Acrel ADL200+AWT100-4GHW Wiring&System Operation Manual (1-phase Centralized)

Author: Aaron
E-mail: aaron@acrel.cn
Wb: www.acrel-electric.ke

1. Wiring Illustration

Only 3 part of wiring was necessary for wiring of ADL200/C and AWT100-4GHW
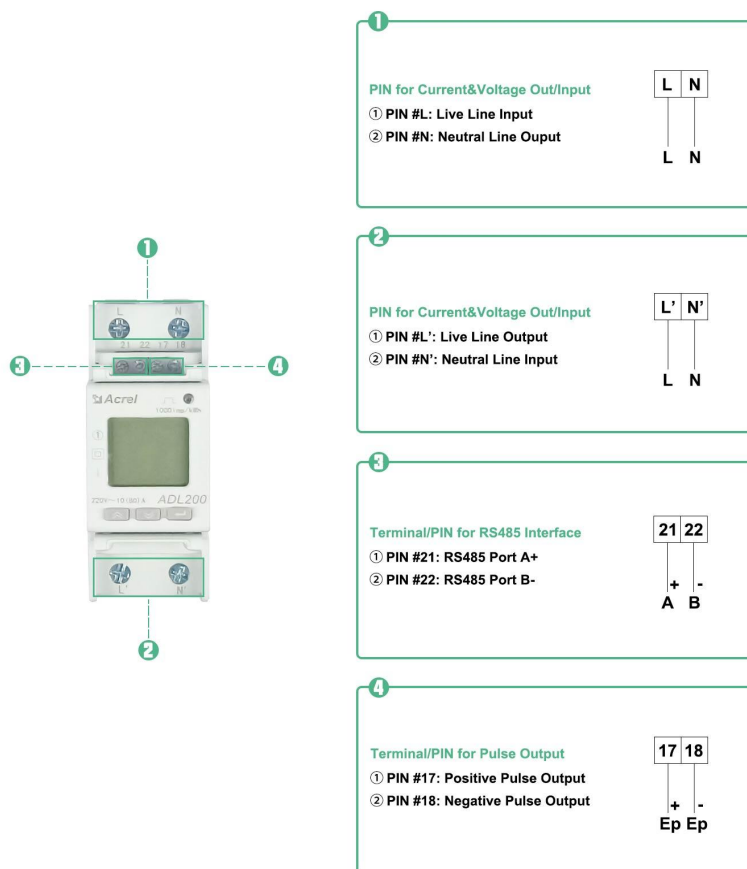
(1) Power Wiring of ADL200/C: Use PIN L, L', N, N' on ADL200 for current and voltage input (Noted, the wiring must be according to the actual live line current direction)

(2) Power Supply of AWT100-4GHW: Use PIN L, N on AWT100-POW for power supply (Noted: voltage level of power source must be with the range of 85~265Vac L-N)
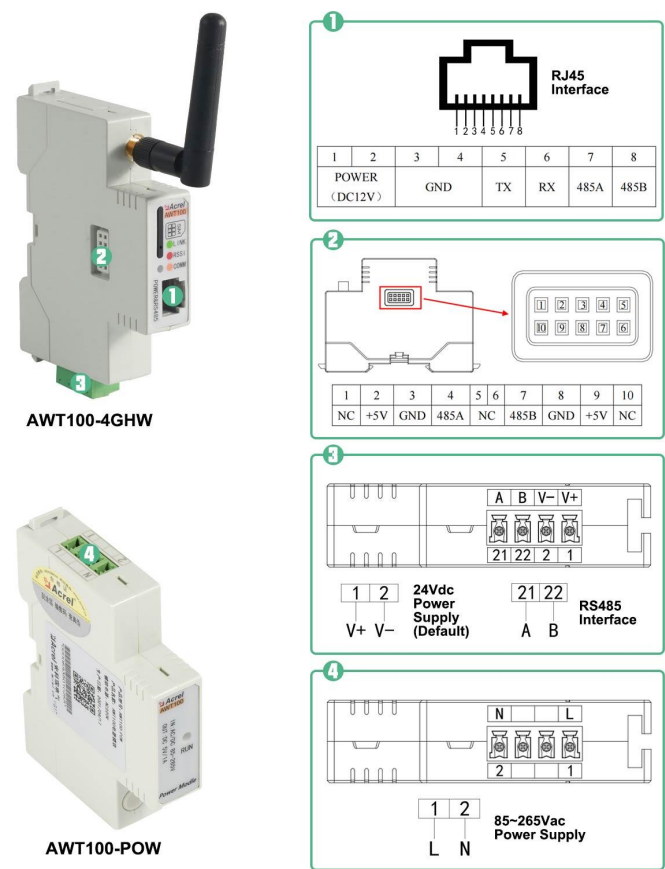
(3) RS485 Communnication Wiring between AWT100-4GHW and ADL200/C: PIN 21 of AWT100-4GHW connected to PIN 21 of first ADL200/C to PIN 21 of second ADL200/C and to PIN 21 of last ADL200/C. (RS485 Port A to Port A to Port A)

PIN 22 of AWT100-4GHW connected to PIN 22 of first ADL200/C to PIN 22 of second ADL200/C and to PIN 22 of last ADL200/C. (RS485 Port B to Port B to Port B)

