

PA/PZ666-□ series  
single phase digital  
Ammeter, Voltmeter



Summary:

PA/PZ-□ series digital Ammeter/Voltmeter is the new generation of programmable instrument, mainly applied into real-time measurement and indication for the current and voltage in the electrical circuit, suitable for the occasions with relatively high requirements for the power quality and power safety as well as that with automation.

1. Main functions and characteristics:

- ◆ Real-time measurement and indication for the current and voltage value of the power circuit.
- ◆ The display range of the instrument is programmable.

2. Model specification and selection description:

(Unit: mm)

Model	Measurement display				T(communicat ion) RS485 interface	External size	Display mode
	AC voltage	AC current	DC voltage	DC current			
PA666-1		•			@	96×48	LED display
PA666-2		•			@	72×72	
PA666-3		•			@	96×96	
PA666-4		•			@	48×48	
PA666-6		•			@	80×80	
PA666-8		•			@	120×120	
PZ666-1	•				@	96×48	
PZ666-2	•				@	72×72	
PZ666-3	•				@	96×96	
PZ666-4	•				@	48×48	
PZ666-6	•				@	80×80	
PZ666-8	•				@	120×120	
PA666-1D				•	@	96×48	
PA666-2D				•	@	72×72	
PA666-3D				•	@	96×96	
PA666-4D				•	@	48×48	
PA666-6D				•	@	80×80	
PA666-8D				•	@	120×120	
PZ666-1D			•		@	96×48	
PZ666-2D			•		@	72×72	
PZ666-3D			•		@	96×96	
PZ666-4D			•		@	48×48	

PZ666-6D			●		@	80×80	
PZ666-8D			●		@	120×120	

Note: ●means the intrinsic functions of the instrument

@means extendible corresponding optional functions of this series of instruments.

### 3. Main technical performance and parameters:

Technical parameters	index		
Accuracy class	Class 0.5		
Input	Voltage	Rated value	AC/DC (0~660)V, the other special specifications can be custom-made
		Overload	Continuous: 1.2 times, instant: 10 times/5s
		Resistance	$\leq 1\Omega$
	Current	Rated value	AC/DC (0~5)A, the other special specifications can be custom-made
		Overload	Continuous: 1.2 times, instant: 10 times/5s
		Resistance	$\leq 1\Omega$
Output	Display mode		Single line 4 digit LED display, the max. voltage resolution is 0.1V, the max. current resolution is 0.001A
	Polarity indication		Complete the positive and negative value switch through polarity light(only for DC meter)
	Communication	Mode	RS-485
		Protocol	MODBUS-RTU
		Baud rate	1200bps, 2400bps, 4800bps, 9600bps, 19200bps, assumed to be 9600bps
Working power supply	Range		AC220V±20%
	Consumption		$\leq 5VA$

Note: this series of instruments can be especially customized according to special specifications: the input terminal inputs DC standard signals, such as 4~20mA, 0~10V, 0~75mV, etc. The head of the meter can display the parameters including the corresponding voltage, current, frequency, power, power factor, pressure, flow, etc. of the primary loop of the sensor or transmitter; the items marked × are optional, which shall be specified by the customers when ordering.



Summary:

PA/PZ666-S series three phase digital Ammeter/Voltmeter is the new generation of programmable instrument, mainly applied into real-time measurement and indication for the phase voltage, wire voltage and phase current in the three phase electrical circuit.

1. Main functions and characteristics

- ◆ Real-time measurement and indication for the phase current, phase voltage, wire voltage value of the electrical circuit.
- ◆ The current/ voltage ratio of the instrument is programmable.

2. Model specification and selection description

Model	Measurement display		T(communication) RS485 interface	External size	Display mode
	3-phase voltage	3-phase current			
PA666-2S		●	@	72×72	LED display
PA666-3S		●	@	96×96	
PA666-4S		●		48×48	
PA666-6S		●	@	80×80	
PA666-8S		●	@	120×120	
PZ666-2S	●		@	72×72	
PZ666-3S	●		@	96×96	
PZ666-4S	●			48×48	
PZ666-6S	●		@	80×80	
PZ666-8S	●		@	120×120	

Note: ●means the intrinsic functions of the instrument

@means extendible corresponding optional functions of this series of instruments.

1. Main technical performance and parameters

Technical parameters	index			
Accuracy class	Class 0.5			
Input	Voltage	Rated value	AC100V, 450V	
		Overload	Continuous: 1.2 times, instant: 2 times/5s	
		Consumption	≤1VA(each phase)	
		Resistance	100V(about 120K), 450V(about 600K)	
	Current	Rated value	AC1A, 5A	
		Overload	Continuous: 1.2 times, instant: 10 times/5s	
		Consumption	≤0.5VA(each phase)	
		Resistance	<20mΩ(each phase)	
Measuring rang of the frequency		45Hz-65Hz		
Output	Display mode		3 phase 4 digit LED display, the max. Voltage resolution is 0.1V, the max. Current resolution is 0.001A; the unit switches automatically, the decimals shift automatically.	
	Display range		Voltmeter AC0~999.9kV Ammeter AC0~99.99kA	
	Communication (*)	Mode	RS-485	
		Protocol	MODBUS-RTU	
		Baud rate	1200bps, 2400bps, 4800bps, 9600bps, 19200bps, assumed to be 9600bps	
Working power supply	Range		AC220V±20%	
	Consumption		≤5VA	

Note: the items marked \* are optional, which shall be specified by the customers when ordering.

