PANEL METER

CHNT Instruments and meters

ISO14001

ISO18001

ISO9001

ANSI

EN 175 certificate

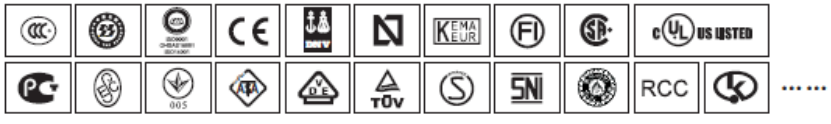
CHINA+TOMORROW= CHINT

"CHIN" means "CHINA", "T" means "TOMORROW".
Implied meaning:"China's fulture"

CHINT has concentrated on industry electric field for tens of years, and has been professionally engaged in manufacturing and developing distributing apparatus, control apparatus, terminal apparatus, power apparatus, power electronics, etc. over 120 series, over 10,000 kinds of low-voltage products. We can provide electricity, machinery, construction, communication, HVA, metallurgy, petrochemicals, railway, etc. industries with the overall solutions of electric transmission and automatic systems

Sales network all over the world, we can immediately provide high-quality professional service for our clients.

In the context of the economic globalization, CHINT always advocates its development strategies of internationalization, technology and industrialization. We attach great importance to the innovation of institutional systems, science&technologies and management, and provide high-performance, intelligentization and energy-saving electric products and technical service, to meet the goal of developing CHINT into a world leading electrical provider of comprehensive system solutions.



Sales Network

CHINT not only has advanced production equipment, strict quality management, innovative research and development team, but also has marketing network all over the world.

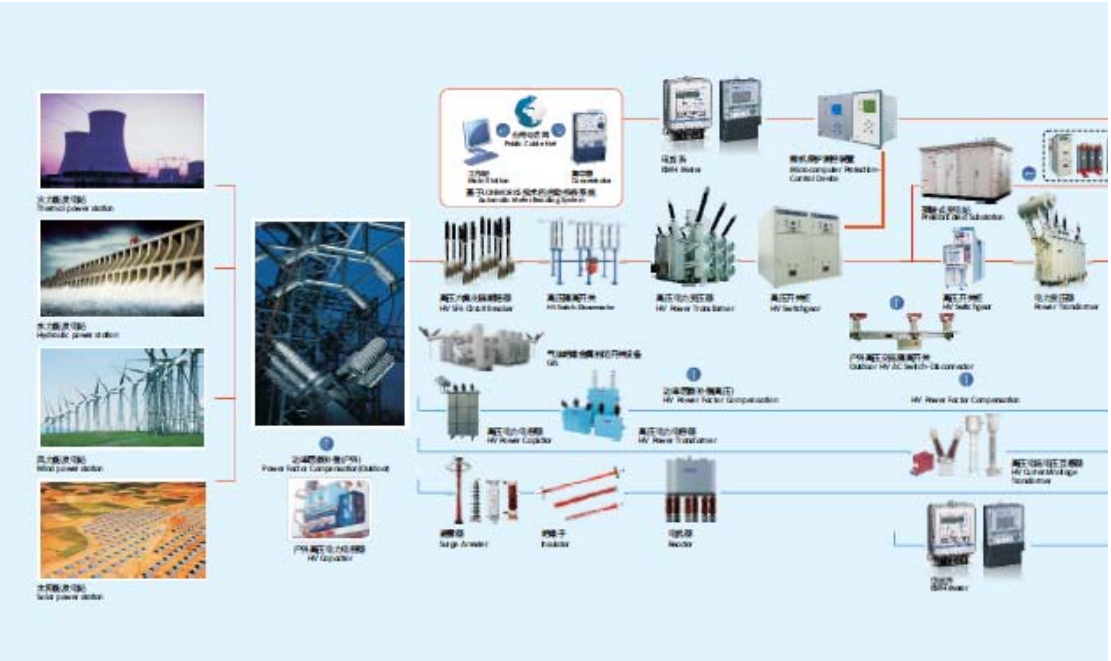
5 marketing areas, 13 domestic sales offices, 12 logistics centers, more than 280 terminal franchises, more than 1000 sales companies, can provide high-quality professional service for the users immediately.

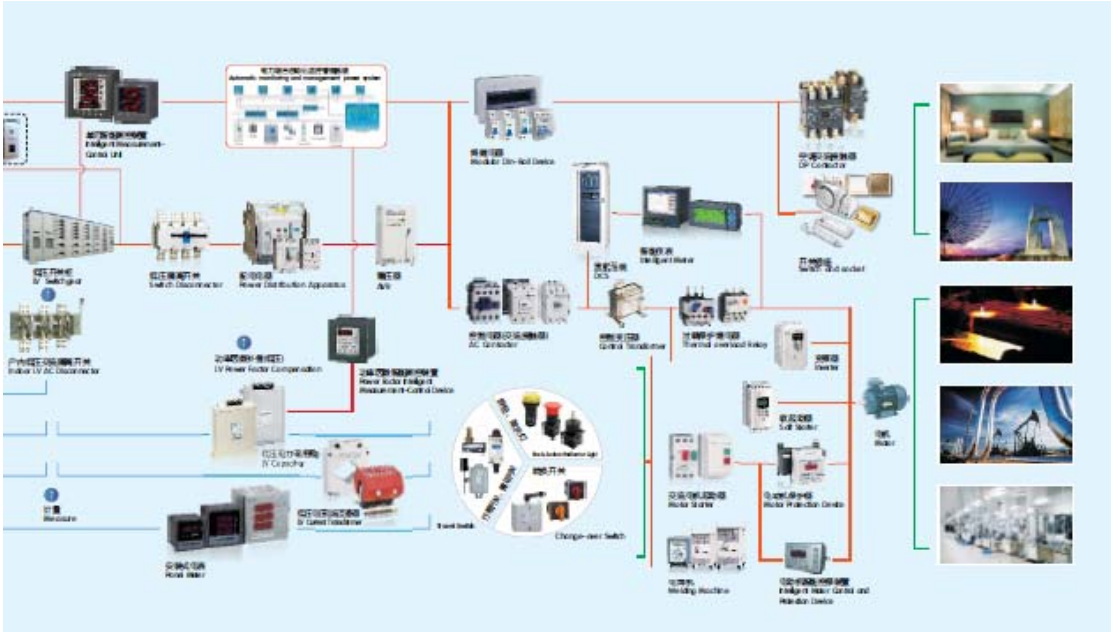

CIS Zone
European Zone
APAC Region
CHNT
China District
West Asia&Africa Zone
America Region


European Zone
America Region
CIS Zone
West Asia&Africa Zone
APAC Region


CHNT正泰
CHNT 正泰电器
CHNT正泰

Electrical System of CHINT





The power of concentration makes CHINT becoming the supplier of electrical system solutions from a manufacturer of single electrical components.

To make users in transmission, distribution, power utilization field share more moderate, more safe, more energy-saving, more environmental, more intelligent electrical products and service.

CHINT concentrates on studying the personalized demand of electricity, machinery, construction, communication, HVA, metallurgy, petrochemicals, railway, etc. industries.

Customize gradually perfect electrical system solutions for users continuously, jointly promote the technical innovation, construct green future.

Company profile

Zhejiang CHINT Instrument&Meter Co.,Ltd.(CIMC) Is a leading professional provider of energy measurement product, systems & solutions,, one of national high-tech enterprises and a high-tech enterprise of National Torch Plan. CIMC was founded in 1998, is one of the core business categories of CHINT group. The registered capital of CIMC is 105 million RMB, total assets si about 700 billion RMB, annual sales reaches 1.22 billion. CIMC covers an area of 60,000 square kilometers, the existing number of workers is about 1600, including 84 medium and senior technicians, 190 researchers.

CIMC subordinate Integrated Instrument Manufacturing Department is professionally manufacturing P series mounted digital panel meters、mounted analog panel meters、mounted temperature indicating controllers、multimeters、clamp meters and auto darkening welding helmets, which conform to GB/T22264-2008《mounted digital electric measurement instrument》、GB/T 7676-1998《direct acting analog indicating electric measurement instrument&accessories》、GB/T 3609-2008《professional eye&face protection》etc. standard requirements. CMIC is the chief drafter of the national standard of GB/T22264-2008《mounted digital electric measurement instrument》and one of the drafting companies of the national standard of GB/T 3609-2008《professional eye&face protection》.

CIMC self-research P7777 series programmable digital panel meters adopt modular design, with measurement、alarm、transmission and communication. Intelligent system networking is realized by RS-485 communication interface and MODBUS field bus. The amounted panel meters of CIMC have passed IEC51 international standardized test and gained CE certificate. Besides, CIMC’s mounted analog panel meters have occupied 1/3 domestic market. CIMC has become the biggest supplier of power equipment enterprise in China, our products are exported to Germany、Italy、Turkey、Brazil、Israel、etc. over 30 countries and regions..

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Digital multi-functional Electric Meter

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Analog panel meters

1 Summary

This meter is widely used direct acting analog indicator electrical measuring instrument, it is used for measuring various electrical parameters, such as voltage, current, power, frequency, power factor, etc. in DC/AC circuit. The advantage of the analog panel meter is, it can show the trend of the measured electrical parameters. It's mainly used in mining enterprises, metallurgy, chemical, electricity, complete equipment and all kinds of electronic control devices. The appearance is simple and elegant.

2 General technical specification

ation and impact	Common Type
	Applicable vertical installation, ± 5° gradient is allowed,unless others specified
	-40℃~+70℃
	Less than 5s
	Reference temperature is 23℃ ± 2℃ ,relative temperature is 40~85%;the temperature limit of working con -dition is -20℃~+55℃ ,relative humidity should be less than 95%,without dust and corrosive gas in the air
	can stand withstand voltage test with frequency 50Hz sine wave AC 2kV voltage lasting 1min
	more than 20MΩ/DC500V

1 Main structure and work principle

51、65、99 series panel meter

51T666、65T666、99T666 mounted panel meters respectively corresponding export models are NP96、NP72、NP48.

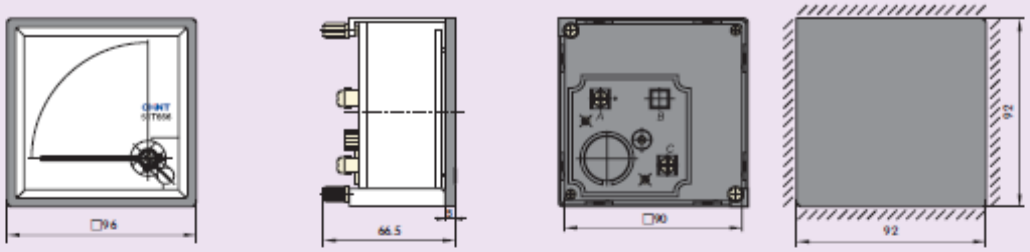
1.1 99T666、65T666、51T666 series square panel meters are electromagnetic type, adopting repulsive construction. The meters are consist of measuring mechanism and indicating device., with casing adopted by flame-retardant ABS engineering plastics, safe measure terminals, high-efficiency connection type, and adopted by printing dial & transparent glass cover. The whole looks beautiful and provides an open view.

