

PD194Z-E20

**User Manual for Rail-Mounted
Multifunctional Power Meter**

1. Product description

1.1 General

PD194Z-E20 has the common power parameters measurement, perfect electric energy measurement and electric energy quality analysis and other functions, and is equipped with many I/O modules for status monitoring and control of the field equipments. This equipment has the standby electric energy metering function, which can be activated through the external signal. This equipment can be easily integrated with a variety of intelligent power distribution systems and energy management systems, to share abundant monitoring data and power quality data.

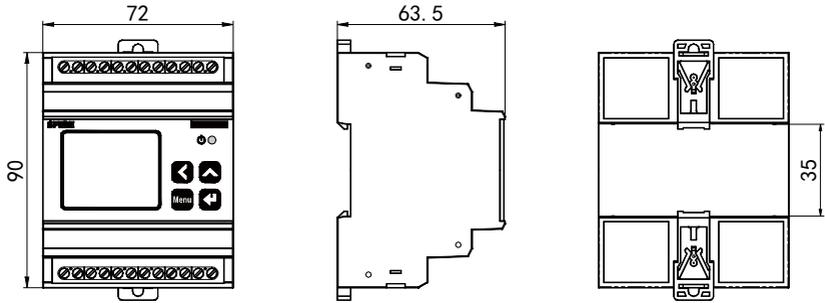
1.2 Selection

Name	Function
PD194Z-E20 main body	To power measure network parameters, including voltage, current, power, frequency, demand, limit values, harmonics, power energy, multi-rate power energy, electric leakage measurement, temperature measurement and other parameters.
EK1 module	To monitor 4-way switching input and 2-way relay output.
EC1 module	Communication module, one-way RS485 interface, Modbus-RTU protocol.

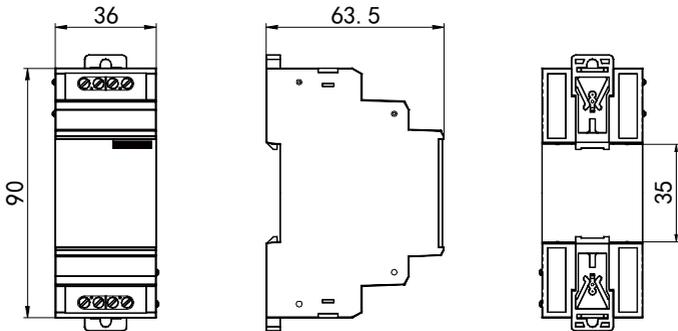
2. Installation and wiring

2.1 Overall dimensions

2.1.1 Main dimensions



2.1.2 EK1 / EC1 module size



3. Technical Specifications

3.1 PD194Z-E20 main module

	Parameters
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Accuracy grade		U, I: grade 0.2; P, Q, PF: grade 0.5; harmonics: B grade;	
Display mode		LCD	
Signal input	Measurement network	Three-phase four-wire, three-phase three-wire	
	Voltage	Rated value	AC100V/AC380V
		Overload	Continue: 1.2 times; instantaneous: 2 times / 10s
		Power consumption	<0.1VA(each phase)
		Impedance	>1MΩ
	Current	Rated value	AC1A, AC5A
		Overload	Continue: 1.2 times; instantaneous: 2 times / 10s
		Power consumption	<0.1VA (each phase)
		Impedance	<20mΩ
	Electric leakage measurement	AC 1A / 1mA leakage current transformer access	
	Temperature measurement	PT100	
	Frequency	45~65 Hz, Accuracy: ±0.01Hz	

Power supply	Working range	AC/DC: 80V~270V
	Power consumption	<5VA
Electric energy pulse output		One way, optocoupler isolation
Expansion Module	Communication module EC1	One-way RS-485 communication MODBUS-RTU protocol, Communication rate: 1200 ~19200bps
	Switching module EK1	4-way dry node access way,
		2-way relay output, with capacity of AC250V/5A
Working environment		-25~70℃, Relative humidity ≤93%, non-corrosive gases site
Storage environment		-40~85℃, Relative Humidity ≤93%
Safety	Insulation	Resistance from signal, power supply and output terminal to shell >100MΩ
	Withstand voltage	Input and power supply >2kV; input and output >1kV; power supply and output 2kV

3.2 EK1 module

Parameters		Spec.
Switching input	Type	4-way, dry contact
	Withstand voltage	2kV AC
	Capacity	2- way, AC 250V/5A DC 30V/3A

Relay output	Withstand voltage	1.5kVAC
Mounting dimensions		L×W×H(mm):36×90×63.5, DIN35mm rail mounting

3.3 EC1 module

Parameters	Spec.
Number of ways	1- way
Physical interface	RS485,Baud rate 2400-9600bps
Protocol	MODBUS-RTU
Mounting dimensions	L×W×H(mm): 36×90×63.5, DIN35mm rail mounting