# ADF400L Series multi user electric energy meter

## General

The ADF400L series multi-user electric energy meter can achieve up to 12 three-phase or 36 single-phase direct access measurement or 12 three-phase mutual inductor access measurement, a hybrid of direct access and mutual inductor access through module combination measurement method. This series of electric energy meters are popular among communities, schools, enterprises, etc. due to their high accuracy, centralized installation, centralized management, high installation flexibility, and non-interference.

## Product Specifications

### ■ Model Description

ADF400L - □ H □ S □ D □ - □

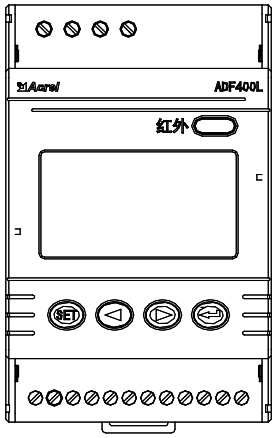
- Optional function: none、CE、IC、K、*C(Up to 3 channels)
- Control type: none: metering type; Y: prepaid type
- Single-phase circuit: up to 36 (multiple of 3) circuits
- Three-phase circuit: up to 12 circuits
- Three mutual inductor access loop: up to 12 (multiple of 2) channels

Note：1、The product consists of main module, direct access module and transformer access module；

2、The product leaves the factory according to the module combination method；

3、The maximum combination of products can achieve 12 three-phase measurements (3 single-phase can be converted into 1 three-phase loop)；

### ■ Product Module Description




#### Main module

1、Three-phase 3*220/380V power supply to provide working power for the back-end measurement module；

2、Man-machine interface: LCD and button programming;

3、Infrared communication；

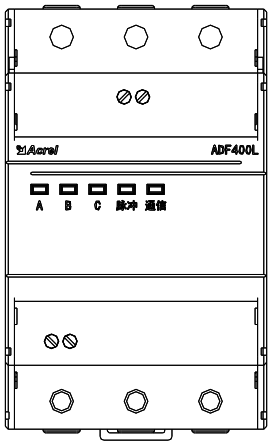
4、RF card swiping (IC function)；

5、2 RS485 network communication (*C function)；

6、RS485 communication for No. 3 extended wireless module (RJ45 connection mode )；

7、Up to 2DI/2DO (K function)；

8、Up to 1 Ethernet communication (CE function)；

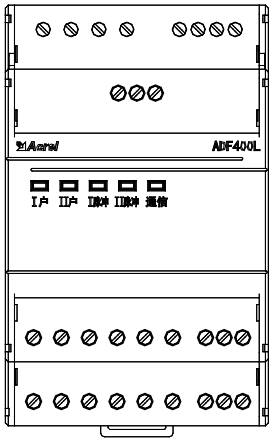



## Direct access to the measurement module

1、It can realize one-way three-phase 3*10 (80) measurement or three-way single-phase 10 (80) A measurement;

2、1 active energy pulse output;

3、Three-phase working status, pulse and communication status LED indication;




## Transformer access measurement module

1、Two-way three-phase 3*1 (6) A measurement can be realized;

2、2 active energy pulse output;

3、2 three-phase working status, pulse and communication status LED indication;

4、Up to 4DI/4DO function (K function);

# Product Functions

## ■ Prepaid

| Function | Function description |
|---|---|
| Energy metering | Total active energy, forward and reverse active energy, multi-rate active energy measurement |
| Electricity measurement | U、I |
| | P、Q、S、PF、F |
| LCD display | 8-digit segment LCD display, backlight display |
| Button programming | Key programmable communication, number of loops, single three-phase mode, external control mode and other parameters |
| Pulse output | Active pulse output |
| Multiple rate | Support 4 time zones, 2 time slots, 14 daily time slots, 4 rates |
| | Date, time, day of the week |
| Main module | Infrared communication |
| Communication | Up to 3 channels of communication: RS485 interface，Also support Modbus |
| Prepaid agreement (remote, radio frequency card) | Cost control (including forward active power and reverse active power) |
| | Time control |
| | Negative control (malignant load identification) |
| | Strong control |
| Recharge record | 20 Article |

## ■ Metering type

| Function | Function description |
|---|---|
| Display method | LCD（Field） |
| Energy metering | Active energy metering（Forward and reverse），Reactive power measurement（Forward and reverse） |
| Electricity measurement | Voltage, current (zero sequence current), power factor, frequency, active power, reactive power, apparent power |
| Harmonic function | Total harmonic content, sub-harmonic content (2～31 times) |
| Three-phase unbalance | Voltage and current unbalance |
| DI/DO | Main module 2DI2DO |
| | Transformer access to the slave module 2DI4DO (direct access to the slave module without) |
| LED Instructions | Pulse light indication |
| Communication | Infrared communication |
| | RS485 interface (main module) supports MODBUS |
| Historical power | Historical Electricity in Last December |

# Technical Parameter

| Technical Parameter / Model | | ADF400L-□H□S□D(Y)- □ |
|---|---|---|
| Auxiliary power | Voltage | Three-phase 3*220V/380V power supply (for single-phase power supply, short-circuit terminals 1, 2, and 3 on the instrument) |
| | Power consumption | ≤10W |
| Voltage input | Rated voltage | 3×220/380V、3×57.7/100V、 |
| | Reference frequency | 50Hz |
| Current input | Input Current | 3×1(6)A(Instrument transformer access), 3*10 (80) (direct access) |
| | Starting current | 1‰Ib |
| Measuring performance | Measurement accuracy | 0.5s level |
| | Clock accuracy | ≤0.5s/d |
| Pulse | Pulse output | Each three-phase metering module has 1 active energy pulse |
| | Pulse Width | 80ms±20ms |
| | Pulse constant | 3×1(6)A specification 6400 imp/kWh |
| | | 3×10(80)A specification 400 imp/kWh |
| Switch | Main module | Main module 2DI+2DO，Among them, DI is dry contact input |
| | Slave module | Transformer access slave module 4DI+4DO，Among them, DI is 220V wet contact input |
| Communication | Infrared interface | Infrared communication |
| | RS485 interface | MODBUS-RTU |
| | Ethernet interface | Modbus-TCP、TCP/IP |
| Surroundings | Temperature | Operating temperature：-20℃~+60℃，<br>storage temperature：-30℃~+70℃ |
| | Humidity | ≤95%RH，No condensation, no corrosive gas place |
| | Altitude | ≤2000m |