



TESCO DEVICE MANAGER



TESCO DEVICE MANAGER APPLICATION MANUAL



THE EASTERN SPECIALTY COMPANY

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1.0 Introduction

Getting to Know Your TESCO Device Manager.

Studies have shown that at transformer-rated sites, most issues are related to wiring, CTs, PTs, and other issues. If you want to be sure the customer is billed correctly and you are not losing revenue, you must test the whole site, not just the meter — this is where TESCO’s Meter Site Analyzer (Catalog No. 6330) comes in.

CAT. 6330 will be referred as “Site Analyzer” throughout the manual.

TESCO Device Manager generates easy-to-understand reports and exports them using the data collected with your Site Analyzer.

Features include:

- Direct to PDF reporting
- Report customization with company logo
- CSV data exporting
- Ability to simultaneously extract data from multiple units
- Ability to import data from a Cat. 6330 into other units
- Ability to simultaneously update multiple units

Since 1904, customers have trusted TESCO for accuracy and reliability. When you think metering, think TESCO.

1.1 Contacting TESCO

For Technical Support or Calibration/Repair, please call 215.228.0500.

You can also send an email to support@tescometering.com with any questions.

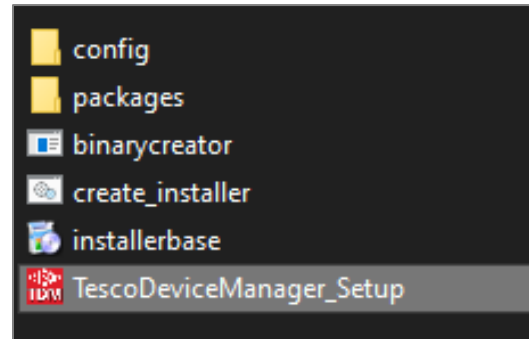
To view, print, or download the latest manual supplement, visit tescometering.com.

1.2 Installation

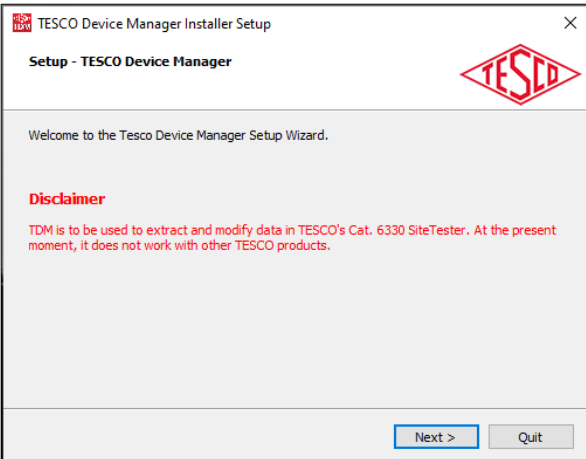
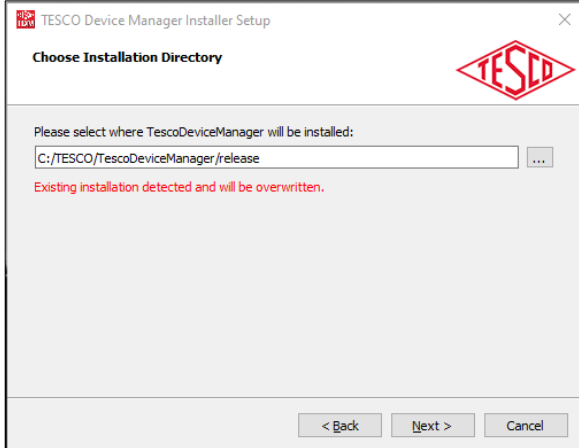
To start installing, simply run **TescoDeviceManager_Setup.exe**. An installation wizard will pop up to guide you in the installation process.

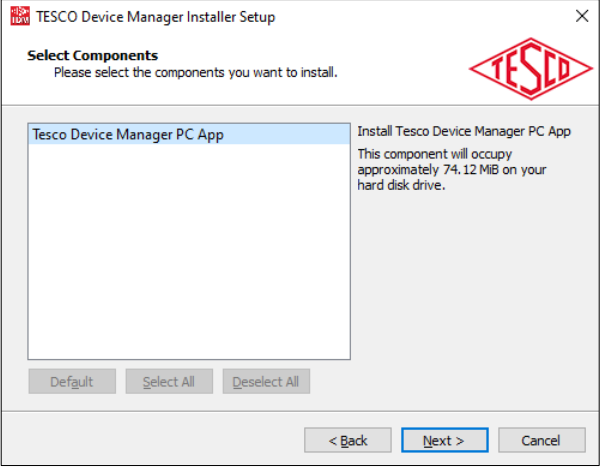
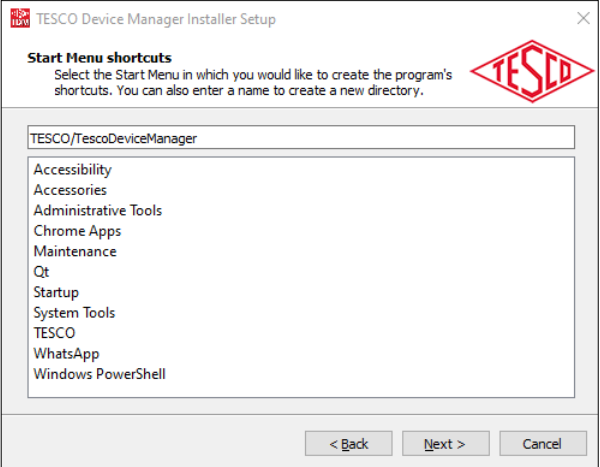
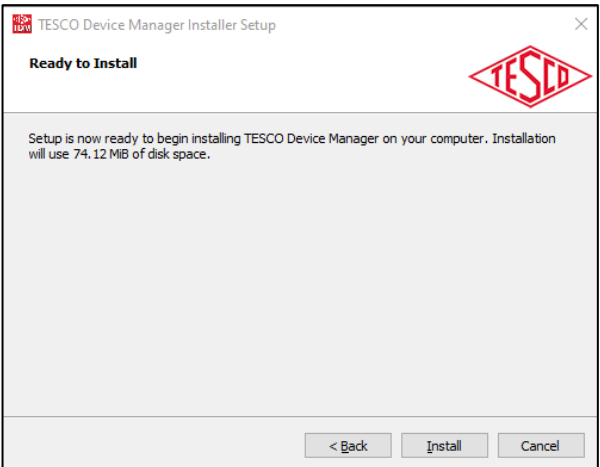
Note:

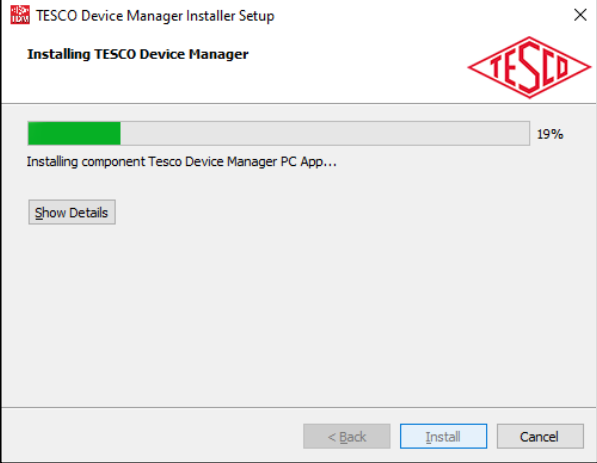
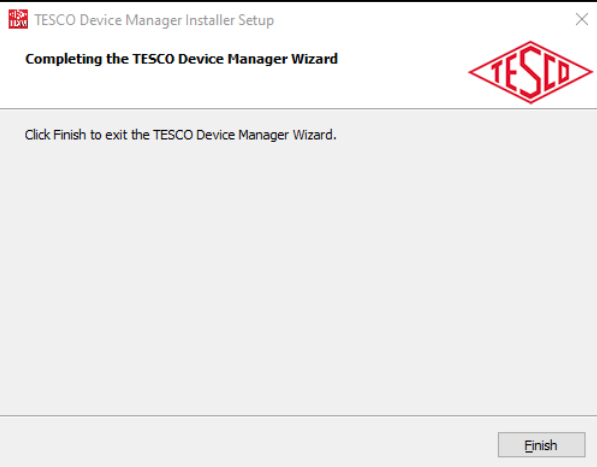
- **The installer will only run on Windows 7, 8, & 10.**
- **Administrative rights are not required to install the application.**



1.2.1 Installation Setup Flow

SCREEN	DESCRIPTION
<p>STEP 1: Disclaimer Information</p> 	<p>Please take note of the Disclaimer Information specific to the defined firmware version of the Site Analyzer as to its compatibility with the TESCO Device Manager (TDM) and its compatibility with TESCO products.</p> <p>Press “Next >” to proceed with the installation.</p>
<p>STEP 2: Installation Directory</p> 	<p>The default installation directory of the application is: C:\TESCO\TescoDeviceManager\release</p> <p>The user can change the installation folder by clicking the ellipsis button and browsing the desired directory. Press “Next >” to continue with the installation.</p>

SCREEN	DESCRIPTION
<p>STEP 3: Selection of Application Components</p> 	<p>The information on the required disk space to install the application is provided.</p> <p>Press “Next >” to continue with the installation.</p>
<p>STEP 4: Start Menu Shortcut</p> 	<p>This step creates a Start Menu Shortcut for the application inside the directory.</p> <p>The user can change the shortcut name of the application and how it is displayed in the start menu. The default name is: TESCO/TescoDeviceManager.</p> <p>In reference to this default name, the installer will create a start menu shortcut icon in TESCO folder. Press “Next >” to continue with the installation.</p>
<p>STEP 5.1: Begin Installation</p> 	<p>Press “Install” to start installing the application by extracting and transferring files from your computer to the installation directory.</p>

SCREEN	DESCRIPTION
<p>STEP 5.2: Installation in Progress</p>  <p>STEP 6: Successful Installation</p> 	<p>If no errors are encountered during the installation process, this step will show up and indicate that the installation is successful.</p> <p>Press “Finish” to successfully end the installation.</p> <p>Note: The application is now ready to be used and does not require a computer restart.</p>

1.3 Configuring TDM Software

TESCO Device Manager (TDM) talks to your Site Analyzers over an Ethernet connection.

