

# PSS-3570A1

## Uni-phase Electric Energy Meter

### Product introduction

PSS-3570A1 single-phase electric energy meter is a single-phase two-wire rail type electric energy meter, which uses a special metering chip to measure active electric energy with high reliability and accuracy. Multi range selection; In the linear power supply mode, the metering chip converts electric energy into pulses, and the microprocessor completes the functions of electric energy collection, power calculation, electric energy pulse output, L display processing, etc.

### 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: voltage, current, active power, power factor, frequency, total active energy
- ❖ Track installation
- ❖ LCD screen display
- ❖ Multi range optional
- ❖ Flame retardant thickened shell, safe and reliable
- ❖ High precision and sensitivity
- ❖ Easy installation



### Product parameters

#### Parameters

Working voltage	220V
Operating current	2.5 (10) A/5 (20) A/10 (40) A/15 (60) A/20 (80) A/30 (100) A according to customer requirements

Starting current	$\leq 0.004b$ (direct access)
Working frequency	$50\text{Hz} \pm 10\%$
Internal power consumption	$\leq 2\text{W}/10\text{VA}$
Data display	Voltage, current, active power, power factor, frequency, total active energy
<b>Interface</b>	
Output signal	RS485
<b>Mechanical</b>	
Size	$100\text{mm} \times 65\text{mm} \times 35\text{mm}$
Work environment	$-10^{\circ}\text{C} \sim +50^{\circ}\text{C}$ ; $\leq 75\%\text{RH}$
Storage environment	$-30^{\circ}\text{C} \sim +70^{\circ}\text{C}$ ; $\leq 95\%\text{RH}$
Weight	0.2kg
<b>Power</b>	
Power	12V DC

## 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

- ❖ PSS-3570A1 sensor is a sensor only, it needs to use with WxS terminals to combine to different product series; On the basis of the combination, multiple PSS sensors can be loaded through the Multiple Purpose Interface (MPI) of the intelligent IoT terminal.
- ❖ 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.
- ❖ PSS sensors can be integrated with the WxS terminal via the MPI interface to form different product series.
- ❖ Example of products are as follows:
  - WxS7800-3570A1 WiFi Series Uni-phase Electric Energy Meter & RTU 2-in-1 Smart Terminal
  - WxS8800-3570A1 LoRaWAN Series Uni-phase Electric Energy Meter & RTU 2-in-1 Smart Terminal
  - WxS9800-3570A1 NB-IoT (China) Series Uni-phase Electric Energy Meter & RTU 2-in-1 Smart Terminal
  - WxS9900-3570A1 NB-IoT (Global) Series Uni-phase Electric Energy Meter & RTU 2-in-1 Smart Terminal
  - WxSC800-3570A1 LTE Cat1 Series Uni-phase Electric Energy Meter & RTU 2-in-1 Smart Terminal
  - WxSC900-3570A1 LTE Cat1 w/GPS Series Uni-phase Electric Energy Meter & RTU 2-in-1 Smart Terminal
  - WxSD800-3570A1 LTE Cat4 Series Uni-phase Electric Energy Meter & RTU 2-in-1 Smart Terminal