*Extra Noted: Before powering ADL200/C and AWT100-4GHW, make sure all the wiring was done and 4G SIM card installed in AWT100-4GHW 4G SIM card tray.
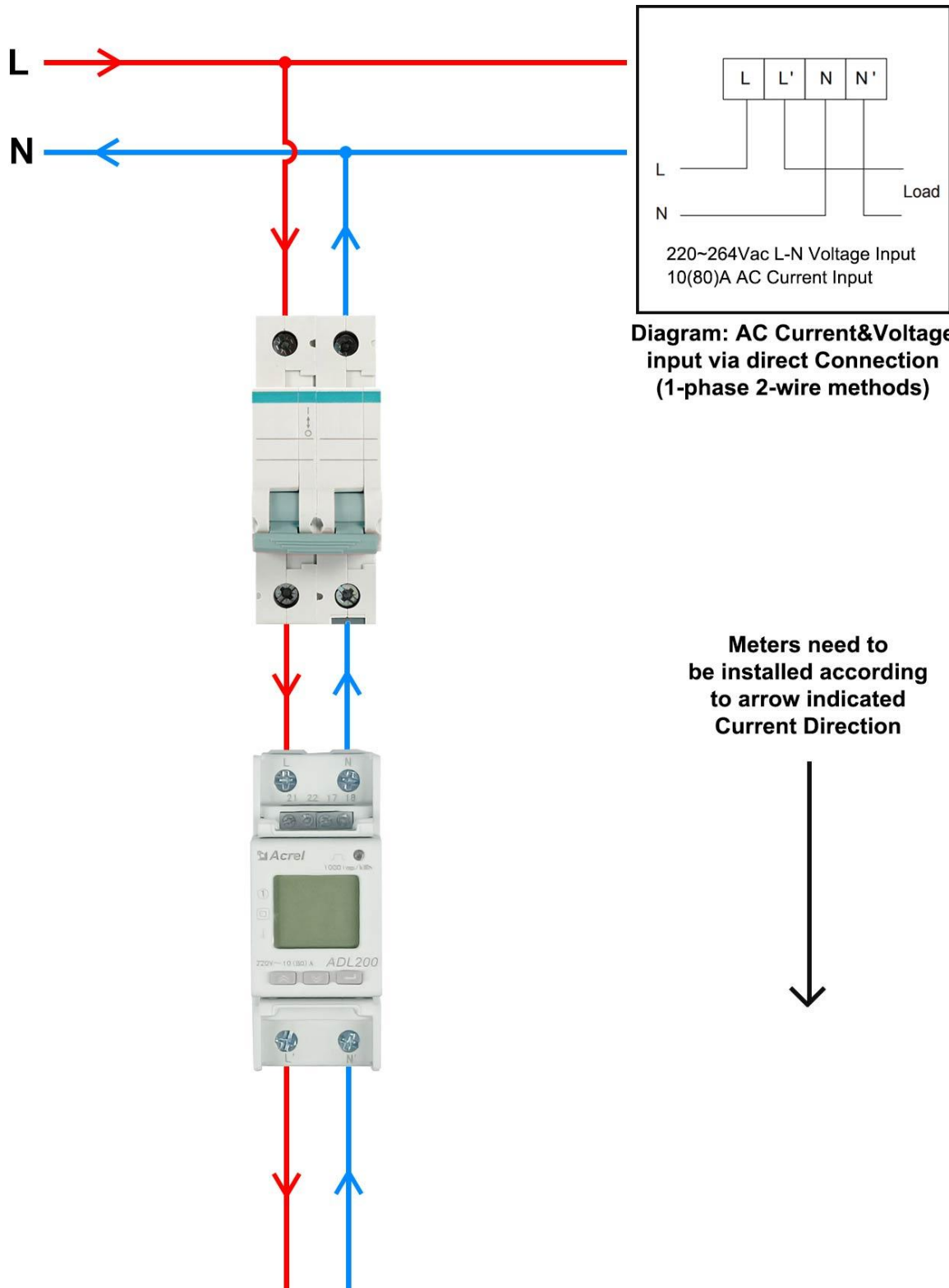
PIN for Current&Voltage Out/Input
① PIN #L: Live Line Input
② PIN #N: Neutral Line Ouput

PIN for Current&Voltage Out/Input
① PIN #L': Live Line Output
② PIN #N': Neutral Line Input

Terminal/PIN for RS485 Interface
① PIN #21: RS485 Port A+
② PIN #22: RS485 Port B-

Terminal/PIN for Pulse Output
① PIN #17: Positive Pulse Output
② PIN #18: Negative Pulse Output

