DTS27 (Direct Meter) Operating Manual

Shenzhen Star Instrument Co., Ltd.

Caution: The user is cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body.

Revision History

Revision Date	Version Record	Description of Major Changes
20241218		Initial Draft
20250306		Adjusted Format, Header

Table of Contents

1 Electricity Meter Introduction

1.1 Technical Parameters

Rated Voltage (Un)	**3×220/380V**
Rated Current (In)	**5A**
Maximum Current (Imax)	**100A**
Starting Current	**Active: 0.4%In Reactive: 0.5%In**
Rated Frequency	**50Hz**
Accuracy Class	**Active: Class 1 Reactive: Class 2**
Pulse Constant	**1000 imp/kWh 1000 imp/kvarh**

1.2 Electrical Performance

Operating Voltage Range	0.7Un - 1.2Un
Operating Frequency Range	Rated Frequency ±5%
Voltage Circuit Consumption (Non-communication)	Not more than 2W, 10VA
Voltage Circuit Consumption (During communication)	Not more than 5W, 25VA
Current Circuit Consumption	Not more than 2.5VA

1.3 Insulation Performance

No.	Item Name	IEC62053-21 Requirement
1	Impulse Voltage	Class II insulation, 6KV
2	AC Voltage	Current circuit to earth (Class II insulation),

		4KV
		Between auxiliary terminals, 2KV

1.4 Operating Environment

No.	Item Name	IEC62053-21 Requirement
1	Temperature	Operating temperature range: -25℃～60℃
		Operating limit temperature range: -40℃～70℃
		Storage and transportation limit temperature range: -40℃～80℃
2	Humidity	Annual average: ≤75%
		30 days in a year: ≤95%
		Other time: ≤85%

1.5 Communication Interface

Non-modulated Infrared Interface	**Type**	Serial bidirectional communication interface
	Baud Rate	9600bps 8N1
RS485 Interface	**Type**	Serial bidirectional communication interface
	Baud Rate	9600bps 8N1
Communication Module Interface	**Type**	Serial bidirectional communication interface
	Baud Rate	9600bps 8N1

1.6 Standards Compliance

Note: The following standards are for reference. The actual standards implemented are subject to the technical parameter table.

IEC62052-11 Electricity metering equipment(AC)-General requirements,tests and test conditions- Part11:Metering equipment

IEC62053-21 Electricity metering equipment(a.c.)-Particular requirements-Part21:Static meters for active energy(classes 1 and 2)

IEC62055-31 Electricity metering -Payment systems-Part31:Particular requirements Static payment meters for active energy(class 1 and 2)

IEC62056-21 Electricity metering - Data exchange for meter reading, tariff and load control -Part 21: Direct local data exchange

IEC62056-46 Electricity metering --Data exchange for meter reading,tariff and load control --Part 46:Data link layer using HDLC protocol

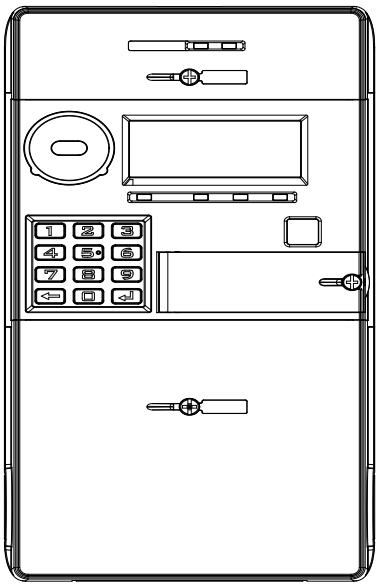
IEC62056-53 Electricity metering --Data exchange for meter reading,tariff and load control --Part 53:COSEM application layer

IEC62056-61 Electricity metering --Data exchange for meterreading, tariff and load control --Part 61:Object identification system (OBIS)

