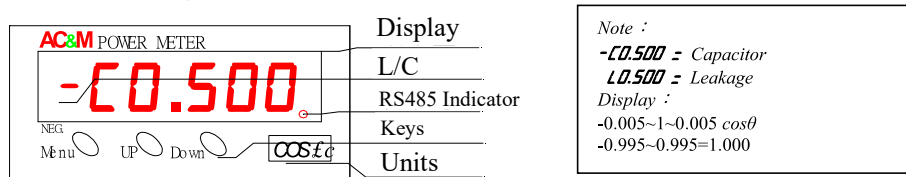


1. Panel and Keys



2. Keys Function

KEY	FUNCTION	INSTRUCTION
Menu	Menu / Confirm	Enter menu/Confirm setting
UP	Change number / Turn page	Page up
Down	Change position / Turn page	Page down

3. Parameter Setting

3.1 Basic Setting (Press Menu for 2 seconds to enter setting mode)

Note: You only need to set the phase function according to the connection diagram.

Menu	Function	Instruction
PHASE Press UP 3P4L Press Menu	System	Press Down to select 1P2W-1-3W-3P3W-3P4W
PT Press UP 000 1.0 Press Menu	PT ratio	Press UP and Down to set. Range: 1-5999.9
CT Press UP 000 1 Press Menu	CT ratio	Press UP and Down to set. Range: 1-9999
Unit Press UP M Press Menu	Unit	Press Down to select KW/MW
dPt Press UP 18.888 Press Menu	Decimal point	Press Down to set 888.8
id Press UP 050 Press Menu	Address	Press UP and Down to set. Range: 1~255
BAUD Press UP 96 Press Menu	Baudrate	Press Down to select 1200-2400-4800-9600-19200-38400-57600-115200
PAR Press UP 8n 1 Press Menu	Parity check	Press Down to select 8N1-8N2-8O1-8O2-8E1-8E2 (PARITY)
PUL 1 Press UP 1 1 Press Menu	PULSE1	Press Down to select 1-10-100-0.01-0.1 PULSE / WH Press UP to select corresponding output signal : +WH/-WH/+QH/-QH Note : Corresponding to secondary value
PUL 2 Press UP 1 2 Press Menu	PULSE2	
FUNC Press UP 0000 Press Menu	NO function	No need to set.
SAVE Press UP 0000	Save setting	Press UP and Down to key in password 0088 to confirm settings.

Note : Any settings will only be effective after entering password.

4. Analog Output Setting

4.1 Function

- 500Ω at 20mA , Voltage: 10 mA (Max)
- Corresponding to PF values.

4.2 Setting

Enter **FUNC 0000** Press UP and Down to enter **0060**
Press Menu to enter setting mode

Setting instruction

- PF** Press Down to select PF
- 0.500** Press UP and Down to set corresponding value at 20mA
- SAVE** Press Menu
- 0000** Press UP and Down to key in password 0099
Press Menu to finish setting.

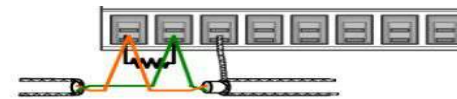
Example : Output 4~20ma corresponding to -0.500~1.000~0.500cosθ, please set as 0.500

5. Communication

5.1 Function

- MODBUS RTU MODE
- RS485 (Half-Duplex)
- Baudrate: (1200-2400-4800-9600-19200-38400-57600-115200)
- Parity : (NONE-ODD-EVEN)
- Address : 1-255
- Stop Bit: 1 or 2
- Data Bit: 8

5.2 Connection



Terminator:
In RS-485 circuit , there can only be 1 meter installed terminator. It's installed in the last meter of the circuit. Terminator : 120~150ohm

5.3 MODBUS RTU MODE PROTOCOL

DATA FORM (hexadecimal)

(ID Number) 1Byte	(Function Code) 1Byte	(Data) N Byte	CRC 2 Byte
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ID Number : The address of the meter (1-255)

CRC : Error check 16Bit CRC

FUNCTION CODE

03 (03H)	Read parameters of meter
06 (06H)	Set parameter

5.4 EXAMPLE

EX1. Read PF value of the meter .Master calls meter ID:1 to read address 0012. Data number:0001

ID NUMBER 1Byte (01H)	Function code 1Byte (03H)	Address 2Byte (00 0CH)	Data number 2Byte (00 01H)	CRC 2Byte (4409)
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Meter displays 1000

ID NUMBER (01H)	Function code (03H)	Data Byte (02H)	Data (03E8H)	CRC (B8FAH)
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5.5 Read Display Values

Address		Name	(Byte)	Format	Range	Function code	R/W
Address	Modbus						
12	40013	PF	2Byte	Signed Int	-32767~32768	03	Write

說明：
 Signed Int has polarity. Positive : 0-32767 ; Negative : 32768-65535 (-32767)
 The decimal point position is preset as 3 digit after decimal point , 1.000 cosθ , no need to read.
 EX: If the meter displays 0.500 (485 reading is 500) / If the meter displays -0.500 (485 reading is 65536-500=65036)

6.Connection diagram

