DSSD858/DTSD858型

three electronic multi-function meter



three electronic multi-function meter(compact)

1.Application

DSSD858/DTSD858 three-phase electronic multi-function meter adopts advanced specified chip for energy measuring, and the digital sampling and processing technology and SMT technology.
This meter realize function of the time sharing metering, settle day auto transfer data, Handheld terminal or PC computer program and reader, LCD indicate. This product take settle of 4 kinds tariff,10 time periods, 2 time zone and 12 bits meter signals, and has energy test impulse output function.
This product conforms to standard of GB/T172.15.321-2008,DL/T614-1997,DL/T645-1997.

2.Function

◆measurement
1) time-share measure positive and negative function(active measure can set),and storage the latest 3 month data.
2) time-share measure positive and negative function(reactive measure can set),and storage the latest 3 month data.
3) measure active total energy,reactive energy,and storage the latest 3 month data
4) time-share measure 4 quadrants reactive energy, and storage the latest 3 month data
5) time-share measure positive and negative active max needs and happen time,and storage the latest 3 month data
6) time-share measure positive and negative reactive max needs and happen time,and storage the latest 3 month data
7) Max needs cycle 5,10,15,30,60 mins selectable.

◆multi-tariff

programmable 4 kinds tariff,2 day time periods,2 time-zone
external clock chip has calendar,timer and year auto transfer function, and also has temperature compensation function.

◆indicate

1) LCD indicate, within -30°C to +55°C
2) Has parameter rotation display, displayed parameter and time, order can be set.
3) Has button display function,displayed parameter and order can be set.
4) Read any item data contents by remoter.
5) Backlight, push "button light"to lighten backlight, and push any digital button on the infrared remoter to light it, Backlight last for 1 min, meter. when meter is on,backlight will light for 4 mins. When meter wakes by power-off,backlight would not lighten.

◆communicate

1) meter has RS485 port and infrared communicate port,PC or computer can communicate it by two communicate port and meter at the same time.
2) RS485 port and internal are electrical isolated,and anti-thunder circuit design

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◆output

1) has active and reactive test port output function
2) has 1Hz clock output function
3) has alarm light output function

◆Event record

1) real time measure ABC 3 phases voltage,current,power,and frequency,etc.
2) record function for voltage-loss,phase-loss,overvoltage, current-loss,undervoltage,overcurrent, power on or off,program,needs clear,shall open,broadcast time.
3) Max record 100 events, can record events orderly according time, and it can be read back by PC.

◆special function

1) has power-off button weak function, infrared and light weak function,light weak can be selectable(within 3days after power-off),and power-off weak infrared reader.
2) has faults information hint,alarm(LCD,alarm light)function
3) has each month(settlement) positive active energy record
4) has load curve record(max can record 2 type load)
5) has immediately freeze,zero freeze,time zone over positive active energy freeze,the representative of the whole point of load power record function
6) selectable function of open shell

3.Technical index

◆specification

Model No.	Type	Reference voltage Un	rated current In	Active impulse constant imp/kWh	Reactive impulse constant imp/kvarh
DSSD858	3-phase 3-line	3×100V	3×1.5(6)A	6400	6400
			3×3(6)A	6400	6400
		3×380V	3×1.5(6)A	6400	6400
			3×3(6)A	6400	6400
			3×5(20)A	1600	1600
			3×10(40)A	800	800
			3×15(60)A	400	400
			3×20(80)A	200	200
			3×30(100)A	200	200
DTSD858	3-phase 4-line	3×57.7/100V	3×1.5(6)A	12800	12800
			3×3(6)A	12800	12800
		3×220/380V	3×1.5(6)A	6400	6400
			3×3(6)A	6400	6400
			3×5(20)A	1600	1600
			3×10(40)A	800	800
			3×15(60)A	400	400
			3×20(80)A	200	200
			3×30(100)A	200	200

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three electronic multi-function meter

- accuracy level active1 level reactive 2level
- rated frequency 5Hz
- shape dimension 267.6 mm x 170.7mm x 73mm
- weight about 1.8kg
- weather

normal temperature	-20℃～+50℃
ultimate temperature	-30℃～+60℃
storage and transport temperature	-25℃～+70℃
storage and transport humidity	≤85%

- electrical parameter

normal voltage	0.7Un～1.2Un
ultimate voltage	0.65Un～1.25Un
voltage circuit consumption	≤2W 和 5VA
current circuit consumption	≤1VA
data backup battery voltage	3.6VDC