AWT100-4GHW

AWT100-POW

RJ45 Interface							
1	2	3	4	5	6	7	8
POWER（DC12V）		GND		TX	RX	485A	485B

1	2	3	4	5	6	7	8	9	10
NC	+5V	GND	485A	NC		485B	GND	+5V	NC

A B V− V+
21 22 2 1

1 2 — 24Vdc Power Supply (Default)
V+ V−

21 22 — RS485 Interface
A B

N L

1 2 — 85~265Vac Power Supply
L N

PIN Overview of ADL200/C

PIN Overview of AWT100-4GHW

Acrel
®

**Acrel ADL200+AWT100-4GHW
Wiring&System Operation Manual
(1-phase Centralized)**

Author: Aaron
E-mail: aaron@acrel.cn
Wb: www.acrel-electric.ke

1. Wiring Illustration

(1) Power Wiring of ADL200/C: Use PIN L, L', N, N' on ADL200 for current and voltage input, voltage input range 220~264Vac L-N, max current input 80A AC. (Noted,the wiring must be according to the actual live line current direction)
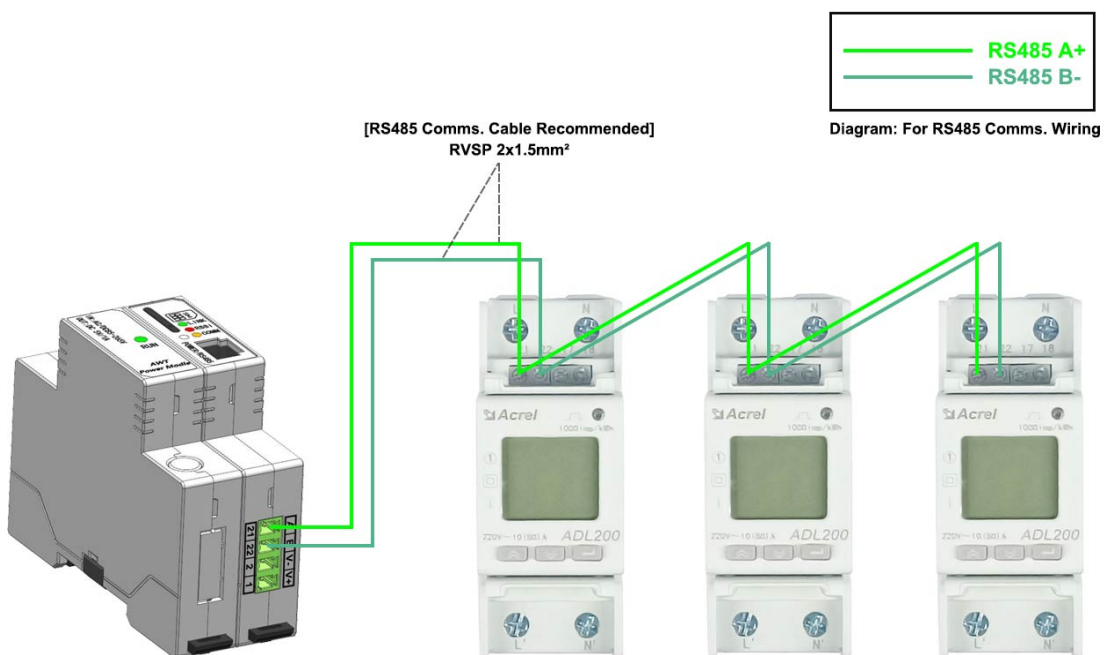
Diagram: AC Current&Voltage
input via direct Connection
(1-phase 2-wire methods)

220~264Vac L-N Voltage Input
10(80)A AC Current Input

Meters need to
be installed according
to arrow indicated
Current Direction

(1) Power Wiring of ADL200/C

Acrel ADL200+AWT100-4GHW
Wiring&System Operation Manual
(1-phase Centralized)

Author: Aaron
E-mail: aaron@acrel.cn
Wb: www.acrel-electric.ke

1. Wiring Illustration

(2) Power Supply of AWT100-4GHW: Use PIN L, N on AWT100-POW for power supply (Noted: voltage level of power source must be with the range of 85~265Vac L-N)

(3) RS485 Communnication Wiring between AWT100-4GHW and ADL200/C: PIN 21 of AWT100-4GHW connected to PIN 21 of first ADL200/C to PIN 21 of second ADL200/C and to PIN 21 of last ADL200/C. (So does the connection of PIN 22)
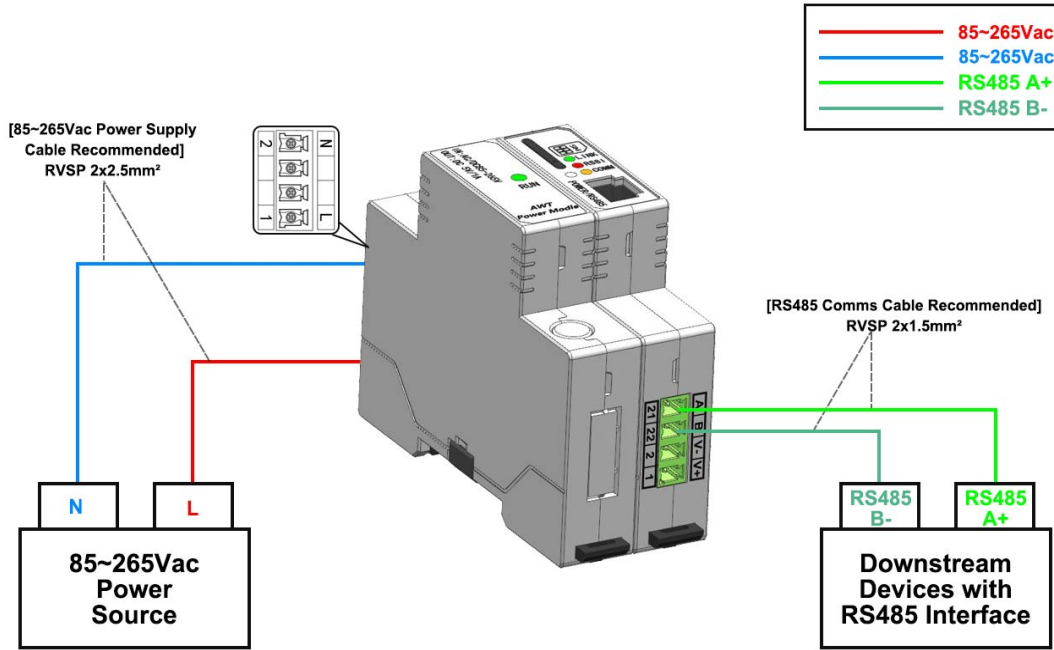
(2) Left Side - Power Supply Wiring of AWT100-4GHW (via AWT100-POW)

