



OPERATIONS

MANUAL

TEST MANAGER APPLICATION

VERSION 2.1.0

TEST MANAGER APPLICATION MANUAL



THE EASTERN SPECIALTY COMPANY

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1

Log in your credentials. Check network view for the connected devices. If your desired master socket is not connected, perform a scan.



Insert a meter to the socket or bypass it by using a meter jumper. Wait for a ready master socket status.

2

3

Select the desired master socket for testing by clicking it. The Test tab will activate, showing the test parameters. If previous tests were performed on the master, wait for the results to be rendered before proceeding.



At this point you have two options. Either perform a pre-defined (Test Sequence) test via the Test tab or a manual test using the Manual Test Tab. For predefined test, make sure test sequences are created first via the Test Sequence tab. See section 3.6 For creating predefined test.

4

5

Predefined Test. Select a test sequence. The available values for the test sequence are solely dependent on the meter form.



In the test control, you can turn on or off the voltage and the load, or even perform pulse align. Pressing the play button will start the test. There are instances wherein the test will fail to commence due to device related problems. Below the play button shows the status of the test.

6

7

If the test has successfully started, real-time channel measurements, pulses, and test durations are shown.



Once the test has successfully ended, the results will be reflected in the Test Results section and the status will now be changed to Ready (Blue).

8

TABLE OF CONTENTS

1.0 INSTALLATION1

1.1 Introduction1

1.2 The Installation1

1.2.1 Installation Setup Flow1

1.3 Configuring the TMA Software.....5

1.3.1 Network Connection: Private Network / P2P Ad Hoc5

1.3.2 Network Connection: Public / Corporate Domain7

1.4 Connecting the Ethernet or LAN Cables.....7

2.0 FUNCTIONALITIES.....8

2.1 Introduction8

2.2 Graphical User Interface (GUI) Sections.....8

2.3 Test Manager Application Functionalities.....9

2.3.1 Login Screen9

2.3.2 Device History10

2.3.3 Network Discovery (NET SCAN)11

2.3.4 View Scan Details11

2.3.5 Network View Functionality12

2.3.6 TEST Tab.....13

2.3.7 METER DATABASE Tab.....14

2.3.8 TEST SETUP Tab.....15

2.3.9 SEQUENCES Tab16

2.3.10 MANUAL TEST Tab18

2.3.11 HEADER Features19

2.3.12 Settings Window20

2.3.12.1 NET SCAN Settings20

2.3.12.2 ON START Settings20

2.3.13 Database Sync Window21

2.3.14 Meter Information Window22

2.3.15 Update NextGen devices using TMA23

3.0 CONFIGURATIONS.....24

3.1 Introduction24

TABLE OF CONTENTS

3.2 Log in	24
3.3 Device Selection.....	24
3.4 Meter Test	25
3.5 Database Selection	25
3.6 SEQUENCES.....	26
3.7 MANUAL SETUP	27
3.8 IMPORTING METERS.....	27

1.0 INSTALLATION

1.1 Introduction

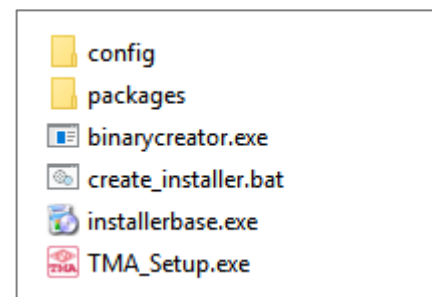
This chapter is intended to guide you through the process of installing the Test Manager™ software and to give you a quick tour so you can explore the software on your own.

1.2 The Installation

To start installing, simply run **TMA_Setup.exe**. An installation wizard will pop-up to guide you in the installation process.

Note: The installer will only run on Windows 7, 8 & 10.

Note: Administrative rights are not required to install the application.

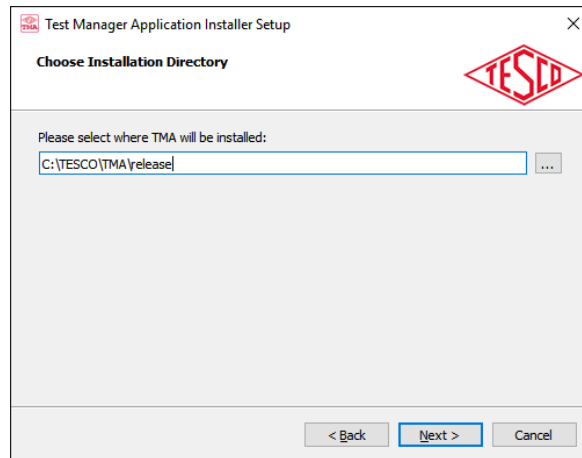


1.2.1 Installation Setup Flow

STEP 1: Disclaimer Information

Please take note of the Disclaimer information specific to the defined firmware version of the NextGen Devices as to its compatibility with the Test Manager Application (TMA).

STEP 2: Installation Directory

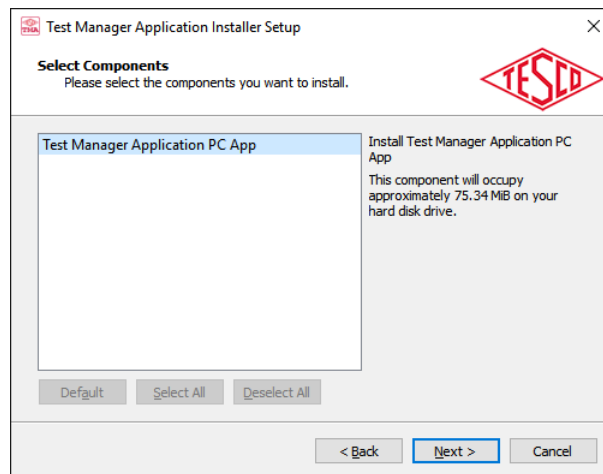


The default installation directory of the application is:

C:\TESCO\TMA\release

The user can change the installation directory.

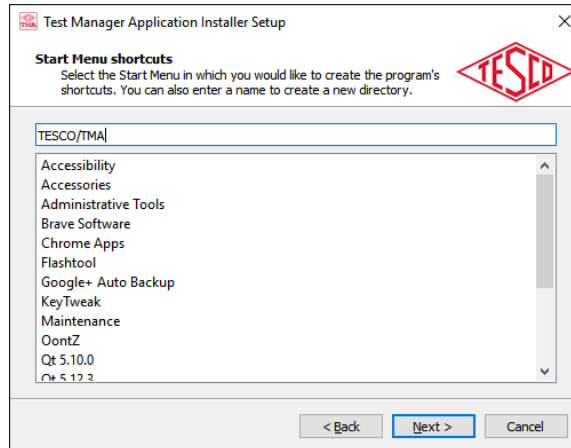
STEP 3: Selection of Application Components



This step provides information on what components are needed aside from the Test Manager Application.

There is also information on the required disk space to install the application.

STEP 4: Start Menu Shortcut



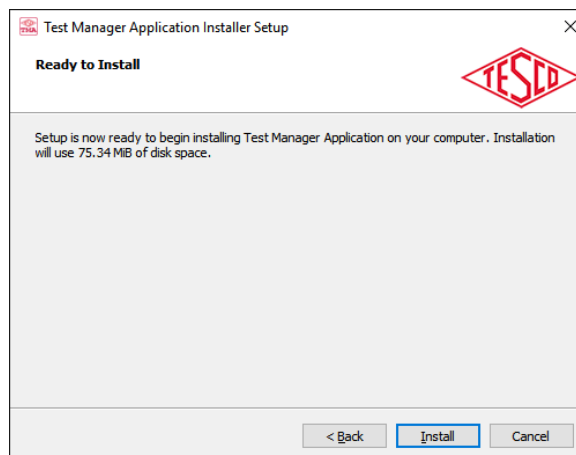
This step creates a Start Menu Shortcut for the application inside the Tesco directory.

The user can change the shortcut name of the application as well as how it is displayed in the start menu.

The default name is **TESCO/TMA**

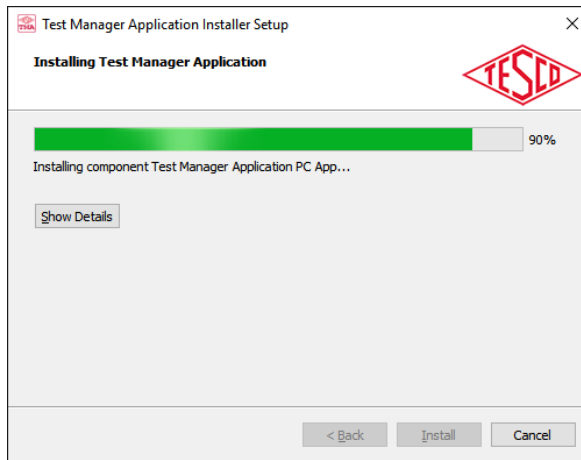
In reference to this default name, the installer will create a start menu shortcut icon inside a Tesco folder.

STEP 5a: Begin Installation

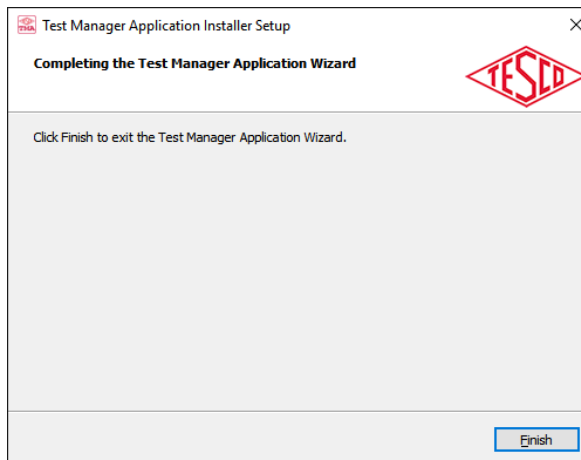


When the install button is pressed in this step, the installation wizard will start to install the application by extracting & transferring files in your computer to the installation directory.