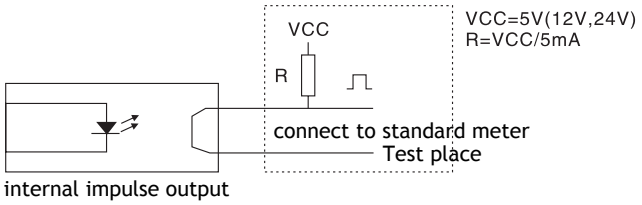
- tariff operate parameter

clock accuracy(day error)	≤0.5S (23℃)
battery capacity	≥1000mAh
data save time after power-off	≥10 years (using new battery)

- technical parameter

tariff	4
time period	10
measure range	0～999999.99 kWh
display	LCD
communicate radio	RS485口:1200bps～9600bps

active or reactive impulse test port diagram

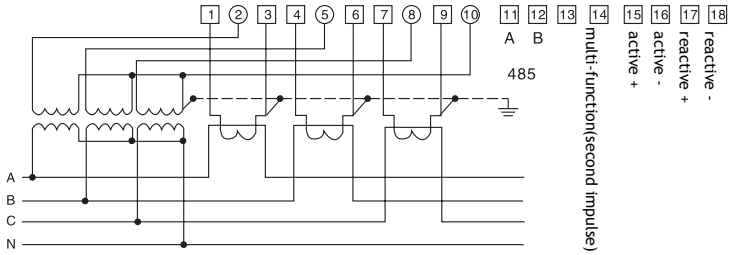


4.Transport and storage

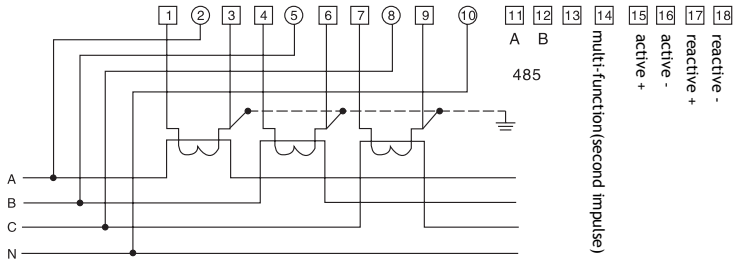
- when transport and unpacked, it shall have no impact.
- product storage shall be put on the shell with original package,the stack shall no more than 8.
- ambient temperature: 0°C~40°C, the relative humidity shall no more than 85%,and without corrosion gas.

5.Power-supply terminal wiring diagram

◆ power terminal wire A type

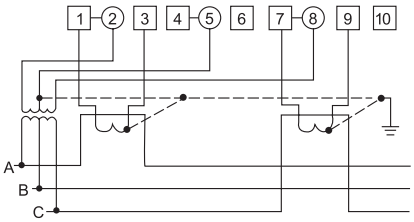


3-phase 4-line voltage,current transformer wiring diagram(3x57.7/100V 3x1.5(6)A)

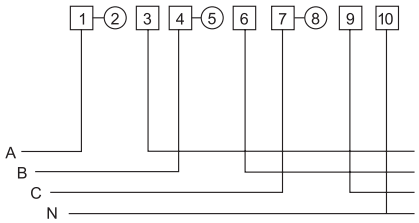


3-phase 4-line current transformer wiring diagram(3x57.7/100V 3x1.5(6)A)

◆ power terminal wire B type



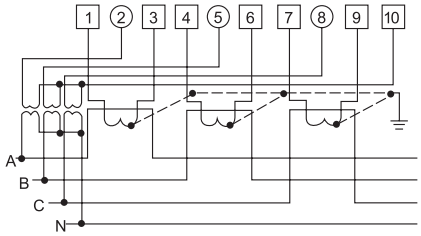
3-phase 3-line through voltage, current transformer wiring



