aMESM Android instructions

METREL®

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2   Instrument compatibility

Instruments supported:
- MI 3152
- MI 3152H
- MI 3102
- MI 3102H
- MI 3125
- MI 3360

3   Instrument setup

3.1   MI3152/MI3152H

No special settings are needed on MI3152/ MI3152H, since BT is always on.

3.2   MI3360

No special settings are needed, since BT is always on.

3.3   MI 3102, MI 3125

Make sure BT is initialized. If BT device is not visible, go to setting menu on instrument and try to use INITIAL SETTINGS. This will initialize BT on instrument.

4   Projects view

In projects view you can:
- Create new projects
- Open existing projects
- Share/Export/Import projects

Main screen elements:
1. Project name and scope of work. When there is a change in project red save indicator will show up.
2. Menu to access other parts of program. Not all icons are shown on every device. It depends on screen size. Icons that are not shown are hidden under overflow menu on the right.
3. Screen is divided in three parts:
   a. Tree view representing project structure in form of tree
   b. Measurements view (results view)
   c. Parameters view
   By selecting tree element, measurement and parameter view will change to reflect parameters and measurements bound to selected element.
4. Tree view representing project structure in form of tree
5. Toolbar used to manipulate structure.
By swiping left/right you can move between selected element measurements, parameters.

4.1 Tree view

In tree view projects structure is presented. By clicking symbol on the left of the tree elements, tree gets expanded or collapsed.

By selecting element using short single click, its measurements, parameters and attachments can be inspected or modified by moving to appropriate tab.

There are 4 different states possible for measurement:

- Passed (green icon)
- Failed (red icon)
- Finished without status(blue)
- Empty measurement (blue hollow) without results

Below structure element icon, there are two icons showing if there are failed or empty measurements beneath that element

4.2   Measurements view

In measurement view appliance measurement results and parameters can be checked. By clicking on measurement, edit dialog will open allowing to manually enter results and parameters. If measurement was downloaded from instrument editing will be disabled.
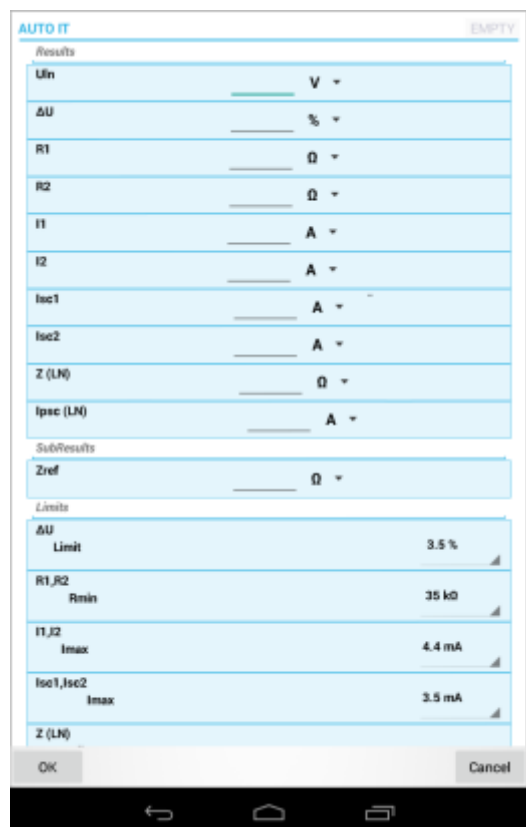
By clicking on measurement, dialog will open allowing to enter results, parameters and limits. If result are entered status of measurement will change. Until results are entered measurement is treated as empty and upon uploading it to instrument it will allow to be executed immediately.

4.3 Parameters view
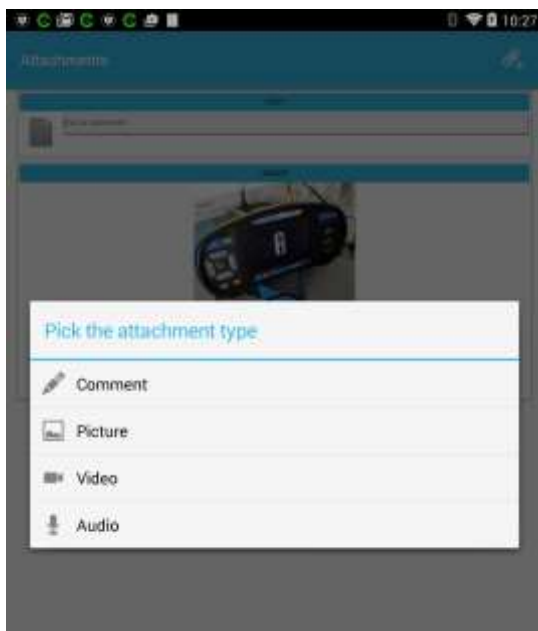

In parameters view, parameters of structure element can be entered.

