

# 单、三相电子式 远程预付费电能表系列

Single and three-phase  
electronic remote prepaid watt-hour  
meter series



## DDSY997 型 4G 款远程单相预付费电表 (壁挂式) Remote single-phase prepaid meter (Wall mounted)

### 概述 Overview

DDSY997 型电子式单相预付费电能表是我公司在性能优良的电子式单相电能表的基础上研制开发的具有电能计量、负荷控制和用户信息管理等多种功能的新型无线远程预付费电能表, 该表是当前改革用电体制、实现电能商品化、解决收费难及调节电网负荷状态的理想产品。

该产品的各项性能指标符合 GB/T17215.321-2008 《1 级和 2 级静止式交流有功电度表》和 GB/T18460.3-2001 标准中对电子式单相预付费电能表的全部技术要求。

DDSY997 electronic single-phase prepaid watt-hour meter is a new wireless remote prepaid watt-hour meter developed by our company on the basis of the electronic single-phase watt-hour meter with excellent performance, which has many functions such as power metering, load control and user information management. The table is an ideal product for reforming the current power consumption system, realizing the commercialization of electric energy, solving the difficulty of charging and adjusting the load state of the power grid.

The performance indicators of the product meet all the technical requirements of the electronic single-phase prepaid energy meter in GB/T17215.321-2008 "1 and 2 static AC active power meter" and GB/T18460.3-2001 standard.

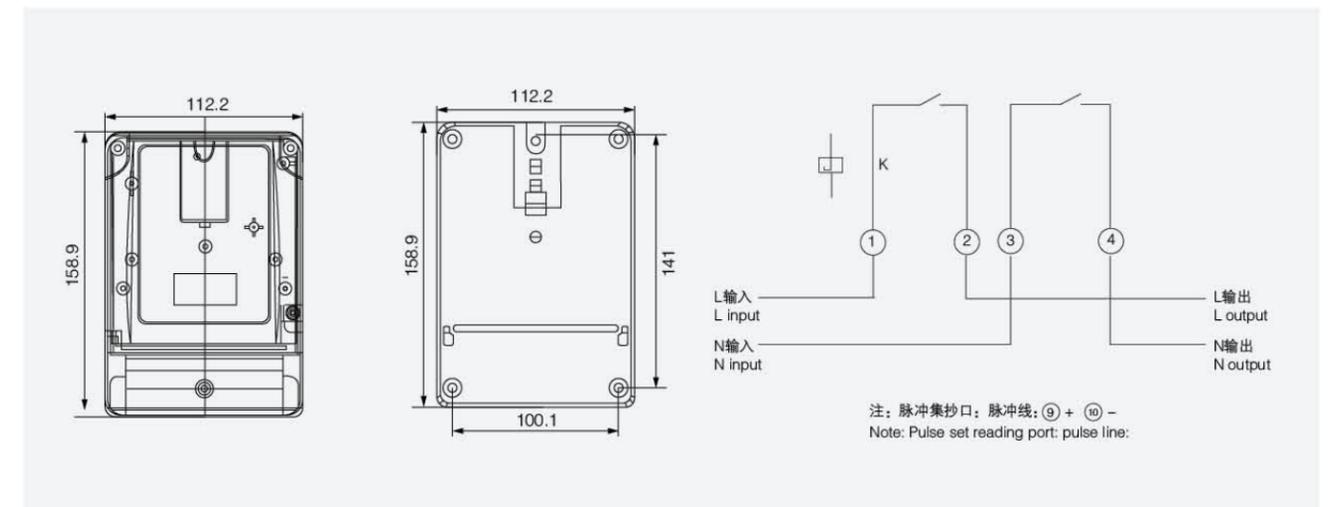
### 特点 Feature

- 送流量卡 (包三年流量费): 电表内置移动 4G 流量卡
- 与中国移动签署战略合作: 物联网卡信号全国覆盖断线自动拨号连接
- 无需采集器: 电表与系统直连 - 无需接线。
- 彻底解决蓝牙 WiFi 表的各项缺点: 解决了蓝牙表距离限制和 WiFi 表的不稳定性节约时间成本以及售后效率。
- 24 小时充值不受限制: 支持手机 APP、微信公众号充值; 实现远程抄表、充值、清零、通断
- 可拓展水表: 可拓展水表, 水电表同一个管理系统
- Data card (including three years of data fee): the meter built-in mobile 4G data card
- Signed strategic cooperation with China Mobile: iot card signal nationwide coverage of automatic dial-up connection
- No collector: the meter is directly connected to the system - no connection is required.
- Completely solve the shortcomings of the Bluetooth WiFi meter: solve the distance limit of the Bluetooth meter and the instability of the WIFI meter to save time, cost and after-sales efficiency.
- 24-hour recharge is not limited: support mobile APP, wechat public account recharge; Realize remote meter reading, recharge, zero clearing, on-off
- Expandable water meter: expandable water meter, water meter with one management system

### 技术参数 Technical parameter

额定电流 Rated current (A)	2.5 (10) 、 5 (20) 、 10 (40) 、 15 (60) 、 20 (80) 、 30 (100)
额定电压 Rated voltage (V)	220 或 240
额定频率 Rated frequency (Hz)	50 或 60
准确度等级 Accuracy class	1 级

### 外形尺寸及接线图 Overall dimensions and wiring diagram (mm)





概述 Overview

DT (S) SY997 型电子式三相预付费电能表具有电能计量、负荷控制和用户信息管理等多种功能的新型无线远程预付费电能表。该表是当前改革用电体制、实现电能商品化、解决收费难及调节电网负荷状态的理想产品。本系列电子式三相电能表接入方式有两种：直接接入式或经互感器接入式。该产品各项性能指标符合 GB/T17215.3-1-2008 《1 级和 2 级静止式交流有功电度表》和 GB/T18460.3-2001 标准中对电子式三相预付费电能表的全部技术要求。

DT (S) SY997 electronic three-phase prepaid energy meter A new wireless remote prepaid energy meter with multiple functions such as power metering, load control and user information management. The table is an ideal product for reforming the current power consumption system, realizing the commercialization of electric energy, solving the difficulty of charging and adjusting the load state of the power grid. There are two kinds of access methods for this series of electronic three-phase energy meter: direct access or access by transformer. The performance indicators of the product meet all the technical requirements of the electronic three-phase prepaid watt-hour meter in GB/ T17215.3-1-2008 "1 and 2 stationary AC active watt-hour meter" and GB/T18460.3-2001 standard.

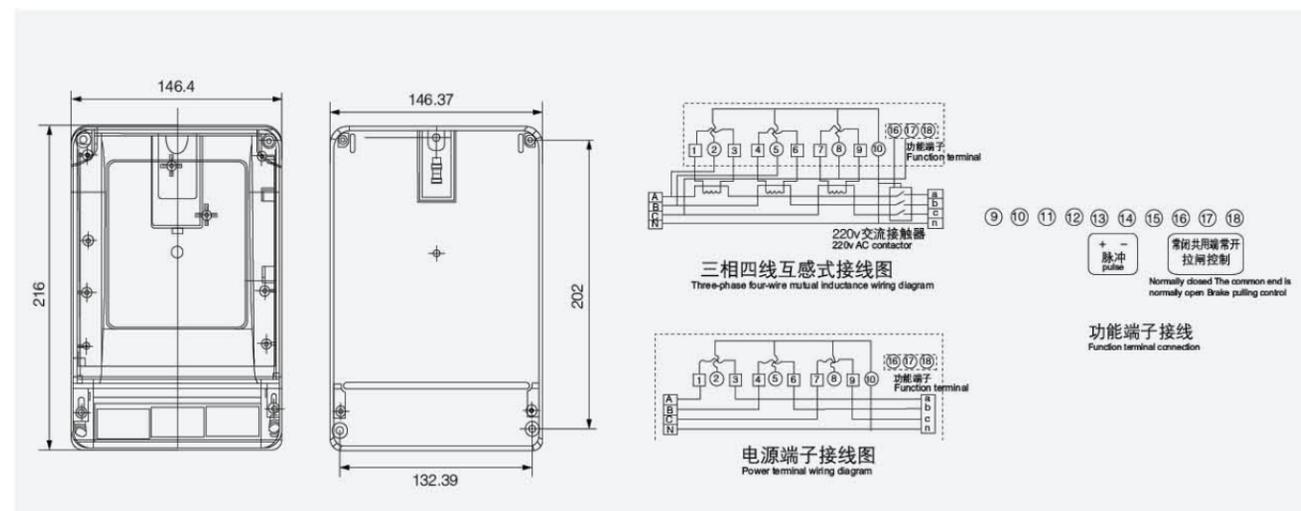
特点 Feature

- 送流量卡 (包三年流量费)：电表内置移动 4G 流量卡
- 与中国移动签署战略合作：物联网卡信号全国覆盖断线自动拨号连接
- 无需采集器：电表与系统直连 - 无需接线。
- 彻底解决蓝牙 WiFi 表的各项缺点：解决了蓝牙表距离限制和 WiFi 表的不稳定性节约时间成本以及售后效率。
- 24 小时充值不受限制：支持手机 APP、微信公众号充值；实现远程抄表、充值、清零、通断
- 可拓展水表：可拓展水表，水电表同一个管理系统
- Data card (including three years of data fee) : the meter built-in mobile 4G data card
- Signed strategic cooperation with China Mobile: iot card signal nationwide coverage of automatic dial-up connection
- No collection device: the meter is directly connected to the system - no wiring is required.
- Completely solve the shortcomings of the Bluetooth WiFi meter: solve the distance limit of the Bluetooth meter and the instability of the WiFi meter to save time, cost and after-sales efficiency.
- 24-hour recharge is not limited: support mobile APP, wechat public account recharge; Realize remote meter reading, recharge, zero clearing, on-off
- Expandable water meter: expandable water meter, water meter with one management system

技术参数 Technical parameter

额定电流 Rated current (A)	1.5(6)、5(20)、10(40)、15(60)、20(80)、30(100)
额定电压 Rated voltage (V)	3×220/380V 3×380V
额定频率 Rated frequency (Hz)	50 或 60
准确度等级 Accuracy class	1 级

外形尺寸及接线图 Overall dimensions and wiring diagram (mm)



概述 Overview

DDSY997 型单相电子式预付费电能表主要用于单相的计量。仪表采用液晶显示，具有有功电能计量、RS485 通讯、远程控制断送电、抄表日电量自动冻结、实时监控等功能。

本仪表综合技术指标符合中华人民共和国国家标准 GB/T17215-2002 《1 级和 2 级静止式交流有功电度表》的要求，红外通信符合 DL/T645-2007 《多功能 电能表通信规约》的要求。符合中华人民共和国电力行业标准 DL/T698-1999 《低压电力用户集中抄表系统技术条件》。

DDSY997 single-phase electronic prepaid energy meter is mainly used for single-phase measurement. The instrument adopts liquid crystal display, with active power metering, RS485 communication, remote control power supply, automatic freezing of meter reading daily power, real-time monitoring and other functions.

The comprehensive technical indicators of the instrument meet the requirements of the national standard of the People's Republic of China GB/T17215-2002 "1 and 2 stationary AC active power meter", and the infrared communication meets the requirements of DL/T645-2007 "Multi-function electricity meter communication Protocol". In line with the People's Republic of China power industry standard DL/T698-1999 "Low voltage power users centralized meter reading system Technical conditions".

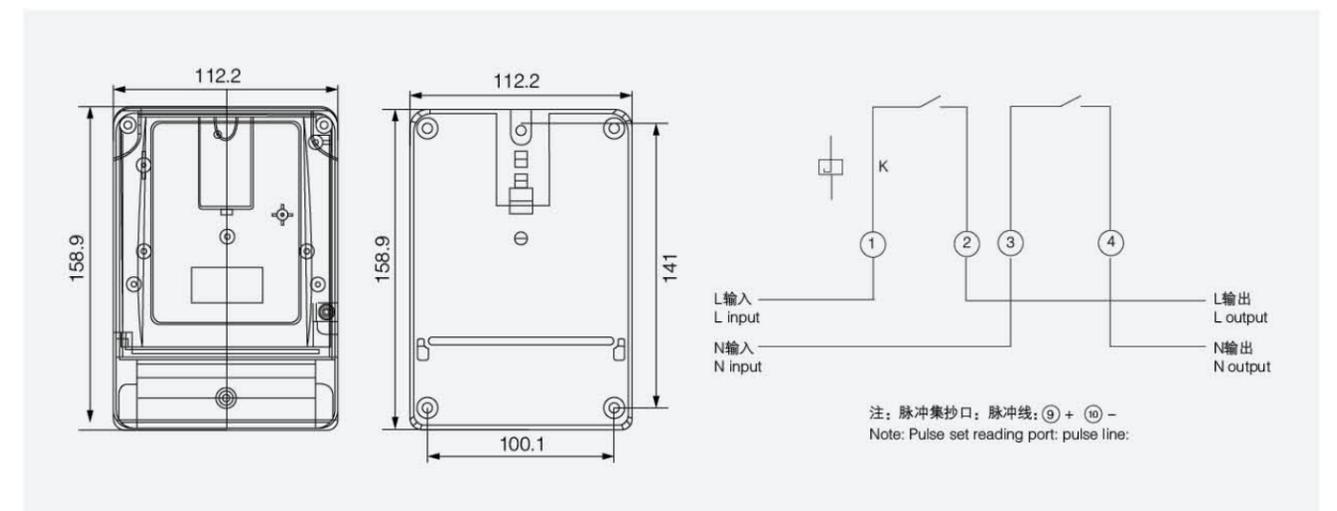
特点 Feature

- 有功电能 1.0 级计量
- 通讯方式 485、支持 DL/T645-2007
- 支持用户信息录入
- 远程抄表、充值、开合闸
- 超容断电限制功能
- 支持生成各项充值报表，所有记录一目了然
- Active power 1.0 metering
- Communication mode 485, support DL/T645-2007
- Support user information input
- Remote meter reading, recharge, opening and closing
- Over-capacity power restriction function
- Support the generation of various recharge reports, all records at a glance

技术参数 Technical parameter

额定电流 Rated current (A)	2.5 (10) 、 5 (20) 、 10 (40) 、 15 (60) 、 20 (80) 、 30 (100)
额定电压 Rated voltage (V)	220 或 240
额定频率 Rated frequency (Hz)	50 或 60
准确度等级 Accuracy class	1 级

外形尺寸及接线图 Overall dimensions and wiring diagram (mm)



DTSY997 远程三相预付费电表 (485 壁挂式)  
DTSY997 Remote three-phase Prepaid meter (485 Wall mounted)



概述 Overview

DTSY997 型电子式三相预付费电能表具有电能计量、负荷控制和用户信息管理等多种功能的新型远程预付费电能表。该表是当前改革用电体制、实现电能商品化、解决收费难及调节电网负荷状态的理想产品。本系列电子式三相电能表接入方式有两种：直接接入式或经互感器接入式。该产品各项性能指标符合 GB/T17215.3-1-2008《1 级和 2 级静止式交流有功电能表》和 GB/T18460.3-2001 标准中对电子式三相预付费电能表的全部技术要求。

DTSY997 electronic three-phase prepaid watt-hour meter is a new remote prepaid watt-hour meter with many functions such as power metering, load control and user information management. The table is an ideal product for reforming the current power consumption system, realizing the commercialization of electric energy, solving the difficulty of charging and adjusting the load state of the power grid. There are two kinds of access methods for this series of electronic three-phase energy meter: direct access or access by transformer. The performance indicators of the product meet all the technical requirements of the electronic three-phase prepaid watt-hour meter in GB/ T17215.3-1-2008 "1 and 2 stationary AC active watt-hour meter" and GB/T18460.3-2001 standard.

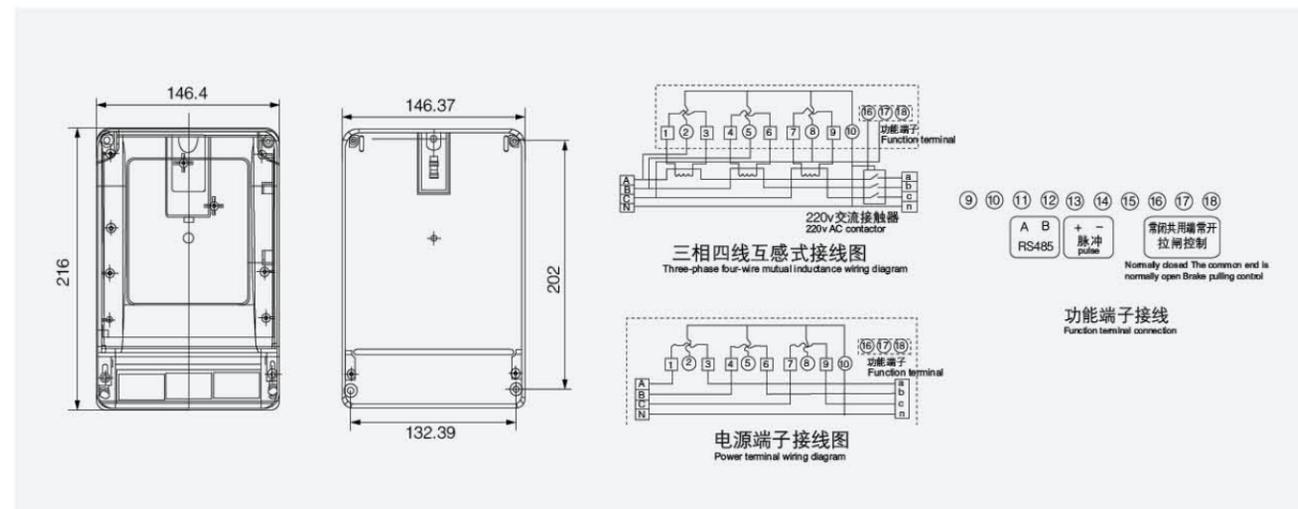
特点 Feature

- 有功电能 1.0 级计量
- 通讯方式 485、支持 DL/T645-2007
- 支持用户信息录入
- 远程抄表、充值、开合闸
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- 支持生成各项充值报表，所有记录一目了然
- Active power 1.0 metering
- Communication mode 485, support DL/T645-2007
- Support user information input
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技术参数 Technical parameter

额定电流 Rated current (A)	1.5(6)、5(20)、10(40)、15(60)、20(80)、30(100)
额定电压 Rated voltage (V)	3×220/380V 3×380V
额定频率 Rated frequency (Hz)	50 或 60
准确度等级 Accuracy class	1 级、2 级

外形尺寸及接线图 Overall dimensions and wiring diagram (mm)



计量精准 | Accurate measurement  
让用户放心 | Let users rest assured

# 单相电子式 电能表系列

Single-phase  
electronic watt-hour  
meter series





概述 Overview

DDS997 型单相电子式电能表采用大规模集成电路, 高可靠性步进电机等先进技术制造的国内最新电能计量新产品, 用来计量额定电压为 220V, 频率为 50Hz 的交流单相有功电能, 该产品能够精确计量正、反两方向的有功电能。且以同一千方向累计, 具有防止窃电的功能。采用光耦输出检测信号, 发光二极管指示用电, 便于监控。本产品质量技术指标符合 GB/T17215.321-2008 国家标准和 IEC1036-2002 国际标准。

用户使用电表时, 对分流分压器上进行信号取样, 经放大、乘法、积分、V/F 变换、分频、功率驱动等电路的处理, 驱动步进马达带动计度器累计电能度数。

DDS997 single phase electronic energy meter adopts large-scale integrated circuit, high reliability step motor and other advanced technology manufacturing of the latest domestic energy metering new products, used to measure the rated voltage of 220V, frequency of 50Hz AC single phase active energy, the product can accurately measure the positive and reverse direction of active energy. And accumulated in the same thousand direction, with the function of preventing electricity theft. Optocoupler output detection signal, light emitting diode indicates electricity, easy to monitor. The product quality technical indicators comply with GB/T17215.321-2008 national standard and IEC1036-2002 international standard.