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

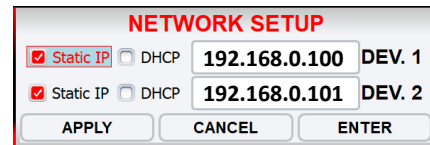
1.3.1 Network Connection: Private Network / P2P Ad Hoc

The Site Analyzers can be placed on a private network segment. In this configuration the TDM software does not communicate over your corporate network.

NOTE: If you want to have the computer on which the TDM 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 system 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 Site Analyzer.



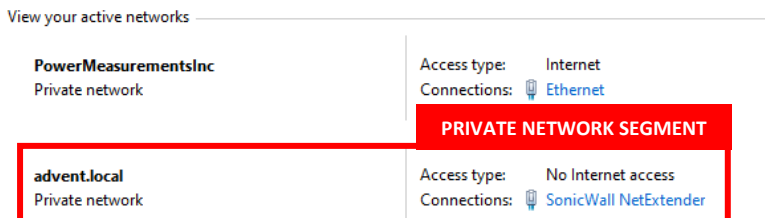
Some devices will show two IP addresses; some only one.

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:

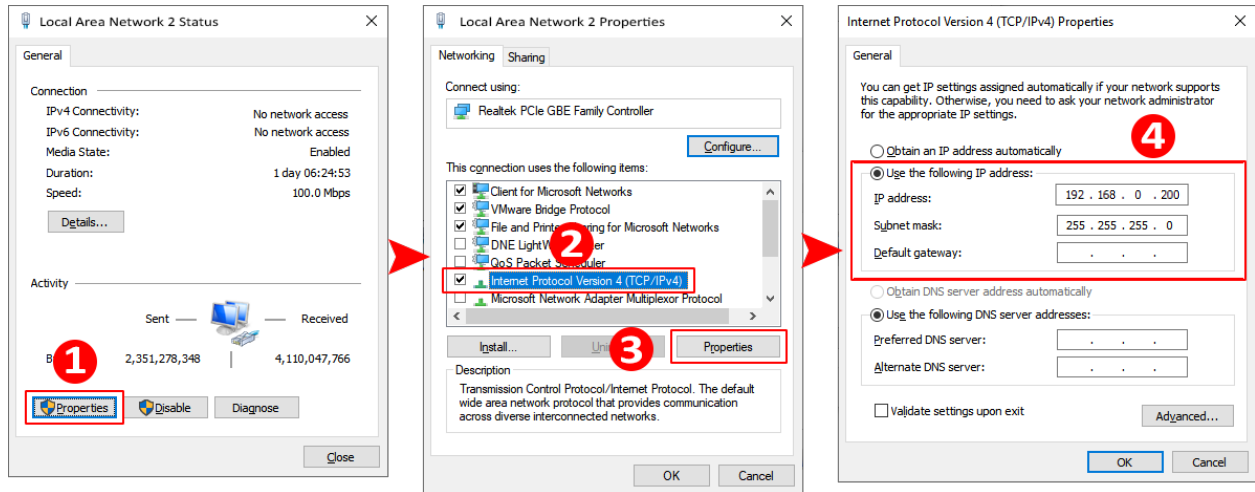
View your basic network information and set up connections



NOTE 1: Where one NIC is connected to your company network and the new NIC has no network access.

NOTE 2: 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.

