DRC-004G
USER GUIDE

www.vpstart.com

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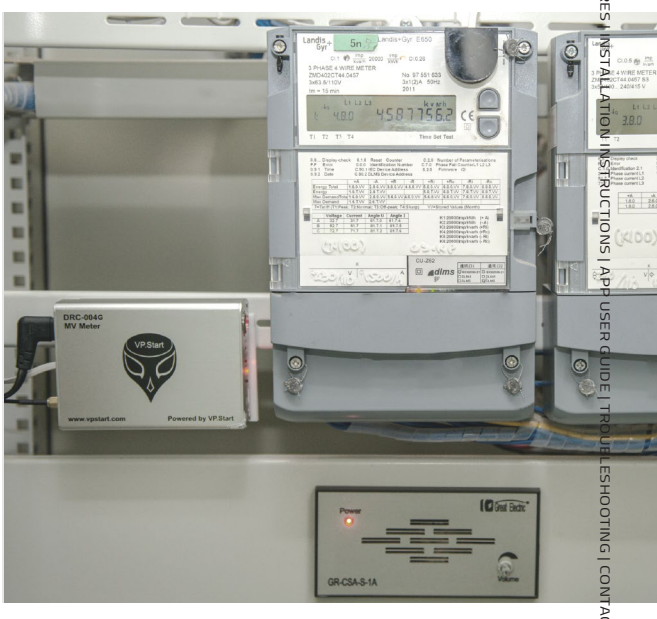
INTRODUCTION

The DRC-004G is a smart controller for Landis +Gyr meters. The DRC-004G controller can be easily integrated with any Landis +Gyr meter to specifically monitor import or export power flows to better meterize downstream consumers. In addition to this, operators can view power quality data, load information as well as better understand trends in power consumption & losses instantly through remote-control operation through the DRC-004G. The additional insights have helped operators reduce their OPEX costs, execute better preventive maintenance & enhance decision making & resource planning for operators managing distributed energy grid assets.

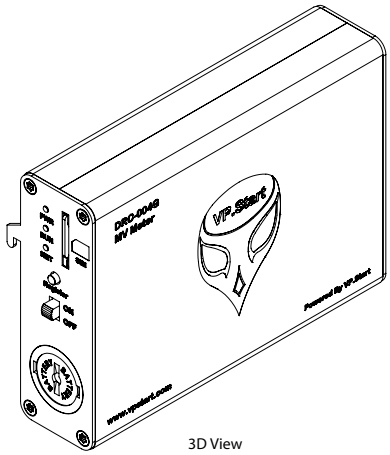


PRODUCT OVERVIEW

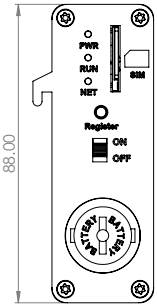
DRC-004G BOX PACKAGING

DRC-004G DEVICE

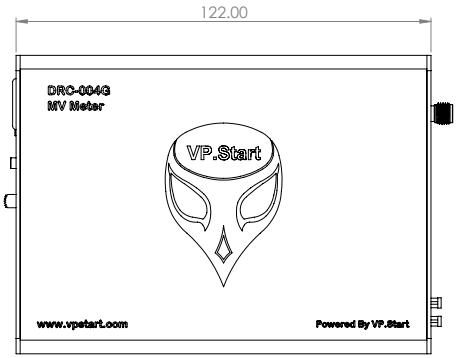
HARDWARE DIMENSIONS



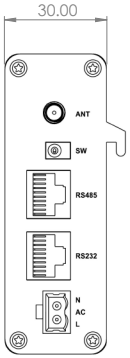
3D View



Side View



Front View



Side View

SPECIFICATIONS & FEATURES

Description	Specifications
Remote Control Unit	
Country of Origin	Cambodia
Manufacturer's Name	VP.Start Technology
Manufacturer's Reference	DRC-004G
Remote Control for Meter (Landis +Gyr)	Remote Controller Via Smartphone or PC for Meter (Landis +Gyr) can be Configured to Distribution Remote Control System.
Voltage Supply Range	50 to 230 Vac
Operating Frequency Bandwidth	0 to 65 °C
Ambient Temperature Range	-10 to +70 °C
Operating Humidity	30 to 95 %
Communication Interface:	
Serial (.c1) RS232	Yes
Optical Len Port	Yes
GSM Communication	Yes
GPRS Communication	Yes

Controller Status Indication Via LEDs:	
System Running	Blinking 1s
System Power	Red LED is ON
System Network	Green LED flashing

App & Software Tools Interface:	
PC Application	Yes
Mobile Application (Android)	Yes

Remote Control Functions & Features

Data Monitoring Features:	
Power	30 to 95 ℃
Current	30 to 95 ℃
Voltage	Yes
Power Factor	Yes
Frequency	Yes
Active Power	Yes
Reactive Power	Yes

SPECIFICATIONS & FEATURES

Energy Monitoring Features:	
Active Energy Import	Yes
Active Energy Export	Yes
Reactive Energy Import	Yes
Reactive Energy Export	Yes
Monitoring Features:	
Data Energy TOU Rating	Optional (DRS Available)
Meter Serial Number	Yes
Meter Date & Time	Yes
System Setting Features:	
Tracking Ability	Yes
Source Supply OFF Alarm (On/Off)	Yes
Loss of Phase Alarm (On/Off)	Yes
Current Warning Alarm (On/Off)	Yes
Current Warning Value	0.01 to 100 A
Meter Interface Connection	.c1/Optical Len
Data Upload/Refresh	15, 30, 60 Min Optional (DRS Available)
Internet Hosting Address	Optional (DRS Available)

SPECIFICATIONS & FEATURES

Software Management:	
Add/Remove User	Yes
Add/Remove Controller (DRC-004G)	Yes
View all Controllers (DRC-004G)	Yes
View all Users	Yes
Check/Top-Up Balance	Yes
Mobile Application	Yes

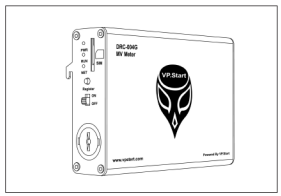
Alarm Notifications:	
Source Supply OFF Alarm	Yes
Loss of Phase Alarm	Yes
Low Current Warning Alarm	Yes
Door Open Alarm	Yes
Maintenance Alarm	Yes
IR Sensor Connection Lose Alarm	Yes

Physical Specification:

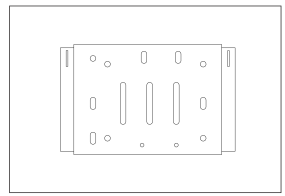
Mounting Position	The Remote Control (DRC-004G) is Connected Inside the MV Metering Cabinet (Landis +Gyr).
Dimensions	H=88mm x L=122mm x W=30mm
Weight	200mg