STEP 5b: Begin Installation



STEP 6: Successful Installation



If no errors are encountered during the installation process, this step will show up and indicates that the installation is successful.

Note:

The application is now ready to be used and doesn't require a computer restart.

1.3 Configuring the TMA Software

Test Manager Application (TMA) talks to your TESCO NextGen devices over an Ethernet connection.

There are two different ways to set up your connection depending on the security requirements of your company.

1.3.1 Network Connection: Private Network / P2P Ad Hoc

The NextGen devices can be placed on a private network segment. In this configuration the TMA software does not communicate over your corporate network.

NOTE: If you want to have the computer on which the TMA software is installed to also have access to your corporate network, then you will need to either: (1) Install two NIC cards (one for the corporate network and one for the private segment) or (2) Use WIFI to connect to the corporate network and the NIC to connect to the private segment. If you do not want the computer connected to your corporate network, then you will only need one NIC card which will be used for the private segment.

Connecting to a Private Network Segment

Consult your IT department to determine available private network segment. The systems ship from TESCO with the IP addresses set in the 192.168.0.XXX segment. They can be changed on the **Setup>System>Network** screen of the device.

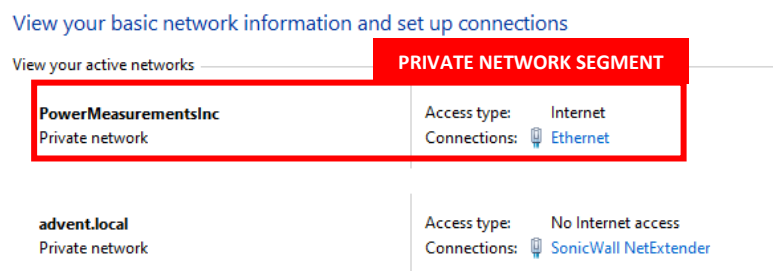
NETWORK SETUP			
<input checked="" type="checkbox"/> Static IP	<input type="checkbox"/> DHCP	192.168.0.100	DEV. 1
<input checked="" type="checkbox"/> Static IP	<input type="checkbox"/> DHCP	192.168.0.101	DEV. 2
APPLY		CANCEL	ENTER

Some devices will show two IP addresses, some only one.

For a PRIVATE segment installation, select Static IP and set the IP address within the desired segment. When there are two IP addresses, set the second address to one more than the first as shown above. Make sure that all units have unique IP addresses.

Setting the Static IP Address for the private NIC

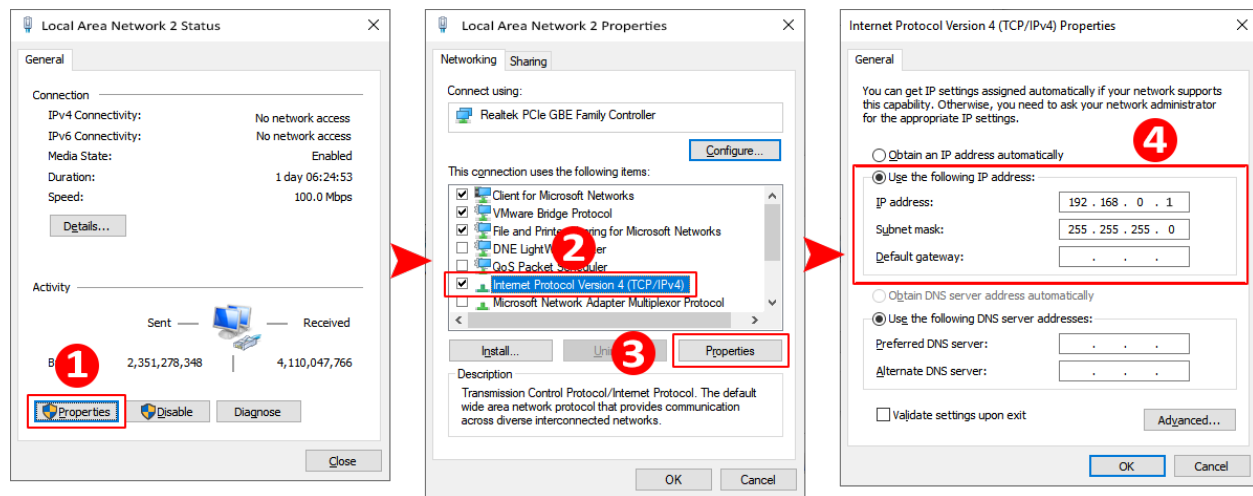
If you are on a private network segment, you will also have to go into **Windows Control Panel** and select **Network and Sharing Center**. You should see a display like this:



NOTE1: Where one NIC is connected to your company network and the new NIC has no network access.

NOTE2: Depending on your Windows Operating System version, "Local Area Connections" are used interchangeably with "Ethernet" in the Connections Type.

Double click on the connections “**Local Area Network 2**” as illustrated above inside the red rectangle box label Private Network Segment to bring up the Status window.



1	From the status window of the Private Network, click on the “Properties” button
2	From the Properties window, select “Internet Protocol Version 4 (TCP/IPv4)”
3	Once “Internet Protocol Version 4 (TCP/IPv4)” is selected, click “Properties” button. Also, double-clicking the “Internet Protocol Version 4 (TCP/IPv4)” will open the IPv4 properties window
4	In the IPv4 properties window, set a private IP address for that adapter. If your company network does not use 192.168.0.xxx, set 192.168.0.1 as the IP address as shown above. Click OK on each popup until you get back to Control Panel. The segment set here must match the segment set in the devices.

1.3.2 Network Connection: Public / Corporate Domain

Consult your IT department to determine whether they want these devices set to either of the following:

- 1- Static or fixed IP addresses

If Static IP, proceed as for a private network using the addresses assigned by your IT department.

- 2- Dynamic Host Configuration Protocol (DHCP).

*If DHCP, change the **Network Setup** of your device from Static IP to DHCP. You do not need to set an IP address. That will be setup through DHCP; it means that your router will assign the IP address for your device. See image below.*

The screenshot shows a 'NETWORK SETUP' window with two rows of configuration options. Each row has a 'Static IP' checkbox (unchecked) and a 'DHCP' checkbox (checked). To the right of the checkboxes are two IP address input fields: '192.168.1.178' for 'DEV. 1' and '192.168.1.183' for 'DEV. 2'. At the bottom of the window are three buttons: 'APPLY', 'CANCEL', and 'ENTER'.

NETWORK SETUP	
<input type="checkbox"/> Static IP	<input checked="" type="checkbox"/> DHCP
<input type="checkbox"/> Static IP	<input checked="" type="checkbox"/> DHCP
192.168.1.178	DEV. 1
192.168.1.183	DEV. 2
APPLY	CANCEL ENTER

1.4 Connecting the Ethernet or LAN Cables

The devices can be connected to a switch/hub with a standard Ethernet/LAN cable or directly to a computer with a crossover cable (Ad Hoc or P2P). Beginning January 1, 2019 all systems are shipped with a BLUE standard LAN cable and the DMS and DTS systems also include a red crossover cable for your convenience.

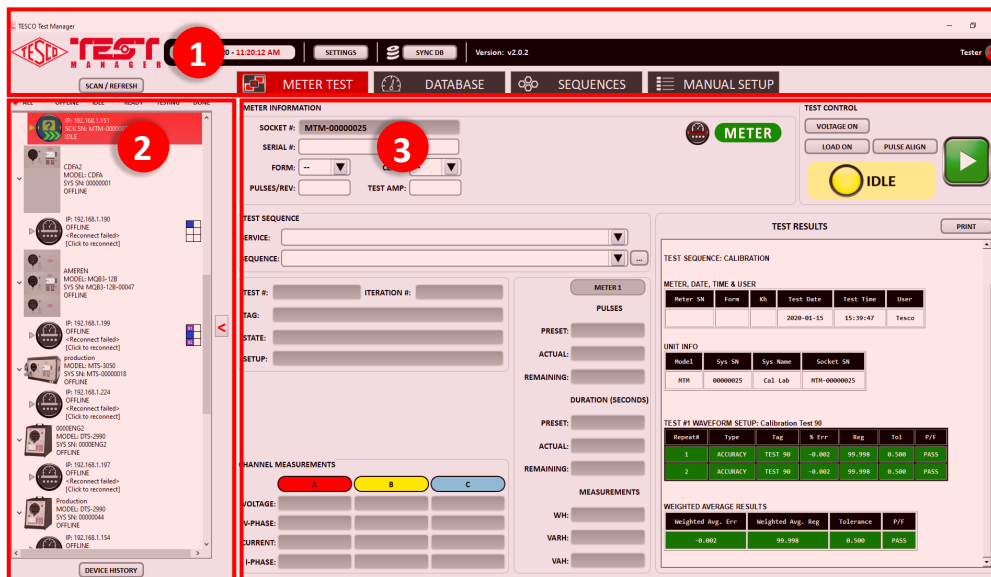
2.0 FUNCTIONALITIES

2.1 Introduction

This chapter is a reference for the functions & features of the Test Manager Application (TMA) and provides brief descriptions of each feature for quick access.

