correctly configured and up to date.*

**Log Interval:** Select how frequently the data is logged. The logging interval can be from 15 sec to 1 month.

**Backup File Length:** Select the length of the log file as either 1 day or 1 month of data from the drop-down list.

**Backup File Prefix:** Provide a name for the log file which will be appended to the beginning of the log file. By default 'logger1' will be appended to the beginning of the log file.

**SFTP Enable:** To download the logged data from the module using a FTP client, select Enable. The log file will then be available to be downloaded using a FTP client using the following credentials:

**Host:** sftp://IPAddressofthemet

**Username:** sftpuser

**SFTP Password:** accuenergy

**Port:** 22

By default the password for retrieving the backup log files is **accuenergy**. The user can configure any password or can reset to the default of accuenergy by clicking on the **Reset SFTP Password**.

**NOTE:** After enabling the SFTP function the user must reboot the communication module in order to access the data logs with the default password of **accuenergy**. Click **Save** after changing any settings.

Users will be prompted to reboot the module immediately or later. If later is chosen the module will need to be rebooted from the **Management** page.

The screenshot shows the 'Settings' page for 'Communications'. The 'SFTP Enable' option is selected. The 'SFTP Username' is 'sftpuser' and the 'SFTP Password' is 'accuenergy'. The 'Log Start Time' is 'March 7, 2019 4:20 PM', 'Log Interval' is '15 seconds', and 'Backup File Length' is '1 day'. The 'Backup File prefix' is 'logger1'. A list of parameters to be backed up is shown, including Line-to-Neutral Voltage, Line-to-Line Voltage, Line Current, Active Power, Reactive Power, Apparent Power, Power Factor, Frequency, Load Ratio, Import Active Energy, and Import Reactive Energy.



### 11.2.6 HTTP/FTP Post

The AcuRev 2020-WEB meter supports the HTTP and FTP Post functions to send data from the meter to an HTTP/FTP server. The meter can post .csv files to two different web servers using HTTP Post and can also send the same.CSV file to a server using FTP Post.

In the case when there is no connection to the server, the module will store and back up the posts and send it out after the connection is restored.

The meter can post data to a server at intervals of time ranging from 15 sec to 1 month.

The settings for the HTTP/FTP Post function can be found by clicking on the **Settings** menu and selecting **Communications**. Click on the **HTTP/FTP Post** tab to access the settings.

The following setting must be configured:

- **Data Upload:** To use the HTTP/FTP post function to send data to the appropriate server, select the Enable option to view and configure the settings that are applicable.
- **Log Start Time:** Select a valid time for the meter to start logging the data to be posted.

*NOTE: The device clock of the meter should be correctly configured and up to date.*

- **Log Interval:** Select how frequently the meter will log data to the file that will be uploaded to the server from the drop-down list. The logging interval can be from 15 sec to 1 month.
- **Timestamp Format:** Select the format of the timestamp for the data that is logged. The format for the timestamp can be based on the Local Time, UTC Seconds or based on ISO8601 Format.
- **Push File Prefix:** Provide a name for the log file which will be appended to the beginning of the log file if "Time Interval Format" is selected as the Post File Name Format. By default 'logger1' will be appended to the beginning of the log file.
- **Post File Length:** Select how frequently the log file will be uploaded to the server from the drop-down list. The log file length can be from 15 sec to 1 month.
- **Post File Format:** Select the format in which the file name is in, there are two types, old format and time interval format.

The screenshot shows the 'Settings' page for 'HTTP/1.1 Post' configuration. The page includes the following sections:

- Data Upload:** Radio buttons for 'Disable' and 'Enable'.
- Log Start Time:** A text input field containing 'May 13, 2020 12:00 AM'.
- Log Interval:** A dropdown menu set to '5 minutes'. A note below states: 'Note: Log Interval shouldn't be greater than Post File Length'.
- Timestamp Format:** Radio buttons for 'Local Time String' (e.g., 2017-01-01 10:00), 'UTC Seconds' (Number of seconds that have elapsed since 1970-01-01 00:00:00 Coordinated Universal Time), and 'ISO8601 Format' (e.g., 2017-01-01T10:00:00Z).
- Push File Prefix:** A text input field containing 'klog1'. A note below states: 'e.g., klog1-2017-10-01T09:46-1day.csv'.
- Post File Length:** A dropdown menu set to '1 day'. A note below states: 'Note: Post File Length shouldn't be less than Log Interval'.

With the above settings configured the following settings need to be configured depending on which protocol will be used:

## HTTP Post

There are two HTTP post channels available on the AcuRev 2020-WEB. Users can configure either or both channels.

