

PANEL METER

51C777, 51L777 240° circular scale meter



1 Profile

51C777, 51L777 240° circular scale meter is used for measuring the circuit parameter including AC/DC current, AC/DC voltage, single-phase/three

-phase active and reactive power, single-phase/three -phase power factor. It is widely use in power, metallurgy, chemical, source, communication fields.

2 main performance

- 2.1 damping: less than 4 second
- 2.2 working temperature: -20~+50℃, humidity≤95%
- 2.3 insulation resistance is more than 20MΩ
- 2.4 standard:UL94-VO IEC473

3 basic parameter

Type	Measurement machine	Accuracy	Measuring range
51C777-A	Moving iron	1.5	100 μA~20A (directly connecting) 15A~1.5kA (with transformer)
51C777-V	Moving iron	1.5	60mV~600V (directly connecting) 750V~1.5kV (with transformer)
51L777-A	Moving iron with measuring circuit	1.5	
51L777-V	Moving iron with measuring circuit	1.5	
51L777-Hz	Moving iron with measuring circuit	1.0	
51L777-COSΦ	Moving iron with measuring circuit	2.5	
51L777-W/var	Moving iron with measuring circuit	1.5	

PA666 PZ666 PP666 PS666 digital panel meter



1 Profile

PA666 PZ666 PP666 PS666 digital panel meter is mainly used in power, chemical, source and textile etc. for measuring: AC current, AC

voltage, single/three phase active and reactive power, frequency, power factor.

2 main technical parameters

- 2.1 impulse sample time : about 3 second
- 2.2 operating resource: AC voltage: 90~132V or 180~264V frequency: 50/60 Hz \pm 10%
- 2.3 max. power consumption: 1.2 VA
- 2.4 transparent test: more than 100M Ω
- 2.5 working temperature: -25~ +40 $^{\circ}$ C humidity \leq 85%

3 main parameters

Type	Accuracy	display digit	span
PA666	0.5 \pm 1 digit	3 1/2 digits	200mA~20A(D) 20A~2KA(T)
PZ666	0.5 \pm 2digits		200mV~750V(D) 750V~2KV(T)
PP666	0.5 \pm 1 digit		45~55 Hz (100V,220V)
PS666	0.5 \pm 2digits		100V, 220V,380V,5A

Mark: any other type can be supplied according to special requirements.

51T666, 65T666, 99T666 Series panel meter



1 Usage range

51T666, 65T666, 99T666 series panel meter can measure the current, voltage, frequency, active & reactive power, power factor in assembly equipment electrical cubes, boxes and other

Measurement system in industrial enterprise, chemical, metallurgy, electric, textile and so on. The exportation type is Np72, NP96, NP48.

2 The main technical parameter

- 2.1 Accuracy of current and voltage: Class1.5, Accuracy of frequency, power and power factor: class 2.5, Accuracy of 99T666-A.V: class 2.5.
- 2.2 Operation conditions: working temperature $-25^{\circ}\text{C} \sim +40^{\circ}\text{C}$, relative atmosphere humidity $\leq 85\%$. A few sands are allowable in the air.
- 2.3 Outside mechanical applied force withstand: Common type.
- 2.4 Insulation Strength AC Sine 50Hz, 2kV/1min. There should be no feed-through and flashover indications on the meter after the voltage tests.
- 2.5 Working Position: It should be mounted vertically to operate.

3 Construction characters

- 3.1 The series meters can be divided into two type constructions. 51,65,99T666 ampere, voltage meters are electromagnetic series adopting repulsive construction. When meter in AC circuit, the coil can bring out a magnet field. The stable & movable iron chip repel each other because of magnet and make the pointer rotor turn till 4the reverse torque equality.
- 3.2 51T666, 65T666 series frequency active/reactive power, power factor meter are adjustable current type. The construction is made of electromagnetic measurement mechanism and electronic transfer.

4 Measuring range

■ 4.1 65T666、51T666、99T666

65T666, 51T666, 99T666 ampere and voltage meter measurement

Measuring range	Connecting way	Remark
0.5A~30A	Directly connecting	
30A~10kA	With current transformer/5	5A table
15A~600V	Directly connecting	
450V~460kV	With current transformer/100	100V table