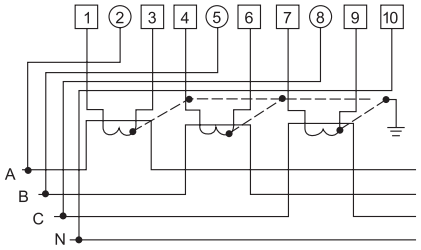
3-phase 4-line direct wiring diagram

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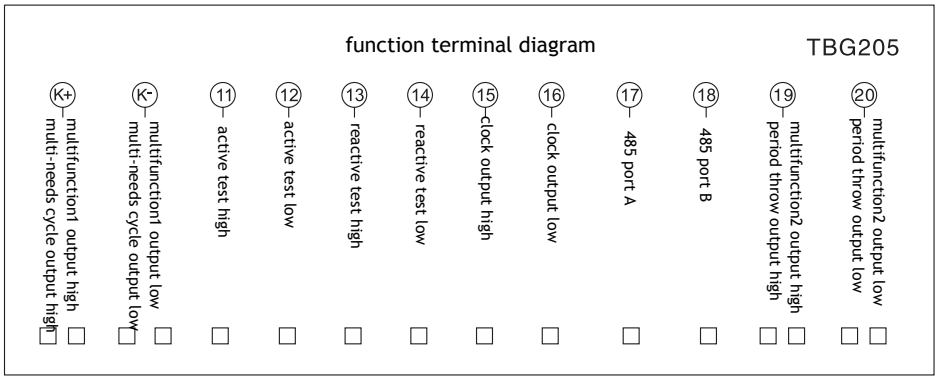
3-phase 4-line through external voltage,current transformer wiring



3-phase 4-line through external current transformer wiring

6.Terminal wiring diagram(for reference)

- meter shall wire according to the diagram. Terminal rotation button box lead suggest using copper wire or head, and the screw shall be tighten to avoid the heating.
- Terminal diagram



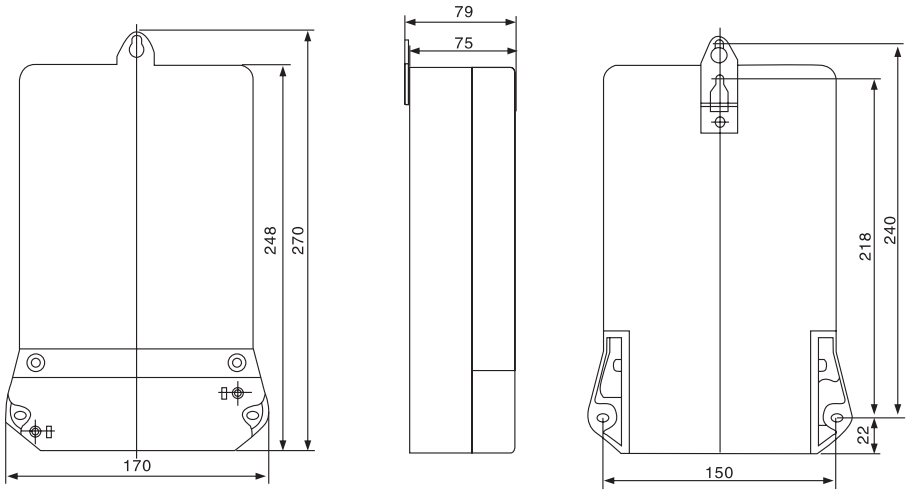
7. Shape and install dimension

- Please check the lead seal whether is completed before install. If it is,lead seal can be installed.
- Meter install at indoors for dry, fixed it with 3 screw, the hole of board shall be open according to diagram. The base board shall be strong, anti-fire, non-vibrate to ensure the safety and reability.

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three electronic multi-function meter

◆ Shape dimension diagram



DSSD858/DTSD858型

three-phase electronic multi-function meter



three-phase electronic multi-function meter (full-function)

1.Application

DDSD858/DTSD858 series three-phase electronic multi-function energy meter adopts large scale integrated circuit,digital sampling process technology and SMT manufacture. And it conforms to standard of IEC 62053-21-2003,IDT,IEC 62053-61-1998 and IEC 62053-22-2003,IDT .
This meter can measure active,reactive electricity and max needs of each direct, and also has dual-485 communicate,manual and infrared weak up when power-off. And it has stable characteristic,convenient operate.

2.Function feature

◆Measure

1)Time sharing metering Positive and negative active power (active measurement can be set),and storage data of present, last month,and last 2 months.

2)Time sharing metering Positive and negative reactive power (reactive measurement can be set),and storage data of present, last month,and last 2 months.

3)Measure active and reactive total power,and storage the data of last 3 months.

4)Time sharing metering Four quadrant reactive power and storage the data of last 3 months.

5)Time sharing metering Positive and negative active power and reactive power and storage the data of last 3 months.

6)Max needing cycle 5 min,10 min,15 min,30min,60min.(selectable)

◆Multi-tariff function

1) programmable 4 tariff,12 time periods,5 day period tables,4 time zone,12 public holiday,and 3 days for spring festival.