When the user uses the meter, the signal sampling on the shunt divider is carried out, and the processing of the circuit such as amplification, multiplication, integration, V/F conversion, frequency division, and power drive drives the stepping motor to drive the meter to accumulate the electric energy degree.

特点 Feature

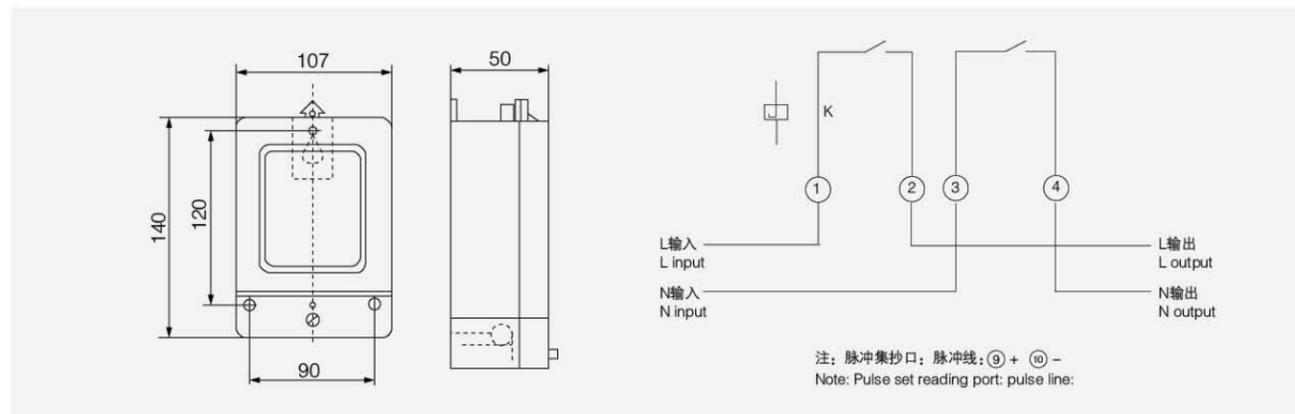
- 高精度: 误差  $<\pm 1.0\%$ ;
- 高灵敏度: 启动电流  $<0.4\%I_b$ ;
- 高负荷: 电流过载倍数  $>4$  倍;
- 低功耗: 电表自身耗电  $<1W$ ;
- 重量轻:  $<0.6kg$ ;
- 启动电流: 在额定电压, 额定频率、功率因素为 1.0 的条件下, 当负载电流大于  $0.4\%I_b$  时电表能正常工作;

- High precision: error  $<\pm 1.0\%$ ;
- High sensitivity: starting current  $<0.4\%I_b$ ;
- High load: current overload multiple  $>4$  times;
- Low power consumption: the meter itself consumes less than 1W;
- Light weight:  $<0.6kg$ ;
- Starting current: under the conditions of rated voltage, rated rate and power factor of 1.0, the meter can work normally when the load current is greater than  $0.4\%I_b$ ;

技术参数 Technical parameter

额定电流 Rated current (A)	2.5 (10)、5 (20)、10 (40)、15 (60)、20 (80)、30 (100)
额定电压 Rated voltage (V)	220 或 240
额定频率 Rated frequency (Hz)	50 或 60
准确度等级 Accuracy class	2 级

外形尺寸及接线图 Overall dimensions and wiring diagram (mm)



概述 Overview

DDS997 型单相电子式电能表采用大规模集成电路, 高可靠性步进电机等先进技术制造的国内最新电能计量新产品, 用来计量额定电压为 220V, 频率为 50Hz 的交流单相有功电能, 该产品能够精确计量正、反两方向的有功电能。且以同一千方向累计, 具有防止窃电的功能。采用光耦输出检测信号, 发光二极管指示用电, 便于监控。本产品质量技术指标符合 GB/T17215.321-2008 国家标准和 IEC1036-2002 国际标准。

用户使用电表时, 对分流分压器上进行信号取样, 经放大、乘法、积分、V/F 变换、分频、功率驱动等电路的处理, 驱动步进马达带动计度器累计电能度数。

DDS997 single phase electronic energy meter adopts large-scale integrated circuit, high reliability step motor and other advanced technology manufacturing of the latest domestic energy metering new products, used to measure the rated voltage of 220V, frequency of 50Hz AC single phase active energy, the product can accurately measure the positive and reverse direction of active energy. And accumulated in the same thousand direction, with the function of preventing electricity theft. Optocoupler output detection signal, light emitting diode indicates electricity, easy to monitor. The product quality technical indicators comply with GB/T17215.321-2008 national standard and IEC1036-2002 international standard.

When the user uses the meter, the signal sampling on the shunt divider is carried out, and the processing of the circuit such as amplification, multiplication, integration, V/F conversion, frequency division, and power drive drives the stepping motor to drive the meter to accumulate the electric energy degree.

特点 Feature

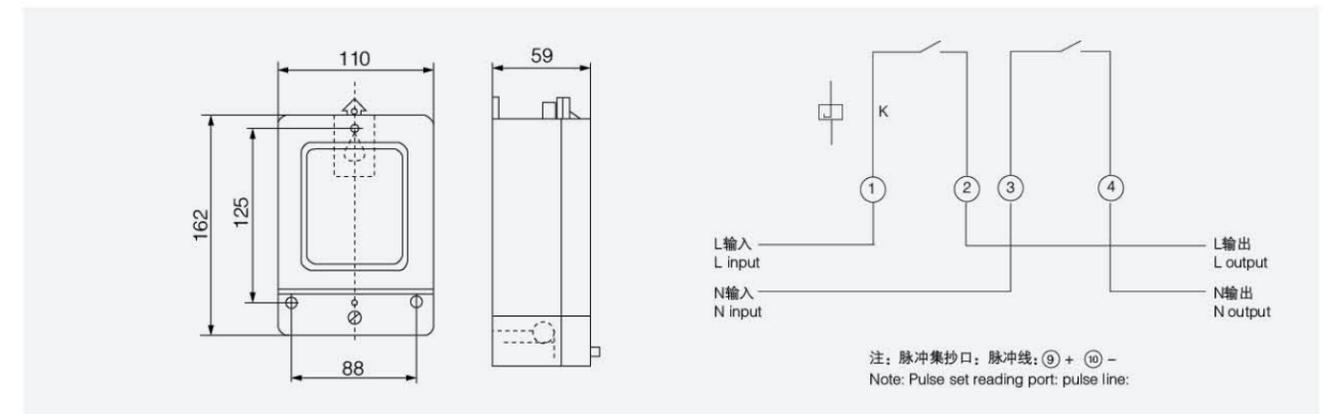
- 高精度: 误差  $<\pm 1.0\%$ ;
- 高灵敏度: 启动电流  $<0.4\%I_b$ ;
- 高负荷: 电流过载倍数  $>4$  倍;
- 低功耗: 电表自身耗电  $<1W$ ;
- 重量轻:  $<0.6kg$ ;
- 启动电流: 在额定电压, 额定频率、功率因素为 1.0 的条件下, 当负载电流大于  $0.4\%I_b$  时电表能正常工作;

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准确度等级 Accuracy class	2 级

外形尺寸及接线图 Overall dimensions and wiring diagram (mm)





概述 Overview

DDS997 型电子式单相电能表采用专用大规模集成电路, 具有外围元件少、结构简单、可靠性高、功耗低、寿命长等特点, 可用于计量额定频率为 50Hz 的单相交流有功电能。该产品各项性能指标符合 GB/T17215.321-2008《1 级和 2 级静止式交流有功电度表》标准中对电子式单相电能表的全部技术要求。

DDS997 electronic single-phase watt-hour meter adopts special large-scale integrated circuit, which has the characteristics of few peripheral components, simple structure, high reliability, low power consumption, long life, etc., and can be used to measure single-phase AC active energy with rated frequency of 50Hz. The performance indicators of the product meet all the technical requirements of electronic single-phase watt-hour meters in GB/T17215.321-2008 standard "1 and 2 stationary AC active watt-hour meters".

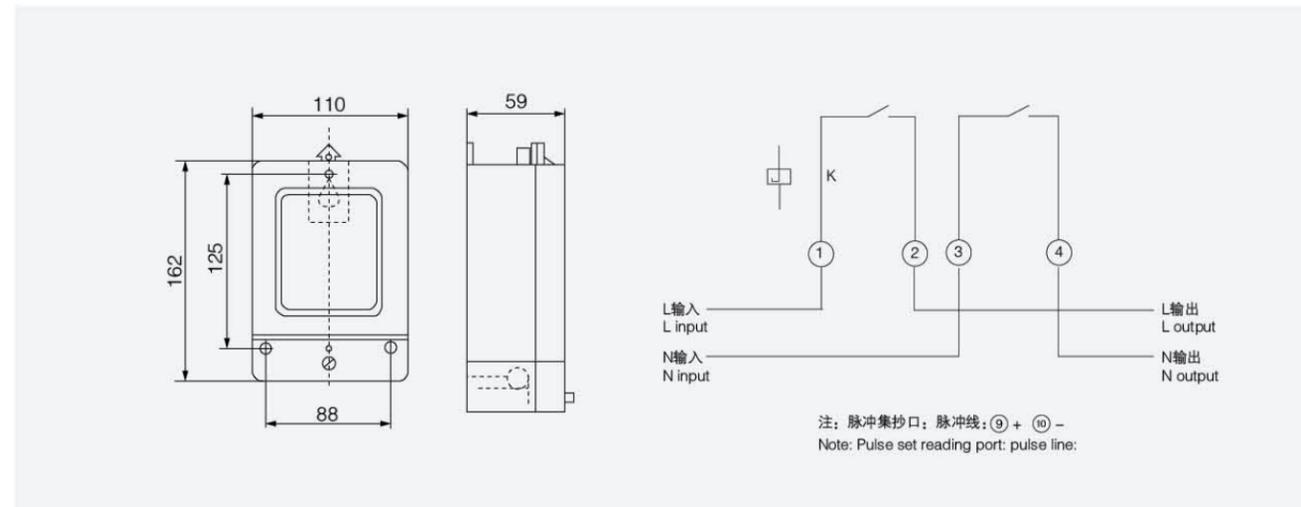
特点 Feature

- 有功电能计量, 长期工作不需调校;
  - 采用 ADE7755 专用计量芯片;
  - 采用内含数字乘法器的国外新型电能专用集成电路, 大大提高了仪表的动态工作范围;
  - 在 5%Ib-I<sub>max</sub> 范围内有良好的误差线性;
  - 外围元件少、功耗低、电表结构简单;
  - 电表内所有元件均选用长寿命、高可靠的电子电器件, 因而具有寿命长、可靠性高的特点。
- Active energy metering, long-term work does not need to be adjusted;
  - ADE7755 special metering chip;
  - The use of new foreign electric energy ASIC with digital multiplier, greatly improving the dynamic working range of the instrument;
  - Good error linearity in the 5%Ib-I<sub>max</sub> range;
  - Few peripheral components, low power consumption, simple meter structure;
  - All components in the meter are selected long-life, highly reliable electronic and electrical parts, so it has the characteristics of long life and high reliability.

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外形尺寸及接线图 Overall dimensions and wiring diagram (mm)



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用户使用电表时, 对分流分压器上进行信号取样, 经放大、乘法、积分、V/F 变换、分频、功率驱动等电路的处理, 驱动步进马达带动计度器累计电能度数。

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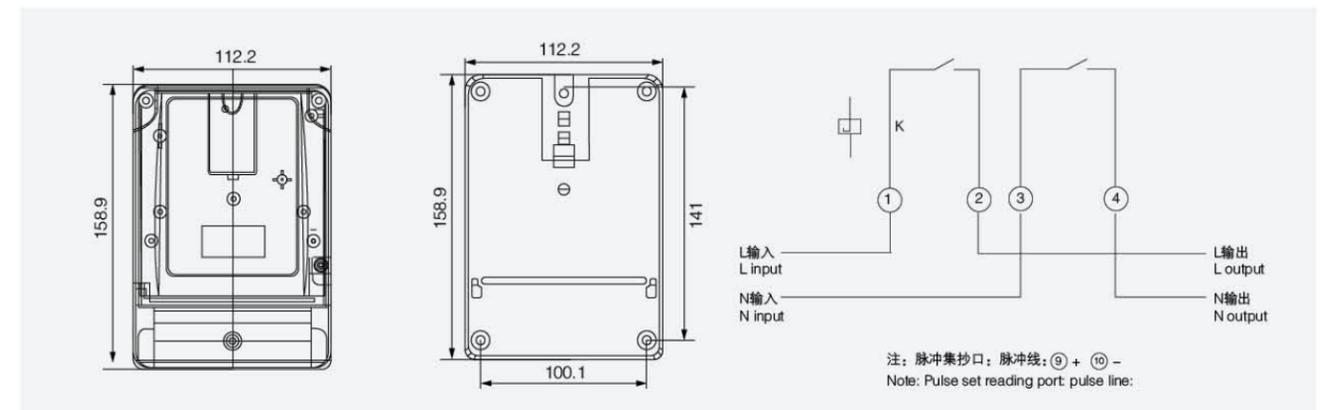
特点 Feature

- 高精度: 误差 <±1.0%;
  - 高灵敏度: 启动电流 <0.4%I<sub>b</sub>;
  - 高负荷: 电流过载倍数 >4 倍;
  - 低功耗: 电表自身耗电 <1W;
  - 重量轻: <0.6kg;
  - 显示方式: 计数器、LCD
  - 启动电流: 在额定电压, 额定频率、功率因素为 1.0 的条件下, 当负载电流大于 0.4%I<sub>b</sub> 时电表能正常工作;
- High precision: error <±1.0%;
  - High sensitivity: starting current <0.4%I<sub>b</sub>;
  - High load: current overload multiple >4 times;
  - Low power consumption: the meter itself consumes less than 1W;
  - Light weight: <0.6kg;
  - Display mode: counter, LCD
  - Starting current: under the conditions of rated voltage, rated rate and power factor of 1.0, the meter can work normally when the load current is greater than 0.4%I<sub>b</sub>;

技术参数 Technical parameter

额定电流 Rated current (A)	2.5 (10) 、 5 (20) 、 10 (40) 、 15 (60) 、 20 (80) 、 30 (100)
额定电压 Rated voltage (V)	220 或 240
额定频率 Rated frequency (Hz)	50 或 60
准确度等级 Accuracy class	1 级、2 级

外形尺寸及接线图 Overall dimensions and wiring diagram (mm)



# 单、三相多费率 电能表系列

Single and three  
phase electronic watt-hour  
meter series



## DDSF997 单相电子式多费率电能表 DDSF997 single phase electronic multi-rate energy meter

### 概述 Overview

DDSF997 型单相电子式电能表采用大规模集成电路，高可靠性步进电机等先进技术制造的国内最新电能计量新产品，用来计量额定电压为 220V，频率为 50Hz 的交流单相有功电能，该产品能够精确计量正、反两方向的有功电能，且以同一千方向累计，具有防止窃电的功能。采用光耦输出检测信号，发光二极管指示用电，便于监控。本产品质量技术指标符合 GB/T17215.321-2008 国家标准和 IEC1036-2002 国际标准。

用户使用电表时，对分流分压器上进行信号取样，经放大、乘法、积分、V/F 变换、分频、功率驱动等电路的处理，驱动步进马达带动计度器累计电能度数。

DDSF997 single phase electronic energy meter adopts large-scale integrated circuit, high reliability step motor and other advanced technology manufacturing of the latest domestic energy metering new products, used to measure the rated voltage of 220V, frequency of 50Hz AC single phase active energy, the product can accurately measure the positive and reverse direction of active energy. And accumulated in the same thousand direction, with the function of preventing electricity theft. Optocoupler output detection signal, light emitting diode indicates electricity, easy to monitor. The product quality technical indicators comply with GB/T17215.321-2008 national standard and IEC1036-2002 international standard.

When the user uses the meter, the signal sampling on the shunt divider is carried out, and the processing of the circuit such as amplification, multiplication, integration, V/F conversion, frequency division, and power drive drives the stepping motor to drive the meter to accumulate the electric energy degree.

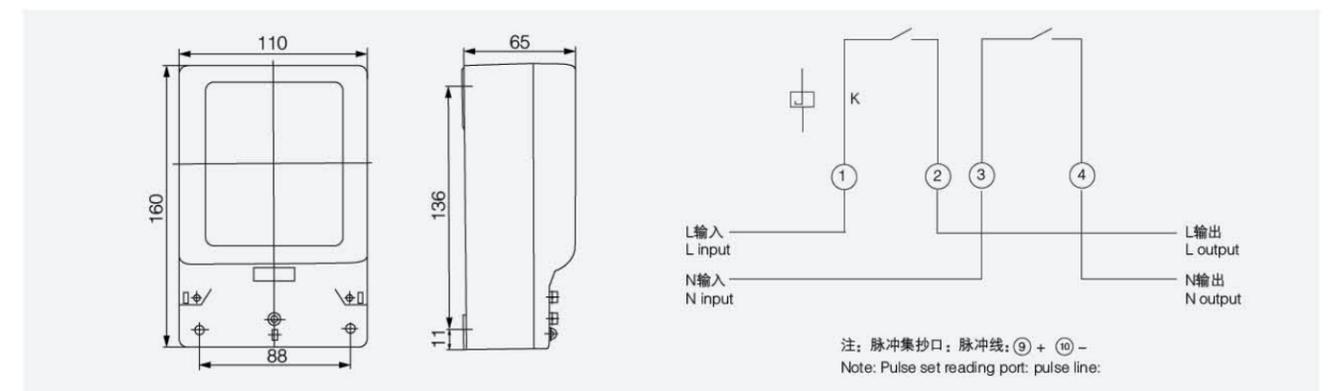
### 特点 Feature

- 分时有功正、反向电能计量，可分为 5 种费率、14 个时段、8 个时区；
- 高精度：误差  $<\pm 1.0\%$ ；
- 高灵敏度：启动电流  $<0.4\%I_b$ ；
- 高负荷：电流过载倍数  $>4$  倍；
- 低功耗：电表自身耗电  $<1W$ ；
- RS485 有线通讯与红外无线通讯，符合 DL/T645-1997/2007 标准事件记录（如总清、需清）；
- 重量轻： $<0.6kg$ ；
- 启动电流：在额定电压，额定速率、功率因素为 1.0 的条件下，当负载电流大于  $0.4\%I_b$  时电度表能正常工作；
- 具有编程禁止功能、停电按键唤醒功能。
- Time-sharing active power positive and reverse power metering, which can be divided into 5 rates, 14 periods and 8 time zones;
- High precision: error  $<\pm 1.0\%$ ;
- High sensitivity: starting current  $<0.4\%I_b$ ;
- High load: current overload multiple  $>4$  times;
- Low power consumption: the meter itself consumes less than 1W;
- RS485 wired communication and infrared wireless communication, in line with DL/T645-1997/2007 standard event record (such as total clear, need to clear);
- Light weight:  $<0.6kg$ ;
- Starting current: under the conditions of rated voltage, rated rate and power factor of 1.0, the meter can work normally when the load current is greater than  $0.4\%I_b$ ;
- With programming prohibition function, power failure key wake-up function.