■ 4.2 51T666、65T666

51T666, 65T666 frequency meter

Rated voltage	Measuring range	Remark
100, 220, 380V	45~55Hz	

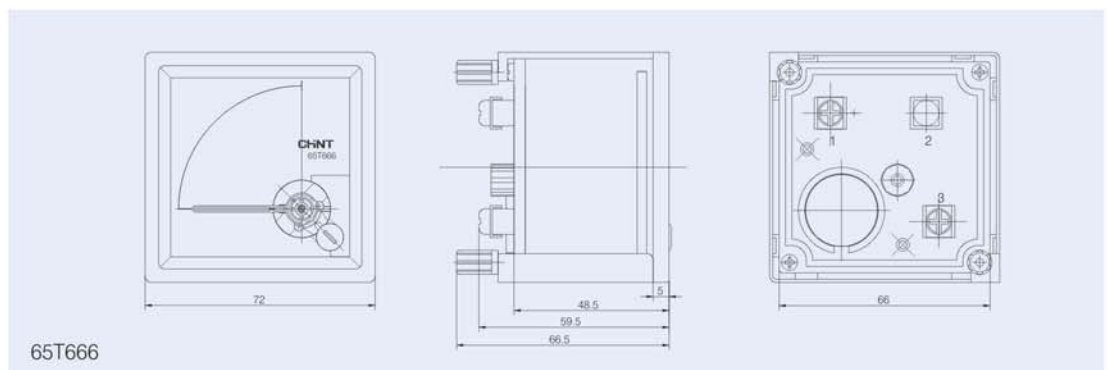
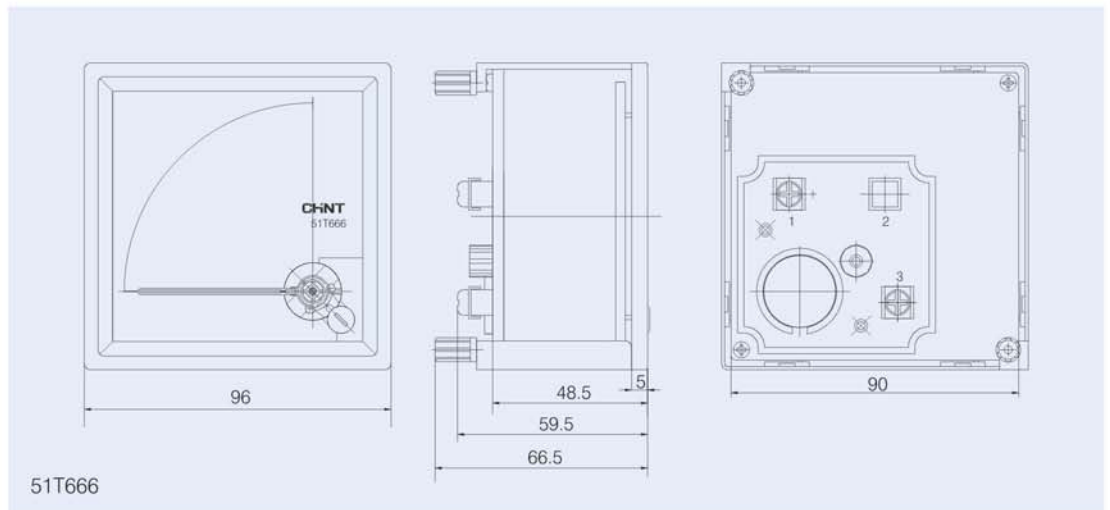
■ 4.3 51T666、65T666

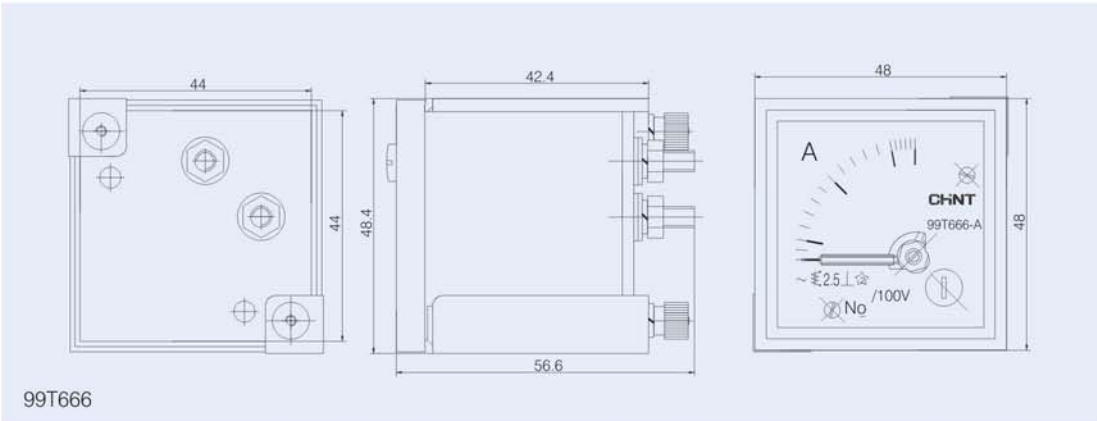
51T666, 65T666 power factor meter

Rated voltage	Measuring range	Rated current
100, 220, 380V	0.5~1~0.5	5A

■ 4.4 Power

Rated Voltage 100、220、380V





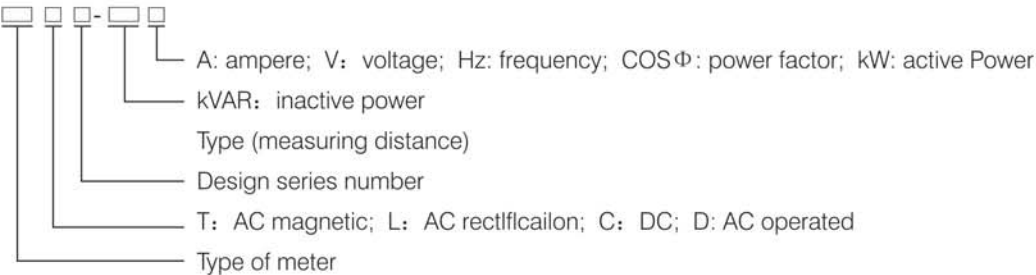
Amper, voltage, frequency, power factor and power serles panel meterl



1 Application

This series of products are suitable for measuring Ampere, voltage, frequency, power factor and power in AC and DC circuits.