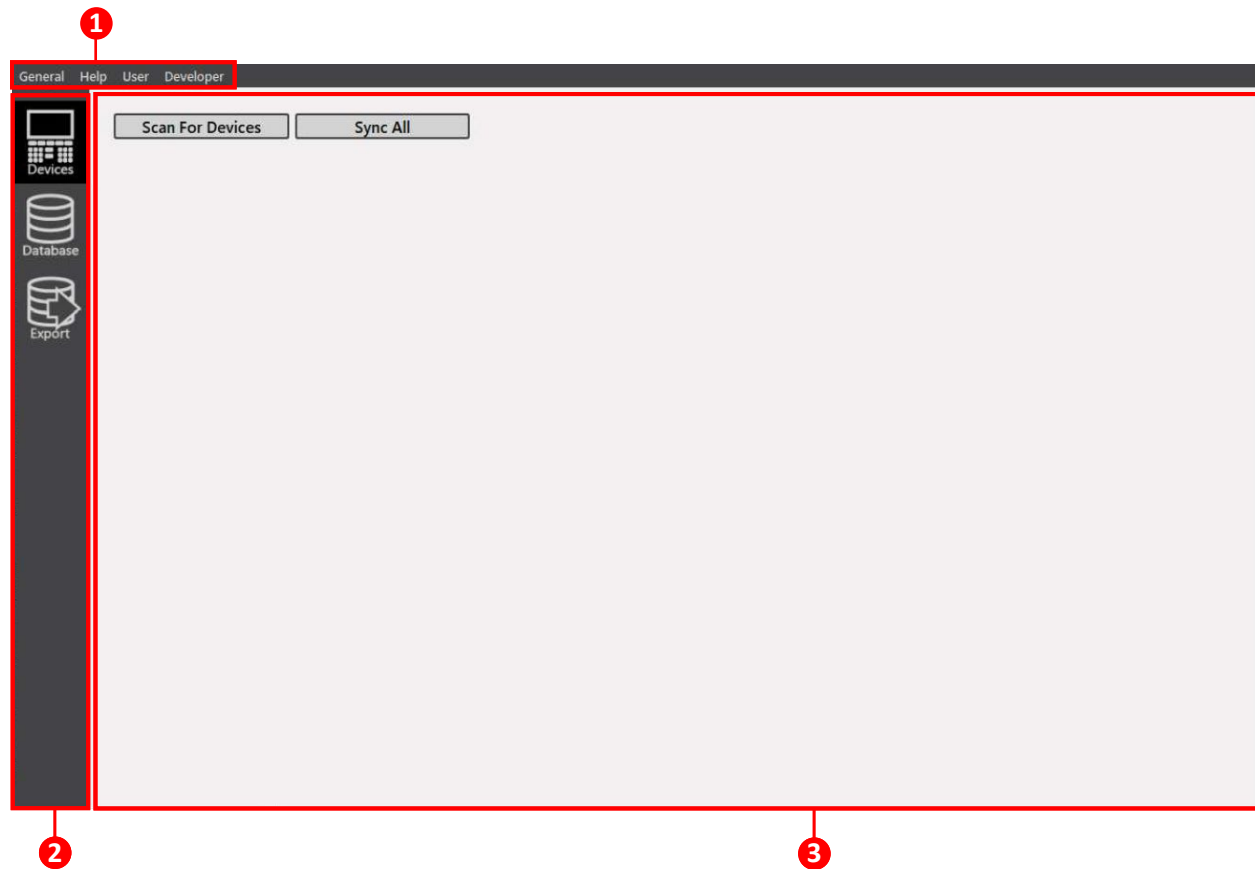


1	From the status window of the Private Network, click on the “Properties” button.
2	From the Properties window, select “Internet Protocol Version 4 (TCP/IPv4.)”
3	Once “Internet Protocol Version 4 (TCP/IPv4)” is selected, click the “Properties” button. Also, double-clicking the “Internet Protocol Version 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 192.168.0.200 as the IP address as shown above. Click OK on each pop-up until you get back to Control Panel. The segment set here must match the segment set in the devices.

1.4 Graphical User Interface (GUI)

The user interface is divided into three sections.