### 技术参数 Technical parameter

额定电流 Rated current (A)	2.5 (10)、5 (20)、10 (40)、15 (60)、20 (80)、30 (100)
额定电压 Rated voltage (V)	220 或 240
额定频率 Rated frequency (Hz)	50 或 60
准确度等级 Accuracy class	1 级、2 级

### 外形尺寸及接线图 Overall dimensions and wiring diagram (mm)





概述 Overview

DT(S)SF997 型三相电子式多费率电能表，该表性能指标符合 GB/T17215.321-2008《1级和2级静止式交流有功电能表》、GB/T 17215.322-2008《0.2s级和0.5s级静止式交流有功电能表》和 DL/T614-2007《多功能电能表》国家标准对多功能电能表的各项技术要求，其通信符合 DL645-1997/2007《多功能表通讯规约》的要求。分时计量正向有功和反向有功、正向无功和反向无功，四象无功电量及最大需量，最大需量发生时间。

DT(S)SF997 three-phase electronic multi-rate energy meter, The performance specifications of this table comply with GB/T17215.321-2008 "Grade 1 and 2 and Static AC Active Power meter" and GB/T 17215.322-2008 "0.2s class and 0.5s class static AC active power meter" and DL/T614-2007 "Multi-function meter" national standard for the technical requirements of multi-function meter, its communication in line with DL645-1997/2007 "multi-function meter communication Statute" requirements. Time-sharing measurement of forward active power and reverse active power, forward reactive power and reverse reactive power, four images of reactive power and maximum demand, maximum demand occurrence time.

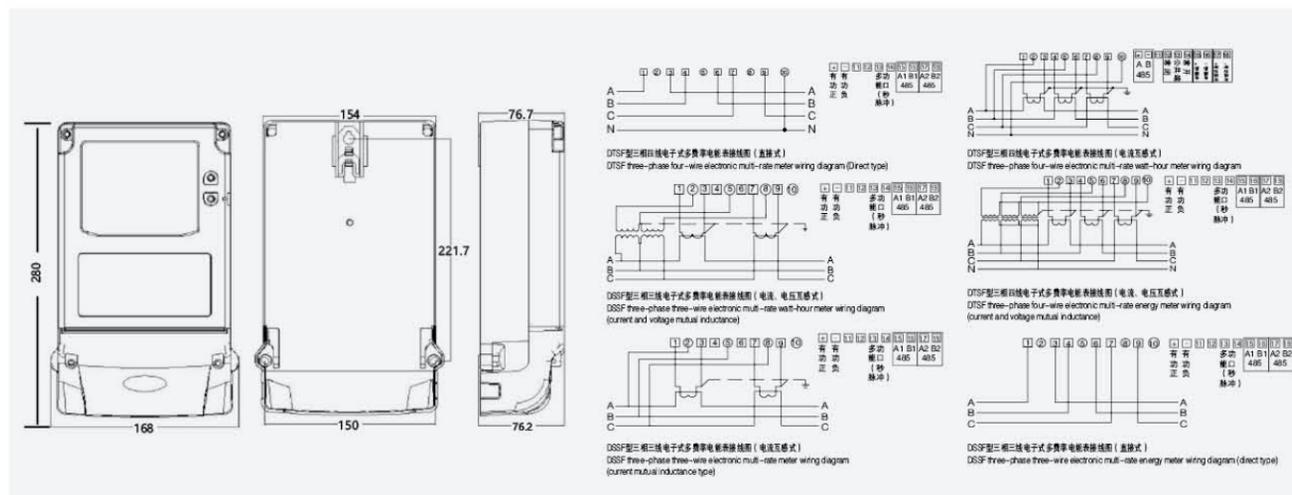
特点 Feature

- 分时有功正、反向电能计量，可分为5种费率、14个时段、8个时区；
  - 3个抄表周期数据，可自动冻结数据；
  - 正向有功、反向有功脉冲输出，脉冲宽度可用红外或RS485设置；
  - 红外遥控器调出显示项；
  - RS485有线通讯与红外无线通讯，符合DL/T645-1997/2007标准事件记录（如总清、需清）；
  - 通过LCD显示电表的运行状态及各种参数设置情况和各种计量数据；
  - 可实时测量A、B、C三相的电压、电流、功率等有效值及当前频率；
  - 具有编程禁止功能、停电按键唤醒功能。
- Time-sharing active power positive and reverse power metering, which can be divided into 5 rates, 14 periods and 8 time zones;
  - 3 meter reading cycle data, can automatically freeze the data;
  - Forward active power, reverse active power pulse output, pulse width can be set by infrared or RS485;
  - Infrared remote control to call the display item;
  - RS485 wired communication and infrared wireless communication, in line with DL/T645-1997/2007 standard event record (such as total clear, need to clear);
  - Display the running status of the meter and various parameter Settings and various metering data through the LCD;
  - Real-time measurement of A, B, C three-phase voltage, current, power and other effective values and current frequency;
  - With programming prohibition function, power failure key wake-up function.

技术参数 Technical parameter

额定电流 Rated current (A)	1.5(6)、5(20)、10(40)、15(60)、20(80)、30(100)
额定电压 Rated voltage (V)	3×220/380V 3×57.7/100V 3×380V 3×100V
额定频率 Rated frequency (Hz)	50 或 60
准确度等级 Accuracy class	有功1级、无功2级

外形尺寸及接线图 Overall dimensions and wiring diagram (mm)



# 三相电子式 电能表系列

Single and three  
phase electronic watt-hour  
meter series





概述 Overview

DTS997 型三相四线电子式有功电能表采用微电子技术与专用大规模集成电路, 应用数字采样处理技术及 SMT 工艺等先进技术研制开发的三相有功电能表。该表技术性能完全符合 IEC62052-11 和 IEC62053-21 国际标准中 1 级或 2 级三相有功电能表的相关技术要求, 能直接精确的测量额定频率为 50Hz 或 60Hz 三相交流电网中负荷的有功电能消耗, 供安装于室内或室外表箱中使用。该表由步进电机式脉冲计数器显示有功电量, 具有可靠性好、重量轻、外型美观、安装方便等特点。

DTS997 three-phase four-wire electronic active watt-hour meter is developed by microelectronic technology, special large-scale integrated circuit, digital sampling processing technology, SMT technology and other advanced technologies. The technical performance of the table fully complies with the relevant technical requirements of IEC62052-11 and IEC62053-21 international standards for level 1 or level 2 three-phase active energy meters, and can directly and accurately measure the active energy consumption of the rated frequency of 50Hz or 60Hz three-phase AC power grid load, for installation in indoor or outdoor watch boxes. The meter displays the active power quantity by stepping motor type pulse counter. It has the characteristics of good reliability, light weight, beautiful appearance and convenient installation.

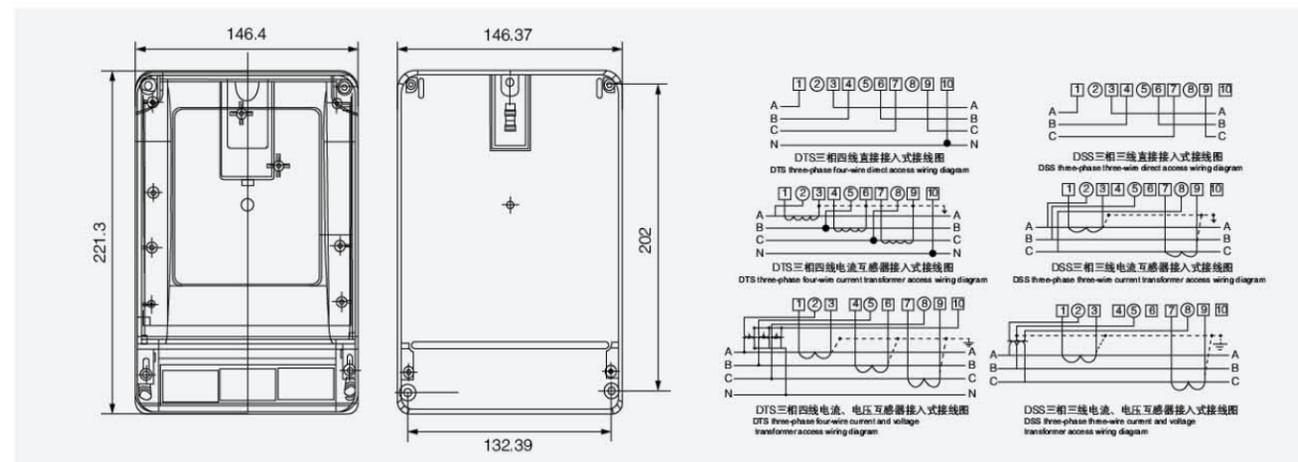
特点 Feature

- 计量三相有功电能, 长期工作不需调校;
- 三相电源供电, 一线 (三相三线电能表三线中任一) 或两线 (三相四线电能表四线中任两线) 断电, 计量准确度不受影响;
- 具有断相指示功能或电压指示功能;
- 显示方式: 计数器、LCD;
- 板前式三点固定安装, 上下安装孔中心距 198-212mm, 可由用户任意选择。
- Measurement of three-phase active power, long-term work without adjustment;
- Three-phase power supply, one line (any line in the three lines of the three-phase three-wire watt-hour meter) or two lines (any two lines in the four lines of the three-phase four-wire watt-hour meter) power off, metering accuracy is not affected;
- With phase break indicating function or voltage indicating function;
- Display mode: counter, LCD;
- Plate front type three-point fixed installation, the center distance of the upper and lower mounting holes 198-212mm, can be selected by the user.

技术参数 Technical parameter

额定电流 Rated current (A)	1.5(6)、5(20)、10(40)、15(60)、20(80)、30(100)
额定电压 Rated voltage (V)	3×220/380V 3×57.7/100V 3×380V 3×100V
额定频率 Rated frequency (Hz)	50 或 60
准确度等级 Accuracy class	1 级或 2 级

外形尺寸及接线图 Overall dimensions and wiring diagram (mm)



概述 Overview

DTS997 型三相电子式有功电能表采用微电子技术与专用大规模集成电路, 应用数字采样处理技术及 SMT 工艺等先进技术研制开发的三相有功电能表。该表技术性能完全符合 IEC62052-11 和 IEC62053-21 国际标准中 1 级、2 级三相有功电能表的相关技术要求, 能直接精确的测量额定频率为 50Hz 或 60Hz 三相交流电网中负荷的有功电能消耗, 供安装于室内或室外表箱中使用。该表由步进电机式脉冲计数器显示有功电量, 具有可靠性好、重量轻、外型美观、安装方便等特点。

DTS997 three-phase electronic active watt-hour meter is developed by microelectronic technology, special large-scale integrated circuit, digital sampling processing technology and SMT technology. The technical performance of the table fully complies with the relevant technical requirements of IEC62052-11 and IEC62053-21 international standards for level 1 and level 2 three-phase active power meters, and can directly and accurately measure the active power consumption of the rated frequency of 50Hz or 60Hz three-phase AC power grid load, for installation in indoor or outdoor watch boxes. The meter displays the active power quantity by stepping motor type pulse counter. It has the characteristics of good reliability, light weight, beautiful appearance and convenient installation.

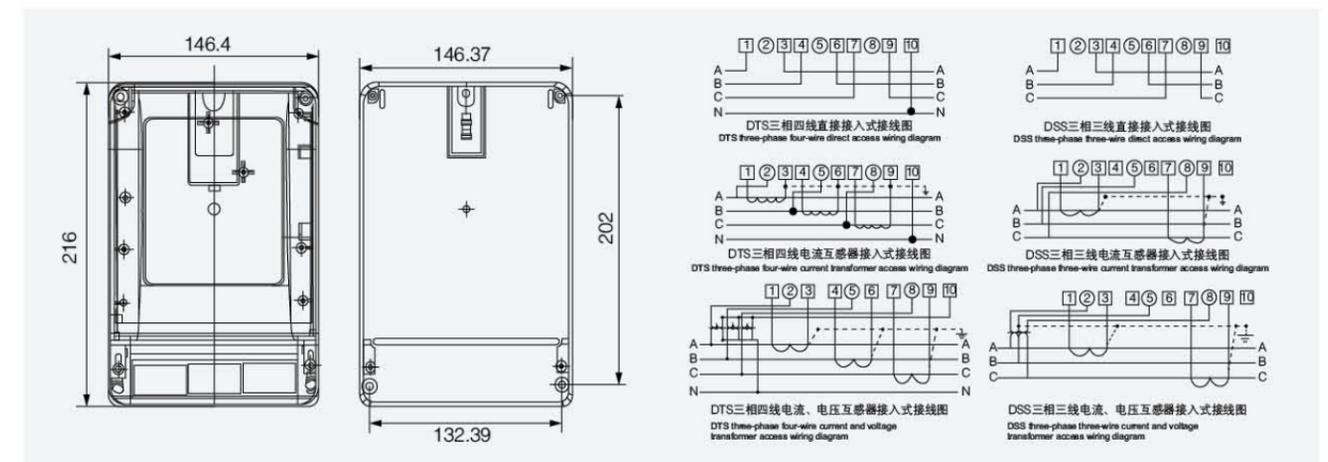
特点 Feature

- 计量三相有功电能, 长期工作不需调校;
- 三相电源供电, 一线 (三相电能表三线中任一) 或两线 (三相电能表四线中任两线) 断电, 计量准确度不受影响;
- 具有断相指示功能或电压指示功能;
- 显示方式: 计数器、LCD;
- 板前式三点固定安装, 上下安装孔中心距 198-212mm, 可由用户任意选择。
- Measurement of three-phase active power, long-term work without adjustment;
- Three-phase power supply, one line (any line in the three lines of the three-phase watt-hour meter) or two lines (any two lines in the four lines of the three-phase watt-hour meter) power off, metering accuracy is not affected;
- With phase break indicating function or voltage indicating function;
- Display mode: counter, LCD;
- Plate front type three-point fixed installation, the center distance of the upper and lower mounting holes 198-212mm, can be selected by the user.

技术参数 Technical parameter

额定电流 Rated current (A)	1.5(6)、5(20)、10(40)、15(60)、20(80)、30(100)
额定电压 Rated voltage (V)	3×220/380V 3×57.7/100V 3×380V 3×100V
额定频率 Rated frequency (Hz)	50 或 60
准确度等级 Accuracy class	1 级、2 级

外形尺寸及接线图 Overall dimensions and wiring diagram (mm)





概述 Overview

DTS997 型三相电子式有功电能表采用微电子技术与专用大规模集成电路, 应用数字采样处理技术及 SMT 工艺等先进技术研制开发的三相有功电能表。该表技术性能完全符合 IEC62052-11 和 IEC62053-21 国际标准中 1 级、2 级三相有功电能表的相关技术要求, 能直接精确的测量额定频率为 50Hz 或 60Hz 三相交流电网中负荷的有功电能消耗, 供安装于室内或室外表箱中使用。该表由步进电机式脉冲计数器显示有功电量, 具有可靠性好、重量轻、外型美观、安装方便等特点。

DTS997 three-phase electronic active watt-hour meter is developed by microelectronic technology, special large-scale integrated circuit, digital sampling processing technology and SMT technology. The technical performance of the table fully complies with the relevant technical requirements of IEC62052-11 and IEC62053-21 international standards for level 1 and level 2 three-phase active power meters, and can directly and accurately measure the active power consumption of the rated frequency of 50Hz or 60Hz three-phase AC power grid load, for installation in indoor or outdoor watch boxes. The meter displays the active power quantity by stepping motor type pulse counter. It has the characteristics of good reliability, light weight, beautiful appearance and convenient installation.

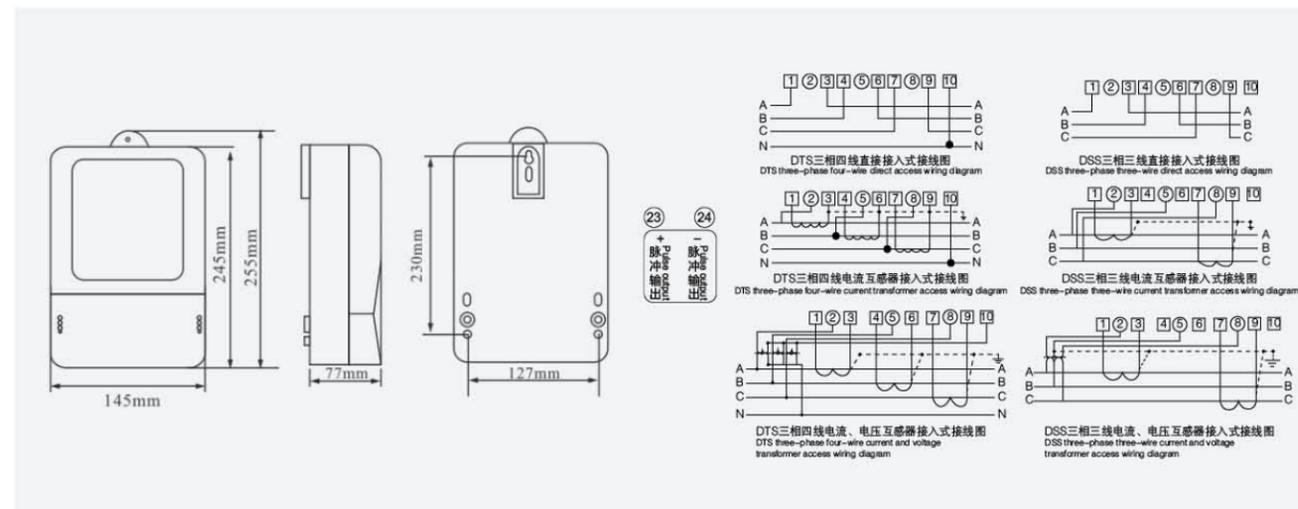
特点 Feature

- 计量三相有功电能, 长期工作不需调校;
- 三相电源供电, 一线 (三相电能表三线中任一) 或两线 (三相电能表四线中任一) 断电, 计量准确度不受影响;
- 具有断相指示功能或电压指示功能;
- 显示方式: 计数器。
- Measurement of three-phase active power, long-term work without adjustment;
- Three-phase power supply, one line (any line in the three lines of the three-phase watt-hour meter) or two lines (any two lines in the four lines of the three-phase watt-hour meter) power off, metering accuracy is not affected;
- With phase break indicating function or voltage indicating function;
- Display mode: counter.

技术参数 Technical parameter

额定电流 Rated current (A)	1.5(6)、5(20)、10(40)、15(60)、20(80)、30(100)
额定电压 Rated voltage (V)	3×220/380V 3×380V
额定频率 Rated frequency (Hz)	50 或 60
准确度等级 Accuracy class	1级、2级

外形尺寸及接线图 Overall dimensions and wiring diagram (mm)



# 三相多功能 单三相 RS485 电能表系列

Three-phase multi-function,  
single-three-phase RS485  
Energy meter series





### 概述 Overview

DT(S)SD997型三相多功能电能表,该表性能指标符合GB/T17215.321-2008《1级和2级静止式交流有功电能表》、GB/T 17215322-2008《0.2s级和0.5s级静止式交流有功电能表》和DL/T614-2007《多功能电能表》国家标准对多功能电能表的各项技术要求,其通信符合DL/T645-1997/2007《多功能电能表通信规约》的要求。分时计量正向有功和反向有功、正向无功和反向无功,四象无功电量及最大需量,最大需量发生时间。

DT(S)SD997 three-phase multi-function energy meter, The performance specifications of this table comply with GB/T17215.321-2008 "Grade 1 and 2 Static AC Active Power meter" and GB/T 17215322-2008 "0.2s class and 0.5s class static AC active power meter" and DL/T614-2007 "Multi-function meter" national standard for the technical requirements of multi-function meter, its communication in line with DL/T645-1997/2007 "multi-function meter communication Statute" requirements. Time-sharing measurement of forward active power and reverse active power, forward reactive power and reverse reactive power, four images of reactive power and maximum demand, maximum demand occurrence time.

