

Multi-function power Meter

User Manual

This manual is applied to following model:
PD194Z-9HY

JIANGSU SFERE ELECTRIC CO., LTD.

1. Product Introduction

1.1 Reference to Product Standard

Reference to national standard

GB/T 17883-1999 0.2 S lass and 0.5S class Static AC Active Watt-Hour Meters

GB/T 17882-1999 2 class Static AC Reactive Watt-Hour Meters

DL/T 614-1997 Multi-function Power Meters

GB/T17626-1998 Test of Electromagnetic Compatibility

Reference to International Standard

IEC 62053-22:2003 Electric measurement device (AC)-Special demand- The 22 part : Static Watt-Hour Meters (0.2S and 0.5S)

IEC 62053-23:2003 Electric measurement device (AC)-Special demand- The 23 part: Static reactive meters (2 class and 3class)

IEC 61010-1:2001 Safety demand for measuring, control and lab electric device 1st part: general demand.

IEC 61000-2-11 Electromagnetic Compatibility (EMC)-from 2 to 11

IEC 60068-2-30 Environment test from 2-30 part.

1.2 General

H series LCD multi-function power meters can measure various common electric parameters such as active/ reactive, harmonic distortion, with functions of digital communication, over-range alarm, switch monitoring status, energy pulse output and analogue transmitting. H series are of high performance-cost ratio, can replace the conventional measuring indicators, power metering device, harmonic measuring meter. As an advanced smart and digital front end data sampling unit, the meters can be used in various control system, energy management system, substation automation, residential power monitoring, industrial automation, smart buildings, smart distributor, and switch gears. They are easy to install, connect, maintain. They need less project cost and field programming on spot for power grid grouping with different PLC and industrial control PC communication software.

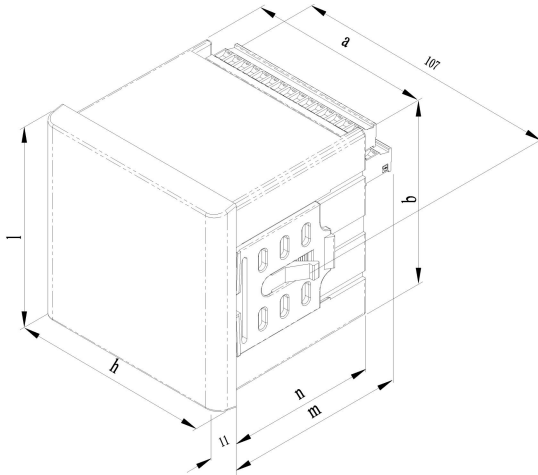
2. Technical Parameters

Feature		Parameters	
Accuracy		U, I: 0.2 class, P, Q, PF: 0.5 class, Harmonic: A class, Active energy: 0.5S class, Reactive energy: 2 class, Analog output: 0.5 class	
Display		LCD	
Signal Input	Power Grid	3 phase 4 wire, 3 phase 3 wire, single phase	
	Voltage	Rated Value	AC100V, AC380V
		Overload	Sustainable: 1.2 times, Instantaneous: 2 times/10s
		Consumption	<0.1VA(each phase)
		Impedance	>1MΩ
	Current	Rated Value	AC1A, AC5A
		Overload	Sustainable:1.2 times, Instantaneous:10 times/5s
		Consumption	<0.1 VA(each phase)
		Impedance	<20mΩ
	Frequency	(50±5%) (60±5%) Hz, accuracy: ±0.01Hz	
	Harmonic	Voltage, current total harmonic distortion and 2-31 times odd harmonic distortion	
Energy	Dual direction active and reactive metering		
Power	Working range	AC, DC: 80V~270V	
	Consumption	<5VA	
Function Module	Energy pulse output	2 loops energy pulse output, photo coupler relay, constant 5000imp/kWh (kvarh)	
	Communication port	1 loop RS-485, MODBUS-RTU, Baud rate: 2400~9600	
	Digital input	At most 4 loops digital invariables input, dry node connection	
	Relay output	At most 3 cycles relay output, AC250V/5A, DC30V/5A	
	Analog output	1 analog output: 0/4~20mA or 0~5/10V	

Operating environment		-20~65°C, humidity ≤93%, no erosion gas, altitude≤2500m
Storage environment		-25~75°C, humidity≤93%
Safety	Insulation	Signal, power, output terminal to shell resistance>100MΩ
	Withstand voltage	Input and power>2kV, Input and output>1kV, power and output>2kV

3. Installation and connection

3.1 Meter size

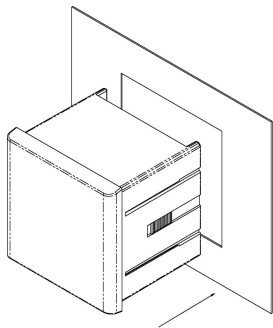


3-1 Size Diagram

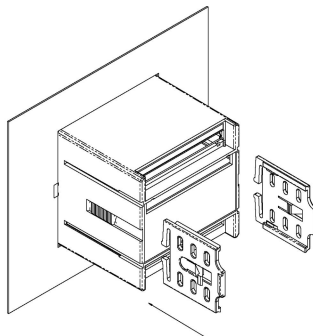
3-1 Meter size form

Model	Outline	Panel $l \times h$ (mm)	Install size $a \times b$ (mm)	Cut-out $s \times y$ (mm)	Minimum. install space		Total length	
					Level (mm)	Vertical (mm)	n (mm)	m (mm)
9HY	9square	96×96	90×90	91×91	150	150	75	96

3.2 Installation



3-2 Front view



3-3 Back view

- 1) Open an $s \times y$ (mm) hole on fixed switchgear;
- 2) Take the fixing claps off the meter;
- 3) Insert the meter to the cutout;
- 4) Place the fixing claps, insert, fasten and fix the meter firmly on the panel.

The information in this document is subject to change without notice

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