EmoDrive
Emotron FDU/VFX

Instruction manual
English
Valid from APP version V1.00
Valid from drive software version V5.00

emotron
DEDICATED DRIVE
A CG Product

EmoDrive Application

INSTRUCTION MANUAL

Valid from drive software version V5.00

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Contents

1. Introduction 6

2. Installation 6

2.1. Android Installation 6

2.2. iOS Installation 6

3. Wireless connection 6

4. Application Folder 6

5. User Interface 6

5.1. Splash Screen 6

5.2. Terms and conditions 7

5.3. Feature Walkthrough 7

5.4. Connectivity 7

5.4.1. Wi-Fi 8

5.4.2. BLE Comm 8

5.4.3. Work Offline 8

5.4.4. Demo Drive 10

5.4.5. Upgrade CSV 10

6. Dashboard 11

6.1. Drive Connection Status 11

6.2. Drive Name 11

6.3. Parameter Window 11

6.4. Dashboard Setting 12

6.5. Control Source 12

6.6. Input/output 13

6.7. Status 13

6.8. Faults/Logs 13

6.9. Control Panel 14

6.10. Trip Icon 15

6.11. Set/Status Icon 15

7. File Option 15

7.1. New 15

7.2. Open 15

7.3. Save 15

7.4. Export PDF 15

7.5. Compare 16

7.6. Save to Drive 16

7.7. Load from Drive 17

7.8. Sync date & time 17

8. Side Menu 17

8.1. Drive Information 18

8.2. User login 19

8.3. Drive Parameters 20

8.4. Oscilloscope 21

8.4.1. Oscilloscope graph 22

8.4.2. Oscilloscope Menu 23

8.5. Logs & Events 28

8.5.1. Faults logs 29

8.5.2. Events logs 29

8.5.3. Transaction logs 30

8.6. Documents/Manuals 30

8.7. Service Report 30

8.8. Settings & Preferences 31

8.8.1. Language 32

8.8.2. Preference 32

8.8.3. Communication 33

8.8.4. Customer Data 34

8.9. About EmoDrive 35

8.9.1. Licenses Acknowledgment 35

8.9.2. Licenses 35

8.9.3. Feature Walkthrough 35

8.9.4. Feedback/ Bug report 35

8.10. Exit Application 36

1. Introduction

CGDA is a leading company in the area of motor control solutions and AC Drive control. CG has various AC drives in the market that cater to different market segments. The purpose of this mobile application is to control different AC Drives used in multiple industrial environments.

The AC Drive requires software to configure, control, monitor, troubleshoot, and maintenance. The EmoDrive mobile application is used to improve ease of use of AC Drives.

2. Installation

EmoDrive is a mobile application that is available on Google Play Store and App Store (iOS).

2.1. Android Installation

Install the EmoDrive application from Google Play Store and follow the standard installation procedure of android. Provide the all asked permission to the APP; otherwise, the APP will not work or malfunction.

The EmoDrive APP has support from Android 6 to Android 11 version.

2.2. iOS Installation

Install the application from the Apple App Store and follow the standard installation procedure of iOS. Provide the all asked permission to the APP; otherwise, the APP will not work or malfunction.

The EmoDrive APP has support from iOS 11 to iOS 15 version.

3. Wireless connection

The EmoDrive APP provides only wireless connectivity options. The APP can be connected to the FDU/VFX drives via BLE and WiFi communication.

4. Application Folder

The APP creates an application folder (EmoDrive) on mobile internal storage to store the APP related content. That application has the following sub folders.

- Dat: Dat file folder contains saved ".dat" files. Users can save ".dat" extension files here in this folder
- Rec: Oscilloscope recording files can be found in this folder. Oscilloscope recording files will be saved with the ".rec" extension.
- PDF: This folder will contain exported graphs & PDF files.
- Logs: Crash log files can be found in this folder.

5. User Interface

5.1. Splash Screen

The EmoDrive APP starts with a splash screen; which has the welcome screen and APP version. See figure 1.

Figure 1: Splash screen.

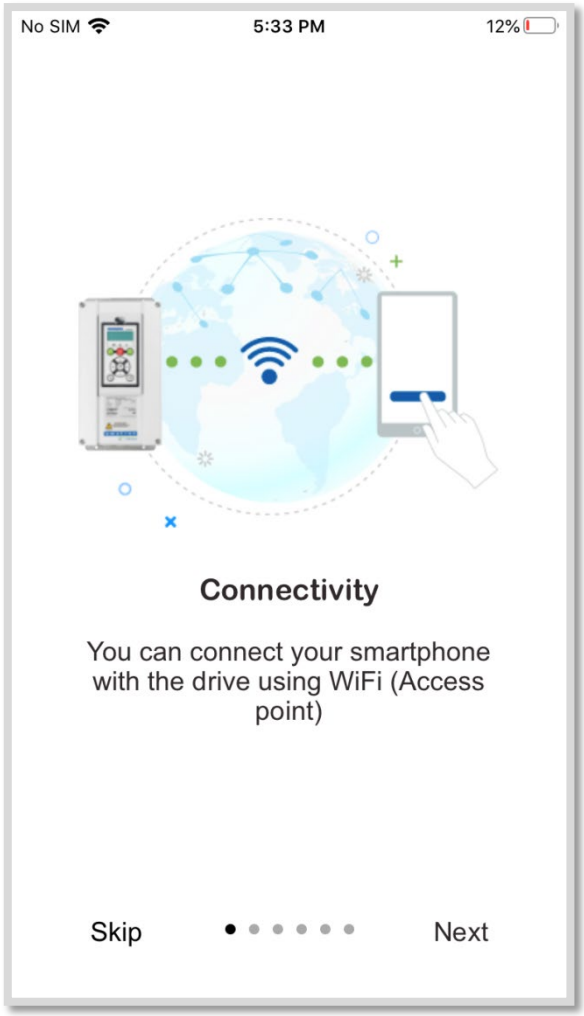

Figure 2: Feature walkthrough.

5.2. Terms and conditions

Users see the terms & conditions screen when the application is opened for the first time after installation.

After accepting the Terms & conditions; the user navigates to the feature walkthrough.

5.3. Feature Walkthrough

Feature Walkthrough provides a brief introduction of the application to the user. It comes for the very first time after the installation of the application. Users can skip the walkthrough by pressing the 'Skip'.

5.4. Connectivity

After the user completes the walkthrough, the user is directed to connectivity screen. The user gets multiple options to work with the drive. The options are -

- WiFi
- BLE Comm
- Work Offline
- Demo Mode
- Upgrade CSV

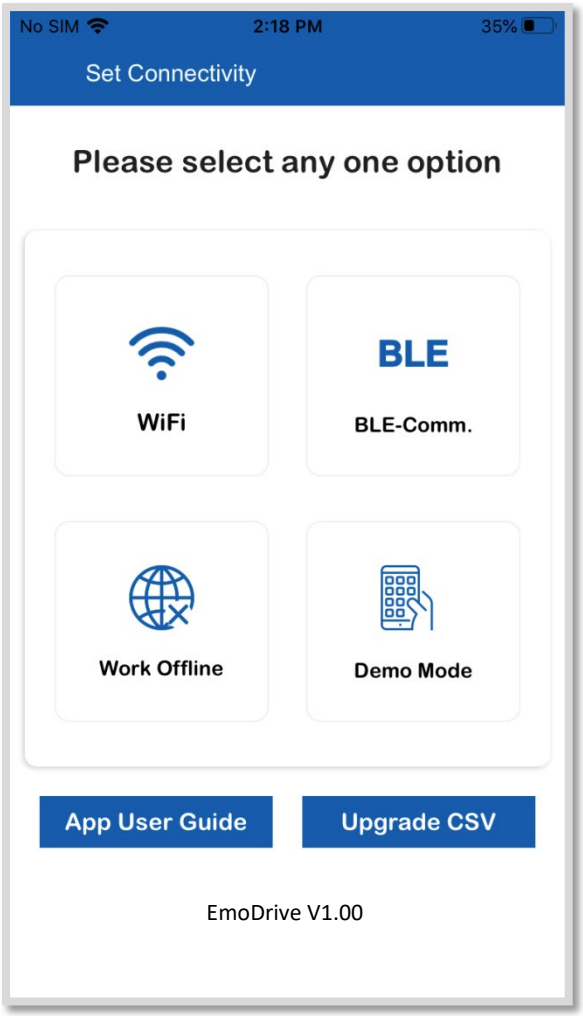

Figure 3: Connectivity page.

5.4.1.Wi-Fi

- Clicking on the WiFi option shall redirect the user to a screen where all available Wi-Fi networks shall display.
- The mobile location service needs to be enabled otherwise the APP will ask the user for enabling the location service. Without enabling the location, the APP will not work.
- The user shall choose one option among the displayed option.
- If the Wi-Fi network is private & secured, the system shall prompt the user to enter the password.
- Once the password is entered and validated, then the connection shall be established.
- Alternatively clicking on IP address button on the topmost right corner of the screen, the user can enter the IP address manually & can connect to the PPU.

5.4.2.BLE Comm

- Clicking on the "BLE-Comm", the option shall redirect the user to a screen where they get an option to choose a valid PPU BLE ID.
- The user needs to select the one BLE ID among all options.
- After selecting the PPU, the APP shall open a prompt to enter the drive BLE-Comm code.
- Once the code is entered, the APP shall validate whether the entered code is correct & valid.
- If correct & valid, the APP shall redirect the user to the "Dashboard" screen of the paired drive.
- If incorrect, the APP shall display the message "please enter correct BLE-Comm code to pair the drive".
- After an unsuccessful attempt, the user needs to turn off the BLE of the mobile. To reconnect the APP again, turn on the BLE of mobile and repeat the above steps.

5.4.3.Work Offline

- The offline section gives flexibility to the user for working offline with files. The application gives the ability to open the existing ".dat" file of the drive or create the new ".dat" file in offline mode.
- By clicking on 'New'; the user can open a listing of CSV files along with the version. The user can choose the appropriate file to create an offline drive.
- The user can load a ".dat" format file by clicking on the 'Open' folder.

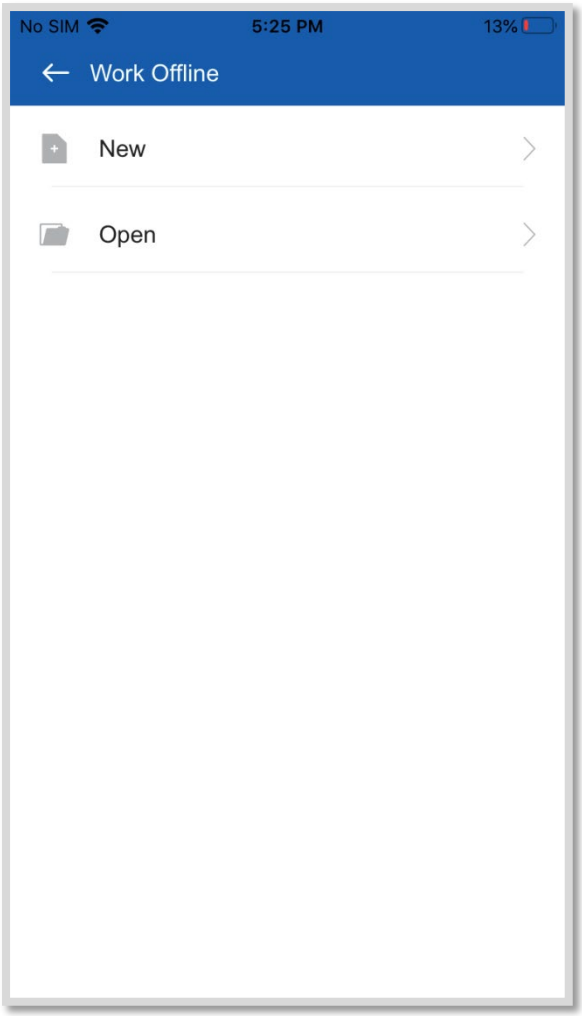

Figure 4: Work offline page.

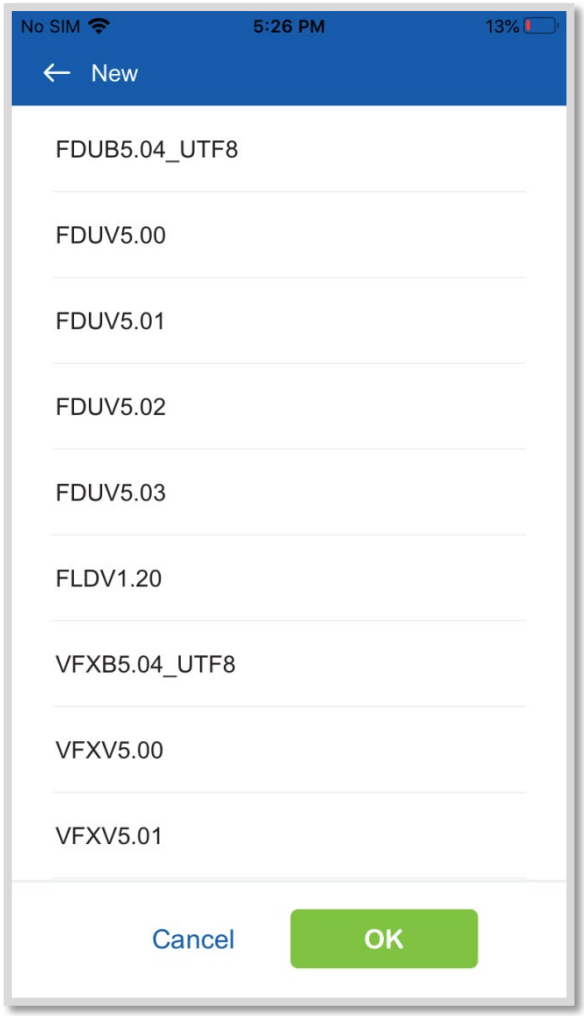

Figure 5: CSV file selection for work offline.

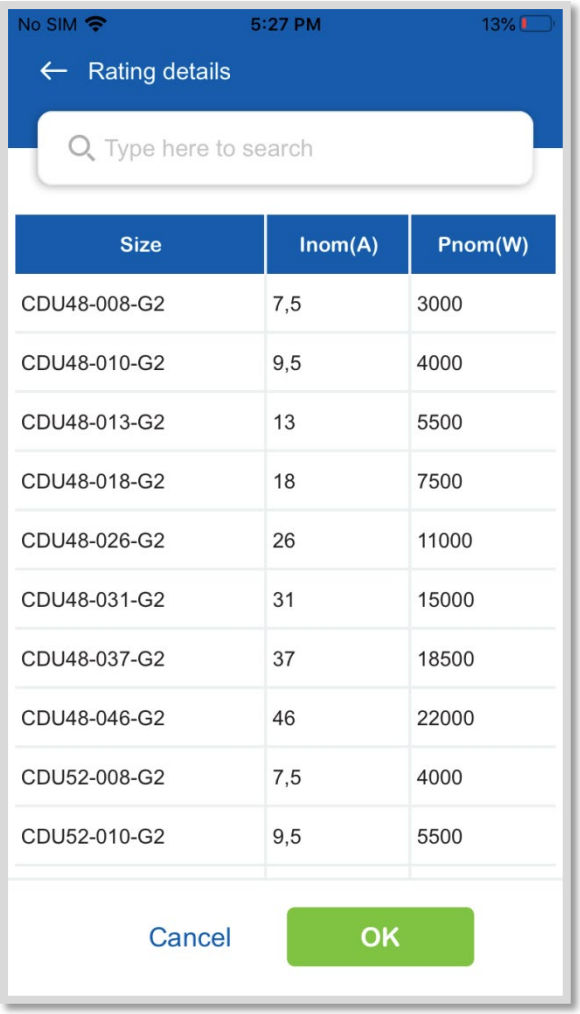

Figure 6: Drive capacity selection for work offline.