- **HTTP Push Channel 1/2 Enable:** Select Yes to enable and to further configure the HTTP Push setting.
- **HTTP Push 1/2 Meter Upload Url:** Enter the Url of the HTTP server that will receive the data from the meter.
- **HTTP Push 1/2 Port:** Enter the port number for the server that will receive the data.
- **HTTP Push 1/2 Password:** Enter the password to send data to the receiving server if applicable. Otherwise, leave blank.
- **HTTP Push 1/2 Interval:** Select how frequently the data should be uploaded to the HTTP server. The data can be posted in intervals from 15 sec to 1 month.

**NOTE:** The "TEST HTTP Push1" button should only be utilized after clicking the 'Save' button otherwise a fail response will be observed. If a fail response occurs after clicking 'Save' the settings should be double-checked or troubleshooting on the server-side may be required.

In the case when the network is down and the module cannot send the data to the server it will accumulate all the failed posts and send them out when the network is up. These failed posts can be cleared by clicking the **Clear HTTP Push Logs**.

HTTP Push Channel 1 Enable

No  
 Yes

HTTP Push 1 Meter ID  
test

HTTP Push 1 Meter Upload Url  
ftp.testserver.com

HTTP Push 1 Port  
80

HTTP Push 1 Password

HTTP Push 1 Interval  
5 minutes

Test HTTP Push 1    Clear HTTP Push 1 Logs

### FTP Post

There is one FTP post channel supported on the AcuRev 2020-WEB. The following settings must be configured:

- **FTP Push Enable:** Select Yes to enable and further configure the FTP Push settings.
- **FTP Push Meter Upload Url:** Enter the Url of the FTP server that will receive the data from the meter.
- **FTP Push Port:** Enter the port number for the server that will receive the data.
- **FTP Push Username:** Enter a valid username to send the data to the FTP server. An incorrect username could result in no data being received by the server.
- **FTP Push Password:** Enter a valid password for the username above to send data to the receiving FTP server.
- **FTP Push Interval:**Select how frequently the data should be uploaded to the FTP server. The data can be posted in intervals from 15 sec to 1 month.

**NOTE:** The "TEST FTP Push" button should only be utilized after clicking the 'Save' button otherwise a fail response will be observed. If a fail response occurs after clicking 'Save' the settings should be double-checked or troubleshooting on the server-side may be required.

In the case when the network or FTP server is down and the module cannot send the data to the server it will accumulate all the failed posts and send them out when the network is up. These failed posts can be cleared by clicking the **Clear FTP Push Logs** button.

Click **Save** after changing any settings, users will be prompted to reboot the communications module immediately or later. If later is chosen the module will need to be rebooted from the **Management** page.

FTP Push Enable  
 No  
 Yes

FTP Push Url

FTP Push Port

FTP Push Username

FTP Push Password

FTP Push Interval

### 11.2.7 BACnet-IP

The AcuRev 2020-WEB meter supports the BACnet/IP protocol. The settings for the BACnet/IP protocol can be found by clicking on the **Settings** menu and selecting **Communications**. Select the **BACnet/IP** tab to access the settings to configure the module to communicate with a BACnet client.

The following settings can be configured:

- **BacNet Enabled:** Select Enable to enable the BACnet protocol.
- **BACnet Port:** Enter the BACnet or UDP port number. The default port is 47808.
- **Device Instance:** Enter the instance number for the device in the BACnet system. It must be unique within the system.
- **Device Name:** Enter a name for the device to distinguish it from other devices within the network.

WiFi Network Email Time/Date Datalog HTTP/IP Push **BACnet-IP** AcuCloud Push SNMP

BACnet Enabled  
 No  
 Yes

BACnet Port

Device Instance

Device Name

Location

Description

Enable Foreign Device Function  
 No  
 Yes

Under the **Enable Foreign Device Function** the following settings can be configured:

- Select **Enable** to communicate with a BACnet device from another subnet.
- **BBMD IP:** Enter the IP of the BACnet Broadcast Management Device(BBMD) under the 'BBMD IP' field for the device which will receive broadcast messages on one subnet and forward them to another subnet.
- **BBMD Port:** Enter BACnet Port of the BBMD in "BBMD Port"
- **Time To Live:** Enter a value between 5-1440 min in the 'Time To Live' for how often the foreign device will register in the BBMD's foreign device table.

Enable Foreign Device Function Advanced

No  
 Yes

BBMD IP

BBMD Port

Range: 0-65535

Time To Live

Range: 5-1440

[EPICS file download](#)

[Save](#)

Click **Save** after changing any settings. Users will be prompted to reboot the module immediately or later. If later is chosen the module will need to be rebooted from the **Management** page.

