

PD7777-□ series

single phase digital
multi-function meter



Summary:

As a new generation of programmable intelligent instrument, PD7777-□ series single phase digital multi-functional meter is designed for the demand of power monitoring and electric energy measurement including power system, communication industry and construction industry, integrated with measurement and communication, mainly applied into real-time measurement and indication for the electrical parameters such as voltage, current, active power, negative power, frequency, power factor, four-quadrant energy, realizing networked through RS485 communication interface and external device, which is widely used in variety of intelligent power distribution system for power monitoring, industrial automation and switching cabinet etc. with standard communication interface convenient for networking with the host computer to realize remote data transmission.

1. Main functions and characteristics:

- ◆ It can measure single phase AC current, voltage, active/reactive power, power factor, frequency, positive/negative active energy and reactive energy.
- ◆ Extendible for two-way switch quantity input and two-way switch quantity output to realize "remote communication" and "remote control" for the local or remote switching signals.
- ◆ Parameters such as the current/voltage ratio, indication mode for electrical quantity, the of the meter, electric quantity display mode, communication address of the meter, baud rate, transmitting output object, transmitting output range, alarming object, alarming upper/lower limit, etc. can be randomly programmed and set.

2. Model specification and selection description:

Model	Measurement display						Energy		Power pulse	RS485 communication	Switch quantity input	External size	Display mode
	voltage	current	Active power	Reactive power	Power factor	Frequency	Active energy	Reactive energy					
PD7777-13T	•	•	•	•	•	•	•	•	•	•	•	96×48	LCD display
PD7777-23T	•	•	•	•	•	•	•	•	•	•	•	72×72	
PD7777-33T	•	•	•	•	•	•	•	•	•	•	•	96×96	

Note: • means the intrinsic functions of the instrument

Analog quantity output function, switch quantity output function (alarm) can be added according to the customers' needs.

3. Main technical performance and parameters:

Technical parameters	index		
Connection mode	Single phase		
Input	Voltage	Rated value	AC220V, AC450V, the other special specifications can be custom-made.
		Overload	Continuous: 1.2 times, instant: 2 times/5s
		Consumption	≤2VA
		Resistance	>500kΩ
	Current	Rated value	AC5A
		Overload	Continuous: 1.2 times, instant: 10 times/5s
		Consumption	≤1VA
		Resistance	<20mΩ
	Measuring rang of the frequency		45Hz-65Hz
Output	Display mode Measuring accuracy		LCD display Voltage Class 0.5 Resolution 0.1V Current Class 0.5 Resolution 0.001A Active power Class 0.5 Resolution 1W Reactive power Class 1.0 Resolution 1var Power factor Class 0.5 Resolution 0.001 Frequency Class 0.5 Resolution 0.01Hz Active energy Class 0.5 Resolution 0.01kWh Reactive energy Class 2.0 Resolution 0.01kvarh The unit can switch automatically, the decimals shift automatically
	Electric energy	Energy measurement	Support positive/negative measurement active energy, four-quadrant measurement reactive energy.
		Pulse constant	Active power: 10000imp/kWh, Reactive power: 10000imp/kvarh
		Pulse signal output	Provide 1 set(active/reactive energy) of optical signal and optocoupler isolated open collector electrical signal pulse output, pulse length:80ms±16ms
	Communication	Mode	RS-485
		Protocol	MODBUS-RTU
		Baud rate	1200bps, 2400bps, 4800bps, 9600bps, 19200bps, assumed to be 9600bps
	Switch quantity output(*)		Upper/lower-limit alarm with the same relay output, contact capacity:AC250V/5A, DC30V/2A
	Analog quantity output(*)		Current output: DC0mA~20mA, DC4mA~20mA, Class 0.5
	Switch quantity input		2-way passive dry node input mode
Working power supply	Range		AC/DC85V~264V, 50Hz/60Hz
	Consumption		≤15VA

Note: 1. PD7777-23T can add 1-way switch quantity input, 1-way switch quantity output (alarm);

2. PD7777-13T, PD7777-33T can add 2-way switch quantity input, 2-way switch quantity output (alarm);

3. The items marked *are optional, which shall be specified by the customers when ordering.