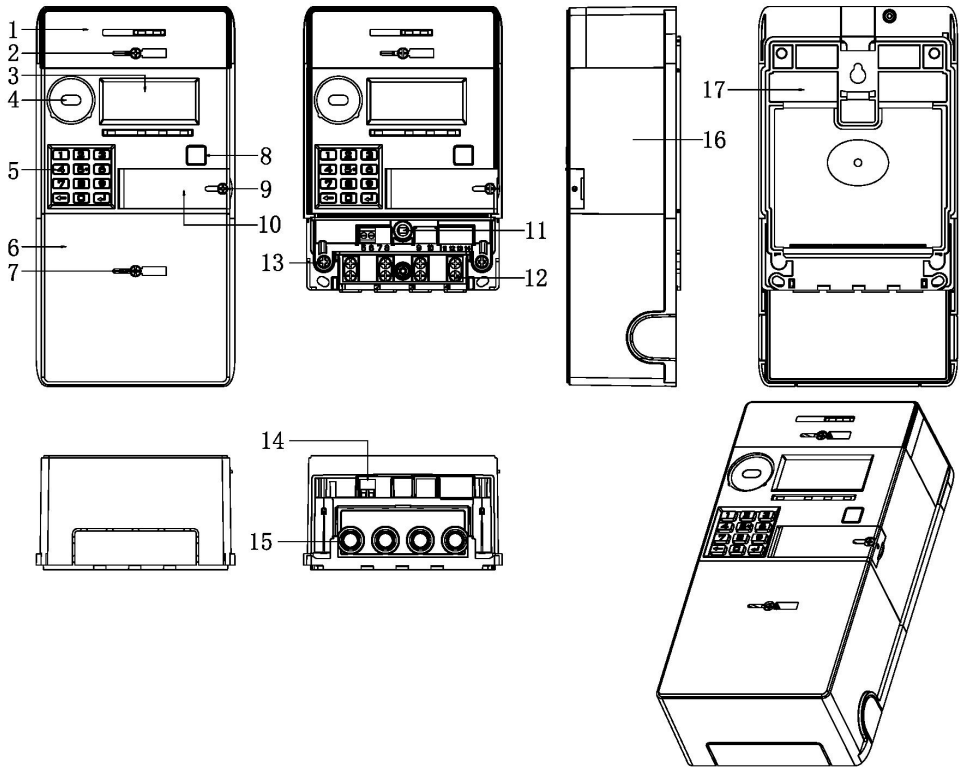
IEC62056-62 Electricity metering --Data exchange for meterreading, tariff and load control --Part 62:Interface classes

2 Structure Description

2.1 Appearance



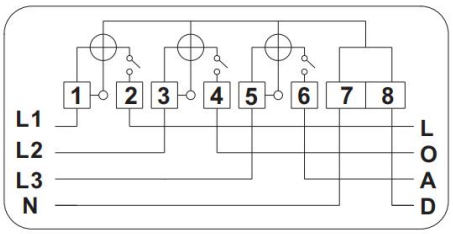
2.2 Meter Structure Dimensions

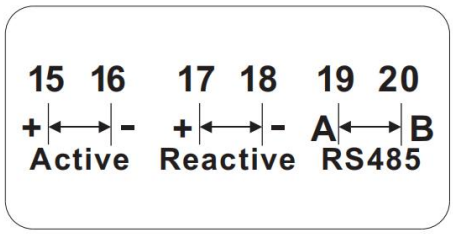


01	Module Box	02	Module Box Seal
03	LCD Display Window	04	Optical Port
05	Button	06	Terminal Cover

07	Terminal Cover Seal	08	Display Button
09	Battery Cover Seal	10	Battery Cover
11	Terminal Cover Open Detection	12	Wire Clamp Screw
13	Upper Cover Seal	14	Pulse Terminal
15	Current Terminal	16	Upper Cover
17	Bottom Case		

2.3 Wiring Diagram





Electricity Meter Introduction

The meter supports various energy measurement functions. Specific supported energy objects are listed below.

Note:

1. In the object identifiers (OBIS codes) in the tables of this chapter, T is the tariff identifier:

    T = 0 indicates total energy;
    T = 1~N indicates energy for each tariff; the specific number of supported tariffs N is detailed in the technical parameter table.

2. Whether the product supports reactive energy, apparent energy, and per-phase energy functions is subject to the specific requirements in the technical parameter table.

2.4 Basic Energy

The basic energy measurement objects supported by the meter and their unit dimensions are listed in the following table:

Energy Category	Energy Object	Object Identifier[Note]
Active Energy	Total and tariff forward active energy	1-0:1.8.T.255
	Total and tariff reverse active energy	1-0:2.8.T.255
	Total and tariff total active energy	1-0:15.8.T.255
	Total and tariff net active energy	1-0:16.8.T.255
Reactive Energy	Total and tariff forward reactive energy	1-0:3.8.T.255
	Total and tariff reverse reactive energy	1-0:4.8.T.255
	Total and tariff quadrant 1 reactive energy	1-0:5.8.T.255
	Total and tariff quadrant 2 reactive energy	1-0:6.8.T.255
	Total and tariff quadrant 3 reactive energy	1-0:7.8.T.255
	Total and tariff quadrant 4 reactive energy	1-0:8.8.T.255
Apparent Energy	Total and tariff forward apparent energy	1-0:9.8.T.255
	Total and tariff reverse apparent energy	1-0:10.8.T.255

Note: T is the tariff identifier.