### 11.2.8 AcuCloud Post

The WEB module can directly interface with the Accuenergy Cloud software AcuCloud. The module will post data to the cloud software every five minutes. AcuCloud will require the serial number of the module which will then provide a token that will be used to configure the module so it can send its data to AcuCloud.

The settings for the AcuCloud Post function can be found by clicking on the **Settings** menu and selecting **Communications**.

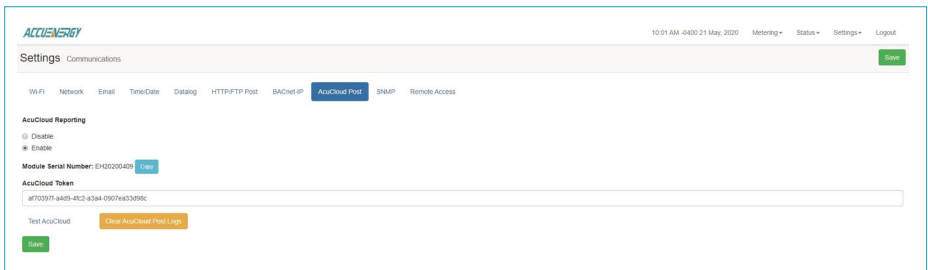
Select the **AcuCloud Post** tab to access the settings to configure the module to send data to AcuCloud.

- **AcuCloud Reporting:** Select **Enable** to enable the function and to further configure the settings related to AcuCloud.
- **Module Serial Number:** The module serial number will need to be copied using the **Copy** button, and pasted into the AcuCloud interface when adding the device to the cloud.
- **AcuCloud Token:** Copy and paste the token provided by the AcuCloud software into this field.

***NOTE:** The 'TEST AcuCloud' button should only be utilized after clicking the 'Save' button otherwise a fail response will be observed. If a fail response occurs after clicking 'Save' the serial number entered in AcuCloud should be double-checked.*

Click **Save** after changing any settings. Users will be prompted to reboot the module immediately or later if later is chosen the module will need to be rebooted from the **Management** page.

In the case when the network is down and the module cannot send the data to the server it will accumulate all the failed posts (up to 3000 cached posts) and send them out when the network is up. These failed posts can be cleared by clicking the **Clear AcuCloud Post Logs**.

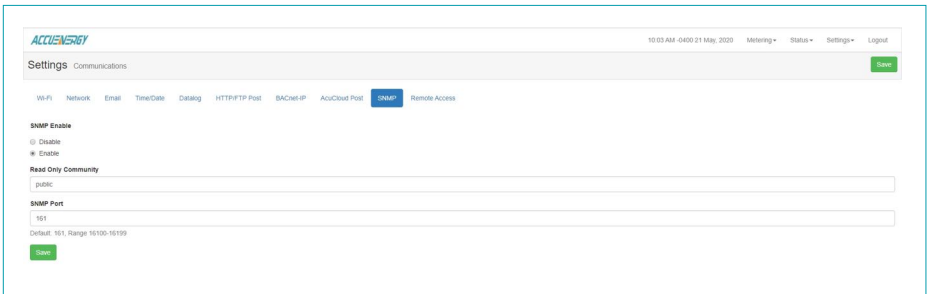


### 11.2.9 SNMP

The AcuRev 2020-WEB meter supports the Simple Network Management Protocol (SNMP) protocol for reporting the metering data to the management station. The module uses a public community string for read-only access. By default the meter will communicate using SNMP port 161.

The settings for the SNMP protocol can be found by clicking on the **Settings** menu and selecting **Communications**. Select the **SNMP** tab to access the settings to configure the module to communicate with a SNMP management station.

- **SNMP Enable:** Select Enable to enable the function and to further configure the settings related to the SNMP protocol.
- **Read-Only Community:** By default the community string is Public, this configuration is similar to a password that allows only authorized users to access the meters data.
- **SNMP Port:** By default, the SNMP Port is configured to 161. The SNMP Port can be any value from 16100 to 16199.



### 11.2.10 Remote Access

The AcuRev 2020-WEB meter offers the remote access function. This allows users to provide other users with remote access to the meter's web interface. Users will have full functionality and access to all meter readings and settings with this function. After logging into the meters web interface, click on **Settings** the menu on the top right corner of the interface and then select **Communications**. On the communications page, select the **Remote Access** tab.