INSTALLATION INSTRUCTIONS

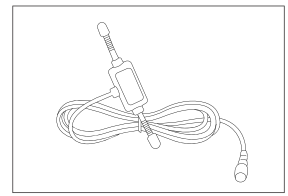
ACCESSORIES



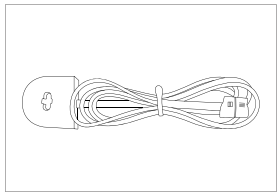
DRC-004G Controller (1pc)



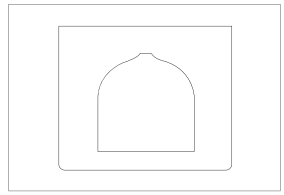
Controller Support (1pc)



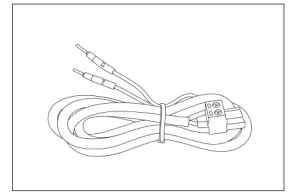
GSM Antenna (1pc)



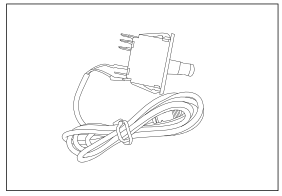
Infrared Sensor (1pc)



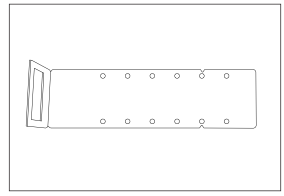
Infrared Sensor Shield (1pc)



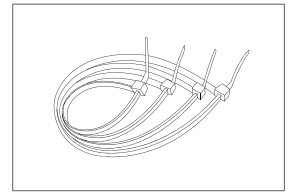
AC Power Cable (1pc)



Door Sensor (1pc)



Door Sensor Support (1pc)



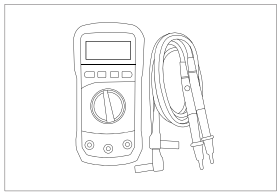
Cable Tie (4pcs)

INSTALLATION INSTRUCTIONS

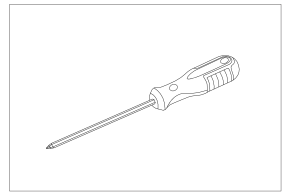
Blind Rivets (4pcs)

Bugle Head Screw (2pcs)

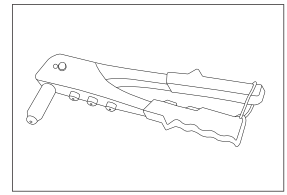
SUPPORTING TOOLS



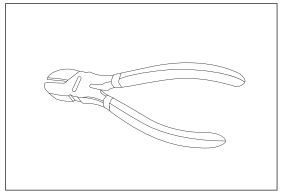
Multimeter



Screwdriver PH2

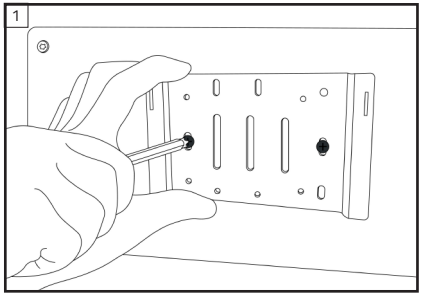


Hand Riveter

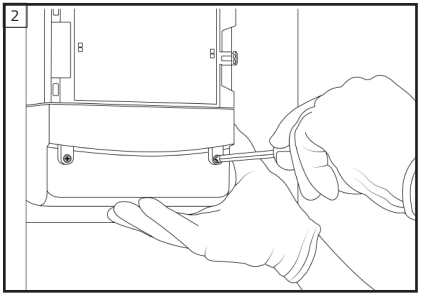


Diagonal Cutting Pliers

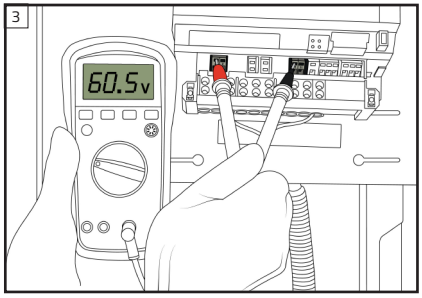
CONTROLLER INSTALLATION PROCESS



Mount the controller support into the propriety space in the Meter cabinet.



Remove meter terminal cover (Casborn).

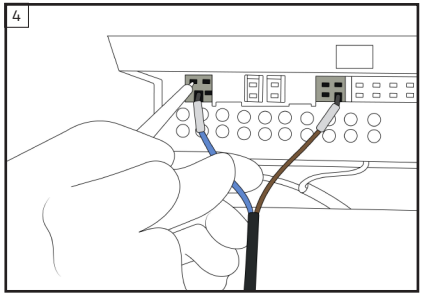


By AC meter, check the voltage through meter-terminal pin (2) and pin (11).

⚠ NOTE

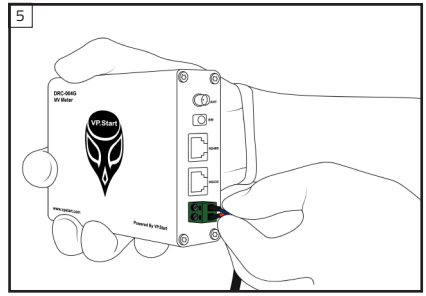
- The suitable voltage shall be 60VAC to 220VAC.

4



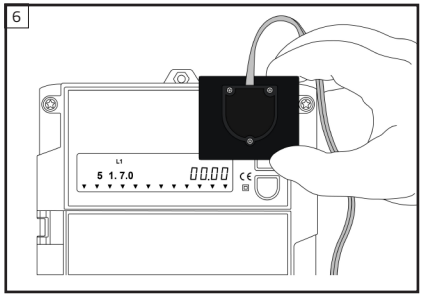
Connect AC Power Cable to meterterminal pin (2) and pin (11).

5



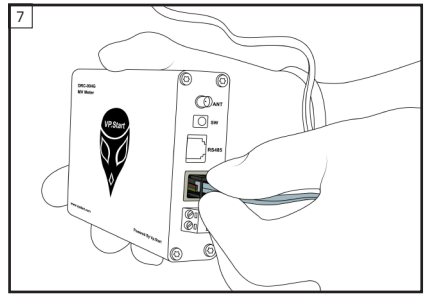
Connect AC Power Cable to AC INPUT port on DRC-004G.

6



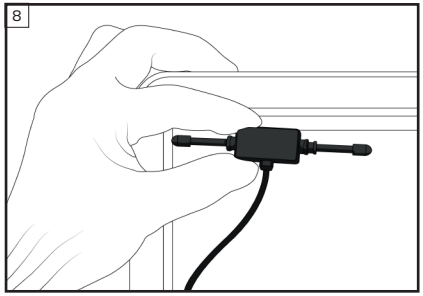
Mount Infrared Sensor and its shield on Meter.

7



Connect Infrared Sensor to Primary port on DRC-004G.