2.5 Per-phase Energy (Only for Poly-phase Meters)

The per-phase energy measurement objects supported by the meter and their unit dimensions are listed in the following table:

Energy Category	Energy Object	Object Identifier
Active Energy	A(B/C) phase forward active energy	1-0:21(41/61).8.0.255
	A(B/C) phase reverse active energy	1-0:22(42/62).8.0.255
	A(B/C) phase total active energy	1-0:35(55/75).8.0.255
	A(B/C) phase net active energy	1-0:36(56/76).8.0.255
Reactive Energy	A(B/C) phase forward reactive energy	1-0:23(43/63).8.0.255
	A(B/C) phase reverse reactive energy	1-0:24(44/64).8.0.255
	A(B/C) phase quadrant 1 reactive energy	1-0:25(45/65).8.0.255
	A(B/C) phase quadrant 2 reactive energy	1-0:26(46/66).8.0.255
	A(B/C) phase quadrant 3 reactive energy	1-0:27(47/67).8.0.255
	A(B/C) phase quadrant 4 reactive energy	1-0:28(48/68).8.0.255
Apparent Energy	A(B/C) phase forward apparent energy	1-0:29(49/69).8.0.255
	A(B/C) phase reverse apparent energy	1-0:30(50/70).8.0.255

2.1 Demand

The demand objects supported by the meter are listed in the following table.

Note:

1. In the object identifiers (OBIS codes) in the tables of this chapter, T is the tariff identifier:

T = 0 indicates total energy;
T = 1~N indicates energy for each tariff; the specific number of supported tariffs N is detailed in the technical parameter table.

2. Whether the product supports reactive demand and apparent demand functions is subject to the specific requirements in the technical parameter table.

Demand Category	Demand Object	Object Identifier[Note]
Active Demand	Total and tariff forward active demand	1-0:1.4.T.255
	Total and tariff reverse active demand	1-0:2.4.T.255
Reactive Demand	Total and tariff forward reactive demand	1-0:3.4.T.255
	Total and tariff reverse reactive demand	1-0:4.4.T.255
	Total and tariff quadrant 1 reactive demand	1-0:5.4.T.255
	Total and tariff quadrant 2 reactive demand	1-0:6.4.T.255
	Total and tariff quadrant 3 reactive demand	1-0:7.4.T.255
	Total and tariff quadrant 4 reactive demand	1-0:8.4.T.255
Apparent Demand	Total and tariff forward apparent demand	1-0:9.4.T.255
	Total and tariff reverse apparent demand	1-0:10.4.T.255

Note: T is the tariff identifier.

2.2 Maximum Demand

The maximum demand objects supported by the meter and their unit dimensions are listed in the following table:

Demand Category	Demand Object	Object Identifier[Note]
Active Demand	Total and tariff forward active maximum demand	1-0:1.6.T.255
	Total and tariff reverse active maximum demand	1-0:2.6.T.255
Reactive Demand	Total and tariff forward reactive maximum demand	1-0:3.6.T.255
	Total and tariff reverse reactive maximum demand	1-0:4.6.T.255
	Total and tariff quadrant 1 reactive maximum demand	1-0:5.6.T.255
	Total and tariff quadrant 2 reactive maximum demand	1-0:6.6.T.255
	Total and tariff quadrant 3 reactive maximum demand	1-0:7.6.T.255
	Total and tariff quadrant 4 reactive maximum demand	1-0:8.6.T.255
Apparent Demand	Total and tariff forward apparent maximum demand	1-0:9.6.T.255
	Total and tariff reverse apparent maximum demand	1-0:10.6.T.255

Note: T is the tariff identifier.

2.3 Demand Storage and Clearance

When the meter reaches the set monthly storage (monthly settlement) time, the monthly maximum demand is automatically stored and then cleared to restart calculation.

3 Instantaneous Values

The meter supports real-time measurement of instantaneous values.