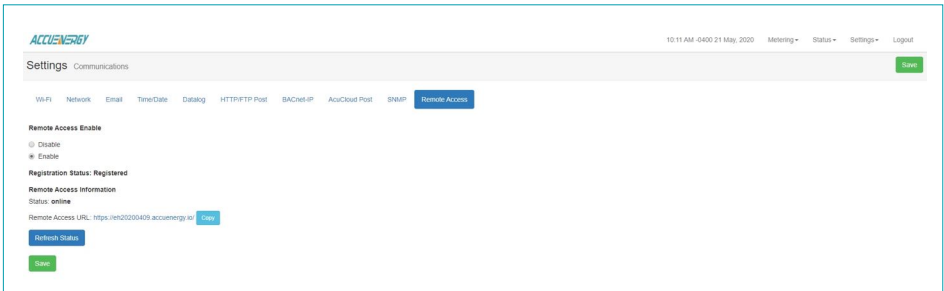
- **Registration Status:** Displays the status as Registered or Unregistered.
- **Remote Access Information:** Lets users know if remote access status either, online or offline.
- **Remote Access URL:** The URL used to access the meters web interface remotely. This URL can be copied and shared with all users that require remote access.

Under Remote Access **Enable** click on the Enable button. Next under Registration Status click on the **Manual Register** button. Once the meter is registered successfully a URL will be provided.

Click on **Save** in order to save all settings.

A module reboot is required for the remote access URL to be successfully activated. Once complete, go back to the **Remote Access** page and click on **Refresh Status**, the status should now show as **online**.

***NOTE:** If the status of the remote access still shows offline, please check the network connection to the meter. The meter requires a sufficient internet connection in order to successfully use the Remote Access function.*



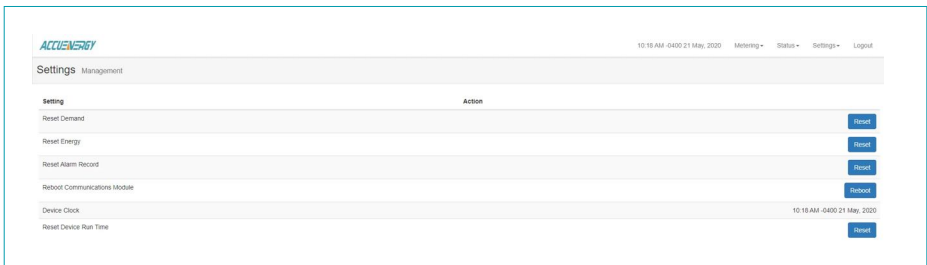


## 11.3 Management

### 11.3.1 Parameter Reset

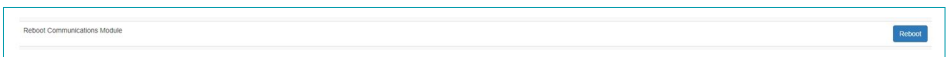
The Management web page allows the user to clear and reset certain parameters in the meter. The following parameters can be reset from the Management page:

- Demand
- Energy
- Max and Min
- Alarm Record
- Device Run Time



### 11.3.2 Reboot Communications Module

Users can also reboot the web module and meter which is required after any communication or meter setting is changed if a module reboot is not performed the settings will not be saved to the meter and will go back to its default settings. This not only resets the communication module, but it also performs a soft reboot on the Acuvim II meter.



### 11.3.3 Password Configuration

The access level passwords can be changed from the Management page as well, all new passwords must be 6 characters or more.

The screenshot shows a web interface for password configuration. It contains two main sections: 'Reset Admin Password' and 'Reset View Password'. Each section has two input fields: 'Enter old password' and 'Enter new password'. To the right of the 'Enter new password' field is a 'Show password' checkbox. Below each set of fields is a blue 'Save' button.

### 11.3.4 Diagnostic File

There is a diagnostic file on the WEB module that users can download which can be used to analyze the modules diagnostics. The diagnostic file can be downloaded at the bottom of the Management page.

**NOTE:** Please send the diagnostic file to Accuenergy Technical Support ([support@accuenergy.com](mailto:support@accuenergy.com)) for analysis.

