PREPAID ENERGY METER

IPM 05 connect 5 different households using a single meter but measuring usage of individuals at same time.

APPLICATIONS

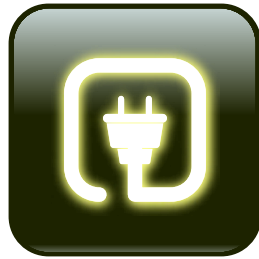- Micro grid
- Home utility
- Shops
- Generator supply

IPM 05 is microcontroller based prepaid energy meter which is especially designed for solar ac micro grids. It has 5 channels and each of them can be programmed separately for desired watt hour credit, watt limit and number of days .Multi channel design allows to connect 5 different households using a single meter but measuring usage of individuals at same time.

Watt hours can be credited to individual channels. each channel can be programmed for different watt-hour credit. once the credit is finish it auto cuts the supply to that house. IPM05 has a built in RTC so one can program it to allow usages of electricity supply for fixed number of days.Watt limit can be set so no one can use above the permissible watt limit.current usages are monitored and if overload at any channel is detected it trips the supply for that channel.IMP05 is field programmable and can easily programmed by using a mobile phone or a hand held terminal. each channel can be programmed individually for requested watt hours,watt limit or number of days.As skilled manpower is one of the challenge in microgrid operation,no skilled man power is required to recharge the meter,any one who is familier with android phones and apps can do recharge and diagnostics of the network.

Specification

Operating voltage Range...... 150 – 260 Volts AC.
Nominal Operating Voltage...230V AC
Power Consumption.............15 watt
Max load per channels.........500 watts
accuracy .... Watt Hour <5%
........................Load Limit <5%
.... RTC < 5 min per month drift.
Protection......................... Short circuit by 3 Amp fuse.
Communication Range......... < 10 meters.
Programable Features.......... KWatt Hour Credit
..........Max Permissiable Load in watts
..........Use for programmed No. of days.

For further enquiries
Call 022-28548123

BluePlug

Android application manual

The application BluePlug is an Android application which is used to display meter reading and recharge Irya Prepaid Energy Meters via Bluetooth. This application is designed to monitor Prepaid energy meter's reading at an interval of 5 Sec along with recharging facility.

The application can be used for:

- Find nearby devices
- Display meter reading
- Recharge the meter
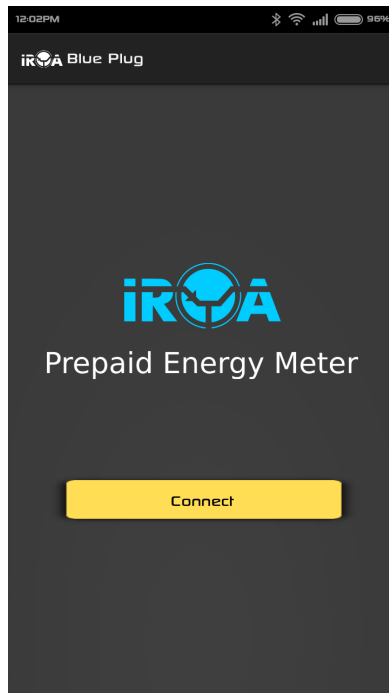- Set Auto on/off times of the meter
- Sync the meter time and date

Icon:-

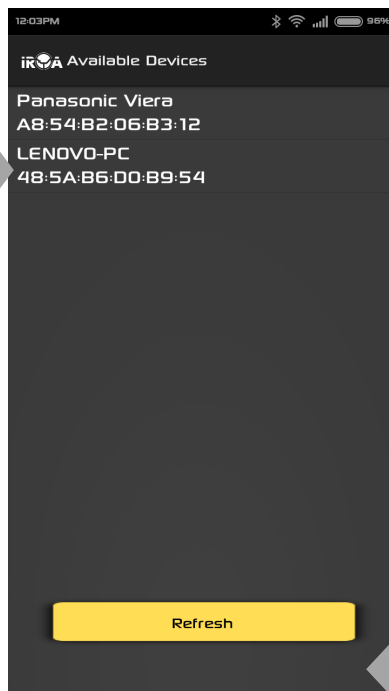Press the icon to open the application.

Welcome Screen-

Press the "Connect to a meter" button to connect to a meter.