2) has backup time period function: Under implement of present tariff,time period, it can set pre-storage second sets tariff and time period, and it can set auto transfer time and storage auto transfer code(includes positive and negative active power and reactive power,electricity under each tariff)

3) external clock chip has calendar,time-count, and year auto transfer function, and also has temperature compensation function.

◆Display function

1) LCD display, operate within -30°C~+55°C

2) has parameter auto alternate display function, alternate display parameter and time, order can be set.

3) has button display function,content and order can be set.

4) the remote controller can view any data contents

5) with backlight function, can light back through remote controller or button. when power-off, backlight wether be lighting can be set.

◆Communicate function

1) has 2 RS485 port and 1 infrared communicate port. PC or computer can communicate with meter by 3 port at the same time to realize three communicate without interference .

2) RS485 Port and meter inside realize the electrical insulation,and have lightning protect design.

3) communicate protocol according to DL/T645-1997

◆Output function

1) has reactive test impulse output, positive and negative active and reactive impulse test (remote control) port output function

2) has multi-function output function,can realize 1hz clock,Demand cycle alternate signal, Time switch signal,overload tripping output function.

DSSD858/DTSD858型

three-phase electronic multi-function meter

◆Event recording function

1) real-time measure elective value of a,b,c three-phase,current,power and the present frequency.

2) has record function of voltage-loss,phase-loss,current-loss,overload voltage,overload current,voltage Voltage qualification rate,demand amount clean, Broadcasting time school.

◆Special function

1) has power-off button wake function,infrared and light wake function, light wake can be selectable(in 3 day after power-off) and can wake infrared read after power-off

2) has fault code tip,alarm(LCD,alarm light,buzzer)

3) load means daily point energy record function

4) has month (settlement) positive active electricity record function.

5) has load curve record function(Max to record 2 type load), load curve freeze time can be set,and it can use the PC to read back the freeze data.

6) has events recording function. It can record the time of each event in order,and it can use the PC to read back the freeze data.

7) has immediately freeze, zero point freeze,time zone transfer freeze function

8) selectable open cover record function, selectable 2-phase no voltage current detect function(in 3 days after power-off)

3.Technical index

◆specification and impulse constant comparison table

Model No.	Type	reference voltage Un	rated current In	active impulse constant imp/kWh	reactive impulse constant imp/Kvarh
DSSD858	3-phase 3-line	3×100V	3×1.5(6)A	12800	12800
			3×3(6)A	12800	12800
		3×380V	3×1.5(6)A	12800	6400
			3×3(6)A	12800	6400
DTSD858	3-phase 4-line	3×57.7/100V	3×1.5(6)A	12800	12800
			3×3(6)A	12800	12800
		3×220/380V	3×1.5(6)A	6400	6400
			3×3(6)A	6400	6400

◆accuracy level active 0.5S level,0.5 or 1 reactive 2 level

◆rated frequency 50Hz

◆start current active 0.001In(0.5S level)0.002In(1 level) reactive0.003In(2 level)

◆shunt running has anti shunt logic design

◆shape dimension 293mm X 175mm X 80mm

◆weight about 2.4kg

◆temperature

normal temperature	-20℃～+50℃
ultimate temperature	-30℃～+60℃
storage and transport temperature	-25℃～+70℃
storage and transport humidity	≤85%

◆electrical parameter

normal voltage	0.8Un～1.1Un
ultimate voltage	0.75Un～1.2Un
voltage circuit consumption	≤2W和5VA
current circuit consumption	≤1VA
data backup battery voltage	3.6VDC
power-off read battery voltage	6.0VDC

◆Tariff operate parameter

clock accuracy(day error)	≤0.5S (23℃)
battery capacity	≥1000 mAh
data storage time after powr-off	≥10 years (new battery)

◆Technical parameter

1)real-time measure elective value of A,B,C 3-phase voltage,current,power and the present frequency

2)has event record of voltage-loss,phase-loss,current-loss,overvoltage,undervoltage,overcurrent,voltage Qualified rate,power-on or off, program,demand clean, broadcast time school .