8

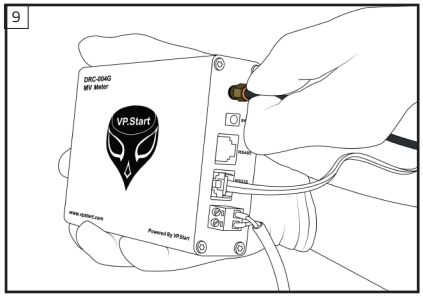


Install GSM Antenna to the appropriate area on site.

⚠ NOTE

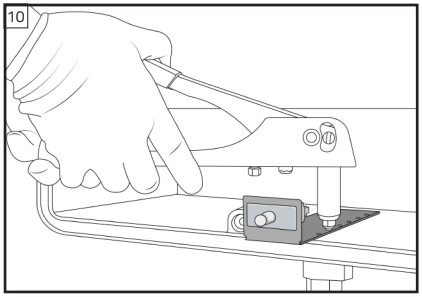
- The area that allows the antenna to get better signal strength.

9



Connect GSM Antenna to ANT connector on DRC-004G.

10

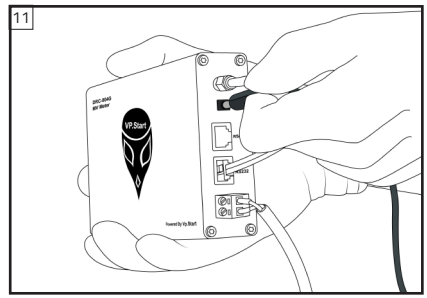


Mount Door Sensor and its Support at the appropriate area in the Meter Cabinet.

⚠ NOTE

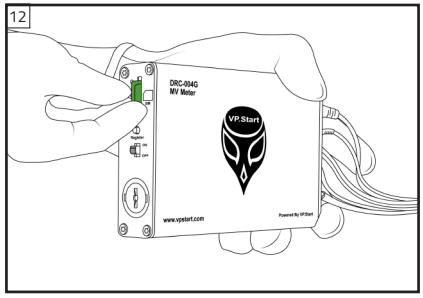
- The Door Sensor needs to be properly pushed by the door whenever the door closes.

11



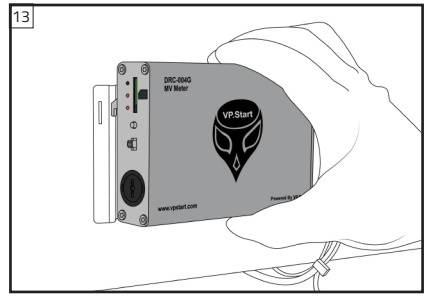
Connect Door Sensor to SW port on DRC-004G.

12

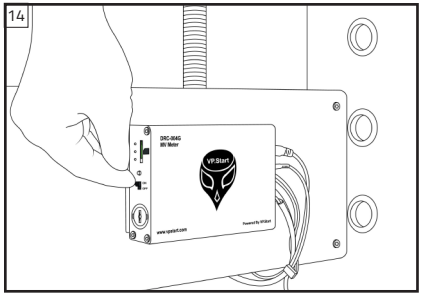


Insert SIM into SIM Slot on DRC-004G.

13



Mount the DRC-004G on the controller support.



Startup the DRC-004G by Turn ON the switch.

⚠NOTE

- The DRC-004G is running normally if the running LED is blinking every 1s.
- The GSM connection is Good if Net LED flashing every 3s.
- The GSM Module is Okay if GSM LED is ON.

APP USER GUIDE

Mobile Phone Interface Usage

01 How to Install DRC-004G App on Smartphone

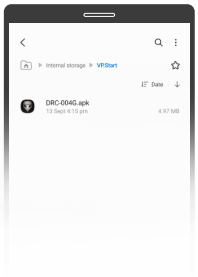
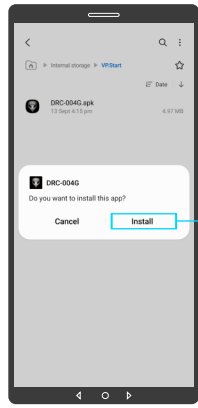


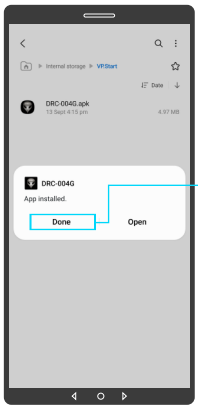
Fig | 01

Click on “DRC-004G .apk” to install.



Click on “Install”.

Fig | 02



Click on “Done” to finish.

Fig | 03

DRC-004G App installed.

Fig | 04

02 Create User Account

Fig 05

Click on “DRC-004G App” to open App.

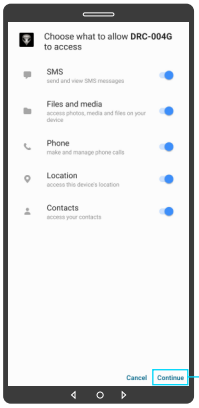


Fig 06

If the system pop up allow DRC-004G to access.

Then clicwk on “Continue”.

Fig 07

Create User Account login interface.

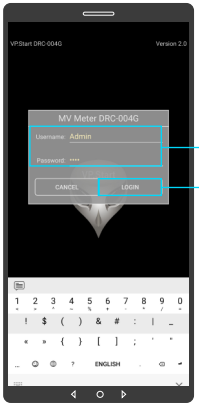


Fig 08

Create: Username and Password.

Then click on “LOGIN”.

Fig | 09

NOTE

When installing the DRC-004G smartphone application for the first time, users will have to register the first DRC-004G controller before they can access other functions.

Fig | 10

NOTE

After the first controller is registered, users can access other functionalities as showed in Fig. 10.

03 Login to App

Fig | 11

Click on "DRC-004G App" to open App.

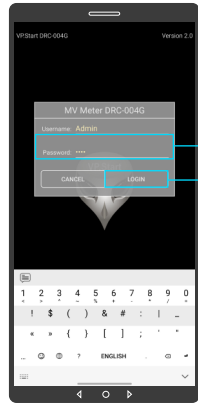


Fig | 12

Input Password.

Click on "LOGIN".

04 Service

Fig 13

DRC-004G App functions.

Fig 14

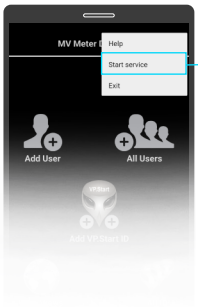
Click here to view "Help, Service and Exit".

Fig 15

After the device(s) has been registered. Alarm service is enabled by default. To stop it, click on Stop service to stop receiving automated alarms from the controller through the smartphone app.

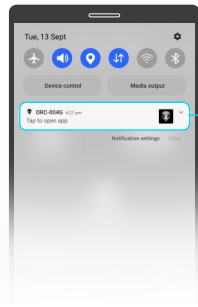
Fig 16

Alarm service is not running when your smartphone has not enabled DRC-004G alarm service as shown in Fig. 16.