(3) RS485 Communication Wiring between ADL200/C&AWT100-4GHW

Acrel ADL200+AWT100-4GHW
Wiring&System Operation Manual
(1-phase Centralized)

Author: Aaron
E-mail: aaron@acrel.cn
Wb: www.acrel-electric.ke

2. System Operation

After correctly installing, wiring and powering up the Acrel devices, there are 4 steps to bind these devices with Acrel System before formally using the system:

(1) Step 1 - Download IoT EMS APP on your Mobile Phone;

(2) Step 2 - Register and login your own account.

(3) Step 3 - Create a new Project

(4) Step 4 - Add devices to your new Project (Recommend to add by using APP)

Extra Noted: Acrel IoT EMS APP (for Mobile) and IoT EMS WEB (for PC) Share the same data and account, once add the devices using APP, we can check the data on IoT EMS WEB on PC.
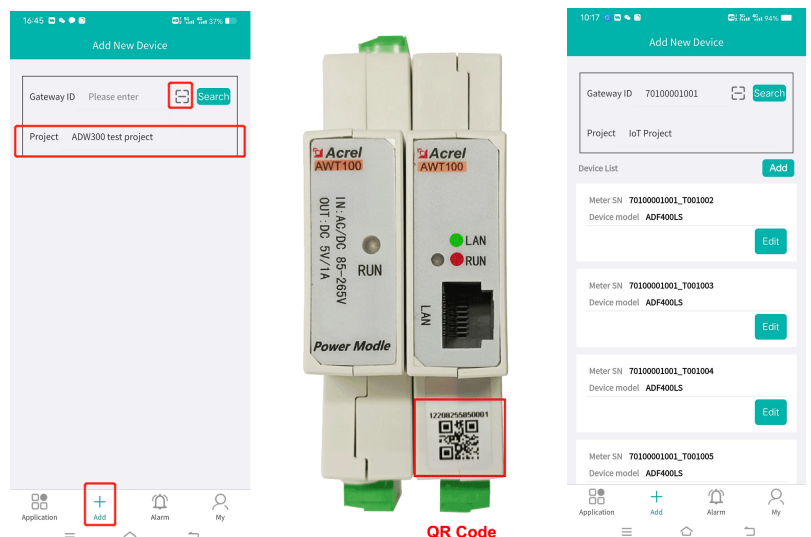
(1) Download IoT EMS APP:

- Download Link (Android): https://play.google.com/store/apps/details?id=com.acrel.iotems

- Download (IOS): Search IoT EMS
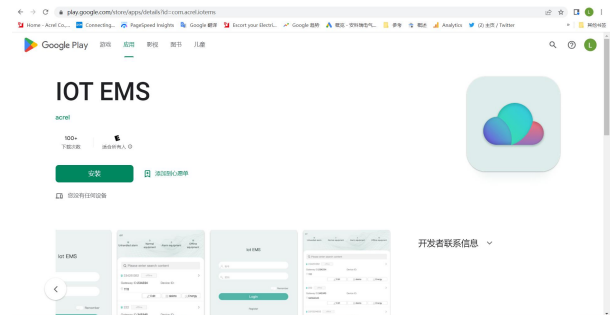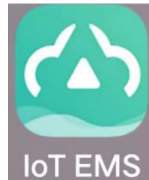
(2) Register your own Account:

- Click on register

- Enter related information for registering account

- Login with your new account by entering "Account" and "Password" you just set
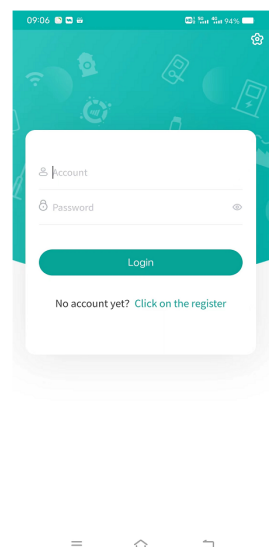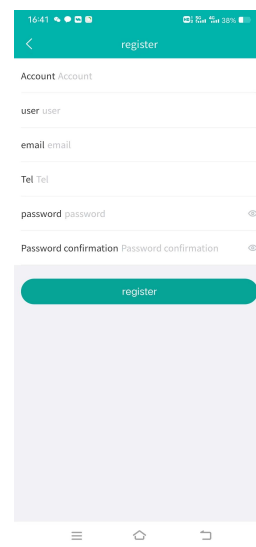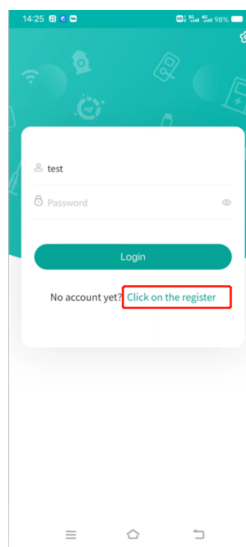
4

Acrel® Acrel ADL200+AWT100-4GHW
Wiring&System Operation Manual
(1-phase Centralized)

Author: Aaron
E-mail: aaron@acrel.cn
Wb: www.acrel-electric.ke

2. System Operation

After correctly installing, wiring and powering up the Acrel devices, there are 4 steps to bind these devices with Acrel System before formally using the system:

(1) Step 1 - Download IoT EMS APP on your Mobile Phone;

(2) Step 2 - Register and login your own account.

(3) Step 3 - Create a new Project

(4) Step 4 - Add devices to your new Project (Recommend to add by using APP)

Extra Noted: Acrel IoT EMS APP (for Mobile) and IoT EMS WEB (for PC) Share the same data and account, once add the devices using APP, we can check the data on IoT EMS WEB on PC.

(3) Creat a new Project:

- "My"　　"Project management"

- Click "+" icon on the right top

- Choose "Platform prepaid" and fill in other information marked by *
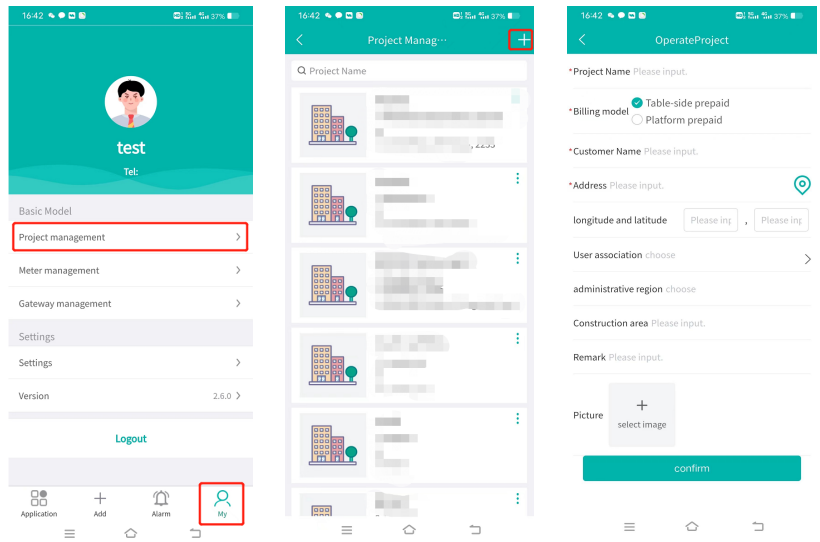
(2) Add Devices to Project:

- Enter "Add" interface

- Select "Project"

- Click "QR Code" scanning icon

- Scan the QR Code on AWT100-4GHW

- Downstream devices will be automatically recognized if connection success between AWT100-4GHW and ADL200/C

**Acrel ADL200+AWT100-4GHW
Wiring&System Operation Manual
(1-phase Centralized)**

Author: Aaron
E-mail: aaron@acrel.cn
Wb: www.acrel-electric.ke

3. Acrel IoT Energy Monitoring System (Partail Introduction)

Acrel IoT Energy Monitoring System could be access in 2 different ways:

(1) Access through WEB on your computer.

Access port: https://iot.acrel-eem.com/

(2) Access through APP on your mobile phone

Download Link: https://play.google.com/store/apps/details?id=com.acrel.iotems

(1) WEB Accesss (Computer):

Access Port: https://iot.acrel-eem.com/

Account Name: (Enter yours)

Account Password: (Enter yours)
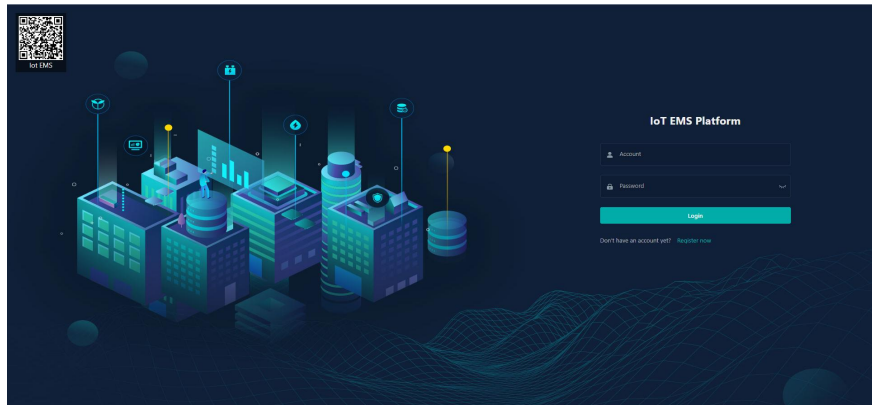
(2) APP Accesss (Mobile):