PN666-□ series  
single phase digital  
combined current  
& voltage meter



### Summary:

PN666-□ series digital current and voltage combined meter is the new generation of programmable instrument, mainly applied into real-time measurement and indication for the current and voltage in the electrical circuit, suitable for the occasions with relatively high requirements for the power quality and power safety as well as that with automation.

#### 1. Main functions and characteristics

- ◆ Real-time measurement and indication for the current and voltage value of the electrical circuit.
- ◆ RS-485 communication interface can be extended according to the needs, adopting the standard ModBus-RTU communication protocol.
- ◆ The current ratio of the instrument is programmable.

#### 2. Model specification and selection description:

(unit: mm)

Model	Measurement display		T(communication) RS485 interface	External size	Display mode
	AC voltage	AC current			
PN666-2	●	●	@	72×72	LED display
PN666-3	●	●	@	96×96	
PN666-6	●	●	@	80×80	
PN666-8	●	●	@	120×120	

Note: ●means the intrinsic functions of the instrument

@means extendible corresponding optional functions of this series of instruments.

#### 3. Main technical performance and parameters:

Technical parameters	index		
Accuracy class	Class 0.5		
Input	Voltage	Rated value	AC450V, the other special specifications can be custom-made
		Overload	Continuous: 1.2 times, instant: 2 times/5s
		Resistance	≥1kΩ
	Current	Rated value	AC5A, the other special specifications can be custom-made
		Overload	Continuous: 1.2 times, instant: 10 times/5s
		Resistance	≤1Ω
Output	Display mode		Single line 4 digit LED display, the max. voltage resolution is 0.1V, the max. current resolution is 0.001A
	Polarity indication		Complete the positive and negative value switch through polarity light(only for DC meter)
	Communication	Mode	RS-485
		Protocol	MODBUS-RTU
	Baud rate	1200bps, 2400bps, 4800bps, 9600bps, 19200bps, assumed to be 9600bps	
Working power supply	Range		AC220V±20%
	Consumption		≤5VA

Note: the items marked \* are optional, which shall be specified by the customers when ordering.

PN666-□S series  
three phase digital  
combined current &  
voltage meter



#### Summary:

PN666-□ series three phase digital current and voltage combined meter is the new generation of programmable instrument, mainly applied into real-time measurement and indication for the current and voltage in the three phase electrical circuit, suitable for the occasions with relatively high requirements for the power quality and power safety as well as that with automation.

#### 1. Main functions and characteristics

- ◆ Real-time measurement and indication for the current and voltage value of the electrical circuit.
- ◆ RS-485 communication interface can be extended according to the needs, adopting the standard ModBus-RTU communication protocol.
- ◆ The current/voltage ratio of the instrument is programmable.

#### 2. Model specification and selection description:

Model	Measurement display		T(communication) RS485 interface	External size	Display mode
	3-phase voltage	3-phase current			
PN666-3S	●	●	@	96×96	LED display
PN666-6S	●	●	@	80×80	
PN666-8S	●	●	@	120×120	

Note: ● means the intrinsic functions of the instrument

@ means extendible corresponding optional functions of this series of instruments.

3. Main technical performance and parameters:

Technical parameters	index			
Accuracy class	Class 0.5			
Input	Voltage	Rated value	AC100V, 450V	
		Overload	Continuous: 1.2 times, instant: 2 times/5s	
		Consumption	≤1VA(each phase)	
		Resistance	100V(about 120K), 450V(about 600K)	
	Current	Rated value	AC1A, 5A	
		Overload	Continuous: 1.2 times, instant: 10 times/5s	
		Consumption	≤0.5VA(each phase)	
		Resistance	<20mΩ(each phase)	
	Measuring rang of the frequency		45Hz-65Hz	
Output	Display mode		3 line 4 digit LED display, the max. Voltage resolution is 0.1V, the max. Current resolution is 0.001A; the unit switches automatically, the decimals shift automatically.	
	Display range		Voltmeter AC0~999.9kV Ammeter AC0~99.99kA	
	Communication (*)	Mode	RS-485	
		Protocol	MODBUS-RTU	
		Baud rate	1200bps, 2400bps, 4800bps, 9600bps, 19200bps, assumed to be 9600bps	
Working power supply	Range		AC220V±20%	
	Consumption		≤5VA	

Note: the items marked \*are optional, which shall be specified by the customers when ordering.