2.2 Graphical User Interface (GUI) Sections

TMA Main Window user interface is divided into three sections.

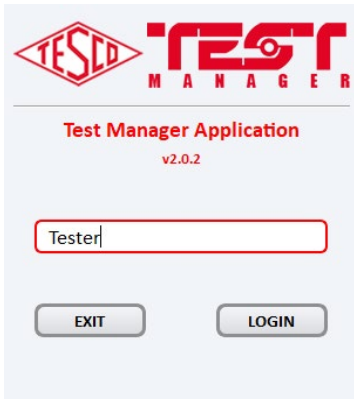


#	DESCRIPTION
1	Header (See Section 2.3.11)
2	Network View
3	TMA Content

2.3 Test Manager Application Functionalities

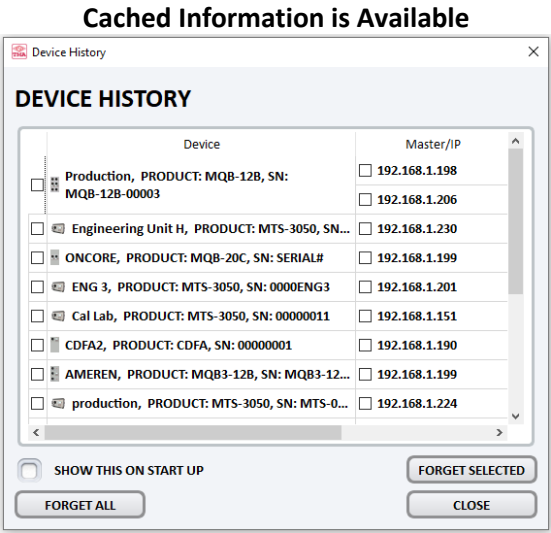
2.3.1 Login Screen

Upon opening the application, the login screen will appear.

	<p>NAME/INITIALS Provide Name/Initial prior opening the application</p> <p>EXIT Closes the dialog box and exits TMA Application</p> <p>LOGIN Proceed to the TMA Main Window</p>
--	--

2.3.2 Device History

Device History is a pop-up window containing cache information on the devices recently used with their corresponding master unit(s) IP address(es). On the first run, the device history is empty.



DEVICE

Information on recently used device(s)
Format: [icon][name],[model],[serial number]

MASTER/IP

The master/IP varies per device. This is the IP addresses of the master sockets of the device.

SHOW THIS ON START UP

A checkbox to show this Device History window after logging in. It will not be shown when this is unchecked during startup. This is also accessible via a button in the bottom part of the Network view section.

FORGET ALL

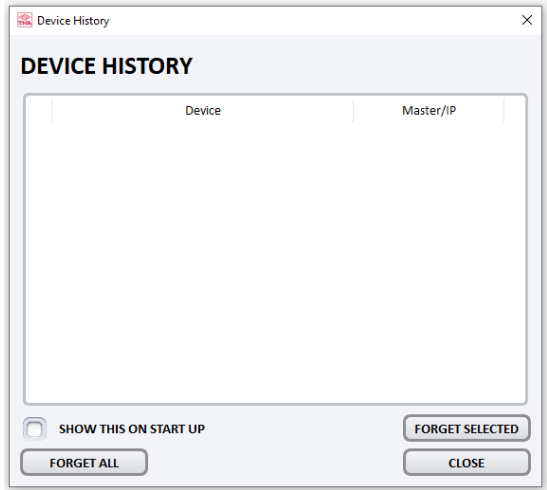
Remove all information per device that is shown in the Device History.

NOTE: All devices shown (as scanned and cached, online & offline) in the Network view will be removed. All online devices will be disconnected. To reconnect, the user needs to perform Scan/Refresh.

FORGET SELECTED

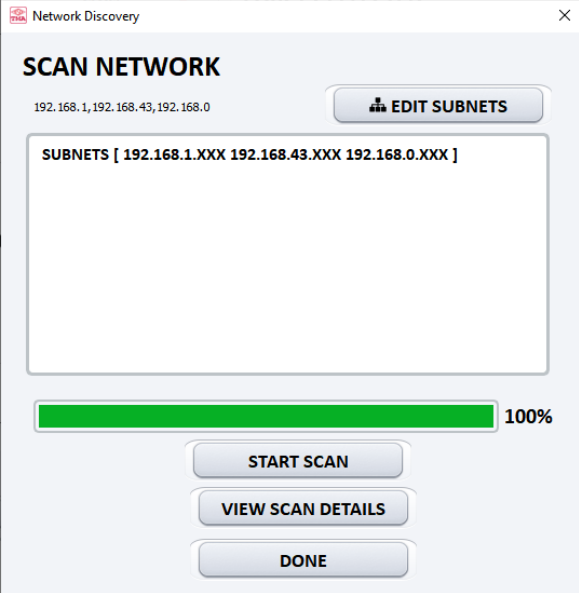
Only forgets/removes selected device. See FORGET ALL for the description of the functionality.

Cached Information is Emptied or Forgotten



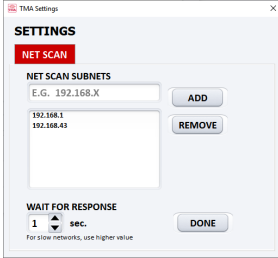
2.3.3 Network Discovery (NET SCAN)

When “Scan/Refresh” button is pressed in the Network View section, Network Discovery window is activated.



EDIT SUBNETS

See 2.3.12.1 for more details.



START SCAN

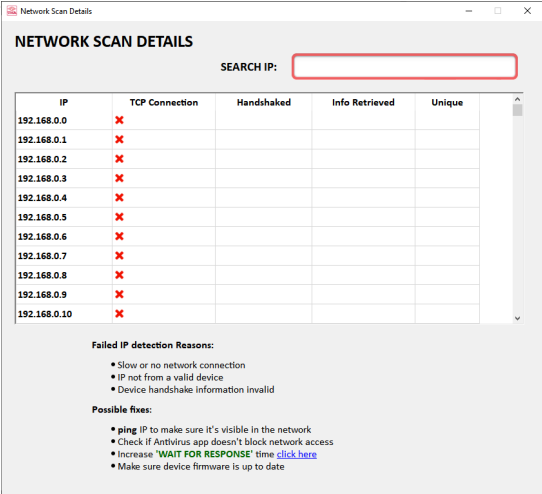
The application will scan all NextGen devices based on the defined network subnets. By default, the subnet is 192.168.1.

VIEW SCAN DETAILS

See Section 2.3.5 for more details.

2.3.4 View Scan Details

View Scan Details window provides detailed information of the result of the latest network scan operation. It lists down all the IPs involved in the scan and the phases of the scan where the discovery failed or passed. It is to be noted that a successful IP discovery requires all the phases to be successful.



SEARCH IP

Enables the user to input a specific IP addresses to filter out the list in the table & immediately check the cause of connection error.

“click here” LINK

Clicking this link will show the **NETS CAN Settings** window (see **SECTION 2.3.12.1**) that allows you to fine tune aspects of the network scan process.

2.3.5 Network View Functionality


The Network View section provides information of the NextGen Devices that is connected in the network. This section displays current connected devices and the cached data the previously connected devices. The list of devices is clustered relative to their statuses.

The screenshot shows the TESCO Test Manager interface. At the top, there's a header with the TESCO logo, 'TEST MANAGER', and the date 'Jan. 23, 2020'. Below the header is a 'SCAN / REFRESH' button (1). A status filter bar (2) contains buttons for 'ALL', 'OFFLINE', 'IDLE', 'READY', 'TESTING', and 'DONE'. The 'ONLINE' filter is selected (3). The main area displays a list of devices, grouped by status. The 'ONLINE' group (4) shows three devices with their respective icons (5) and details: IP, SCK SN, and status. The 'OFFLINE' group shows several devices, some with 'Reconnect failed' messages. To the right of the device list are master socket orientation icons (6), represented by blue and violet squares. At the bottom, there is a 'DEVICE HISTORY' button (8).

1- SCAN/REFRESH BUTTON
This button searches for all the NextGen devices connected in the network.

2- DEVICE STATUS FILTER
The listed devices can be filtered per status. See **Section XXX** for the Device Status Filter Information.

3- DEVICE STATUS GROUP
This is the group status header of the devices belong in the same respective status, either **ONLINE** or **OFFLINE**.

4- DEVICE MODEL ICON
All NextGen devices have their unique icons that represent the physical appearance of the device.
 For new, unknown and unlisted devices, TMA will display a generic icon (see image on right).

5- DEVICE INFORMATION
Displays important identification parameters of the device in this order: NAME, MODEL, SERIAL NUMBER, STATUS.

6- DEVICE MASTER INFORMATION
Master socket list attached to the device. See **Section XXX** for the Master icon & description information.

7- MASTER SOCKET ORIENTATION
Indicates the position of the sockets in the device. The **blue** square represents the *master* socket while **violet** ones are the *slaves* (if present).
NOTE: Masters belonging to a single-socket device don't have this since orientation/position is obvious.

8- DEVICE HISTORY BUTTON
This button can be clicked to show the **Device History** popup window (see [section 2.3.2](#)) for more info on this window.