Download Link: https://play.google.
com/store/apps/details?id=com.acrel.
iotems
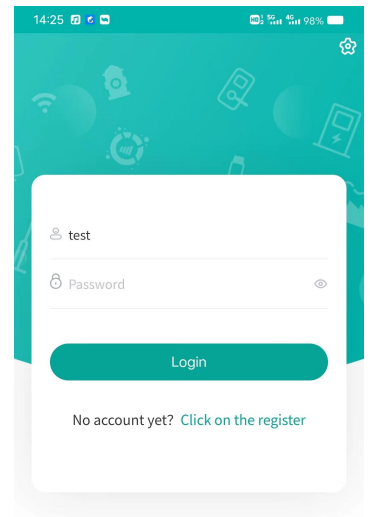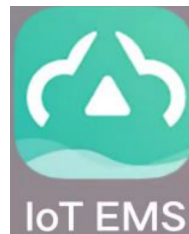
Account Name: (Enter yours)

Account Password: (Enter yours)

Acrel ADL200+AWT100-4GHW
Wiring&System Operation Manual
(1-phase Centralized)

Author: Aaron
E-mail: aaron@acrel.cn
Wb: www.acrel-electric.ke

3. Acrel IoT Energy Monitoring System (Partail Introduction)

Main Function of WEB side System:

(1) Devices List (2) History Curve (3) Electricity Parameters Report (4) Energy Consumption Report (Daily, Monthly, Yearly) (5) User Report
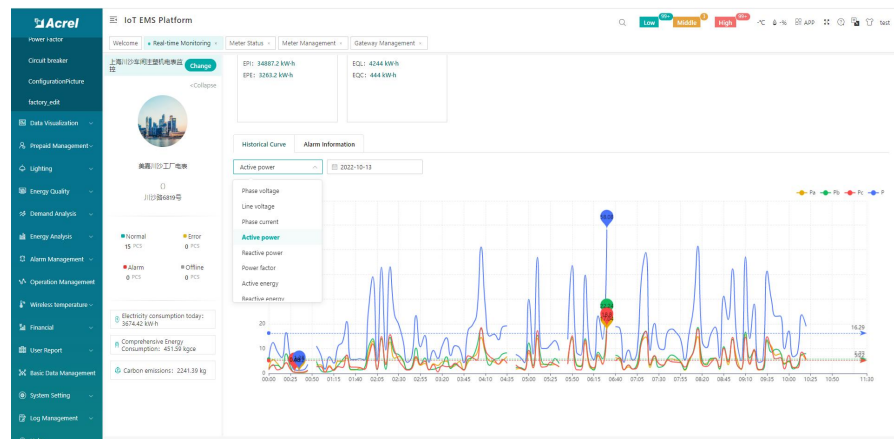
(1) Devices List: Showing the overall devices connected to Acrel System and were bond to certain project. SN code, Online-Offline status, devices model and other necessary information will be shown here.
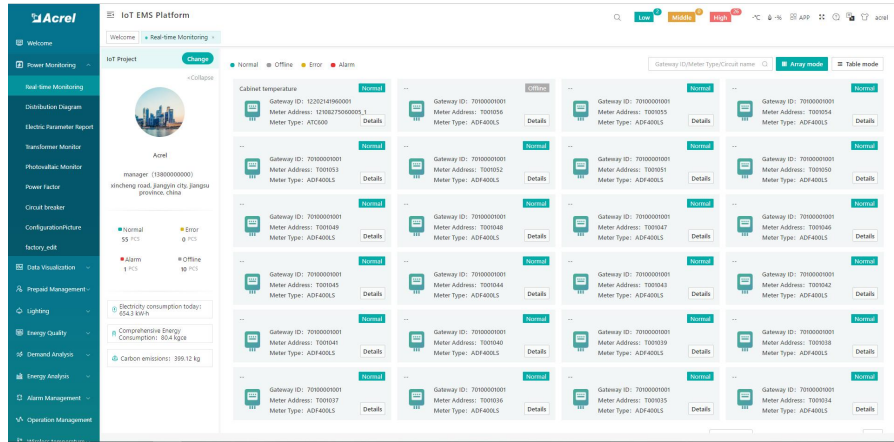
(2) History Curve: Showing the daily history data curve of all the data that could be collected and upload by energy meter or other basic metering devices.
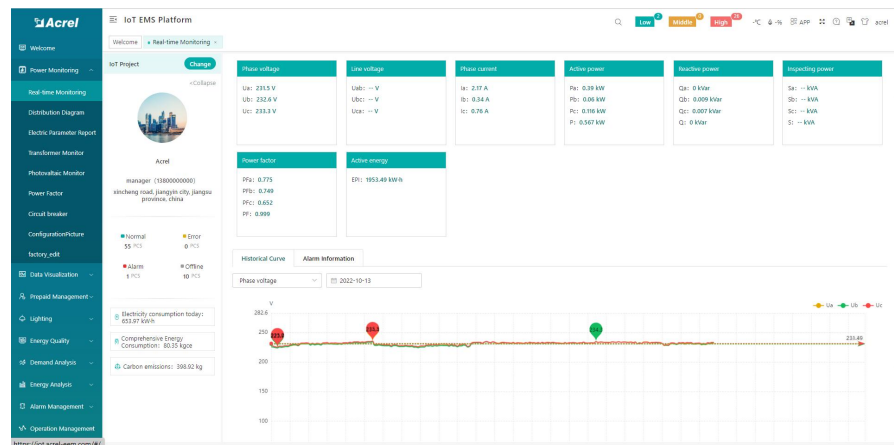
(2) History Curve: By selecting the items of "data" and "electricity parameter", platform can show the history curve of different data and date.