To start alarm service. Click to view "Help, Service and Exit". Click on "Start service" to start receiving automated alarms from the controller through the smart-phone app.

Fig | 17



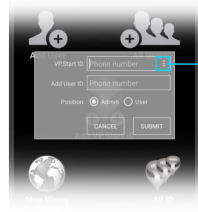
Alarm service is running when your smartphone has enabled DRC-004G alarm service as shown in Fig.18.

Fig | 18

05 Adding Users

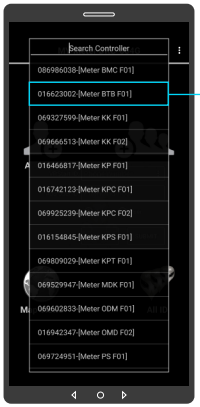
Click to open "Add User".

Fig | 19



Click here to view all VP.Start ID (Phone Number).

Fig | 20



Click to choose a VP.Start ID.

Fig 21

Fig 22

NOTE

Scroll up or down to view more VP.Start ID.

VP.Start ID chosen.

Fig 23

Write user phone number in “Add User ID”.

Choose user position as Admin or User.

Click on “SUBMIT” and confirm by “OK” button.

Fig 24

Fig | 25

NOTE

The application will display "Done" as a pop up notification to confirm the registration of the new user into the system for a specific controller.

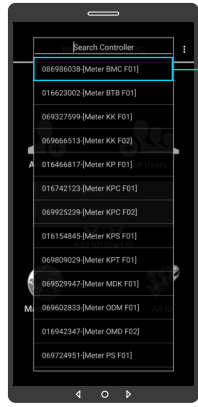
06 All Users

Click to open "All Users".

Fig | 26

Click here to view all VP.Start ID (Phone Number).

Fig | 27

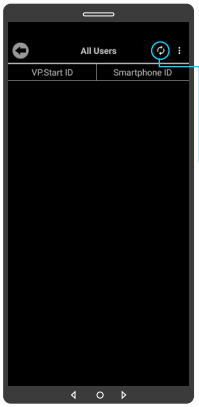


Choose a VP.Start ID.

Fig | 28

Confirm by "OK" button.

Fig 29



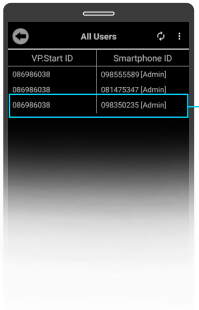
Click on Refresh button. And confirm by "OK" button.

Fig 30

07 Delete User

All Users view.

Fig 31



To delete user from your DRC-004G, hold on an user number.

Fig 32

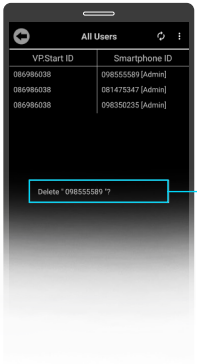


Fig | 33

Click on Delete "User phone number" and confirm by "OK" button.

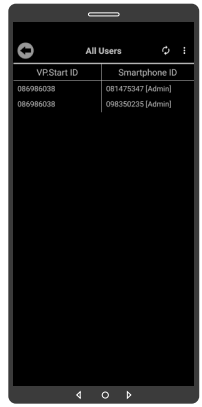


Fig | 34

User deleted.

08 Add VP.Start ID

Fig | 35

Click to open "Add VP.Start ID".

Fig | 36

Add VP.Start ID interface.

Click to write location name (DRC-004G name).

Click to write VP.Start ID (DRC-004G phone number).

Click on "ADD" button.

Fig | 37

Confirm by "OK" button.

Fig | 38

09 Map Views

NOTE

The application will display "Success" as a pop up notification to confirm the registration of the DRC-004G controller into the system.

Fig | 39

Scroll down notification bar.

Fig | 40

Fig | 41

Turn on location.

Fig | 42

Turn on Internet.

Fig | 43

Click to open
“Map Views”.

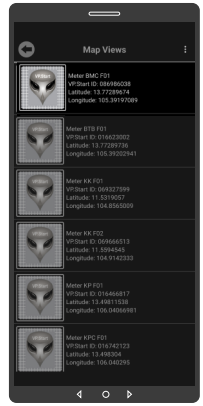


Fig | 44

Select a VP.Start ID.

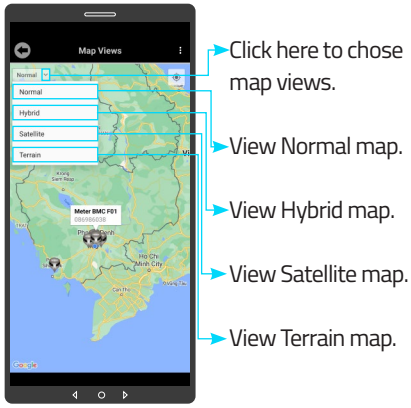
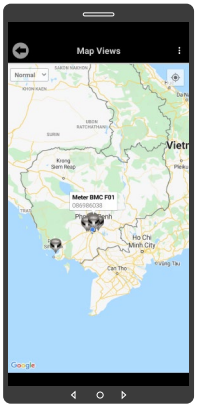


Fig | 45



Normal view

Fig | 46

Hybrid view

Fig | 47

Satellite view

Fig | 48

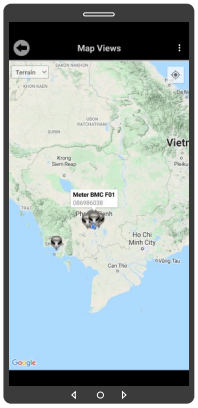


Fig | 49

Terrain view

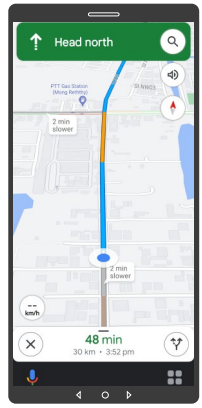


Fig | 50

Hold on VP.Start icon to show Drive Mode to VP.Start controller on Google Map.

10 Map Views (Change Map Coordinates)

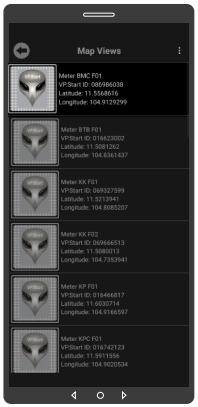


Fig | 51

To change map coordinate, hold on VP.Start ID in “Map Views”.

