

## DTSD3/DSSD2 Three-phase Multi-function Static Energy Meter

### Summary

DTSD3/DSSD2 three-phase multi-function energy meter is the new generation intelligent meter designed by our company adopting the advanced technology. The products have the characteristics of high accuracy, good stability, strong function, convenient operation, etc, and conform to the standards of IEC1036, IEC1107, IEC687 & IEC1268.

### Technical specification

#### 1. Electrical condition

Class of accuracy: 0.5, 0.5, 1.0 class, reactive 2.0 class;  
 Normal working voltage:  $0.9U_n \sim 1.1U_n$ ;  
 limit working voltage:  $0.7U_n \sim 1.15U_n$ ;  
 power consumption in voltage line: power consumption in every phase voltage loop  $\leq 2.0W$  and  $5VA$ ;  
 power consumption in current loop:  $\leq 2.5VA$ ;  
 Starting current: active  $0.001I_n(0.5s)$ ,  $0.5$   $0.002I_n(1.0)$  reactive  $0.003I_n(2.0)$ ;  
 Shunt running: with logical design proof from shunt running;  
 Data backup battery voltage:  $3.6VDC$ ;  
 Battery voltage for power cut reading:  $6.0VDC$ .

#### 2. Ambient condition

Normal working temperature:  $-25^{\circ}C \sim +55^{\circ}C$ ;  
 limit working temperature:  $-30^{\circ}C \sim +70^{\circ}C$ ;  
 Stockpile and transportation temperature:  $-35^{\circ}C \sim +70^{\circ}C$ ;  
 Relative humidity: annual average 80%.

#### 3. Tariff working parameter

Clock error:  $\leq 0.5S(23^{\circ}C)$ ;  
 Batteries capacity:  $\geq 1000mAh$ ;  
 Data storage time in the event of power failure:  $\geq 10$  years;  
 Tariff number: 4, section number: 10, measurement range:  $0 \sim 999999.99KWh$ ,  $0 \sim 999999.99$  kvarh, communication baud rate: RS485 ①  $\square$   $1200bps \sim 9600bps$ , RS485 ②  $\square$   $1200bps$ , infrared:  $1200bps$ .

#### 4. Accord standard: IEC62053; GB/T17215-2002; DT/T614-1997; GB/T17883-1999; DL/T645-1997.

#### 5. Life: 10 years.



### Model

Model	Reference voltage(V)	Rated frequency(Hz)	Nominal current(A)	Meter constant(imp/kwh)
Three phase four wire DTSD3	$3 \times 220/380$	50	1.5(6) 2.5(10) 5(20) 10(40) 15(60) 20(80) 30(100)	On nameplate
	$3 \times 57.5/100$	50		
Three phase three wire DSSD2	$3 \times 100$	50		
	$3 \times 380$	50		

### Basic function

#### 1. Measurement function

Measure active power of both directions in separate sections (active measure mode available), and store data;  
 Measure active power of both directions in separate time sections (reactive measure mode available), and store data;  
 Measure maximum quantity and time of active and reactive power of both directions in separate time sections; store the data,  
 measure four quadrant reactive power and store the data;  
 Demand cycle: options 5, 10, 15, 30, 60 minutes.

#### 2. Multi-tariff function

Program 4 tariffs, 10 time sections, 5 daily time sections time zones and 12 public holidays;  
 Outer clock chips are fixed with functions like calendar, timing, anniversary auto-change and temperature compensation.

#### 3. Display function

LCD display is able to display clearly within  $-30^{\circ}C \sim +55^{\circ}C$ ;  
 Parameter running display function, and the parameter of running display is available to set;  
 Button display function, content and sequence are set by random;  
 Check arbitrary item data by controller.

Optional multi-background light, remote control and button to light the background, the light is settable while power reactive after cut-off.

#### 4. Communication function

The watt-hour meter has two RS485 connectors(option) and one infrared communication connector, three communication interfaces are available by PC and mini computer to communicate with watt-hour meter, thus all are protected from communication interruption in three sides;

RS485 interface is electrically isolated from inner part of meter and equipped with lightning proof function;

Communication agreement: DL/T645-1997.

#### 5. Output function

Active and reactive impulse test output function, negative and positive active and reactive remote output function; 1Hz clock output, demand periods exchange signal output, time period exchange signals output;

Remote output impulse width programmable(20-250ms).

#### 6. Event record function

Real time measure virtual value of A,B,C phase voltage, current and power as well as present frequency;

Event recording function like: No-voltage, no-current, voltage eligibility rate, power off, programming, demand reset and broadcasting timing.

#### 7. Special function

Wake-up by key and infrared when power off (within 3 days after power off), power-off data reading by infrared;

Fault message indication, alarming and overload trip output;

Electric quantity frozen, electric quantity of December and complete clock energy record at load representative day;

Opening record of meter;

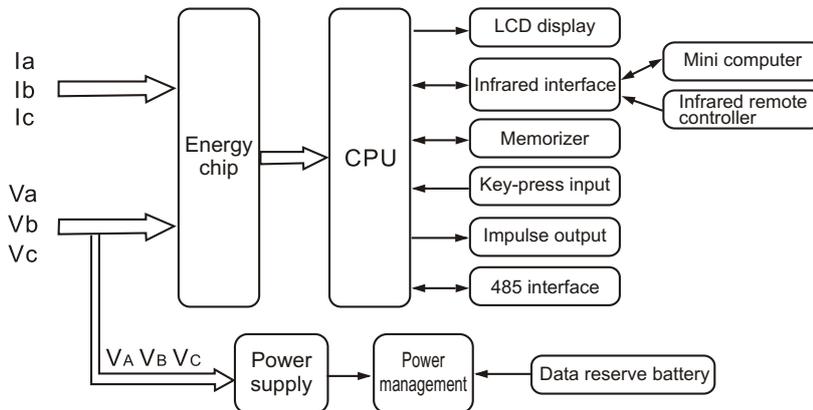
Load curve record;

Complete clock active power record at load representative day;

Positive active electricity freeze when certain time zone is over;

Electricity freeze.

### Principle sheet



### Outline dimension and wiring

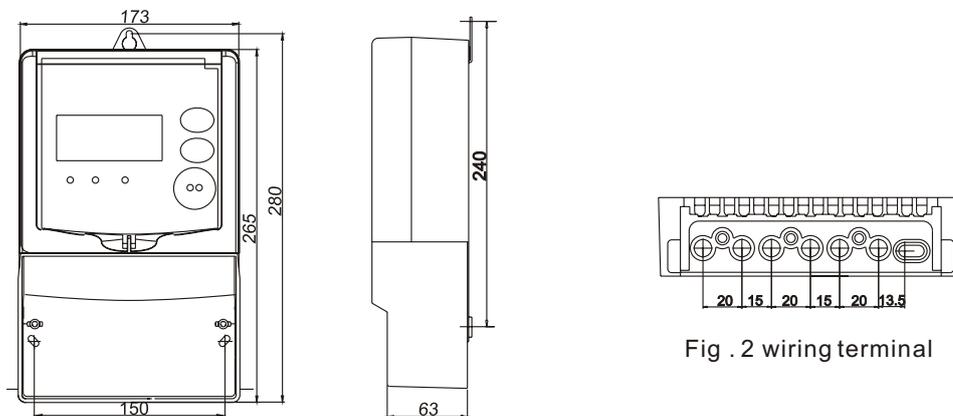


Fig. 1 outline dimension

Fig. 2 wiring terminal