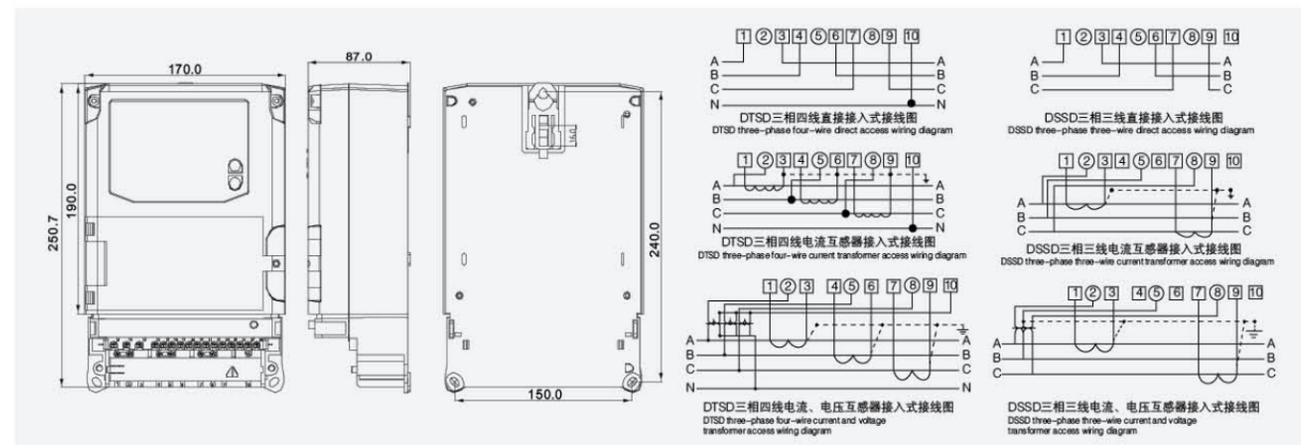
### 特点 Feature

- 分时有功正、反向电能计量,可分为4种费率、12个时段、8个时区;
- 分相电量计量;失压、失流记录功能;
- 3个抄表周期数据,可自动冻结数据;12个月抄表数据;
- 正向有功、反向有功脉冲输出,四象限无功脉冲输出,脉冲宽度可用红外或RS485设置;
- 红外遥控器调出显示项;停电红外抄表;
- RS485有线通讯与红外无线通讯,符合DL/T645-1997/2007标准事件记录(如总清、需清);
- 通过LCD显示电表的运行状态及各种参数设置情况和各种计量数据;
- 可实时测量A、B、C三相的电压、电流、功率等有效值及当前频率;
- 具有失压、失流、超功、停电、来电、编程、需量清零、广播校对时等事件记录功能;
- 具有编程禁止功能、需量复位功能:停电按键唤醒功能。
- Time-sharing active power positive and reverse power metering, which can be divided into 4 rates, 12 periods and 8 time zones;
- Phase metering; Decompression. Loss of current recording function;
- 3 meter reading cycle data, can automatically freeze the data; 12-month meter reading data;
- Forward active power, reverse active power pulse output, four-quadrant reactive power pulse output, pulse width can be set by infrared or RS485;
- Infrared remote control to call the display item; Power failure infrared meter reading;
- RS485 wired communication and infrared wireless communication, in line with DL/T645-1997/2007 standard event record (such as total clear, need to clear);
- Display the running status of the meter and various parameter Settings and various metering data through the LCD;
- Real-time measurement of A, B, C three-phase voltage, current, power and other effective values and current frequency;
- With loss of voltage, loss of current, overpower, power outage, call, programming, demand zero, broadcast proofreading and other event recording functions;
- With programming prohibition function, demand reset function: power off button wake-up function.

### 技术参数 Technical parameter

额定电流 Rated current (A)	1.5(6)、5(20)、10(40)、15(60)、20(80)、30(100)
额定电压 Rated voltage (V)	3×220/380V 3×57.7/100V 3×380V 3×100V
额定频率 Rated frequency (Hz)	50 或 60
准确度等级 Accuracy class	有功 0.2级、无功 2级 / 有功 0.5级、无功 2级

### 外形尺寸及接线图 Overall dimensions and wiring diagram (mm)



### 概述 Overview

DTS997、DSS997型系列电子式三相电能表均采用新型微电子技术,用于计量额定频率为50/60Hz的三相交流有功电能,对于正反向用电同等计量。本系列电子式三相电能表接入方式有两种:直接接入式或经互感器接入式。该产品符合国家标准GB/T-17215.321-2008《1级和2级静止式交流有功电能表》标准中对电子式三相电能表的全部技术。

DTS997, DSS997 series electronic three-phase watt-hour meter adopts new micro-electronic technology for measuring three-phase AC active power with rated frequency of 50/60Hz, and equal metering for positive and negative power consumption. There are two kinds of access methods for this series of electronic three-phase kilowatt-hour meters: direct access or access by transformer. The product conforms to the national standard GB/T-17215.321-2008 "1 and 2 static AC active energy meter" standard for electronic three-phase energy meter all technology.

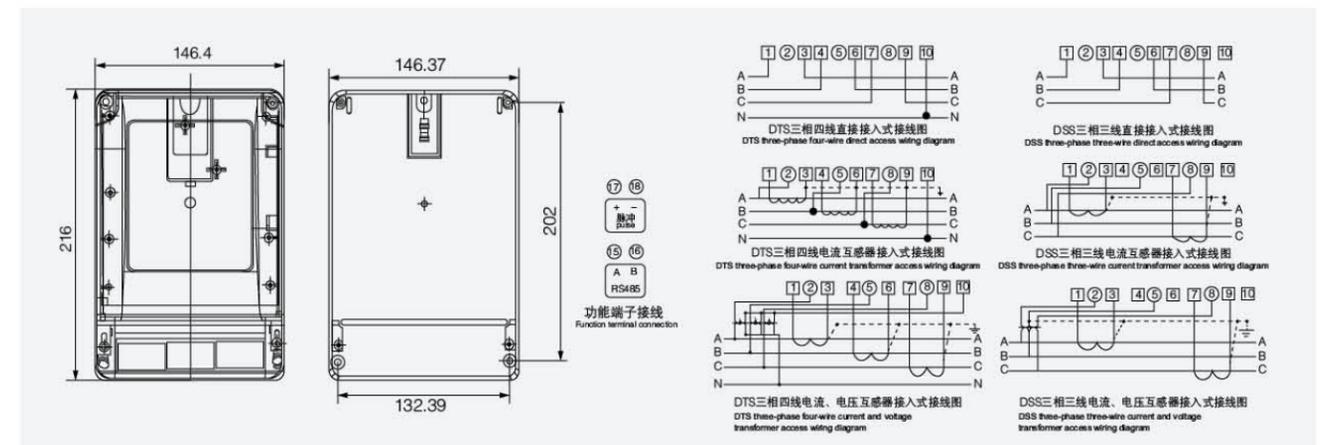
### 特点 Feature

- 计量三相有功电能,长期工作不需调校;
- 三相电源供电,一线(三相电能表三线中任一)或二线(三相电能表四线中任二线)断电,计量准确度不受影响;
- 可实时测量A、B、C三相的电压、电流、功率等有效值及当前频率;
- 宽工作温度范围;
- 带RS485和红外两种通讯方式;
- 全封闭防尘结构,使用阻燃材料,精选长寿命元器件,使用寿命长;
- 铜接线柱,安全性能好,经久耐用;
- 高精度、高品质、低功耗、宽负荷。
- Measurement of three-phase active power, long-term work without adjustment;
- Three-phase power supply, one line (any line in the three lines of the three-phase watt-hour meter) or two lines (any two lines in the four lines of the three-phase watt-hour meter) power off, metering accuracy is not affected;
- Real-time measurement of A, B, C three-phase voltage, current, power and other effective values and current frequency;
- Wide operating temperature range;
- With RS485 and infrared two communication modes;
- Fully enclosed dust-proof structure, the use of flame retardant materials, long-life components, long service life;
- Copper terminal, good safety performance, durable;
- High precision, high quality, low power consumption, wide load.

### 技术参数 Technical parameter

- 额定电流 (A): 1.5(6)A、5(20)A、10(40)A、15(60)A、20(80)A、30(100)A;
- 额定电压 (V): 三相 3×100V 或 3×380V; 三相 3×220/380V 或 3×57.7/100V;
- 额定频率 (Hz): 50Hz 或 60Hz;
- 准确度等级: 有功 1.0级;
- 通讯规约: DL/T645-2007 或 modbus-RTU;
- 显示屏: LCD。
- Rated current (A): 1.5(6)A, 5(20)A, 10(40)A, 15(60)A, 20(80)A, 30(100)A;
- Rated voltage (V): three-phase 3×100V or 3×380V; Three-phase 3×220/380V or 3×57.7/100V;
- Rated frequency (Hz): 50Hz or 60Hz;
- Accuracy level: Active power 1.0;
- Communication protocol: DL/T645-2007 or modbus-RTU;
- Display: LCD.

### 外形尺寸及接线图 Overall dimensions and wiring diagram (mm)





### 概述 Overview

DDS997 型系列电子式单相电能表均采用新型微电子技术,用于计量额定频率为 50/60Hz 的单相交流有功电能,对于正反向用电同等计量。本系列电子式单相电度表接入方式有两种:直接接入式或经互感器接入式。该产品符合国家标准 GB/T-17215.321-2008《1 级和 2 级静止式交流有功电能表》标准中对电子式单相电能表的全部技术。

DDS997 series electronic single-phase energy meter adopts new micro-electronic technology for measuring single-phase AC active power with rated frequency of 50/60Hz, and equal metering for positive and negative power consumption. This series of electronic single-phase watt-hour meter has two kinds of access: direct access or through the transformer access. The product conforms to the national standard GB/T-17215.321-2008 "1 and 2 static AC active power meter" standard for electronic single-phase power meter all technology.

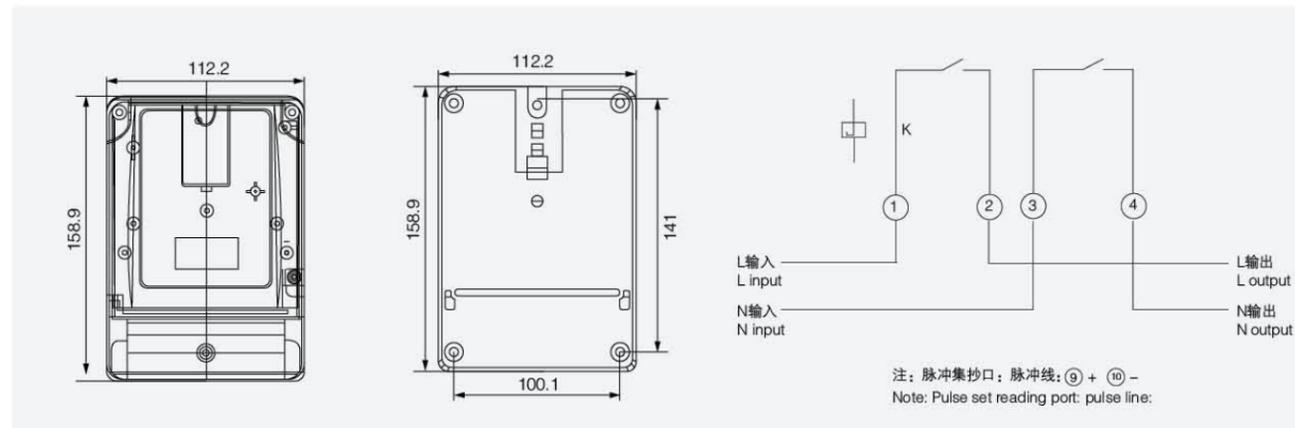
### 特点 Feature

- 计量单相有功电能,长期工作不需调校;
- 宽工作温度范围;
- 具有正反向计量和反向指示功能;
- 带 RS485 和红外两种通讯方式;
- 全封闭防尘结构,使用阻燃材料,精选长寿命元器件,使用寿命长;
- 铜接线柱,安全性能好,经久耐用;
- 可实时测量电压、电流、功率等有效值及当前频率;
- 高精度、高品质、低功耗、宽负荷。
- Single-phase active energy metering, long-term work does not need to be adjusted;
- Wide operating temperature range;
- With positive and negative metering and reverse indication function;
- With RS485 and infrared two communication modes;
- Fully enclosed dust-proof structure, the use of flame retardant materials, long-life components, long service life;
- Copper terminal, good safety performance, durable;
- Real-time measurement of voltage, current, power and other effective values and current frequency;
- High precision, high quality, low power consumption, wide load.

### 技术参数 Technical parameter

- 额定电流 (A): 5(20)A、10(40)A、15(60)A、20(80)A、30(100)A;
- 额定电压 (V): 220V;
- 额定频率 (Hz): 50Hz 或 60Hz;
- 准确度等级: 有功 1.0 级;
- 通讯规约: DL/T645-2007 或 modbus-RTU;
- 显示屏: LCD。
- Rated current (A) : 5(20)A, 10(40)A, 15(60)A, 20(80)A, 30(100)A;
- Rated voltage (V) : 220V;
- Rated frequency (Hz) : 50Hz or 60Hz;
- Accuracy level: Active power 1.0;
- Communication protocol: DL/T645-2007 or modbus-RTU;
- Display: LCD.

### 外形尺寸及接线图 Overall dimensions and wiring diagram (mm)



## 单、三相预付费 电能表系列

Single and three  
phase prepaid watt-hour  
meter series





概述 Overview

DDSY997 型单相电子式预付费电能表是我公司在性能优良的电子式单相电能表的基础上研制开发的具有电能计量、负荷控制和用户信息管理等多种功能的新型 IC 卡式预付费电能表，该表是当前改革用电体制、实现电能商品化、解决收费难及调节电网负荷状态的理想产品。

该产品的各项性能指标符合 GB/T17215.321-2008 《1 级和 2 级静止式交流有功电度表》和 GB/T18460.3-2001 标准中对电子式单相预付费电能表的全部技术要求。

DDSY997 single-phase electronic prepaid watt-hour meter is a new IC card prepaid watt-hour meter developed by our company on the basis of the electronic single-phase watt-hour meter with excellent performance, which has many functions such as electric energy metering, load control and user information management. The table is an ideal product for reforming the current power consumption system, realizing the commercialization of electric energy, solving the difficulty of charging and adjusting the load state of the power grid.

The performance indicators of the product meet all the technical requirements of the electronic single-phase prepaid energy meter in GB/T17215.321-2008 "1 and 2 static AC active power meter" and GB/T18460.3-2001 standard.

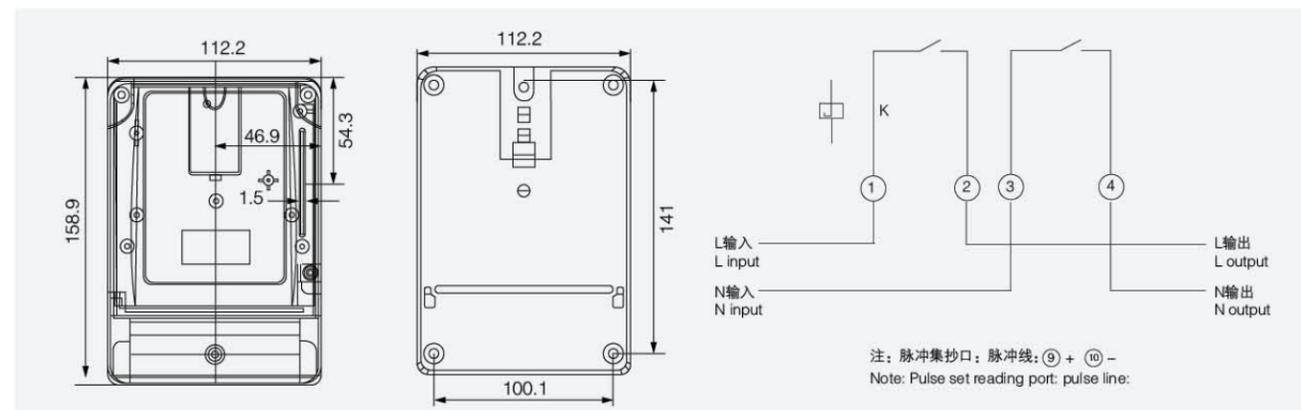
特点 Feature

- 有功电能计量，长期工作不须调校；
- 先交钱，后用电，一表（户）一卡，专卡专用，具有良好的防伪性；
- 剩余电量等于报警电量时，告警灯常亮，提醒用户及时购电；
- 剩余电量为 0 时跳闸断电；
- 超负荷自动断电；
- 大容量磁保持继电器，低功耗、高可靠；
- 电表内所有元件均选用长寿命、高可靠的电子元器件，因而具有寿命长、可靠性高的特点；
- 配套的 IC 卡售电管理系统具有完备的售电管理和用电监察等功能；
- 显示方式：LCD 显示。
- Active power metering, long-term work does not need to be adjusted;
- Pay first, after electricity, a table (household) a card, special card, with good anti-counterfeiting;
- When the remaining power is equal to the alarm power, the alarm light is on to remind the user to purchase power in time;
- Trip power off when the remaining power is 0;
- Overload automatic power off;
- Large capacity magnetic holding relay, low power consumption, high reliability;
- All components in the meter are selected long-life, highly reliable electronic components, so it has the characteristics of long life and high reliability;
- The supporting IC card power sale management system has complete power sale management and power monitoring functions;
- Display mode: LCD display.

技术参数 Technical parameter

额定电流 Rated current (A)	2.5 (10) 、 5 (20) 、 10 (40) 、 15 (60) 、 20 (80) 、 30 (100)
额定电压 Rated voltage (V)	220 或 240
额定频率 Rated frequency (Hz)	50 或 60
准确度等级 Accuracy class	1 级

外形尺寸及接线图 Overall dimensions and wiring diagram (mm)



概述 Overview

DTSY997 型三相电子式预付费电能表具有电能计量、负荷控制和用户信息管理等多种功能的新型 IC 卡式预付费电能表。该表是当前改革用电体制、实现电能商品化、解决收费难及调节电网负荷状态的理想产品。本系列电子式三相电能表接入方式有两种：直接接入式或经互感器接入式。该产品各项性能指标符合 GB/T17215.3-1-2008 《1 级和 2 级静止式交流有功电度表》和 GB/T18460.3-2001 标准中对电子式三相预付费电能表的全部技术要求。

DTSY997 three-phase electronic prepaid watt-hour meter is a new IC card prepaid watt-hour meter with many functions such as power metering, load control and user information management. The table is an ideal product for reforming the current power consumption system, realizing the commercialization of electric energy, solving the difficulty of charging and adjusting the load state of the power grid. There are two kinds of access methods for this series of electronic three-phase energy meter: direct access or access by transformer. The performance indicators of the product meet all the technical requirements of the electronic three-phase prepaid watt-hour meter in GB/T17215.3-1-2008 "1 and 2 stationary AC active watt-hour meter" and GB/T18460.3-2001 standard.