NUMBER	DESCRIPTION
1	Menu Bar
2	Sidebar Navigation
3	Devices Display Section

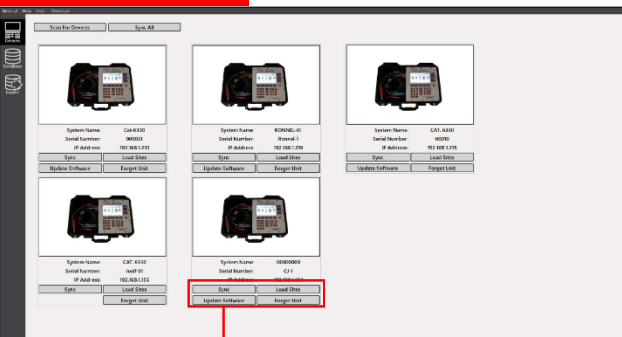


1.5 TDM Functions

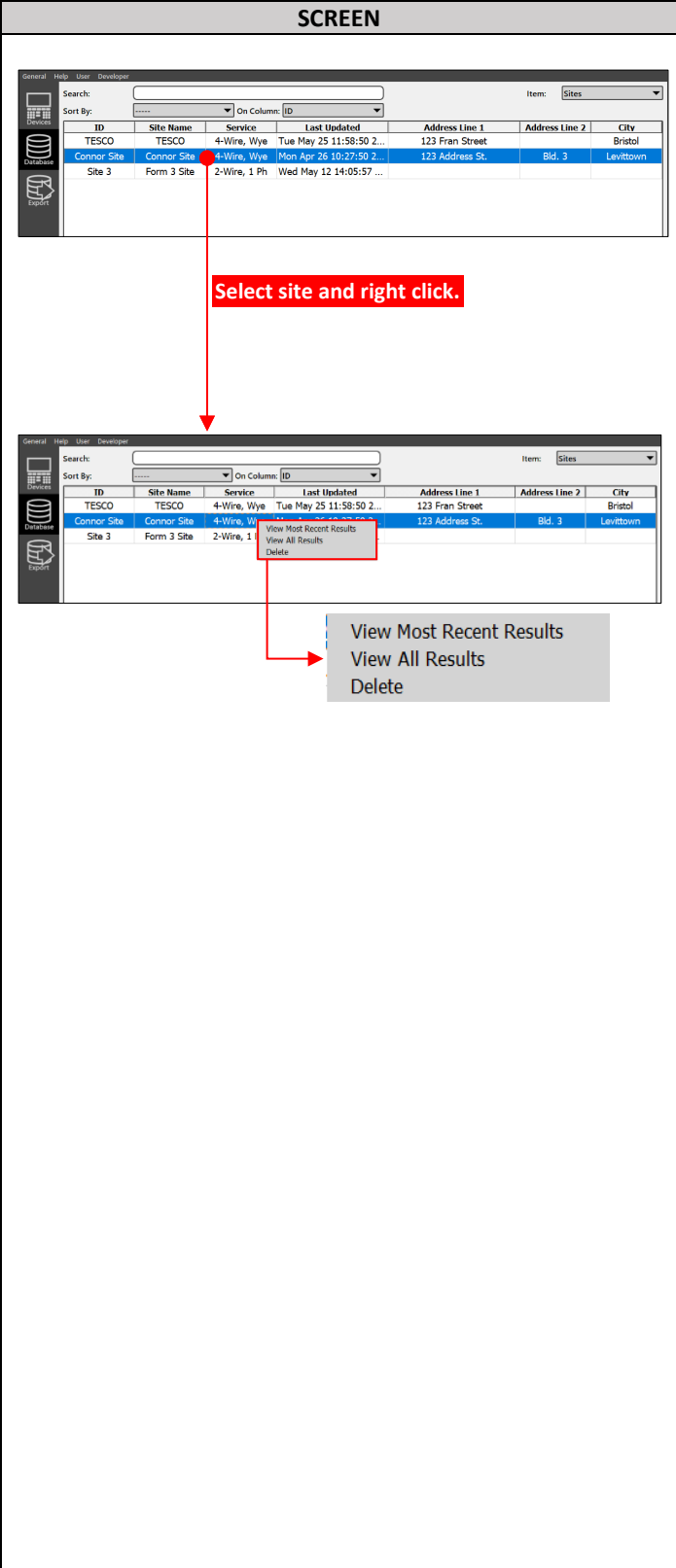
1.5.1 Devices Page

SCREEN	DESCRIPTION																		
<p>The screenshot shows the TDM interface. At the top, there are buttons for 'Scan For Devices' and 'Sync All'. A red arrow points from the 'Scan For Devices' button to a pop-up window titled 'Scan For Devices'. This window has a text input field containing '192.168.1', a dropdown menu for 'Scan Type' set to 'Subnet', and two buttons: 'Add Subnet' and 'Remove Selected'. Below this, another red arrow points to a grid of device cards. A red box highlights the 'Update Software' button on one of the cards. A final red arrow points from this button to a set of four buttons at the bottom: 'Sync', 'Load Sites', 'Update Software', and 'Forget Unit'.</p>	<p>The Devices page displays all the Site Analyzers connected to your network. Make sure that you have your Site Analyzers on your chosen subnet and that they have an IP address on the unit.</p> <p>FUNCTION KEYS:</p> <table border="1"> <tr> <td>Scan For Devices</td> <td>Scan all Site Analyzers connected to your network. A pop-up for the network settings will show upon clicking this button.</td> </tr> <tr> <td>Sync All</td> <td>Sync the data of all the Site Analyzers connected to your network.</td> </tr> </table> <p>Network Settings This pop-up allows scanning for Site Analyzers on your network. The subnet field is pre-populated with 192.168.1 but this can be changed to whatever subnet your Site Analyzers are on.</p> <p>To add Site Analyzers:</p> <ol style="list-style-type: none"> 1. Enter preferred subnet on the subnet field. 2. Click "Add Subnet" to add the subnet to the list. Add as many as you like. 3. Select a subnet from the list and click "Scan Subnets" to detect all the Site Analyzers on the network you specified. 4. The pop-up will close, and the Device Pages will display all the Site Analyzers connected to your network. <p>FUNCTION KEYS:</p> <table border="1"> <tr> <td>Add Subnet</td> <td>Add entered subnet into the list.</td> </tr> <tr> <td>Scan Subnets</td> <td>Detect all the Site Analyzers on the chosen networks.</td> </tr> <tr> <td>Remove Selected</td> <td>Remove selected subnet from the list.</td> </tr> </table> <p>FUNCTION KEYS:</p> <table border="1"> <tr> <td>Sync</td> <td>Run a Database Sync on the unit and collect all Site, Sequences, Test Results, and Libraries that the TESCO Device Manager does not already have in its database. This does not delete them from the unit.</td> </tr> <tr> <td>Load Sites</td> <td>Sync the unit. When a pop-up shows, select which sites to be on the Site Analyzer device.</td> </tr> <tr> <td>Update Software</td> <td>Update the unit to the latest software. This button will only be available if it does not already have the latest software. NOTE: Once an update has begun, you cannot try to update another unit at the same time or close out the application as this may cause an issue with the update process and potentially delete the software on the unit.</td> </tr> <tr> <td>Forget Unit</td> <td>Remove the Site Analyzer from TDM.</td> </tr> </table>	Scan For Devices	Scan all Site Analyzers connected to your network. A pop-up for the network settings will show upon clicking this button.	Sync All	Sync the data of all the Site Analyzers connected to your network.	Add Subnet	Add entered subnet into the list.	Scan Subnets	Detect all the Site Analyzers on the chosen networks.	Remove Selected	Remove selected subnet from the list.	Sync	Run a Database Sync on the unit and collect all Site, Sequences, Test Results, and Libraries that the TESCO Device Manager does not already have in its database. This does not delete them from the unit.	Load Sites	Sync the unit. When a pop-up shows, select which sites to be on the Site Analyzer device.	Update Software	Update the unit to the latest software. This button will only be available if it does not already have the latest software. NOTE: Once an update has begun, you cannot try to update another unit at the same time or close out the application as this may cause an issue with the update process and potentially delete the software on the unit.	Forget Unit	Remove the Site Analyzer from TDM.
Scan For Devices	Scan all Site Analyzers connected to your network. A pop-up for the network settings will show upon clicking this button.																		
Sync All	Sync the data of all the Site Analyzers connected to your network.																		
Add Subnet	Add entered subnet into the list.																		
Scan Subnets	Detect all the Site Analyzers on the chosen networks.																		
Remove Selected	Remove selected subnet from the list.																		
Sync	Run a Database Sync on the unit and collect all Site, Sequences, Test Results, and Libraries that the TESCO Device Manager does not already have in its database. This does not delete them from the unit.																		
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Update Software	Update the unit to the latest software. This button will only be available if it does not already have the latest software. NOTE: Once an update has begun, you cannot try to update another unit at the same time or close out the application as this may cause an issue with the update process and potentially delete the software on the unit.																		
Forget Unit	Remove the Site Analyzer from TDM.																		