PD666-□S4 series  
three phase digital  
multi-function meter



Summary:

PD666-□S4 series three 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, mainly applied into real-time measurement and indication for the electrical parameters such as three phase voltage, three phase current, active power, negative power, frequency, power factor and energy in the electrical circuit, realizing networked through RS485 communication interface and external device for remote data transmission, which is widely used into variety of intelligent power distribution system for power monitoring and industrial automation, etc.

1. Main functions and characteristics:

- ◆ It can measure three phase current, three phase voltage, active power, reactive power, power factor, frequency, positive/negative active energy and four-quadrant reactive energy.
- ◆ With the standard RS-485 communication interface, it adopts the standard ModBus-RTU communication protocol and the baud rate can be set.
- ◆ Parameters such as current/voltage ratio, type of network, communication address of the meter, communication baud rate, etc. are programmable.

2. Model specification and selection description:

(unit: mm)

Model	Measurement display						Energy		Power pulse	RS485 communication	External size	Display mode
	3-phase voltage	3-phase current	Active power	Reactive power	Power factor	Frequency	Active energy	Reactive energy				
PD666-2S4	●	●	●	●	●	●	●	●	●	●	72×72	3 line 4 digit LED display
PD666-3S4	●	●	●	●	●	●	●	●	●	●	96×96	
PD666-6S4	●	●	●	●	●	●	●	●	●	●	80×80	
PD666-8S4	●	●	●	●	●	●	●	●	●	●	120×120	

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 is optional			
Input	Voltage	Rated value	AC100V, 220V, 380V, 450V	
		Overload	Continuous: 1.2 times, instant: 2 times/5s	
		Consumption	≤2VA(each phase)	
		Resistance	>500kΩ	
	Current	Rated value	AC1A, 5A	
		Overload	Continuous: 1.2 times, instant: 10 times/5s	
		Consumption	≤1VA(each phase)	
		Resistance	<20mΩ(each phase)	
	Measuring rang of the frequency		45Hz-65Hz	
Output	Display mode		LED display	
	Measuring accuracy		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 2 sets(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		
Working power supply	Range	AC/DC85V~264V		
	Consumption	≤15VA		



**Summary:**

PD666-□S3 series three phase digital LCD display multi-function meter is designed for the demand of power monitoring and electric energy measurement including power system, communication industry and construction industry, mainly applied into real-time measurement and indication for the electrical parameters such as three phase voltage, three phase current, active power, negative power, frequency, power factor and energy in the electrical circuit, realizing networked through RS485 communication interface and external device for remote data transmission, which is widely used into variety of intelligent power distribution system for power monitoring and industrial automation, etc.

**1. Main functions and characteristics:**

- ◆ It can measure three phase current, three phase voltage, active power, reactive power, power factor, frequency, positive/negative active energy and four-quadrant reactive energy.
- ◆ With the standard RS-485 communication interface, it adopts the standard ModBus-RTU communication protocol and the baud rate can be set.
- ◆ Parameters such as current/voltage ratio, type of network, communication address of the meter, communication baud rate, etc. are programmable.

**2. Model specification and selection description:**

(unit: mm)

Model	Measurement display						Energy		Power pulse	RS485 communication	External size	Display mode
	3-phase voltage	3-phase current	Active power	Reactive power	Power factor	Frequency	Active energy	Reactive energy				
PD666-2S3	●	●	●	●	●	●	●	●	●	●	72×72	LCD display
PD666-3S3	●	●	●	●	●	●	●	●	●	●	96×96	
PD666-6S3	●	●	●	●	●	●	●	●	●	●	80×80	
PD666-8S3	●	●	●	●	●	●	●	●	●	●	120×120	

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 is optional			
Input	Voltage	Rated value	AC100V, 220V, 380V, 450V	
		Overload	Continuous: 1.2 times, instant: 2 times/5s	
		Consumption	≤2VA(each phase)	
		Resistance	>500kΩ	
	Current	Rated value	AC1A, 5A	
		Overload	Continuous: 1.2 times, instant: 10 times/5s	
		Consumption	≤1VA(each phase)	
		Resistance	<20mΩ(each phase)	
	Measuring rang of the frequency		45Hz-65Hz	
Output	Display mode		Segment LCD display	
	Measuring accuracy		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 2 sets(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		
Working power supply	Range	AC/DC85V~264V		
	Consumption	≤15VA		

PA/PZ7777-□ series  
single phase digital  
Ammeter, Voltmeter



## Summary

PA/PZ7777-□ series digital Ammeter/Voltmeter is the new generation of programmable intelligent instrument, integrating measurement, alarm, transmission, communication, mainly applied into real-time measurement and indication for the current and voltage in the electrical circuit. It can output the limit-value alarming output for the measurement value according to the settings, and conduct transmitting output for the measured electrical quantity data, realizing networked through RS485 communication interface and host computers.

