DDS67

SINGLE PHASE STATIC kWh METER

USER'S MANUAL

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CONTENT

USER'S MANUAL

I. INTRODUCTION

DDS67 single phase static kWh meter adopts advanced MCU, electrical power measurement technologies and perfect anti-tamper design. It is used to measure the active energy consumption of single phase two-wire electricity network of 50Hz alternating current and it can be set up to 6 tariffs. Its anti-tamper features can ensure the meter work properly under the following conditions: Interchanging of I/C & O/G; phase & neutral wires, etc. It has optical port and RS232 port to communicating with AMR modems/devices. All the functions of meter comply with technical standard of IS:13779-1999, IEC 61036 and CBIP No.88.

II. PARAMETERS

Reference voltage: 240V
Limited operating voltage: 144V□440V
Current: 10(60) A
Frequency: 50Hz±5□
Pulse constant: 1600imp/kWh
Accuracy of RTC: 1 s/d
Error limit of time setting: ±30s
Power consumption of voltage circuit: ≤1W/ 4VA
Power consumption of current circuit: ≤2VA
Operating temperature range: -10□~ +60□
Limit operating temperature range: -10□~ +70□
Storage and transport temperature range: -25□~ +70□
Maximum relative humidity: 95%

III. MAIN FUNCTIONS

1. Multi-tariff function

The meter can set up to 6 tariffs and 6-time segment: T1, T2, T3, T4, T5, T6. The minimum unit of time segment is minute. The meter can store accumulative active energy of each tariff.

2. Energy measurement

The meter measures active energy consumption for single phase power system. Previous six months active energy and time thereof are stored in the meter.

The meter has non-volatile memory (NVM) that can retain important data up to 10 years in case of power failure.

3. Maximum demand

The meter calculates Demand for an integration time of 30 minutes and records MD, date and time thereof. Previous six months' MD is stored in NVM with occurring date and time. Push the MD-RESET button, the MD of current month will be set to zero. The data of MD and the data of previous six months' MD stored in NVM can be read by meter-reading instrument.

Clock and calendar: The minimum unit of energy measurement is second. The calendar is up to 100 years. Date & time can be set by meter-reading instrument.

4. Viewing data

Consumers can push the button to view the data of meter at any time. The functions of LCD must be checked before pushing the button. The data will auto scroll in LCD and customers can also using meter-reading instrument to read data via optical port or RS232 port. Communication of RS232 port of the meter is designed to be powered by CMRI or RS232 port of computer, no additional power supply is needed.

5. Meter-reading & Program

The meter can be read or set by CMRI. Code must be entered before program the meter. Regarding to the specification, please refer to "User's Manual of CMRI". Optical communication complies with IEC1107, mode C.

6. Pulse output for calibration

LED in the meter cover can produce pulses for calibrate the meter.

7. Anti-tamper

a. Interchanging of I/C & O/G

Meter can record forward energy.

b. Interchanging of phase and neutral wires

Meter can record forward energy.

c. Disconnected neutral wires of output and connect load to earth

Meter can record forward energy.

d. Put interferential signals to output

The influence quantities comply with CBIP No.88.

e. Disconnected voltage of input and connect load to L line and earth

Meter can record forward energy.

IV. DISPLAY

S.No	Code	Explaination	Can be Programed?
0*	E0	Cumulative Active Energy	NO
1	P	MD of current month	NO
2	d0	MD occurring date	NO
3	T0	MD occurring time	NO
4	T	Time	YES
5	d	Date	YES
6	E1	Cumulative Active Energy of previous month 1	NO
7	E2	Cumulative Active Energy of previous month 2	NO
8	E3	Cumulative Active Energy of previous month 3	NO
9	E4	Cumulative Active Energy of previous month 4	NO
10	E5	Cumulative Active Energy of previous month 5	NO
11	E6	Cumulative Active Energy of previous month 6	NO
12	P1	MD of previous month 1	NO
13	d1	Month 1 MD occurring date	NO
14	T1	Month 1 MD occurring time	NO
15	P2	MD of previous month 2	NO
16	d2	Month 2 MD occurring date	NO
17	T2	Month 2 MD occurring time	NO
18	P3	MD of previous month3	NO
19	d3	Month 3 MD occurring date	NO
20	T3	Month 3 MD occurring time	NO
21	P4	MD of previous month 4	NO
22	d4	Month 4 MD occurring date	NO
23	T4	Month 4 MD occurring time	NO
24	P5	MD of previous month 5	NO
25	d5	Month 5 MD occurring date	NO
26	T5	Month 5 MD occurring time	NO
27	P6	MD of previous month 6	NO
28	d6	Month 6 MD occurring date	NO