5.4.4.Demo Drive

- Demo drive option provides the flexibility to experience the APP without connecting the actual drive.
- As you select the 'Demo Drive' you will see the notice.
- "The Demo drive has limited functionality, press OK to continue".
- Click ok after reading it.

5.4.5.Upgrade CSV

The user shall download the latest CSV files from the FTP server when FDU/VFX drive software version is higher than the available CSV files in the APP. To know the drive compatible CSV file exists or not, connect the drive with Wifi/BLE, APP will give a warning about the CSV file mismatch and ask to download the new version CSV file.

The user should use the downloaded CSV file for connecting the drive or creating the offline ".dat" files.

When the user selects a certain CSV file and clicks "Download" if this specific CSV file already exists in the APP directory, there will be a pop-up showing info: "File already downloaded, do you want to overwrite?" together with Yes and No-keys (where Yes performs a download of the file and No cancels the operation).

6. Dashboard

The dashboard comes with all the connectivity options WiFi/BLE-Comm/Offline/Demo.

- In BLE-Comm or WiFi connectivity case, it shows the drive parameters value along with the menu number for ease.
- In Demo mode, it shows the pre-defined values for user experience.
- In Offline mode, it shows the CSV file values of an offline created drive.

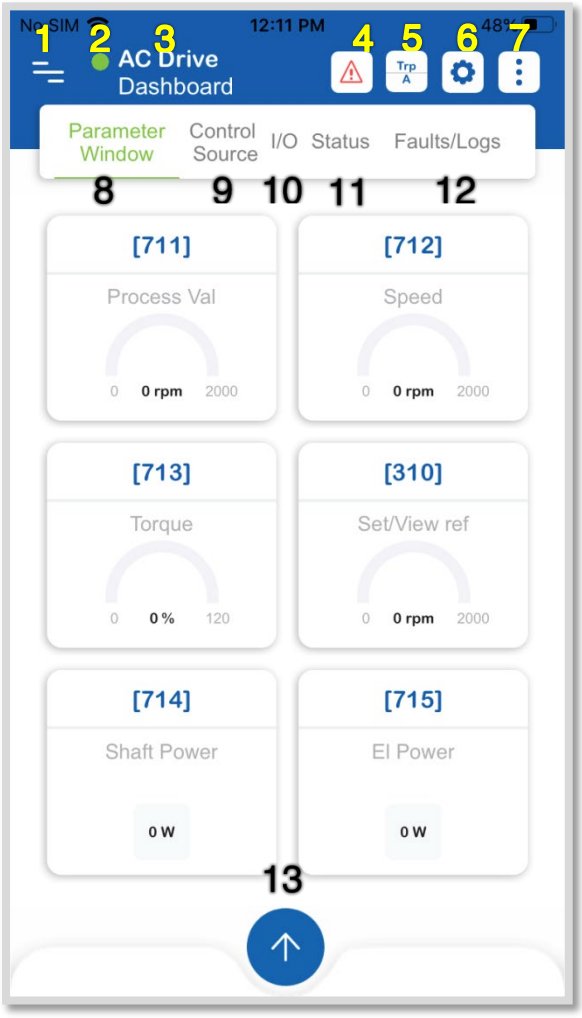

Figure 7: Application dashboard.

Following sections shall be displayed on the dashboard screen. For illustration the sections are marked with unique number.

1. Side menu button
2. Drive connection status
3. Drive name
4. Trip/Warning icon
5. Set/Status icon
6. Dashboard setting button
7. File menu button
8. Parameter window
9. Control source window
10. I/O window
11. Drive status window
12. Fault log window
13. Control panel button

6.1. Drive Connection Status

It shows the connection status between application and drive –

- Green – drive connected.
- Red – drive not connected.

6.2. Drive Name

It shows the drive/unit name which stored into the drive [923] menu.

6.3. Parameter Window

It displays the six parameters in graphical representation. Dashboard parameters and their sequencing of appearance can be configured by the dashboard setting, where the user can select 6 out of 16 parameters to display in the dashboard. The dashboard setting button is placed in the topmost right corner at the second position from right to left, see figure 8. It appears only within the parameter window.

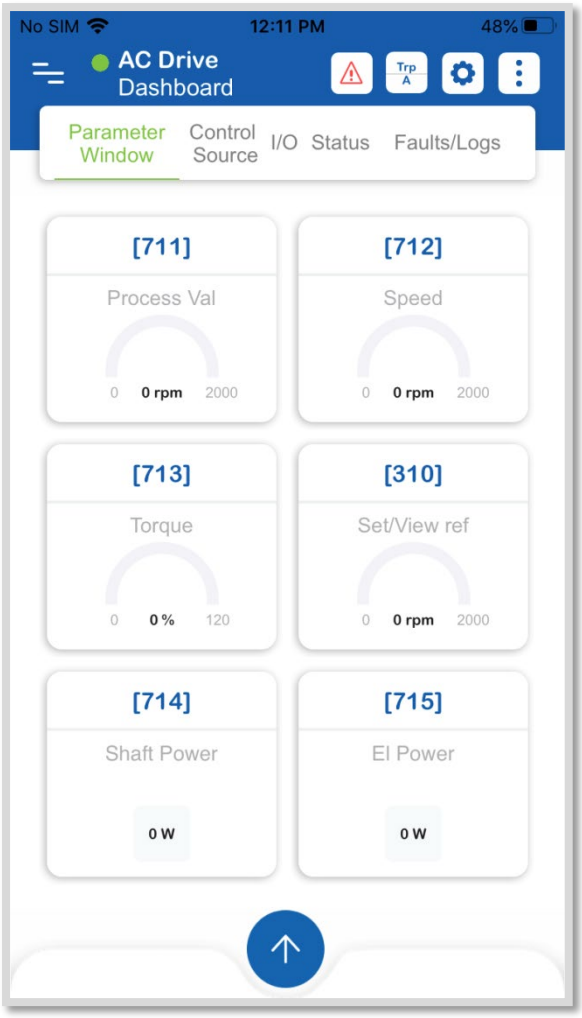

Figure 8: Dashboard parameter window.

By default following parameter are selected -

- **Process Value** – this shall display the actual process value depending on selection done in process source [321].
- **Speed** – this shall display the speed of motor in RPM.
- **Torque** – this shall display the Torque value.
- **Set/View ref** – this shall display the ref value which is selected by user.
- **Shaft Power**- it shows the value in W unit.
- **EI power**- Electrical power. It shows value in W unit.

6.4. Dashboard Setting

User can select the 6 parameter out of 16 to display in parameter window.

6.5. Control Source

This section shall be displayed the control source information of drive along with drive mode and selected motor set. It is read only information to get the control source status of drive.

- Selected Motor Set
- Drive Mode
- Reference Control
- Run/Stop Control
- Reset Control

To know more about the above options, read Emotron AC drive instruction manual.

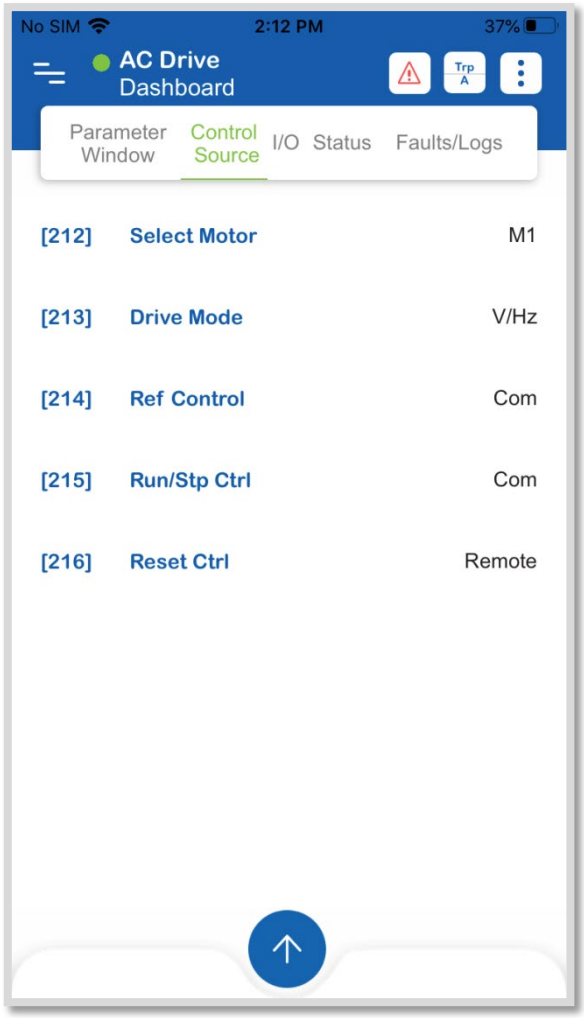

Figure 9: Control source window.

6.6. Input/output

Users shall be able to view digital input/output states, analog input/output value, and status of relay along with their selected function.

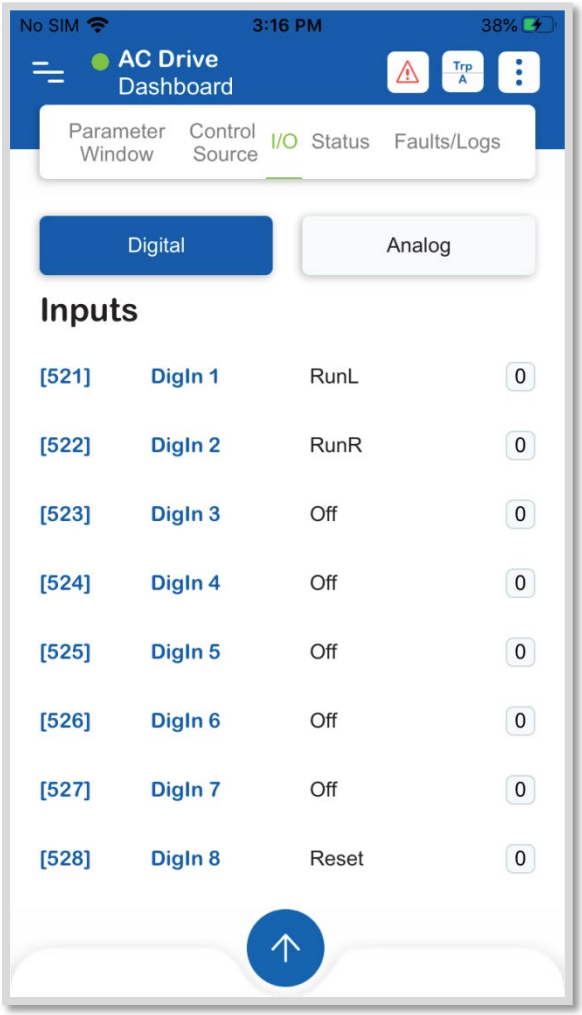

Figure 10: IO status window.

6.7. Status

Status parameters of a Drive can be monitored in status view. These parameter sets are read only and continuously updated.

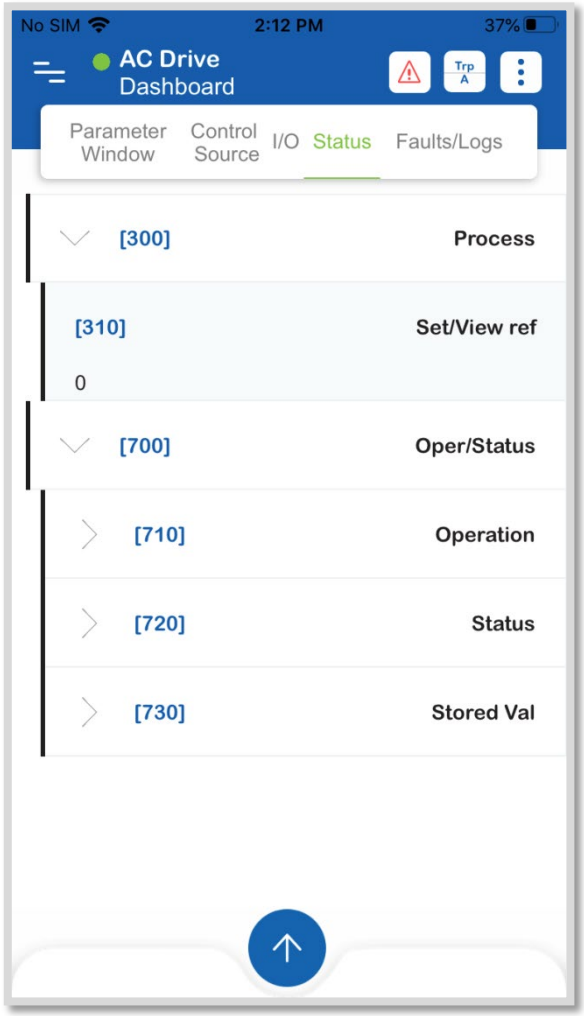

Figure 11: Drive Status window.

6.8. Faults/Logs

Fault logs of a drive can be monitored in fault logger view. These parameter sets are read only and continuously updated. User can also reset the trip; if reset control is set to the COM.

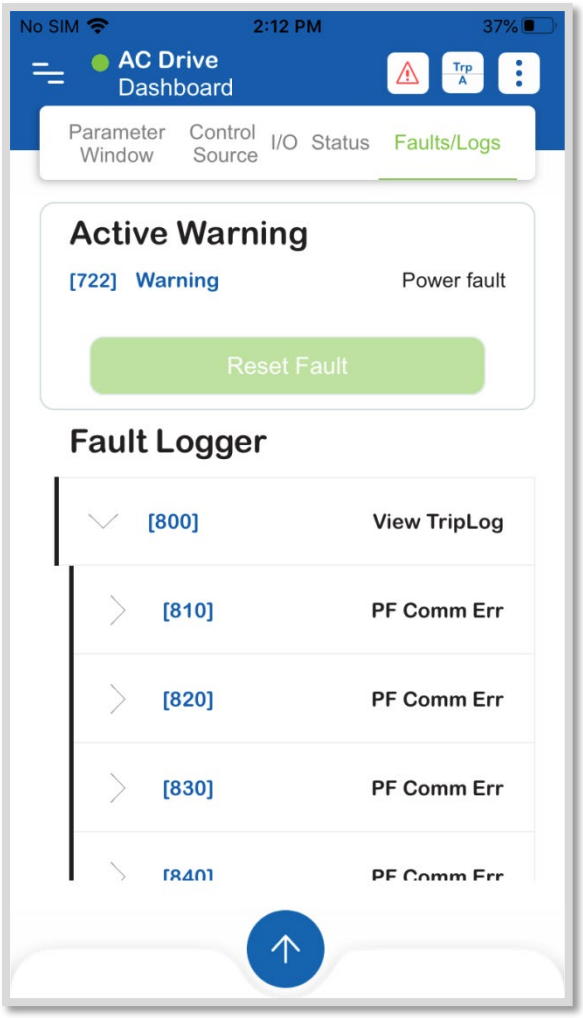

Figure 12: Faults log window.

6.9. Control Panel

Control Panel in parameter view, oscilloscope view and status view are the same, the user can operate the control panel from any view. Users can set reference values in terms of speed, V/Hz and torque of motor. User also has the option to rotate the motor in Forward / Reverse directions or stop. See figure 13.