### 1. Main functions and characteristics:

- ◆ Real-time measurement and indication for the current/voltage value in the circuit.
- ◆ Extendible for one-way analog quantity output function, with various transmitting specifications optional and extendible for switch quantity output function of relay. It can realize upper/lower-limit alarm output, extendible for RS-485 communication interface, adopting standard ModBus-RTU communication protocol and the baud rate can be set.
- ◆ The instrument is characterized with parameters such as range, upper/lower-limit alarm value, alarm return difference, communication address of the meter, baud rate, transmitting output mode, etc. are programmable.

### 2. Model specification and selection description:

Model	Measurement display				T(communication) RS485 interface	External size	Display mode
	AC voltage	AC current	DC voltage	DC current			
PA7777-1		●			@	96×48	LED display
PA7777-2		●			@	72×72	
PA7777-3		●			@	96×96	
PA7777-4		●			@	48×48	
PA7777-5		●			@	120×60	
PA7777-6		●			@	80×80	
PA7777-7		●			@	160×80	
PA7777-8		●			@	120×120	
PZ7777-1	●				@	96×48	
PZ7777-2	●				@	72×72	
PZ7777-3	●				@	96×96	
PZ7777-4	●				@	48×48	
PZ7777-5	●				@	120×60	
PZ7777-6	●				@	80×80	
PZ7777-7	●				@	160×80	
PZ7777-8	●				@	120×120	
PA7777-1D				●	@	96×48	
PA7777-2D				●	@	72×72	
PA7777-3D				●	@	96×96	
PA7777-4D				●	@	48×48	
PA7777-5D				●	@	120×60	
PA7777-6D				●	@	80×80	

PA7777-7D			•	@	160×80
PA7777-8D			•	@	120×120
PZ7777-1D		•		@	96×48
PZ7777-2D		•		@	72×72
PZ7777-3D		•		@	96×96
PZ7777-4D		•		@	48×48
PZ7777-5D		•		@	120×60
PZ7777-6D		•		@	80×80
PZ7777-7D		•		@	160×80
PZ7777-8D		•		@	120×120

Note: the size code with 1,3,7,8 can set 3 types of function modules at the same time, the size code with 2,5,6 can only choose any 2 types of function modules, the size code with 4 can only choose any 1 type of function modules.

### 3. Main technical performance and parameters:

Technical parameters	index		
Accuracy class	Class 0.5		
Input	Voltage	Rated value	AC100V,600V optional, DC75mV, 660V, the other special specifications can be custom-made
		Overload	Continuous: 1.2 times, instant: 2 times/5s
		consumption	≤2VA
		Resistance	>500kΩ
	Current	Rated value	AC1A,5A optional, DC4~20mA, 5A optional, the other special specifications can be custom-made
		Overload	Continuous: 1.2 times, instant: 10 times/5s
		Consumption	≤1VA
		Resistance	<20mΩ
	Measuring range of the frequency		45Hz~65Hz
Output	Display mode		Single line 4 digit LED display, the max. voltage resolution is 0.1V, the max. current resolution is 0.001A
	Polarity indication		Complete the positive and negative value switch through polarity light(only for DC meter)
	Communication	Mode	RS-485
		Protocol	MODBUS-RTU
		Baud rate	1200bps, 2400bps, 4800bps, 9600bps, 19200bps, assumed to be 9600bps
	Switch quantity output(*)		Upper/limit alarm with the same relay output, contact capacityAC250V/5A, DC30V/2A, can work in the remote mode
Analog quantity output(*)		DC0mA~10mA, DC0mA~20mA, DC4mA~20mA, Class 0.5, customizable voltage output	
Working power supply	Range		AC/DC85V~264V
	Consumption		≤5VA

Note: 1. This series of meters can be custom-made according to special specifications: input terminal inputs DC standard signals such as 4~20mA, 0~10V, 0~75mV and so on, the head of the meter can display the corresponding parameters including voltage, current, frequency, power, power factor, pressure, flow, etc. in one circuit for the sensor or transmitter.

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

PA/PZ7777-□S series  
three phase digital  
Ammeter, Voltmeter



Summary

PA/PZ7777-□S series three phase digital Ammeter/Voltmeter is the new generation of programmable intelligent instrument, mainly applied into real-time measurement and indication for the phase voltage, wire voltage and phase current in the three phase electrical circuit, realizing remote data for the measured electrical quantity data through RS485 interface or analog quantity transmission interface.

1. Main functions and characteristics:

- ◆ Real-time measurement and indication for the phase current, phase voltage and wire voltage value in the electrical circuit.
- ◆ Extendible for one-way analog output function, with optional transmitting specifications of 4-20mA, 0-20mA and 0-10mA.
- ◆ Extendible for relay switch quantity output function, to realize the upper and lower limit alarming output.
- ◆ Extendible for RS-485 communication interface, adopting the standard ModBus-RTU communication protocol and the baud rate can be set.
- ◆ The instrument is characterized with parameters such as range, upper/lower-limit alarm value, alarm return difference, communication address of the meter, baud rate, transmitting output mode, etc. are programmable.