4.4 Attachments view

For every tree structure element 4 different types of attachments can be added.

- Text
- Picture
- Video record
- Sound record

Once element has attachments symbol will appear on tree element.

Under setting there is an option for choosing quality setting for pictures taken. It is recommended to keep quality as low as possible to have overall size of attachments low.

4.5 Toolbar

Depending on type of tree element selected, appropriate toolbar will open on bottom of the screen. There are different sets of actions available for structure elements and measurements.

4.5.1 Structure element toolbar
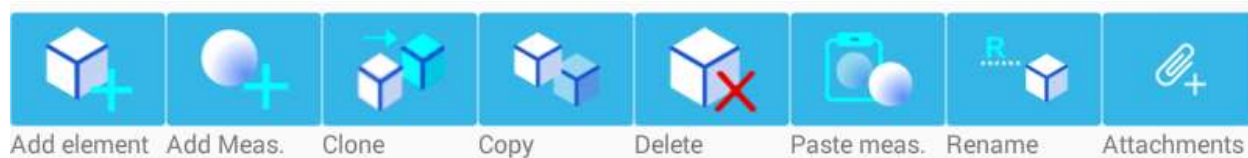
Using long click on toolbar, help will show on bottom. Toolbar allows:
- Adding new structure elements
- Adding new measurements
- Cloning structure elements
- Copy/Paste operation
- Deleting measurements
- Renaming element
- Adding/viewing/manipulating attachments

4.5.2 Measurement element toolbar

When measurement is selected in tree view, toolbar actions will change. Measurement toolbar allows:
- Adding new measurements
- Cloning measurements
- Copy/paste operation
- Deleting measurements

4.6   Working with structure

4.6.1   Open project

Projects are opened using "Open" from menu. Projects are saved under directory / aMESM/Projects. Location of this folder depends on device. Usually it is on external storage, but some devices don't have external storage and they have some internal memory mapped as external storage. This is normally storage that shows up when phone/tablet is connected to PC using USB cable (connection type should not be camera, but MTP or storage – set on device).
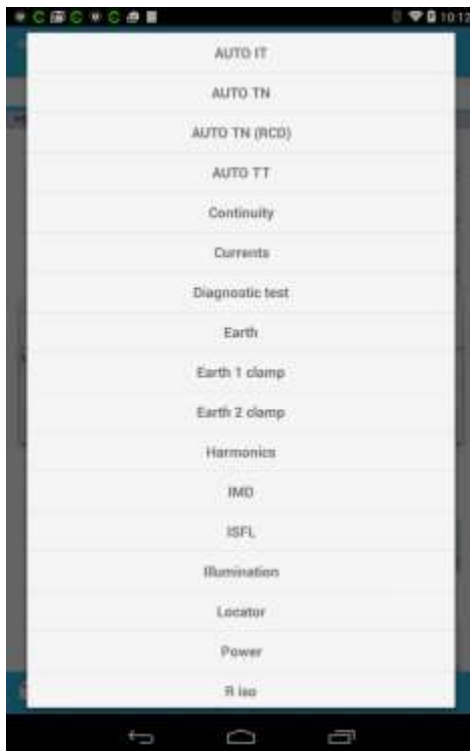
4.6.2   Adding structure elements

Elements can be added by using "Add element" button. Before adding element you have to select an element you would like new element be added to. When "Add element" button is selected only elements that can be added are shown.

Depending on selected scope of work different sets of structure elements will be available.

By moving to parameters tab, selected element parameters can be entered/modified.

4.6.3 Adding measurements

By selecting "Add measurement", different measurements can be added to structure elements. Depending on scope of work, different sets of measurements will be available for selection.

After measurement is selected, dialog will open where user can enter parameters, limits and results. If no results are entered empty measurement is created, allowing immediate execution after uploading of project to instrument.

4.6.4 Modifying tree structure

Tree structure can be modified by using toolbar on the bottom. By long pressing tree element additional toolbar will open allowing to move elements up/down (on same level) and adding comment and attachment to tree element.

If measurement is selected, using info icon, information about instrument used to make measurements is shown.