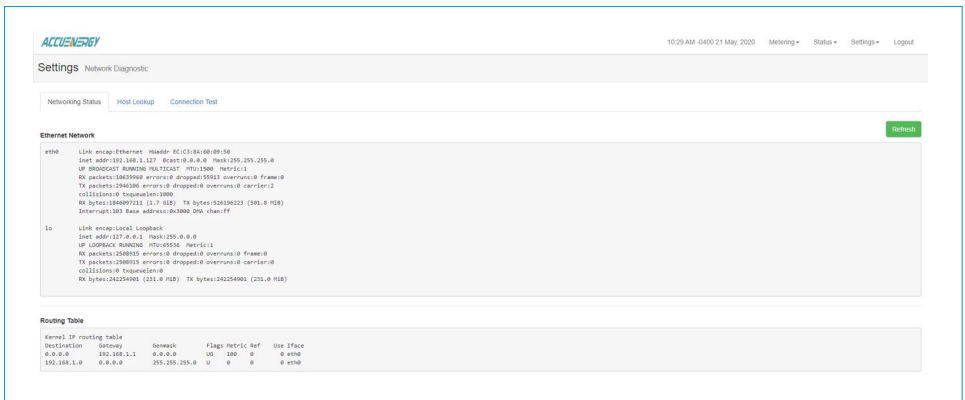
The screenshot shows the 'Settings Management' page in the AccuEnergy web interface. The page title is 'Settings Management' and the user is logged in as 'Meeting'. The page lists various settings with 'Reset' buttons: 'Reset Demand', 'Reset Energy', 'Reset Alarm Record', 'Reboot Communications Module', 'Reset Device Clock' (10:18 AM - 04:00:21 May, 2020), 'Reset Device Run Time', 'Live API Token' (273cf4e05-87b6-40ac-76b6-423a60746771), 'Reset API Token', 'Reset Admin Password', and 'Reset View Password'. Each 'Reset' button is accompanied by a password configuration form with 'Enter old password' and 'Enter new password' fields, a 'Show password' checkbox, and a 'Save' button. At the bottom of the page, there is a blue button labeled 'Download Diagnostic File'.

## 11.4 Network Diagnostic

The Network Diagnostic page can be used to monitor the network status of the module.

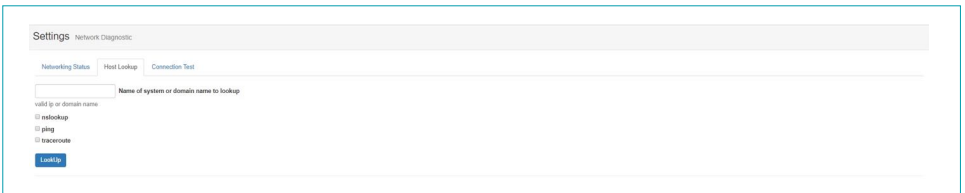
### 11.4.1 Networking Status

On the Networking Status page, it shows the Ethernet network status, routing table, DNS server and Network stat.



### 11.4.2 Host Lookup

AcuRev 2020-Web can be used to lookup a system or domain. By using the host lookup function, users can nslookup, ping and traceroute a domain.



Enter the name of the system or the domain.

The screenshot shows the 'Connection Test' tab in a network diagnostic tool. The target is 'www.google.com'. The test results are as follows:

```

Namelookup
-----
Server: 8.8.8.8
Address: 8.8.8.8 google-public-dns-e.google.com
Name: www.google.com
Address: 1: 172.217.180.4:cdn12386-in-f4.1a300.net
Address: 2: 20877f60440b:88912084 yyz1284-in-0b.1a300.net

Ping
---
PING www.google.com (172.217.1.4): 56 bytes of data
64 bytes from 172.217.1.4: seq=1 ttl=64 time=7.813 ms
64 bytes from 172.217.1.4: seq=2 ttl=64 time=8.000 ms
64 bytes from 172.217.1.4: seq=3 ttl=64 time=8.000 ms
64 bytes from 172.217.1.4: seq=4 ttl=64 time=8.000 ms
64 bytes from 172.217.1.4: seq=5 ttl=64 time=8.000 ms
64 bytes from 172.217.1.4: seq=6 ttl=64 time=8.000 ms
64 bytes from 172.217.1.4: seq=7 ttl=64 time=8.000 ms
64 bytes from 172.217.1.4: seq=8 ttl=64 time=8.000 ms
64 bytes from 172.217.1.4: seq=9 ttl=64 time=8.000 ms
64 bytes from 172.217.1.4: seq=10 ttl=64 time=8.000 ms
--- www.google.com ping statistics ---
8 packets transmitted, 8 packets received, 0% packet loss
round-trip min/avg/max = 8.000/10.627/18.000 ms

Traceroute
-----
Traceroute to www.google.com (172.217.185.4), 30 hops max, 30 byte packets
 0  192.168.1.1 (192.168.1.1)  0.000 ms  0.000 ms  0.000 ms
 1  10.0.0.1 (10.0.0.1)  0.000 ms  0.000 ms  0.000 ms
 2  10.0.0.1 (10.0.0.1)  0.000 ms  0.000 ms  0.000 ms
 3  10.0.0.1 (10.0.0.1)  0.000 ms  0.000 ms  0.000 ms
 4  10.0.0.1 (10.0.0.1)  0.000 ms  0.000 ms  0.000 ms
 5  10.0.0.1 (10.0.0.1)  0.000 ms  0.000 ms  0.000 ms
 6  10.0.0.1 (10.0.0.1)  0.000 ms  0.000 ms  0.000 ms
 7  10.0.0.1 (10.0.0.1)  0.000 ms  0.000 ms  0.000 ms
 8  10.0.0.1 (10.0.0.1)  0.000 ms  0.000 ms  0.000 ms
 9  10.0.0.1 (10.0.0.1)  0.000 ms  0.000 ms  0.000 ms
  
```

### 11.4.3 Connection Test

Users can use the Connection Test function to test the local network that the module connected to.