- Control Panel dialogue becomes visible when clicked on arrow symbol located at the bottom side of APP.
- Reference value (Range 0 to 100) of speed: This field shall be active when Reference source is in COM mode.
- Reference Source: User can select the reference source as Remote, Keyboard, Com.
- Run/Stop Source: User can select the Run/Stop source as Remote, Keyboard, Com and in some cases Option from drop down list.
- Device rotation in reverse direction (Anti clockwise direction): This Button shall be active when Run/Stop source is in COM mode. The button colour shall be green when motor running.
- Stop: Stop the motor by the clicking on this button. This Button shall be active when Run/Stop source is in COM mode. The button colour shall be red when drive is stop.
- Device rotation in forward direction (clockwise direction): This Button shall be active when Run/ Stop source is in COM mode. The button colour shall be green when motor running.

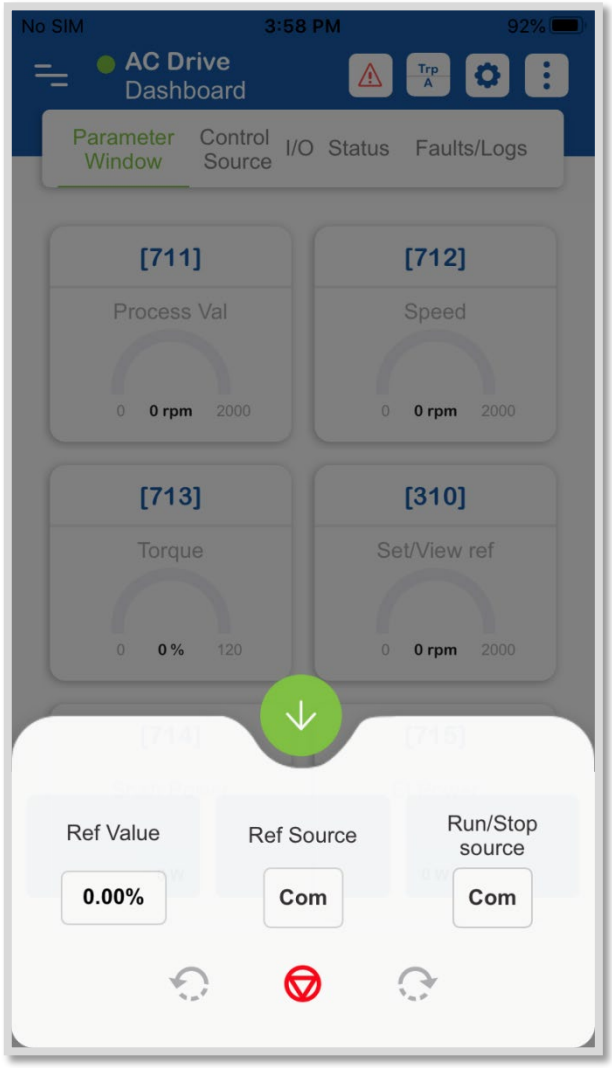

Figure 13: Control panel.

6.10. Trip Icon

The trip icon shall be displayed when there is a warning or trip condition. During the warning condition the trip icon will toggle. For trip condition the icon shall be displayed continuously.

6.11. Set/Status Icon

The Set icon shall display the drive status similar to Emotron FDU/VFX PPU. It shows the selected parameter set, run, trip, acceleration, and deceleration status.

7. File Option

The file option button shall be located on top right corner and can be opened by clicking on three dots in square box. It has following option –

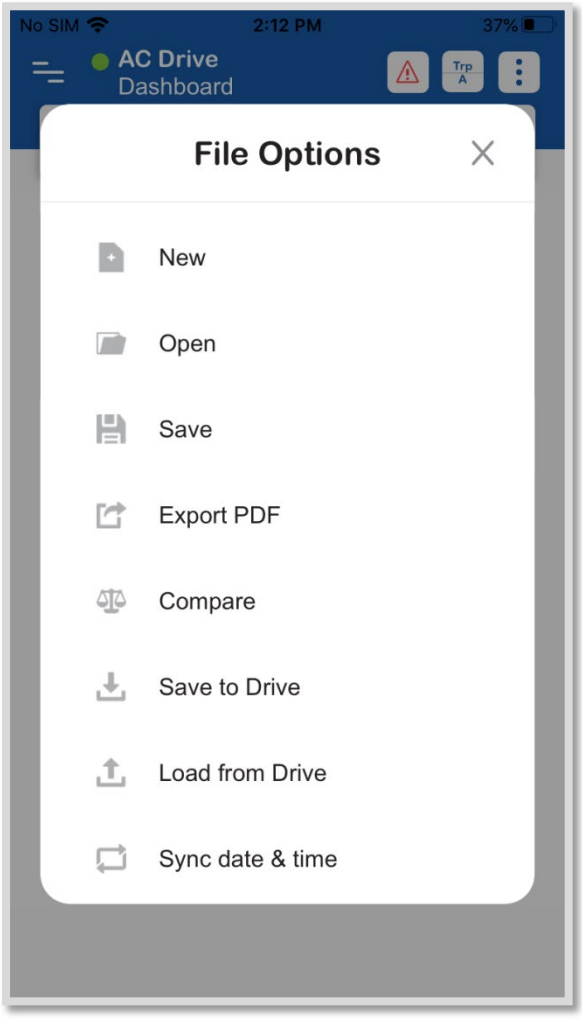

Figure 14: File option menu.

7.1. New

On clicking the **"New"** button, the user can create the new ".dat" file. The user needs to select the specific CSV file version and drive model number.

7.2. Open

On clicking the "Open" button, the user shall be able to open the existing ".dat" files that are available /stored on the mobile device.

7.3. Save

On clicking the "Save" button; the user can save the ".dat" file.

After clicking the save button, if drive parameter not loaded into the earlier, the APP first load the parameter from drive than prompt a screen to set the file name with Cancel and save button. On clicking to cancel, the process shall be aborted. On clicking the save button the data file shall be saved into the application folder <EmoDrive/Dat> in internal mobile storage.

The prompt screen also has the option to email the file. The user needs to check the button and the email client selection screen shall be opened when ".dat" file shall be generated.

7.4. Export PDF

On clicking the "Export PDF" button, the drive parameters shall be exported in PDF file. When user clicks the button, first the drive parameter will be loaded if not loaded already. Then a prompt screen appears with options "All" and "Changed value" with "Cancel" and "OK" buttons.

All: All parameter shall be exported in PDF file.

Changed Values: The APP shall only be exporting the parameters with different values from the default value.

On clicking the "Cancel" button, the export process shall be aborted.

On clicking the "OK" button, A new prompt shall be displayed and having option to set file name with "Cancel" and "Save" button. It also has the option to send exported file directly by mail. This prompt work similar to the "Save" option prompt.

7.5. Compare

The compare option provides the facility to compare the two ".dat" files.

To compare, follow these steps –

- Open first ".dat" file in offline work mode.
- Open file menu and select the compare option. Here, the first ".dat" file already selected in source 'A' and user needs to select the second ".dat" file source 'B'.
- On clicking the "Compare" button, the APP shall display the result.

To compare the online drive with any ".dat" file, instead of creating offline work drive, connect online drive and follow above step.

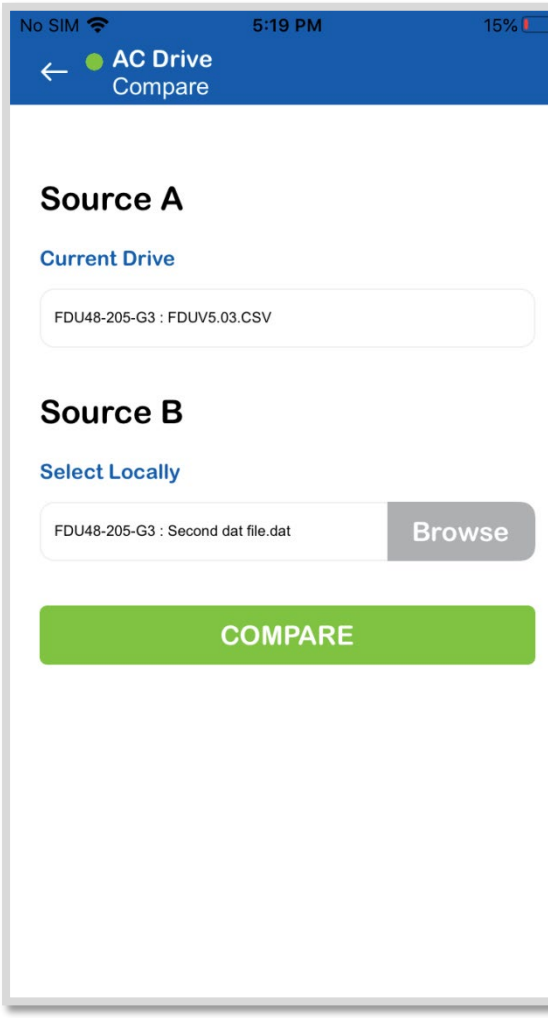

Figure 15: Dat file compare window.

7.6. Save to Drive

On clicking the "Save to drive" button; the APP shall save all the parameter into the drive.

On clicking the save to drive button, a progress bar prompt shall appear with "Cancel" button. On clicking the "Cancel" button, the saving process shall be terminated.

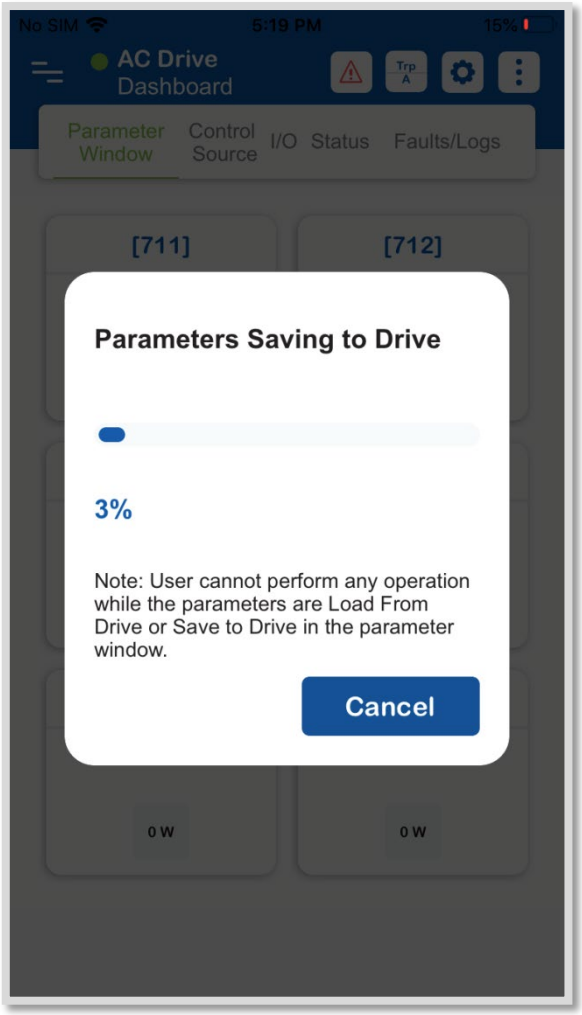

Figure 16: Parameter saving into drive.

7.7. Load from Drive

On clicking the “Load from drive” button, all the parameter of drive APP shall be loaded into the APP.

On clicking the load from drive button, a progress bar prompt shall be appeared with “Cancel” button. On clicking the “Cancel” button, the saving process shall be terminated

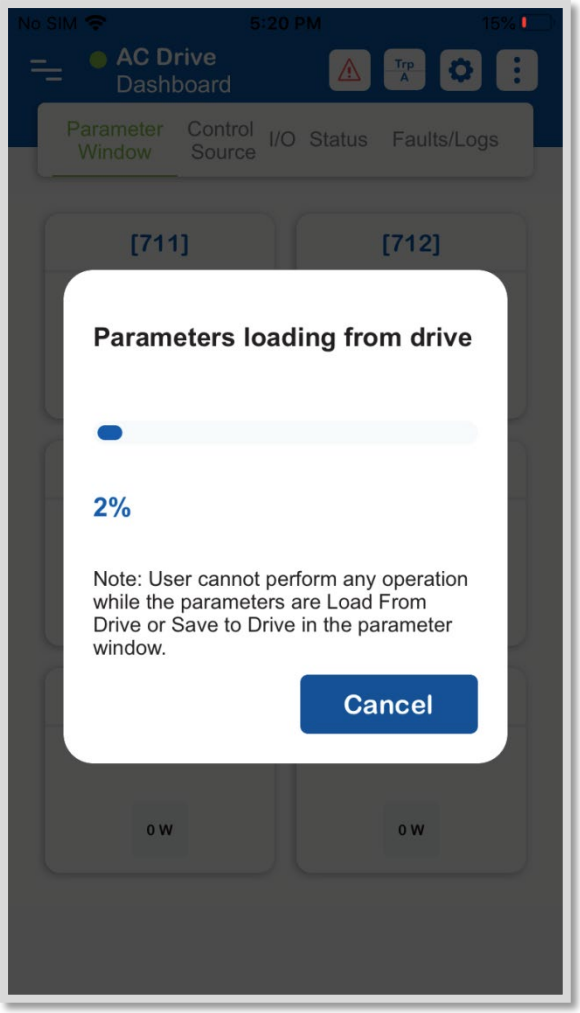

Figure 17: Parameter loading from drive.

7.8. Sync date & time

On clicking the ‘Sync date & time’ button, the drive date time shall update with the mobile date time.

8. Side Menu

The side menu shall be open by pressing the three line button located in top left side. See figure 7, the button marked with 1. The following option shall be displayed after opening side menu.

1. Drive connection status
2. Drive information
3. User login
4. App version
5. Dashboard
6. Drive parameters
7. Oscilloscope
8. Logs & Events
9. Drive information
10. Documents/Manuals
11. Service report
12. Settings & Preferences
13. About EmoDrive
14. Exit

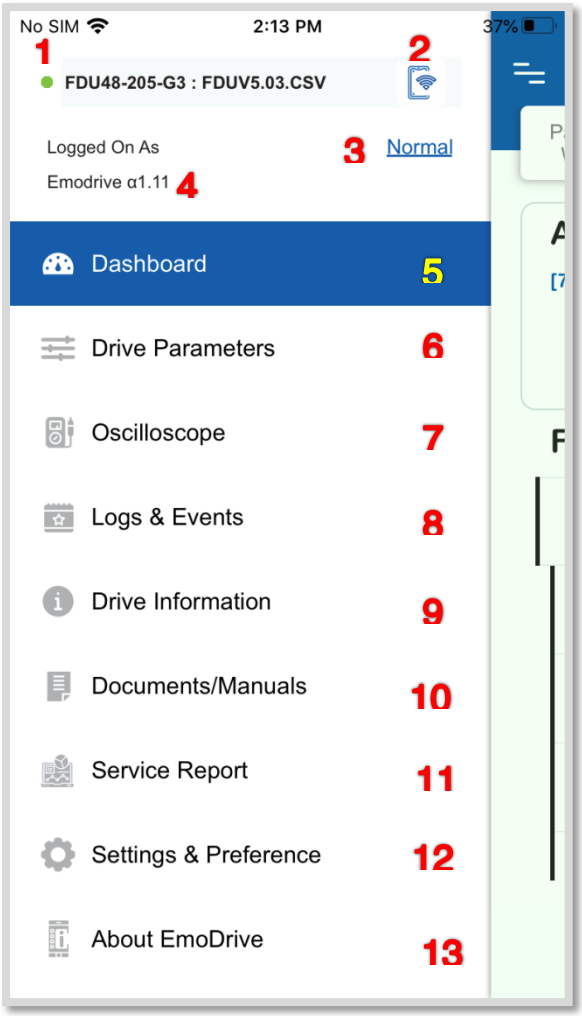

Figure 18: Side menu window.