2 Main technical parameters

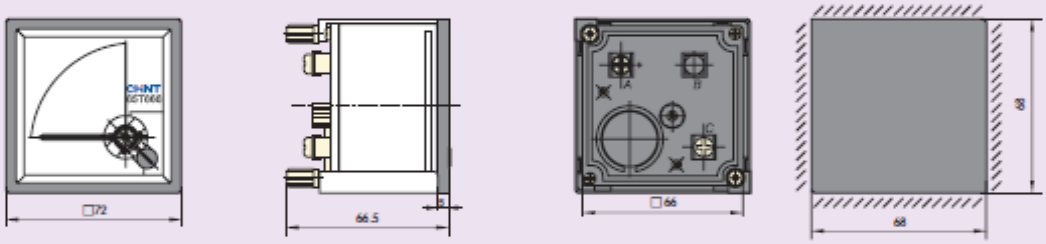
Product Name	Specification	Measuring Range	Accuracy Class
DC Ammeter	51C666-A、65C666-A 99C666-A	50μA~20A (direct) 20A~10kA/60mV or /75mA(external device)	Class 1.5 (999c666 is Class 2.5)
DC Voltmeter	51C666-V、65C666-V 99C666-V	5V~750V (direct) 450V~450kV/1mA or /5mA(external device)	
AC Ammeter	51T666-T、65T666-A 99T666-A	500mA~100A (direct) 99T666为500mA~30A (direct) 5A~10kA/5A或/1A.(external device)	<=30A Class1.5 >30A Class 2.5 99T666 Class2.5
AC Voltmeter	51T666-V、65T666-V 99T666-V	15V~600V (direct) 380V~450kV/100V (external device)	Class 1.5 99T666 is Class 2.5
Frequency Meter	51L666-Hz 65L666-Hz 99L666-Hz	45~55Hz、45~65Hz、55~65Hz etc. Rated voltage 100V 220V 380V	Class 1.0
Power Meter Varmeter	51L666-W/var 65L666-W/var	100V、220V、380V~380kV/100V 5A、5A~10kA/5A (external device)	Class 2.5
3-phase Power Factor Meter	51L666-cosφ 65L666-cosφ	0.5C~1~0.5L 100V 5A, 380V 5A	Class 2.5

Analog panel meters

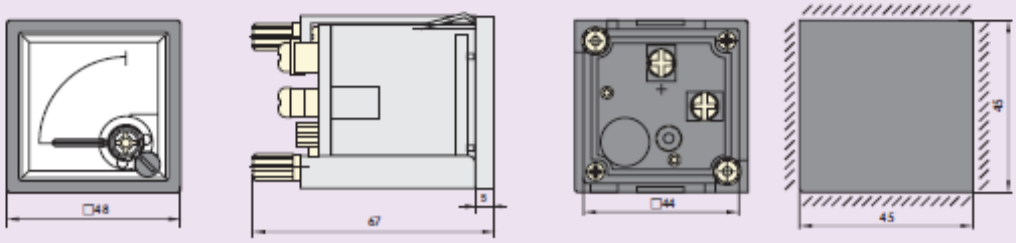
51T666 51L666 51C666(NP96)



65T666 65L666 65C666(NP72)



99T666 99C666(NP48)



Analog panel meters

42、6 series panel meter

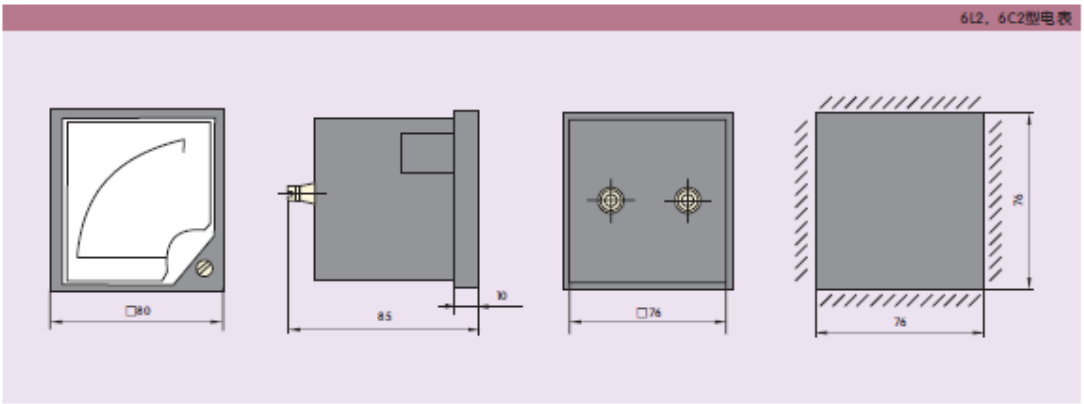
1 Main structure and work principle

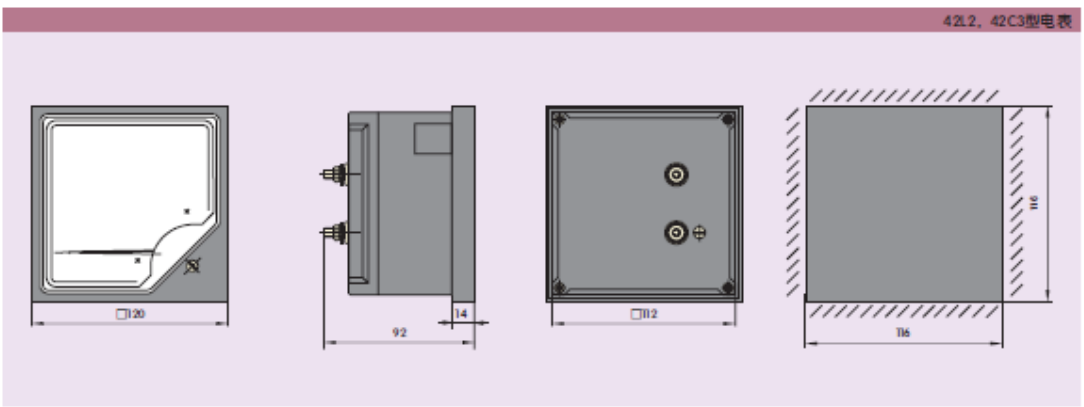
42、6 series panel meters are consist of measuring circuit、measuring mechanism and indicating device, adopting inner magnetic electricity structure. With bakelite case and printing dial & transparent glass cover. the whole looks beautiful and provides an open view.

2 Main technical parameters

Product Name	Specification	Measuring Range	Accuracy Class
DC Ammeter	42C3–A 6C2–A	50 μ A~20A (direct) 20A~10kA*/75mV*/60mV(external device)	Class 1.5
DC Voltmeter	42C3–V 6C2–V	5V~750V (direct) 450V~450kV*/1mA*/5mA (external device)	
AC Ammeter	42L6–A 6L6–A	50mA~50A (direct) 5A~10kA*/5A*/1A(external device)	Class 1.5
AC Voltmeter	42L6–V 6L6–V	15V~600V (direct) 380V~450kV*/100V (external device)	
Frequency Meter	42L6–Hz 6L2–Hz	45~55Hz、45~65Hz、55~65Hz etc. Rated voltage 100V 220V 380V	Class 1.0
Power Meter Varmeter	42L6–W/var 6L2–W/var	100V、220V、380V–380kV/100V 5A、5A~10kA/5A (external device)	Class 2.5
3-phase Power Factor Meter	42L6–cos ϕ 6L2–cos ϕ	0.5C~1~0.5L 100V 5A，380V 5A	Class 2.5

3 Outline and installation dimension





Maxinum demand meter

1 Applicable range

The single structure maximum demand panel meter is dual metal structure. It's used for measuring Max. average current of all kinds of AC/DC transmission systems and electric equipment controlled by the power plant in the demand cycle.

2 General technical index

2.1 Model: 51S666-A 61S666-A

2.2 Accuracy: Class 3.0

2.3 Specification: demand interval: 8min、15min、30min,current specification: 1A、5A

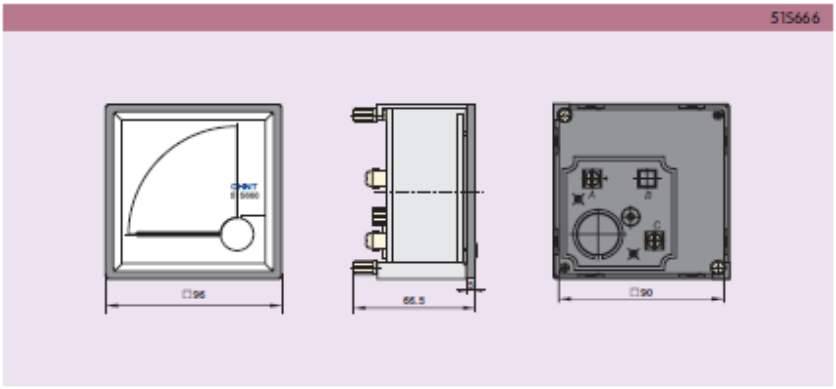
2.4 Casing: flame retardant plastic

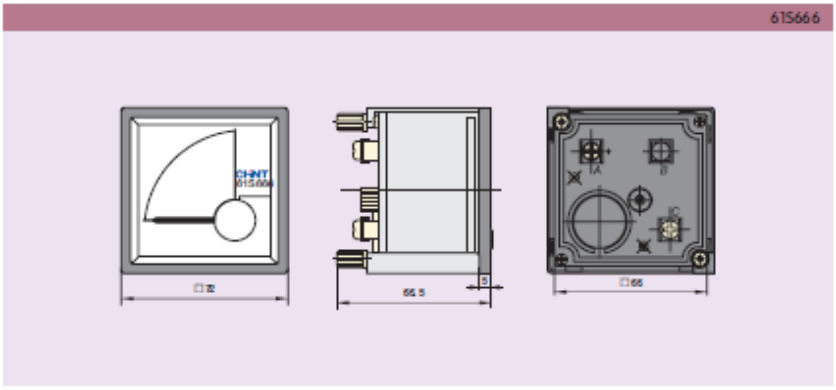
2.5 Operation conditions: reference temperature is 23℃±2℃, relative humidity is 40~85%,the operation temperature limit is -20℃~+55℃. The relative temperature should be no more than 95% without dust and corrosive gas in the air.

2.6 Voltage test: can stand 50Hz sine wave AC 2kV lasting 1min withstand voltage test

2.7 Insulation test: all the insulation resistance should be more than 20MΩ

3 Outline and installation dimension





4 Note

The meter can measure max. average load after 8min、15min or 30min indicating, the red pointer indicates max. demand, max. pointer resets by reset button. Reset button is lead sealed by the power plant, which can prevent resetting without unauthorization.

Accessories

1 Applicable range

1.1 We can also provide other specification which is not in the list according to your needs. Overload multiples is customer-made 1、2、3、5,etc.

1.2 Please specify the demand time of Maximum demand meter when ordering.

2 The examples of ordering

Clients should specify the product model,specification and quantity while ordering the analog panel meters.		
Ex. model：51T666-A(NP96)	specification：5A	Qty.：50
Model：99T666-V(NP48)	specification：AC380V/100V	Qty.：50
Model：42L6-Hz	specification：45~65Hz，AC380V	Qty.：10
Model：42L6-W	specification：AC380V，400/5A	Qty.：22
Model：42L6-kvar	specification：AC380V，200/5A	Qty.：22
Model：44L1-cos ϕ	specification：0.5C~1~0.5L，AC380V，5A	Qty.：20
Model：51S666-A	specification：15 min. 5A	Qty.：12
Cients should specify model,auxiliary voltage,input specification and quantity while ordering the digital panel meters.		
Ex. model：PS666-3S	APS：AC220V/50Hz	
Input：AC100A/5A，35kV/100V		Qty.：20

i

ndexing table of the active power meter

Via current transformer (sendary curr -ent is 5A)	measuring range	Rated voltage(V) Direct input 100	220	380	via voltage transformer(sendary voltage is 100V) 3k	6k	10k	15k	35k	110k	220k	380k
5	kW	0.8	2	3	25	50	80	120	300	1	2	3
7.5	kW	1.2	3	5	40	80	120	200	500	1.5	3	5
10	kW	1.5	4	6	50	100	150	250	600	2	4	6
15	kW	2.5	6	10	80	150	250	400	1	3	6	10
20	kW	3	8	12	100	200	300	500	1.2	4	8	12
30	kW	5	12	20	150	300	500	800	2	6	12	20
40	kW	6	15	25	200	400	600	1	2.5	8	15	25
50	kW	8	20	30	300	500	800	1.2	3	10	20	30
75	kW	12	30	50	400	800	1.2	2	5	15	30	50
100	kW	15	40	60	500	1	1.5	2.5	6	20	40	60
150	kW	25	60	100	800	1.5	2.5	4	10	30	60	100
200	kW	30	80	120	1	2	3	5	12	40	80	120
300	kW	50	120	200	1.5	3	5	8	20	60	120	200
400	kW	60	150	250	2	4	6	10	25	80	150	250
00	kW	100	250	400	3	6	10	15	40	120	250	400
750	kW	120	300	500	4	8	12	20	50	150	300	500
800	kW	120	300	500	4	8	15	20	50	150	300	500
1k	kW	150	400	600	5	10	25	25	60	200	400	600
1.5k	kW	250	600	1	8	15	25	40	100	300	600	1000
2k	kW	300	800	1.2	10	20	30	50	120	400	800	1200
3k	kW	500	1.2	2	15	30	50	80	200	600	1200	2000
4k	kW	600	1.5	2.5	20	40	60	100	250	800	1500	2500
5k	kW	800	2	3	25	50	80	120	300	1000	2000	3000
6k	MW	1	2.5	4	30	60	100	150	400	1200	2500	4000
7.5k	MW	1.2	3	5	40	80	120	200	500	1500	3000	5000
10k	MW	1.5	4	6	50	100	150	250	600	2000	3500	6000

