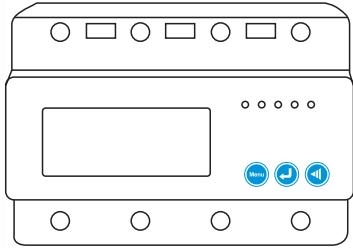


Three Phase Energy Meter
Instruction manual



Overview

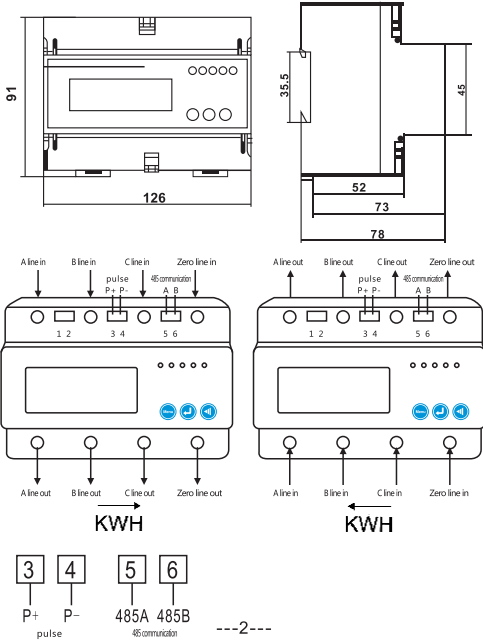
The three-phase electronic energy meter adopts microelectronic technology and large-scale integrated circuit, and applies advanced technologies such as digital sampling processing and SMT technology. Measure AC active energy with a rated frequency of 50/60HZ, and display active/reactive energy, three-phase 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: 126x78x91 mm (L x W x H)
Installation method: 35mm standard din rail
Working temperature: -10℃~+55℃
Storage temperature: -40℃~+70℃
Relative humidity: 5%~95%

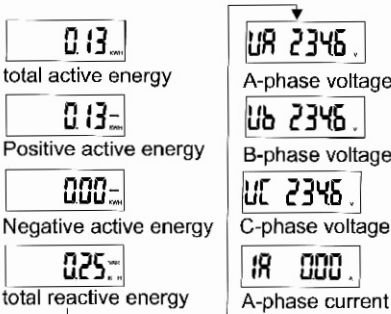
Pulse output indicator: the indicator flashes once, indicating the pulse output synchronously.

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

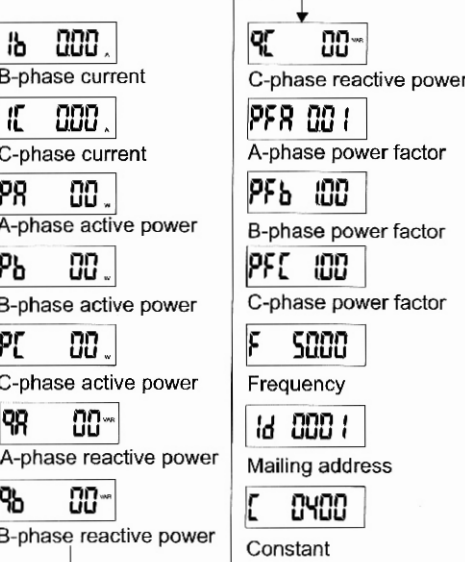
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Display and Key operation

Press to switch parameter display
Drücken Sie , um den Parameter zu wechseln
Appuyez sur pour changer de paramètre
Premere per cambiare parametro
Presione para cambiar el parámetro



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Technische Parameter DE

Nennspannung: 3x230/400V
Nennstrom: 10(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: 126 x 78 x 91 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: 126 x 78 x 91 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: 126 x 78 x 91 mm (L x P x A)
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: 126 x 78 x 91 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》

MODBUS-RTU communication address information table (03 04 read 10 as write universal address 00)						
default baud rate: 9600bps even validity						
address (Hex)	Data content	data format (word)	length	Company	Read vlt R/W	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	0~1.000	R	cosQ A
0x15	Phase B power factor	Int	1	0~1.000	R	cosQ B
0x16	Phase C power factor	Int	1	0~1.000	R	cosQ C
0x1A	Voltage frequency	Int	1	0.01Hz	R	FR
Meter setting parameters (write)						
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		nB1	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	 	Ct1
8		0001
9	Use the key  And  to modify	0020
10	  	SAVE 