2. Model specification and selection description

Model	Measurement display		T(communication) RS485 interface	K Switch quantity output	B analog quantity output	External size	Display mode
	3-phase voltage	3-phase current					
PA7777-2S		●	@	@	@	72×72	LED display
PA7777-3S		●	@	@	@	96×96	
PA7777-4S		●				48×48	
PA7777-6S		●	@	@	@	80×80	
PA7777-8S		●	@	@	@	120×120	
PZ7777-2S	●		@	@	@	72×72	
PZ7777-3S	●		@	@	@	96×96	
PZ7777-4S	●					48×48	
PZ7777-6S	●		@	@	@	80×80	
PZ7777-8S	●		@	@	@	120×120	

Note: ● means the intrinsic functions of the instrument

@ means extendible corresponding optional functions of this series of instruments.

### 3. Main technical performance and parameters

Technical parameters	index			
Accuracy class	Class 0.5			
Input	Voltage	Rated value	AC100V, 450V	
		Overload	Continuous: 1.2 times, instant: 2 times/5s	
		Consumption	≤1VA(each phase)	
		Resistance	100V(about 120K), 450V(about 600K)	
	Current	Rated value	AC1A, 5A	
		Overload	Continuous: 1.2 times, instant: 10 times/5s	
		Consumption	≤0.5VA(each phase)	
		Resistance	<20mΩ(each phase)	
Measuring rang of the frequency		45Hz-65Hz		
Output	Display mode		3 phase 4 digit LED display, the max. Voltage resolution is 0.1V, the max. Current resolution is 0.001A; the unit switches automatically, the decimals shift automatically.	
	Display range		Voltmeter AC0~999.9kV(PZ7777-4S is 0~9999V) Ammeter AC0~99.99kA(PA7777-4S is 0~9999A)	
	Switch quantity output(*)		Upper/lower-limit alarm with the same relay output, contact capacityAC250V/5A, DC30V/2A, can work in the remote mode	
	Analog quantity output(*)		DC0mA~10mA, DC0mA~20mA, DC4mA~20mA, Class 0.5, output overload≤500Ω,customizable voltage output	
	Communication (*)	Mode	RS-485	
		Protocol	MODBUS-RTU	
Baud rate		1200bps, 2400bps, 4800bps, 9600bps, 19200bps, assumed to be 9600bps		
Working power supply	Range		AC/DC 85~264V	
	Consumption		<5VA	

Note: the items marked \* are optional, which shall be specified by the customers when ordering.

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:

(unit: mm)

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.

PD7777-□S4 series  
three phase digital  
multi-function meter



### Summary:

As a new generation of programmable intelligent instrument, PD7777-□S4 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 three phase current, voltage, active/reactive power, power factor, frequency, positive/negative active energy, four-quadrant reactive energy.
- ◆ With the standard RS-485 communication interface, adopting the standard ModBus-RTU communication protocol and the baud rate can be set with switch quantity input function.
- ◆ Function extension: four-way analog quantity output function; four-way switch

quantity output function (“remote-communication” and “remote control” functions)

◆ 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:

(unit: mm)

Model	Measurement display						Energy		Power pulse	RS485	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							
PD7777-2S4	●	●	●	●	●	●	●	●	●			●	72×72	3 line 4 digit LED display	
PD7777-2SK4	●	●	●	●	●	●	●	●	●		●	●	72×72		
PD7777-3S4	●	●	●	●	●	●	●	●	●			●	96×96		
PD7777-3SK4	●	●	●	●	●	●	●	●	●		●	●	96×96		
PD7777-3SB4	●	●	●	●	●	●	●	●	●			●	96×96		
PD7777-6S4	●	●	●	●	●	●	●	●	●	●		●	80×80		
PD7777-6SK4	●	●	●	●	●	●	●	●	●		●	●	80×80		
PD7777-8S4	●	●	●	●	●	●	●	●	●			●	120×120		
PD7777-8SK4	●	●	●	●	●	●	●	●	●		●	●	120×120		
PD7777-8SB4	●	●	●	●	●	●	●	●	●	●		●	120×120		

Note: ● means the intrinsic functions of the instrument

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

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, 450V
		Overload	Continuous: 1.2 times, instant: 2 times/5s
		Consumption	≤2VA(each phase)
		Resistance	>500kΩ
	Current	Rated value	AC1A, 5A
		Overload	Continuous: 1.2 times, instant: 10 times/5s
		Consumption	≤1VA(each phase)
		Resistance	<20mΩ(each phase)
Measuring rang of the frequency		45Hz-65Hz	
Output	Display mode		3 line 4 digit LED or LCD display
	Measuring accuracy		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 2 sets(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(*)		Support 4-way relay-state output, relay contact capacity:AC250V/2A, DC30V/2A(-2,-6 only has 2-way)
	Analog quantity output(*)		Current output: DC0mA~20mA, DC0mA~20mA, DC4mA~20mA, Class 0.5(-2, -6 without this function)
Switch quantity input		4-way passive dry node input mode(-2,-6 can only be configured 2-way)	
Working power supply	Range	AC/DC85V~264V	
	Consumption	≤15VA	

Note: 1. the items marked \* are optional, which shall be specified by the customers when ordering.