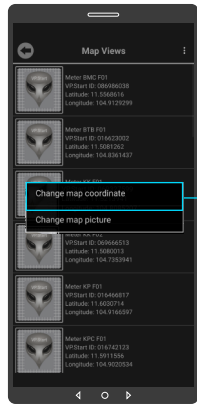
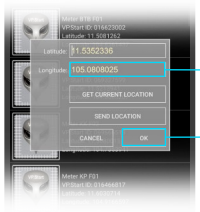


Fig | 52

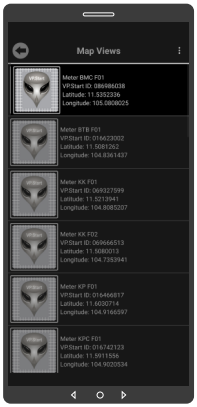
Click on “Change map coordinates”.



Click on “GET CURRENT LOCATION”.

Click on “OK” button.

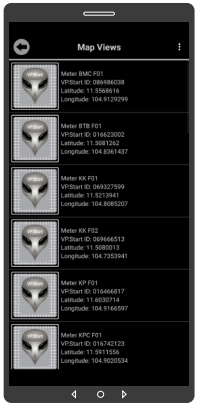
Fig 53



DRC-004G location changed.

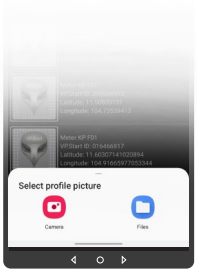
Fig 54

11 Map Views (Change Map Picture)



To change map picture, click and hold VP.Start ID in “Map Views” as Fig. 51. And click on “Change map picture”

Fig 55



Take photo from “Camera” or choose photo from “File” and select photo. And confirm by “OK” button.

Fig 56

12 Map Views (Delete Map Picture)

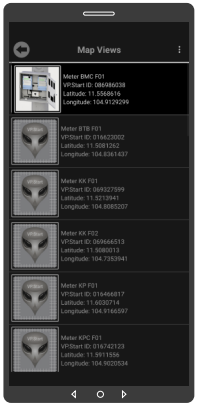


Fig | 57

DRC-004G map picture changed.

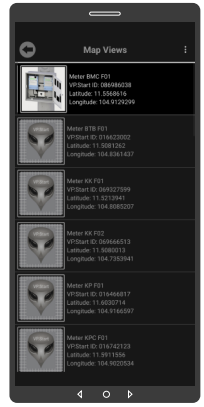


Fig | 58

To delete map picture, hold on map picture.

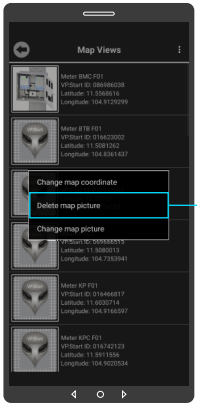


Fig | 59

Click on “Delete map picture” and confirm by “OK” button.

Fig | 60

DRC-004G map picture deleted.

13 All IDs

Fig 61

Click on “All ID”.

Fig 62

All VP.Start ID view.

> **NOTE**
> Scroll up or down to view more VP.Start ID.

14 Measurement Interface

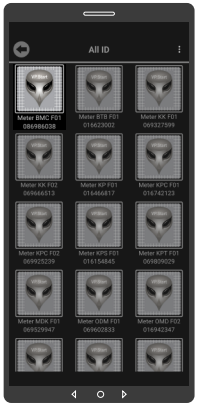


Fig 63

Select a VP.Start ID.

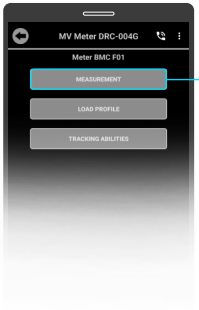


Fig 64

Click on MEASURE-MENT”

Fig | 65

Click on “OK” button.

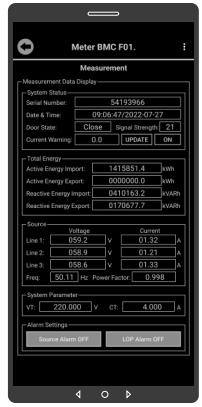


Fig | 66

Measurement interface.

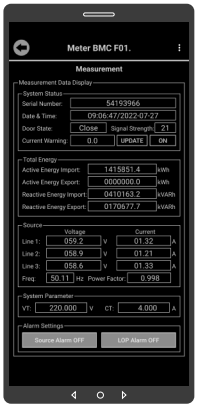


Fig | 67

To set Current Warning Alarm.

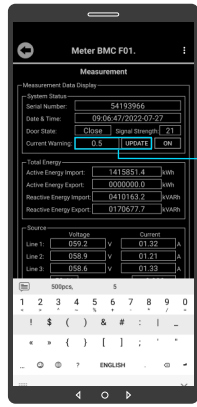


Fig | 68

Input Curren Warning value. And click on “UPDATE” button.

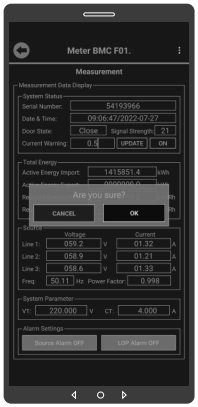


Fig 69

Click on "OK" button.

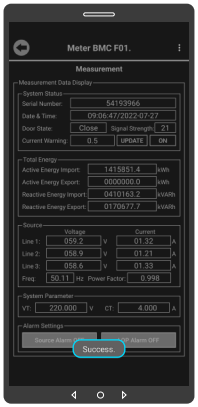


Fig 70

NOTE

"Success" will pop up as a notification message below indicating that the Current Warning value has been successfully set in the system.

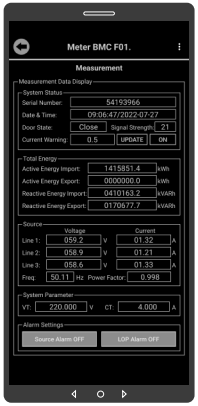


Fig 71

Current Warning Alarm value set.

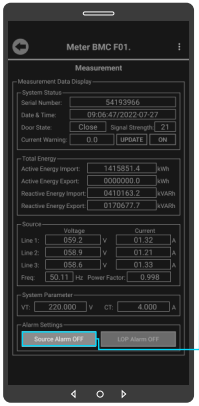


Fig 72

To turn on Source Alarm, click on "Source Alarm OFF".

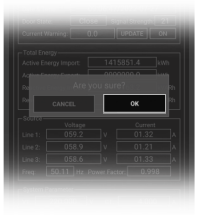


Fig | 73

Click on "OK" button.

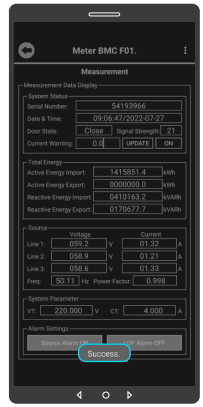


Fig | 74

NOTE

"Success" will pop up as a notification message below indicating that the Source Alarm has been successfully turn on in the system.

Fig | 75

To set Lost of Phase (LOP) Alarm, click on "LOP Alarm OFF".