29	T6	Month 6 MD occurring time	NO
30	E7	Active Energy of tariff 1	NO
31	E8	Active Energy of tariff 2	NO
32	E9	Active Energy of tariff 3	NO
33	EA	Active Energy of tariff 4	NO
34	Eb	Active Energy of tariff 5	NO
35	EC	Active Energy of tariff 6	NO
36	P7	MD of current month of tariff 1	NO
37	d7	MD of current month of tariff 1 occurring date	NO
38	T7	MD of current month of tariff 1 occurring time	NO
39	P8	MD of current month of tariff 2	NO
40	d8	MD of current month of tariff 2 occurring date	NO
41	T8	MD of current month of tariff 2 occurring time	NO
42	P9	MD of current month of tariff 3	NO
43	d9	MD of current month of tariff 3 occurring date	NO
44	T9	MD of current month of tariff 3 occurring time	NO
45	PA	MD of current month of tariff 4	NO
46	dA	MD of current month of tariff 4 occurring date	NO
47	TA	MD of current month of tariff 4 occurring time	NO
48	Pb	MD of current month of tariff 5	NO
49	db	MD of current month of tariff 5 occurring date	NO
50	Tb	MD of current month of tariff 5 occurring time	NO
51	PC	MD of current month of tariff 6	NO
52	dC	MD of current month of tariff 6 occurring date	NO
53	TC	MD of current month of tariff 6 occurring time	NO
54	F0	Tariff and time-sequence 1	YES
55	F1	Tariff and time-sequence 2	YES
56	F2	Tariff and time-sequence 3	YES
57	F3	Tariff and time-sequence 4	YES
58	F4	Tariff and time-sequence 5	YES
59	F5	Tariff and time-sequence 6	YES
60	88	LCD test	NO

Note: The data with * will display continued.

1. Format of data and time is:
   Active Energy: XXXXXX KWH
   MD: XX.XX KW
   MD occurring date: MM:DD (Month : Date)
   MD occurring time: HH:MM (Hour : Minute)
   Date: DD:MM:YY (Date : Month : Year)
   Time: HH:MM:SS (Hour : Minute : Second)

2. Format of data of tariff and time-sequence (Current data set is 134501)

13:45:01

01: T1 tariff 1
02: T2 tariff 2
03: T3 tariff 3
04: T4 tariff 4
05: T5 tariff 5
06: T6 tariff 6
Tariff start time (hour:minute)

V. INSTALLATION

The meter to be installed and used must be tested and sealed before delivery.

The multi-tariff meter must be installed in dry and ventilated environment. The installation board must be fixed on steady, fire-resistant and non-vibrant wall. The referential installation height is 1.8m.

The method of how to install the meter is shown on meter terminal cover.

VI. TRANSPORTATION AND STORAGE

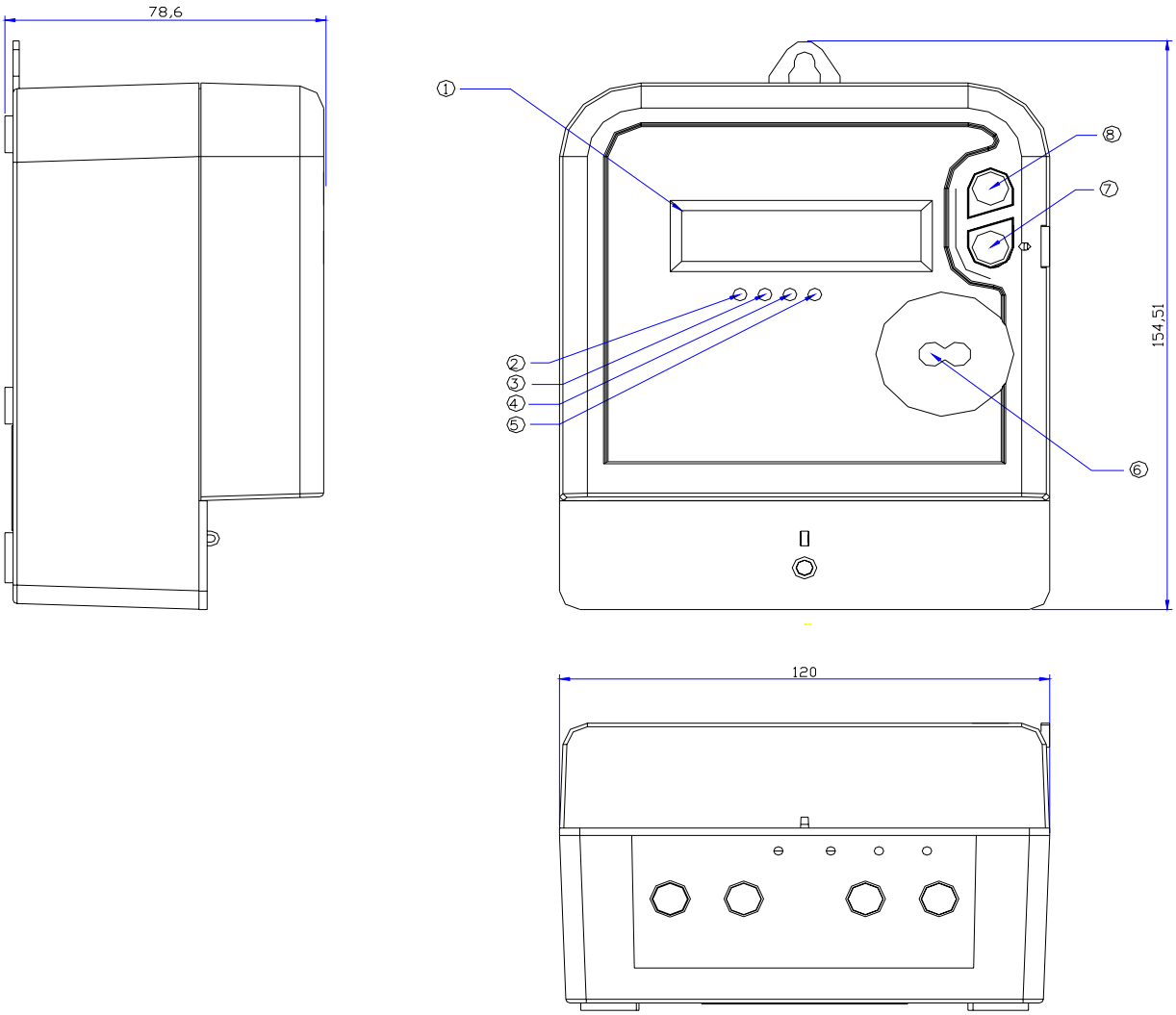
The meter should be placed on shelf and not exceed five box layers in transporting. The place for storage must be kept clean. This product should be stored in a warehouse which is clean and where the ambient temperature is -25□□+70□, relative humidity is less than 90% and no erosive gas in air.