Indexing table of the varmeter

Via current transformer (sendary curr -ent is 5A)	measuring range	Rated voltage(V)										
		Direct input		via voltage transformer(sendary voltage is 100V)								
		100	220	380	3k	6k	10k	15k	35k	110k	220k	380k
5	kvar	0.6	1.5	2.5	20	40	60	100	250	800	1.5	2.5
7.5	kvar	1	2.5	4	30	60	100	150	400	1.2	2.5	4
10	kvar	1.2	3	5	40	80	120	200	500	1.5	3	5
15	kvar	2	5	8	60	120	200	300	800	2.5	5	8
20	kvar	2.5	6	10	80	150	250	400	1	3	6	10
30	kvar	4	10	15	120	250	400	600	1.5	5	10	15
40	kvar	5	12	20	150	300	500	800	2	6	12	20
50	kvar	6	15	25	200	400	600	1	2.5	8	15	25
75	kvar	10	25	40	300	600	1	1.5	4	12	25	40
100	kvar	12	30	50	400	800	1.2	2	5	15	30	50
150	kvar	20	50	80	600	1.2	2	2.5	8	25	50	80
200	kvar	25	60	100	800	1.5	2.5	4	10	30	60	100
300	kvar	40	100	150	1.2	2.5	4	5	15	50	100	150
400	kvar	50	120	200	1.5	3	5	8	20	60	120	200
600	kvar	80	200	300	2.5	5	8	10	30	100	200	300
750	kvar	100	250	400	3	6	10	15	40	120	250	400
800	kvar	100	250	400	3	6	10	20	40	120	250	400
1k	kvar	120	300	500	4	8	12	30	50	150	300	500
1.5k	kvar	200	500	800	6	12	20	40	80	250	500	800
2k	kvar	250	600	1	8	15	25	40	100	300	600	1000
3k	kvar	400	1	1.5	12	25	40	50	150	500	1000	1500
4k	kvar	500	1.2	2	15	30	50	80	200	600	1200	2000
5k	kvar	600	1.5	2.5	20	40	60	100	250	800	1500	2500
6k	kvar	800	2	3	25	50	80	120	300	1000	2000	3000
7.5k	Mvar	1	2.5	4	30	60	100	150	400	1200	2500	4000
10k	Mvar	1.2	3	5	40	80	120	200	500	1500	3000	5000

f

P series digital panel meters

1 Summary

1.1 Applicable range

P series digital panel meters are mainly used for measuring various electrical parameters, such as AC/DC voltage、AC/DC current、 frequency,、single/three phase active power、single/three phase power factor, etc. in power station、electrical switchgear and the variety measurement of electrical equipment or indicating circuit. It has the features of high measurement accuracy、clear reading、convenience、no perspective errors、optional installation angle、anti-seismic、anti-magnetic field interference, etc., which is the ideal substitute of pointer meter.

1.2 Meter type

1.2.1 This series meter can be divided into several types below according to the difference in additional features:

Normal digital display meters (only display 1 electrical parameter or 3 electrical parameters in the same type. For example: 3 phase voltage)

Programmable digital meter (RS-485 communication、alarm for upper and lower limits、analog quantitative output, etc. functions are added base on the display meter)

Muti-functional digital meters (the function of displaying all the electrical parameters or several different types of electrical parameters is added base on the display meter and programmable meter)

1.3 Function features

1.3.1 Used in the real-time measurement on all the electrical parameters in power circuits. It can also measure and display single parameter or several parameters at the same time according to the needs.

1.3.2 The variety specification is complete, a variety of external dimensions and series product.

1.3.3 All the meters are designed according to the standard size. High compatibility, convenient replace and maintain.

1.3.4 adopting new cassette installation method, which makes the installation simple、convenient and tight.

1.3.5 SMT production technology, software production calibration.

1.3.6 Intelligent and modularized design method. The multiplying factor of transformer can be set freely, the functional modules can be combined freely, so that it can improve the operation flexibility of the users.

1.3.7 Network design can be docked with all kinds of electric network remote monitoring system easily.

1.4 Model and function info

Model	Measuring display														External dimension code													
	voltage	current	frequency	active power	reactive power	apparent power	power factor	phase	active anergy	reactive energy	voltage harmonic	current harmonic	max.&min.value	demand indicating	1	2	3	4	5	6	7	8	T communication	K alarm contact	B transmitting output	switch output	energy impulse
PA666-□		●													√	√	√	√	√	√	√	√					
PZ666-□	●														√	√	√	√	√	√	√	√					
PP666-□			●												√	√	√	√	√	√	√	√					
PS666-□				●											√	√	√		√	√	√	√					
PQ666-□					●										√	√	√		√	√	√	√					
PH666-□							●								√	√	√		√	√	√	√					
PA7777-□		●											●		√	√	√	√	√	√	√	√	△	△	△		
PZ7777-□	●												●		√	√	√	√	√	√	√	√	△	△	△		
PP7777-□			●												√	√	√	√	√	√	√	√	△	△	△		
PS7777-□				●											√	√	√		√	√	√	√	△	△	△		
PQ7777-□					●										√	√	√		√	√	√	√	△	△	△		
PH7777-□							●								√	√	√		√	√	√	√	△	△	△		
PD7777-□3	●	●	●	●	●	●	●		●	●	●	●		●			√					√	△	△	△	△	△
PD7777-□4	●	●	●	●	●	●	●		●	●							√					√	△	△	△	△	△

2 Model composition and representative meaning

The model of meter is comprised of 8 parts. The content from Part 1~Part 4 and Part 8 should be filled in, others can be chosen according to needs.

①② ③ ④ ⑤ ⑥ ⑦ ⑧
P□ □□-□ □ □ □-□

- ⑧ measure range,input specification,ratio,etc. information
- ⑦ auxiliary code: AC220V or AC/DC 86~264V
- ⑥ additional functions
  - No: means no additional functions
  - K: single realy contact, alarm or remote output
  - B: the function of analog transmitting output
  - T: RS485 communication function
  - N: two or more functions are combined according to the clients
- ⑤ signal input method
  - No: single sine wave signal input
  - D: DC signal input
  - S: three phase AC signal input
  - Y: 3 phase 4 wire AC signal input/for power meter
- ④ external size code of the meter
  - 1: size 48×96mm 2: size 72×72mm
  - 3: size 96×96mm 4: size 48×48mm
  - 5: size 60×120mm 6: size 80×80mm
  - 7: size 80×160mm 8: size 120×120mm
- ③ design number
  - 666: 3 or 3 1/2 digits meter
  - 7777: 4 digits programmable meter
- ② type of meter
  - A: Ammeter Z: Voltmeter
  - P: Frequency meter H: power factor meter
  - S: active power meter G: reactive power meter
  - D: multi-functional meter
- ① the product code of mounted digital electric meters

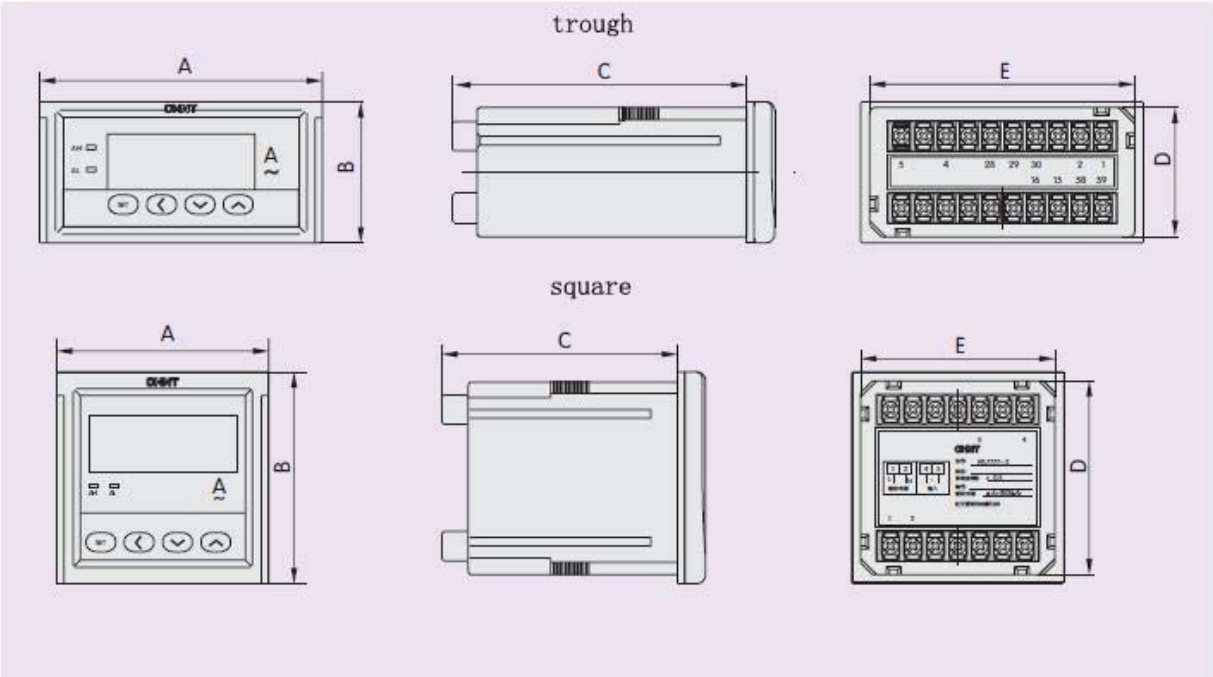
3 General technical index

voltage input consumption	<3VA/Phase
current input consumption	< 5VA
frequency range while input signal is AC voltage	50Hz ± 2.5Hz
frequency range while input signal is current	50Hz ± 2.5Hz
overrange	continues 1.2 times
the consumption of auxiliary power supply	<= 5VA
work condition	work temperature range should be -10~+50℃. relative humidity<90%RH, atmosphere pressure 86-106kPa, well-veritilated and no corrosive gas in the air, no direct sunlight
insulation strength	no breakdown and flashover on the test condition of AC2kV, 50Hz, 5mA, 1min
insulation resistance	> 20MΩ/DC500V

4 External and installation dimension

Unit : mm

No.	Model	panel size(width×height)	shell size(width×height)	shell length	installation size(width×height)
1	96 × 48 (trough)	96 × 48	90 × 44	100	92 × 45
2	72 × 72 (square)	72 × 72	66 × 66	80	68 × 68
3	96 × 96 (square)	96 × 96	90 × 90	80	92 × 92
4	48 × 48 (square)	48 × 48	44 × 44	100	45 × 45
5	60 × 120 (trough)	120 × 60	112 × 55	80	116 × 56
6	80 × 80 (square)	80 × 80	75 × 75	80	76 × 76
7	80 × 160 (trough)	160 × 80	150 × 75	100	152 × 76
8	120 × 120(square)	120 × 120	112 × 112	80 (multi-functional meter is 120)	116 × 116



PA、PZ666-□ series digital voltmeter,Ammeter

1 PA666-□ digital Ammeter,PZ666-□ digital Voltmeter

1.1 function: measure and display the current&voltage value in electrical circuit with digital direct reading method.