2 Type and its meaning



3 Technical data

- 3.1 Accurate grade: 1.5, 2.5
- 3.2 Operating conditions:
-20~40°C, relative humidity ≤80%(25°C)
- 3.3 Mechanical character: It can withstand vibration of acceleration 30 meters/second² with shock frequency 80~120 per minute 2 hours transportation.
- 3.4 Dielectric strength: AC voltage 50Hz 2kV, minute
- 3.5 Voltage influence: When rated value changes ±15%, the indicated value should not exceed the basic tolerance.
- 3.6 Operating position: Vertical
- 3.7 The measuring range of ampere and voltage meters

Name		Normal specification (measuring range)	Remarks
AC ampere meter	A	0.5A~50A 1T1型10A~200A	Direct making
		10/5A~800/5A	Making secondary current 5A via current transformer
	kA	1kA~10kA	
AC voltage meter	V	5V~600V	Direct making
	kV	1kV~35kV	Making secondary voltage 100V via voltage transformer
DC ampere meter	uA, mA	50uA~500uA 1mA~500mA	Direct making
	A	1A~20A	
		30A~750A	Current divider 75mv attached
	kA	1kA~3kA	
DC voltage meter	V	3V~600V	Direct making
	kV	1kV~3kV	Fixed value resistor attached

- 3.8 Measuring range of frequency and power factor (Phase Position)

Name		Limit	Precision
Frequency meter	Hz	45~55Hz 100V 220V 380V	2.5
Power factor meter	COSΦ	COSΦ=0.5~1~0.5 100V 200V 380 5A	2.5

- 3.9 The measuring range of 3 phase ampere meter

Via Current transformer (Secondary current 5A)	Measuring range	Rated voltage (V)										
		Direct making			Making via voltage transformer (secondary voltage 100V)							
		100	220	380	380	3k	6k	10k	15k	35k	110k	220k
5	kvar	0.6	1.5	2.5	2.5	20	40	60	100	250	800	1.5
7.5	kvar	1	2.5	4	4	30	60	100	150	400	1.2	2.5
10	kvar	1.2	3	5	5	40	80	120	200	500	1.5	3
15	kvar	2	5	8	8	60	120	200	300	800	2.5	5
20	kvar	2.5	6	10	10	80	150	250	400	1	3	6
30	kvar	4	10	15	15	120	250	400	600	1.5	5	10
40	kvar	5	12	20	20	150	300	500	800	2	6	12
50	kvar	6	15	25	25	200	400	600	1	2.5	8	15
75	kvar	10	25	40	40	300	600	1	1.5	4	12	25
100	kvar	12	30	50	50	400	800	1.2	2	5	15	30
150	kvar	20	50	80	80	600	1.2	2	2.5	8	25	50
200	kvar	25	60	100	100	800	1.5	2.5	4	10	30	60
300	kvar	40	100	150	150	1.2	2.5	4	5	15	50	100

Via Current transformer (Secondary current 5A)	Measuring range	Rated voltage (V)												
		Direct making			Making via voltage transformer (secondary voltage 100V)									
		100	220	380	380	3k	6k	10k	15k	35k	110k	220k	380k	
400	kvar	50	120	200	200	.5	3	5	8	20	60	120	200	
600	kvar	80	200	300	300	2.5	5	8	10	30	100	200	300	
750	kvar	100	250	400	400	3	6	10	15	40	120	250	400	
800	kvar	100	250	400	400	3	6	10	20	40	120	250	400	
1k	kvar	120	300	500	500	4	8	12	30	50	150	300	500	
1.5k	kvar	200	500	800	800	6	12	20	40	80	250	500	800	
2k	kvar	250	600	1	1	8	15	25	40	100	300	600	1000	
3k	kvar	400	1	1.5	1.5	12	25	40	50	150	500	1000	1500	
4k	kvar	500	1.2	2	2	15	30	50	80	200	600	1200	2000	
5k	kvar	600	1.5	2.5	2.5	20	40	60	100	250	800	1500	2500	
6k	kvar	800	2	3	3	25	50	80	120	300	1000	2000	3000	
7.5k	Mvar	1	2.5	4	4	30	60	100	150	400	1200	2500	4000	
10k	Mvar	1.2	3	5	5	40	80	120	200	500	1500	3000	5000	

■ 3.10 Measuring range of 3 phase inactive ampere meter

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

4 Dimension and mounting size (mm)