2.3.6 TEST Tab

The screenshot shows the TEST Tab interface with the following components and callouts:

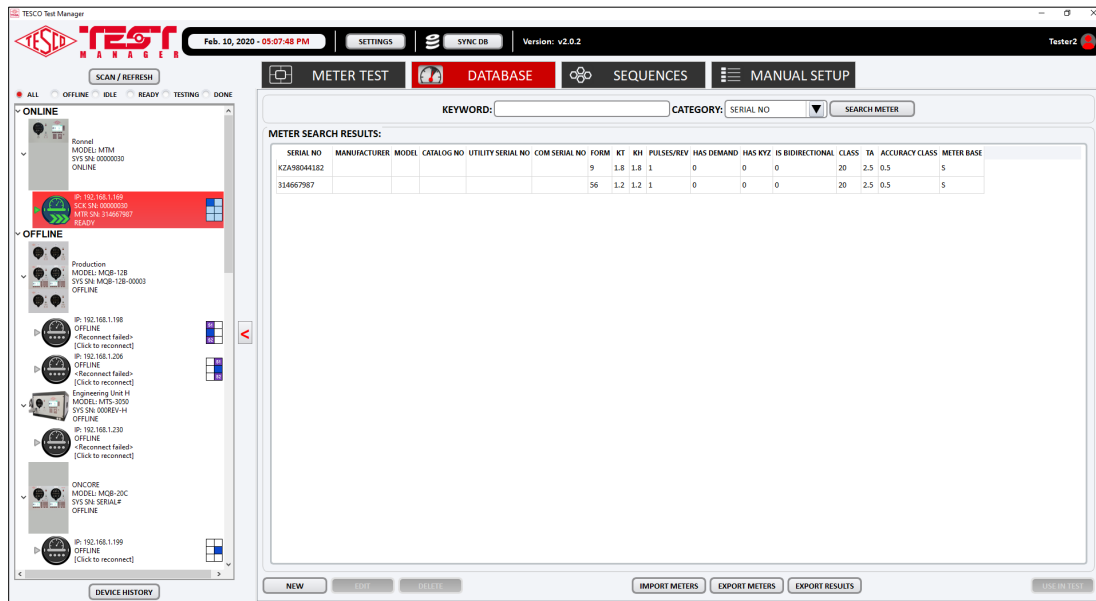
- 1 METER INFORMATION:** A section at the top left showing a list of meters. The first two are MSM2-000005B and MQB-000003B, both labeled 'METER'. The third is MSM2-000006B, labeled 'BYPASS'. Each meter entry includes a 'METER S/N' field.
- 2 TEST SEQUENCE:** A section below the meter information with dropdown menus for 'FORM' (set to 9S), 'SERVICE' (set to 2-Wire, 1 Ph), and 'SEQUENCE' (set to 2W,1PH FL, LL, FLPF @TA, SINUSOIDAL, ACCURACY). There is also a 'WAVEFORM SETUP' field.
- 3 TEST # and ITERATION #:** Fields for 'TEST #' and 'ITERATION #'.
- 4 CHANNEL MEASUREMENTS:** A section with three tabs: A, B, and C. It includes fields for 'VOLTAGE', 'V-PHASE', 'CURRENT', and 'I-PHASE'.
- 5 MEASUREMENTS:** A section with three columns for 'METER 1', 'METER 2', and 'METER 3'. It includes fields for 'PRESET', 'ACTUAL', and 'REMAINING' for 'PULSES', 'DURATION (SECONDS)', and 'MEASUREMENTS'.
- 6 TEST RESULTS:** A large empty area for displaying test results, with a 'PRINT' button.
- 7 TEST CONTROL:** A section on the right with buttons for 'VOLTAGE ON', 'LOAD ON', and 'PULSE ALIGN'. It also features a green play button and a yellow 'IDLE' indicator.

This is for conducting a test. The results will be displayed as the test is being executed.

<p>1 METER INFORMATION Shows the connected meters. A pop-up window (see the image) will appear when a meter is clicked. The pop-up contains the detailed information about the meter. See Section 2.3.14 for details about the Meter Information window.</p> <p>2 TEST SEQUENCE Shows the available test sequences that can be executed as a test. See Section 2.3.9 for the details in creating Test Sequence.</p> <p>3 This section shows the test number and the test iteration while the test is being performed. Real-time results are shown in this section.</p>	<p>4 This section shows the channel measurements when LOAD ON is activated, regardless if a test is being performed or not. Real-time results are shown in this section.</p> <p>5 This section shows the measurements acquired in the meters when the test is being performed. Real-time results are shown in this section.</p> <p>6 This section shows the test results after a test has been performed. The print button can only be clicked if there are available test results.</p> <p>7 This section shows the test control. This allows you to set the voltage on, the load on, and pulse align. A state indicator is also displayed. The play button starts the test.</p>
---	--

2.3.7 METER DATABASE Tab

This tab allows for management of meter information saved in the application database.



KEYWORD

Specific words to use when performing SEARCH METER. The value depends on the chosen **category**.

CATEGORY

Choose a category to use for Search.

SEARCH METER

Perform Search using the selected keyword and category value.

NEW

Click this to add a meter's information to the application database via the METER INFORMATION popup window (See [SECTION 3.4](#)).

EDIT

Click this to update information of meter selected in the table via the METER INFORMATION popup window (See [SECTION 3.4](#)).

DELETE

Click this to remove one or more selected meters from the database.

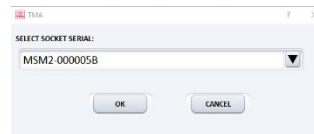
IMPORT METERS

Click this to import meter information file (in CSV format) to the application database. A File dialog box will pop up to help you locate the file.

EXPORT METERS

Click this to export one or more selected meters in the table to a CSV file. A file dialog box will pop up to help you find a location to save the file.

USE IN TEST



Click this button to use a selected meter in the table for

testing. A popup window (see image) may sometimes appear if the **active master** (the one displayed in the **Test tab**) has more than one available socket. Use the pop-up window to select the appropriate socket for the meter.

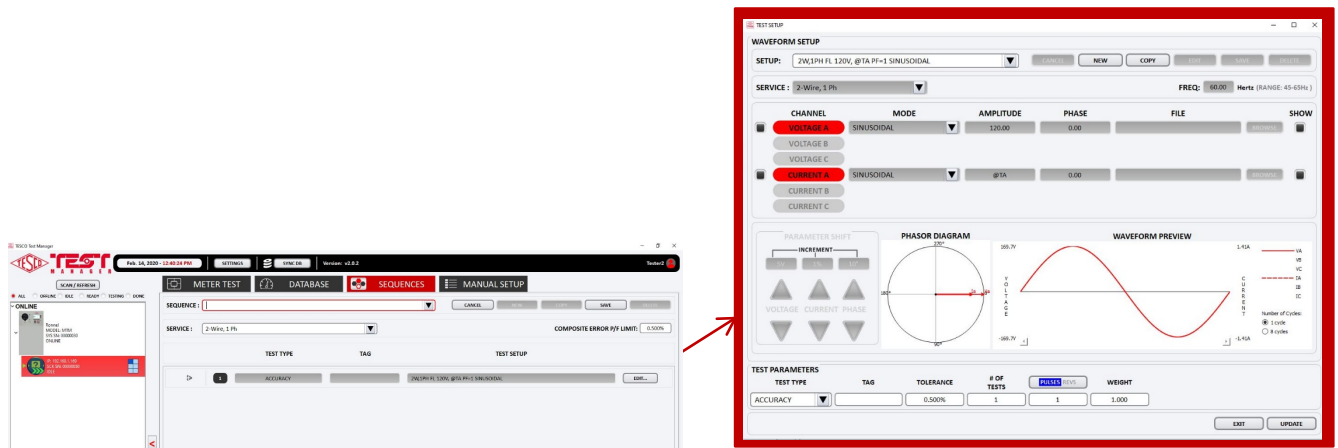
2.3.8 TEST SETUP Tab

This section enables user to create or setup different types of waveforms. It allows creating and editing preset waveform setup in the application database where each setup can have its unique name. The name is arbitrary. The preset setups all conform to the naming approach above. You can create, copy and edit any setup to satisfy/ comply your specific test requirements.

In the figure below the name is an example of the suggested nomenclature:

4W, WYE FL 120V, @TA PF=1 SINUSOIDAL

The name is arbitrary. The preset setups all conform to the naming approach above. You can create, copy and edit any setup to satisfy/ comply your specific test requirements.



NEW

Allows user to create new waveform preset.

SETUP

Enables user to select the waveform presets they want to copy or edit. When creating new preset, this allows the user to write the waveform setup name.

CANCEL

When clicked it cancels whatever action the user chooses.

COPY

This allows the users to duplicate an existing preset.

SAVE

Allows the user to save a waveform preset whether as a new preset or the ones being edited.

SERVICE

Service refers to the transformer (CT, PT, LINE) configuration that is feeding the meter. For example, a 4-WIRE, WYE waveform will have three voltages and three currents.

HARMONIC (FC)

Waveform is defined by a CSV file containing harmonic number and the two Fourier coefficients for each.

ANSI C12.20

ANSI C12.20-2015 specifies a number of waveforms for harmonic testing of meters. All these waveforms are predefined in the system and can be selected by picking the appropriate definition in the File Browser. **NOTE: There are different files for voltage and current.**

For all waveform definitions the amplitude of the waveform is automatically scaled by the system so that the RMS value is as specified under AMPLITUDE. The phase is shifted by the amount specified compared to the original definition

PARAMETER SHIFT

Increments or decrements all related input values: voltage, current, and phase uniformly.

VECTOR DIAGRAM

Visual representation of the current, voltage and phase angles.

FREQ

Allows user to input the frequency ranging from 45-65 Hz.