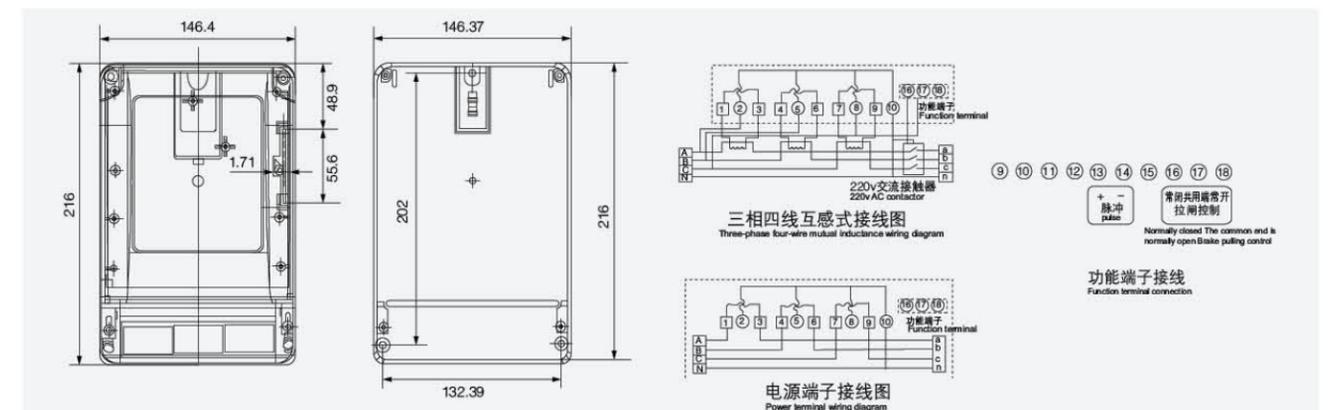
特点 Feature

- 计量三相有功电能，长期工作不须调校；
- 三相电源供电，一线（三相电能表三线中任一）或两线（三相电能表四线中任一）断电，计量准确度不受影响；
- 先买电，再用电；
- 一表（户）一卡，具有良好的防伪性；
- 剩余电量等于报警电量时，告警灯常亮，提醒用户及时购电；
- 剩余电量为 0 时跳闸断电；
- 超负荷自动断电；
- 具有数据回写功能，便于电力部门管理；
- 互感式负荷开关采用表外安装，表内采用继电器控制（触点容量为 250VAC/5A）；
- 配套的 IC 卡售电管理系统具有完备的售电管理和用电监察等功能；
- 可扩展 RS485。
- Measurement of three-phase active power, long-term work does not need to be adjusted;
- Three-phase power supply, one line (any line in the three lines of the three-phase watt-hour meter) or two lines (any two lines in the four lines of the three-phase watt-hour meter) power off, metering accuracy is not affected;
- Buy electricity first, then use electricity;
- One table (household) one card, with good anti-counterfeiting;
- When the remaining power is equal to the alarm power, the alarm light is on to remind the user to purchase power in time;
- Trip power off when the remaining power is 0;
- Overload automatic power off;
- With data write back function, easy to manage the power department;
- The mutual inductance load switch is installed off-sheet and controlled by relay inside the meter (contact capacity is 250VAC/5A);
- The supporting IC card power sale management system has complete power sale management and power monitoring functions;
- Scalable RS485.

技术参数 Technical parameter

额定电流 Rated current (A)	1.5 (6) 、 5 (20) 、 10 (40) 、 15 (60) 、 20 (80) 、 30 (100)
额定电压 Rated voltage (V)	3×220/380V 3×380V
额定频率 Rated frequency (Hz)	50 或 60
准确度等级 Accuracy class	1 级

外形尺寸及接线图 Overall dimensions and wiring diagram (mm)





概述 Overview

DTSY997 型三相电子式预付费电能表是我公司在性能优良的电子式三相电能表的基础上研制开发的具有电量计量、负荷控制和用户信息管理等多种功能的新型 IC 卡式预付费电能表, 该表是当前改革用电体制、实现电能商品化、解决收费难及调节电网负荷状态的理想产品。

该产品的各项性能指标符合 GB/T17215.321-2008 《1 级和 2 级静止式交流有功电度表》和 GB/T18460.3-2001 标准中对电子式单相预付费电能表的全部技术要求。

DTSY997 three-phase electronic prepaid watt-hour meter is a new IC card prepaid watt-hour meter developed by our company on the basis of the electronic three-phase watt-hour meter with excellent performance, which has many functions such as electric energy metering, load control and user information management. The table is an ideal product for reforming the current power consumption system, realizing the commercialization of electric energy, solving the difficulty of charging and adjusting the load state of the power grid.

The performance indicators of the product meet all the technical requirements of the electronic single-phase prepaid energy meter in GB/T17215.321-2008 "1 and 2 static AC active power meter" and GB/T18460.3-2001 standard.

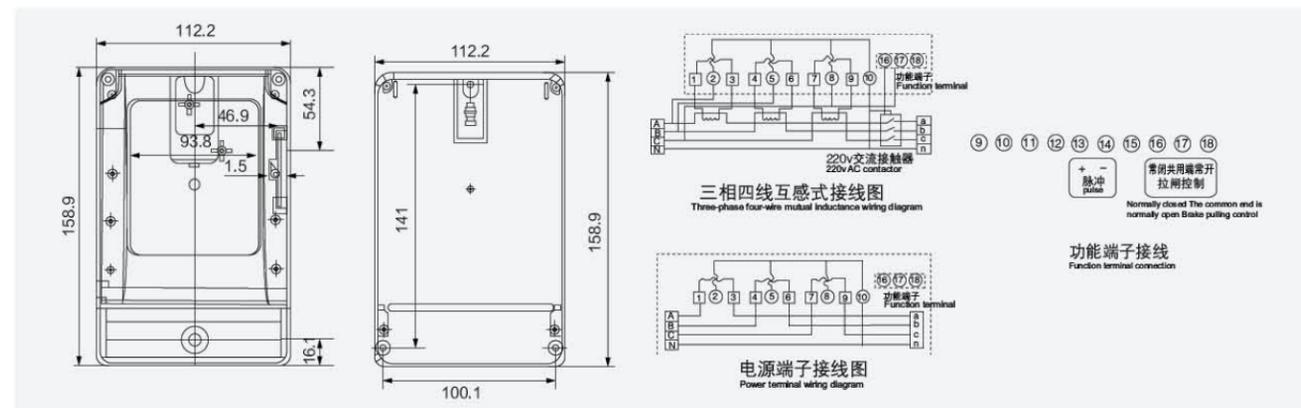
特点 Feature

- 有功电能计量, 长期工作不须调校;
- 先交钱, 后用电, 一表 (户) 一卡, 专卡专用, 具有良好的防伪性;
- 剩余电量等于报警电量时, 告警灯常亮, 提醒用户及时购电;
- 剩余电量为 0 时跳闸断电;
- 超负荷自动断电;
- 大容量磁保持继电器, 低功耗、高可靠;
- 电表内所有元件均选用长寿命、高可靠的电子元器件, 因而具有寿命长、可靠性高的特点;
- 配套的 IC 卡售电管理系统具有完备的售电管理和用电监察等功能;
- 显示方式: LCD 显示。
- Active power metering, long-term work does not need to be adjusted;
- Pay first, after electricity, a table (household) a card, special card, with good anti-counterfeiting;
- When the remaining power is equal to the alarm power, the alarm light is on to remind the user to purchase power in time;
- Trip power off when the remaining power is 0;
- Overload automatic power off;
- Large capacity magnetic holding relay, low power consumption, high reliability;
- All components in the meter are selected long-life, highly reliable electronic components, so it has the characteristics of long life and high reliability;
- The supporting IC card power sale management system has complete power sale management and power monitoring functions;
- Display mode: LCD display.

技术参数 Technical parameter

额定电流 Rated current (A)	1.5 (6) 、 5 (20) 、 10 (40) 、 15 (60) 、 20 (80) 、 30 (100)
额定电压 Rated voltage (V)	3×220/380V 3×380V
额定频率 Rated frequency (Hz)	50 或 60
准确度等级 Accuracy class	1 级

外形尺寸及接线图 Overall dimensions and wiring diagram (mm)



概述 Overview

DDSY997 型电子式单相预付费电能表是我公司在性能优良的电子式单相电能表的基础上研制开发的具有电量计量、负荷控制和用户信息管理等多种功能的新型 IC 卡式预付费电能表, 该表是当前改革用电体制、实现电能商品化、解决收费难及调节电网负荷状态的理想产品。

该产品的各项性能指标符合 GB/T17215.321-2008 《1 级和 2 级静止式交流有功电度表》和 GB/T18460.3-2001 标准中对电子式单相预付费电能表的全部技术要求。

DDSY997 electronic single-phase prepaid watt-hour meter is a new IC card prepaid watt-hour meter developed by our company on the basis of the electronic single-phase watt-hour meter with excellent performance, which has many functions such as electric energy metering, load control and user information management. The table is an ideal product for reforming the current power consumption system, realizing the commercialization of electric energy, solving the difficulty of charging and adjusting the load state of the power grid.

The performance indicators of the product meet all the technical requirements of the electronic single-phase prepaid energy meter in GB/T17215.321-2008 "1 and 2 static AC active power meter" and GB/T18460.3-2001 standard.

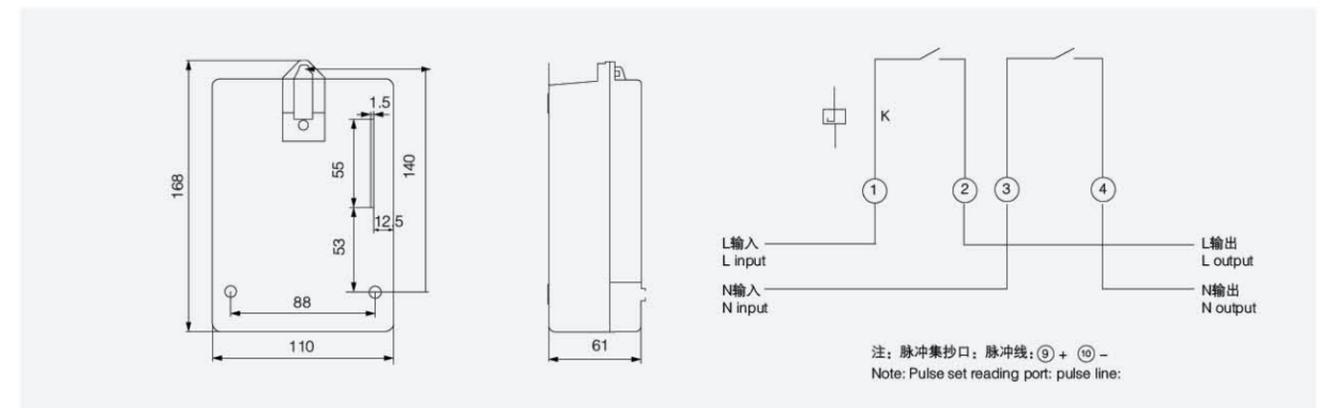
特点 Feature

- 有功电能计量, 长期工作不须调校;
- 先交钱, 后用电, 一表 (户) 一卡, 专卡专用, 具有良好的防伪性;
- 剩余电量等于报警电量时, 告警灯闪烁, 提醒用户及时购电;
- 剩余电量为 0 时跳闸断电;
- 超负荷自动断电;
- 大容量磁保持继电器, 低功耗、高可靠;
- 电表内所有元件均选用长寿命、高可靠的电子元器件, 因而具有寿命长、可靠性高的特点;
- 配套的 IC 卡售电管理系统具有完备的售电管理和用电监察等功能;
- 显示方式: LED 显示。
- Active power metering, long-term work does not need to be adjusted;
- Pay first, after electricity, a table (household) a card, special card, with good anti-counterfeiting;
- When the remaining power is equal to the alarm power, the warning light flashes to remind the user to purchase power in time;
- Trip power off when the remaining power is 0;
- Overload automatic power off;
- Large capacity magnetic holding relay, low power consumption, high reliability;
- All components in the meter are selected long-life, highly reliable electronic components, so it has the characteristics of long life and high reliability;
- The supporting IC card power sale management system has complete power sale management and power monitoring functions;
- Display mode: LED display.

技术参数 Technical parameter

额定电流 Rated current (A)	2.5 (10) 、 5 (20) 、 10 (40) 、 15 (60) 、 20 (80) 、 30 (100)
额定电压 Rated voltage (V)	220 或 240
额定频率 Rated frequency (Hz)	50 或 60
准确度等级 Accuracy class	1 级

外形尺寸及接线图 Overall dimensions and wiring diagram (mm)





概述 Overview

DDS997 型单相电子式电能表, 广泛用于计量居民住宅、机关、商店等照明, 家电等的用电量。该表采用超低功耗集成电路技术和 SMT 制造工艺, 用以计量额定电压 220、额定频率 50Hz 的交流单相有功电能。

其性能符合 GB/T17215.321-200 和 IEC62053-21:2003《1 级和 2 级静止时有功电能表》标准中对单相电子式电能表的全部技术要求。

DDS997 single-phase electronic energy meter is widely used to measure the electricity consumption of residential buildings, institutions, shops and other lighting and home appliances. The watch adopts ultra-low power integrated circuit technology and SMT manufacturing process to measure AC single-phase active energy with rated voltage 220 and rated frequency 50Hz. Its performance meets all the technical requirements of single-phase electronic watt-hour meters in GB/T17215.321-200 and IEC62053-21:2003 standard "1 and 2 stationary active watt-hour meters".

特点 Feature

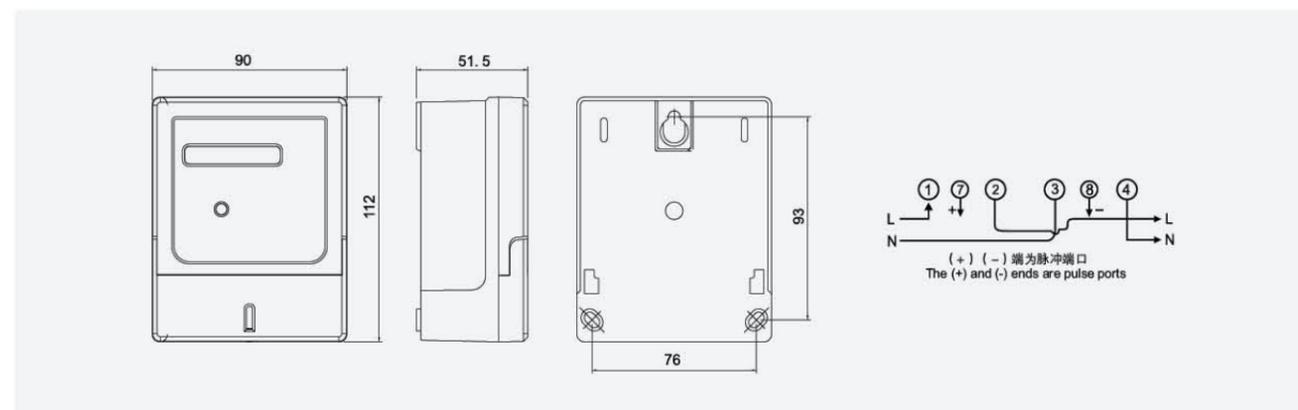
- 电能计量准确稳定。双向计量功能, 能够精确测量正、反两个方向的有功功率。且以一个方向累计电量, 具有一定的防窃电功能。
- 采用光电隔离技术输出电能脉冲信号, 可进行误差检测, 发光二极管指示用电。
- 采用锰铜分流器作为电流回路, 大大提高了仪表的过载能力。
- 本产品具有宽流程、可靠性、灵敏度、误差曲线平直、体积小、重量轻、功耗低、过载能力强、安装方便等优点。

- Accurate and stable power metering. Two-way metering function, can accurately measure the active power in both positive and negative directions. And accumulated electricity in one direction, with a certain anti-theft function.
- The use of photoelectric isolation technology to output electrical energy pulse signal, error detection, light emitting diode indicates electricity.
- The use of copper shunt as the current circuit, greatly improve the overload capacity of the instrument.
- This product has the advantages of wide flow, reliability, sensitivity, flat error curve, small size, light weight, low power consumption, strong overload capacity, easy installation and so on.

技术参数 Technical parameter

额定电流 Rated current (A)	2.5 (10)、5 (20)、10 (40)、15 (60)、20 (100)
额定电压 Rated voltage (V)	220V
额定频率 Rated frequency (Hz)	50 或 60
准确度等级 Accuracy class	1 级

外形尺寸及接线图 Overall dimensions and wiring diagram (mm)



概述 Overview

DTS997 系列三相电子式电能表是采用集成电路, 16 位 A/D 转换, 数字乘法器、应用数字采样处理技术及 SMT 工艺, 根据工业级用户实际用电状况而设计、制造的电力仪表。

该电表采用集成计量模块, 能准确地测量三相正向和反向的有功电能。计量误差具有优异的稳定性。

其性能符合 GB/T17215.321-2008 和 IEC62053-21:2003《1 级和 2 级静止式有功电能表》标准中的各项技术要求。

主要特点: 抗干扰能力强、低功耗、误差曲线平直、宽量程、断相指示功能等。

DTS997 series three-phase electronic energy meter is a series of integrated circuit, 16-bit A/D conversion, digital multiplier, the application of digital sampling processing technology and SMT technology, according to the actual situation of industrial users designed and manufactured power meters.

The meter adopts integrated metering module, which can accurately measure the active energy of three-phase forward and reverse. The measurement error has excellent stability.

Its performance meets the technical requirements of GB/T17215.321-2008 and IEC62053-21:2003 "Level 1 and 2 static active power meter" standards.

Main features: strong anti-interference ability, low power consumption, flat error curve, wide range, phase break indicator function.

特点 Feature

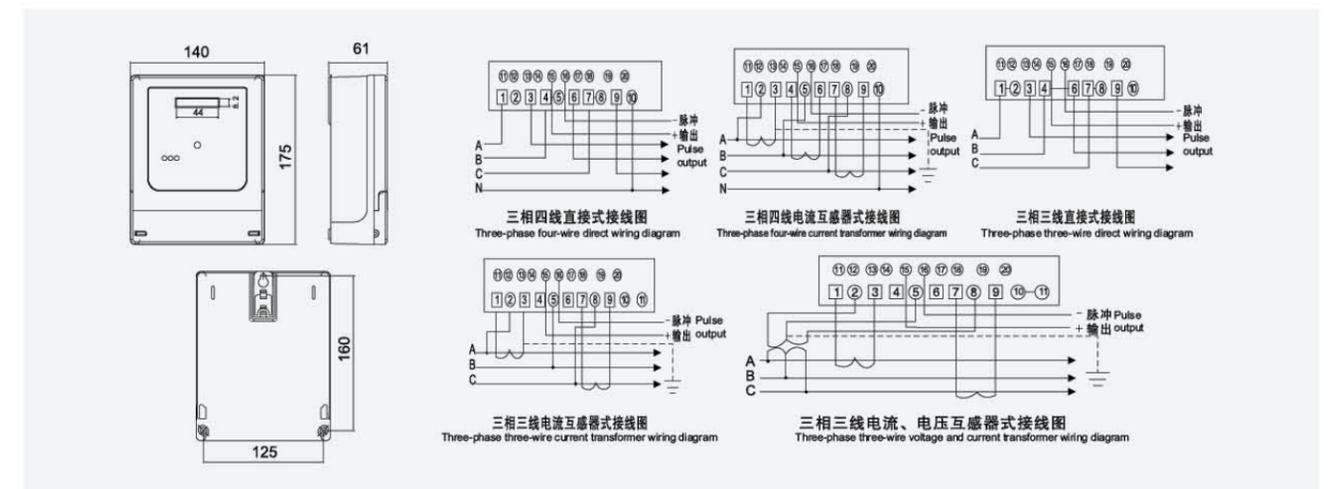
- 准确计量有功电能并存储其数据。
- 带光耦隔离有功无源脉冲输出接口。
- 用三个 LED 二级管来指示是否缺相, 三个发光管分别代表 A、B、C、三相, 某相缺相时, 相应指示灯不良。
- 当有脉冲信号时, 脉冲指示灯正比于用电量开始闪亮。

- Accurately measure active energy and store its data.
- With optocoupler isolation active passive pulse output interface.
- Use three LED secondary tubes to indicate whether there is a lack of phase, three light emitting tubes respectively represent A, B, C, three phases, when a phase is missing, the corresponding indicator is bad.
- When there is a pulse signal, the pulse indicator starts to shine proportional to the power consumption.