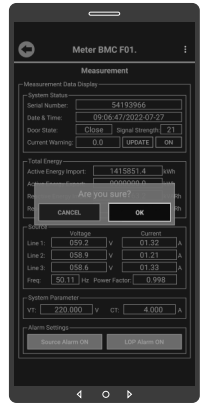


Fig | 76

Click on "OK" button.

15 Load Profile

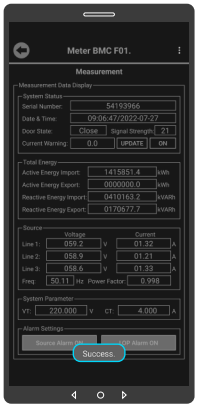
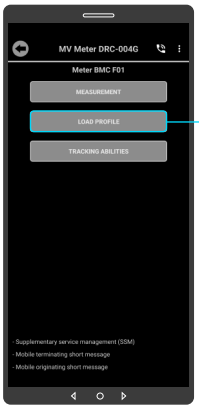


Fig 77

NOTE

"Success" will pop up as a notification message below indicating that the Lost of Phase (LOP) Alarm has been successfully turn on in the system.

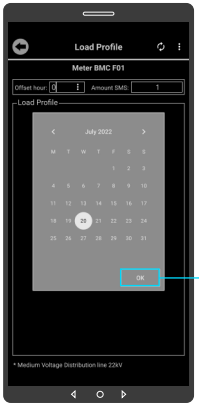


To read Load Profile of MV Meter, click on "LOAD PROFILE".

Fig 78

Click to show calendar.

Fig 79



Select date to read Load Profile, then click on "OK" button.

Fig 80

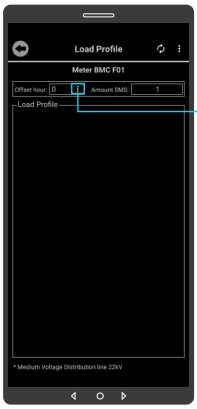


Fig 81

Set offset hour in "Offset hour" box.

NOTE

Offset hour from time 00:00AM of the selected day.

Fig 82

Set amount SMS to read (1 SMS = 1h) in "Amount SMS" box.

Then click on "Refresh" sign.

Fig 83

Click on "OK" button.

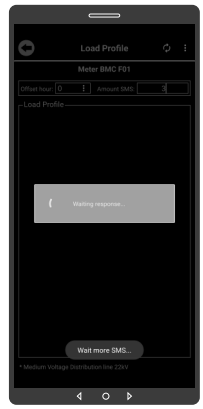


Fig 84

NOTE

"Wait more SMS..." to read more MV Meter Load Profile.

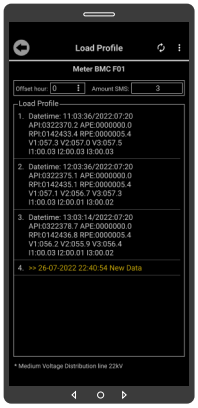


Fig 85

Load Profile read.

Fig 86

To delete Load Profile Data, hold on Load Profile data.

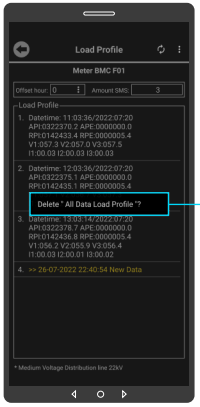


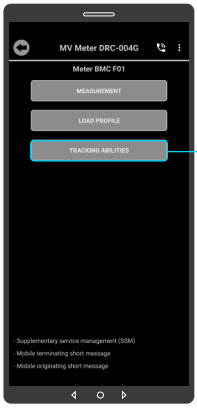
Fig 87

Click on Delete "All Data Load Profile"?

Fig 88

Load Profile Data deleted.

16 Tracking Abilities Interface



Click on “TRACKING ABILITIES”.

Fig 89

Click on “OK” button to read DRC-004G controller Tracking Abilities.

Fig 90

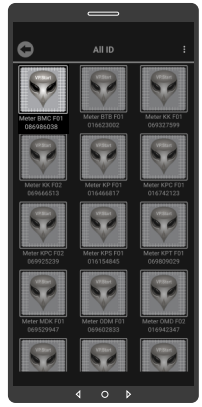
Click to read data on phone.

Click to update data from phone to system.

Click to update date to phone.

Fig 91

17 Renaming VP.Start IDs (DRC-004G Controllers)



To rename VP.Strat ID, hold on VP.Start ID icon.

Fig 92

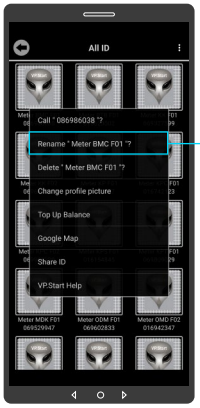


Fig 93

Click on “Rename”.

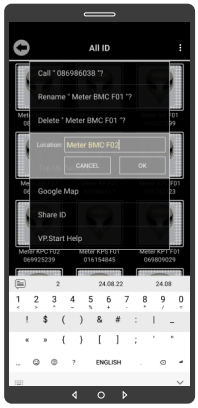


Fig 94

Rename existing name. And click on “OK” button.

18 Delete VP.Start ID

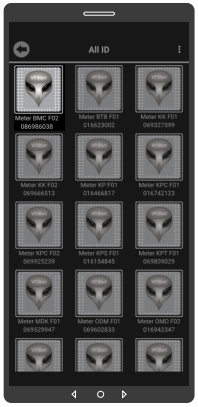


Fig 95

Controller’s name changed.

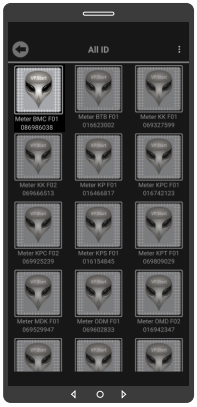
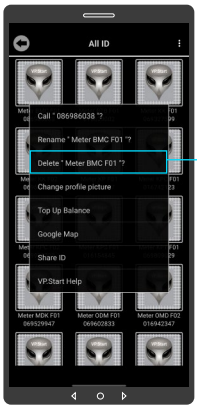


Fig 96

To delete VP.Start ID, hold on VP.Start ID icon.



Click on “Delete” and confirm by “OK” button

Fig | 97

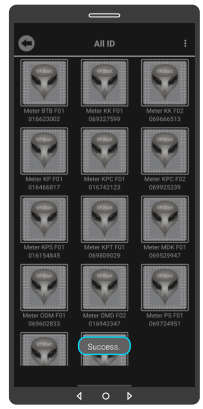
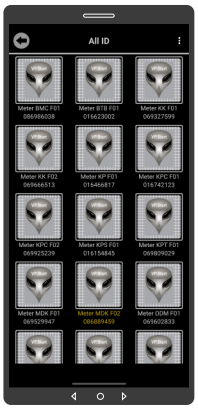


Fig | 98

NOTE

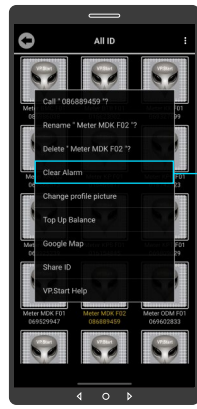
“Success” will pop up as a notification message below indicating that the controller has been successfully deleted from the system.