SINUSOIDAL

A pure sinusoidal wave

WAVEFORM PREVIEW

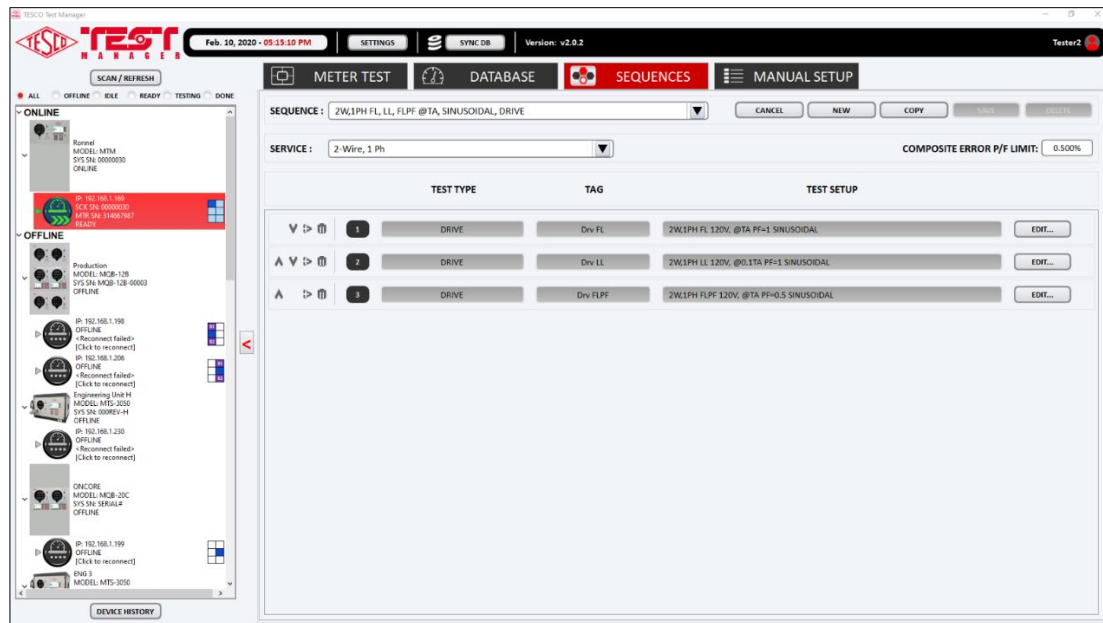
Shows the graph of the waveform setup.

HARMONIC (A&P)

Waveform is defined by a CSV file containing harmonic number, amplitude, and phase.

2.3.9 SEQUENCES Tab

The Sequence tab is used to setup or edit test sequences. Test sequences allow you to setup a complex test scenario that can be run from the TEST tab by selecting it in a dropdown box.



<p>NEW Allows user to create new test sequence.</p> <p>SEQUENCE The name you give the test scenario.</p> <p>CANCEL When clicked it cancels whatever action the user chooses.</p> <p>COPY This allows the users to duplicate an existing test sequence.</p> <p>SAVE Allows the user to save a test sequence applies to new, copied and edited test sequence.</p> <p>The additional parameters are:</p> <p>TAG A user defined short label for the test.</p> <p>WAVEFORM SETUP The specific waveform setup associated with this test.</p> <p>DRIVE Run the waveform generator for a specified time (no metrology)</p> <p>TIME RUN</p> <p>WEIGHT A weight associated with each test. A weighted average error is computed that is the sum of the products of weight and test error.</p> $Werr = \sum_{\#tests} \sum_{\#repeats} Error * Weight$	<p>TIME (min:sec) Duration of the test in minutes and seconds</p> <p>REPEATS Number of times a test will be repeated</p> <p>PULSES Number of meter pulses that the test will be run</p> <p>SERVICE Each sequence has a unique service type with which it is associated.</p> <p>A sequence may contain any number of tests. There are Four Test Types available. They can be combined in any order. Each type requires different parameters. The four test types are:</p> <p>ACCURACY Measure the meter's Watt-Hr accuracy based on the meter's pulse output</p> <p>DEMAND Check the meter's demand measurements</p> <p>INTERVAL (min:sec) For a demand test, the demand interval.</p> <p>SUBINT (min:sec) For a demand test, the demand sub-interval.</p> <p>SYNC TO CLOCK For demand tests, if set the time interval will be synced to real time.</p> <p>P/F % The pass/fail criterion. Test error must be less than this to be a pass.</p>
---	--

2.3.10 MANUAL TEST Tab

The MANUAL TEST Tab allows the user to adjust all system parameters on the fly and run a single test at a time. It does not use predefined sequences.

FORM

Selection of different meter forms.

SERVICE

Service refers to the transformer (CT, PT, LINE) configuration that is feeding the meter. For example, a 4-WIRE, WYE waveform will have three voltages and three currents.

WAVEFORM GENERATOR

PARAMETER SHIFT

VECTOR DIAGRAM

WAVEFORM PREVIEW

(See [SECTION 2.3.8](#))

TOLERANCE

WARM UP

Set the warmup time before testing.

TEST TIME

TEST TYPE

Contains the four test types:

ACCURACY

Measure the meter's Watt-Hr accuracy based on the meter's pulse output

DEMAND

Check the meter's demand measurements

DRIVE

Run the waveform generator for a specified time (no metrology)

TIME RUN

TAG

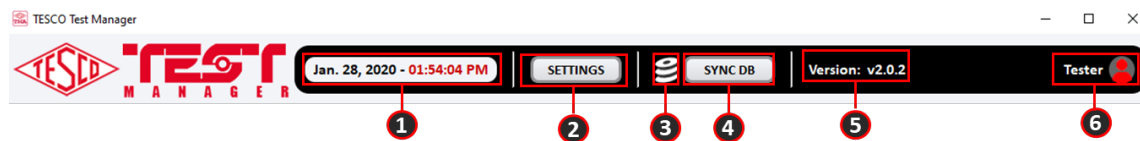
Serves as an alias for the manual test that is being performed.

INTERVAL

For a demand test, the demand interval.

Shows the accumulated test time.	
# OF TESTS Test Repetition	SUBINT For a demand test, the demand sub-interval.
PULSES/REVS Allows the user to input the number of pulses or revolutions they intend to use for testing.	SYNC TO CLK
	VOLTAGE OFF Turns off the voltage output.
	LOAD OFF Turns off the load.
	PLAY button Starts the manual test.

2.3.11 HEADER Features



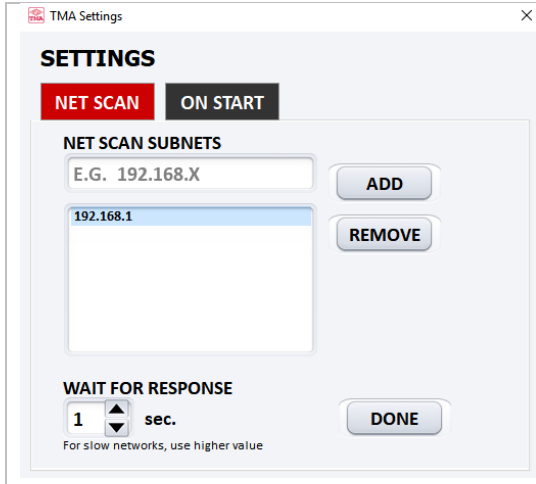
1- Date/Time display Displays time and date information.
2- Settings Button Clicking this button opens the Settings popup window (See Section 2.3.12)
3- Need-To-Sync indicator icon When blinking-red, signals the need for all connected masters to be synced
4- SYNC DB button Clicking this button opens Database Sync popup window (See Section 2.3.13) where master to be synced can be selected.
5- Application Version display Shows the specific version of the running application.
6- User Information Shows the <i>username</i> used during login. Clicking this shows an option to Logout or Exit the application.

2.3.12 Settings Window

This window contains application settings which the user can customize. Settings are categorized into two tabs: **Net Scan** and **On Start** settings.

2.3.12.1 NET SCAN Settings

This tab allows the user to add new subnetworks relative to their network connection or remove listed inapplicable subnetwork(s).



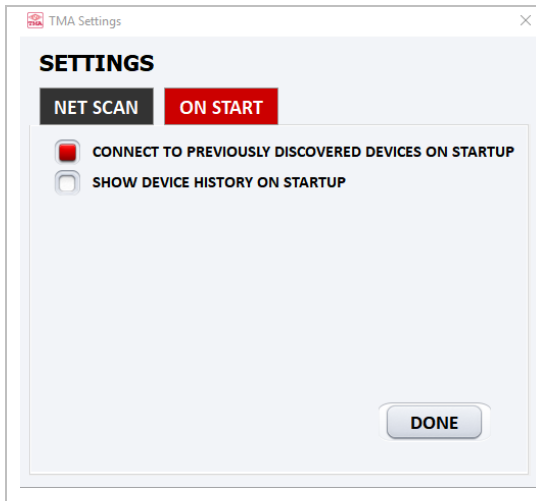
ADD
Adds the typed SubNet value in the NET SCAN SUBNETS textbox.

REMOVE
Remove a selected subnet in the list

WAIT FOR RESPONSE
This value determines how long the application will wait for the IP response during network discovery. You can set a higher value if IP discovery fails due to slow network speed. A value of **1 sec** is usually optimal in most cases.

2.3.12.2 ON START Settings

This tab allows the user to permit certain features to be performed automatically when the application starts up.



CONNECT TO PREVIOUS... Checkbox
Check this option to allow auto-connection of cached (previously connected) devices after logging into the application.

SHOW DEVICE HISTORY... Checkbox
Check this option to show Device History popup window after logging into the application.

DONE button
Click this to close the Settings window.