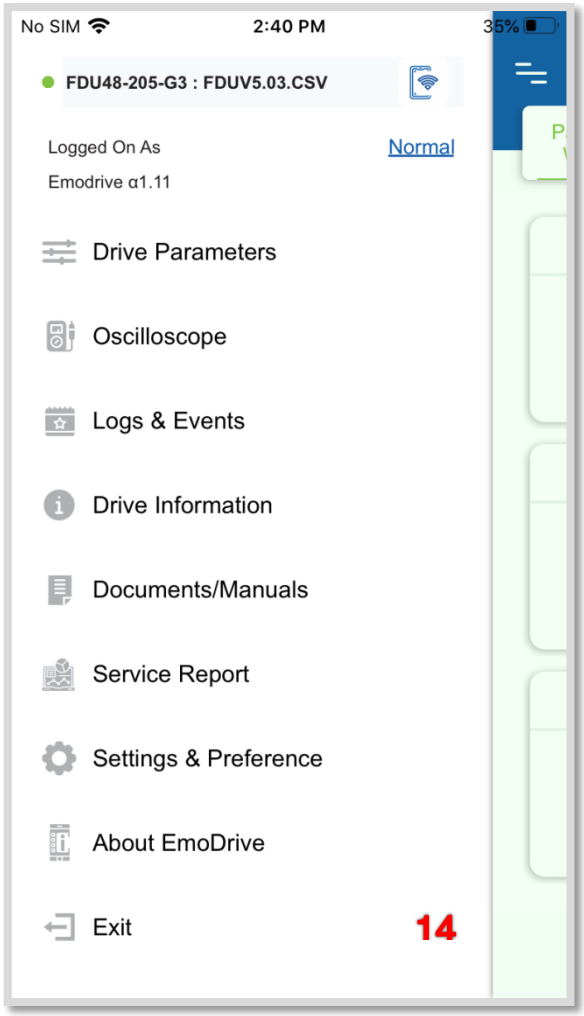

Figure 19: Side menu window.

Scroll down for Exit button.

8.1. Drive Information

Clicking on “Drive Information” from navigation shall redirect user to screen where user can perform the following action:–

- User can edit drive name which is connected and selected.
- User can remove online connected drive by clicking on “Disconnect” button.
- User can remove selected online/offline drive by clicking on “Remove” button.

The drive information screen shall display the following information -

- Drive Size – this shall display connected drive type and size.
- Software Version – this shall display drive software version.
- CSV Version – this shall display CSV version of connected file.
- Build info – this shall display build info of the drive.
- Build ID- this shall display build ID of the drive.

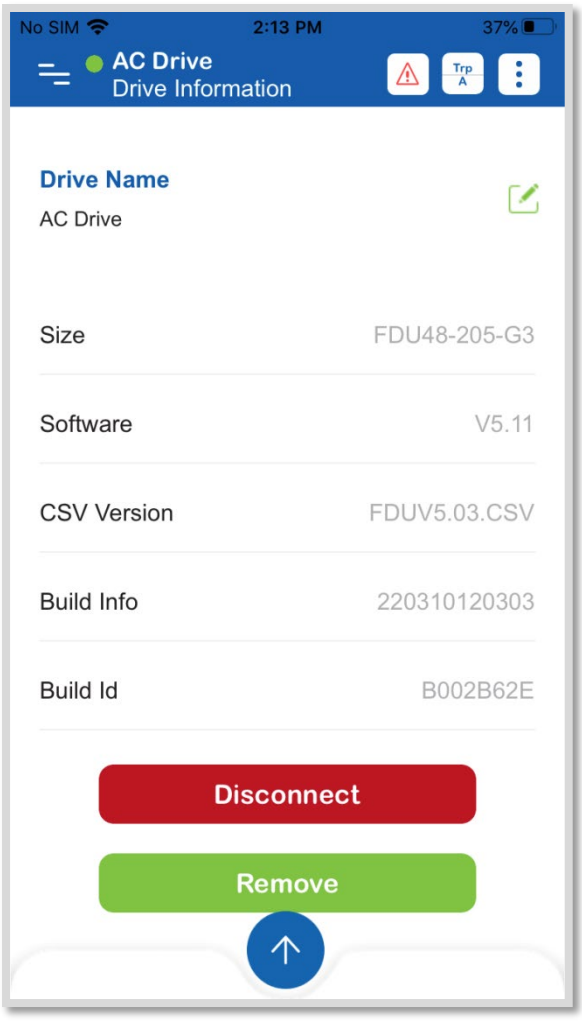

Figure 20: Drive information window.

8.2. User login

The user login shows the current login category in the APP. The user can change the login category by touching it. The APP shall be asked for confirmation to change user role. User need to press OK to proceed further.

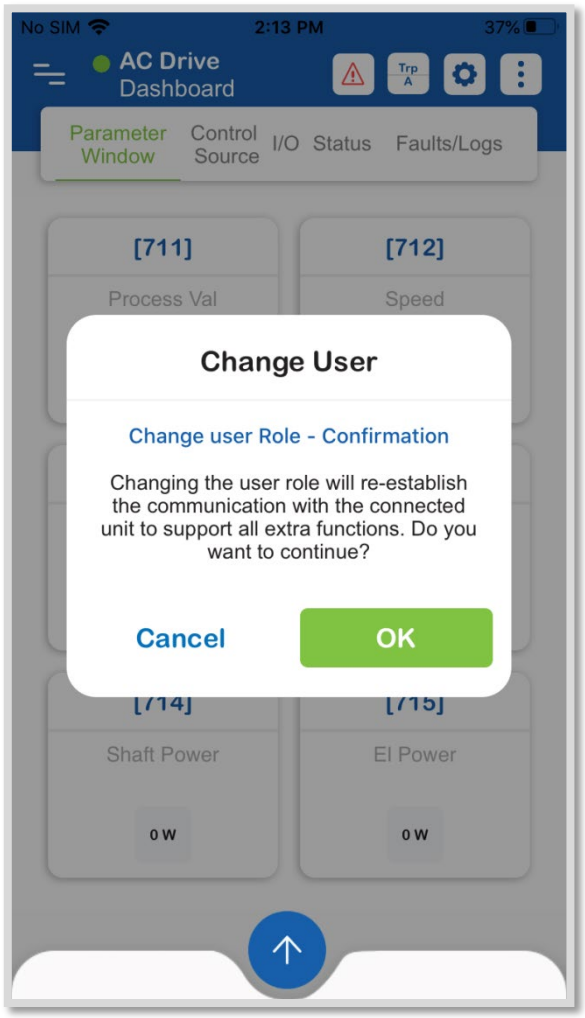

Figure 21: User login window.

- User can select the user role type by drop down in either Normal or Service.
- If user has selected “Service” type in user role, then user needs to provide password to login.
- By clicking login user can enter the user role which is selected.

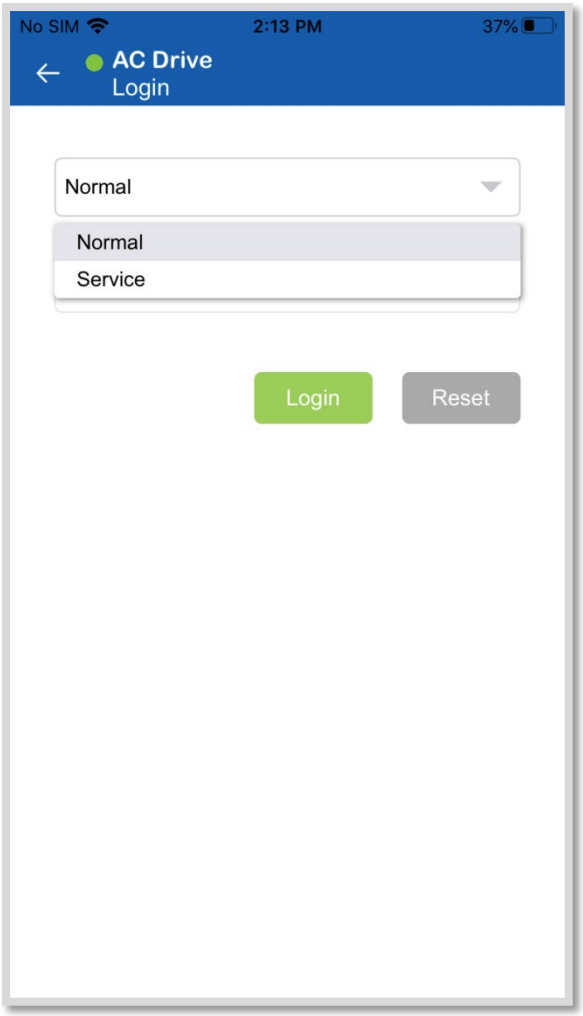

Figure 22: User login window.

Note: Service login is only possible when user has had service training at one of the CG/Emotron training centres.

8.3. Drive Parameters

All parameter screens show all the parameters in connected file with respect to user role. The users can view/edit/change the parameter values where applicable. User can see sub-values of any parameter by expand the tree structure.

Color convention for parameter values:

- **Green**: It represents the parameter value that has been successfully written into the drive.
- **Red**: It represents the parameter value that has been failed to written in the drive.
- **Yellow:** It represents the parameter that has been changed in the application but not loaded into the drive.
- **Red with Underline**: It represents, the application is not sure about the parameter write status, the parameter has been written successfully or not.
- **BOLD**: Parameter value which differs from default value, shall be displayed in bold.

On clicking the filter button (see figure 24, marked with circle), the filter option shall be opened. Filters section helps users to customize parameter view. This feature helps in choosing the parameter which is needed and user can select form a smaller group of parameters with the help of filter options.

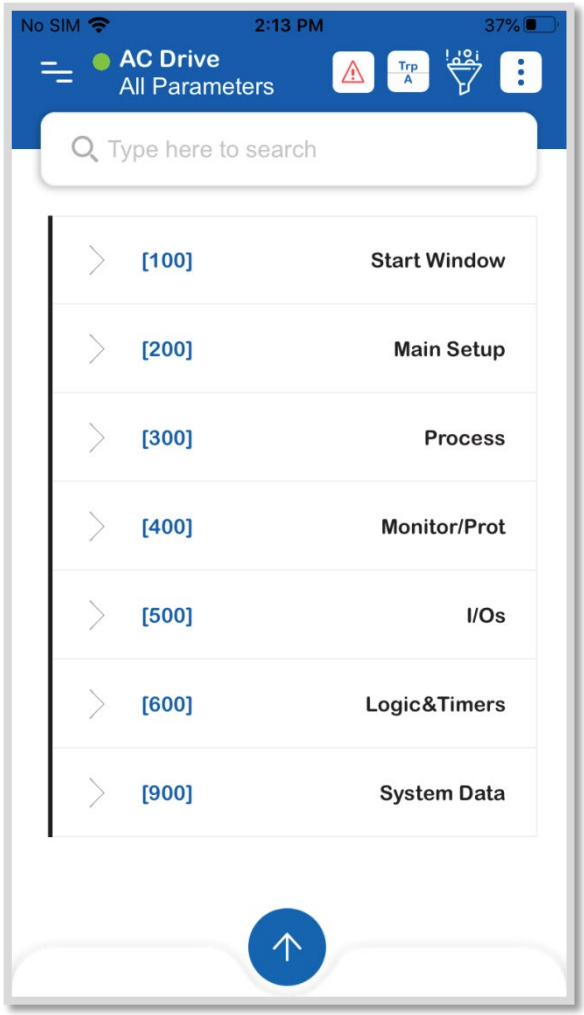

Figure 23: Drive parameter window.

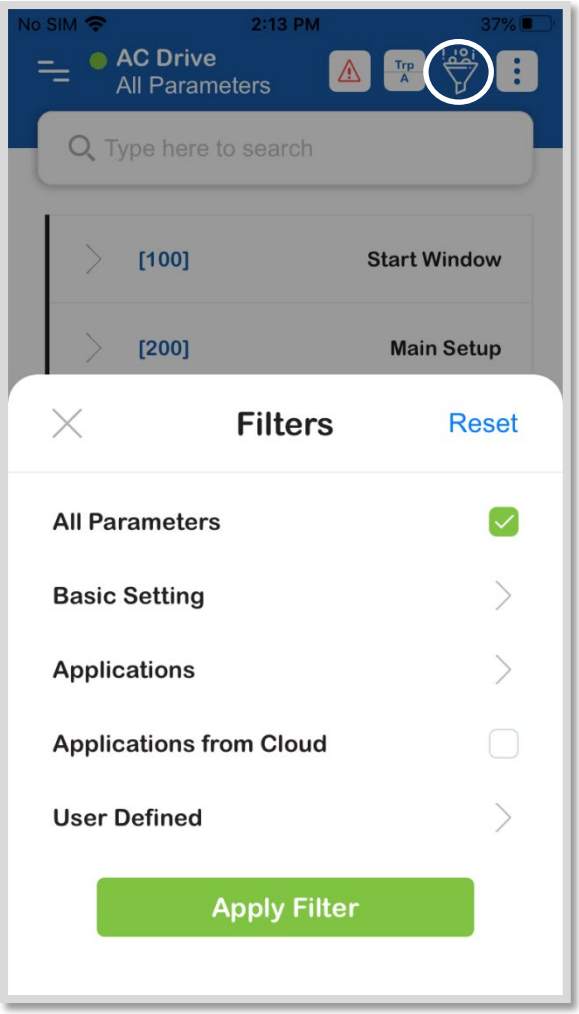

Figure 24: Drive parameter filter option.

- "All parameter" filter show all the available parameters of the selected file
- "Basic settings" have 2 wire, 3 wire, Motor potentiometer, ID control, Preset Speeds, Load Monitor setup groups. Users can select any one of them.
- "Applications" have Flow drive- standalone, Flow drive-Master Follower, Standard fan pump & Crane brake control groups.
- "Application on cloud" feature can helps user to download ".dat" file with pre-configured parameters for various application. The database of cloud application is updated from time to time.
- "User defined" group gives ability of customized group creation. User can create custom groups with their choice of parameters & groups name.
- User can submit selected group of parameter by clicking on apply button.
- Reset button provides the functionality to reset the filter setting changes to factory default.

8.4. Oscilloscope

Oscilloscope is the signal monitoring tool. It works as an on-line as well as off-line analysis tool. It is divided into three parts: Analogue graph, Digital graph, and Legend view. Refer to the below section for details.