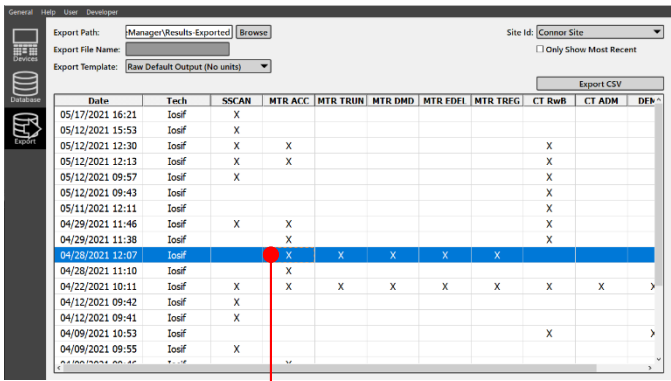
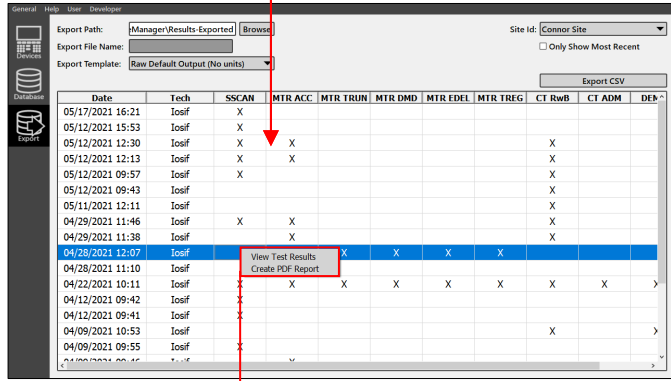
WITH SITE ANALYZERS



1.5.2 Database Page

SCREEN	DESCRIPTION
 <p>The screenshot shows the Database Page interface. At the top, there are search and sort options. Below is a table with columns: ID, Site Name, Service, Last Updated, Address Line 1, Address Line 2, and City. The table contains three rows: TESCO, Connor Site, and Site 3. The 'Connor Site' row is highlighted in blue. A red circle is drawn around the 'Connor Site' row, and a red arrow points from it to a red text box that says "Select site and right click." Below this, another screenshot shows the same table with the 'Connor Site' row right-clicked. A context menu is visible over the row with three options: "View Most Recent Results", "View All Results", and "Delete". A red arrow points from the "View Most Recent Results" option to a grey text box containing the same three options: "View Most Recent Results", "View All Results", and "Delete".</p>	<p>The Database Page displays Sites and Meters from the units that were synced to TDM already. If no Database Sync was performed or if synced units were empty, there will be no Sites or Meters displayed.</p> <p>When looking through Sites in the table, right-click on a site to choose any of the following:</p> <ul style="list-style-type: none"> View Most Recent Test Results The Export Page will be opened where it shows the sequence that was run and export it. View All Test Results The Export Page will be opened. The “Show Only Most Recent” checkbox will not be checked, and all the test results will be shown. Delete Deletes the selected Site and its test results from TDM’s database. This will also remove the site and test results from any Site Analyzer that is synced going forward if it contains them.

1.5.3 Export Page

SCREEN	DESCRIPTION										
 <p>Select test result and right click.</p>	<p>The Export Page shows the results and allows the user to create CSVs of the data synced from Site Analyzers. The results can be filtered by checking the “Only Show Most Recent” to show only the latest test results from the selected site. These results are sorted by date/time with the most recent at the top.</p> <p>The results can also be exported without viewing them first. To do so, select a result, or as many as preferred by pressing shift and drag the selection from the table, and click the “Run Export” button. This will export them to the file path with the Site ID and start time of the sequence that was ran as the filename.</p>										
 <p>View Test Results Create PDF Report</p>	<p>DATA</p> <table border="1"> <tr> <td>SITE ID</td> <td>Choose which Site to view the test results for. This will be already populated if the site in the Database Page was right clicked and View All Resultsview was selected.</td> </tr> <tr> <td>EXPORT PATH</td> <td>Choose which directory to export the test results.</td> </tr> <tr> <td>EXPORT FILE NAME</td> <td>Sets the file of the selected test result to be exported. Note: This is only enabled when a test result is selected and viewed.</td> </tr> <tr> <td>EXPORT TEMPLATE</td> <td>Pick an export template: a CSV format with units or without units.</td> </tr> </table> <p>FUNCTION KEY:</p> <table border="1"> <tr> <td>Export CSV</td> <td>Export the selected result(s) to the file path with the Site ID and Start Time of the Sequence that was run as the filename.</td> </tr> </table> <p>To view the test results of a Test Session, right-click a result on the table and choose either:</p> <ul style="list-style-type: none"> View Test Results Allows to view the selected test results and enables the Export File Name textbox which then sets the desired export file name for the test result. Create PDF Report Generates a report of the selected result(s) to a PDF file. Once clicked, a pop-up menu will appear with choices for what result(s) should be included and other optional parameters or features. 	SITE ID	Choose which Site to view the test results for. This will be already populated if the site in the Database Page was right clicked and View All Resultsview was selected.	EXPORT PATH	Choose which directory to export the test results.	EXPORT FILE NAME	Sets the file of the selected test result to be exported. Note: This is only enabled when a test result is selected and viewed.	EXPORT TEMPLATE	Pick an export template: a CSV format with units or without units.	Export CSV	Export the selected result(s) to the file path with the Site ID and Start Time of the Sequence that was run as the filename.
SITE ID	Choose which Site to view the test results for. This will be already populated if the site in the Database Page was right clicked and View All Resultsview was selected.										
EXPORT PATH	Choose which directory to export the test results.										
EXPORT FILE NAME	Sets the file of the selected test result to be exported. Note: This is only enabled when a test result is selected and viewed.										
EXPORT TEMPLATE	Pick an export template: a CSV format with units or without units.										
Export CSV	Export the selected result(s) to the file path with the Site ID and Start Time of the Sequence that was run as the filename.										

TEST RESULTS

Site ID	Start Time	End Time	Sequence Name	Service				
Connor Site	2021-04-28 16...	2021-04-28 16...	METER TEST ...	4-Wire Wye				
TAG	Result Index	Meter Serial N...	Pass/Fail	Registration	% Error	Meter Measured	Pulses	
CL ACC	1-1	123&AD BE	Passed	99.953	-0.047	0.15	1	
TAG	Result Index	Meter Serial N...	Pass/Fail	Registration	% Error	Meter Measured	Interval Me	
FL DMND	2-1	123&AD BE	Failed	221689.866	221589.866	2008000.0	905.769865	
LL DMND	3-1	123&AD BE	Failed	0.0	-100.0	0.0	90.7269963	
TAG	Result Index	Meter Serial N...	Pass/Fail	Registration	% Error	Meter Measured	Delivere	
FL EDEL	4-1	123&AD BE	Passed	99.998	-0.002	10.019	10.0192242	
LL EDEL	5-1	123&AD BE	Failed	996186.511	996086.511	100000.0	10.0382808	
TAG	Result Index	Meter Serial N...	Pass/Fail	Registration	% Error	Meter Measured	Second	
FL TRUN	8-1	123&AD BE	Passed	99.921	-0.079	15.0	60.0951484	

CREATE PDF REPORT

PDF Report Builder

Site ID: Connor Site
Date of Test Session: Apr 22, 2021 10:11-10:11

Tests Performed To Include:

- CL ACC Test Index: 6-1 Status: Skipped
- CL TRUN Test Index: 7-1 Status: Skipped
- FL TREG Test Index: 8-1 Status: Skipped
- FL DMND Test Index: 9-1 Status: Skipped
- FL EDEL Test Index: 10-1 Status: Skipped
- CL ACC Test Index: 11-1 Status: Skipped
- Ratio with Burden Test

Optional Items to Include:

- As Found As Left Table
- Linear Harmonic Charts
- Logarithmic Harmonic Charts

File Path: TESCO/TescoDeviceManager/Results-Exported
File Name: Connor Site-22-Apr-2021-10-11

PDF Report Builder

Site ID: Connor Site
Date of Test Session: Apr 22, 2021 10:11-10:11

Tests Performed To Include:

- CL ACC Test Index: 6-1 Status: Skipped
- CL TRUN Test Index: 7-1 Status: Skipped
- FL TREG Test Index: 8-1 Status: Skipped
- FL DMND Test Index: 9-1 Status: Skipped
- FL EDEL Test Index: 10-1 Status: Skipped
- CL ACC Test Index: 11-1 Status: Skipped
- Ratio with Burden Test

Optional Items to Include:

- As Found As Left Table
- Linear Harmonic Charts
- Logarithmic Harmonic Charts

File Path: TESCO/TescoDeviceManager/Results-Exported
File Name: Connor Site-22-Apr-2021-10-11

1: Site Information (Date and Time)
2: Optional Tables (Checkboxes)
3: Tests Performed (List with checkboxes)
4: File Export Menu (File Path and File Name)

Test Results

This page shows the format of the exported CSV file. This will also allow setting a custom filename for the Results in the "Export File Name" field.

Create PDF Report

This window allows you to select the results and optional tables you would want to include in your PDF report.

1- Site Information

Displays the Site ID and the date and time of the Test Session.

2- Optional Tables

To include any optional features in your PDF report, click its corresponding checkbox.

3- Tests Performed


To include what tests you would like in your report, click its corresponding checkbox

4- File Export Menu

- **File Path**
Selects the folder where the PDF report will be saved.
- **File Name**
Sets the desired file name of the PDF report.

FUNCTION KEY:

Browse	Allows browsing the desired directory where the PDF report will be saved.
Export Report	Generates a PDF report of the selected tests.
Cancel	Closes the PDF Report Builder without exporting.