The test result will show SUCCESS and PASS if there are no issues found.

If users have an issue of AcuCloud, email or HTTP/FTP post, it may be related to the internet connection. To verify the connection is working, we can use the connection test here.

The screenshot shows the 'Settings Network Diagnostic' page. The 'Connection Test' tab is selected. The page contains the following text:

This diagnostic page will attempt a connection to the specified network nodes.  
 In process, all network settings will be tested and a report will be given with detailed results of these tests.

A 'Begin Test' button is visible at the bottom left of the diagnostic area.

## Chapter 12 Firmware Update

---

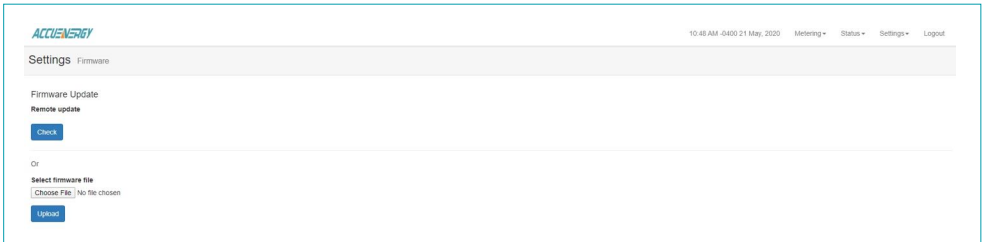
12.1 Manual Firmware Update

12.2 Remote Firmware Update



## Chapter 12 - Firmware Update

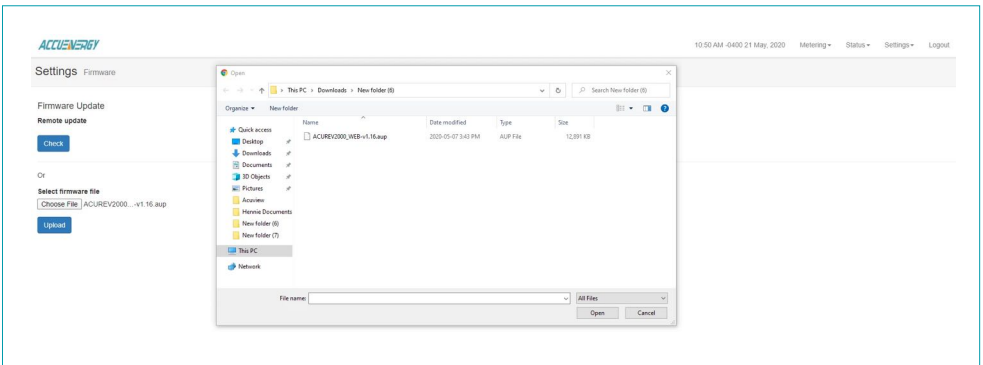
The Module Firmware web page is used for updating the firmware version on the AcuRev 2020-WEB module. The user can check if the module they are using is up to date and update the module if needed using the remoter firmware update. Users can also manually update the firmware by uploading the firmware file. The current version of the firmware will be displayed on the Module firmware update page and can also be viewed on the **Device Information** page of the web interface.



### 12.1 Manual Firmware Update

To update the module using the Select Firmware File option:

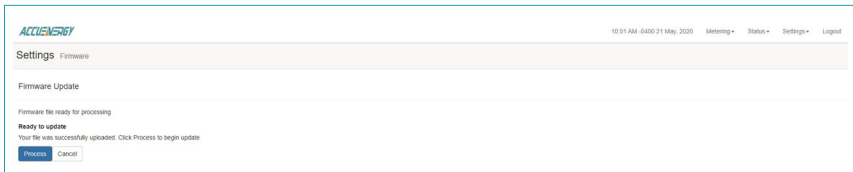
Click on **Choose File** and select the firmware file to update from your computer. The file format must be **.aup**. Then click on **Upload**.



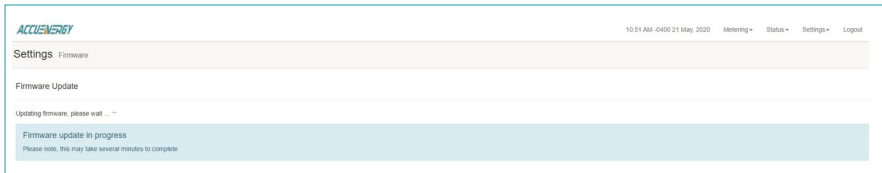


Once the upload was successfully uploaded you will see the following page confirming that the file was uploaded.