技术参数 Technical parameter

额定电流 Rated current (A)	1.5 (6)、5 (20)、10 (40)、15 (60)、20 (80)、30 (100)
额定电压 Rated voltage (V)	3×220/380V 3×57.7/100V 3×380V 3×100V
额定频率 Rated frequency (Hz)	50 或 60
准确度等级 Accuracy class	1 级

外形尺寸及接线图 Overall dimensions and wiring diagram (mm)



# 电子式 电能表 (导轨) 系列

Electronic energy  
meter (rail) series



DDS997 单相导轨式电能表 (2P 导轨款)  
DDS997 Single phase guide type energy meter (2P guide type)

## 概述 Overview

DDS997 型单相导轨式电能表是我厂最新产品, 用于测量额定频率为 50HZ, 额定电压 220V 单相交流有功电能。该产品采用计置电能的专用大规模集成电路和 SMT 技术, 以确保计量精度和可靠性。

- 掉电报价电能累计值。
- 5+1 位宽温型 LCD 显示。
- 35mm 标准导轨安装方式。
- 整机功耗小于 2W/5VA。
- 人工清零功能 (选配)。
- 背光显示 (选配)。

DDS997 single phase guide rail energy meter is the latest product of our factory, which is used to measure single-phase AC active power with rated frequency of 50HZ and rated voltage of 220V.

The product uses a dedicated large-scale integrated circuit and SMT technology for metering electrical energy to ensure metering accuracy and reliability.

- Power failure quoted cumulative value of power.
- 5+1 bit wide temperature LCD display.
- 35mm standard rail mounting method.
- Power consumption is less than 2W/5VA.
- Manual zero clearing function (optional).
- Backlight display (optional).

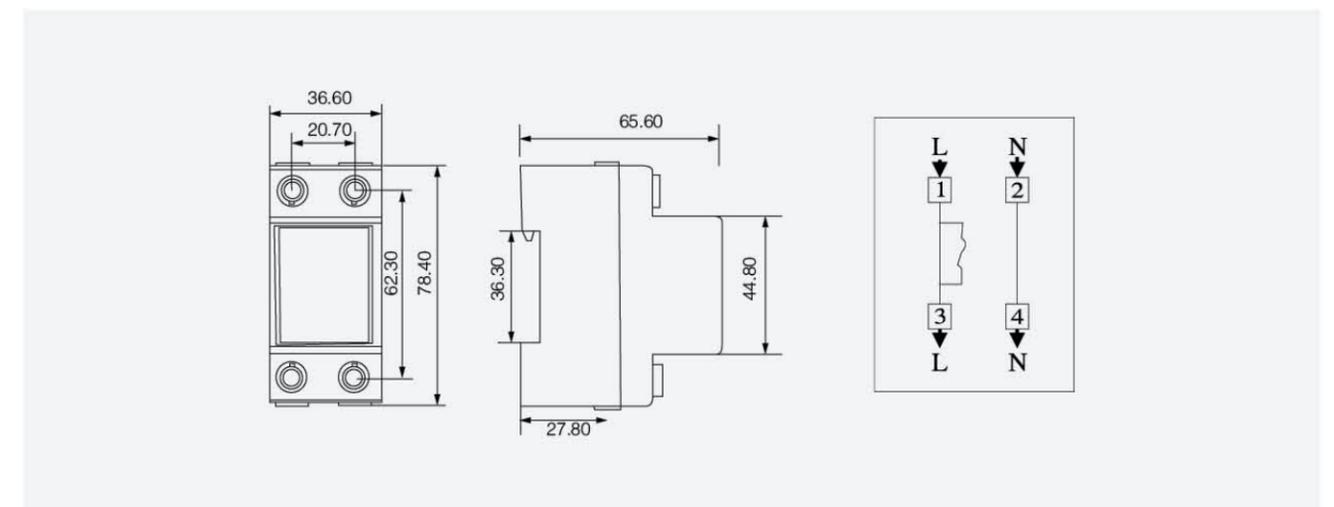
## 技术参数 Technical parameter

额定电流 Rated current (A)	5(60)A
额定电压 Rated voltage (V)	220V
类型 Type	直接接入 Direct access
准确度等级 Accuracy class	1 级

## 工作原理 Working principle

用户消耗的电能, 通过分压器, 分流器上的信号进行取样, 送到放大和乘法器电路, 乘积信号经过积分和 V/F 变换, 经逻辑 分频电路输出, 驱动 LCD 显示器计量电能。  
The electric energy consumed by the user is sampled by the signal on the divider and shunt, and sent to the amplifier and multiplier circuit, the product signal is integrated and V/F transformation, and output by the logical frequency division circuit to drive the LCD display to measure the electric energy.

## 外形尺寸及接线图 Overall dimensions and wiring diagram (mm)





概述 Overview

DT(D)S997 系列电子式电能表适用于供电部门、工厂、企业、商业、农业的动力、照明设备的有功电能计量产品，该产品是根据用户实际用电状况所设计、制造的新型电能表，可通过 RS485 通讯接口与上位机实际数据交换，实现对电表远程抄表、远程控制拉合闸功能、远程预付费充值功能、极大方便了用户用电自动化管理。本产品符合标准 DL/T 645-1997/2007 《多功能表通讯规约》和 GB/T 17215.321-2008 《1 级和 2 级静止式交流有功电能表》。

DT(D)S997 series electronic energy meter is suitable for power supply departments, factories, enterprises, commercial, agricultural power, lighting equipment of active power metering products, the product is based on the user's actual electricity situation designed, manufactured new energy meter, through RS485 communication interface with the host computer actual data exchange. It realizes the function of remote meter reading, remote control pulling and closing, remote prepaid recharge, which greatly facilitates the automatic management of user electricity consumption. This product complies with the standard DL/T 645-1997/2007 "Multi-function meter Communication Protocol" and GB/T 17215.321-2008 "Class 1 and 2 stationary AC active power meter".

工作原理 Working principle

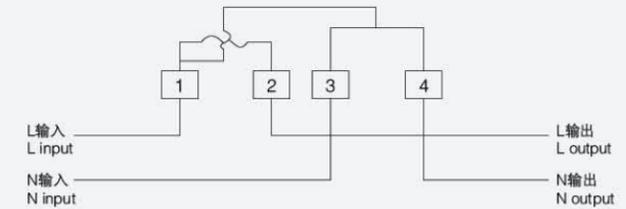
电能表工作时，电压、电流经取样电路分别取样后，送至大规模专用集成电路缓冲放大再由 16 位 A/D 转换器转换成数字信号，经数字乘法器运算后，转换成和电能大小成正比的脉冲，驱动计数器进行电能累加和驱动脉冲指示灯，并输出脉冲，供计量。

When the energy meter works, the voltage and electricity flow through the sampling circuit are respectively sampled, sent to the large-scale application-specific integrated circuit buffer amplification and then converted into a digital signal by the 16-bit A/D converter, after the digital multiplier operation, converted into a pulse proportional to the size of the electric energy, drive the meter for energy accumulation and drive pulse indicator light, and output pulse for metering.

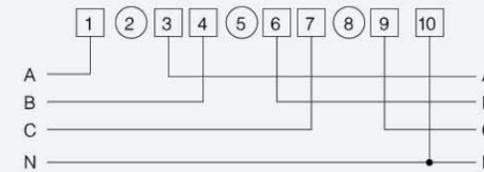
技术参数 Technical parameter

功能 Feature	型号 Model number	DDS997		DTS997	
		DDS997	DDSY997	DSS997	DSSY997
应用场合 Application situation	单相回路 Single-phase circuit	√	√		
	三相回路 Three-phase circuit			√	√
电流规格 Current specification	1.5 (6) A			√	√
	5 (20) A	√	√	√	√
	10 (40) A	√	√	√	√
	15 (60) A	√	√	√	√
	20 (80) A	√	√	√	√
接线方式 Connection mode	直接接入 Direct access	√	√	√	√
	经互感器接入 Connected by the transformer			√	√
实时测量 Real-time measurement	电流 / 电压 Current/voltage	√	√	√	√
	有功功率 Active power	√		√	√
	功率因数 / 频率 Power factor/frequency	√		√	
实时计量 Real-time measurement	需量 demand	√		√	
	有功电能 Active energy	√	√	√	√
预付费方式 Prepaid method	无功电能 Reactive energy			√	
	远程 Long range		√		√
通讯 communication	MODBUS-RTU	选配 assorting		选配 assorting	
	DL/T6451997/2007	选配 assorting	√	选配 assorting	√

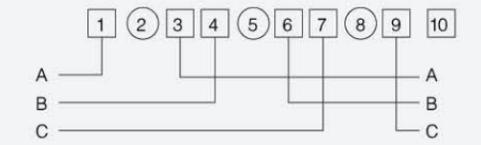
信号接线图 Signal wiring diagram



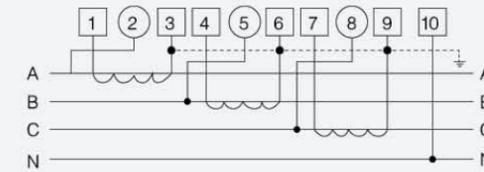
单相接线图  
Single-phase wiring diagram



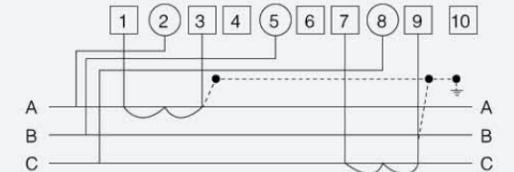
DTS三相四线直接接入式接线图  
DTS three-phase four-wire direct access wiring diagram



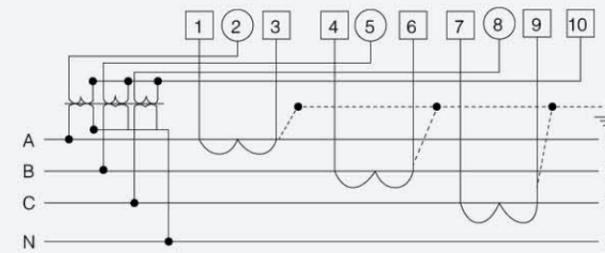
DSS三相三线直接接入式接线图  
DSS three-phase three-wire direct access wiring diagram



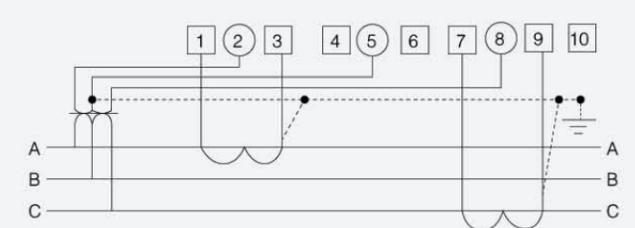
DTS三相四线电流互感器接入式接线图  
DTS three-phase four-wire current transformer access wiring diagram



DSS三相三线电流互感器接入式接线图  
DSS three-phase three-wire current transformer access wiring diagram

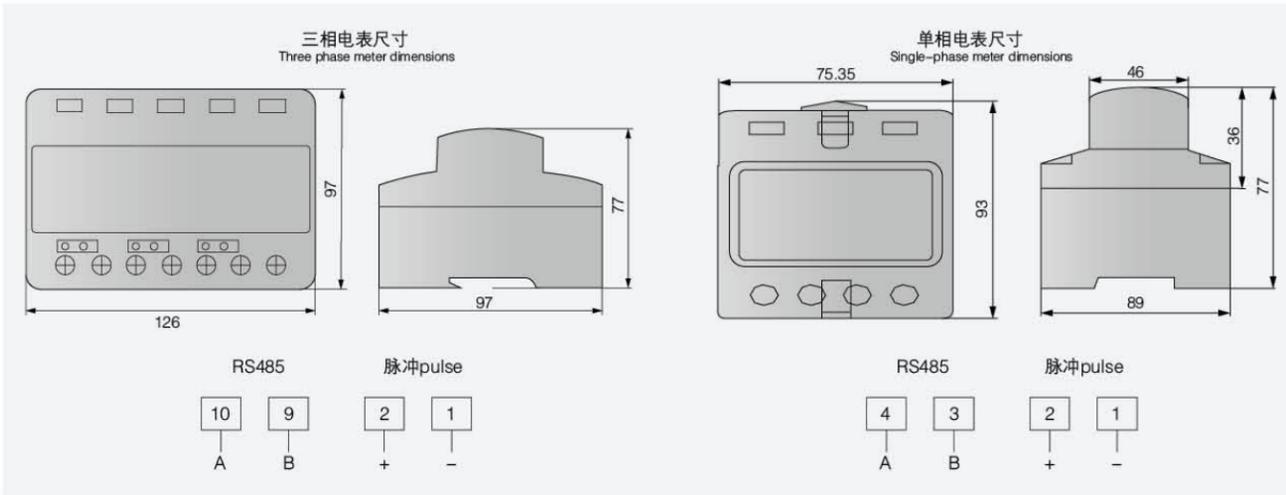


DTS三相四线电流、电压互感器接入式接线图  
DTS three-phase four-wire current and voltage transformer access wiring diagram



DSS三相三线电流、电压互感器接入式接线图  
DSS three-phase three-wire current and voltage transformer access wiring diagram

外形安装尺寸及功能端子 Dimension and function terminal (mm)



远程智能售电示意图 Remote intelligent electricity sale diagram



概述 Overview



DT(S)S997 三相导轨式多功能电能表, 使用在供电部门、工厂、企业、商业、农业的动力、照明设备的有功电能计量, 该表采用先进专用大规模集成电路, 16 位 A/D 转换、数字乘法器、数字采样处理技术及 SMT 工艺, 根据工业用户实际用电状况所设计、制造的新型电能仪表。用于计量频率为 50Hz 的交流三相有功电能, 并电量采用液晶显示, 读数直观便于抄表, 本仪表带 RS485 通讯功能, 为三相电能测量提供先进、可靠的计量工具。

该表采用的计量模块能精确地测量三相正反向有功电能。计量准确、稳定、可靠、具有良好的抗电磁干扰、低功耗、高精度、防窃电、宽量程、长寿命等特点。本仪表符合标准 Modbus-RTU 通讯规约和 GB/T 17215.321-2008《1 级和 2 级静止式交流有功电能表》以及 IEC 61036:2000。

DT(S)S997 three-phase guide multifunctional energy meter, used in power supply departments, factories, enterprises, commercial, agricultural power, lighting equipment active power metering, the table uses advanced special large-scale integrated circuit, 16-bit A/D conversion, digital multiplier, digital sampling processing technology and SMT process, A new type of electric energy instrument designed and manufactured according to the actual power consumption of industrial users. It is used to measure AC three-phase active power with a frequency of 50Hz, and the power adopts liquid crystal display, the reading is intuitive and easy to read the meter, the instrument with RS485 communication function, provides advanced and reliable measuring tools for three-phase power measurement.

The measuring module used in the table can accurately measure the positive and negative bidirectional active energy of the three phases. The measurement is accurate, stable, reliable, with good anti-electromagnetic disturbance, low power consumption, high accuracy, anti-theft, wide range, long life and so on. This instrument complies with the standard Modbus-RTU communication protocol and GB/T 17215.321-2008 "Class 1 and 2 Stationary AC Active Energy meter" and IEC 61036:2000.

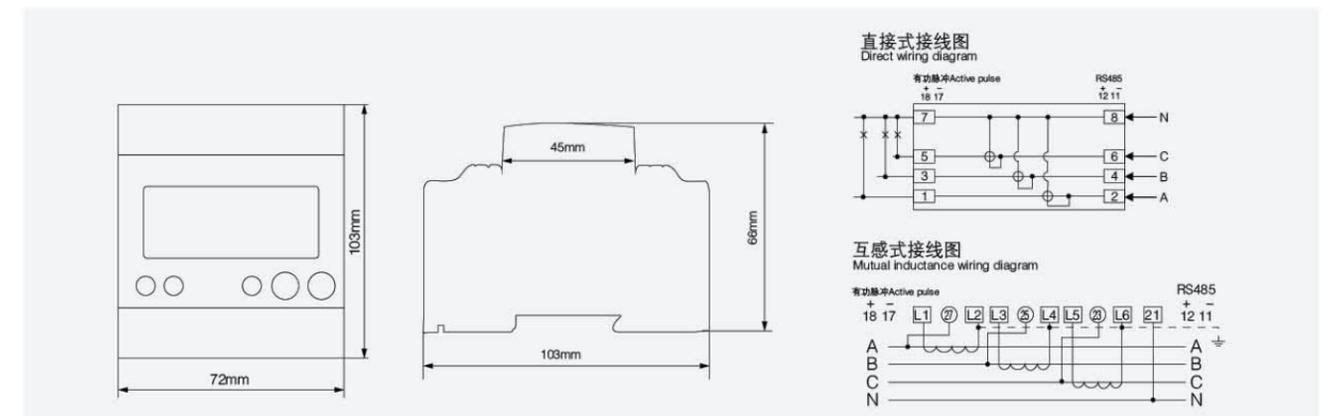
特点 Feature

- 计量三相有功电能, 长期工作不需调校;
  - A 相电源供电;
  - 可实时测量 A、B、C 三相的电压、电流、功率等有效值及当前频率;
  - 宽工作温度范围;
  - 通讯规约: DL/T645-2007 或 modbus-RTU;
  - 全封闭防尘结构, 精选长寿命元器件, 使用寿命长;
  - 铜接线柱, 安全性能好, 经久耐用;
  - 高精度、高品质、低功耗、宽负荷。
- Measurement of three-phase active power, long-term work without adjustment;
  - A phase power supply;
  - Real-time measurement of A, B, C three-phase voltage, current, power and other effective values and current frequency;
  - Wide operating temperature range;
  - Communication protocol: DL/T645-2007 or modbus-RTU;
  - Fully enclosed dust-proof structure, select long-life components, long service life;
  - Copper terminal, good safety performance, durable;
  - High precision, high quality, low power consumption, wide load.