Acrel ADL200+AWT100-4GHW
Wiring&System Operation Manual
(1-phase Centralized)

Author: Aaron
E-mail: aaron@acrel.cn
Wb: www.acrel-electric.ke

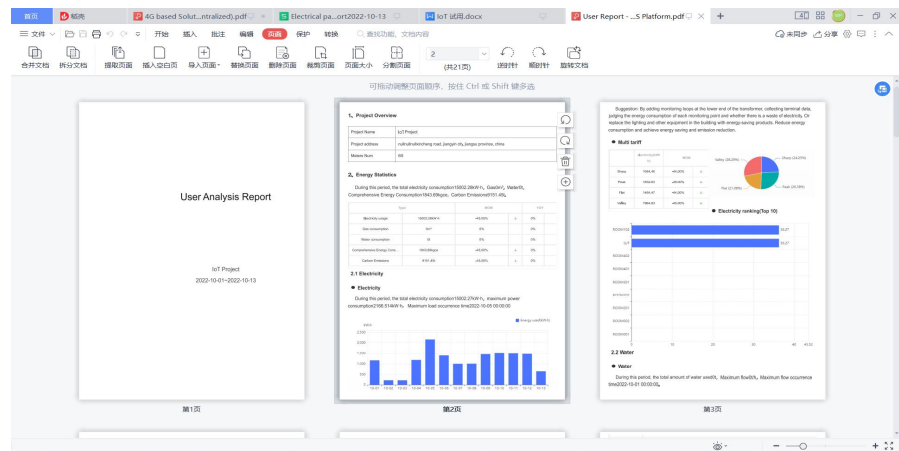# 3. Acrel IoT Energy Monitoring System (Partail Introduction)

Main Function of WEB side System:

(1) Devices List (2) History Curve (3) Electricity Parameters Report (4) Energy Consumption Report (Daily, Monthly, Yearly) (5) User Report
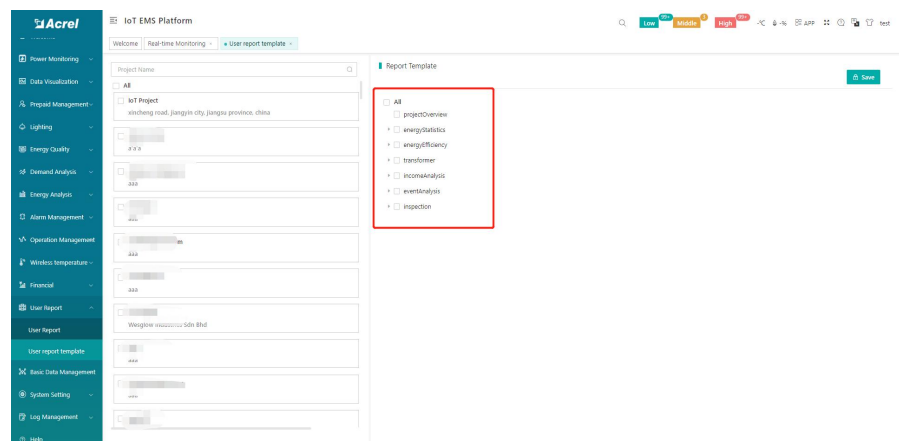
(4) Energy Report (Daily): This Interface show the daily energy consumtion report (calculated by forward active energy)

(4) Energy Report (Daily): This daily energy report could be also export to computer in "Excel" format

(4) Energy Report (Monthly& Yearly): Same as daily energy report, monthly and yearly energy report could be also checked on platform and exported in "Excel" format.