1.2 specification and selection instructions

Model	measurement displays AC voltage	AC current	DC voltage	DC current	the code of external size(the number in □) 1	2	3	4	5	6	7	8	Note
PZ666-□	●				√	√	√	√	√	√	√	√	● The corresponding measurement display type of this meter
PA666-□		●			√	√	√	√	√	√	√	√	√ The corresponding external size code of this meter can be chosen one external size code should be filled in "□" while selecting.
PZ666-□D			●		√	√	√	√	√	√	√	√	
PA666-□D				●	√	√	√	√	√	√	√	√	

1.3 basic parameters

Measuring range: (AC Ammeter) AC(0~5)A(direct); AC(0~1999)kA/5A

(DC Ammeter) DC(0~5)A(direct); AC(0~1999)kA/75mV

(AC Voltmeter) AC(0~660)V(direct); AC(0~1999)kV/100V

(DC Voltmeter) DC(0~660)V(direct)

Accuracy: ±[0. 4%measuring value + 0.1% rated value + 1 word]

Measurement display method: the measurement of average value, 3 digits、3 and a half digits LED effective value display

Maximum digital display range: ±1999

Resolution: last digit 1 word

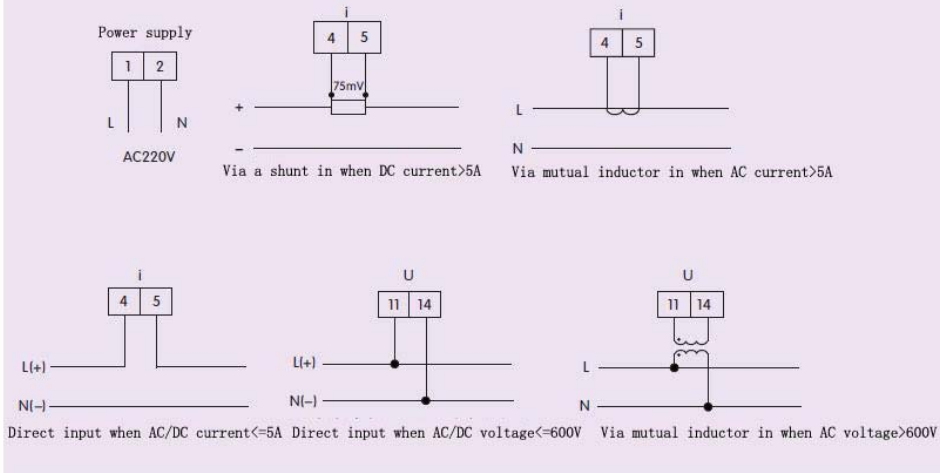
Overflow indication: the highest displays "1" or "-1", the remaining is blanking

Polar indication: the positive value has no display, the negative value shows "_" automatically (only for DC meter)

Auxiliary power supply: AC220V±10%

Note: the meter can be specially made as per special specification: input 0~10mA、4~20mA、0~10V、1~5V,etc. DC standard signals. The header can display the corresponding voltage、current、frequency、power、power factor、pressure、flow, etc. parameters in the primary circuit of the sensors or transmitters.

The terminal code and connection diagram of single Ammeter, Voltmeter



PA、PZ666-□S series three phase digital Ammeter,Voltmeter

2 PA666-□S 3-phase digital Ammeter,PZ666-□S 3-phase digital Voltmeter

2.1 function: real-time measure three currents(or voltages) in the electric lines at the same time, and display with digital direct reading method. Only one 3-phase digital Ammeter can finish the measuring task of A phase current、B phase current、C phase current, which can only be done by three normal Ammeter. At the same time, one 3-phase digital Voltmeter can finish the measuring task of A phase voltage、B phase voltage、C phase voltage, which can only be done by three normal voltage.

2.2 specification and selection instructions

Model	measurement displays		the code of external size(the number in □)								Note
	3-phase voltage	3-phase current	1	2	3	4	5	6	7	8	
PZ666-□S	●			√	√	√		√		√	● The corresponding measurement display type of this meter √ The corresponding external size code of this meter can be chosen one external size code should be filled in "□" while selecting.
PA666-□S		●		√	√	√		√		√	

2.3 basic parameters

Current measuring range: 3×AC(0~5)A(direct); 3×AC(0~1999)kA/5A

Voltage measuring range: 3×AC(0~500)V(direct); 3×AC(0~1999)kV/5V

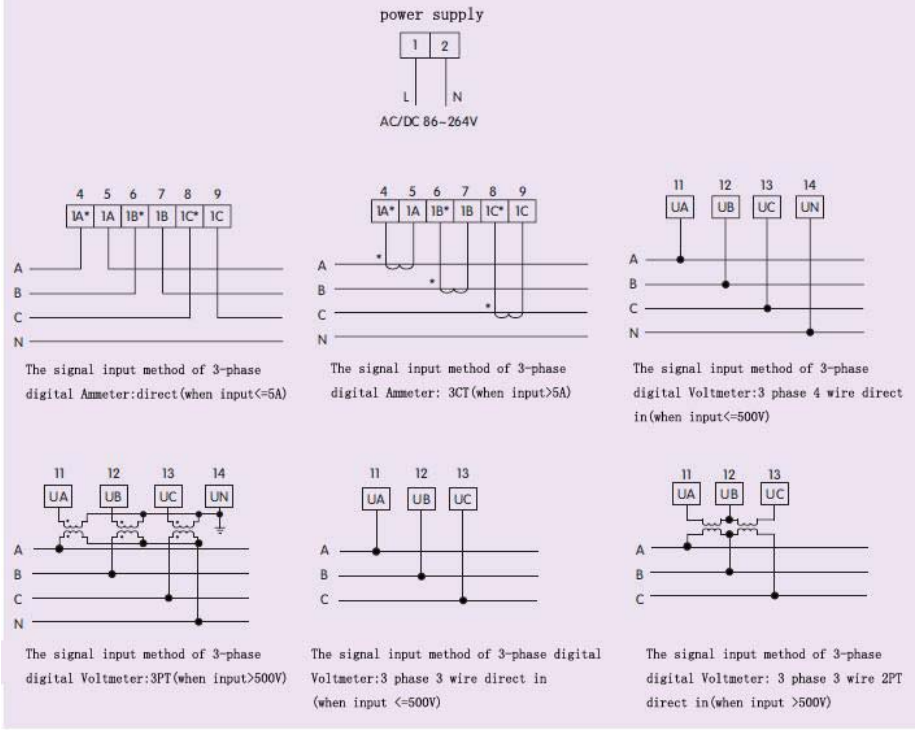
Accuracy: ±[0.4%measuring value + 0.1% rated value + 1 word]

Measurement display method: the measurement of average value, 3 digits、3 and a half digits LED effective value display

Maximum digital display range: 0~1999

Auxiliary power supply: AC/DC 86~264V

The terminal code and conection diagram of 3-phase Ammeter,Voltmeter



3 PS、PQ666-□/S/Y 3 phase 3 wire/3 phase 4 wire wattmeter、varmeter

PS、PQ666-□ series digital wattmeter,varmeter

3.1 function: measure and display the single/three phase active power、reactive power in the electric lines with digital direct reading method. Both 3 phase 3 wire and 3 phase 4 wire signal input method are allowed.

3.2 specification and selection instructions

Model	measurement displays: single phase active power	3ogase 3wire active oiwer	3phase 4wire active power	single phase reactive power	3phase 3wire reactive power	3wire 4wire reactive power	the code of external size(the number in □) 1	2	3	4	5	6	7	8	Note
PS666-□	●						√	√	√		√	√	√	√	● The corresponding measurement display type of this meter
PS666-□S		●					√	√	√		√	√	√	√	√ The corresponding external size code of this meter can be chosen one external size code should be filled in "□" while selecting
PS666-□Y			●				√		√				√	√	
PQ666-□				●			√	√	√		√	√	√	√	
PQ666-□S					●		√	√	√		√	√	√	√	
PQ666-□Y						●	√		√				√	√	

3.3 basic parameters

Input(single、3 phase 3 wire、3 phase 4 wire): 100V 5A、220V 5A、380V 5A(direct) 220V*/5A、380V*/5A、*/100V*/5A(additional device)

Accuracy: ±[0. 4%measuring value + 0.1% rated value + 1 word]

Maximum digital display range: ±1999

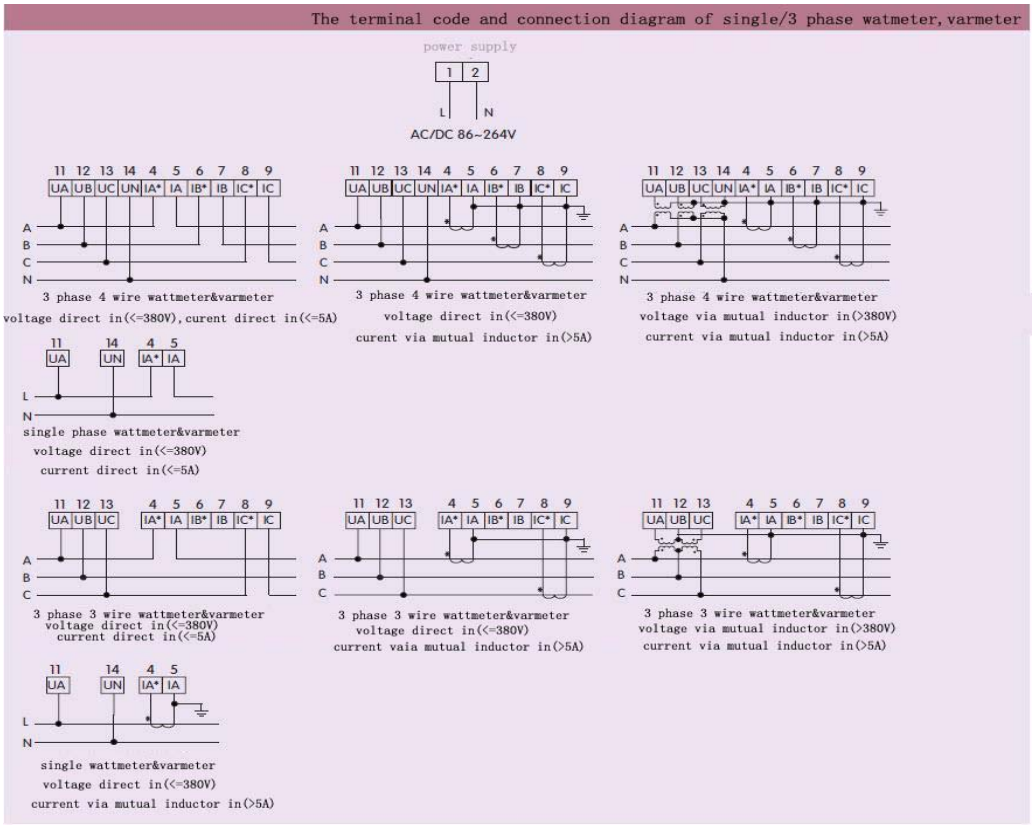
Resolution: last digit 1 word

Sampling rate: ≈2.5 times/second

Polar indication: can identify the negative power automatically, the positive value has no display, the negative value shows "_" automatically

Auxiliary power supply: AC/DC 86~264V

The terminal code and connection diagram of single/3 phase watmeter, varmeter



PH666-□series digital power factor meter

4 PH666-□/S single/3 phase digital power factor meter

4.1 function: measure and display the single/three phase power factor meter in the electric lines with digital direct reading method