技术参数 Technical parameter

额定电流 Rated current (A)	1.5 (6)、5 (20)、10 (40)、15 (60)、20 (80)、30 (100)、5(100)
额定电压 Rated voltage (V)	3×220/380V 3×57.7/100V 3×380V 3×100V
额定频率 Rated frequency (Hz)	50 或 60
准确度等级 Accuracy class	1 级

外形尺寸及接线图 Overall dimensions and wiring diagram (mm)





概述 Overview

DTS997 型三相导轨式电能表系我公司采用微电子技术计量电能：采用专用大规模集成电路，应用数字采样处理技术及 SMT 工艺等技术研制开发的新型三相电子式电能表。该电能表完全符合 GB/T17215.321-2008 国家标准和 IEC62053-21 国际标准；能直接精确地测量电能计量中正向有功电能，7 位 LCD 显示器显示有功用电量，具有可靠性好、体积小、重量轻、外表美观、工艺先进、35mmDIN 标准导轨式安装等特点；并具有良好的抗电磁干扰、低自耗节电、高精度、高过载、高稳定性、长寿命。

该表适用于计量额定频率为 50Hz 或 60Hz 的三相交流有功电能。供固定安装在室内使用，适用于环境温度不超过 -25~+55°C，相对湿度不超过 95%，且空气中不含有腐蚀性气体及避免尘沙、霉菌、盐雾、凝露、昆虫等影响。

DTS997 three-phase guideway energy meter is a new three-phase electronic energy meter developed by using special large-scale integrated circuit, digital sampling processing technology and SMT technology. The energy meter fully conforms to GB/T17215.321-2008 national standard and IEC62053-21 international standard; It can directly and accurately measure the positive active energy in the power measurement, and the 7-bit LCD display displays the active power consumption. It has the characteristics of good reliability, small size, light weight, beautiful appearance, advanced technology, 35mmDIN standard guide rail installation, etc., and has good electromagnetic interference resistance, low self-consumption and power saving, high precision, high overload, high stability and long life.

This table is suitable for measuring three-phase AC active energy with a rated frequency of 50Hz or 60Hz. For fixed installation in indoor use, suitable for the ambient temperature does not exceed -25~+55°C, the relative humidity does not exceed 95%, and the air does not contain corrosive gases and avoid dust, mold, salt spray, condensation, insects and other effects.

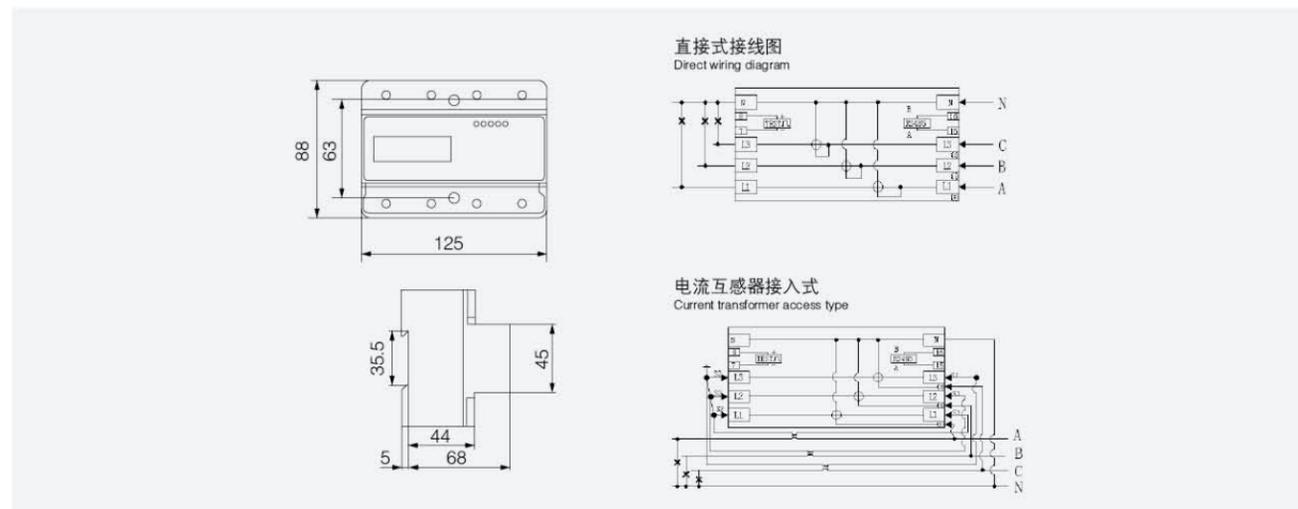
特点 Feature

- 电能计量功能：计量有功电能。
- 三相电源供电，一相或两相断电，计量准确度不受影响。三相电源断电后，所有存储数据不丢失，保存数据时间长。
- 具有耦隔离有功无源脉冲测试口输出功能（满足运动脉冲输出要求，脉宽为 80ms±20ms）。
- 缺相时报警指示灯灭。
- Power metering function: measuring active power.
- Three-phase power supply, one or two phase power off, metering accuracy is not affected. After the three-phase power supply is powered off, all data is not lost and the data is stored for a long time.
- With decouple isolation active passive pulse test port output function (to meet the requirements of remote artery impulse output, pulse width of 80ms±20ms).
- The alarm light is off when the phase is missing.

技术参数 Technical parameter

额定电流 Rated current (A)	1.5 (6) 、 5 (20) 、 10 (40) 、 15 (60) 、 20 (80) 、 30 (100) 、 5(100)
额定电压 Rated voltage (V)	3×220/380V 3×57.7/100V 3×380V 3×100V
额定频率 Rated frequency (Hz)	50 或 60
准确度等级 Accuracy class	1 级

外形尺寸及接线图 Overall dimensions and wiring diagram (mm)



概述 Overview

DTS997 型三相导轨式电能表，使用在供电部门、工厂、企业、商业、农业的动力、照明设备的有功电能计量，该表采用先进专用大规模集成电路，16 位 A/D 转换、数字乘法器、数字采样处理技术及 SMT 工艺，根据工业用户实际用电状况所设计、制造的新型电能仪表。用于计量频率为 50Hz 的交流三相有功电能，并电量采用液晶显示，读数直观便于抄表。

该表采用的计量模块能精确地测量三相有功电能。计量准确、稳定、可靠、具有良好的抗电磁干扰、低功耗、高准确度、防窃电、宽量程、长寿命等特点。本仪表符合 GB/T 17215.321-2008 《1 级和 2 级静止式交流有功电能表》以及 IEC61036:2000。

DTS997 three-phase guide rail energy meter, used in power supply departments, factories, enterprises, commercial, agricultural power, lighting equipment active power metering, the table uses advanced special large-scale integrated circuit, 16-bit A/D conversion, digital multiplier, digital sampling processing technology and SMT process, A new type of electric energy instrument designed and manufactured according to the actual power consumption of industrial users. It is used to measure AC three-phase active power with a frequency of 50Hz, and the power is displayed by liquid crystal, which makes the reading intuitive and easy to read the meter.

The measuring module used in this table can measure the three-phase active power accurately. The measurement is accurate, stable, reliable, with good anti-electromagnetic disturbance, low power consumption, high accuracy, anti-theft, wide range, long life and so on. This instrument conforms to GB/T 17215.321-2008 "1 and 2 stationary AC Active power meter" and IEC61036:2000.

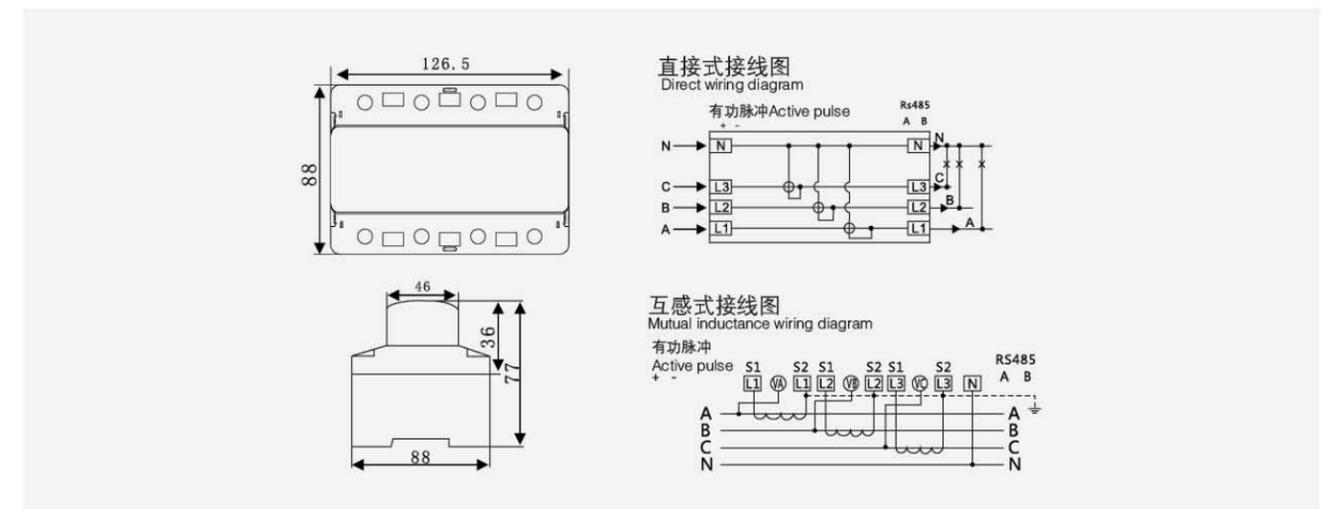
特点 Feature

- 电能计量功能：计量有功电能。
- 三相电源供电，一相或两相断电，计量准确度不受影响。三相电源断电后，所有存储数据不丢失，保存数据时间长。
- 具有耦隔离有功无源脉冲测试口输出功能（满足运动脉冲输出要求，脉宽为 80ms±20ms）。
- 缺相时报警指示灯灭。
- Power metering function: measuring active power.
- Three-phase power supply, one or two phase power off, metering accuracy is not affected. After the three-phase power supply is powered off, all data is not lost and the data is stored for a long time.
- With decouple isolation active passive pulse test port output function (to meet the requirements of remote artery impulse output, pulse width of 80ms±20ms).
- The alarm light is off when the phase is missing.

技术参数 Technical parameter

额定电流 Rated current (A)	1.5 (6) 、 5 (20) 、 10 (40) 、 15 (60) 、 20 (80) 、 30 (100) 、 5(100)
额定电压 Rated voltage (V)	3×220/380V 3×57.7/100V 3×380V 3×100V
额定频率 Rated frequency (Hz)	50 或 60
准确度等级 Accuracy class	1 级

外形尺寸及接线图 Overall dimensions and wiring diagram (mm)





概述 Overview

DDS997 型单相导轨式电能表是为了适应我国电网改造，用来测量参比频率为 50Hz/60Hz 单相有功电能而开发设计的电能表。

本仪表采用超低功耗大规模集成电路技术，具有测量精度高、稳定性好、可靠性高、显示直观、过载能力强等显著优点。关键元器件选用国际知名品牌的长寿命器件，数据显示采用液晶 LCD，读数直观便于抄表，本仪表具有 RS485 通讯功能。

本仪表符合标准 Modbus-RTU《通讯规约》和 GB/T 17215.321-2008《1 级和 2 级静止式交流有功电能表》。

DDS997 single phase guide rail energy meter is developed and designed to adapt to the transformation of China's power grid and measure single phase active energy with reference frequency of 50Hz/60Hz.

The instrument adopts ultra-low power consumption large-scale integrated circuit technology, with high measurement accuracy, good stability, high reliability, visual display, overload ability and other significant advantages. The key components are long-life devices of international well-known brands, the data display is LCD, the reading is intuitive and easy to read the meter, the instrument has RS485 communication function.

This instrument complies with the standard Modbus-RTU Communication Protocol and GB/T 17215.321-2008 Stationary AC Active Energy meter of Class 1 and 2.

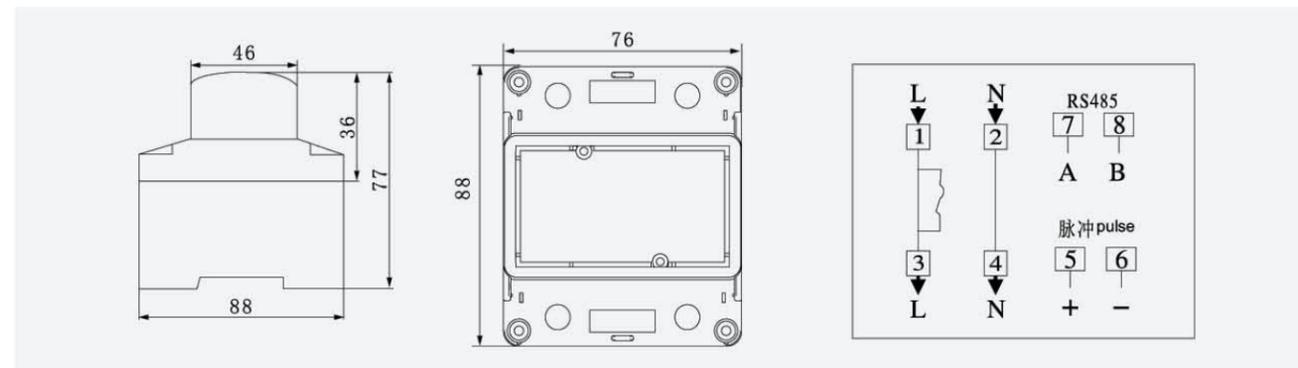
特点 Feature

- 计量单相有功电能，长期工作不需调校；
  - 宽工作温度范围；
  - 具有正反向计量和反向指示功能；
  - 通讯规约：DL/T645-2007 或 modbus-RTU；
  - 全封闭防尘结构，使用阻燃材料，精选长寿命元器件，使用寿命长；
  - 铜接线柱，安全性能好，经久耐用；
  - 可实时测量电压、电流、功率等有效值及当前频率；
  - 高精度、高品质、低功耗、宽负荷。
- Single-phase active energy metering, long-term work does not need to be adjusted;
  - Wide operating temperature range;
  - With positive and negative metering and reverse indication function;
  - Communication protocol: DL/T645-2007 or modbus-RTU;
  - Fully enclosed dust-proof structure, the use of flame retardant materials, long-life components, long service life;
  - Copper terminal, good safety performance, durable;
  - Real-time measurement of voltage, current, power and other effective values and current frequency;
  - High precision, high quality, low power consumption, wide load.

技术参数 Technical parameter

额定电流 Rated current (A)	5 (20) 、 10 (40) 、 15 (60) 、 20 (80) 、 30 (100)
额定电压 Rated voltage (V)	220/230
额定频率 Rated frequency (Hz)	50 或 60
准确度等级 Accuracy class	1 级

外形尺寸及接线图 Overall dimensions and wiring diagram (mm)



概述 Overview

DT (S) S997 型三相电子式电能表，使用在供电部门、工厂、企业、商业、农业的动力、照明设备的有功电能计量，该表采用专用大规模集成电路，16 位 A/D 转换、数字乘法器、数字采样处理技术及 SMT 工艺，根据工业用户实际用电状况所设计、制造的新型电能仪表。用于计量频率为 50Hz 的交流三相有功电能，并电量采用液晶显示，读数直观便于抄表，本仪表可扩展红外和 RS485 通讯功能，为三相电能测量提供先进、可靠的计量工具。

该表采用的计量模块能精确地测量三相正反向有功电能。计量准确、稳定、可靠、具有良好的抗电磁骚扰、低功耗、高精度、防窃电、宽量程、长寿命等特点。本仪表符合标准 DL/T 645-1997/2007《多功能表通讯规约》和 GB/T 17215.321-2008《1 级和 2 级静止式交流有功电能表》以及 IEC 61036:2000。

DT (S) S997 three-phase electronic energy meter, used in power supply departments, factories, enterprises, commercial, agricultural power, lighting equipment active power metering, the table uses special large-scale integrated circuit, 16-bit A/D conversion, digital multiplier, digital sampling processing technology and SMT process, A new type of electric energy instrument designed and manufactured according to the actual power consumption of industrial users. It is used to measure AC three-phase active power with a frequency of 50Hz, and the power adopts liquid crystal display, which makes the reading intuitive and easy to read the meter. The instrument can expand the infrared and RS485 communication functions to provide advanced and reliable measurement tools for three-phase power measurement.

The measuring module used in the table can accurately measure the positive and negative bidirectional active energy of the three phases. The measurement is accurate, stable, reliable, with good anti-electromagnetic disturbance, low power consumption, high accuracy, anti-theft, wide range, long life and so on. This instrument complies with the standards DL/T 645-1997/2007 "Multifunction meter Communication Protocol" and GB/T 17215.321-2008 "Class 1 and 2 stationary AC Active Energy meter" and IEC 61036:2000.

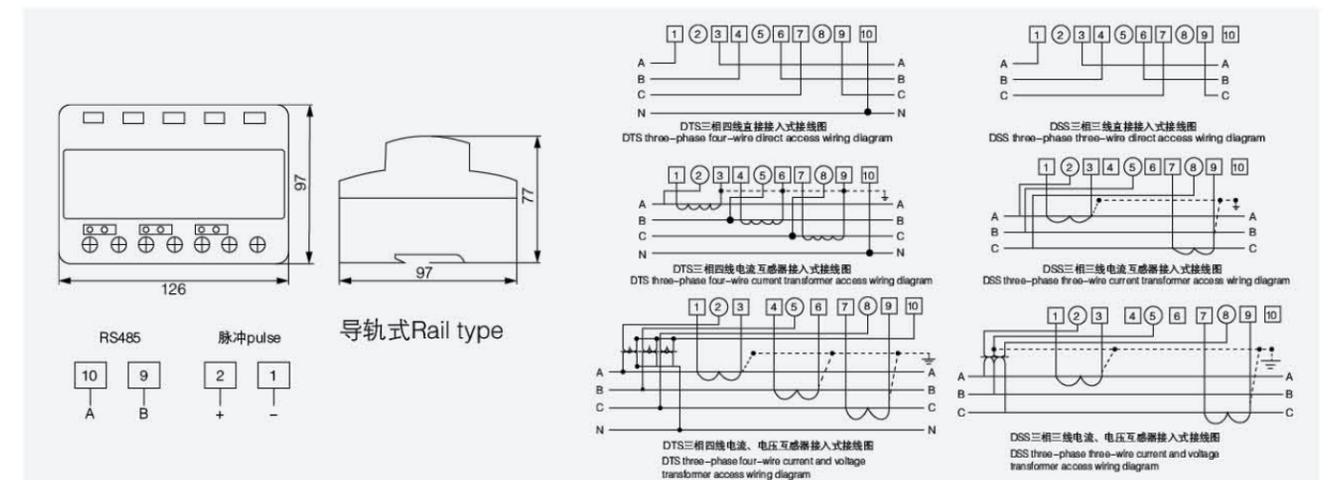
特点 Feature

- 计量三相有功电能，长期工作不需调校；
  - 三相电源供电，一线（三相电能表三线中任一线）或两线（三相电能表四线中任两线）断电，计量准确度不受影响；
  - 可实时测量 A、B、C 三相的电压、电流、功率等有效值及当前频率；
  - 宽工作温度范围；
  - 通讯规约：DL/T645-2007 或 modbus-RTU；
  - 全封闭防尘结构，使用阻燃材料，精选长寿命元器件，使用寿命长；
  - 铜接线柱，安全性能好，经久耐用；
  - 高精度、高品质、低功耗、宽负荷。
- Measurement of three-phase active power, long-term work without adjustment;
  - Three-phase power supply, one line (any line in the three lines of the three-phase watt-hour meter) or two lines (any two lines in the four lines of the three-phase watt-hour meter) power off, metering accuracy is not affected;
  - Real-time measurement of A, B, C three-phase voltage, current, power and other effective values and current frequency;
  - Wide operating temperature range;
  - Communication protocol: DL/T645-2007 or modbus-RTU;
  - Fully enclosed dust-proof structure, the use of flame retardant materials, long-life components, long service life;
  - Copper terminal, good safety performance, durable;
  - High precision, high quality, low power consumption, wide load.