Note:

1. Whether the product supports reactive power and apparent power functions is subject to the specific requirements in the technical parameter table.

3.1 Basic Instantaneous Values

The related objects and their unit dimensions are listed in the following table:

Category	Object	Object Identifier
Voltage	A phase voltage	1-0:32.7.0.255
	B phase voltage	1-0:52.7.0.255
	C phase voltage	1-0:72.7.0.255
Current	A phase current	1-0:31.7.0.255
	B phase current	1-0:51.7.0.255
	C phase current	1-0:71.7.0.255
	Combined phase current	1-0:90.7.0.255
	N line current	1-0:91.7.0.255
Active Power	Combined phase (A/B/C phase) forward active power	1-0:1(21/41/61).7.0.255
	Combined phase (A/B/C phase) reverse active power	1-0:2(22/42/62).7.0.255
	Combined phase (A/B/C phase) total active power	1-0:15(35/55/75).7.0.255
Reactive Power	Combined phase (A/B/C phase) forward reactive power	1-0:3(23/43/63).7.0.255
	Combined phase (A/B/C phase) reverse reactive power	1-0:4(24/44/64).7.0.255
	Combined phase (A/B/C phase) quadrant 1 reactive power	1-0:5(25/45/65).7.0.255
	Combined phase (A/B/C phase) quadrant 2 reactive	1-0:6(26/46/66).7.0.255

	power	
	Combined phase (A/B/C phase) quadrant 3 reactive power	1-0:7(27/47/67).7.0.255
	Combined phase (A/B/C phase) quadrant 4 reactive power	1-0:8(28/48/68).7.0.255
Apparent Power	Combined phase (A/B/C phase) forward apparent power	1-0:9(29/49/69).7.0.255
	Combined phase (A/B/C phase) reverse apparent power	1-0:10(30/50/70).7.0.255
Power Factor	Combined phase forward power factor	1-0:13.7.0.255
	A phase power factor	1-0:33.7.0.255
	B phase power factor	1-0:53.7.0.255
	C phase power factor	1-0:73.7.0.255
	Combined phase reverse power factor	1-0:84.7.0.255
Grid Frequency	Grid frequency	1-0:14.7.0.255

3.2 Other Instantaneous Values

The related objects and their unit dimensions are listed in the following table:

Category	Object	Object Identifier
Temperature	Meter temperature	0-0:96.9.0.255
Battery Voltage	External battery voltage	0-0:96.6.3.255

4 Clock (Only for Meters with Battery)

4.1 Clock Accuracy

- Within the temperature range of -25～+60℃: Clock accuracy ≤ ±1s/d;
- At reference temperature (23℃): Clock accuracy ≤ ±0.5s/d;

When the electricity meter is powered off, the backup battery is activated to maintain clock accuracy.

5 Human Machine Interface

5.1 Display Button

The electricity meter supports the display button function.

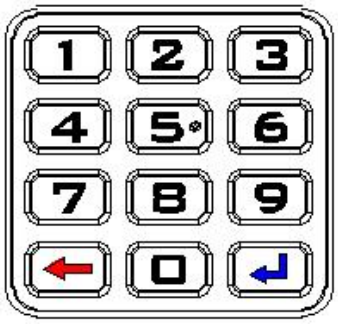
1. **Button-triggered Display**
   When the meter is in auto-scroll display mode, briefly press the display button to enter button-triggered display mode;
   In button-triggered display mode, briefly press the display button to page through the display data;
   In button-triggered display mode, if no button operation occurs for a set period (configurable, default value refer to technical parameter table), the meter automatically returns to auto-scroll display mode.

5.2 Keypad (Optional)

The meter keypad clearly displays each key, including numeric keys from 0 to 9, a backspace key, and an enter key.

If input is incorrect, use the "Backspace" key on the keypad to delete. After input is complete, press the "Enter" key to execute the numeric command.

The meter supports paging through displays by pressing the enter key.