Site Test Session Report

Site Info

Site ID: Connor Site Service: 4-Wire, Wye
 Address: 123 Address St. Bld. 3 Customer:
 Levittown, AL 39057 Acct Number:

Meter Info

Serial Number: 123&ADBE Accuracy Class: 0.1
 Model: Test Amps: 2.5
 Manufacturer: Meter K/E: 1.8
 Form: 9S Pulses Per Rev: 1

CT Info

Phase A

Serial Number: 123&ADBE Accuracy Class: 0.3
 Model: Burden Class: 0.2
 Manufacturer: Rating Factor: 4
 Ratio: 200:5

Phase B

Serial Number: 432GIAD Accuracy Class: 0.3
 Model: Burden Class: 0.2
 Manufacturer: Rating Factor: 4
 Ratio: 200:5

Phase C

Serial Number: 643GD5AE Accuracy Class: 0.3
 Model: Burden Class: 0.2
 Manufacturer: Rating Factor: 4
 Ratio: 200:5

Test Session Meta-Data


Tech: Iosif
 Date: Apr 22, 2021 10:11 - 10:11

Page 1

Sample PDF Report

The PDF Report may contain the information below depending on how the configurations are applied from the PDF Report Builder:

- Site Information
- Meter Information
- CT Information
- Test Session Meta-Data
- Harmonic Charts
- Logarithmic Charts
- Site Measurements

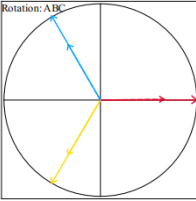
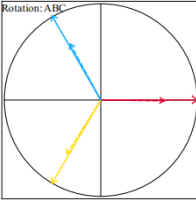


Site Measurements

Phase	Voltage	Voltage Phase	Current	Current Phase	Probe Current	Probe Phase
A	119.832	0.000°	0.876	359.761°	35.161	1.30°
B	119.922	119.985°	0.876	119.831°	34.958	121.289°
C	119.887	239.975°	0.879	239.746°	35.202	241.461°

Secondary Phasor Primary Phasor

Rotation: ABC Rotation: ABC

Power

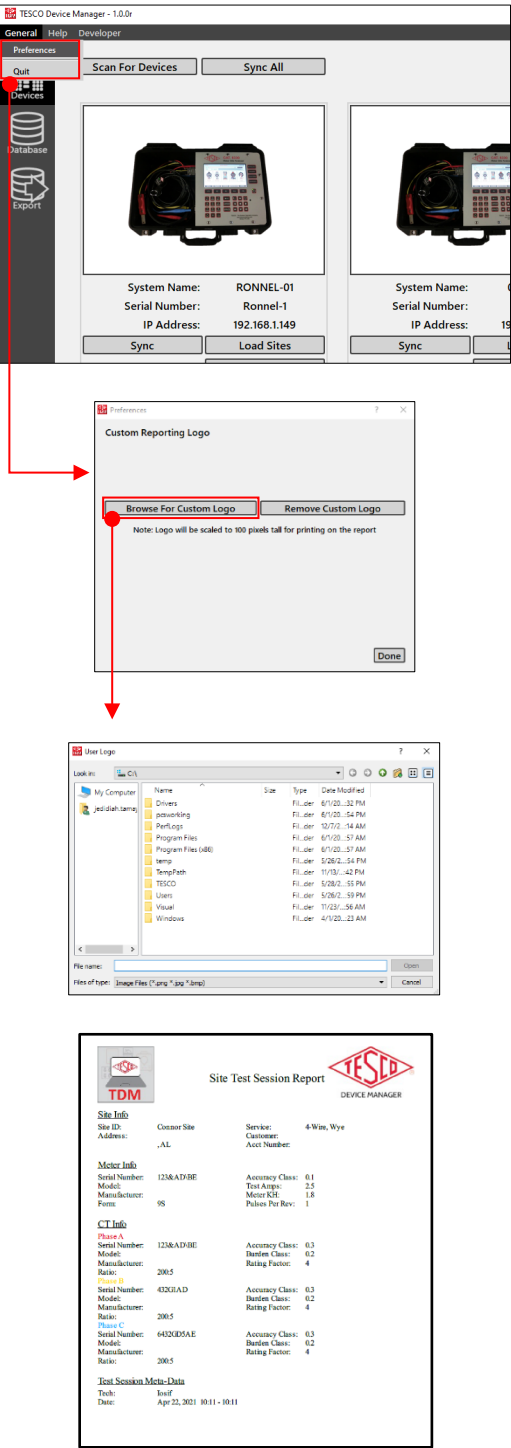
Phase	Watts	VA	VAR	Voltage THD	Current THD	Power Factor	CT Ratio
A	0.117	0.466	-0.002	0.002	0.000	1.000	200.77:5
B	0.467	0.467	-0.001	0.002	0.000	1.000	199.47:5
C	0.469	0.469	-0.002	0.003	0.000	1.000	200.17:5

As Found As Left Table (Registration)

CL	FL	LL	PF
X	X	X	X
X	X	X	X

Page 2

1.5.4 Custom Reporting Logo

SCREEN	DESCRIPTION
	<p>TDM allows custom logos in generating the PDF Report. You can change the default logo by clicking (General) on the menu bar.</p> <p>Under (General), select (Preferences).</p> <p>A pop-up will appear with the following functions:</p> <ul style="list-style-type: none"> • Browse For Custom Logo Opens a file browser where you can locate your custom logos. • Remove Custom Logo Removes the custom logo selected. <p>NOTE: Custom logos are automatically scaled to 100 px in height.</p> <p>Sample PDF Report with a Custom logo</p>