技术参数 Technical parameter

额定电流 Rated current (A)	1.5 (6) 、 5 (20) 、 10 (40) 、 15 (60) 、 20 (80) 、 30 (100) 、 5(100)
额定电压 Rated voltage (V)	3×220/380V 3×57.7/100V 3×380V 3×100V
额定频率 Rated frequency (Hz)	50 或 60
准确度等级 Accuracy class	1 级

外形尺寸及接线图 Overall dimensions and wiring diagram (mm)





概述 Overview

DTS997 型三相导轨式电能表，使用在供电部门、工厂、企业、商业、农业的动力、照明设备的有功电能计量，该表采用先进专用大规模集成电路，16 位 A/D 转换、数字乘法器、数字采样处理技术及 SMT 工艺，根据工业用户实际用电状况所设计、制造的新型电能仪表。用于计量频率为 50Hz 的交流三相有功电能，并电量采用液晶显示，读数直观便于抄表，本仪表可扩展 RS485 通讯功能。

该表采用的计量模块能精确地测量三相正双向有功电能。计量准确、稳定、可靠、具有良好的抗电磁干扰、低功耗、高精度、防窃电、宽量程、长寿命等特点。本仪表符合标准 Modbus-RTU 通讯规约和 GB/T 17215.321-2008《1 级和 2 级静止式交流有功电能表》以及 IEC61036:2000。

DTS997 three-phase guide rail energy meter, used in power supply departments, factories, enterprises, commercial, agricultural power, lighting equipment active power metering, the table uses advanced special large-scale integrated circuit, 16-bit A/D conversion, digital multiplier, digital sampling processing technology and SMT process, A new type of electric energy instrument designed and manufactured according to the actual power consumption of industrial users. It is used to measure AC three-phase active power with a frequency of 50Hz, and the power adopts liquid crystal display, which makes the reading intuitive and easy to read the meter. The instrument can expand the RS485 communication function.

The measuring module used in the table can accurately measure the positive and negative bidirectional active energy of the three phases. The measurement is accurate, stable, reliable, with good anti-electromagnetic disturbance, low power consumption, high accuracy, anti-theft, wide range, long life and so on. This instrument complies with the standard Modbus-RTU communication protocol and GB/T 17215.321-2008 "Class 1 and 2 Stationary AC Active Energy meter" and IEC61036:2000.

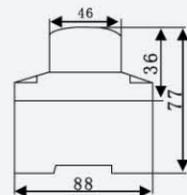
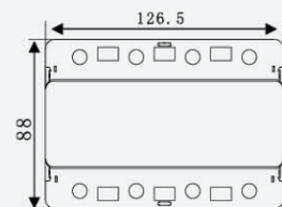
特点 Feature

- 计量三相正双向有功电能，长期工作不需调校；
- 三相电源供电，一线（三相电能表三线中任一线）或二线（三相电能表四线中任二线）断电，计量准确度不受影响；
- 宽工作温度范围；
- 通讯规约：DL/T645-2007 或 modbus-RTU；
- 全封闭防尘结构，使用阻燃材料，精选长寿命元器件，使用寿命长；
- 铜接线柱，安全性能好，经久耐用；
- 高精度、高品质、低功耗、宽负荷。
- Measurement of three-phase positive and negative bidirectional active energy, long-term work without adjustment;
- Three-phase power supply, one line (any line in the three lines of the three-phase watt-hour meter) or two lines (any two lines in the four lines of the three-phase watt-hour meter) power off, metering accuracy is not affected;
- Wide operating temperature range;
- Communication protocol: DL/T645-2007 or modbus-RTU;
- Fully enclosed dust-proof structure, the use of flame retardant materials, long-life components, long service life;
- Copper terminal, good safety performance, durable;
- High precision, high quality, low power consumption, wide load.

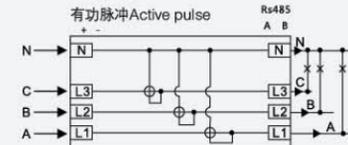
技术参数 Technical parameter

额定电流 Rated current (A)	1.5 (6)、5 (20)、10 (40)、15 (60)、20 (80)、30 (100)、5(100)
额定电压 Rated voltage (V)	3×220/380V 3×57.7/100V 3×380V 3×100V
额定频率 Rated frequency (Hz)	50 或 60
准确度等级 Accuracy class	1 级

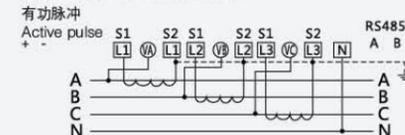
外形尺寸及接线图 Overall dimensions and wiring diagram (mm)



直接式接线图  
Direct wiring diagram



互感式接线图  
Mutual inductance wiring diagram



# 智能多功能 电力仪表系列

Intelligent multi-function  
power meter series





概述 Overview

HD19 系列智能多功能电力仪表是针对工矿企业、公共设施、智能电力监控需求而设计的。能测量所有的常用电力参数，具有显示直观、精度高、抗震动等优点。还带有脉冲输出和 RS485 通讯接口，可实现数据的远程传输，并可选配开关量输入输出、模拟量输出、谐波含量分析、多费率电能统计等多个功能。本产品适用于能源管理系统、变电站自动化、配电网自动化、工业自动化、小区电力监控、智能配电柜中。

HD19 series intelligent multi-functional power meter is designed for industrial and mining enterprises, public facilities, intelligent power monitoring needs. It can measure all the commonly used power parameters, and has the advantages of intuitive display, high precision and anti-vibration. It also has pulse output and RS485 communication interface, which can realize remote transmission of data, and optional switch input and output, analog output, harmonic content analysis, multi-rate power statistics and other functions. This product is suitable for energy management system, substation automation, distribution network automation, industrial automation, community power monitoring, intelligent distribution cabinet.

产品标准 Product standard

GB/T17215.322-2008 交流电测量设备 - 特殊要求 - 第 22 部分: 静止式有功电能表 (0.2S 级和 0.5S 级)

GB/T17215.323-2008 交流电测量设备 - 特殊要求 - 第 23 部分: 静止式无功电能表 (2 级和 3 级)

Alternating current measuring equipment - Particular requirements - Part 22: Static active energy meters (classes 0.2S and 0.5S)  
Alternating current measuring equipment - Particular requirements - Part 23: Static reactive watt-hour meters (Classes 2 and 3)

型号含义 Model meaning

HD 19 □ - □ □ □ □ □ □ □ □

- (省略)- 无模拟变送输出功能, nD- 模拟变送输出 (n=1 路、2 路、3 路.....)
- (省略)- 无 RS485 通讯, nT-RS485 通讯 (n=1 路、2 路)
- (省略)- 无报警 (开关量) 输出, nO- 报警 (开关量) 输出 (n=1 路、2 路、3 路.....)
- (省略)- 无开关量输入, nI- 开关量输入 (n=1 路、2 路、3 路.....)
- 显示方式: S- 数码管显示, Y-LCD 显示

外形尺寸 Overall dimensions:

外形代号 Shape code	面框尺寸 Face frame size(mm)	开孔尺寸 Opening size (mm)
1	120×120	111×111
7	80×80	76×76
5	96×48	92×45
9	96×96	92×92
6	72×72	68×68
4	48×48	45×45

功能代号: A- 电流, V- 电压; F- 频率, H- 功率因数, P- 有功功率, Q- 无功功率; E- 有功电能, RE- 无功电能; I/U- 电流电压组合, I/U/F- 电流电压频率组合; P/Q/H- 有功无功功率功率因数组合; Z-I/U/F/H/PQ 组合, D- 全电量多功能电力仪表; FD- 全电量测量 + 多费率分时计量; HD- 全电量测量 + 谐波测量; FHD- 全电量测量 + 多费率 + 谐波测量;

Function code: A-current, V-voltage; F-frequency, H-power factor, P-active power, Q-reactive power, E-active electric energy, re-reactive electric energy; I/U- current and voltage combination, I/U/F- current and voltage frequency combination; P/Q/H- Active and reactive power power factor combination; Z-I/U/F/H/PQ combination, D-full power multifunctional power meter, FD- Full power measurement + multi-rate time-sharing measurement; HD- Full power measurement + harmonic measurement; FHD- Full power measurement + multi-rate + harmonic measurement;

相别: 192: 单相交流信号输入; 194: 三相交流信号输入; 195: 直流信号输入  
Phase: 192: single-phase AC signal input; 194: three-phase AC signal input; 195: DC signal input

公司代号  
Company code



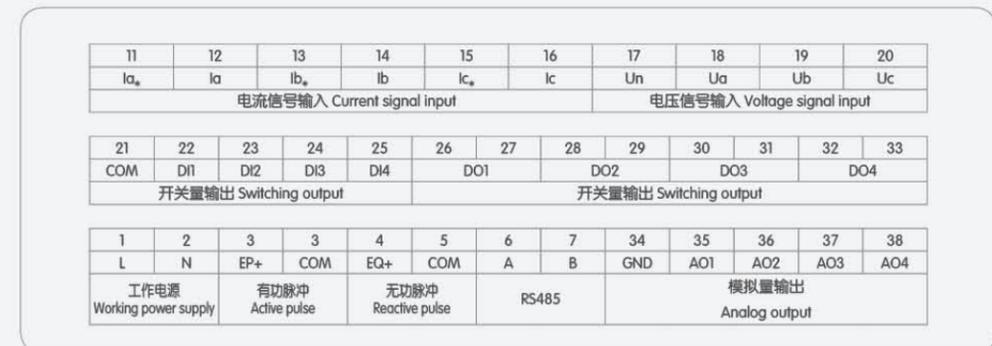
HD19 系列多功能电力仪表 HD19 series multi-function power meter

功能及型号 Function and model	测量 measure 三相 全电 量测 量 Three-phase full power measurement	扩展功能 (选配) Extended function (optional)				显示 reveal		开孔 尺寸 Opening size (mm)
		开关量 输入 Switching input	开关量 输出 Switching value exportation	变送 输出 Converter output	通讯 接口 Communication interface	LED	LCD	
HD192D-1S	√	4	4	4	1	√	-	111×111
HD192D-1Y	√	4	4	4	1	-	√	
HD192D-7S	√	-	-	-	1	√	-	76×76
HD192D-7Y	√	-	-	-	1	-	√	
HD192D-9S	√	4	4	4	1	√	-	92×92
HD192D-9Y	√	4	4	4	1	-	√	
HD192D-6S	√	-	-	-	1	√	-	68×68
HD192D-6Y	√	-	-	-	1	-	√	

注: 1、三相全电量测量包括: 三相电流、电压, 三相有功功率, 三相无功功率, 功率因数, 正向有功无功电能显示。  
2、选配的扩展功能为常规最多能扩展的功能数量, 如有特殊订货要求, 请与我公司技术部门协商解决。

Note:  
1, three-phase full power measurement includes: three-phase current, voltage, three-phase active power, three-phase reactive power, power factor, forward active reactive power display.  
2, the optional extension function is the maximum number of conventional functions that can be extended, if there are special orders, please negotiate with our technical department to solve.

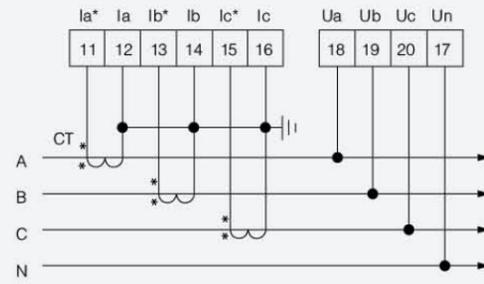
接线图 Wiring diagram



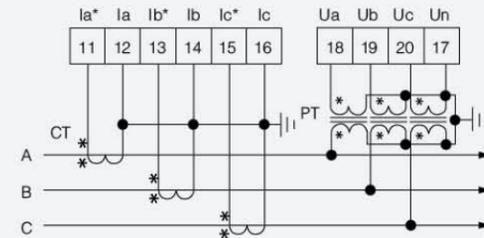
注: 如与仪表壳体上接线图不一致, 请以仪表壳体上为准基本电量测量 + 开关量输入 + 开关量输出 + 模拟量变送输出

Note: If it is inconsistent with the wiring diagram on the instrument housing, please refer to the basic power measurement + switch input + switch output + analog converter output on the instrument housing

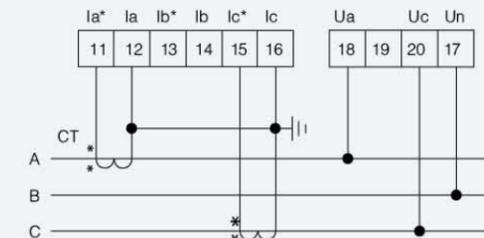
接线图 Wiring diagram



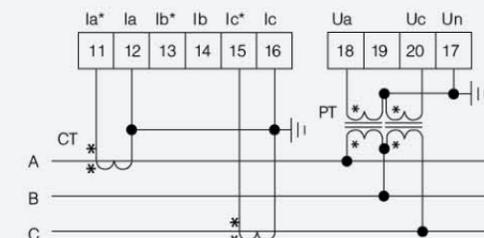
低压：三相四线(3CT 无PT)  
Low voltage: three-phase four-wire (3CT without PT)



高压：三相四线(3CT 3PT)  
High voltage: three-phase four-wire (3CT 3PT)



低压：三相三线(2CT 无PT)  
Low voltage: Three phase three wire (2CT without PT)



高压：三相三线(2CT 2PT)  
High voltage: three-phase three wire (2CT 2PT)



HD192-A/V 系列数显单相电流电压表 HD192-A/V series digital display single-phase current voltmeter

功能及型号 Function and model	测量 measure		扩展功能 (选配) Extended function (optional)				显示 reveal		开孔尺寸 Opening size (mm)
	交流 电流 / 电压 Current/voltage	直流 电流 / 电压 Direct current Current/voltage	开关量 输入 Switching input	开关量 输出 Switching value exportation	变送 输出 Converter output	通讯 接口 Communication interface	LED	LCD	
HD192A/V-11S	√	-	2	2	1	1	√	-	111×111
HD192A/V-71S	√	-	2	2	1	1	√	-	76×76
HD192A/V-91S	√	-	2	2	1	1	√	-	92×92
HD192A/V-61S	√	-	2	2	1	1	√	-	68×68

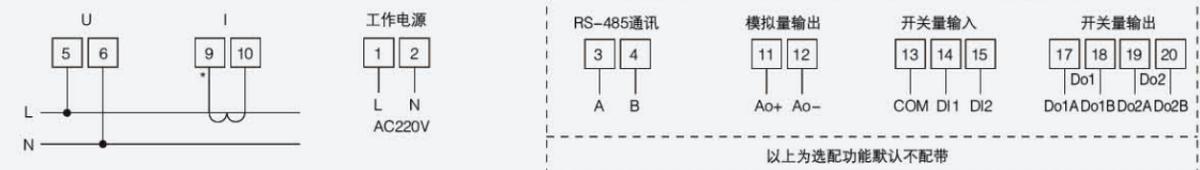
注：选配的扩展功能为常规最多能扩展的功能数量，如有特殊订货要求，请与我公司技术部门协商解决。  
Note: The optional extension function is the maximum number of functions that can be extended. If you have special order requirements, please negotiate with our technical department.

端子排列图 Terminal arrangement diagram



注：如与仪表壳体上接线图不一致，请以仪表壳体上为准  
Note: If it is inconsistent with the wiring diagram on the instrument housing, please refer to the instrument housing

接线图 Wiring diagram



注：1、“\*”为电流进线端；  
2、具体接线方式请参照产品实际接线图

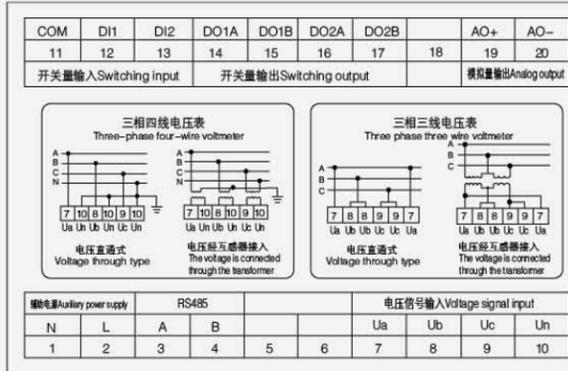
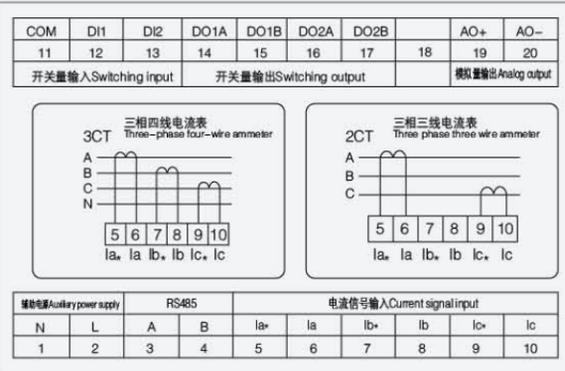


HD194-A/V 系列数显三相电流电压表 HD194-A/V series digital display three-phase current voltmeter

功能及型号 Function and model	测量 measure	扩展功能 (选配) Extended function (optional)				显示 reveal		开孔尺寸 Opening size (mm)
	三相交流 电流 / 电压 Three-phase AC Current/ voltage	开关量 输入 Switching value input	开关量 输出 Switching value exportation	变送 输出 Converter output	通讯 接口 Communication interface	LED	LCD	
HD192A/V-13S	√	2	2	1	1	√	-	111×111
HD192A/V-73S	√	2	2	1	1	√	-	76×76
HD192A/V-93S	√	2	2	1	1	√	-	92×92
HD192A/V-63S	√	2	2	1	1	√	-	68×68

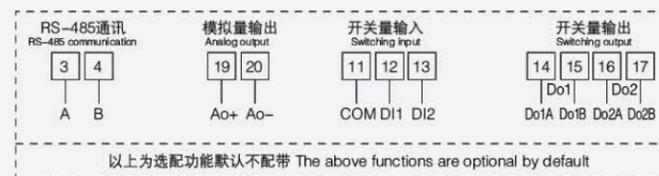
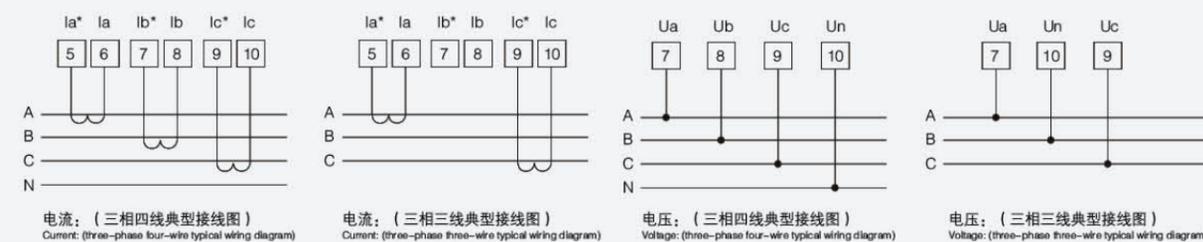
注：选配的扩展功能为常规最多能扩展的功能数量，如有特殊订货要求，请与我公司技术部门协商解决。  
Note: The optional extension function is the maximum number of functions that can be extended. If you have special order requirements, please negotiate with our technical department.

端子排列图 Terminal arrangement diagram



注：如与仪表壳体上接线图不一致，请以仪表壳体上为准  
Note: If it is inconsistent with the wiring diagram on the instrument housing, please refer to the instrument housing

接线图 Wiring diagram



注：1、\*\*为电流进线端；  
2、具体接线方式请参照产品实际接线图  
Note: 1, \*\* is the end of the current inlet line;  
2, the specific wiring method, please refer to the actual wiring diagram of the product

外形及安装尺寸 Dimensions and mounting dimensions (mm)