4.2 specification and selection instructions

Model	measurement displays: single power factor	measurement displays: 3-phase power factor	the code of external size(the number in □): 1	2	3	4	5	6	7	8	Note
PH666-□	●		√	√	√		√	√	√	√	● The corresponding measurement display type of this meter √ The corresponding external size code of this meter can be chosen one external size code should be filled in "□" while selecting
PH666-□S		●	√	√	√		√	√	√	√	

4.3 basic parameters

Input voltage: AC100V±10%;220V±10%、380V±10%

Input current range: 1A~5A

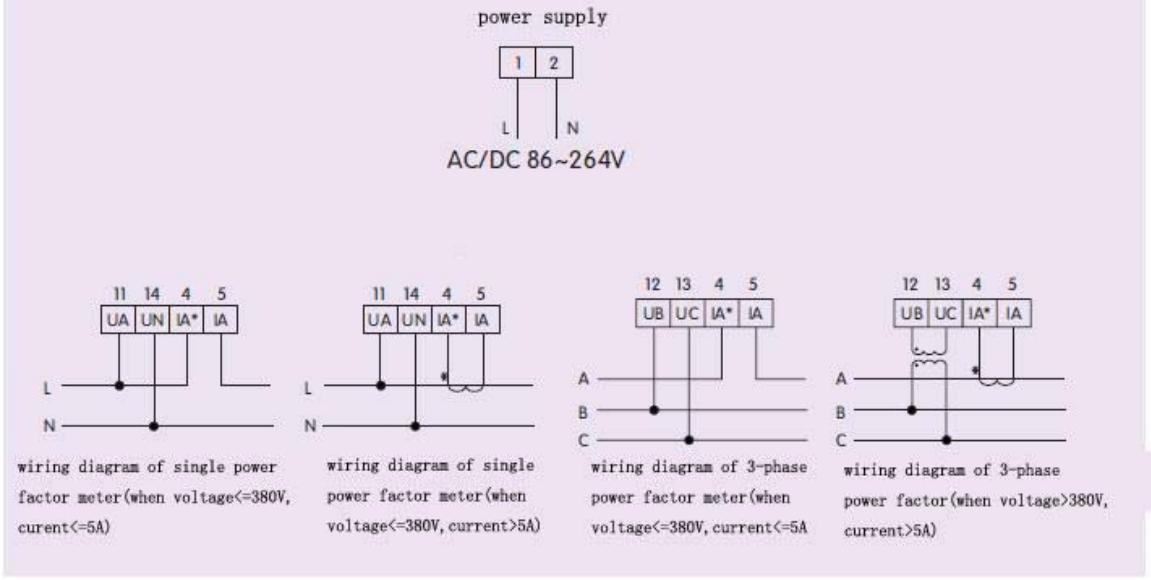
Measuring range: 0~359.9°

Display range: 0.000C~0.500C~1.000~0.500L~0.000L

Accuracy: ±[0.4%measuring value + 0.1% rated value + 1 word]

Auxiliary power supply: AC/DC 86~264V

The terminal code and connection diagram of single/3-phase power factor meter



PP666-□ series digital frequency meter

5 PP666-□ digital frequency meter

5.1 function: measure and display the frequency in the electric lines with digital direct reading method

5.2 specification and selection instructions

Model	measurement displays	the code of external size(the number in □)								Note
	frequency	1	2	3	4	5	6	7	8	
PP666-□	●	√	√	√	√	√	√	√	√	● The corresponding measurement display type of this meter √ The corresponding external size code of this meter can be chosen one external size code should be filled in "□" while selecting

5.3 basic parameters

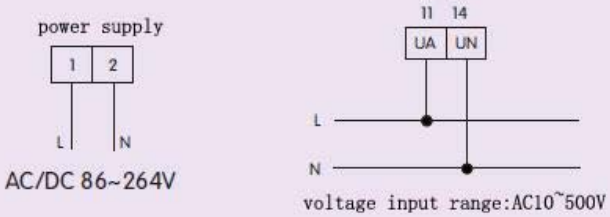
Input voltage: AC100V±50%;220V±50%、380V±50%、5~30Vp-p(impulse signal)

Measuring range: 30~70Hz

Accuracy: ±[0.4%measuring value + 0.1% rated value + 1 word]

Auxiliary power supply: AC/DC 86~264V

The terminal code and connection diagram of the frequency meter



PA、PZ7777-□ series programmable digital Ammeter,Voltmeter

6 PA、PZ7777-□(K/B/T/N)programmable digital Ammeter、 Voltmeter

6.1 function: measure and display the current&voltage value in the electrical circuit with digital direct reading method. The meter can be used as normal digital Ammeter、Voltmeter, it can also be used as current/voltage transmitter with the function of displaying one measuring value by installing the analog input module. It can be used as current/voltage data collector with the function of displaying one measuring current by adopting RS-485 digital communication module, it can also be used for protecting over-limit alarm of normal current、voltage by adopting the relay input module. Besides, by adopting all the three function modules, it can be a multi-functional network electric meter, which has measuring, alarming, transmitting, communicating, etc. functions.

There are programmable keys on the panel, which can program and set parameters including transformer rate、upper and lower limit alarm value、communication address of the meter、communication baud rate、transmitting output method、transmitting output range, etc. parameters.

6.2 specification and selection instructions

Model	measurement displays: AC voltage	AC current	DC voltage	DC current	the code of external size(the number in □): 1	2	3	4	5	6	7	8	T communication	K alarm contact	B transmitting output	Note
PZ7777-□	●				√	√	√	√	√	√	√	√				● The corresponding measurement display type of this meter
PA7777-□		●			√	√	√	√	√	√	√	√				√ The corresponding external size code of this meter can be chosen one external size code to be filled in "□" while selecting
PZ7777-□K	●				√	√	√	√	√	√	√	√		△		"△" means this type of meter has this additional functions
PA7777-□K		●			√	√	√	√	√	√	√	√		△		
PZ7777-□B	●				√	√	√	√	√	√	√	√			△	
PA7777-□B		●			√	√	√	√	√	√	√	√			△	
PZ7777-□T	●				√	√	√	√	√	√	√	√	△			
PA7777-□T		●			√	√	√	√	√	√	√	√	△			
PZ7777-□N	●				√		√				√	√	△	△	△	
PA7777-□N		●			√		√				√	√	△	△	△	
PZ7777-□D			●		√	√	√	√	√	√	√	√			△	
PA7777-□D				●	√	√	√	√	√	√	√	√			△	
PZ7777-□DK			●		√	√	√	√	√	√	√	√		△		
PA7777-□DK				●	√	√	√	√	√	√	√	√		△		
PZ7777-□DT			●		√	√	√	√	√	√	√	√			△	
PA7777-□DT				●	√	√	√	√	√	√	√	√			△	
PZ7777-□DN			●		√		√				√	√	△	△	△	
PA7777-□DN				●	√		√				√	√	△	△	△	

Note: the size code 1,3,7,8 can be collocated 3 functional modules at the same time, the size code 2,4,5,6 can only choose one functional module optionally.

6.3 basic parameters can be modified according to the parameters below

6.3.1 rated input

AC: voltage 100V、660V optional, current 1A、5A optional, other specification can be made by users

DC: voltage 75mV、660V optional, current 0~20mA、4~20mA、5A optional, other specification can be made by users

6.3.2 overrange: 1.2 times/2h, instant: voltage 2 times/1s, current 10 times/5s

6.3.3 frequency: 45Hz~65Hz or DC

6.3.4 Accuracy: ±[0.4%measuring value + 0.1% rated value + 1 word]

6.3.5 display method: 4 digits LED display, refresh time is about 3 times/s

6.3.6 alarm output: upper and lower limit alarm the same relay output, contact capacity AC250V/2A、DC30V/2A、can be working in remote control mode

6.3.7 transmitting output: DC0~10mA、0~20mA、4~20mA, class 0.5, output load≤500Ω, output voltage is customizable.

6.3.8 communication interface: RS-485 serial communication, MODBUS_BTU communication protocol, baud rate 1200bps~19200bps can be set.

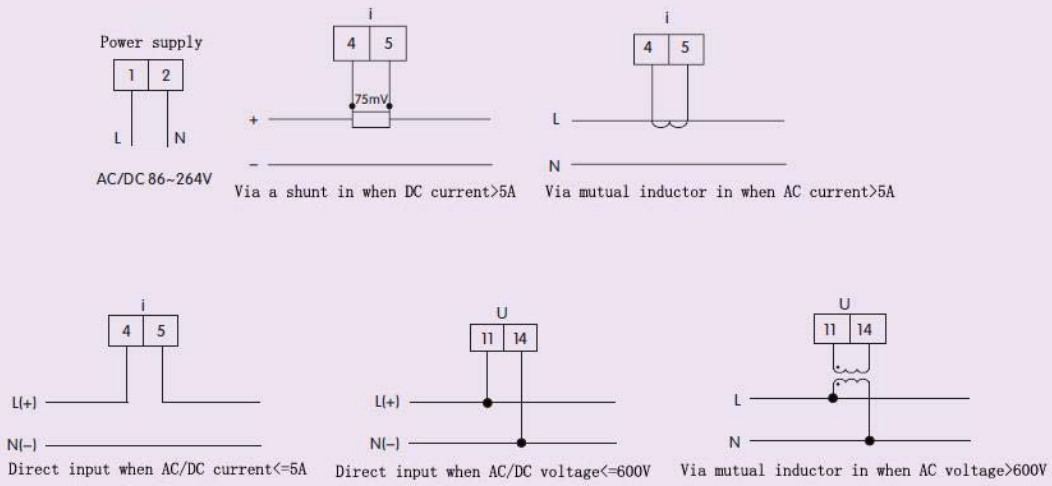
6.3.9 Auxiliary power supply: AC/DC 86~264V

6.3.10 power consumption: <3VA

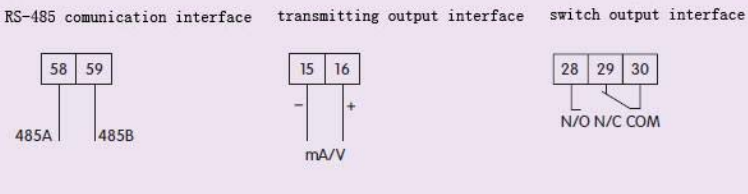
6.3.11 working environment: temperature -25℃~55℃, relative humidity is no more than 93%RH, no corrosive gas in the air

6.3.12 safe electromagnetic compatibility: no less than class 2 operating requirements specified in the standard of GB/T17626.2-2008、GB/T17626.3-2008、GB/T17626.5-2008

The terminal code and connection diagram of single Ammeter, Voltmeter



The terminal code and connection diagram of the functional output modules



PA、PZ7777-□S series programmable 3-phase digital Ammeter,Voltmeter

7 PA、PZ7777-□S(K/B/T/N)programmable 3-phase digital Ammeter、Voltmeter

7.1 function: measure and display 3 currents (or voltage) in the electrical circuit with digital direct reading method. Only one 3-phase digital Ammeter can finish the measuring task of A phase current、B phase current、C phase current, which can only be done by three normal Ammeter. At the same time, one 3-phase digital Voltmeter can finish the measuring task of A phase voltage、B phase voltage、C phase voltage, or AB phase line voltage、BC phase line voltage、AC phase line voltage which can only be done by three normal voltage. When providing real-time measurement and indicating function, the meter also has analog transmission、upper and lower limit alarm、RS485 communication each function separately by adopting different function modules. There are total 5 output methods, including 3-way transmitting simultaneous output、3-way alarm contact(3 relays) simultaneous output、3-way alarm one relay output、RS485 communication output、3-way alarm one relay output+RS485 communication output(note:48×48 square meter has no output function at present).There are programmable keys on the panel, which can program and set parameters including transformer rate、upper and lower limit alarm value、communication address of the meter、communication baud rate、transmitting output method、transmitting output range, etc. parameters.