- Click **Process** to begin the update.

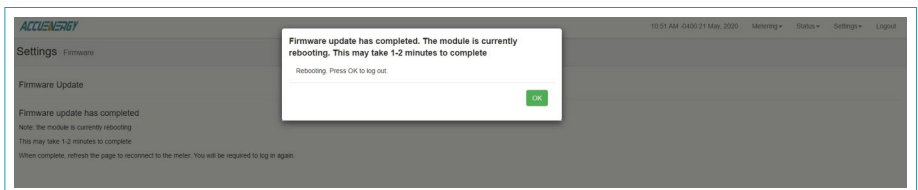


The update will begin and you will see the following message: 'Firmware update in progress!'



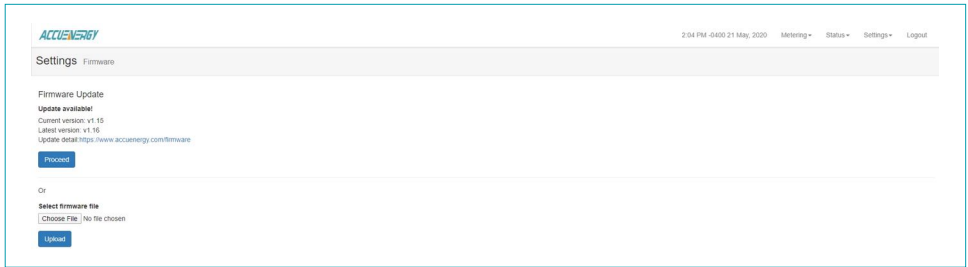
Once the update is complete, you will see the following page.

**NOTE:** The module is currently rebooting. This may take 1-2 minutes to complete. When complete, refresh the page to reconnect to the meter. You will be required to log in again.

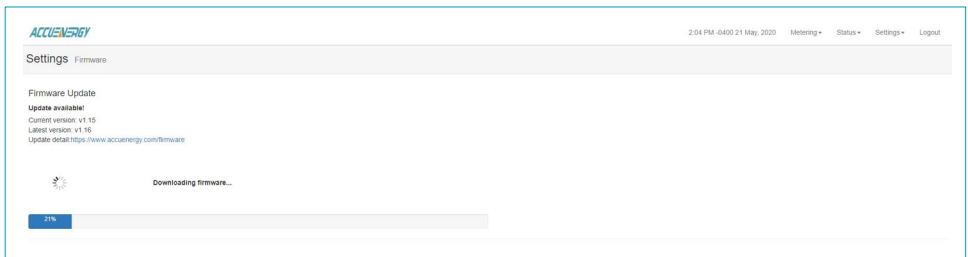


## 12.2 Remote Firmware Update

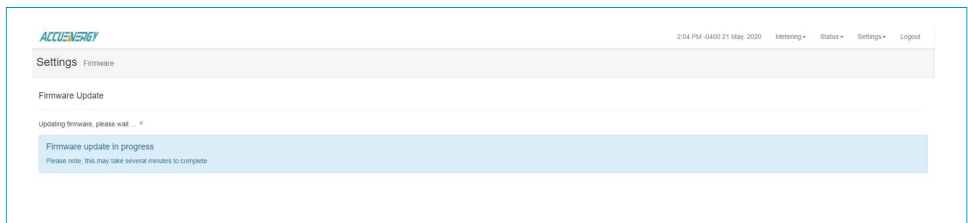
Users can also use the remote firmware server to update the module firmware. Click on Check to verify if there is a firmware update available.



If there is an update available click on **Proceed**.



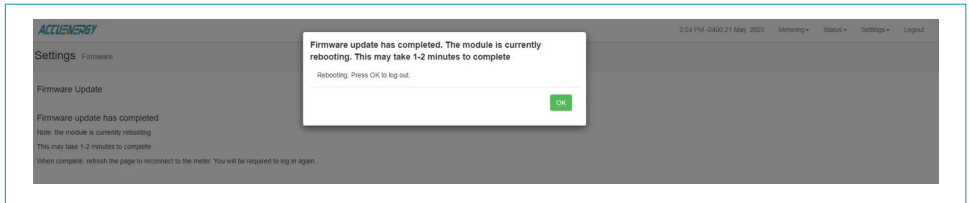
After the firmware finishes downloading the update from the remote server, the firmware update will begin.





Once the firmware update is complete the module will reboot itself and users will be required to log back into the web interface.

The rebooting will take 1-2 minutes.



