

## 1. Main functions and characteristics:

- ◆ It adopts dot colorized LCD sketch display with intuitive and friendly interface.
- ◆ It can measure the electrical parameters such as current, voltage, active/reactive power, apparent power, power factor, frequency, etc. in the electrical network.
- ◆ Accurate measurement four-quadrant energy.
- ◆ power quality monitoring:  
Measure the 2nd~31st harmonic content of the voltage, current, total harmonic distortion, bar graph of the display harmonic in the electrical network.  
Measure the power quality parameters such as positive sequence, negative sequence, zero sequence of voltage/current, degree of unbalancedness, etc.  
Online real-time displayed voltage, current waveform, observing the real-time condition of power grid, which can realize the phase sequence regulation such as voltage and current and loss of phase detection, etc.
- ◆ Input/output function of the modules:  
Provide one-way active energy and one-way reactive power impulse output.  
Provide multi-way relay switch output function, which can realize upper and lower limit alarm output.  
Provide four-way switch input state indicating function, adopting passive stem node resistive signal input method.
- ◆ With the standard RS-485 communication interface, adopting the standard ModBus-RTU communication protocol and the baud rate can be set.
- ◆ Each switch quantity has 500 SOE event recording function.
- ◆ It is characterized with 500 pieces of manual and automatic fault wave recording function, continuously saving loaded curve data records for one year.

## 2. Model specification and selection description:

Model	Measurement display						Energy		Power pulse	RS485 communication	Analog quantity output	Switch quantity output	Switch quantity input	External size	Display mode
	voltage	current	Active power	Reactive power	Power factor	Frequency	Active energy	Reactive energy							
PD7777-3H	•	•	•	•	•	•	•	•	•	•	•	•	•	96×96	Color LCD
PD7777-8H	•	•	•	•	•	•	•	•	•	•	•	•	•	120×120	graphic display

Note: • means the intrinsic functions of the instrument.

## 3. Main technical performance and parameters:

Technical parameters	index	
Connection mode	Three phase three wire or three phase four wire optional	
Input	Voltage	Rated value AC100V, 220V, 380V
		Overload Continuous: 1.2 times, instant: 2 times/1s, adopt red font identification when out of 1.2 times of the rated value
		Consumption <2VA(each phase)
		Resistance >500kΩ
	Current	Rated value AC1A, 5A
		Overload Continuous: 1.2 times, instant: 10 times/5s, adopt red font identification when out of 1.2 times of the rated value
		Consumption <1VA(each phase)
		Resistance <20mΩ(each phase)
Output	Measuring rang of the frequency 45Hz-65Hz	
	3.5 inch/4.3 inch lattice LCD Voltage Class 0.2 Resolution 0.1V Current Class 0.2 Resolution 0.001A Active power Class 0.2 Resolution 1W Reactive power Class 0.5 Resolution 1var Power factor Class 0.5 Resolution 0.001 Frequency Class 0.2 Resolution 0.01Hz Active energy Class 0.2 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(reactive) energy
		Pulse constant Active power: 10000imp/kWh, Reactive power: 10000imp/kvarh
		Pulse signal output Provide 2 sets(active/reactive energy) of optical signal and optocoupler isolated open collector electrical signal pulse output
	Communication	Mode RS-485
		Protocol MODBUS-RTU
		Baud rate 1200bps, 2400bps, 4800bps, 9600bps, 19200bps, assumed to be 9600bps
	Switch quantity input 4-way passive dry node input mode	
	Switch quantity output Support 4-way relay-state output, relay contact capacity:AC250V/2A, DC30V/2A(-3H only has 2-way)	
	Analog quantity output Current output: DC0mA~10mA, DC0mA~20mA, DC4mA~20mA, Class 0.5(-3H without this function)	
	Switch quantity input 4-way passive dry node input mode	
	Harmonic 2 <sup>nd</sup> ~31 <sup>st</sup> harmonic of voltage/current	
	Calendar clock Clock error: 0.5s/d (reference temperature: 23°C)	
Working power supply	USB interface Host mode(-3H without this function)	
	Range AC/DC85V~264V	
	Consumption ≤15VA	

## PD7777-□Hseries

digital harmonic  
multi-function meter



### Summary:

PD7777-□H series digital harmonic multi-functional meter is mainly applied into highly accurate real-time measurement and indication such as voltage, current, active power, reactive power, apparent power, frequency, power factor, four-quadrant electric energy, voltage/current harmonic content (2nd ~31st), total harmonic content of voltage/current and degree of unbalancedness of voltage/current (including positive, negative, zero sequence) in the electrical circuit. The instrument supports switch quantity input, switch quantity output, analog quantity output, RS485 interface, USB interface and other functions.

The meter is widely applied into the relevant fields such as industrial automation control, energy management system, substation automation, distribution network automation, electric power monitoring, complete equipment, switchgear and so on, to complete the industrial automation control and communication networking.