7.2 specification and selection instructions

Model	measurement displays		the code of external size(the number in □)										Note
	3-phase voltage	3-phase current	2	3	4	5	6	7	8	T communication	K alarm contac	B transmitting output	
PZ7777-□S	●		√	√	√		√		√				● The corresponding measurement display type of this meter √ The corresponding external size code of this meter can be chosen one externa size code to be filled in "□" while selecting "△" means this type of meter has this additional functions
PA7777-□S		●	√	√	√		√		√				
PZ7777-□SK	●		√	√			√		√		△		
PA7777-□SK		●	√	√			√		√		△		
PZ7777-□SB	●		√	√			√		√			△	
PA7777-□SB		●	√	√			√		√			△	
PZ7777-□ST	●		√	√			√		√	△			
PA7777-□ST		●	√	√			√		√	△			
PZ7777-□SN	●		√	√			√		√	△	△	△	
PA7777-□SN		●	√	√			√		√	△	△	△	

Note: the size code 2, 6 can only be collocated 2 functional modules optionally, and the size code 3,8 can be collocated 3 functional modules optionally.

7.3 basic parameters

7.3.1 voltage measuring range: 3×AC(0~500)V(direct); 3×AC(0~9999)kV/100V

7.3.2 current measuring range: 3×AC(0~5)A(direct); 3×AC(0~9999)kA/5A

7.3.3 accuracy: ±[0. 4%measuring value + 0.1% rated value + 1 word]

7.3.4 sampling rate: about 3 times/s

7.3.5 display method: 3 lines 4 digits LED display

7.3.6 current display resolution: max. is 0.001A, decimal points shift automatically, the unit automatically switches between A and kA.

7.3.7 voltage display resolution: max. is 0. 1V, decimal points shift automatically, the unit automatically switches between V and kV.

7.3.8 input loop consumption: current<5VA、voltage<1VA

7.3.9 Auxiliary power supply: AC/DC 86~264V

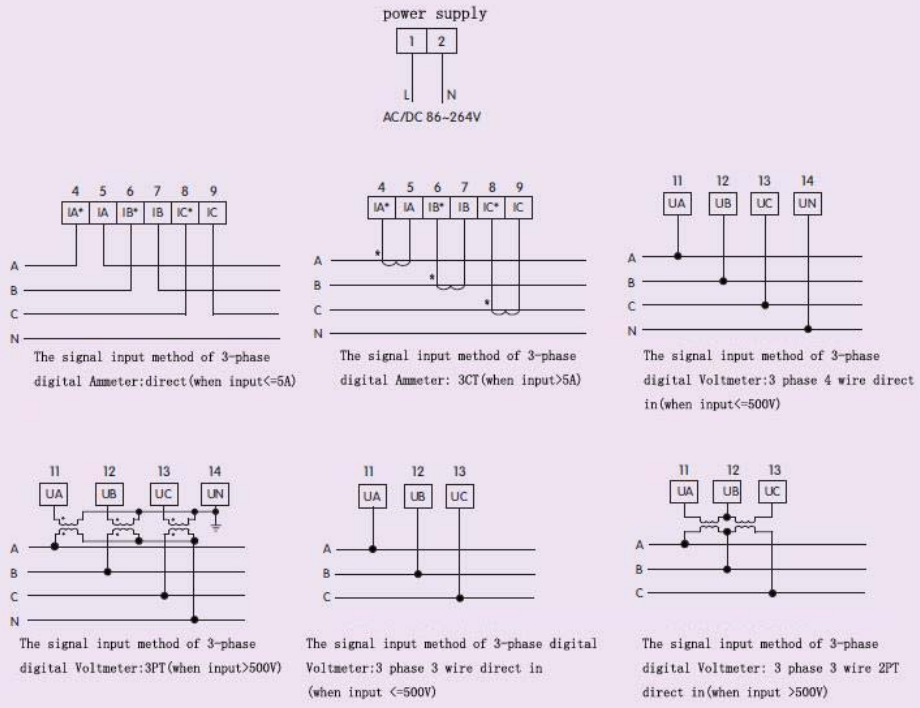
7.3.10 transmitting output(optional): 3-way transmission, corresponding to the 3-way measured electricity separately. Can be set DC(0~10)mA、(0~20)mA or (4~20)mA freely; accuracy ±0.5%FS. There is electrical isolation between signal input and auxiliary power port.

7.3.11 load resistance of transmitting output: ≦500Ω

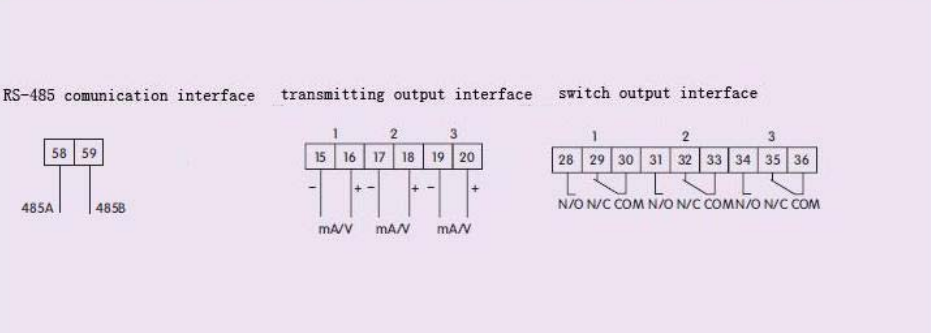
7.3.12 alarm output(optional): can choose 1-way or 3-way alarm output, the upper limit and lower limit of alarm can be defined separately. The upper and lower limit alarm of all the measured electricity is adopted by the same relay contact output when 1-way alarm is chosen. And 3 relays separately output when 3-way alarm is chosen, output state is corresponding to 3-way measured electricity separately. The capacity of alarm contact is AC250V/2A、DC30V/2A.

7.3.13 communication interface(optional): RS-485 serial communication, MODBUS_BTU communication protocol, baud rate 1200bps、2400bps、4800bps、9600bps、19200bps.

The terminal code and conection diagram of 3-phase Ammeter,Voltmeter



The terminal code and connection diagram of the functional output modules



PH7777-□
series programmable digital power factor meter

8 PH7777-□(K/B/T/N)programmable digital power factor meter

8.1 function: measure and display the single/three phase power factor meter in the electric lines with digital direct reading method. And can provide over-limit alarm output、transmitting output and communication output functions according to clients' needs. There are programmable keys on the panel, can look up the current frequency and power factor angle by pressing the keys, which can program and set parameters including transformer rate、upper and lower limit alarm value、communication address of the meter、communication baud rate、transmitting output method、transmitting output range, etc. parameters.

8.2 specification and selection instructions

Model	measurement displays: single power factor	measurement displays: 3-phase current	the code of external size(the number in □): 1	2	3	4	5	6	7	8	T communicatio	K alarm contac	B transmitting output	Note
PH7777-□	●		√	√	√		√	√	√	√				● The corresponding measurement display type of this meter
PH7777-□K	●		√	√	√		√	√	√	√		△		√ The corresponding external size code of this meter can be chosen one externa size code to be filled in "□" while selecting
PH7777-□B	●		√	√	√		√	√	√	√			△	
PH7777-□T	●		√	√	√		√	√	√	√	△			
PH7777-□N	●		√		√				√	√	△	△	△	
PH7777-□S		●	√	√	√		√	√	√	√				"△" means this type of meter has this additional functions
PH7777-□SK		●	√	√	√		√	√	√	√		△		
PH7777-□SB		●	√	√	√		√	√	√	√			△	
PH7777-□ST		●	√	√	√		√	√	√	√	△			
PH7777-□SN		●	√		√				√	√	△	△	△	

Note: the size code 1,3,7,8 can be collocated 3 functional modules at the same time, the size code 2,5,6 can only choose one functional module optionally.

8.3 basic parameters

8.3.1 power factor measuring display range: 0.000C~0.500C~1.000~0.500L~0.000L

8.3.2 phase measuring display range: 0~359.9°

8.3.3 accuracy:

8.3.6 input voltage: AC100V±10%;220V±10%、380V±10%

8.3.7 input current range: 1A~5A

8.3.8 auxiliary power supply: AC/DC 86~264V

8.3.9 alarm output(optional): relay contact output, the capacity of contact is AC250V/2A、DC30V/2A

8.3.10 communication interface(optional): RS-485 serial communication, MODBUS_BTU communication protocol,

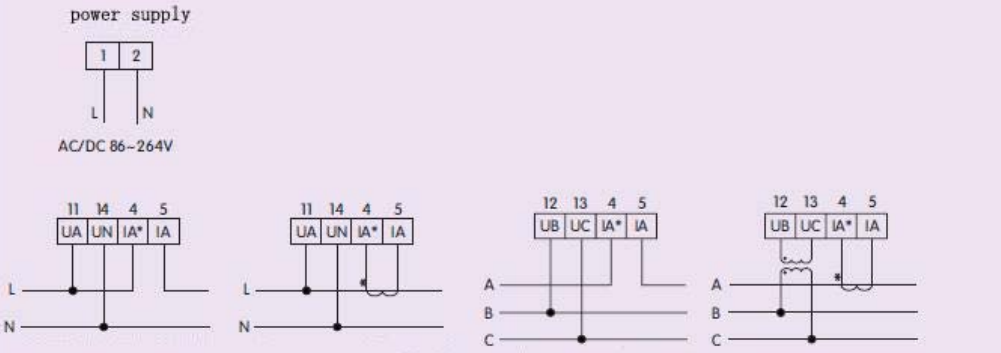
8.3.11 baud rate 1200bps、2400bps、4800bps、9600bps、19200bps.

8.3.12 transmitting output(optional): can be set among (0~10)mA、(0~20)mA、(4~20)mA, there is electrical isolation between the output port and signal input&auxiliary power port.

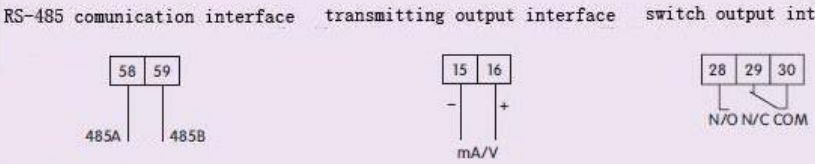
8.3.13 load resistance of transmitting output: ≦500Ω

Digital panel meters

The terminal code and connection diagram of single/3-phase power factor meter



The terminal code and connection diagram of the functional output modules



PS、PQ7777-□ series programmable digital Wattmeter,Varmeter

9 PS、PQ7777-☐ (K/B/T/N)programmable digital Wattmeter、Varmeter

9.1 function: measure and display the single/three phase active power、reactive power in the electric lines with digital direct reading method. Both 3 phase 3 wire and 3 phase 4 wire signal input method are allowed. The meter can be used as normal digital wattmeter、varmeter, it can also be used as active/reactive power transmitter with the function of displaying one measuring value by installing the analog input module. It can be used as active/reactive power data collector with the function of displaying one measuring current by adopting RS-485 digital communication module, it can also be used for protecting over-limit alarm of normal active/reactive power by adopting the relay input module. Besides, by adopting all the three function modules, it can be a multi-functional network electric meter, which has measuring, alarming, transmitting, communicating, etc. functions.

There are programmable keys on the panel, which can program and set parameters including transformer rate、upper and lower limit alarm value、communication address of the meter、communication baud rate、transmitting output method、transmitting output range, etc.