On the opening of oscilloscope, the following menu/options shall be available for the user:–

1. Start recording button
2. Run/pause button
3. Oscilloscope parameter menu button
4. Oscilloscope option menu button
5. Free parameter menu button
6. Favourites menu button
7. Oscilloscope setting button
8. Y – axis parameter drop down list
9. Analog parameters graph
10. Digital parameters graph
11. Legend graph

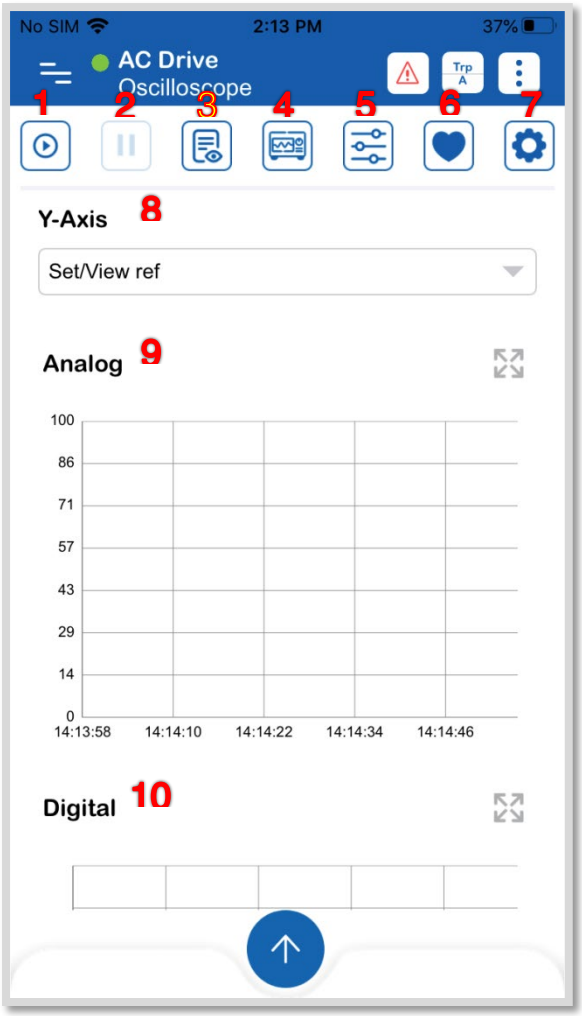

Figure 25: Oscilloscope window.

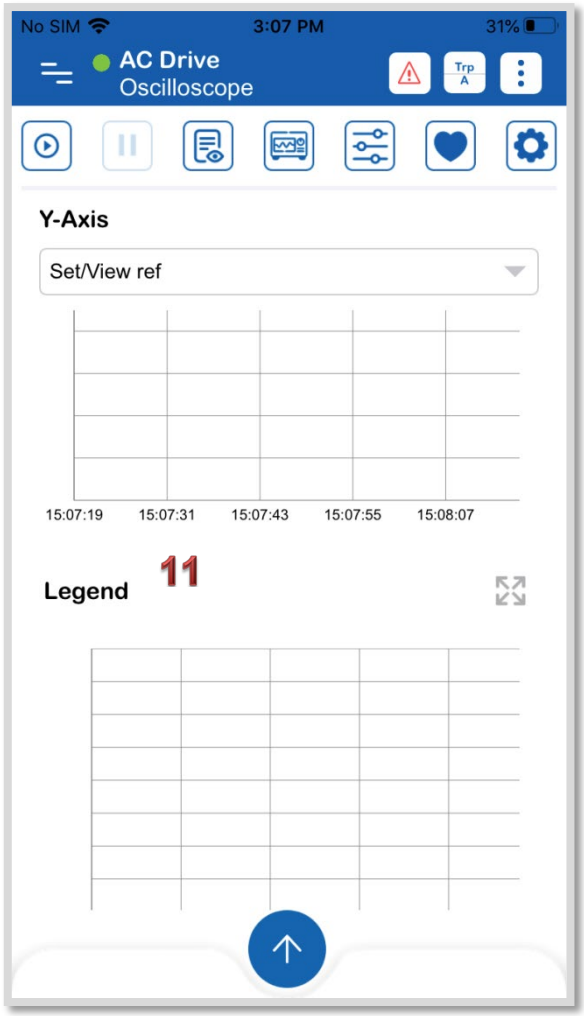

Figure 26: Oscilloscope window.

Scroll down for legend graph.

8.4.1.Oscilloscope graph

- Analog view: Analog signal shall be plotted in this graph area.
- Digital View: Digital signal shall be plotted in this graph area.
- Legend view: summary of analog signal from starting the oscilloscope recording till stopping the oscilloscope recording.
- Y-axis - The Y-axis selection feature provides the flexibility for the user to view the analog graph from a specific drive parameter perspective. To experience the feature, select the Y-axis parameter from the drop-down list and enable auto scaling of the selected parameter from the oscilloscope parameter list.

The analog graph Y-axis scaling will change according to the level of the Y-axis parameter.

Note: Y-axis is displayed only for one signal at a time. There is no relation of selected y-axis scale with other signal. Every signal has its individual Y scale. It's just a label of signal. Actual Minimum and maximum of each signal shall be considered from Min and max value from Parameter view of oscilloscope.

Note: iOS and Android have some difference in oscilloscope functionality. The iOS have following limitations:

- Updating graph in the fixed seconds. (WiFi = 3 seconds, BLE = 1.5 seconds).
- Graph will reset in every 4 min (approx.).
- User can only select 2 digital signals, before start of oscilloscope recording.

Note: The android does not have these limitations.

8.4.2.Oscilloscope Menu

8.4.2.1 Oscilloscope recording

- Start/Stop Button - On click of this button, oscilloscope recording shall be started or stopped.
- Start/stop button shall be disabled, if no device is connected.
- On click of start button, it changed to red color stop button.
- On click of stop button it changed to green color start button.
- On click of stop button, pop-up windows shall be opened to save the recorded file. The recorded file can be found in the phone internal memory under the folder EmoDrive/rec/<filename>.rec.
- User can't zoom in and out the graph, when oscilloscope is recording.

8.4.2.2 Pause/Resume:

- On click of this button, oscilloscope recording shall be paused and resumed.
- Pause/Resume button shall be disabled if the oscilloscope does not start the recording.
- Pause /Resume button shall be active if a minimum of one device is connected.
- At the start of oscilloscope recording, pause /resume shall be enabled
- On the Clicking of the pause button, graph display updating shall be stopped, but recording shall continue in the background. User can click on the graph when pausing so that they may see the current value of the respective time.
- On the Click of the resume button, the recording and graph updating will start.

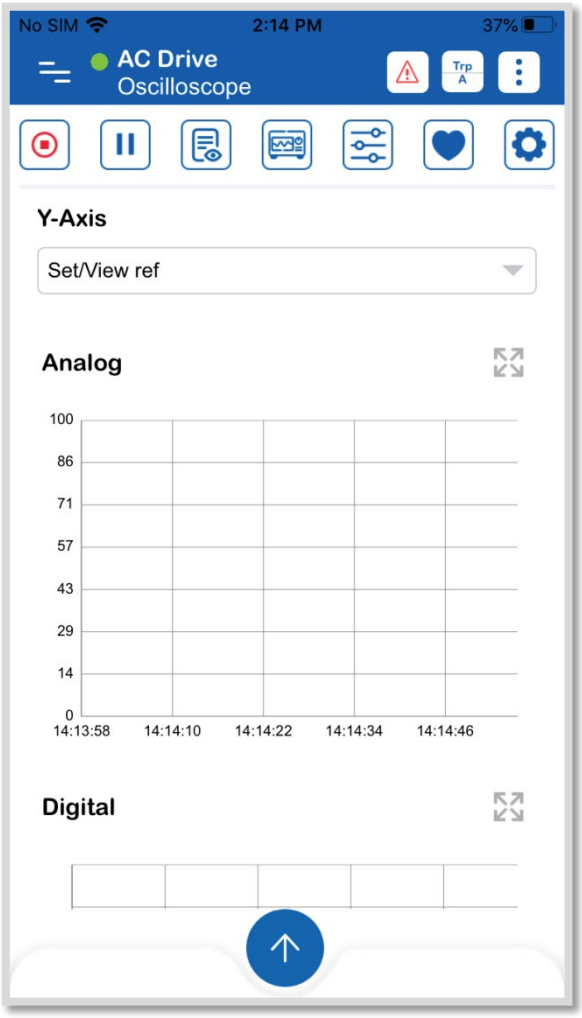

Figure 27: Oscilloscope run and pause button change.

8.4.2.3 Oscilloscope Parameter

Auto Scale: It is a feature for automatically scaling the graph window according to the parameter value. To activate the auto-scaling of oscilloscope parameters, the user needs to long-press (more than 3 second) the parameter text; a prompt alert will come with the message “Do you want to add this parameter to auto-scale” and having a 'yes' and 'no' buttons. Press yes to enable the auto scale. The text appearance of the parameter will change into bold from normal. By repeating the above step on the auto-scaled parameter, the auto-scaling shall be disabled.

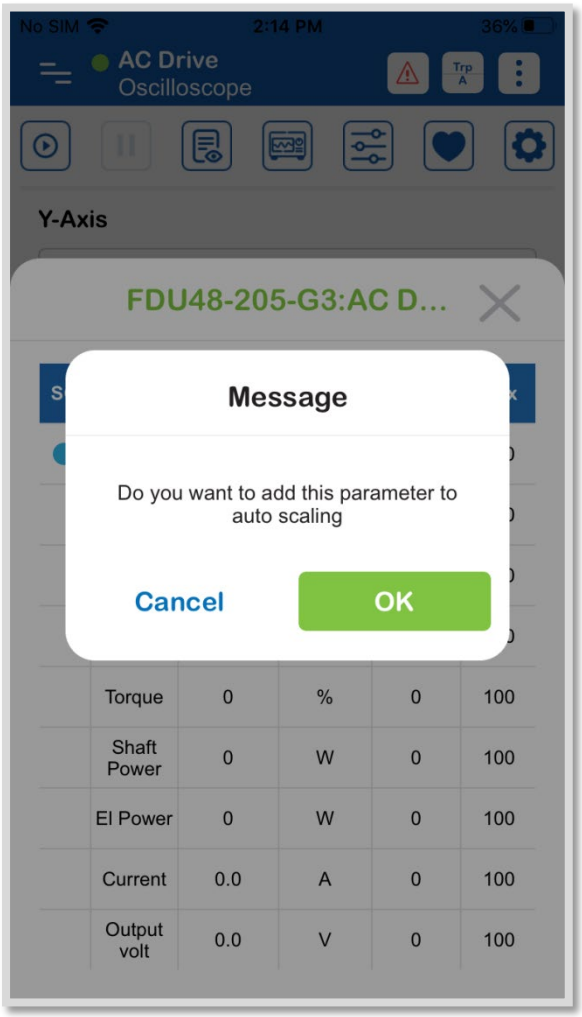

Figure 28: Oscilloscope parameter auto scaling

Signal Color: For the selected parameter a signal color dot is displayed on the left side of the table. The user can change signal color, with a click on the color dot.

The color selection dialogue box shall be opened and the user can select the desired color for the signal graph.

Parameter Name: Signal name shall be displayed in this column.

Current Value: On start of the oscilloscope, current value of parameter shall be updated.

Unit: This field in not editable. It shows the display unit such as Nm, rpm etc.

Min: It is the minimum value of the parameter. It uses to scale the Y-axis of the graph when auto-scaling is not activated and the parameter has been selected on Y-axis drop-down list.

Max: It is the maximum value of the parameter. It uses to scale the Y-axis of the graph when auto-scaling is not activated and the parameter has been selected on Y-axis drop-down list.

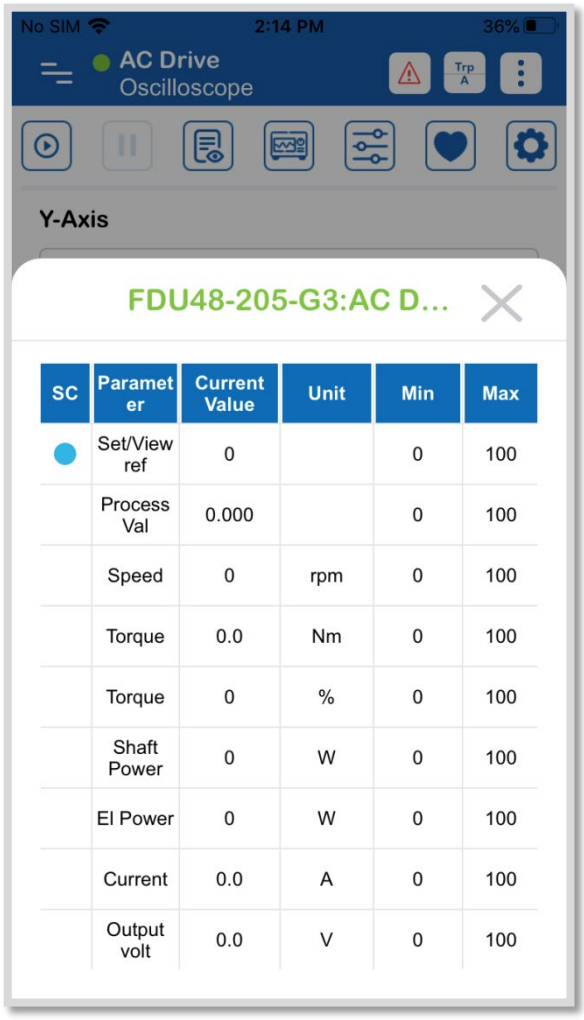

Figure 29: Oscilloscope signal colour selection.

8.4.2.4 Oscilloscope Options

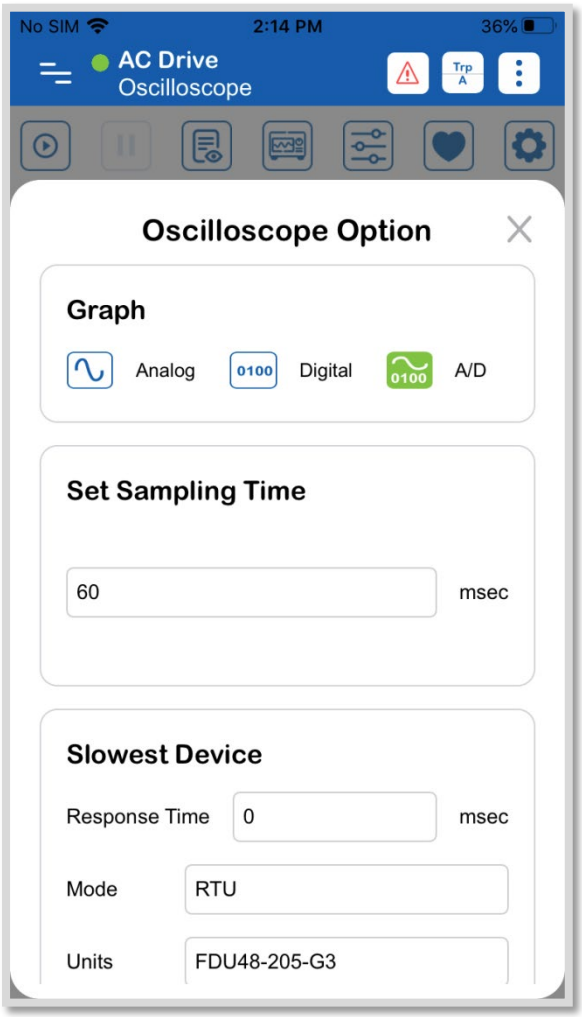

Figure 30: Oscilloscope option settings.