Acrel ADL200+AWT100-4GHW
Wiring&System Operation Manual
(1-phase Centralized)

Author: Aaron
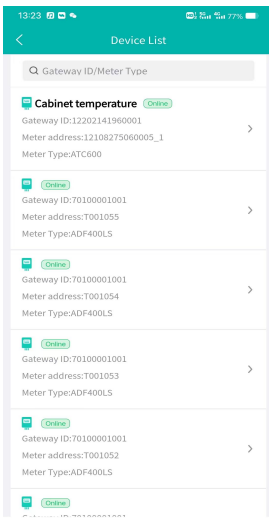E-mail: aaron@acrel.cn
Wb: www.acrel-electric.ke

3. Acrel IoT Energy Monitoring System (Partail Introduction)

Main Function of WEB side System:

(1) Devices List (2) History Curve (3) Electricity Parameters Report (4) Energy Consumption Report (Daily, Monthly, Yearly) (5) User Report

(5) User Report: A comprehensive user report including project overview, energy report, energy analysis and etc could be check on platform
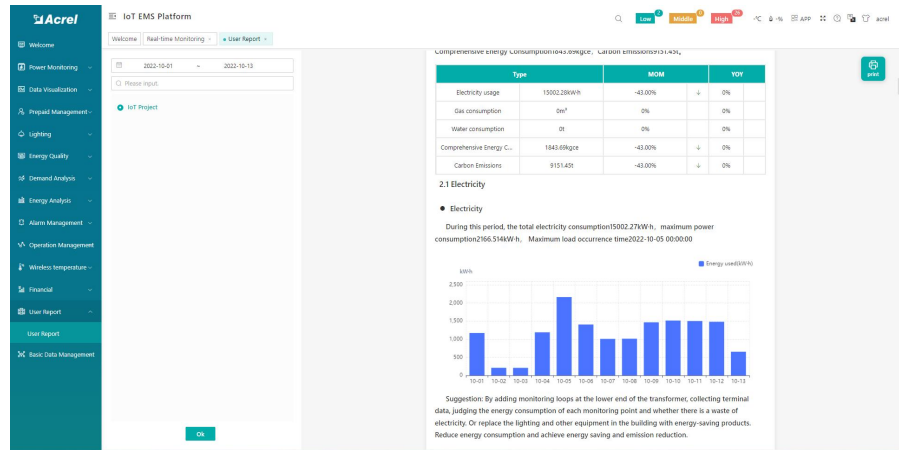
(5) User Report: User report could be exported in "PDF" format into your PC for convenient check and storage.

(5) User Report: User report support template customization in buy-out service of Acrel IoT Energy Monitoirng System.

Acrel ADL200+AWT100-4GHW
Wiring&System Operation Manual
(1-phase Centralized)

Author: Aaron
E-mail: aaron@acrel.cn
Wb: www.acrel-electric.ke

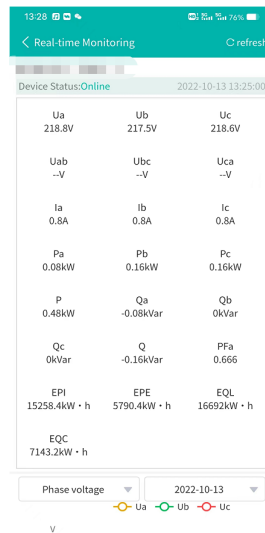# 3. Acrel IoT Energy Monitoring System (Partail Introduction)

Main Function of APP side System:

(1) Devices List (2) History Curve (3) Electricity Parameters Report (4) Energy Trend (5) Energy Consumption Report (Daily, Monthly, Yearly)
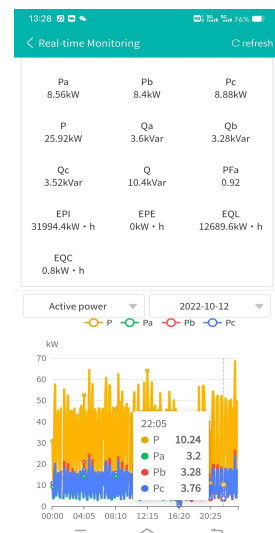
Noted: Since APP side and WEB side of Acrel IoT Energy Monitoring System share the same data, normally recommend our user to add the devices to their account using APP and check the data using WEB platform.
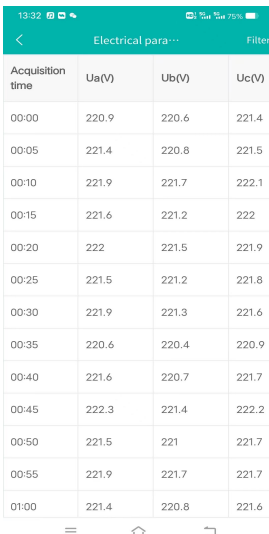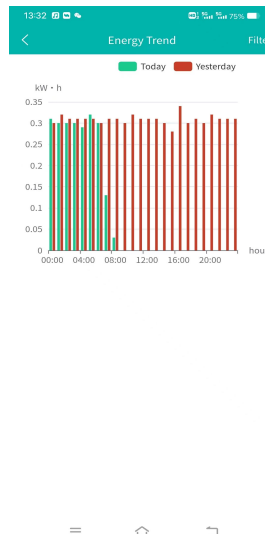

(1) Device List

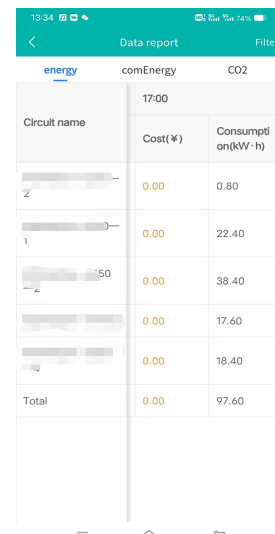(2) History Curve

(2) History Curve

(3) Parameter Report

(4) Energy Trend

(5) Energy Report