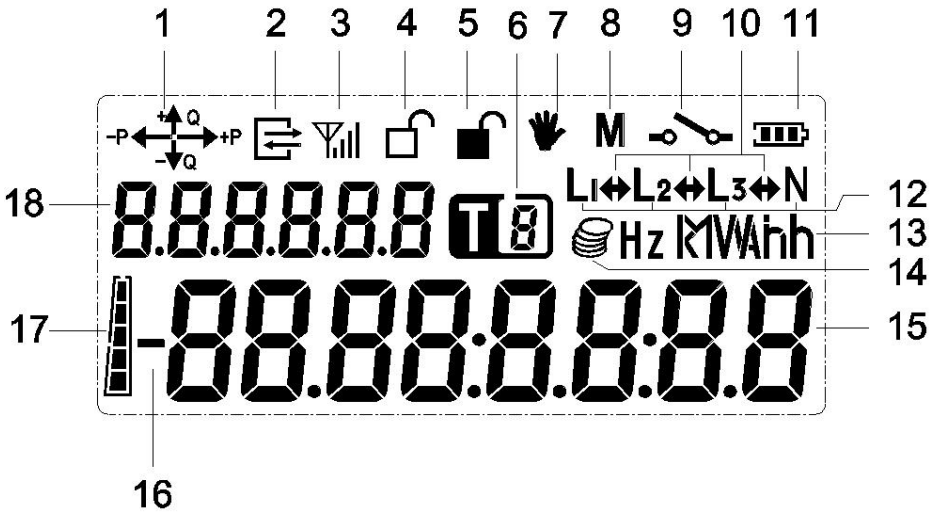


5.3 Backlight Indicator

The meter supports a backlight function. When the meter is powered on, any key input will activate the backlight to facilitate viewing the meter display information. After the backlight is triggered by a key, it will automatically turn off after a period of inactivity.

5.4 Display

5.4.1 LCD Display Content Description



Display No.	Symbol Name	Description
1	Quadrant Indicator	Indicates the current combined phase active and reactive power direction.
2	Communication Indicator	Symbol displays when meter communication occurs.
3	Module	GPRS communication connection

	Communication Status Indicator	status and signal strength indicator.
4	Upper Cover Open Indicator	This symbol displays when the upper cover is open; disappears when the upper cover is closed.
5	Terminal Cover Open Indicator	This symbol displays when the terminal cover is open; disappears when the terminal cover is closed.
6	Tariff Flag	Indicates the current tariff number.
7	Tamper Indicator	Realtime indication of the meter's tamper state: This symbol displays when tampering occurs; Disappears when no tampering event is active and after tamper clear.
8	Reserved	Reserved.
9	Relay Status Indicator	This symbol displays when the relay is open; Disappears when the relay is closed.
10	Power Flow Direction Indicator	Points right during forward power flow; Points left during reverse power flow; Symbol disappears when no power is consumed.
11	Battery Indicator	Realtime indication of battery status. Displays when battery voltage is below 3.0V; disappears when battery voltage recovers above 3.0V.
12	Phase Voltage Presence Indicator	Symbol displays when phase line is present; disappears when phase is lost. Letter "N": Displays when meter neutral line is present; Disappears when meter neutral line is disconnected.
13	Unit Display Area	Unit symbols for energy, power (demand), voltage, current, etc.
14	**Reserved**	**Reserved**

15	Data Display Area	Displays various data content indicated by the display code. For data items exceeding 8 digits (e.g., date/time, meter number), the meter automatically displays them across multiple screens.
16	**Reserved**	**Reserved**
17	**Balance Indicator Bar**	**Realtime indication of balance.**
18	Data Identifier Display Area	Used to identify different display items (displayed as OBIS code abbreviations).

5.4.1.1 GPRS/3G/4G Module Signal Indicator Description

GPRS/3G/4G Signal Indicator Symbol State	Meaning (Steady On)	Meaning (Flashing)
No display	Communication module not detected.	
	No signal (below -111dBm)	SIM card error
	Signal: -111 to -108dBm, Connected to base station	Signal: -111 to -108dBm, Not connected to base station
	Signal: -107 to -102dBm, Connected to base station	Signal: -107 to -102dBm, Not connected to base station
	Signal: -101 to -92dBm, Connected to base station	Signal: -101 to -92dBm, Not connected to base station
	Signal: -91dBm or higher, Connected to base station	Signal: -91dBm or higher, Not connected to base station

5.4.2 Auto-scroll Display

When the meter is powered on and inactive, the LCD enters auto-scroll display mode.

The meter's auto-scroll display list and display interval time are configurable. Default parameters are in the technical parameter table.

5.4.3 Button-triggered Display

When the meter is in auto-scroll display mode, briefly press the display button to enter button-triggered display mode.

The meter's button-triggered display list and the time to return to auto-scroll are configurable. Default parameters are in the technical parameter table.