9.2 specification and selection instructions

Model	measurement displays: active power	single active power	3 phase 3 wire active power	3 phase 4 wire active power	single reactive power	3 phase 3 wire reactive power	3 phase 4 wire reactive power	the code of external size(the number in ☐): 1	2	3	4	5	6	7	8	T communicatio	K alarm contac	B transmitting output	Note
PS7777-☐	●							√	√	√		√	√	√	√				
PS7777-☐K	●							√	√	√		√	√	√	√		△		
PS7777-☐B	●							√	√	√		√	√	√	√			△	
PS7777-☐T	●							√	√	√		√	√	√	√	△			
PS7777-☐N	●							√	√	√		√	√	√	√	△	△	△	
PS7777-☐S		●						√	√	√		√	√	√	√				
PS7777-☐SK		●						√	√	√		√	√	√	√		△		
PS7777-☐SB		●						√	√	√		√	√	√	√			△	
PS7777-☐ST		●						√	√	√		√	√	√	√	△			
PS7777-☐SN		●						√		√				√	√	△	△	△	
PS7777-☐Y			●					√		√				√	√				
PS7777-☐YK			●					√		√				√	√		△		
PS7777-☐YB			●					√		√				√	√			△	
PS7777-☐YT			●					√		√				√	√	△			
PS7777-☐YN			●					√	√	√				√	√	△	△	△	
PQ7777-☐					●			√	√	√		√	√	√	√				
PQ7777-☐K					●			√	√	√		√	√	√	√		△		
PQ7777-☐B					●			√	√	√		√	√	√	√			△	
PQ7777-☐T					●			√	√	√		√	√	√	√	△			
PQ7777-☐N					●			√	√	√		√	√	√	√	△	△	△	
PQ7777-☐S						●		√	√	√		√	√	√	√				
PQ7777-☐SK						●		√	√	√		√	√	√	√			△	
PQ7777-☐SB						●		√	√	√		√	√	√	√		△		
PQ7777-☐ST						●		√	√	√		√	√	√	√	△			
PQ7777-☐SN						●		√		√				√	√	△	△	△	
PQ7777-☐Y							●	√		√				√	√				
PQ7777-☐YK							●	√		√				√	√			△	
PQ7777-☐YB							●	√		√				√	√		△		
PQ7777-☐YT							●	√		√				√	√	△			
PQ7777-☐YN							●	√		√				√	√	△	△	△	

● The corresponding measurement display type of this meter

√ The corresponding external size code of this meter can be chosen one external size code to be filled in "☐" while selecting

"△" means this type of meter has this additional functions

Note: the size code 2, 5,6 can only be collocated 2 functional modules optionally, and the size code 1,3,7,8 can be collocated 3 functional modules optionally.

9.3 basic parameters

9.3.1 input(single、3 phase 3 wire、3 phase 4 wire): 100V 5A、220V 5A、380V 5A(direct)
220V*/5A、380V*/5A、*/100V*/5A(additional device)

9.3.2 accuracy: ±[0. 4%measuring value + 0.1% rated value + 1 word]

9.3.3 maximum digital display range: -9999~+9999

9.3.4 resolution: last digit 1 word

9.3.5 sampling rate: ≈2.5 times/second

9.3.6 polar indication: can identify the negative power automatically, the positive value has no display, the negative value shows "_" automatically

9.3.7 auxiliary power supply: AC/DC 86~264V

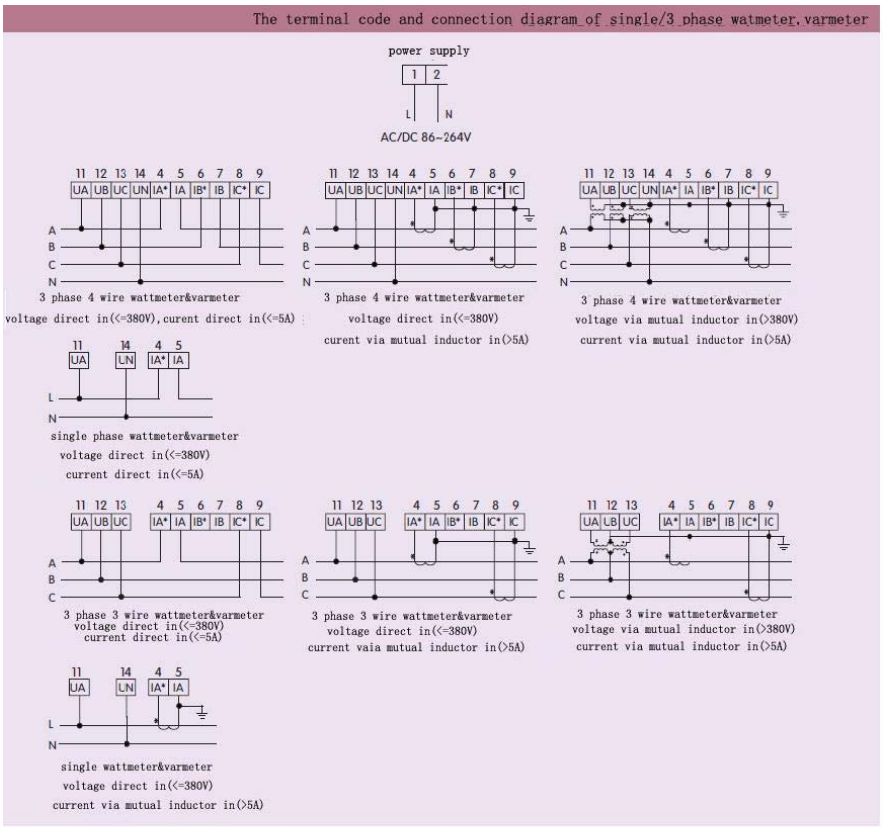
9.3.8 alarm output(optional): relay contact output, the capacity of contact is AC250V/2A、DC30V/2A

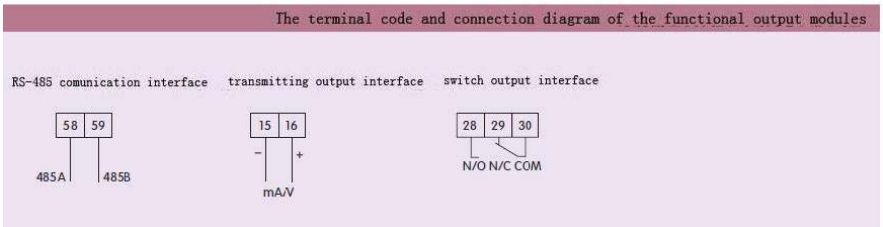
9.3.9 communication interface(optional): RS-485 serial communication, MODBUS_BTU communication protocol,

9.3.10 baud rate 1200bps、2400bps、4800bps、9600bps、19200bps.

9.3.11 transmitting output(optional): can be set among (0~10)mA、(0~20)mA、(4~20)mA, there is electrical isolation between the output port and signal input&auxiliary power port.

9.3.12 load resistance of transmitting output: ≦500Ω





PP7777-□series programmable frequency meter

10 PP7777-□ programmable digital frequency meter

10.1 function: measure and display the frequency in the electric lines with digital direct reading method. can program and set parameters including transformer rate、upper and lower limit alarm value、communication address of the meter、communication baud rate、transmitting output method、transmitting output range, etc.

10.2 specification and selection instructions

Model	measurement displays frequency	the code of external size(the number in□) 1	2	3	4	5	6	7	8	T communicatio	K alarm contac	B transmittin output	Note
PP7777-□	●	√	√	√	√	√	√	√	√				● The corresponding measurement display type of this meter
PP7777-□K	●	√	√	√	√	√	√	√	√		△		√ The corresponding external size code of this meter can be chosen one externa size code to be filled in "□" while selecting
PP7777-□B	●	√	√	√	√	√	√	√	√			△	"△" means this type of meter has this additional functions
PP7777-□T	●	√	√	√	√	√	√	√	√	△			
PP7777-□N	●	√		√				√	√	△	△	△	

Note: the size code 1,3,7,8 can be collocated 3 functional modules at the same time, the size code 2,4,5,6 can only choose one functional module optionally.

10.3 basic parameters

10.3.1 measuring range: 30~70.00Hz

10.3.2 signal input: AC100V±50%;220V±50%、380V±50%、5~30Vp-p(impulse peakl)

10.3.3 accuracy: ±[0.4%measuring value + 0.1% rated value + 1 word]

10.3.4 display resolution: 0.01Hz

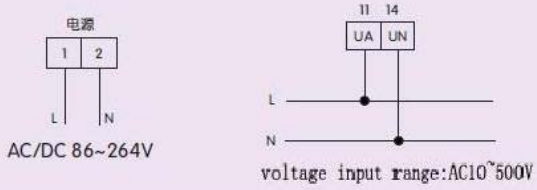
10.3.5 auxiliary power supply: AC/DC 86~264V

10.3.6 alarm output(optional): relay contact output, the capacity of contact is AC250V/2A、DC30V/2A

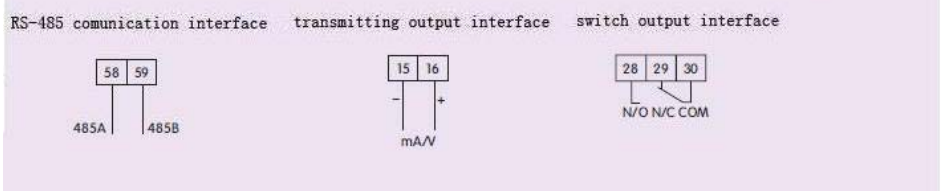
10.3.7 communication interface(optional): RS-485 serial communication, MODBUS_BTU communication protocol, baud rate 1200bps、2400bps、4800bps、9600bps、19200bps.

10.3.8 transmitting output(optional): can be set among (0~10)mA、(0~20)mA、(4~20)mA, there is electrical isolation between the output port and signal input&auxiliary power port. The load resistance of transmitting output: ≦500Ω

The terminal code and connection diagram of the frequency meter



The terminal code and connection diagram of the functional output modules



PD7777-8S series multi-functional electric meter

11 PD7777-8S series multi-functional electric meter

11.1 function: has programmable measurement、display、digital communication, etc. many functions, it's mainly used in measuring and analyzing several electrical parameters. It can realize the display and teletransmission of electrical parameters through RS485 data interface communicating with the external device.

Function expansion: 4-way analog output(0~20mA/4~20mA) can realize transmitting output function of electricity; 4-way switch input and 4-way switch output can realize local/remote switch signal detection and control output function("remote communication" and "remote control"functions). You can program and set parameters including transformer rate、upper and lower limit alarm value、communication address of the meter、communication baud rate、transmitting output method、transmitting output range, etc. by pressing the programmable keys on the panel.

11.2 specification and selection instructions

Model	measurement display								additional functions							Note
	3-phase voltage	3-phase current	active power	reactive power	power factor	frequency	active energy	reactive energy	demand energy	compound tariff	4-way transmitting output	4-way alarm contact	RS485 communication	2-way energy impulse output	4-way switch input	
PD7777-8S4	●	●	●	●	●	●	●	●					√	√		3 phase 4 digits LED display display method is rotation
PD7777-8SK4	●	●	●	●	●	●	●	●				√	√	√	√	
PD7777-8SB4	●	●	●	●	●	●	●	●			√		√	√	√	
PD7777-8S3	●	●	●	●	●	●	●	●					√	√		LCD display display method is rotation
PD7777-8SK3	●	●	●	●	●	●	●	●				√	√	√	√	
PD7777-8SB3	●	●	●	●	●	●	●	●			√		√	√	√	

11.3 basic parameters

11.3.1 input rated voltage: AC100V、220V、380V

11.3.2 input rated current: AC1A、5A

11.3.3 input frequency range: 45~65Hz

11.3.4 input network: 3 phase 3 wire、3 phase 4 wire

11.3.5 measuring accuracy of voltage、current、frequency、active power、power factor: ±(0.5%range+1 word)

11.3.6 measuring accuracy of reactive power: ±(1.0%range+1 word)

11.3.7 measuring accuracy of active energy: ±0.5% (just for reference, not as the basis of measurement and charging)

11.3.8 measuring accuracy of reactive energy: ±2% (just for reference, not as the basis of measurement and charging)

11.3.9 impulse output: optical coupling output of open collector, the voltage of open collector VCC≦48、current≦50mA

11.3.10 impulse constant: 10000imp/kwh or 10000imp/kvarh

11.3.11 alarm(switch) output: 4-way relay NO contact, the capacity of contact 30VDC/1A,240VAC/1A(resistive negative)

11.3.12 switch input: 4-way power contact(built-in+5V power supply)

