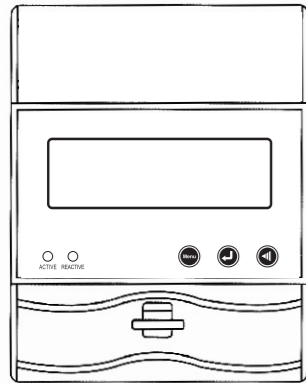


## Three Phase Energy Meter Instruction manual



CE UK CA made in China

### Overview

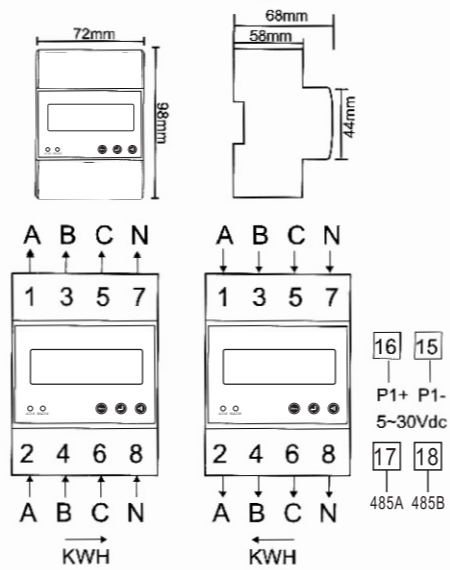
The three-phase electronic energy meter adopts microelectronic technology and large-scale integrated circuit, and applies advanced technologies such as digital sampling processing and SMT technology. Measure AC active energy with a rated frequency of 50/60HZ, and display active/reactive energy, three-phase voltage, current, power factor, frequency and other information. It has the characteristics of good reliability, small size, light weight, beautiful appearance, flexible and convenient installation, etc.

### Functions and features

- 35mm DIN standard rail mounting.
- High-accuracy measurement of active energy level 1 and reactive energy level 2.
- LCD backlight display.
- LED indicates pulse output, passive pulse output.
- Various parameters can be quickly inquired through the keys.
- With active bidirectional energy, reactive energy measurement, display current, voltage, power factor and other functions.

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### Dimensions and diagram



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### Technical parameter

Rated voltage: 3×230/400V  
 Rated current: 5(100)A  
 Input frequency: 50/60Hz  
 Starting current: 0.4%1b  
 Working power: 3×230VAC±20%  
 Power consumption: <2W/10VA per phase  
 Accuracy: Class 1  
 LCD backlight: 15 seconds  
 Dimensions: 96×72×68mm (L x W x H)  
 Installation method: 35mm standard din rail  
 Working temperature: -10℃~+55℃  
 Storage temperature: -40℃~+70℃  
 Relative humidity: 5%~95%

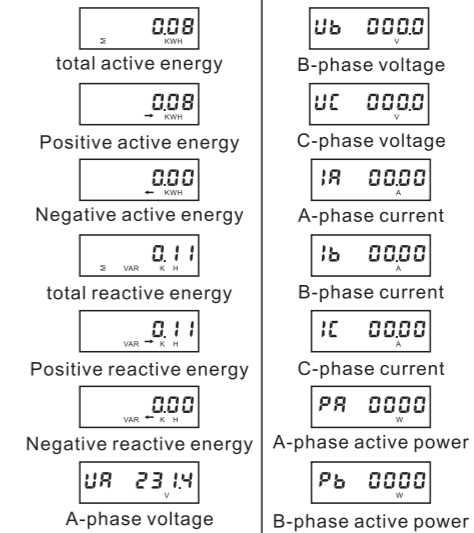
Pulse output indicator: the indicator flashes once, indicating the pulse output synchronously.

Model: KWH can't be reset  
 Can measure negative energy.

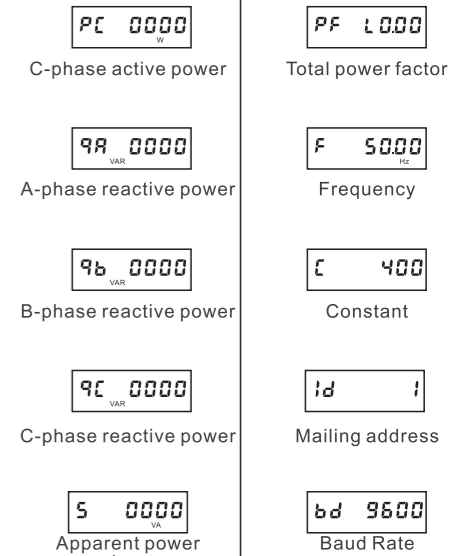
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### Programming menu

Press to switch parameter display



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### Technische Parameter DE

Nennspannung: 3x230/400V  
 Nennstrom: 5(100)A  
 Eingangsfrequenz: 50/60Hz  
 Anlaufstrom: 0,4 % 1b  
 Arbeitsleistung: 3 x 230 VAC ± 20 %  
 Leistungsaufnahme: <2W/10VA pro Phase  
 Genauigkeit: Klasse 1  
 LCD-Hintergrundbeleuchtung: 15 Sekunden  
 Abmessungen: 96 x 72 x 68 mm(Lx B x H)  
 Installationsmethode: 35-mm-Standard-DIN-Schiene  
 Arbeitstemperatur: -10°C~+55°C  
 Lagertemperatur: -40°C~+70°C  
 Relative Luftfeuchtigkeit: 5%~95 %  
 Impulsausgangsanzeige: Die Anzeige blinkt einmal, Anzeige der Impulsausgabe synchron.  
 Modell:KWH kann nicht zurückgesetzt werden, kann aber negative Energie messen.