2. Used for wind power, PV new energy project, the voltage measuring range over 450V can be especially custom-made.



**Summary:**

As a new generation of programmable intelligent instrument, PD7777-S3 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 three phase current, voltage, active/reactive power, power factor, frequency, positive/negative active energy, four-quadrant reactive energy.
- ◆ With the standard RS-485 communication interface, adopting the standard ModBus-RTU communication protocol and the baud rate can be set with switch quantity input function.
- ◆ Function extension: Four-way analog quantity output function; four-way switch quantity output function (“remote-communication” and “remote control” functions)
- ◆ 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:**

(unit: mm)

Model	Measurement display						Energy		Power pulse	RS485	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							
PD7777-2S3	●	●	●	●	●	●	●	●	●			●	72×72	LCD display	
PD7777-2SK3	●	●	●	●	●	●	●	●	●		●	●	72×72		
PD7777-3S3	●	●	●	●	●	●	●	●	●			●	96×96		
PD7777-3SK3	●	●	●	●	●	●	●	●	●		●	●	96×96		
PD7777-3SB3	●	●	●	●	●	●	●	●	●			●	96×96		
PD7777-6S3	●	●	●	●	●	●	●	●	●	●		●	80×80		
PD7777-6SK3	●	●	●	●	●	●	●	●	●	●		●	80×80		
PD7777-8S3	●	●	●	●	●	●	●	●	●	●		●	120×120		
PD7777-8SK3	●	●	●	●	●	●	●	●	●	●		●	120×120		
PD7777-8SB3	●	●	●	●	●	●	●	●	●	●	●	●	120×120		

Note: 1. ●means the intrinsic functions of the instrument;

2. All the meters can custom-made add “harmonic, demand, rate” functions, please choose the corresponding model with “+H” while ordering.

3. -2,-6 do not have analog quantity output function; -2,-6 can only be configured 2-way DI, DO function.

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, 450V	
		Overload	Continuous: 1.2 times, instant: 2 times/5s	
		Consumption	$\leq 2VA$ (each phase)	
		Resistance	$> 500k\Omega$	
	Current	Rated value	AC1A, 5A	
		Overload	Continuous: 1.2 times, instant: 10 times/5s	
		Consumption	$\leq 1VA$ (each phase)	
		Resistance	$< 20m\Omega$ (each phase)	
	Measuring rang of the frequency		45Hz-65Hz	
	Output	Display mode Measuring accuracy		3 line 4 digit LED or 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.	
		Multi-rate energy(*)	Support multi-rate measurement function, max. 4 rates	
		Max. demand record(*)	Support positive, negative total active/reactive max. demand record, demand cycle and slip time can be set	
		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, pulse length:80ms $\pm$ 16ms	
Harmonic( $\times$ )		Harmonic voltage(THDu)	$U_h \geq 3\%U_N$ 5% $U_h$ ; $U_h < 3\%U_N$ 0.15% $U_N$ $I_h \geq 10\%I_N$ $\pm 5\%I_h$ ; $I_h < 10\%I_N$ 0.15% $I_N$	
		Harmonic current(THDi)	$U_N$ is the nominal voltage, $I_N$ is the nominal current, $U_h$ is the harmonic voltage, $I_h$ is the harmonic current.	
Communication		Mode	RS-485	
		Protocol	MODBUS-RTU	
		Baud rate	1200bps, 2400bps, 4800bps, 9600bps, 19200bps, assumed to be 9600bps	
Switch quantity output(*)		Support 4-way relay-state output, relay contact capacity:AC250V/2A, DC30V/2A(-2,-6 only has 2-way)		

	Analog quantity output(*)	Current output: DC0mA~10mA, DC0mA~20mA, DC4mA~20mA, Class 0.5(-2, -6 without this function)
	Switch quantity input	4-way passive dry node input mode(-2,-6 can only be configured 2-way)
Clock(×)	Battery capacity of the clock	≥200mAh
	Accuracy of the clock (daily error)	≤0.5s/d(20℃)
Working power supply	Range	AC/DC85V~264V
	Consumption	≤15VA

Note: 1. The items marked \* are optional, which shall be specified by the customers when ordering.

2. Used for wind power, PV new energy project, the voltage measuring range over 450V can be especially custom-made.

PD7777-□H series  
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 (2<sup>nd</sup> ~31<sup>st</sup>), 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.

#### 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 2<sup>nd</sup>~31<sup>st</sup> 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.

- ◆ 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:

(unit: mm)

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

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)
Measuring rang of the frequency		45Hz-65Hz	
Output	Display mode		3.5 inch/4.3 inch lattice LCD
	Measuring accuracy		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℃)
	USB interface	Host mode(-3H without this function)
Working power supply	Range	AC/DC85V~264V
	Consumption	≤15VA



### Summary

PS/PQ7777-□ series digital active/reactive power meter is the new generation of programmable intelligent instrument, integrated with measurement, alarming, transmission and communication, mainly applied into real-time measurement and indication for the active power, reactive power in the three phase electrical circuit, conducting limited alarming output for transmission output towards electrical data according to the set measured value, realizing networking through RS485 communication interface and the host computer.