When structure element is selected and edit icon is used, name of element can be changed and also comment can be added. Comment is seen in tree structure.

Measurements only allow comment entry.

4.7   Import/Export/Share Project

When you want to share project, you have to export it, so that it can be imported on other device or to MESM software running on PC. There are different directories created for import/export:
- / aMESM/Imports – for importing
- /aMESM/Export – for exporting

When you want to import projects, applications searches in import directory and when you want to export, file is placed in export directory.

In case you want to share project, device offers all applications that are available to share it. Usually sharing options are BT, Mail, Cloud storage providers , Wi-Fi.

Exported project has file ending *.padfx

Exported projects can be opened on MESM PC software.

5   Connecting to instrument

In order to connect to instrument, BT icon has to be selected in main project window.
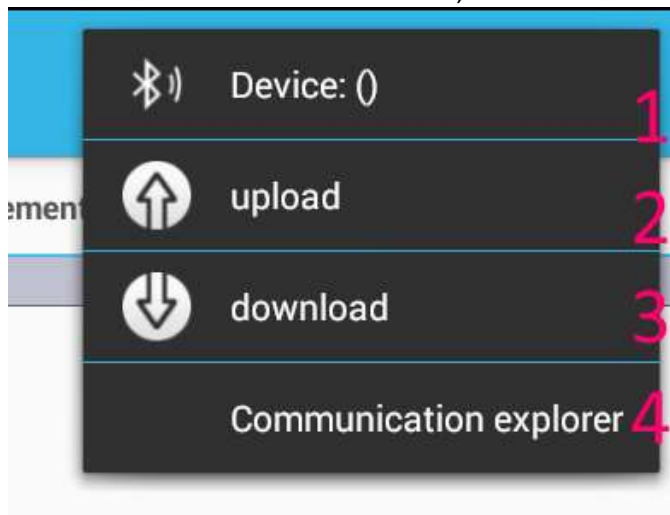
1. Before projects can be uploaded or downloaded, instrument has to be selected. Make sure instrument is turned on so that it can be discovered over BT.
2. To upload currently opened project select 2 option
3. To download project from instrument select 3 option
4. To open Communication explorer, select 4 option.

5.1 Communication explorer

If communication explorer is selected, view will be shown, where projects can be uploaded and downloaded.

5.1.1 Selecting instrument

By using BT icon, instrument we wish to use has to be selected. Once instrument is selected it will remain selected until a new one is selected. All upload/download operations are going to refer to this selected instrument.

5.1.2 Downloading from instrument

By using download icon, active project from instrument is going to be downloaded. Once downloaded, dialog will be shown asking if we want to open project.

5.1.3 Uploading to instrument

Before uploading to instrument a project has to be selected. User has to select uploaded project from list of projects on instrument.

6   QR/NFC

PAT instruments have ability to write results to labels with QR or NFC tag-s. Using aMESM we can read results and send results back to supported instruments (MI3360) to search inside memory organizer and repeat tests. NFC tag or QR label must be created using instrument or else they won't be recognized.


6.1   NFC

Phone/tablet must have NFC reader inside to be able to read NFC tags. It takes some trial and error to find exact position of NFC antenna on back of device. If tag is successfully read, results are shown otherwise not.

6.2   QR

To be able to read QR labels tablet/phone must be equipped with camera. Speed of reading depends on quality of camera sensor. Higher resolution camera sensor generally means faster reading.