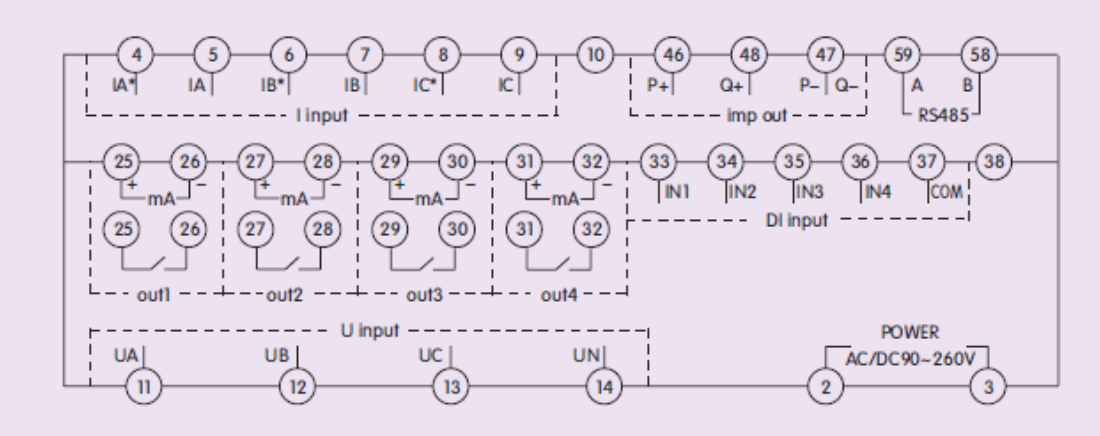
11.3.13 analog transmitting output: 4-way output ,output range:DC0~20mA/4~20mA can be programmed and set, accuracy class: ±0.5%

11.3.14 load capacity of transmitting output: Rmax=500Ω

11.3.15 communication interface(optional): RS-485 serial communication, MODBUS_BTU communication protocol, baud rate 1200bps、2400bps、4800bps、9600bps、19200bps.

11.3.16 auxiliary power supply: AC/DC 86~264V, power consumption＜5VA

11.4.1 terminal arrangement and wiring identification(note: if it's different from the wiring diagram on the casing of the meter, please subject to that on the casing of the meter)



11.4.2 POWER: auxiliary power supply input port , auxiliary power supply is AC/DC86~264V

11.4.3 I input: current signal input port, 1* is the current lead-in end. Please ensure the program of input signal、 polarity and the terminal should be corresponded respectively while wiring, otherwise indicating errors may occur. CT should be considered to use when input current is more than AC5A.

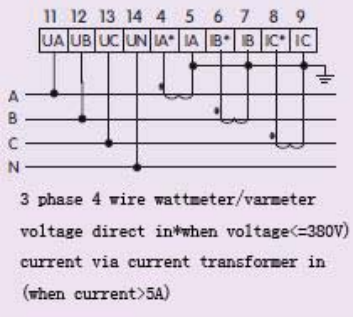
11.4.4 U input: voltage signal input port; PT should be considered to use when the voltage is over AC380V.

11.4.5 OUT1~OUT4: 4-way alarm or 4-way transmitting output port; and the larm is relay NO contact output.

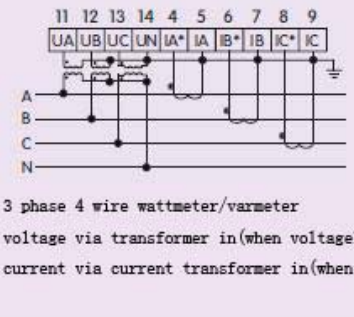
11.4.6 D1 input: switch signal input, input method is passive contact, COM is the common terminal, 1N1~1N4 is the input terminal.

11.4.7 imp out: active/reactive energy impulse output

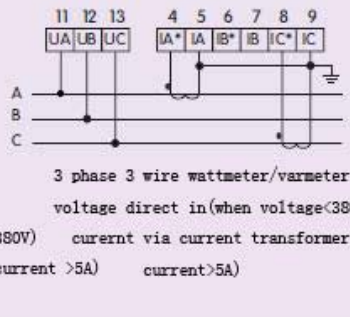
11.5 typical wiring



3 phase 4 wire wattmeter/varmeter voltage direct in*when voltage<=380V) current via current transformer in (when current>5A)



3 phase 4 wire wattmeter/varmeter voltage via transformer in(when voltage>380V) current via current transformer in(when current >5A)



3 phase 3 wire wattmeter/varmeter voltage direct in(when voltage<380V) curernt via current transformer(when current>5A)

PD7777-3S series multi-functional electric meter

12 PD7777-3S series multi-functional electric meter

12.1 function: has programmable measurement、display、digital communication, etc. many functions, it's mainly used in measuring and analyzing several electrical parameters. It can realize the display and teletransmission of electrical parameters through RS485 data interface communicating with the external device.

Function expansion: 4-way analog output(0~20mA/4~20mA) can realize transmitting output function of electricity; 4-way switch input and 4-way switch output can realize local/remote switch signal detection and control output function("remote communication" and "remote control"functions). You can program and set parameters including transformer rate、upper and lower limit alarm value、communication address of the meter、communication baud rate、transmitting output method、transmitting output range, etc. by pressing the programmable keys on the panel.

12.2 specification and selection instructions

Model	measurement display								additional functions						Note
	3-phase voltage	3-phase current	active power	reactive power	power factor	frequency	active energy	reactive energy	demand energy	compound tariff	4-way transmitting output	4-way alarm contact	RS485 communication	2-way energy impulse output	4-way switch input	
PD7777-3S4	●	●	●	●	●	●	●	●					√	√		3 phase 4 digits LED display display method is rotation
PD7777-3SK4	●	●	●	●	●	●	●	●				√	√	√	√	
PD7777-3SB4	●	●	●	●	●	●	●	●			√		√	√	√	
PD7777-3S3	●	●	●	●	●	●	●	●					√	√		LCD display display method is rotation
PD7777-3SK3	●	●	●	●	●	●	●	●				√	√	√	√	
PD7777-3SB3	●	●	●	●	●	●	●	●			√		√	√	√	

12.3 basic parameters

12.3.1 input rated voltage: AC100V、220V、380V

12.3.2 input rated current: AC1A、5A

12.3.3 input frequency range: 45~65Hz

12.3.4 input network: 3 phase 3 wire、3 phase 4 wire

12.3.5 measuring accuracy of voltage、current、frequency、active power、power factor: ±(0.5%range+1 word)

12.3.6 measuring accuracy of reactive power: ±(1.0%range+1 word)

12.3.7 measuring accuracy of active energy: ±0.5% (just for reference, not as the basis of measurement and charging)

12.3.8 measuring accuracy of reactive energy: ±2% (just for reference, not as the basis of measurement and charging)

12.3.9 impulse output: optical coupling output of open collector, the voltage of open collector VCC≦48、current≦50mA

12.3.10 impulse constant: 10000imp/kwh or 10000imp/kvarh

12.3.11 alarm(switch) output: 4-way relay NO contact, the capacity of contact 30VDC/1A,240VAC/1A(resistive negative)

12.3.12 switch input: 4-way power contact(built-in+5V power supply)

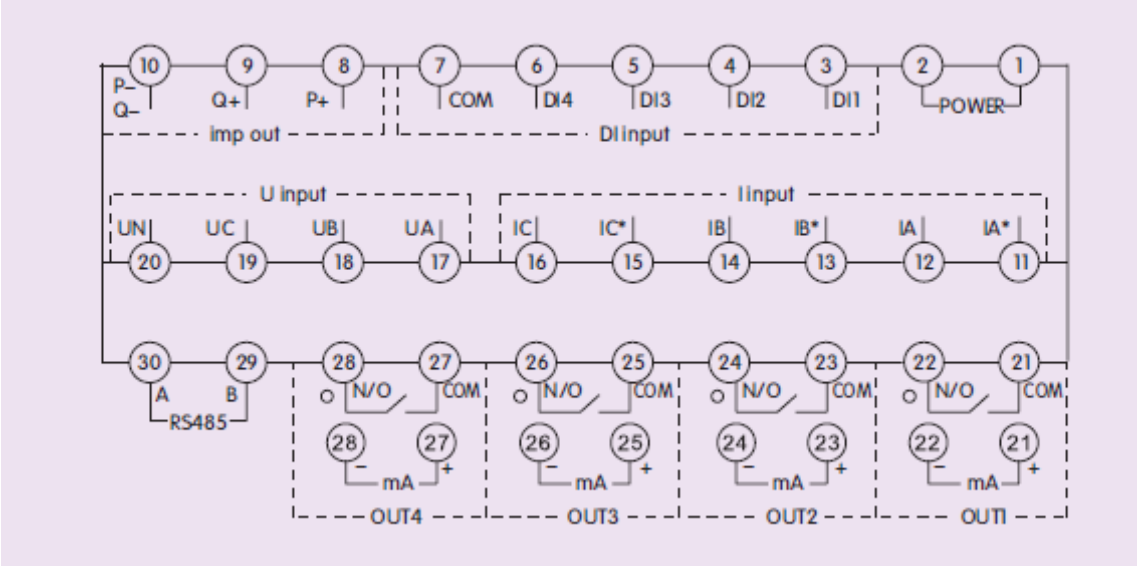
12.3.13 analog transmitting output: 4-way output ,output range:DC0~20mA/4~20mA can be programmed and set, accuracy class: ±0.5%

12.3.14 load capacity of transmitting output: Rmax=500Ω

12.3.15 communication interface(optional): RS-485 serial communication, MODBUS_BTU communication protocol, baud rate 1200bps、2400bps、4800bps、9600bps、19200bps.

12.3.16 auxiliary power supply: AC/DC 86~264V, power consumption＜5VA

12.4.1 terminal arrangement and wiring identification(note: if it's different from the wiring diagram on the casing of the meter, please subject to that on the casing of the meter)



12.4.2 POWER: auxiliary power supply input port , auxiliary power supply is AC/DC86~264V

12.4.3 I input: current signal input port, 1* is the current lead-in end. Please ensure the program of input signal、polarity and the terminal should be corresponded respectively while wiring, otherwise indicating errors may occur. CT should be considered to use when input current is more than AC5A.

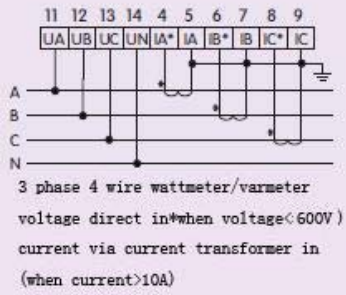
12.4.4 U input: voltage signal input port; PT should be considered to use when the voltage is over AC380V.

12.4.5 OUT1~OUT4: 4-way alarm or 4-way transmitting output port; and the larm is relay NO contact output.

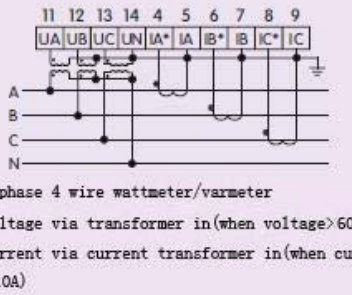
12.4.6 D1 input: switch signal input, input method is passive contact, COM is the common terminal, 1N1~1N4 is the input terminal.

12.4.7 imp out: active/reactive energy impulse output

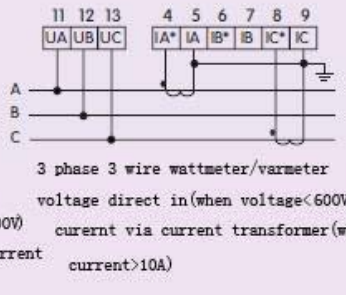
12.5 typical wiring



3 phase 4 wire wattmeter/varmeter
voltage direct in*when voltage<600V)
current via current transformer in
(when current>10A)



3 phase 4 wire wattmeter/varmeter
voltage via transformer in(when voltage>600V)
current via current transformer in(when current
>10A)



3 phase 3 wire wattmeter/varmeter
voltage direct in(when voltage<600V)
curernt via current transformer(when
current>10A)

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