ADL200 – User Manual

GENERAL

This 80A direct connect DIN Rail meter is for use with single phase supplies and measures electrical parameters including Current (I), Voltage (V), Power (kW/KVA/KVAr), Power Factor (PF), Frequency (Hz), Imported, Exported and Total Energy (kWh/kVArh).

It's MID approved, allowing it to be used for billing applications and is highly accurate, (Class B, ±1%). With both a Pulse Output and RS485 Modbus RTU it can be integrated with BMS or remote monitoring systems.

SPECIFICATION

Meter Type	Single Phase
Fitting Type	DIN Rail
Max. Current (Amps)	80A
MID Approved	Yes
Smart (GPRS modem)	No
Input Type	Direct Connect
Tariffs	Single
Import / Export	Import & Export
Module Width	2
Reference Voltage	AC 220V
Consumption	<4VA
Frequency	50Hz
Accuracy – Active Energy	Class 1
Clock	≤0.5 s/d
Pulse Output	Active Energy
Width of Pulse	80±20ms
Pulse Constant	1000imp/kWh
Interface and Communication Protocol	Modbus RTU over RS485
Range of Modbus Addresses	1 - 254
Baud Rate	1200bps - 19200bps
Working Temperature	-25℃ - +55℃
Relative Humidity	≤95% (No condensation)
IP Rating	IP20
LCD Display	8 digit LCD backlit display
Key Programming	3 keys to view and set parameters

MEASURED PARAMETERS

- Active Energy (kWh)
- Active Power (W)
- Apparent Energy (kVAh)
- Apparent Power (VA)
- Current (I)
- Frequency (Hz)
- Power Factor (PF)
- Reactive Energy (kVArh)
- Reactive Power (VAr)
- Voltage (V)

SETUP

Press and hold the  to enter the setup menu. Enter the password, (default is "0001"), using the  button to move the cursor and the  button to change the value, then press  .

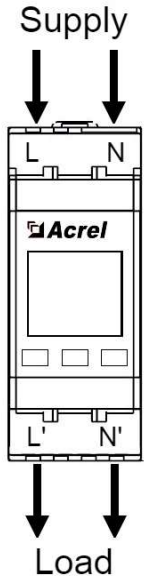
Use the  and  buttons to scroll through the values and press  to amend any settings.

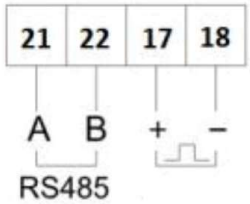
Once complete, press and hold the  button and select 'Yes' to save or 'No' to exit without saving changes.

Symbol	Description	Range
Addr	Modbus Address	1 - 254
bAUd	Baud Rate	1200, 2400, 4800, 9600, 19200
Pari	Parity Setting	None, Odd, Even
H	High	645 Comms protocol (N/A)
L	Low	645 Comms protocol (N/A)
Led	Backlight Time	0-255 minutes, >250 lights to not turn off
S-ty	App. Power Calc.	P Q or U I (N/A)
EF-E	Tariff Set	N/A on this model
dir	Direction of current	no-Forward, yes-Reverse
COdE	Code settings	1 - 9999

WIRING & INSTALLATION

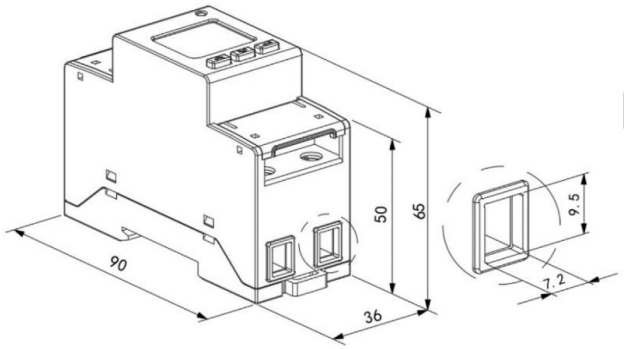
The ADL200 is designed to be installed on a 35mm DIN Rail





Note: Terminal screw torque – 4.0Nm max

DIMENSIONS

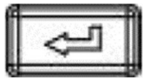


HOW TO USE

This unit features 3 buttons to display the measured electrical parameters. By pressing each button, the user will cycle through the parameters and settings.

 **Voltage & Current**

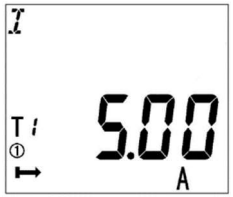
 **Power**

 **Energy**

Voltage & Current

Pressing the  button displays the following parameters:

Voltage (V)



Current (A)

Frequency (Hz)

Modbus Address

Baud Rate

Parity Setting

High word for 645 Protocol (N/A)

Low word for 645 Protocol (N/A)

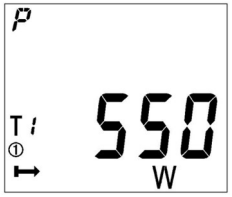
Firmware Version

Cr (software verification code)

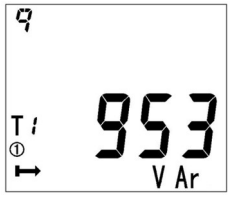
Full Display Test

Power

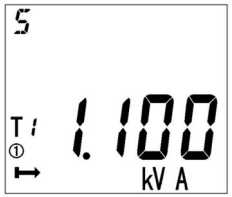
Pressing the  button displays the following parameters:



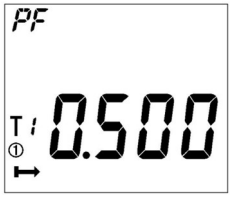
Active Power (kW)



Reactive Power (kVar)



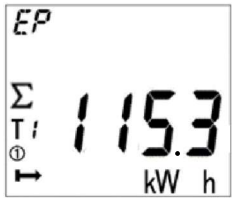
Apparent Power (kVa)



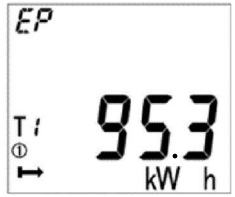
Power Factor

Energy

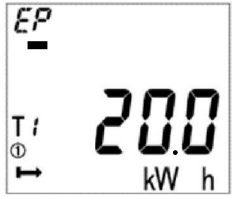
Pressing the  button displays the following parameters:



Total (imported + exported) Active Energy (kWh)



Imported Active Energy (kWh)



Exported Active Energy (kWh)

Total Reactive Energy (kVArh)

Imported Reactive Energy (kVArh)

Exported Reactive Energy (kVArh)

MODBUS PROTOCOL

For the full Modbus Protocol please visit:

http://downloads.spwales.com/spdac200-protocol.pdf

Or use the following QR code: