WxSC800-3570A2

LTE Cat1 Uni-phase Electric Energy Meter & RTU 2-in-1 Smart Terminal

Product Highlights

❖ LTE Cat1 Uni-phase Electric Energy Meter & RTU 2-in-1 Smart Terminal
❖ 2-in-1 smart sensor(s) and RTU terminal product
❖ Optional DC 12V power supply
❖ Optional Battery power supply (ER34615H 19,000mAh/ER34615M 13,500mAh)
❖ It can monitor the power consumption, current, voltage, power and other parameters of single-phase electricity
❖ Up to 8 working simultaneously including sensors and controllers; Customization needed if more than 8 working at the same time
❖ RTU controlling signal and interfaces OD/PWR triggered by sensor(s) data or OTA command for solenoid valve or other devices
❖ Terminal and sensor parameters configurable with Configuration Tool running on PC

  o LTE Cat1 Global Bands Supported and SW Configurable
  o LTE Cat1 Uplink Transmission Cycle Configurable
  o Sensor Parameters Configurable
  o Sensor Data Report Cycle Configurable

❖ FOTA (Over The Air) firmware upgrade, including to upgrade loader and application images
❖ OTA (Over The Air) terminal running parameters supported
❖ Integrated internal antenna, or optional external SMA/IPEX antenna
❖ Optional (Public/Private) IoT cloud platform PolySuite iView

Specifications

Parameters	Value
Smart Terminal	
Data Report	Cross-threshold report, plus periodic report (the threshold and the periodic report cycle are both user-configurable)
Wireless	
Regional Parameters	LTE-TDD:B34/B38/B39/B40/B41 LTE-FDD:B1/B3/B5/B8
Data	LTE-TDD： Up and down matching 2 8Mbps (DL) max/2Mbps (UL) max Up and down matching 1 6Mbps (DL) max/4Mbps (UL) max LTE-FDD: Max 10Mbps (DL)/Max 5Mbps (UL)
Sensitivity	FDD B1: -99dBm (10M) FDD B3: -99dBm (10M)

	FDD B5: -99dBm (10M) FDD B8: -99dBm (10M) TDD B34: -100dBm (10M) TDD B38: -100dBm (10M) TDD B39: -100dBm (10M) TDD B40: -100dBm (10M) TDD B41: -100dBm (10M)
Bandwidth	1.4/3/5/10/15/20MHz
Output power	LTE-TDD: Class3 (23dBm+1/- 3dB) LTE-FDD: Class3(23dBm+-2dB)
Power consumption	1uA @ power off 0.6mA @ Sleep, typical
Interface	1 USB 2.0 high-speed interface (up to 480Mbps); Dual 1.8V/3.0V (U) SIM card interface 2 NETLIGHT interfaces (NET_STATUS and STATUS) 1 channel digital I2S interface, supporting external codec 3 UART interfaces (main serial port, universal serial port, debugging serial port) 1 SPI LCD interface 1 SPI Camera interface PWRKEY (valid at low level) 1 channel ADC interface
Antenna	Integrated internal antenna or external 1/2 wavelength whip antenna (SMA)
Mechanical	
Dimension	170mm*140mm*103mm
Operating Temperature	-40C to +85C
Electrical	
Supply Voltage	12VDC
Power Type	Battery power supply ER34615H/ER34615M or DC12V

Products includes following parts:

❖ PST-3570A2 Uni-phase Electric Energy Meter & RTU 2-in-1 Smart Terminal
❖ WxSC8xx WxS Terminal LTE Cat1 Communications Board

Configuration Tool

❖ iEdge4.0 WxS IoT Terminal products can be configured with PolySuite software-visual based Configuration Tool or CLI interface command or OTA via IoT platform, such as PolySuite PaaS platform iView.
❖ Download link http://ota.polysense.online/wincc/ConfigurationTool.rar

Product Image

PST-3570A2

Uni-phase Electric Energy Meter & RTU 2-in-1 Smart Terminal

Product introduction

PST-3570A2 is a plug and play single-phase watt hour meter, which can be used to detect the power usage of single-phase electricity. Multi range options can be provided according to customer needs

Detection principle

When the electric energy meter is connected to the circuit to be tested, alternating current flows through the current coil and voltage coil, and these two alternating currents generate alternating magnetic flux in their iron cores respectively; The alternating magnetic flux passes through the aluminum disk and induces eddy current in the aluminum disk; The eddy current is also subject to the force in the magnetic field, so that the aluminum disk can get the torque (active torque) and rotate. The greater the power consumed by the negative track load, the greater the current through the current coil, the greater the eddy current induced in the aluminum disk, and the greater the torque that makes the aluminum disk rotate. That is, the torque is proportional to the power consumed by the load. The greater the power, the greater the torque, and the faster the aluminum disk rotates. When the aluminum disc rotates, it is also affected by the braking torque generated by the permanent magnet. The braking torque is in the opposite direction to the active torque; The braking torque is proportional to the rotating speed of the aluminum disc. The faster the aluminum disc rotates, the greater the braking force capacity torque. When the active torque and braking torque reach a temporary balance, the aluminum disc will rotate at a uniform speed. The electrical energy consumed by the load is proportional to the number of revolutions of the aluminum disk. When the aluminum disk rotates, it drives the counter to indicate the consumed electric energy

Product features

❖ Detection items: Power, voltage, current, frequency, power consumption
❖ Integrated design
❖ HD multi-function display
❖ Multi range optional
❖ Flame retardant thickened shell, safe and reliable
❖ High precision and sensitivity
❖ Easy installation

Product parameters

Parameters	
working voltage	110V AC (USA)/220V AC (China) according to customer demand
working frequency	60Hz (US)/50Hz (China) according to customer demand
data display	Power, voltage, current, frequency, power consumption
Communication	MODBUS-RTU RS485

protocol	
current range	5 (20) A/10 (40) A/15 (60) A/20 (80) A/30 (100) A according to customer requirements
Internal power consumption	≤2W / 10VA
Interface	
Output signal	RS485
Mechanical	
Size	170mm×140mm×103mm
Work environment	-40℃ ~+85℃
Power	
Power	12V DC

Usage method

No operation by professional electricians is required, just plug the plug of the target electrical equipment into the panel of the "single-phase electric energy meter". The statistics of electricity quantity, voltage, current and other indicators of zero hour power consumption and target equipment power consumption can be carried out.
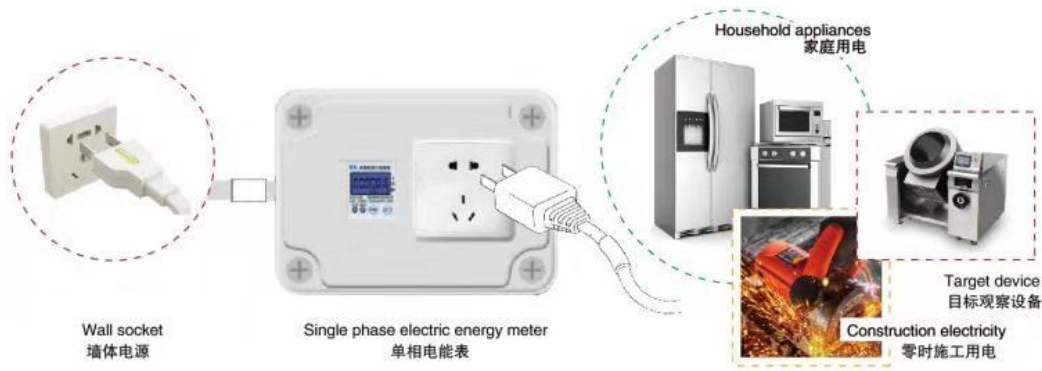
Application

It is widely used in power monitoring system of large sports venues, airport power monitoring system, conference center power monitoring system, power monitoring and power consumption monitoring of each system unit.

Ordering Guide

❖ PST-3570A2 needs to be used together with WxS series communication boards (WxS78xx, WxS88xx, WxS98xx, WxS99xx, WxSC8xx, WxSC9xx, WxSD8xx and CxS18xx) to form intelligent IoT terminals with different communication modes

❖ According to the specific scenario of use case, the enclosure and antenna of intelligent IoT terminal will be replaced to ensure the product quality and performance.

❖ Example of products are as follows:

　o WxS7800-3570A2 WiFi Series Uni-phase Electric Energy Meter & RTU 2-in-1 Smart Terminal
　o WxS8800-3570A2 LoRaWAN Series Uni-phase Electric Energy Meter & RTU 2-in-1 Smart Terminal
　o WxS9800-3570A2 NB-IoT (China) Series Uni-phase Electric Energy Meter & RTU 2-in-1 Smart Terminal

- o   WxS9900-3570A2 NB-IoT (Global) Series Uni-phase Electric Energy Meter & RTU 2-in-1 Smart Terminal
- o   WxSC800-3570A2 LTE Cat1 Series Uni-phase Electric Energy Meter & RTU 2-in-1 Smart Terminal
- o   WxSC900-3570A2 LTE Cat1 w/GPS Series Uni-phase Electric Energy Meter & RTU 2-in-1 Smart Terminal
- o   WxSD800-3570A2 LTE Cat4 Series Uni-phase Electric Energy Meter & RTU 2-in-1 Smart Terminal
- o   CxS1800-3570A2 Ethernet (RJ45) Series Uni-phase Electric Energy Meter & RTU 2-in-1 Smart Terminal