Available Devices Screen-

Shows the Bluetooth devices nearby. Press on one device to pair with it.
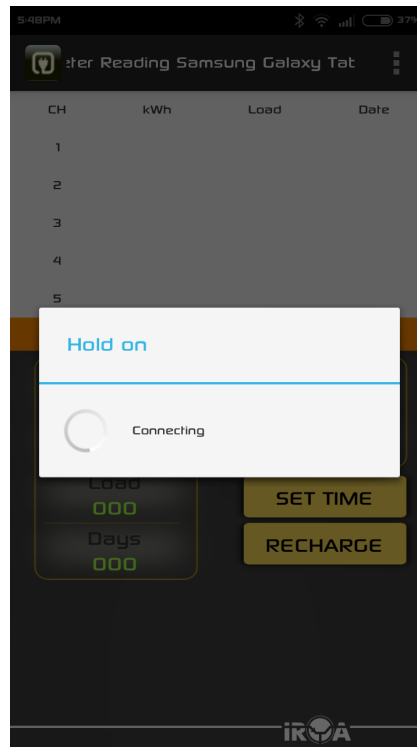Once pairing is done click on device and connect to the meter.

If meter is already paired then on clicking it you will be redirected to meter reading screen.

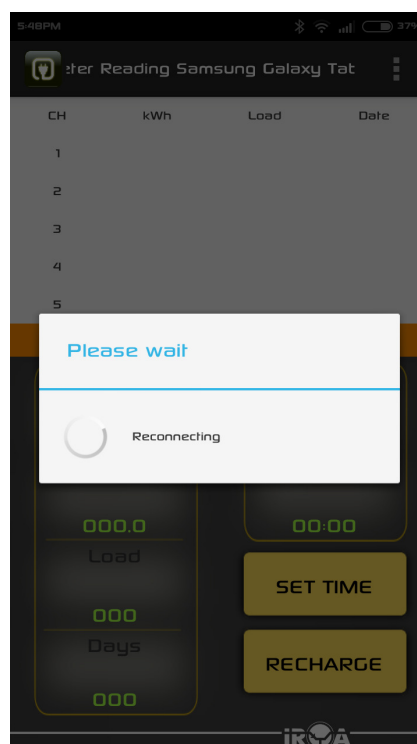If still desired meter not displaying click on refresh button.

Connecting Popup-

Shows that the application is trying to connect with the meter. Wait till the connection is successful

Reconnecting Popup-

Shows that the application is still trying to connect with the meter. Wait till the connection is successful.

Main Screen-

This screen shows when the application is connected to a meter. By default, HEX mode is enabled, that is, the application will read data from the meter in HEX format.

Displays the kWh for each channel.

Display the channel numbers.

Displays the load for each channel.

Displays the expiry date.

Shows selected channel. Press to select another channel.

Shows present Auto ON time. Press to set another Auto ON time.

Shows selected kWh. Press to set another kWh.

Shows present Auto OFF time. Press to set another Auto OFF time.

Shows selected Load. Press to set another Load.

Press to set Auto ON and Auto OFF times of the meter.

Shows selected number of days of validity.Press to set another number of days of validity.

Press to perform the recharge with selected channel, kWh, load and number of days of validity.

Recharge a meter-

Press the Channel button Select a channel to recharge among 1 to 5 as the default channel is 0. This is a required field without selecting this you cannot recharge the meter.

Set kWh for the channel and press Set, else press Cancel

Set Load for the channel and press Set, else press Cancel

Set number of days of validity and press Set, else press Cancel

After setting channel and at least one other value (kWh, Load or number of days of validity)
Press the "RECHARGE" button to recharge the meter

Set Auto ON and OFF times-

Press the Auto ON time button. Scroll to set ON time, if needed to be changed, and press Set, else press Cancel
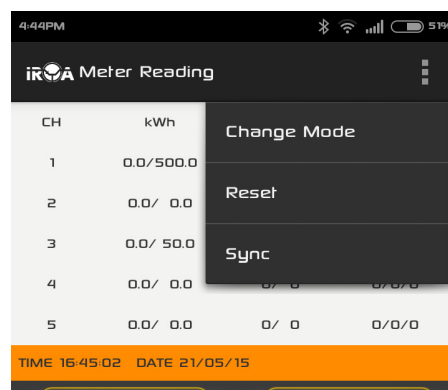
Press the Auto OFF time button. Scroll to set Auto OFF time, if needed to be changed, and press Set, else press Cancel

SET TIME

Press "SET TIME" button to set Auto ON and OFF time of the meter. Wait for message "TIME Updated".

Option menu-

Change mode-

1. Press the Menu button
2. Press the "Change mode" option
3. If the meter is in HEX mode, it will change to ASCII mode, and if the meter is in ASCII mode, it will change to HEX mode.

Reset the meter-

1. Press the Menu button
2. Press the "Reset" option
3. A pop up will appear, if you wish to continue to reset the device, press Yes else press No

Sync the meter-

1. Press the Menu button
2. Press on "Time Sync" option
3. wait for message"RTC Updated"