19 Clear Alarm



To Clear Alarm, hold on alarmed VP.Start ID.

Fig | 99



Click on “Clear Alarm”. Click on “Back” sign.

Fig | 100

20 Change Profile Picture

Fig | 101

Alarm VP.Start ID cleared.

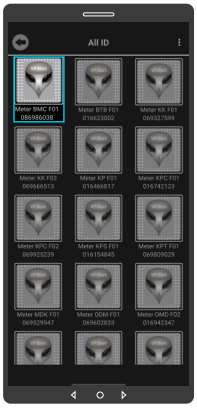


Fig | 102

To change profile picture, hold on VP.Start ID icon.

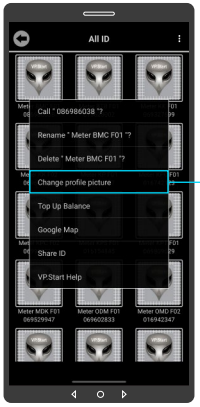


Fig | 103

Click on "Change profile picture".

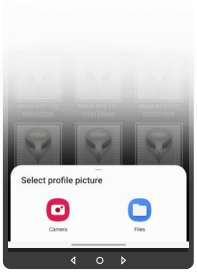


Fig | 104

Take photo from "Camera" or choose photo from "File" and select photo. And confirm by "OK" button.

21 Delete Profile Picture

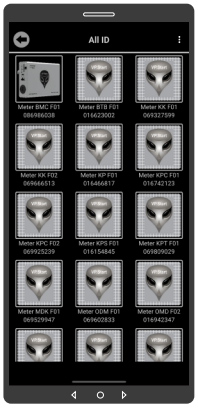


Fig | 105

Profile picture changed.

Fig | 106

To delete profile picture, click and hold on VP.Start ID icon.

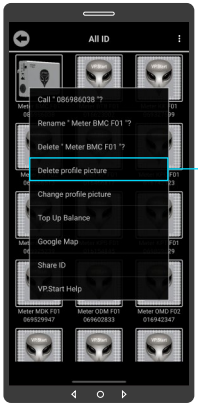


Fig | 107

Click on “Delete profile picture”. And confirm by “OK” button.

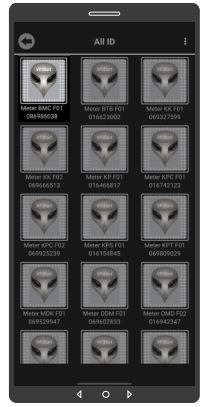


Fig | 108

Controller profile picture deleted.

22 Top Up / Check Balance

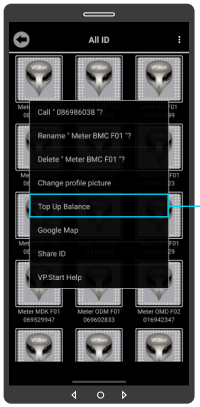


Fig | 109

To top up or check balance, hold on VP.Start ID icon and click on "Balance".

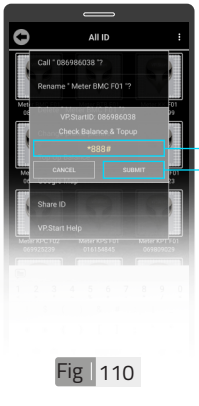


Fig | 110

Click here to input SMS command to check the SIM card balance from the controller.

Click on "SUBMIT" to send the "Check balance or top up" command to the controller.

Fig | 111

Confirm by "OK" button.

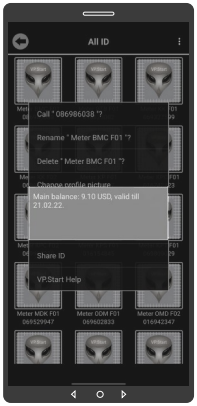


Fig | 112

Balance interface showed.

23 Google Map

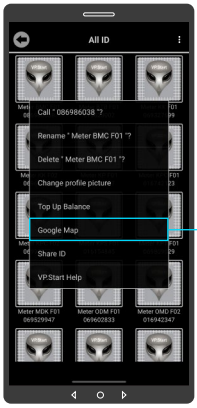


Fig | 113

To view Google Map with Drive Mode to VP.Start controller, click on "Google Map".

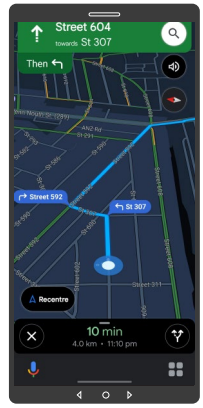


Fig | 114

Google Map Drive Mode showed.

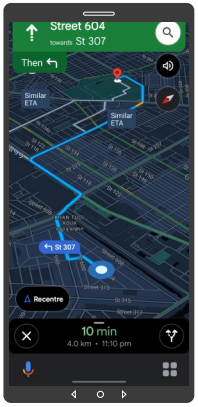


Fig | 115

Click on "X" sign to view in Google Map view.

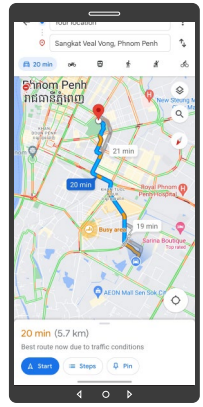
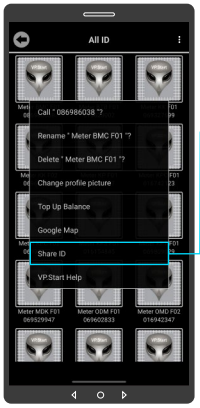


Fig | 116

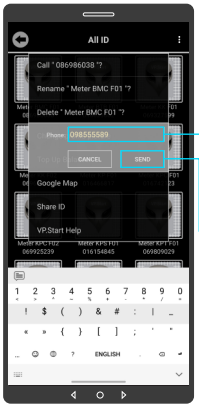
Google Map viewed.

24 Share ID



To share VP.Start ID to other phone number, hold on VP.Start ID icon and click on "Share ID".

Fig | 117



Click to write phone number to share.

Click on "SEND" button.

Fig | 118

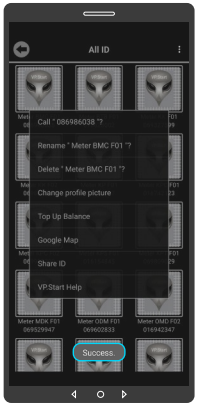


Fig | 119

⚠NOTE

- "Success" will pop up as a notification message below indicating that you have successfully shared the DRC-004G controller's ID and controller information to another phone number as a SMS as shown in Fig. 119.