7   Creating PDF reports

It is possible to create simple reports in PDF format from currently opened project. Before generation, report header can be edited
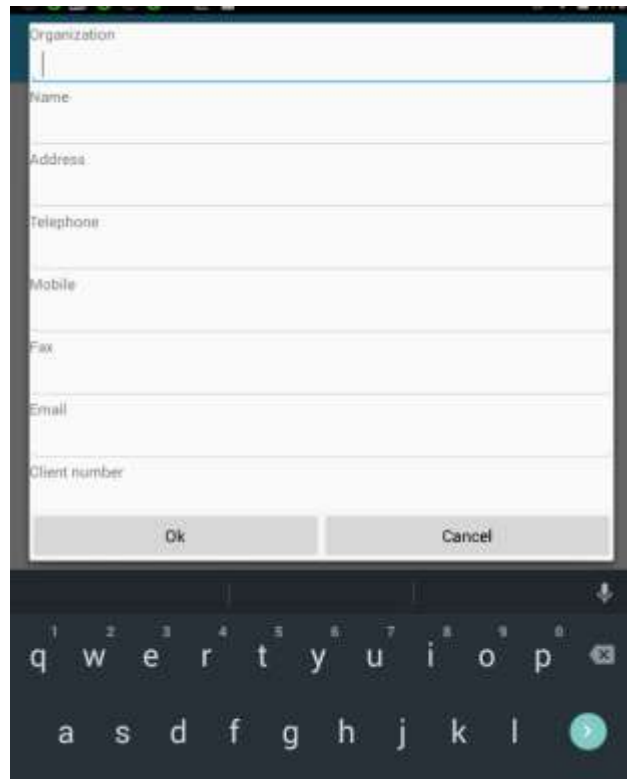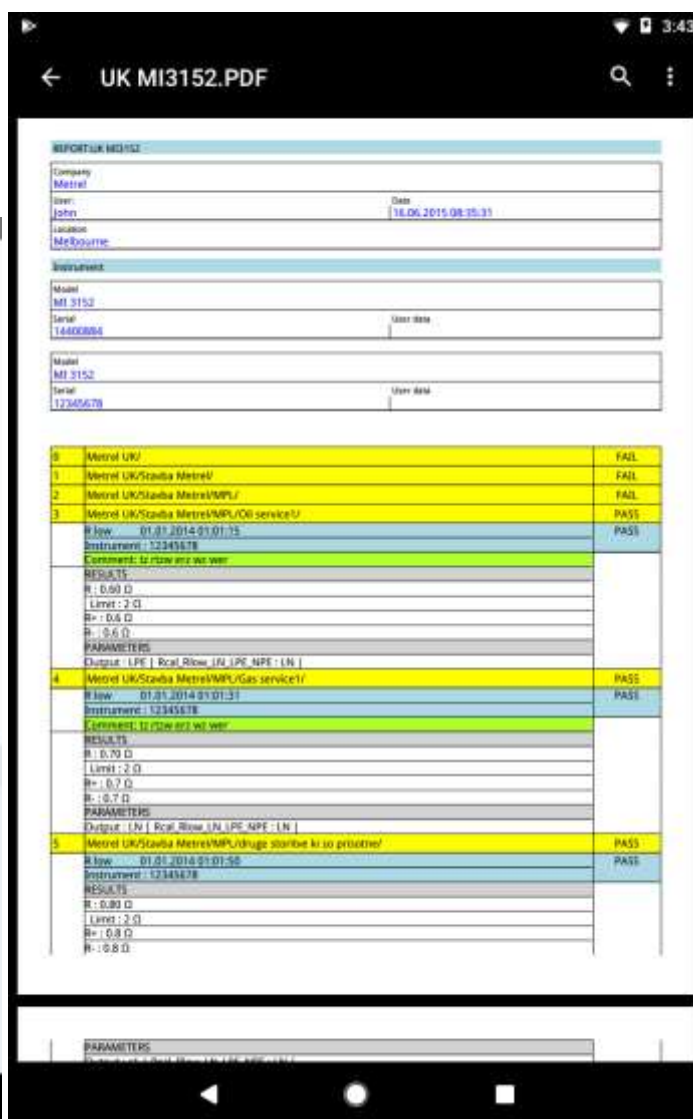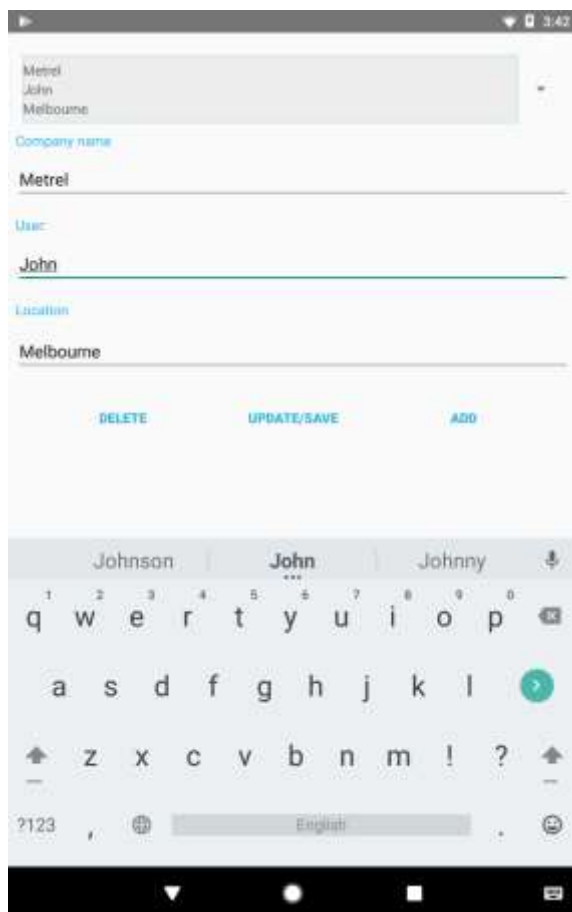
Edit lists

Under menu "Edit lists" option opens editor for adding:

- Client
- Responsible person
- Address list

That can be later selected as parameters on some of structure elements.

8   Activating devices

As long as you do not have any activated devices (which is the default configuration), the application will work in a limited "demonstration" operation mode, which disables upload/download to instrument.
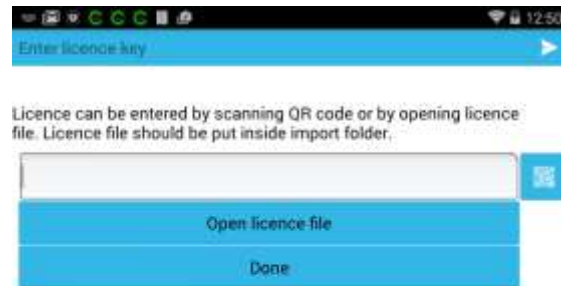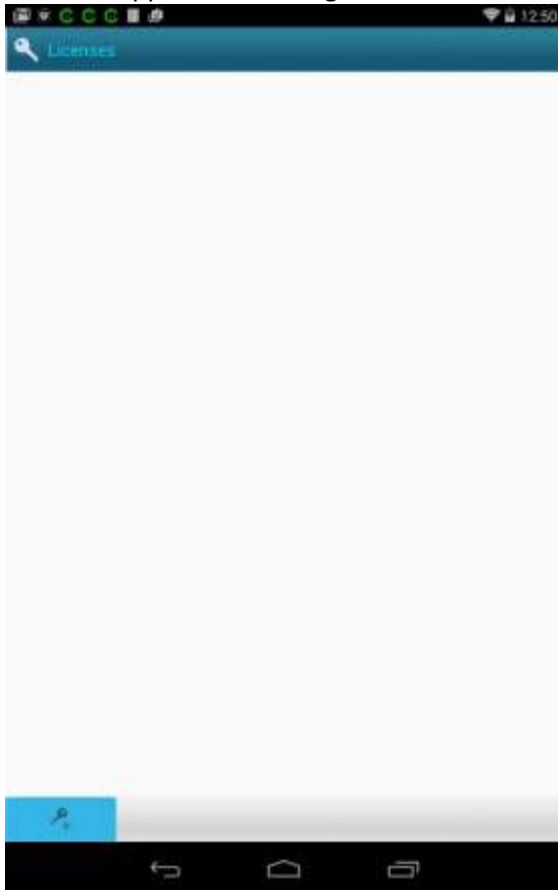
So you need to activate devices to start fully using the application. Each device you want to communicate with must be activated.

There are 2 types of license:

-BASIC allows download

-PRO allows upload and download

Let us go through device activation. First you need to press the action to add a new device at the bottom of the screen in the application settings:

Based on serial number, type of instrument and license type, your dealer will give you a QR code or license file to enter for that device. You can scan QR or import license file and password field will get filled with license key. After that, press the arrow on top-right of the application to complete the activation.

Once it is done, the instrument is added to the list of activated devices and you can use the application to communicate with the instrument without any limitations.

9   Settings

- Scope of work: Lets you choose region you are working in.
- Device activation: Used to enter license for instruments.
- Always load last used project: Keeps last used project loaded all the time. If Application gets killed it will load last used project next time it is started.
- BT: There are options in case of connection problems. Some devices have known bugs when connecting to BT. In case of troubles use this options.
- Attachments:
  - o Picture: Picture quality can be selected here to keep attachments size down.
- Change log lets you check changes in different software versions.

10 Troubleshooting

1. BT devices are not visible when scanning.
   a. Go to android device BT settings and check if devices are visible there. Pair them then go back to aMESM application and try to reselect them.
   b. Turn BT off and back on, then try to search devices again.
   c.   Try to reinitialize BT on instrument.

11 Reporting errors/crashes/problems or suggestions

To report problems/suggestions use email: android.apps@metrel.si

When reporting errors/crashes please include FW version, application version, android version, device model and if possible how to reproduce error.