- **Analog**: On clicking the analog button, the oscilloscope graph window shall display only the analog graph and legend graph.
- **Digital**: On clicking the digital button, the oscilloscope graph window shall display only the digital graph and legend graph.
- **A/D:** On Clicking the A/D (analog/digital) button, the oscilloscope graph window shall display the analog, digital, and legend graph.
- **Set Sampling Time:** The user shall enter the sampling time of the oscilloscope. The default sampling time is 60msec.
  Note: - The actual sampling time may vary due to slow communication.
- **Slowest Device:** It shows the slowest device information and response time of the sampling from the drive. Currently, the APP only supports a single online drive, so this data belongs to that drive.
  - **Response time:** Response time of the slowest device.
  - **Mode:** Slowest device connection mode (RTU (Bluetooth), TCP/IP (WiFi)).
  - **Unit:** Slowest device size and name.
- **File:** This control shall perform the Load, Save, Export functionality of the oscilloscope. If App is connected with the drive, then the load option is disabled.
- **Load:** On clicking the load button, the user can load the record file (".rec" or ".pebb") of the oscilloscope from the internal storage of the mobile. This feature only works with "Work Offline" mode.
  If the file format is not correct, the APP will prompt the message "Please select the ".rec"/".pebb" file format" on top of the APP.
  If the file format is correct and the APP will prompt the message "REC file read successfully".
- **Save:** On clicking the save button, the user can save the record file of the oscilloscope when the oscilloscope is recording.

When the user stops the recording, the APP asks to save the record file, if the user press yes, then the APP is directed to the oscilloscope save data screen. The user needs to set the file name in the file name text box and press the OK button to save the file. The user can also add some comments about the record file for future reference.

The file shall be saved in the application ".rec" folder in the internal memory of the mobile phone.

Export button helps in exporting the file in pdf format either graph or operational data.

- **PEBB:** PEBB button is enabled, if PEBB view check box is tick (checked). On click on PEBB button Pop-up window shall open. This Pop-up window has all the information of available PEBB in connected drive. This page shows the PEBB information like Mode, Unit, No. of PEBB etc. Now each PEBB block contains its own set of parameters. Like Oscilloscope parameters it has all the functionalities like update min and max, auto scan, unit, color change etc.

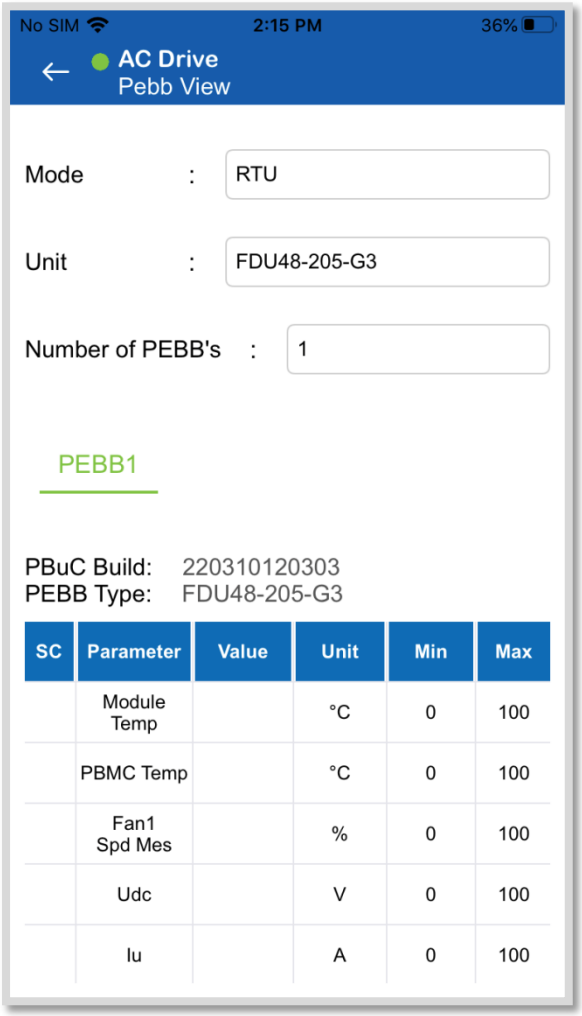

Figure 31: Oscilloscope PEBB view.

8.4.2.5 Free Parameter

Free parameter provides the flexibility to the user for adding user-defined parameters in the oscilloscope graph. The user can set up to 5 free parameters. To add the user-defined parameter, the user needs to write the Modbus address of a particular parameter in the Modbus address text box and needs to select the analog or digital property of the parameter, according to the selected property the parameter shall be displayed in the corresponding oscilloscope graph.

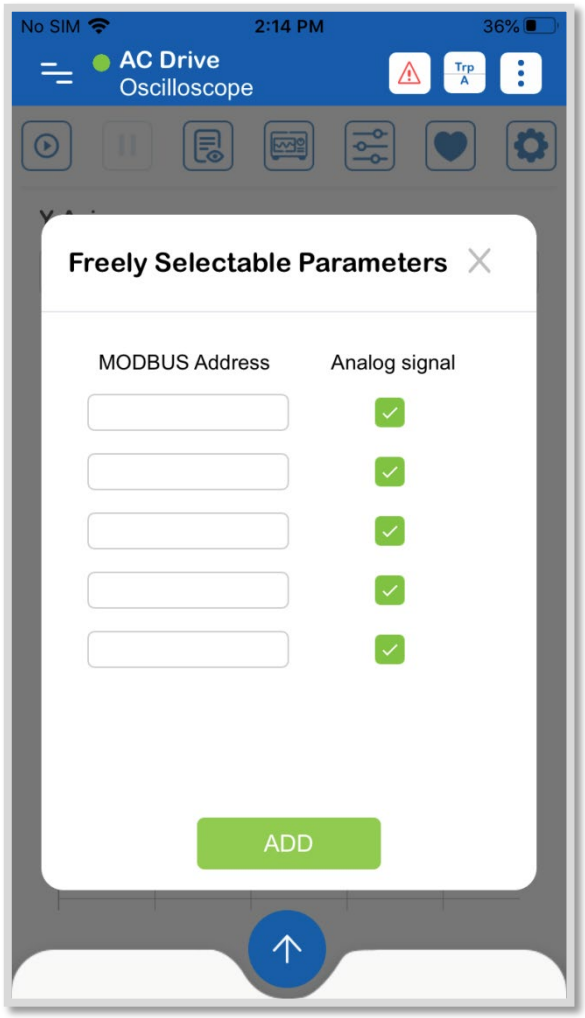

Figure 32: Oscilloscope freely selectable parameter window.

8.4.2.6 Favourites

- **Select Set:** The user can select the drive parameter set i.e. A, B, C, or D to create the favourite parameter group.
- **Set Name:** The user can also set the name of selected set which gives the more relevance the selected set.
- **Unit:** Size of connected drive.
- **Add:** On clicking the Add button (see figure 33), the user can add the parameters in favourite list. After clicking on add button, the APP prompt the drop down list of parameter

with 'cancel' and 'OK' button. the user needs to select the parameter from drop down list and press OK to add the parameter in list. To abort the adding process, the user can press Cancel button.

- **Remove:** On clicking the remove button(see figure 33), the user can remove the favourite list parameters. To remove the parameter form list, the user needs to select the parameter from list by touch on parameter name. After touch the parameter will select and highlight on blue color. Now, user needs to press the Remove button, a prompt message appear to confirm the action. The user needs to press the yes button to remove the parameter or press the cancel button to retain the parameter.
- **Save:** On clicking the save button (see figure 34), the selected parameter will be saved in list. To abort the save process, user needs to press the cross button located in top right corner.
- **Apply:** On clicking the apply button (see figure 34), the favourite list parameters shall be selected to display in the oscilloscope graph.
- On clicking the cross button user can exit from the screen and changes shall be discarded if not saved or applied.

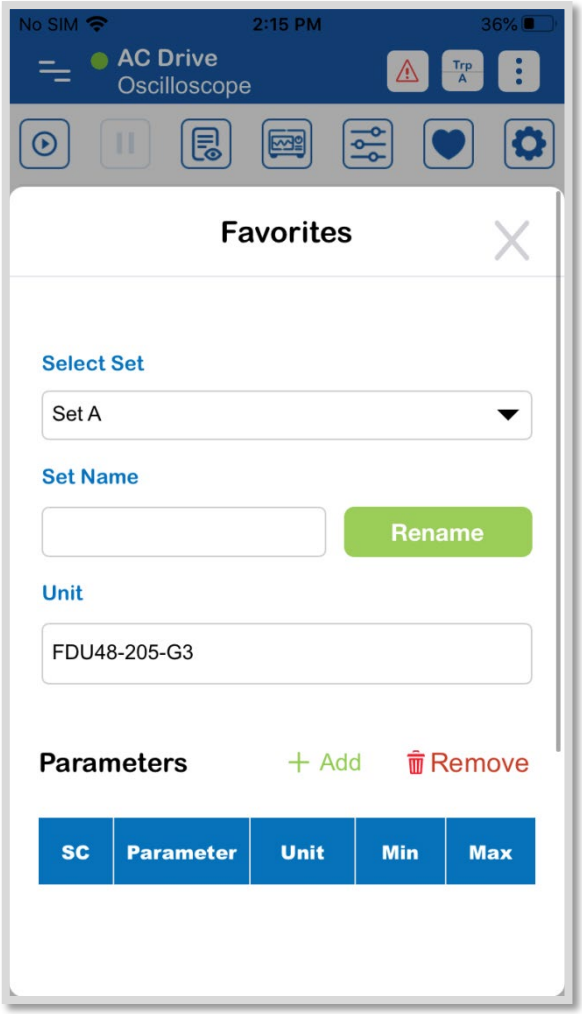

Figure 33: Oscilloscope favourite parameter list.

Scroll down to see save and apply button.

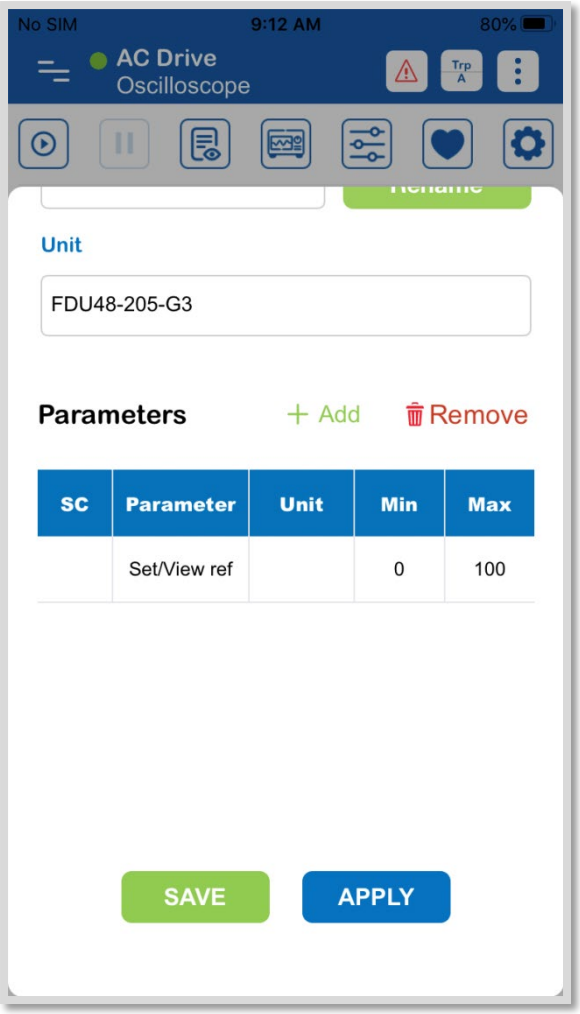

Figure 34: Oscilloscope favourite parameter list.

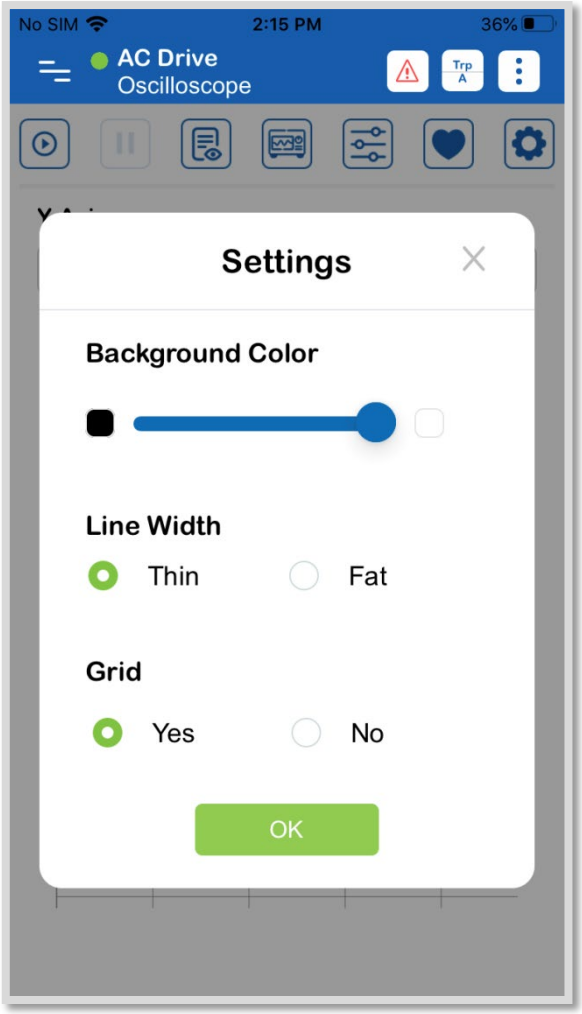

Figure 35: Oscilloscope setting.

8.4.2.7 Oscilloscope Settings

- **Background Color:** User can select the background color of oscilloscope graph either clicking on black button or white button, the graph color shall be set black or white. To set the intermediate colors of black and white, the user can user the slide bar.
- **Line Width:** On clicking the radio buttons, the user can change the graph signal line width.
- **Grid:** On clicking the radio buttons, the user can enable/disable the grid of graph. Select 'yes' for enable the grid and select 'no' for disable the grid.

8.5. Logs & Events

The application and drive logs and event shall be displayed in log & event section. The user shall be able to view the drive fault logs, Modbus communication logs and transactional logs between EmoDrive APP and drive. Following section comes under the log & event section –

- Faults logs
- Event logs
- Transaction logs

8.5.1.Faults logs

This section shall display logs related to faults recorded by drive.

- The fault comes under the 800 parameters, similar to Emotron FDU/VFX drive PPU menu system.
- This section shall be displayed the active warning and latest 10 fault logs.
- The user can expand each log to see the logged parameter value for diagnostic.
- The user shall be able to reset the fault if reset control is enabled. To enable the reset fault button, user need to set the reset control "COM" in [216] parameter.

8.5.2.Events logs

This section shall display the Modbus communication events and logs between drive and application for diagnostic purpose. This information shall be used to diagnose communication problem between drive and application.

User shall be able to view following details of event logs -

- Date & time
- Unit Id
- Unit Name
- Success and failure

Event logs are updated continuously every 3s and this data list is sorted according to time.

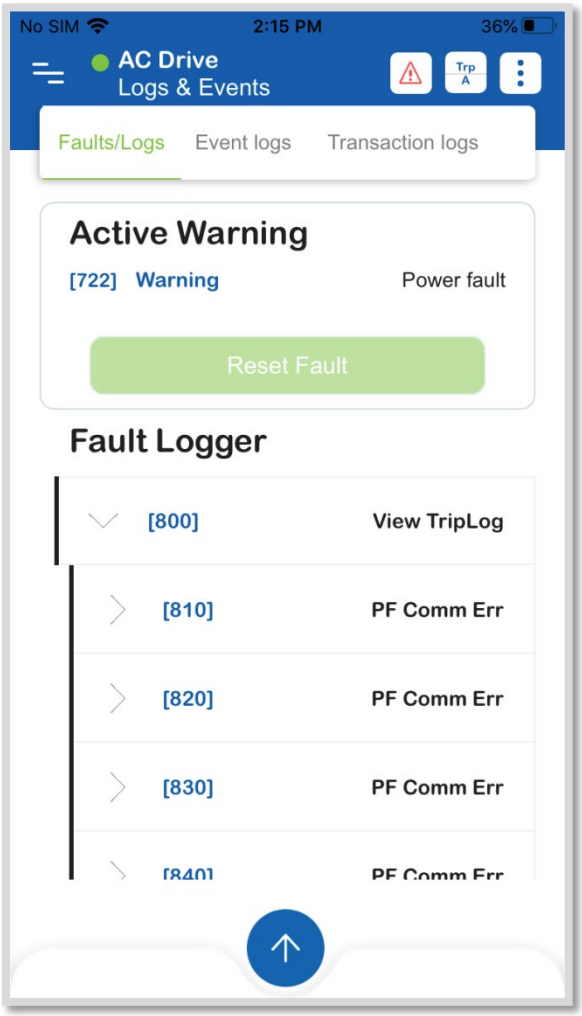

Figure 36: Log & Event window.