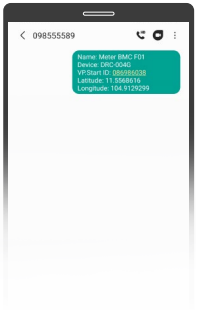


Fig | 120

⚠NOTE

- Controller ID and information displayed as an SMS with a shared number.

25 VP.Start Help

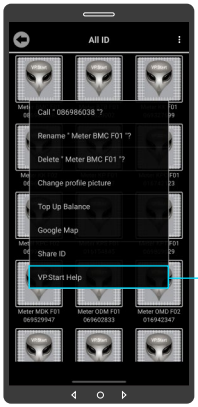


Fig | 121

To alert to call center immediately for help, click and hold on VP.Start ID icon and click on "VP.Start Help".

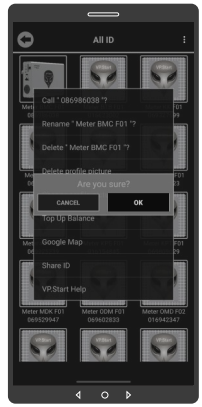


Fig | 122

Click on "OK"button. The app will command the DRC-004G controller to automatically share its ID information and call directly to VP.Start's call center to alert our support team immediately.

Fig | 123

NOTE

As shown in Fig. 123, the DRC-004G controller will share its ID to VP.Start's call center.

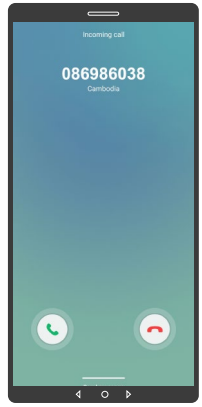


Fig | 124

NOTE

As shown in Fig. 124, the DRC-004G controller is calling VP.Start's call center to immediately alert the support team.

Fig | 125

If the controller is inaccessible for any reason, the app can be used to manually send the controller ID to the VP.Start call center. Click on "SEND CONTROLLER ID: 098555589" to execute the Command. And confirm by "OK" button.

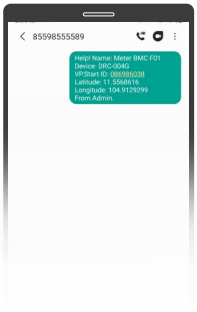


Fig | 126

NOTE

The user has shared the controller's ID manually with VP. Start's callcenter as shown in Fig. 126.

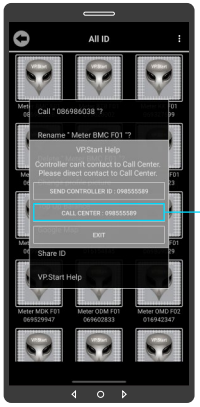


Fig | 127

Or Click on "CALL CENTER: 098 555 589" to call to VP. Start's call center.

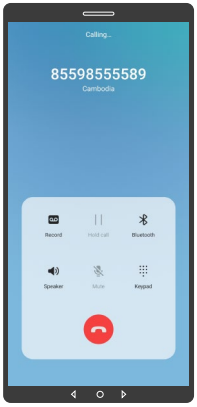


Fig | 128

NOTE

User has manually executed the command to call VP. Start's call center.

26 Alarm System

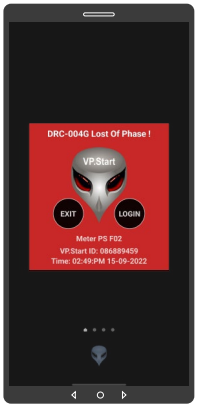


Fig | 129

Lost of Phase Alarm.

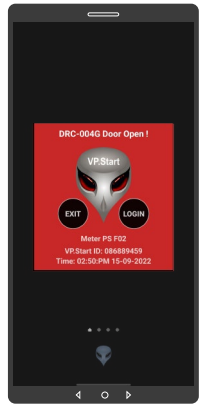


Fig | 130

Door Open Alarm.

Fig | 131

Maintenance MV Meter Alarm.

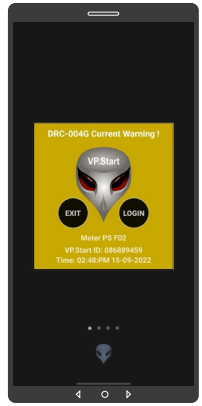


Fig | 132

Current Warning Alarm.

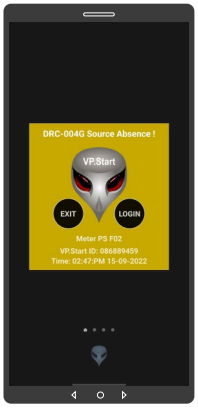


Fig | 133

22kV Supply Off Alarm.

Fig | 134

⚠NOTE

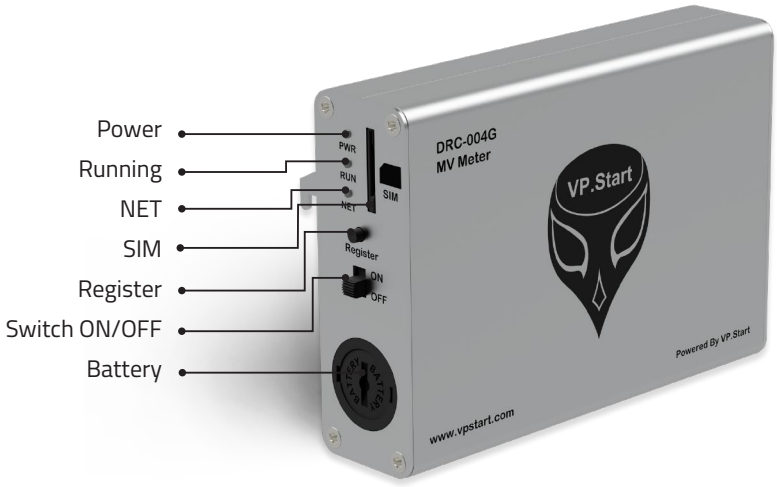
- An alarm notification message will appear whenever the system detects a problem such as Lost of Phase, Door Open, Maintenance MV Meter, Current Warning and 22kV Supply Off.

Fig | 135

⚠NOTE

- Click on "LOGIN" to login controls interface panel.
- Click on "EXIT" to exit an alarm notification message.

TROUBLESHOOTING



LED Light Status Explanation

LED Light	LED Status	System Working Status
Power	Off	The Power button is not turned On. No power input.
	Red	Power On
Running	Red (blinking every 1s)	Running normally
Net	64ms On/800ms Off	GSM has not registered to a network
	64ms On/3000ms Off	GSM has registered to a network
	64ms On/300ms Off	GPRS communication
	Off	GSM is not running

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