## Chapter 13 Device Information

---

13.1 Device Information

13.2 System Event



## Chapter 13 - Device Information

### 13.1 Device Information

The Device Information page provides users with information about the AcuRev 2020 series meter, Display Module and WEB Module. This page contains the device type, serial number, firmware version and release date of the meter and display module. It also contains the device type, serial number, firmware version, hardware version, BSP version, release date and MAC address of the WEB module.

Device	
Setting	Information
Device Type	HC02
Hardware Version	v2.00
Software Version	v2.60
Release Date	2017-09-14
Serial Number	EH17040173
Device Address	6

Display Module	
Setting	Information
Device Type	SA32
Hardware Version	v2.01
Software Version	v2.60
Release Date	2015-11-05

Web Module	
Setting	Information
Device Type	AcuRev2020-WIFI
Hardware Version	v1.01
Software Version	v1.12
BSP Version	v1.00
Release Date	2019-05-21
Module Serial Number	EH15130607
MAC Address	EC:C3:8A:60:09:50

### 13.2 System Event

The system event page will show the event that is occurring in the module and it will also show the timestamp for the event.

Status System Event	
Timestamp	Event
2019-01-11 16:40:02	Modify Clock
2019-01-11 16:39:02	Modify Clock
2019-01-11 16:38:02	Modify Clock
2019-01-11 16:37:02	Modify Clock
2019-01-11 16:36:02	Modify Clock
2019-01-11 16:36:02	Modify Clock
2019-01-11 16:34:02	Modify Clock
2019-01-11 16:33:02	Modify Clock

## Chapter 14 Export/Import Config

---

14.1 Exporting Configuration

14.2 Importing Configuration



## Chapter 14 Export/Import Config

The AcuRev 2020-WEB has a configuration management page that allows users to save all web settings with the exception of certain settings into a configuration file. This is useful if users have more than one meter that needs to be programmed with the same settings, and eliminates any error when trying to configure another AcuRev 2020 meter.

The following settings are saved in the configuration file:

- All Meter settings (Wiring, CT Ratio)
- Network settings (Only DNS1, DNS2, Modbus TCP Port, HTTP Proxy)
- All Email settings
- All Time/Date settings
- All Data Log settings
- All Post Channel settings
- All BACnet settings
- All SNMP settings
- Management settings (the View and Admin Access Level passwords)

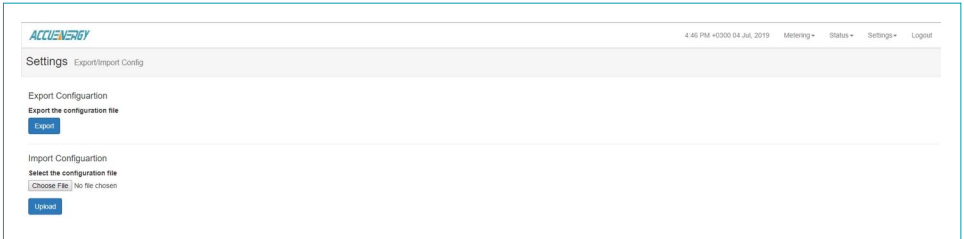
The settings that are not included or affected by the Config Management file is:

- Most Network settings (DHCP, IP, Submask, Gateway, all WiFi settings, and
- HTTPS port are not changed)
- BACnet Instance Number
- AcuCloud
- Remote Access

## 14.1 Exporting Configuration

Users can simply download and save the existing configuration file by clicking on **Export** button.

The exported file has the.conf.am format.

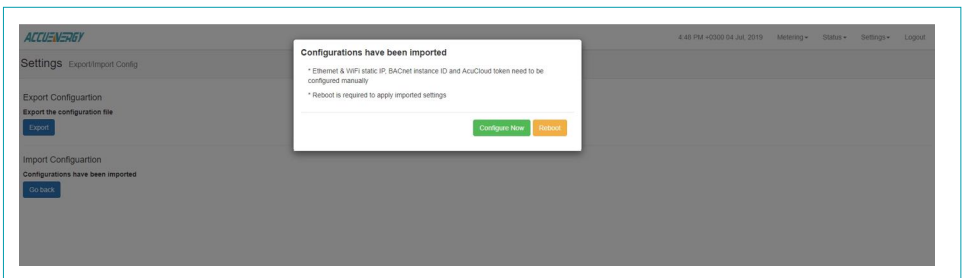


## 14.2 Importing Configuration

The configuration can be imported by using a.conf.am file.

**NOTE:** Only a config file with the file format of .conf.am is accepted when importing the config file.

After the configuration is successfully imported, a message will show up. All the new settings will take effect after the meter is rebooted.





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