2.3.13 Database Sync Window

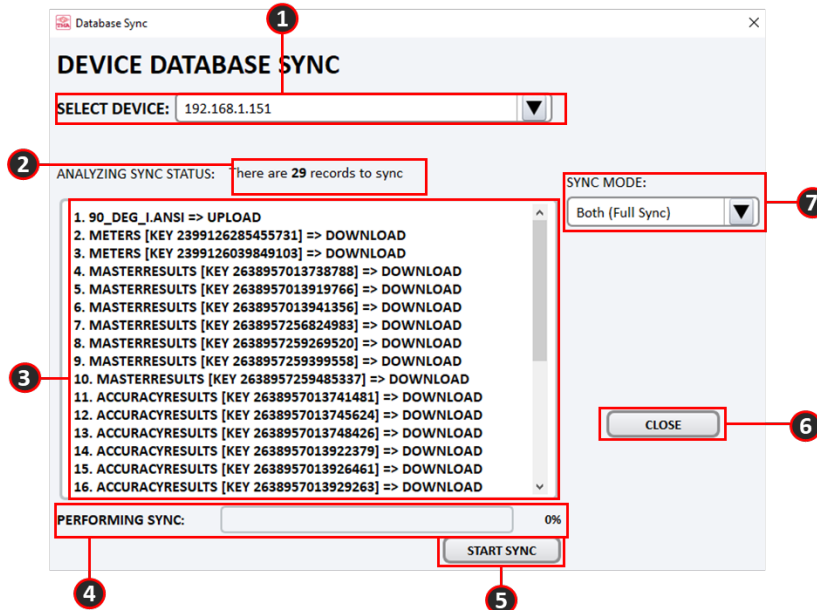
This window allows user to perform Database Sync operations to ensure that master data matches that of the Test Manager Application. There are three types of sync operation or mode:

Upload to Device – data are transferred from the Application to the device

Download from Device – data are transferred from the device to the Application

Both (Full Sync) - data are transferred between Application and device

An **analysis** operation is performed *first* before the actual sync process to determine what specific data needs to be synced between the Application and device.



1- Masters IP List

Contains master IP's that are available for syncing. Selecting an IP will start the **analysis phase** of the Sync.

2- Sync Analysis Progress/Results information

Either a progress bar is displayed when analysis is not yet finished or a text showing a summary of the result of the completed analysis.

3- Sync Operations information

Shows detailed operations of the information to be synced. Information is available only once **analysis phase** has finished and sync operation has not yet been started.

4- Sync Operation Progress

Shows the progress of the sync operation.

5- START/STOP/RESTART SYNC button

Button to control the actual sync operation. NOTE: Performing RESTART SYNC will perform **analysis** again.

6- CLOSE button

Closes Database Sync window. If either **analysis** or **sync operations** are not yet finished when this button is clicked, a popup window will show up to give the user an option to terminate the running process before closing.

7- SYNC MODE List

Click to select Sync Mode to use.

2.3.14 Meter Information Window

STEP 1 PLEASE SCAN BARCODE

STEP 2 ADD/EDIT/DISPLAY METER PRODUCT INFO

STEP 3 METER ELECTRICAL SPECIFICATIONS

1 METER SERIAL NO.: 218021316

MODEL NO: NC 30

CATALOG NO:

MANUFACTURER: EDM

UTILITY SERIAL NO:

COM SERIAL NO:

METER IMAGE:

UPLOAD IMAGE

METER FORM: 2

METER BASE: S

METER CLASS: 200

TEST AMP: 30.00

KH: 10.00

KT: 1.00

PULSES/REV: 10

ACCURACY CLASS: 0.5

FEATURES:

☐ DEMAND ☐ KYZ OUTPUT

☐ BIDIRECTIONAL METERING

2 CANCEL CLEAR EDIT

3 CLOSE

1- Meter Information Fields

Fields can be editable depending on the current operation which can either be ADD or EDIT.

2- Operation Buttons

Buttons that aid in operations related to meter information. The complete set of buttons and their corresponding functions are listed below. Some buttons can appear depending on the current operation.

CANCEL – Closes the window but cancels the operation performed

CLEAR – Resets all fields by either clearing them or returning to their initial/default value.

EDIT – Puts the window in EDIT operation.

UPDATE – Finalize any updates to a meter's information when in EDIT operation.

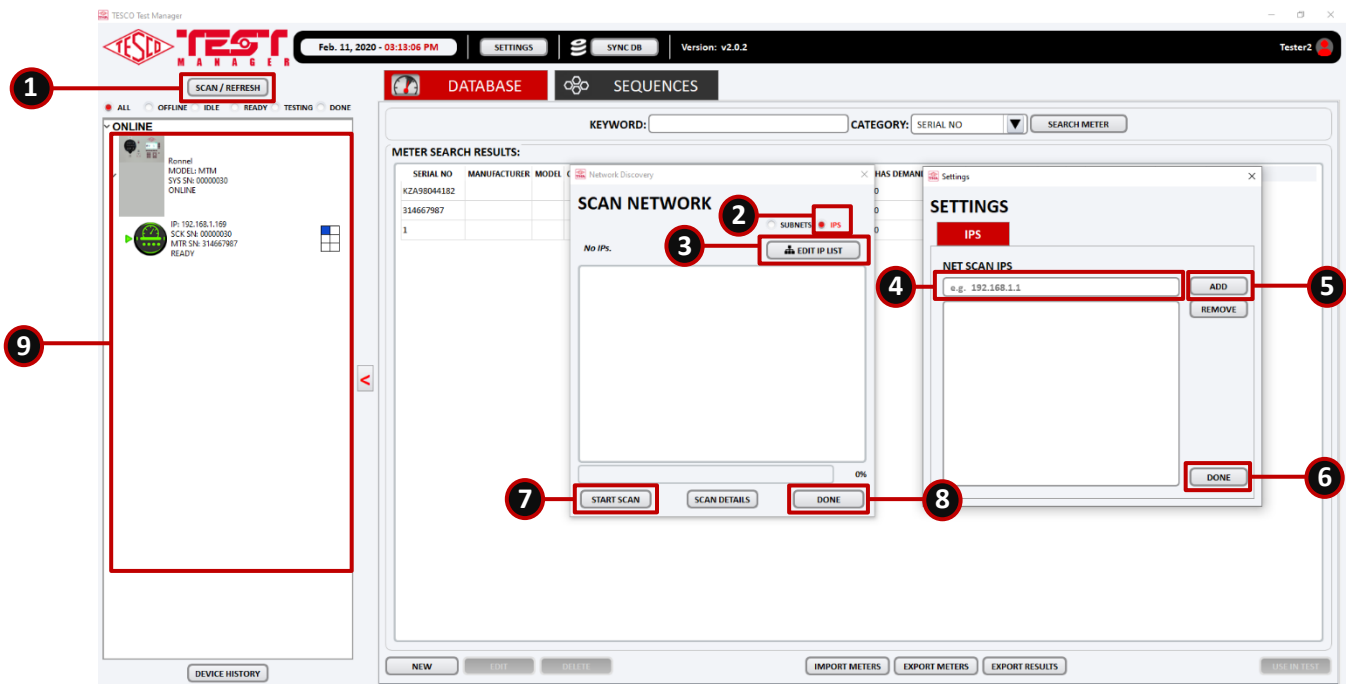
ADD – Saves a new meter's information (has a unique meter serial no.)

CLOSE – Closes the window. Clicking this button can also mean using the displayed meter information for a specific master socket.

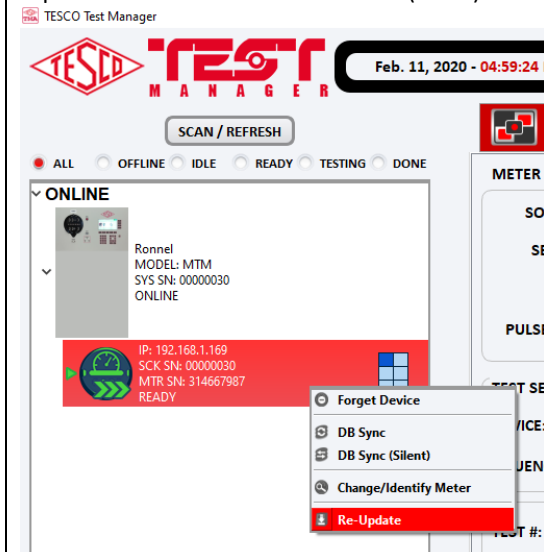
3- Meter Serial Number Field

Aside from inputting the meter serial no., it can be used to search for existing meter information by typing the beginning characters in which a dropdown box will appear showing the possible matches.

2.3.15 Update NextGen devices using TMA



- 1- Click **SCAN/REFRESH** button, causing **SCAN NETWORK** form to appear.
- 2- In **SCAN NETWORK** form, select **IPS** radio button. This will allow you to connect your unit to TMA via its IP address.
- 3- Click **EDIT IP LIST** button to bring up **SETTINGS** form.
- 4- In **SETTINGS** form, type the IP address of the unit in the text field **below** NET SCAN IPS
- 5- Click **ADD** button to include the IP Address for connection.
- 6- Click **DONE** button. This closes the **SETTINGS** form and returns you to the SCAN NETWORK form.
- 7- Click **START SCAN** button to perform network scanning to connect the unit to TMA. Wait for scanning to finish.
- 8- Click **DONE** button. When all goes well and the unit is connected to TMA, it will have an icon representation in the left-most box (No. 9). See below



Just right-click on the unit's master (the one where the IP address is displayed) to access a context menu. Just click **Re-Update** to begin the update.