5.4.4 Popup Display

When certain events occur, the meter displays a popup prompt for the event. See the table below.

Display Content	Meaning	Remarks
OPEN TER	Terminal cover open	Specific display effect is subject to the actual product.
OPEN COV	Meter cover open	
MAGNET	Magnetic field interference	
OVERHEAT	Over temperature	
LOST U 1	Phase A has current but no voltage	
LOST U 2	Phase B has current but no voltage	
LOST U 3	Phase C has current but no voltage	
BYPASS	Bypass	

5.4.5 Power Loss Display

5.4.5.1 Constant Display during Power Loss

The electricity meter supports a constant display function during power loss.

The constant display hold time during power loss is configurable, range 0 seconds to 7 days.

5.4.5.2 Power Loss Wake-up Display

The electricity meter supports a wake-up display function via button press during power loss.

Pressing the display button can wake up the LCD display; pressing the display button again can switch to the next item in the auto-scroll list.

The display turns off after a period of inactivity.

5.5 LED Indicators

5.5.1 Pulse Indicator

- **Active LED:** Red LED, flashes at a frequency defined by the pulse constant when active energy is consumed.
- **Reactive LED:** Red LED, flashes at a frequency defined by the pulse constant when reactive energy is consumed.

5.5.2 Alarm Indicator

- The alarm LED stays steadily on after the relay trips.
- When the relay is closed and an alarm event occurs, the alarm LED flashes.
- When the relay is closed and all alarm events have ended, the alarm LED turns off.
    - Alarm events are as follows:

No.	Event
1	Upper cover open
2	Terminal cover open
3	Magnetic field interference
4	Bypass

-

5.5.3 Credit/Power Indicator

5.5.3.1 Prepayment Mode

When the meter is powered on:

- When remaining credit is exhausted, the red LED stays steadily on.
- When remaining credit is greater than 0 and less than or equal to alarm threshold 2, the red LED flashes.
- When remaining credit is greater than alarm threshold 2 and less than or equal to alarm threshold 1, the green LED flashes.
- When remaining credit is greater than alarm threshold 1, the green LED stays steadily on.

5.5.3.2 Postpayment Mode

When the meter is powered on, the green LED stays steadily on.

6 Load Management

The electricity meter can be programmed to set user load limits. Load limits include active power limit and current limit. An overload condition is triggered when either limit is exceeded.

6.1 Load Control

The electricity meter supports load control function. Overload (or overcurrent) handling is as follows:

- If overload (or overcurrent) duration reaches 60 seconds, the relay opens, and automatically closes after 30 seconds.
- If the relay opens due to overload (or overcurrent) for 6 consecutive times, after opening, it can only automatically close after 30 minutes.
- The lockout time after exceeding the overload (or overcurrent) count is configurable, default is 30min.

7 Relay Control

The electricity meter's relay control function model complies with the DLMS specification. The relay's logical state, physical state, and

control mode can be read via local communication and remote communication.

7.1 Common Trip Reasons

No.	Trip Reason
1	Insufficient credit
2	Overcurrent/Overload
3	Overvoltage/Undervoltage
4	Meter detects tampering

8 Event Logging

The electricity meter logs the most recent group of events, including their date/time of occurrence, in a first-in-first-out manner. Event logs can be uploaded to the host management computer via the communication interface for display, reporting, and appropriate action by the power supply management department.

8.1 Event Detection

Event Code	Event Name	Chinese Description
7	Replace Battery	Battery needs replacement
76	Under voltage L1	L1 phase undervoltage
77	Under voltage L2	L2 phase undervoltage
78	Under voltage L3	L3 phase undervoltage
79	Over voltage L1	L1 phase overvoltage
80	Overvoltage L2	L2 phase overvoltage
81	Overvoltage L3	L3 phase overvoltage
82	Missing voltage L1	L1 phase voltage loss
83	Missing voltage L2	L2 phase voltage loss
84	Missing voltage L3	L3 phase voltage loss
88	Phase sequence reversal	Reverse phase sequence

91	Current Reversal	Current reversal
/	Power failure	Long power failure

9 Time-of-Use Tariff

The meter supports TOU (Time-of-Use) tariff functionality.

10 Tiered Energy (Only for Prepayment Meters)

The meter supports tiered energy functionality.

11 Tariff (Only for Prepayment Meters)

11.1 Time-of-Use Tariff

The meter supports Time-of-Use tariff functionality. Each TOU tariff number corresponds to a time-of-use tariff.