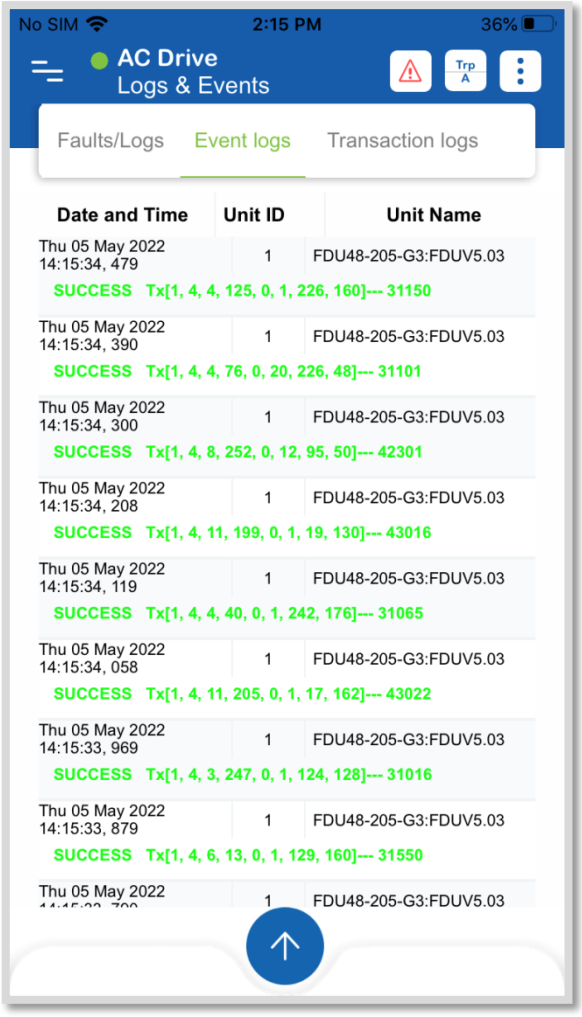

Figure 37: Event logs.

8.5.3.Transaction logs

The transaction logs shall display the motor run and stop command logs given by APP with date and time information.

8.6. Documents/Manuals

User can download instruction manual from this option.

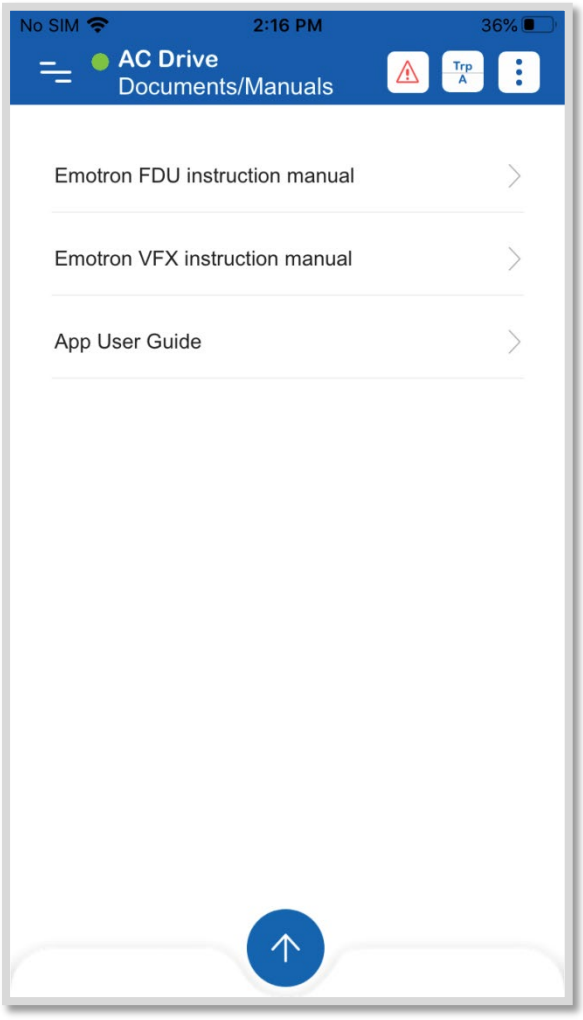

Figure 38: Document and manual window.

8.7. Service Report

This section shall be used by the service engineer to generate the service report.

This section has the following options –

- **Warranty** – Warranty status of drive. Service engineer can select the status using check box.
- **Fault description** – Fault description or cause of service.
- **Replacements** – Parts needed for replacement.
- **Motor details** – Details of motor which is connected with drive.
- **Application details** – Application details, where this drive is being used.
- **Environmental condition** – Environmental conditions, where drive is installed.
- **Status –** Status of service. Service engineer can select the status of service visit.
- **Other remark** – Option to provide the additional feedback.
- **CSV file selected** – Read on field, information of used CSV file.
- **Capture Image –** Option to capture the image of site. There are the options to select the images from mobile device's internal storage or capture the images directly by using the mobile device's camera.
- **Scan code** – Option to scan the drive serial number directly from drive bar code or service engineer can also enter it the manually.
- **Add signature** – Option to add the signature of service engineer. On clicking this option, a signature pad will open; where service engineer can add the signature.
- **Generate Report** – On clicking to button, (if drive parameter was not loaded already, the APP first download all the actual parameter settings from the drive) a prompt will appear to select the parameter to print in service report. The prompt have two options All and Changed Values. By selecting the changed only, the parameter will print in service report which is changed from default values. By selecting the All option, all parameter will print in service report.

Then, another prompt will appear to set the file name and it also has the option to send the service report directly through email.
After setting the name, service report generation will start and shall be saved into application/pdf folder of the mobile device. If user selected the send email option, after generation of service report email client will automatically open to send the email with attachment of service report.

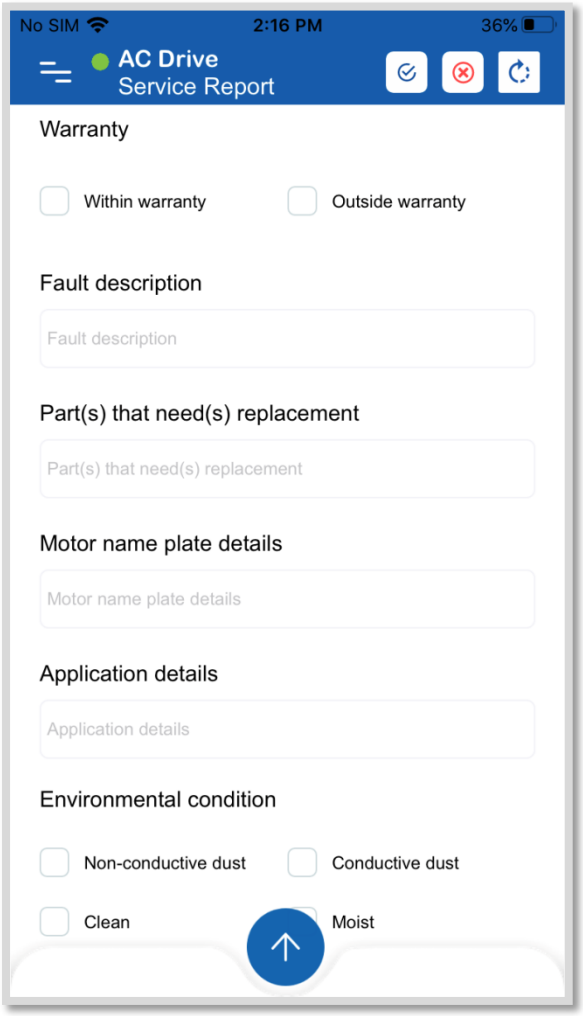

Figure 39: Service report window.

Scroll down for more options.

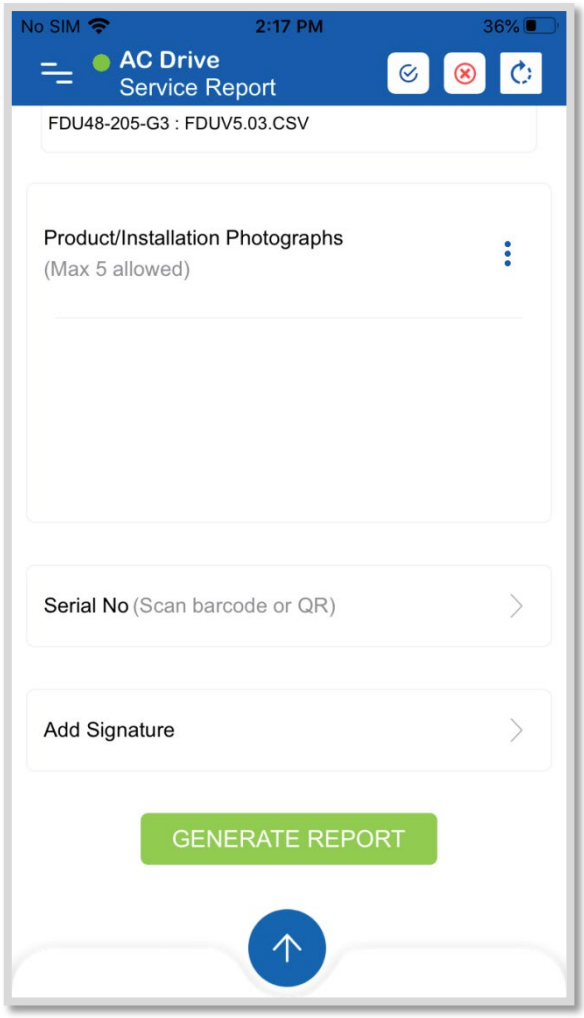

Figure 40: Service report window.

8.8. Settings & Preferences

This option provides the functionality to configure the APP setting and preferences as per the user requirement and ease.

The user has the following options -

- Language
- Preferences
- Communication
- Customer Data

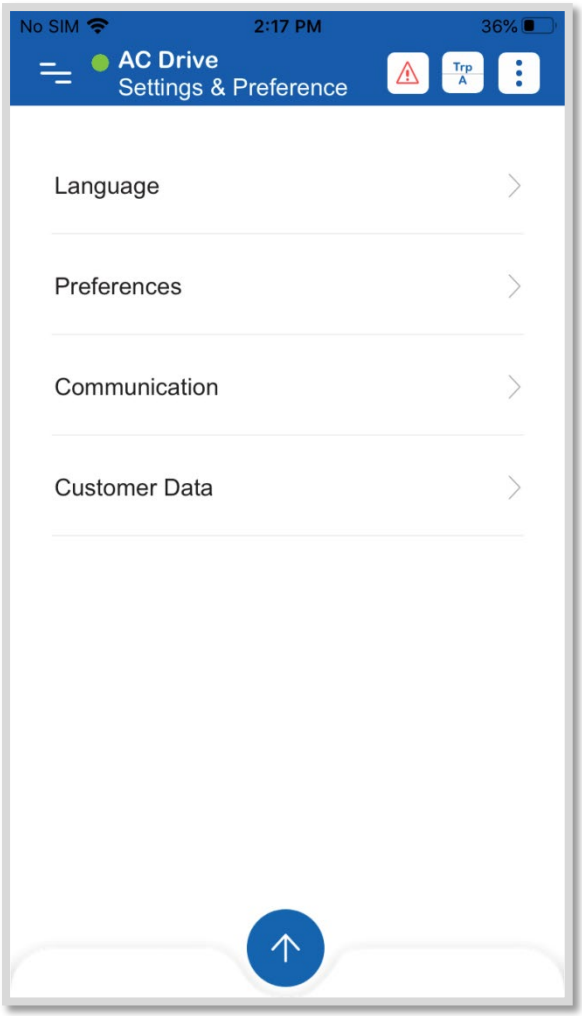

Figure 41: Setting and preferences window.

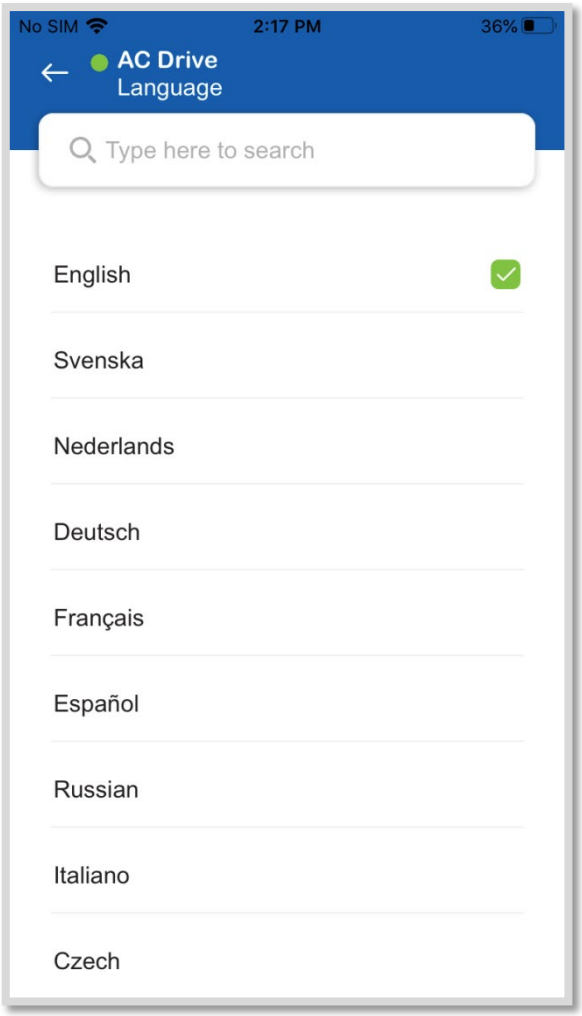

Figure 42: Language selection window.

8.8.1.Language

The APP has the support of multiple languages. The user can select the language from dropdown list.

Supported languages are –

- English
- Swedish (Svenska)
- Dutch (Nederlands)
- German (Deutsch)
- French (Français)
- Spanish (Español)
- Russian (Русск...)
- Italian (Italiano)
- Czech (Cesky)
- Turkish
- Portuguese
- Polish (Polski)
- Chinese

8.8.2.Preference

This section shall provide the option to select the APP behaviours while reading/writing the parameter and displaying the drive parameter set.

The options are –

- Continuous read write operation – On selecting the check box user can control the read write operation –
  - **Checked:** The APP shall be read and write parameter value continuously. If user changes the parameter value, the parameter value is written immediately on drive.

- **Un-Checked:** The continuous read write operation shall be stopped. The user needs to use the "Save to Drive" and "Load from Drive" option in "File" menu to read/write drive parameter.