IMPORTANT: Do not turn off the unit or close TMA while update is still ongoing. When the update is done the unit should automatically reboot.


NOTE: Also, please try this first on a single unit as a test.

3.0 CONFIGURATIONS

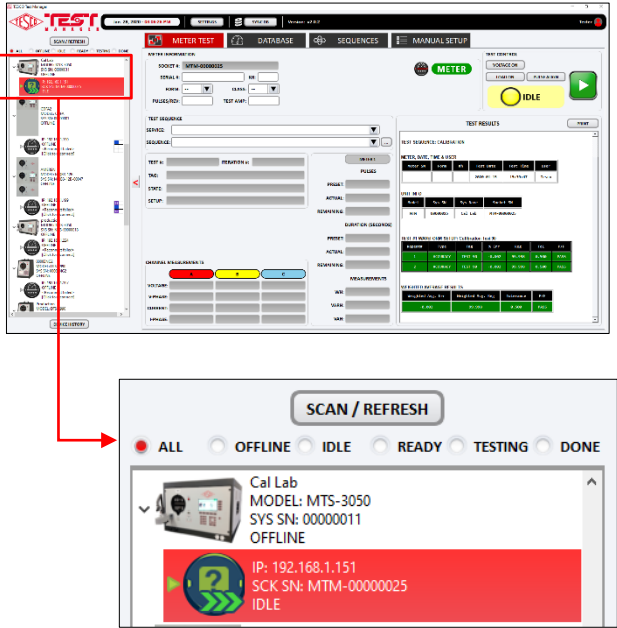
3.1 Introduction

This chapter provides instructions on how to configure tests using Test Manager Application (TMA).

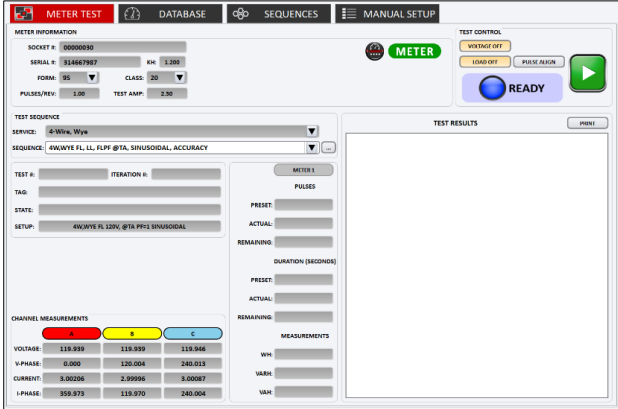

3.2 Log in

SCREEN	DESCRIPTION
	<p>NAME/INITIALS Enter the name or initials to log in.</p>

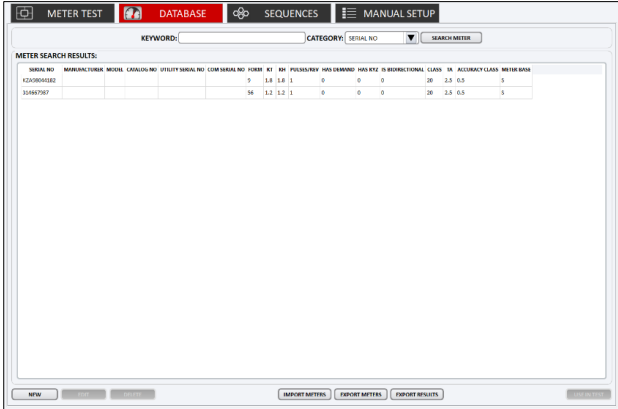
3.3 Device Selection

SCREEN	DESCRIPTION
	<p>PREREQUISITES The NextGen device and the TMA software must be properly configured to be connected to the same network. Please refer to Section 1.3 Configuring the TMA Software.</p> <p>NETWORK VIEW This provides information on the NextGen devices that are connected to the network.</p> <p>If the list is empty, click SCAN/REFRESH to scan the devices connected to the network. Once the list is filled, look for the device you wish to test and check if it is online or offline. <i>For illustration purposes, the device model selected was DTS-2990.</i></p> <p>If offline, the device needs to be manually turned on. If online, click the device to access the TMA Content tabs.</p>

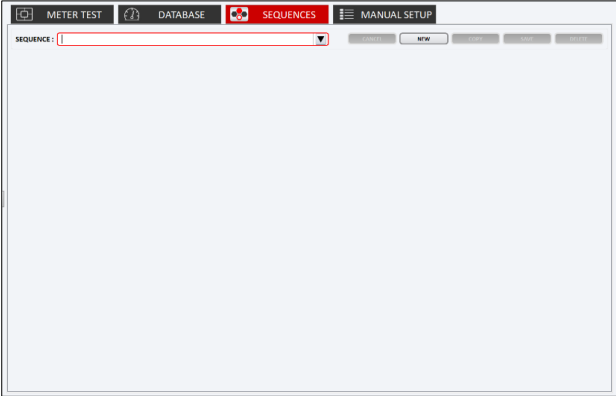

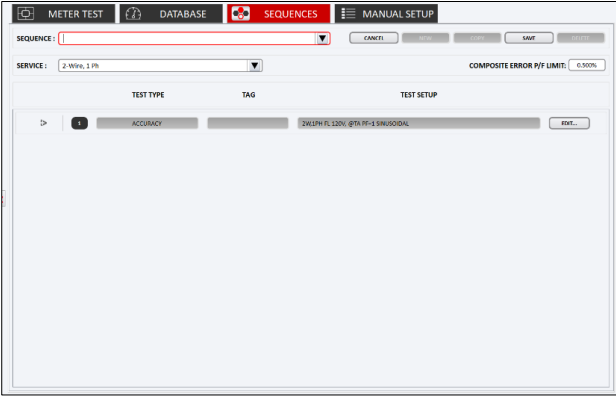
























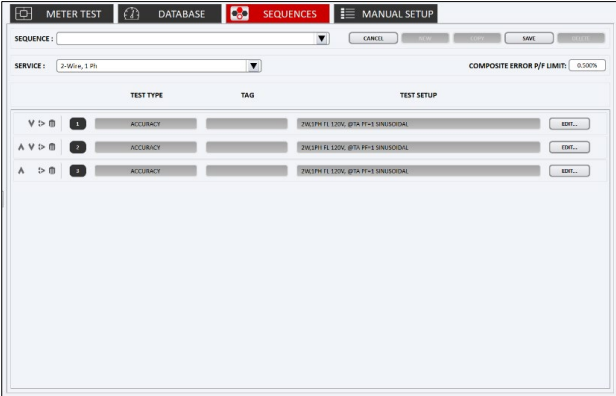
3.4 Meter Test

SCREEN	DESCRIPTION
	<p>METER TEST</p> <p>This is for conducting a test. The results will be displayed as the test is being executed.</p> <p>Select the desired SERVICE and TEST SEQUENCE before starting the test. Then, click either of the following:</p> <ul style="list-style-type: none"> VOLTAGE ON - enable service voltage only to the socket LOAD ON - enable service voltage & load current to the socket <p>Click the start button  to execute the test.</p>

3.5 Database Selection

SCREEN	DESCRIPTION
	<p>Navigate to the DATABASE tab to choose a meter's information to use for the test.</p> <p>DATABASE</p> <p>This allows the management of meter information saved in the application database.</p> <p>Create a new meter info by clicking NEW and entering the meter information in the required fields. To edit/delete, select a meter's info and click EDIT or DELETE.</p> <p>A new meter's info can also be added by importing a Comma-Separated Values (CSV) file. Inversely, the database can be exported as a CSV file.</p> <p>To proceed with the test, click a meter info on the list, click USE IN TEST, and navigate to the METER TEST tab.</p>

3.6 SEQUENCES

SCREEN	DESCRIPTION																
	<p>SEQUENCE</p> <p>This enables the user to create or setup different types of waveforms. This allows the user to adjust all system parameters on the fly and run a single test at a time. It does not use predefined sequences. For more details on conducting a manual test. Preset sequences can be edited. Upon clicking st of the presets is shown in a dropdown menu.</p>																
	<table><tr><td></td><td>Press to create a new sequence.</td></tr><tr><td></td><td>Press to exit the editing sequence screen.</td></tr><tr><td></td><td>Press to save the changes applied to the sequence.</td></tr><tr><td></td><td>Press to pop-up a Test Setup window. This allows the user to edit the waveform setup.</td></tr><tr><td></td><td>Press to add another test.</td></tr><tr><td></td><td>Press to move down the selected test.</td></tr><tr><td></td><td>Press to move up the selected test.</td></tr><tr><td></td><td>Deletes the selected test.</td></tr></table>		Press to create a new sequence.		Press to exit the editing sequence screen.		Press to save the changes applied to the sequence.		Press to pop-up a Test Setup window. This allows the user to edit the waveform setup.		Press to add another test.		Press to move down the selected test.		Press to move up the selected test.		Deletes the selected test.
	Press to create a new sequence.																
	Press to exit the editing sequence screen.																
	Press to save the changes applied to the sequence.																
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	Press to add another test.																
	Press to move down the selected test.																
	Press to move up the selected test.																
	Deletes the selected test.																
																	

3.7 MANUAL SETUP

SCREEN	DESCRIPTION
	<p>MANUAL SETUP</p> <p>This enables the user to create or setup different types of waveforms. This allows the user to adjust all system parameters on the fly and run a single test at a time. It does not use predefined sequences. For more details on conducting a manual test.</p>

3.8 IMPORTING METERS

Meter data can be imported into the Test Manager database using a comma separated data file (.CSV) with the following structure.