The meter supports backup time-of-use tariff functionality. The activation time for backup time-of-use tariff parameters is configurable.

11.2 Tiered Tariff

The meter supports tiered tariff functionality. Each tier type corresponds to a tiered tariff.

The meter supports backup tiered tariff functionality. The activation time for backup tiered tariff parameters is configurable.

12 Payment Mode (Only for Prepayment Meters)

12.1 Prepayment Mode

Energy accumulation and credit deduction proceed normally. The credit indicator light indicates the current balance status according to the set credit alarm thresholds. When the balance decreases to 0, the electricity meter opens the relay (in non-friendly power-off mode), and the user must recharge to resume electricity use.

In prepayment mode, the meter supports standard STS test TOKENs for querying related prepayment information.

12.2 Postpayment Mode

The user's electricity consumption only accumulates energy, without deduction or any relay operation. In postpayment mode, the credit indicator light stays steadily green. If the relay is open due to insufficient balance or debt in prepayment mode, switching to postpayment mode will automatically close the relay, allowing normal power supply and energy metering.

In postpayment mode, purchase tokens and clear balance tokens are not accepted.

12.3 Payment Mode Switching

The meter can switch payment modes via a special TOKEN.

When the meter switches payment mode, corresponding event records are logged. See the Event Logging chapter for details.

13 Prepayment (Only for Prepayment Meters)

The vending system generates a 20-digit numeric sequence (TOKEN) based on user information and purchase amount. The user inputs this 20-digit sequence via the keypad on the meter. The meter performs decryption, writes the purchase amount into the meter after key authentication, adds the purchase amount to the remaining credit, and stores it. In case of emergency use, the emergency credit amount is deducted first from the purchase amount, then the remainder is

added to the remaining credit and stored. When the user consumes electricity, the meter deducts from the remaining credit according to corresponding conditions. When power-off conditions are met, the meter automatically cuts off the user load. When power-on conditions are met, the meter automatically restores the user load.

The meter uses combined active energy (forward + reverse) for deduction and settlement.

The meter supports TOKEN credit, emergency credit, and friendly credit, and supports TOU tariffs and tiered tariffs.

13.1 TOKEN Credit

13.1.1 Purchasing Electricity

When the remaining credit in the meter is insufficient, the user can go to the vending office to purchase electricity. The office generates a 20-digit numeric sequence, i.e., a token (TOKEN), based on user information and purchase amount.

Purchasing method:

1. Go to the local vending office.
2. Provide the meter ID number to the operator.
3. Tell the operator the amount you wish to purchase and pay.
4. On the receipt, you receive a printed token [20-digit number].

13.1.2 Loading Electricity

The user inputs the 20-digit numeric sequence on the meter. After passing key authentication, the meter accepts the purchase amount, adjusts the remaining credit and cumulative purchase amount accordingly, and displays the loaded amount.

Remote prepayment keypad meters support online recharge. Recharge TOKENs can be issued directly by the vending staff for meter recharge, or users can input recharge TOKEN codes.

Manually inputting purchase token into the meter:

1. Input the 20-digit token via the meter keypad.

2. For keypad code meters, if the token input is incorrect, use the "Backspace" key to delete. After all 20 digits are entered, press the "Enter" key to process the token acceptance.
3. If the token input is correct, the LCD will sequentially display "accept", the amount purchased this time, and the remaining credit.
4. If the token input is incorrect, the LCD will display "reject".

13.2 Emergency Credit

When the current time is not within the friendly credit period and the user's balance is below a specific threshold, the user can activate the emergency credit function via the keypad (any number key + enter key), until the emergency credit amount is used up. The emergency credit function can only be used once, and is restored after the next recharge. The emergency credit amount is automatically deducted during the next recharge.

The meter can query the set emergency credit amount threshold via a short code.

Emergency credit related parameters can be programmed via the host management software.

13.3 Friendly Credit

13.3.1 Friendly Day

- The meter's friendly day can be set via software.
- Electricity use is unrestricted throughout the friendly day.

13.3.2 Friendly Period

- The meter's friendly period can be set via software.
- Credit deduction is unrestricted during the friendly period.

13.4 Low Credit Alarm Function

- The meter can be programmed to set two-level low credit alarm threshold values, both default to 0.
- The indicator light status prompts for different credit states of the meter refer to the Human Machine Interface chapter.