### Paramètre technique FR

Tension nominale : 3x230/400V  
 Courant nominal : 5(100)A  
 Fréquence d'entrée : 50/60 Hz  
 Courant de démarrage : 0,4 % 1b  
 Puissance de fonctionnement : 3x230VAC+20%  
 Consommation électrique : <2 W/10 VA par phase  
 Précision : Classe 1

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Rétroéclairage LCD : 15 secondes  
 Dimensions: 96 x 72 x 68 mm (L x l x H)  
 Méthode d'installation : rail DIN standard de 35 mm.  
 Température de fonctionnement : -10°C~+55°C  
 Température de stockage : -40°C~+70°C  
 Humidité relative: 5 % à 95 %  
 Indicateur de sortie d'impulsion : l'indicateur clignote une fois, indiquant la sortie d'impulsion de manière synchrone.

Modèle :KWH ne peut pas être réinitialisé, mais peut mesurer l'énergie négative.

### Parametro tecnico IT

Tensione nominale: 3x230/400V  
 Corrente nominale: 5(100)A  
 Frequenza di ingresso: 50/60 Hz  
 Corrente iniziale: 0,4%1b  
 Potenza di lavoro: 3 X 230 V CA± 20%  
 Consumo energetico: <2W/10VA per fase  
 Precisione: Classe 1  
 Retroilluminazione LCD: 15 secondi  
 Dimensioni: 96x72x68 mm (L xP xA)  
 Metodo di installazione:  
 guida DIN standard da 35 mm  
 Temperatura di lavoro: -10°C~+55°C  
 Temperatura di conservazione: -40°C ~ +70°C  
 Umidità relativa: 5%~95%

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Indicatore di uscita a impulsi: l'indicatore lampeggia una volta, indicando l'uscita a impulsi in modo sincro.  
 Modello:KWH non può essere ripristinato, ma può misurare l'energia negativa.

### Parámetro técnico ES

Tension nominal: 3x230/400V  
 Corriente nominal: 5(100)A  
 Frecuencia de entrada: 50/60Hz  
 Corriente de arranque: 0,4%1b  
 Potencia de trabajo: 3x230VAC+20%  
 Consumo de energia: <2W/10VA por fase  
 Precisión: Clase 1  
 Luz de fondo LCD: 15 segundos  
 Dimensiones: 96 x 72 x 68 mm(largo X ancho X alto)  
 Metodo de instalacion: riel DIN estandar de 35 mm  
 Temperatura de trabajo: -10°C ~ + 55°C  
 Temperatura de almacenamiento: -40°C ~ + 70 °C  
 Humedad relativa: 5%~95%  
 Indicador de salida de pulso: el indicador parpadea una vez, indicando la salida de pulsos sincronicamente.

Modelo:KWH no se puede reiniciar, pero puede medir energia negativa.

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### 《Modbuscommunicationprotocolappendix》

address (Hex)	Data content	data format (word)	Company	read/write	explain
0x00	Phase A voltage	int 1	0.1V	R	Ua ( Examples: Addr 04 00 00 00 02 CRC0 CRC1)
0x01	Phase B voltage	int 1	0.1V	R	Ub
0x02	Phase C voltage	int 1	0.1V	R	Uc
0x03	Phase A current	int 1	0.1A	R	Ia
0x04	Phase B current	int 1	0.1A	R	Ib
0x05	Phase C current	int 1	0.1A	R	Ic
0x08	Phase A active power	int 1	W	R	Pa
0x09	Phase B active power	int 1	W	R	Pb
0x0A	Phase C active power	int 1	W	R	Pc
0x0C	Phase A reactive power	int 1	Var	R	Qa
0x0D	Phase B reactive power	int 1	Var	R	Qb
0x0E	Phase C reactive power	int 1	Var	R	Qc
0x14	Phase A power factor	int 1	0-1000	R	cosQA
0x15	Phase B power factor	int 1	0-1000	R	cosQB
0x16	Phase C power factor	int 1	0-1000	R	cosQC
0x1A	Voltage frequency	int 1	0.01Hz	R	FR
Meter setting parameters (read)					
0x61	Instrument communication address	int 1		R	1-247
0x62	Communication baud rate	int 1		R	0-800; 1-1200; 2-2400; 3-4800; 4-9600
0x63	Communication data format	int 1		R	data format 0-N.8.1 1-O.8.1 2-E.8.1
Meter setting parameters (write)					
0x61	Instrument communication address	int 1		W	1-247
0x62	Communication baud rate	int 1		W	0-800; 1-1200; 2-2400; 3-4800; 4-9600
0x63	Communication data format	int 1		W	data format 0-N.8.1 1-O.8.1 2-E.8.1
Current electric energy					
0x001D	Current total active energy	long 2	0.01kWh	R	
0x0027	Current total reactive energy	long 2	0.01kWh	R	
0x0031	Current total active energy	long 2	0.01kWh	R	
0x003B	Current total reactive energy	long 2	0.01kWh	R	
0x0045	Current total active energy	long 2	0.01kWh	R	
0x004F	Current total reactive energy	long 2	0.01kWh	R	

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### Electricity meter settings

Change ID to 002

1		Code
2		Put
3		0001
4		Put
5		Code
6		Conn
7		Add
8		0002
9		SAVE

Baud rate modified to 9600

1		Code
2		Put
3		0001
4		Put
5		Code
6		Conn
7		Add
8		bud
9		9600 Note:  Use the key to modify the baud rate
10		SAVE

Change the inspection position to NO

1		Code
2		Put
3		0001
4		Put
5		Code
6		Conn
7		Add
8		DATA
9		n81 Note:  Change key to parity check) n None, O Odd, E Even
10		SAVE

Modify the magnification by 20

1		Code
2		Put
3		0001
4		Put
5		Code
6		SEt
7		20
8		0001
9		Use the key  And  to modify 0020
10		SAVE