- Automatically save setting on exit
  - **Checked:** On the closing of the application, store the application configuration setting.
  - **Unchecked:** On the closing of the application, the setting changes will discard.
- Save to Drive – only offline changes parameters:
  - **Checked:** Only offline changed parameter are sent to drive on Click of "Save to Drive" button in parameter view.
  - **Unchecked:** All parameters sets are sent to drive on Click of "Save to Drive" button in parameter view
- Set single parameter set view – Display only single parameter set.

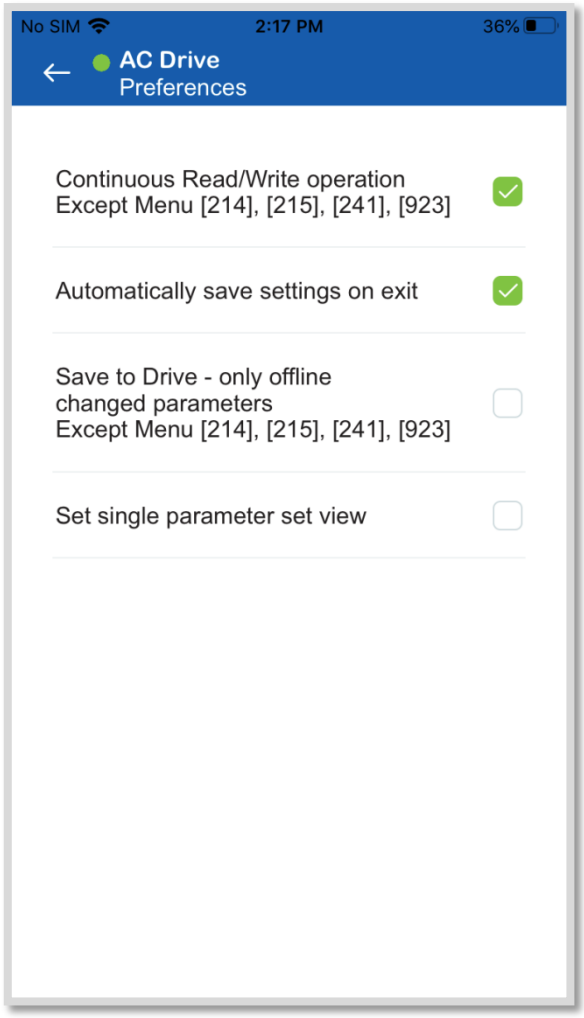

Figure 43: Preferences window.

8.8.3.Communication

The communication setting shall provide the option to control the APP communication behaviour with drive.

- Continue despite communication fault:
  - **Checked:** Ignore all communication faults, operation shall be continued.
  - **Unchecked:** Handle all communication faults.
- Number of retries: User can select the number of retries 2 to 5
- Delay between messages (ms): By default 20 msec.

Figure 44: Communication setting window.

8.8.4.Customer Data

User can feed customer data information that will save in data file of application. This data shall be used to in the service report and other exported pdfs.

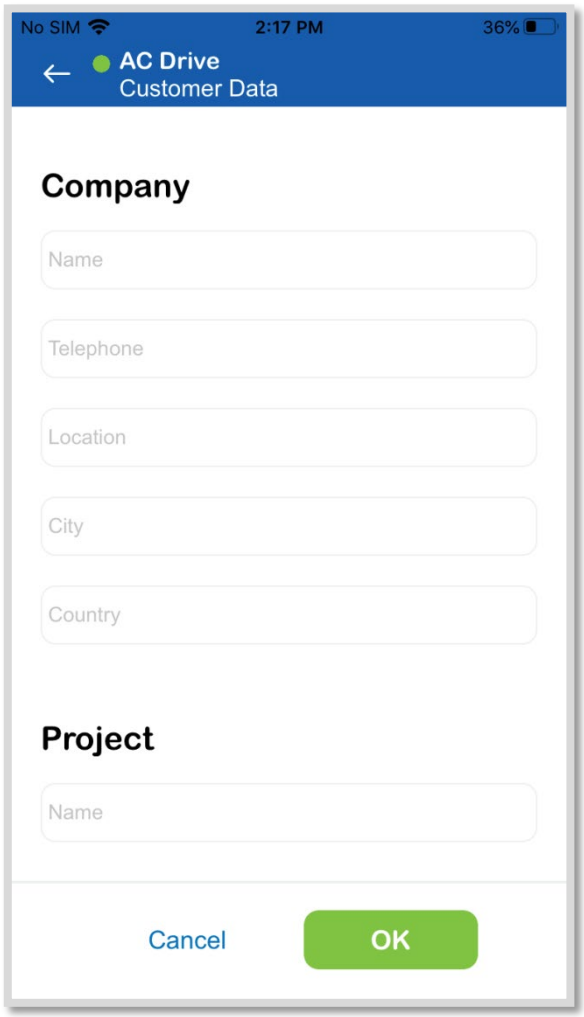

Figure 45: Customer data setting window.

Scroll down for more options.

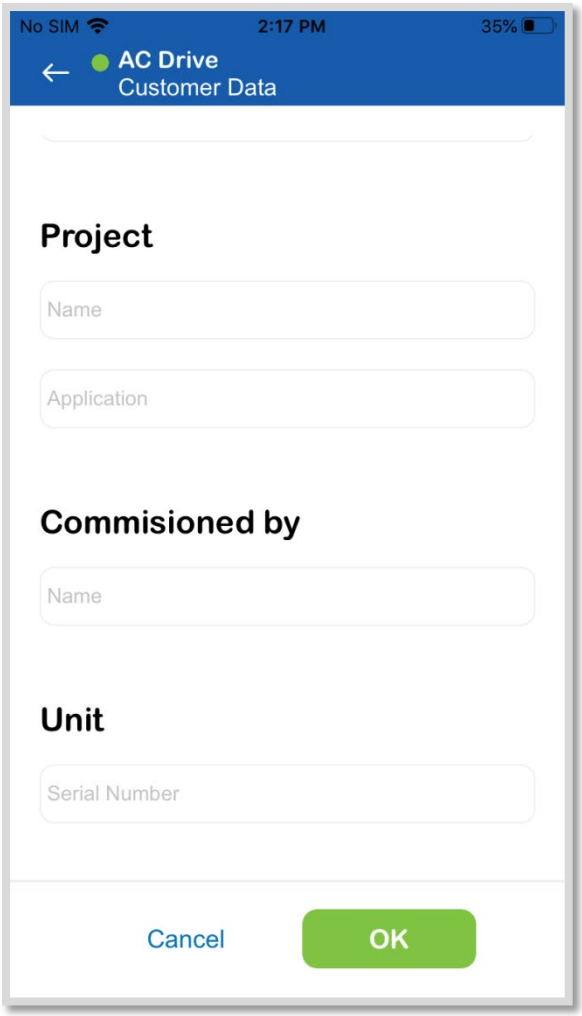

Figure 46: Customer data setting window.

8.9. About EmoDrive

This section shall be provided the following information about the application.

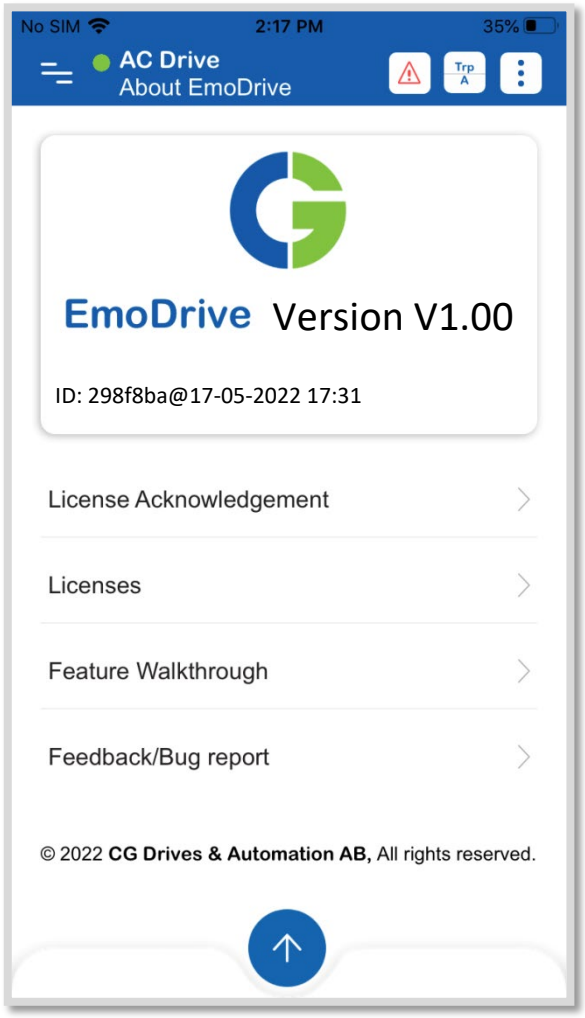

Figure 47: Application about window.

8.9.1.Licenses Acknowledgment

Application's Terms & conditions are stated in this screen.

8.9.2.Licenses

It shows 3rd party license description.

8.9.3.Feature Walkthrough

Feature Walkthrough gives short tour of application.

8.9.4.Feedback/ Bug report

User can submit Feedback/Bug report with use of this feature. User can attach multiple files & can send them via email.

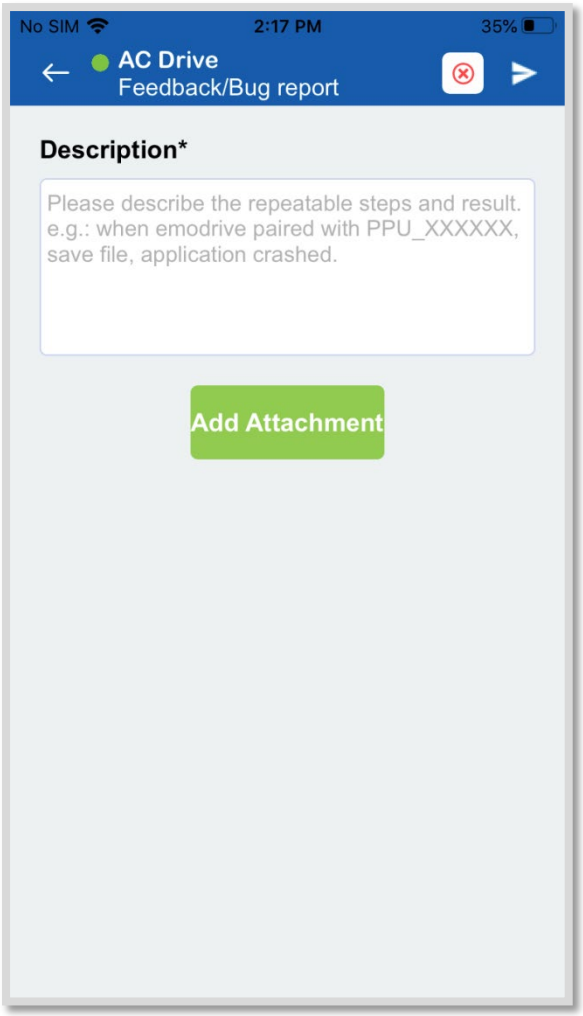

Figure 48: Feedback and bug report window.

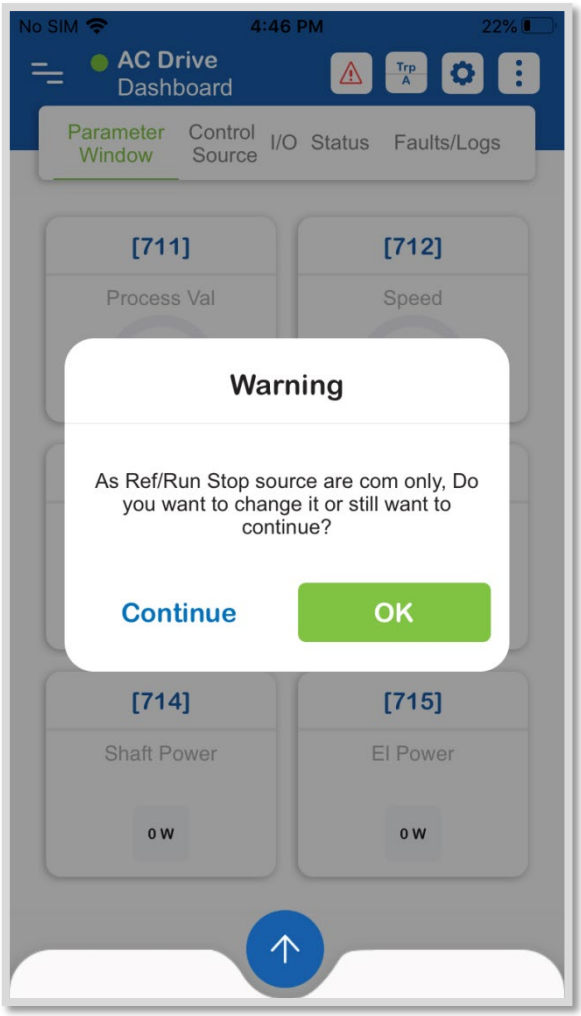

Figure 49: Warning window to change run stop control before exit.

8.10. Exit Application

On Clicking the Exit button, if reference source or run/stop control source configured as Com, a prompt shall be displayed to change the reference source or run/stop control source back to remote or keyboard. The prompt shall have two buttons, Continue and OK.

- On Clicking the Continue button a prompt shall be displayed for confirmation of exit with two button cancel and OK.
    - On clicking the Cancel button, application won't cancel.
    - On clicking of OK button, the user shall be exit from APP and navigate to connectivity screen.
- On clicking the OK button, the user won't exit from APP and control panel shall be open to change the reference source or run/stop source.

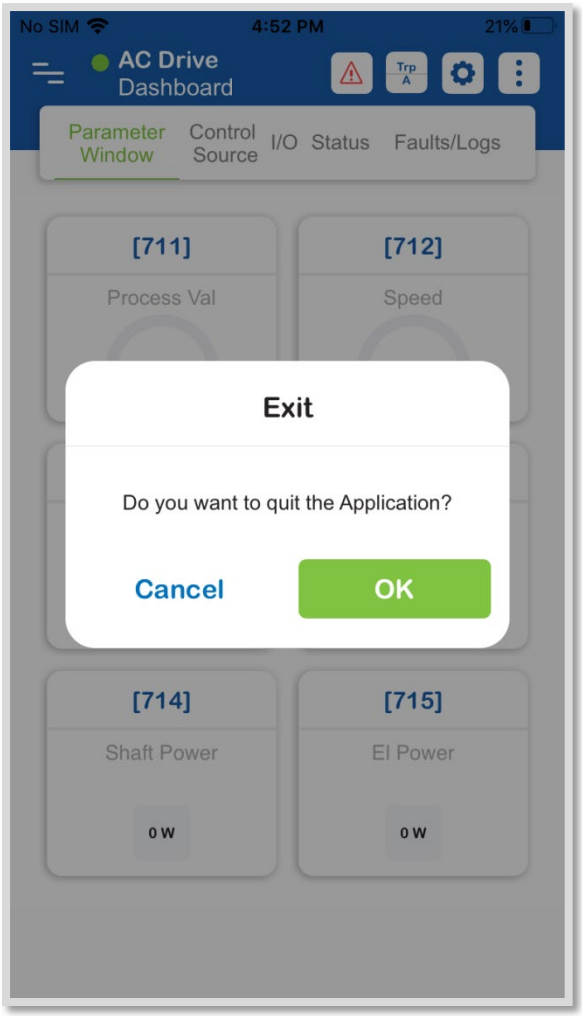

Figure 50: Exit confirmation window.

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