First row consists of column labels. They must match the following:

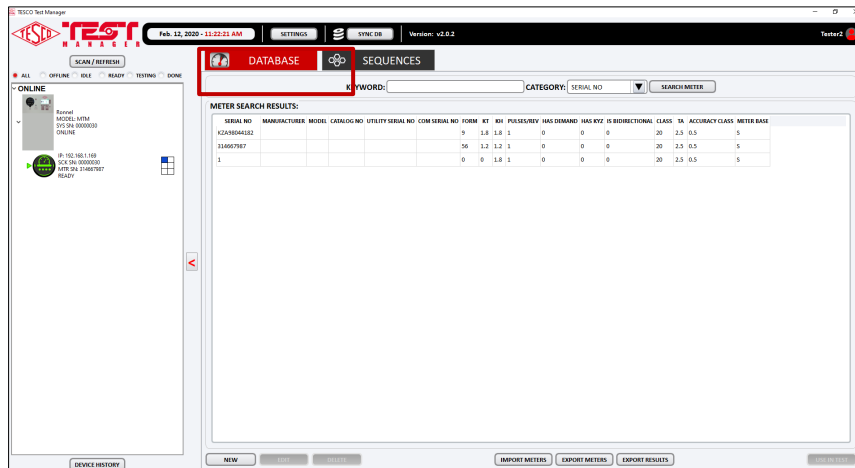
ROW LABEL	DESCRIPTION
meterSerialNumber	This is the primary barcoded number on the meter which will be used to identify in in all data records. It should match the barcode on the meter exactly. (Alphanumeric max 32 characters)
meterManufacturer	Name of manufacturer (Alphanumeric max 32 characters)
meterModel	Model of the meter (Alphanumeric max 32 characters)
meterCatalogNumber	May be used as desired by the user. (Alphanumeric max 32 characters)
utilitySerialNumber	If the utility uses an identifier different than the meterSerialNumber. (Alphanumeric max 32 characters)
comSerialNumber	Serial number of the communications module. (Alphanumeric max 32 characters)
Form	ANSI form identification. A number from the following list: 1,2,3,4,5,6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 25, 26, 29, 32, 35, 36, 45, 46, 56, 66, 76, 103, 106, 109, 112, 116, 125, 135, 136, 145, 166
Kt	Meter test constant if different from meter constant. (Fixed point number in the form xx.x)
Kh	Meter constant. Is used as test value unless Kt is non-zero. (Fixed point number in the form xx.x)
multiplier	1.0 by default. Kh is divided by this value, i.e if Kh = 21.6 and multiplier = 12 then the effective constant is 1.8.

CONFIGURATIONS

hasDemand	True or false. Default is false. Must be true to enable demand testing of this meter. (Any non-blank character will cause this to be set to true)
hasKYZ	True or false. Default is false. Currently does not affect testing. (Any non-blank character will cause this to be set to true)
isBidirectional	True or false. Default is false. Currently does not affect testing. (Any non-blank character will cause this to be set to true)
meterClass	One of the ANSI current classes: 2, 10, 20, 100, 200, 320, 480
meterTA	If non-null will be used as the full load test amps for the meter. If null, then the test amps are determined from the meterClass. (Fixed point number in the form xx.x)
meterAccuracyClass	ANSI accuracy class. 2.0, 1.0, 0.5, 0.2, 0.1 (Default value is 0.5). (Fixed point number in the form xx.x)
meterBase	physical type of meter: "S", "K", "A"

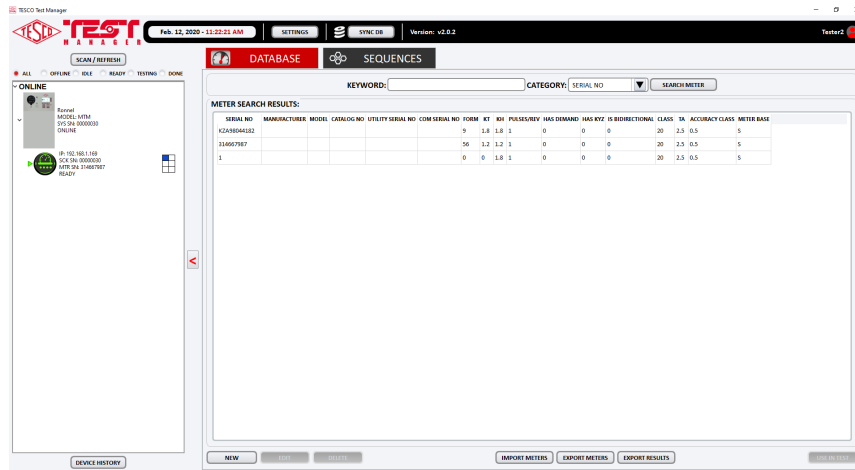
These fields are required. If they are null in a record the record will not be imported. Fields left blank will be set to the default value (if one is defined) or left blank in the data record. Every column must exist in the datafile with a header that exactly matches the above. Columns other than the four marked can be left blank. The order of columns is not significant if the column headers and data match. Each row after the first row represents a meter to be imported. If a meterSerialNumber already exists in the database, the imported data will replace the existing data.

STEP 1:



Open TMA and select "DATABASE"

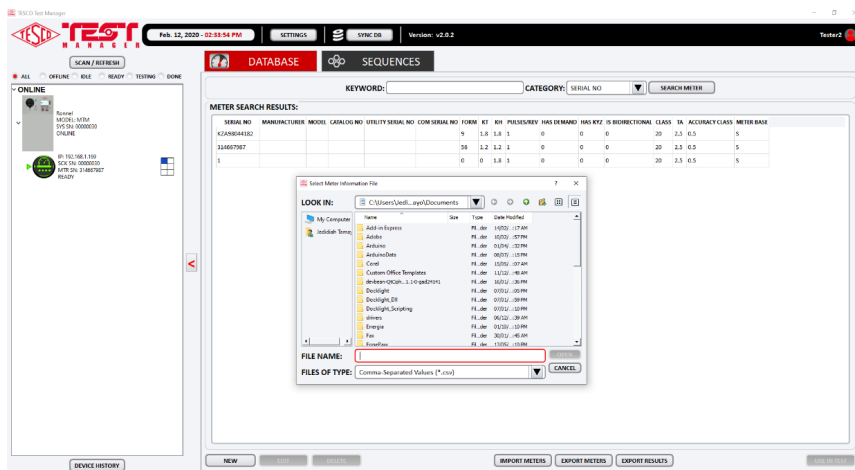
STEP 2:



Press “IMPORT METERS” button on the bottom portion of the TMA.

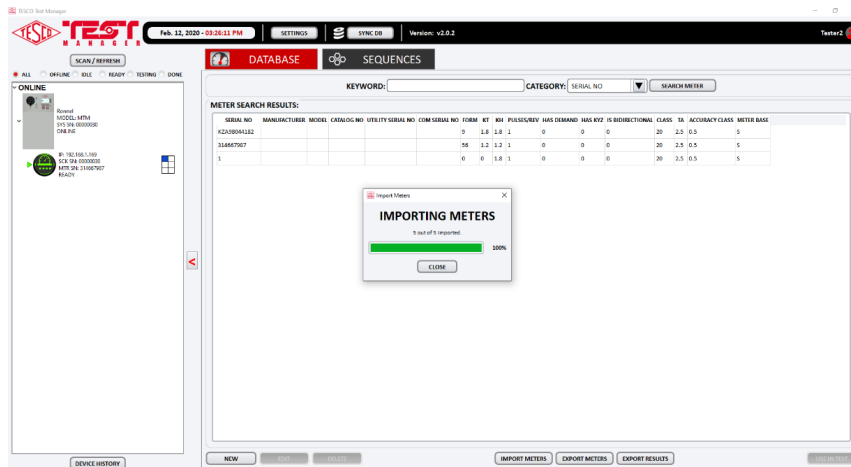


STEP 3:



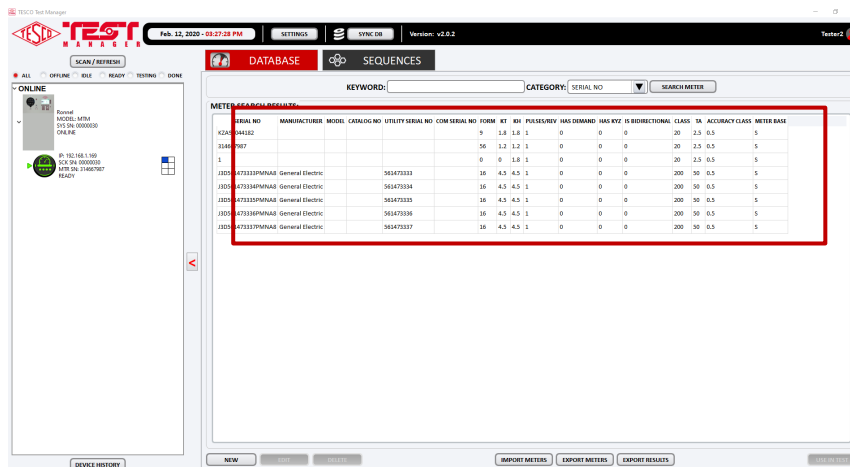
A file dialog will pop-up. Kindly select the target csv file and press “Open” button.

STEP 4:



It will automatically import meters data from csv file to TMA. Press “CLOSE” button from the Import Meters popup dialog.

STEP 5:



The imported meters can now be shown in the meter table.