#### 1. Main functions and characteristics

- ◆ It can measure and display single/three phase active/reactive power value with digital direct reading method.
- ◆ Extendible for analog quantity output function, transmitting specification of 4~20mA, 0~20mA, 0~10mA which is optional.
- ◆ Extendible for switch quantity output function for the relay, realizing upper/lower-limit alarming output.
- ◆ Extendible for RS-485 communication interface, adopting the standard ModBus-RTU communication protocol and the baud rate can be set.
- ◆ Parameters including current/voltage ratio of the meter, upper/lower-limit alarm value, alarming return difference, communication address of the meter, baud rate, transmitting output mode, transmitting output range, etc. are programmable.

#### 2. Model specification and selection description:

(Unit: mm)

Model	Measurement display			T(communi- cation) RS485 interface	K Switch quantity output	B analog quantit y output	External size	Display mode
	Single phase active power	Three phase three wire active power	Three phase four wire active power					
PS7777-1	●			@	@	@	96×48	LED display
PS7777-1Y			●	@	@	@	96×48	
PS7777-1S		●		@	@	@	96×48	
PS7777-2	●			@	@	@	72×72	
PS7777-2S		●		@	@	@	72×72	
PS7777-3	●			@	@	@	96×96	
PS7777-3Y			●	@	@	@	96×96	
PS7777-3S		●		@	@	@	96×96	
PS7777-5	●			@	@	@	120×60	
PS7777-5S		●		@	@	@	120×60	
PS7777-6	●			@	@	@	80×80	
PS7777-6S		●		@	@	@	80×80	
PS7777-7	●			@	@	@	160×80	
PS7777-7Y			●	@	@	@	160×80	
PS7777-7S		●		@	@	@	160×80	
PS7777-8	●			@	@	@	120×120	

PS7777-8Y			●	@	@	@	120×120
PS7777-8S		●		@	@	@	120×120

Note: 1. ● means the intrinsic functions of the instrument

2. @ means extendible corresponding optional functions of this series of instruments.

3. The size code with 2, 5, 6 can only be configured with any 2 types of function modules, the size code with 1, 3, 7, 8 can be configured with any of 3 types of function modules.

4. All the above models of instrument can be made corresponding reactive power meter (PQ7777 series).

### 3. Main technical performance and parameters:

Technical parameters	index		
Wiring mode	Single phase, three phase three wire, three phase four wire		
Input	Voltage	Rated value	AC100V, 220V, 380V
		Overload	Continuous: 1.2 times, instant: 2 times/1s
		Consumption	≤1VA(each phase)
		Resistance	100V(about 120K), 220V(about 400K), 380V(about 600K)
	Current	Rated value	AC1A, 5A
		Overload	Continuous: 1.2 times, instant: 10 times/5s
		Consumption	≤0.5VA (each phase)
		Resistance	<20mΩ(each phase)
Measuring rang of the frequency		45Hz-65Hz	
Output	Display mode Measuring accuracy		5-digit LED display, reactive power displays “-“ 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 The unit can switch automatically, the decimals shift automatically
	Display range		0~9999MV(Mvar), display “----“ when out of the display range
	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 one relay output, contact capacity:AC250V/2A, DC30V/2A
	Analog quantity output		DC0mA~10mA, DC0mA~20mA, DC4mA~20mA, Class 0.5, output overload≤500Ω, the voltage output can be custom-made
Working power supply	Range	AC/DC85V~264V	
	Consumption	<5VA	

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

PH7777-□ series  
digital power  
factor meter



Summary:

PH7777-□ series power factor meter is mainly applied for the real-time measurement and display for power factor and phase value in the single/three phase electrical circuit, realizing remote transmission for the measured electrical quantity data through RS485 interface or analog quantity transmitting interface, characterized with high measurement accuracy, good stability, free adjustment for long period of work, parameters to be set at site, etc.

1. Main functions and characteristics

- ◆ It can measure and display single/three phase power factor value in the electrical circuit.
- ◆ Extendible for analog quantity output function, transmitting specification of 4~20mA, 0~20mA, 0~10mA which is optional.
- ◆ Extendible for switch quantity output function for the relay, realizing upper/lower-limit alarming output.
- ◆ Extendible for RS-485 communication interface, adopting the standard ModBus-RTU communication protocol and the baud rate can be set.
- ◆ Parameters including current/voltage ratio of the meter, upper/lower-limit alarm value, alarming return difference, communication address of the meter, baud rate, transmitting output mode, transmitting output range, etc. are programmable.