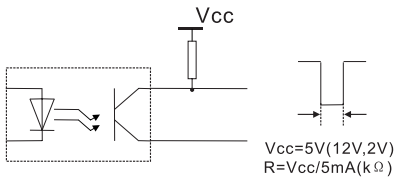
tariff	4
time period	12
count range	0～999999.99 kWh , 0～999999.99 kvarh
display	LCD
communicate baud rate	RS485①口：1200bps～9600 bps、RS485 ②口：1200bps红外接口：1200bps
protocol	DL/T645-1997 multi-function meter communicate prorocol

4.Transport and storage

◆ Avoid the strong impact in the transport and unpacking.

◆Storage in the original package,it shall put on the shell,the stack height shall no more than 8 layers.

◆temperature: 0°C ~40°C,relative humidity shall no more than 85%,no corrosion gas



wiring to standard meter

Internal Optocoupler output

Impulse width 80±20ms
(when cycle less 200ms,it is 1:1Duty ratio)

active or reactive impulse test port diagram

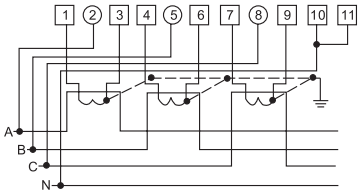
5.Power-supply terminal wiring diagram

◆ Power-supply diagram

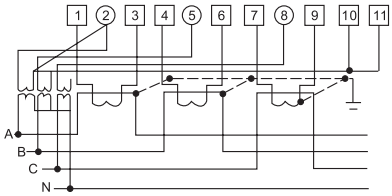
wiring shall follow the diagram,terminal button box lead line shall use copper wire or terminal,the inside screw shall be tighten to avoid the unwell contact or heating.

DSSD858/DTSD858型

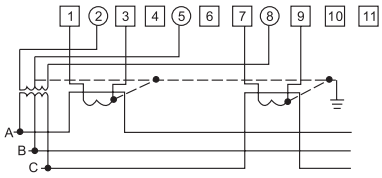
three-phase electronic multi-function meter



3-phase 4-line current transformer type
(3 x 220/380V 3 x 1.5(6)A)



3-phase 4-line
current and voltage transformer type



3-phase 3-line
current and voltage transformer type

◆ terminal wiring

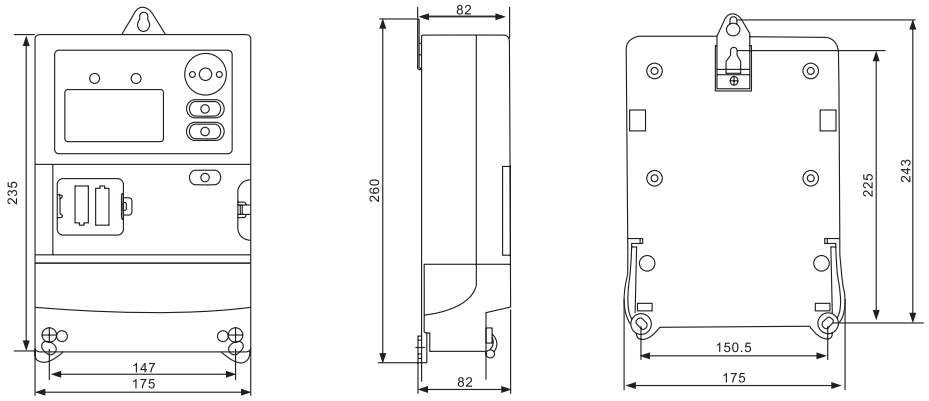
12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
non	non	positive active high	positive active low	positive reactive high	positive reactive low	negative active high	negative active low	negative reactive high	negative reactive low	second impulse high	second impulse low	485 port A1	485 port B1	485 port A2	485 port B2

6.Install and wiring

◆ it shall install at Indoor ventilation and drying,ensure install safety and stable. In the dirty or damage to meter location,meter shall be protected in the cabinet.

◆ Meter upper has hook screw hole, using M4 x 10 screw to fix, lower has 2 install holes, using PA4 x 10,or PA4 x 12 self-tapping screw to fix. According to following diagram install dimension,first open hole on the board which shall be fixed at strong,anti-fire, no vibrate wall.

◆ shape dimension diagram



7.Shape diagram

◆ Open transparent cover, visible a small cover plate by two screws. Open the small cover, you can see two batteries,The left battery tank is provided with two 3.0V lithium battery, and is used for power-off meter reading. The right side of the battery tank is installed with a 3.6V lithium battery, power-off for the power supply to the single chip to keep inside data no change and clock operate. At the bottom of the battery cell, there are positive and negative signs of the battery.