VII. WEIGHT & SIZE

The weight of meter is 1.2kg. The size of configuration of meter is 154.5mm×120mm×79mm.

VIII. DRAWING

1. Configuration Drawing



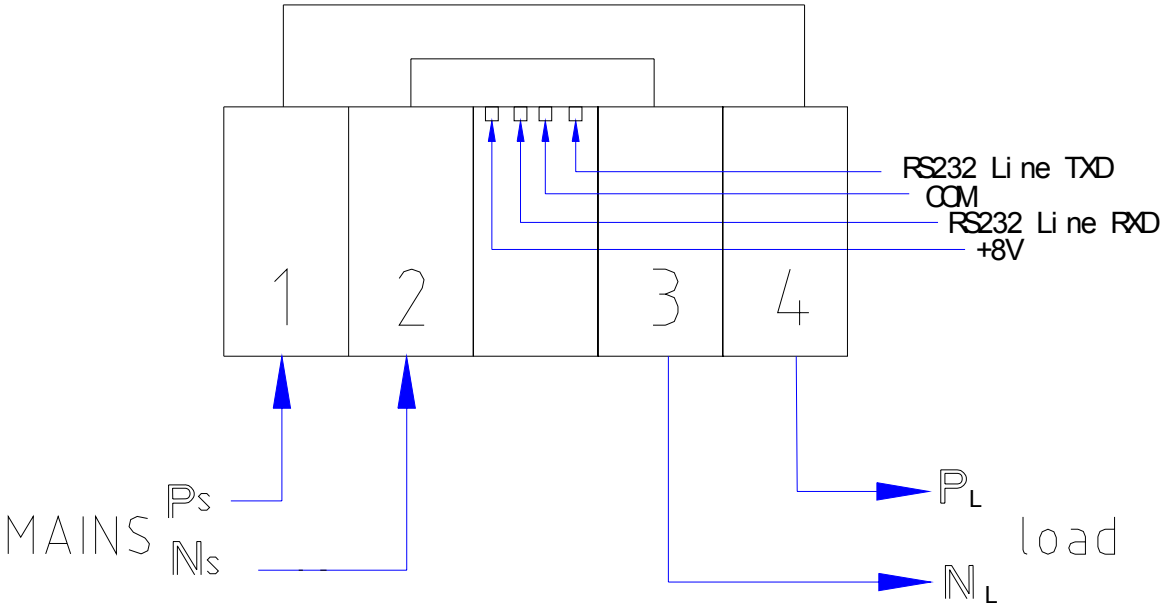
□□LCD Display　　□□Neutral cut

□□Load connect to earth　　□□Current reverse

□□Energy pulse output　　□□Optical port

□□Setting switch　　□□View information switch

2. Wiring Diagram



Wiring Diagram