2. Model specification and selection description:

(Unit: mm)

Model	Measurement display		T(communication) RS485 interface	K Switch quantity output	B analog quantity output	External size	Display mode
	Single phase power factor	3 phase power factor					
PH7777-1	●		@	@	@	96×48	LED display
PH7777-1S		●	@	@	@	96×48	
PH7777-2	●		@	@	@	72×72	
PH7777-2S		●	@	@	@	72×72	
PH7777-3	●		@	@	@	96×96	
PH7777-3S		●	@	@	@	96×96	
PH7777-5	●		@	@	@	120×60	
PH7777-5S		●	@	@	@	120×60	
PH7777-6	●		@	@	@	80×80	
PH7777-6S		●	@	@	@	80×80	
PH7777-7	●		@	@	@	160×80	
PH7777-7S		●	@	@	@	160×80	
PH7777-8	●		@	@	@	120×120	
PH7777-8S		●	@	@	@	120×120	

Note: 1. ●means the intrinsic functions of the instrument

2. @means extendible corresponding optional functions of this series of instruments.

3. The size code with 2, 5, 6 can only be configured with any 2 types of function modules, the size code with 1, 3, 7, 8 can be configured with any of 3 types of function modules.

### 3. Main technical performance and parameters:

Technical parameters	index			
Accuracy	Class 0.5			
Input	Connection mode	Single phase, 3 phase 3 wire, 3 phase 4 wire		
	Voltage	Rated value	AC100V±20%, 220V±20%, 380V±20%	
		Overload	Continuous: 1.2 times, instant: 2 times/1s	
		Consumption	<1VA	
	Current	Rated value	AC(0~ 5)A	
		Overload	Continuous: 1.2 times, instant: 10 times/5s	
Consumption		<0.5VA		
Output	Display mode	4-digit LED display, capacitive(C), inductive(L) can automatically switch through the indicator light.		
	Input indication when there is no signal	Input displays the character”----“ when there is no signal.		
	Measuring display range of the power factor	0.000C~0.500C~1.000~0.500L~0.000L		
	Phase measurement display range	0°~359.9°		
	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 one relay output, contact capacity:AC250V/2A, DC30V/2A			
Analog quantity output	DC0mA~10mA, DC0mA~20mA, DC4mA~20mA, Class 0.5, output overload≤500Ω, the voltage output can be custom-made			
Working power supply	Range	AC/DC85V~264V		
	Consumption	<5VA		

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

PP7777-□ series  
digital frequency meter



Summary:

PP7777-□ series frequency meter is mainly used to measure and display the frequency value of the voltage in a real-time manner in the single phase electrical circuit. It can far-transmit the measured voltage frequency value via RS485 interface or analog transmitting output interface. It has high accuracy, good stability, free adjustment for long-work, setting parameters on set and so on features.

1. Main functions and characteristics

- ◆ It can measure and display the frequency value in the electrical circuit in a direct reading method.
- ◆ Extendible for analog quantity output function, transmitting specification of 4~20mA, 0~20mA, 0~10mA which is optional.
- ◆ Extendible for switch quantity output function for the relay, realizing upper/lower-limit alarming output.
- ◆ Extendible for RS-485 communication interface, adopting the standard ModBus-RTU communication protocol and the baud rate can be set.
- ◆ Parameters including the upper/lower-limit alarm value, alarming return difference, communication address of the meter, baud rate, transmitting output mode, transmitting output range, etc. are programmable.

2. Model specification and selection description:

(Unit: mm)

Model	Measurement display	T(communication) RS485 interface	K Switch quantity output	B analog quantity output	External size	Display mode
	Frequency					
PP7777-1	●	@	@	@	96×48	LED display
PP7777-2	●	@	@	@	72×72	
PP7777-3	●	@	@	@	96×96	
PP7777-4	●	@	@	@	48×48	
PP7777-5	●	@	@	@	120×60	
PP7777-6	●	@	@	@	80×80	
PP7777-7	●	@	@	@	160×80	
PP7777-8	●	@	@	@	120×120	

Note: 1. ● means the intrinsic functions of the instrument

2. @ means extendible corresponding optional functions of this series of instruments.

3. The size code with 2, 5, 6 can only be configured with any 2 types of function modules, the size code with 1, 3, 7, 8 can be configured with any of 3 types of function modules, the size code with 4 can only be configured with any of 1 type of function module.

3. Main technical performance and parameters:

Technical parameters	Index			
Accuracy	Class 0.5			
Input	Connection mode	Single phase		
	Voltage	Rated value	AC100V~AC500V	
		Overload	Continuous: 1.2 times, instant: 2 times/1s	
		Consumption	<1VA	
Output	Display mode	4-digit LED display Input displays the character"----"when there is no signal.		
	Measuring display range of the frequency	30.00Hz~70.00Hz		
	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 one relay output, contact capacity:AC250V/2A, DC30V/2A		
Analog quantity output	DC0mA~10mA, DC0mA~20mA, DC4mA~20mA, Class 0.5, output overload $\leq$ 500 $\Omega$ , the voltage output can be custom-made			
Working power supply	Range	AC/DC85V~264V		
	Consumption	<5VA		

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