



ULEE INTERNATIONAL (H.K.) LIMITED
13/F, Caijiang Mansion, 223 South Caihong Road, Ningbo, China

CONVENTIONAL ELECTRIC METER SINGLE PHASE

USER MANUAL

DDS28 Single-Phase Electronic Meter (Version 1.0)





Modification

Reversion No	Description of change(s)	By Whom	DATE
version 1.0	Modification the manual S028000A02161412_20141106	Mingchao.ge	2015.1.15

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1 Introduction

This User Manual is especially for DDS28 single-phase two-wire energy meter. The meter can support bidirectional active energy measurement and optical communication. Meter configuration can be available via the configuration software. At the same time, you can read instantaneous value by PC software, such as voltage, current and power.

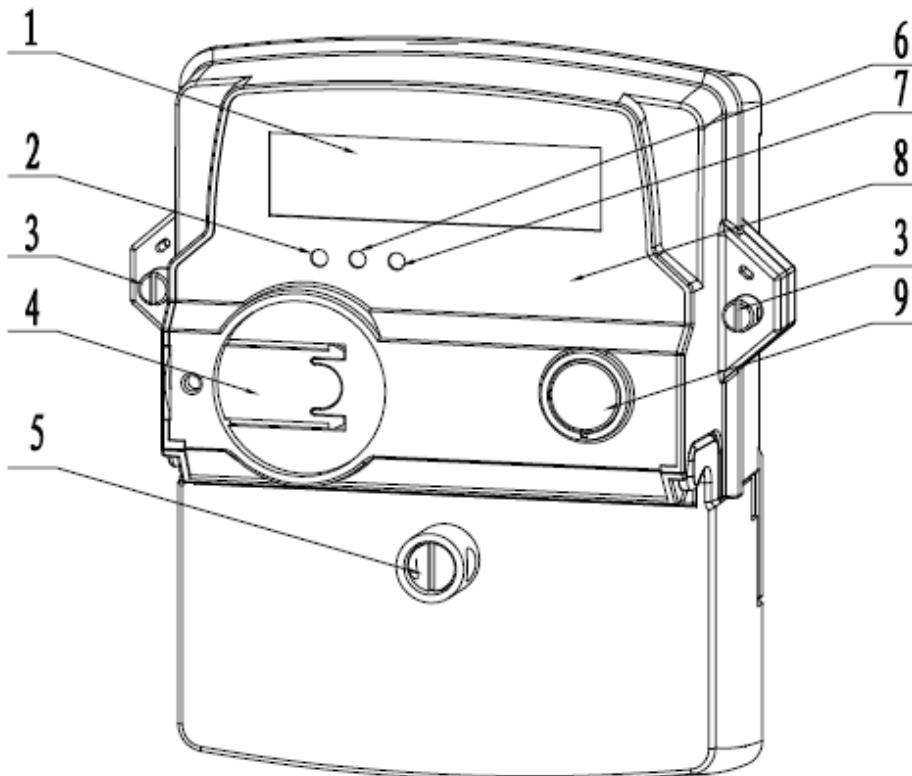
What's in this manual?

Chapter2~Chapter5: Meter function section. Mainly introduce the reference standard, figure, dimension, connection diagram, the basic technical standards and function requirements of the meters

2 Reference standards

Standard	Description
IEC62052-11	Electricity metering equipment (a.c.) – General requirements, tests and test conditions – Part 11: Metering equipment
IEC62053-21	Electricity metering equipment (a.c.) – Particular requirements –Part 21: Static meters for active energy (classes 1and 2)
IEC 62056-21	Electricity Metering-Data exchange for meter reading, Tariff and Load Control-Part 21: direct local data exchange.

3 Appearance



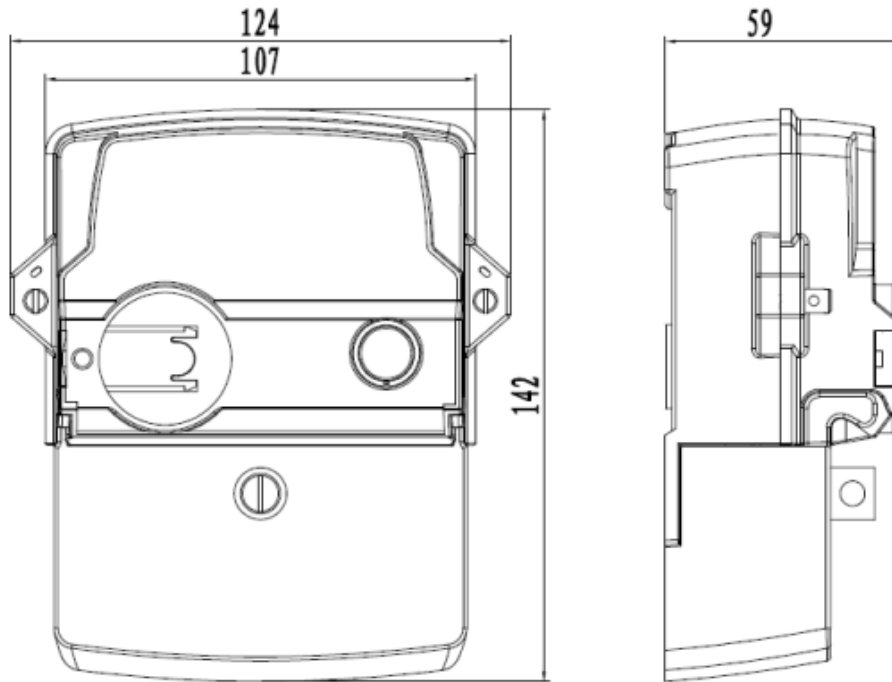
1. Window for LCD display;
2. Current reverse indication LED (yellow);
3. Meter cover(sealed);
4. Optical communication port, for local data reading and parameter setting;
5. Terminal cover(sealed);
6. Active energy (kWh) pulse LED (red);
7. Power indication LED (green);
8. Nameplate: Contain basic parameters and specification;
9. Push Button (reserved).



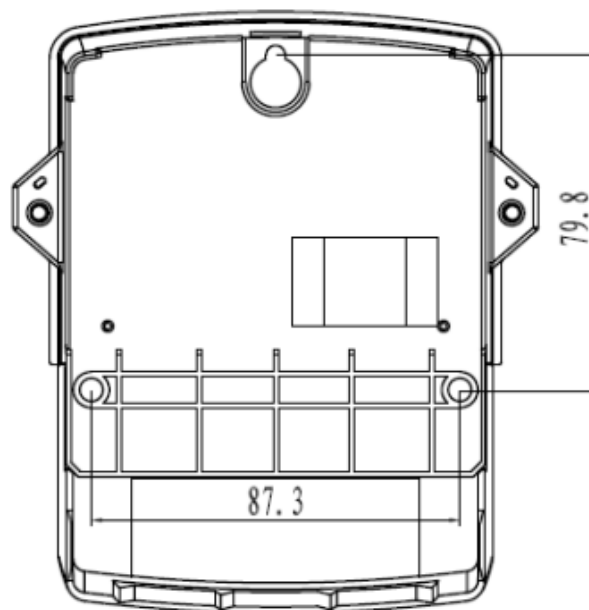
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4 Installation connection and dimensions

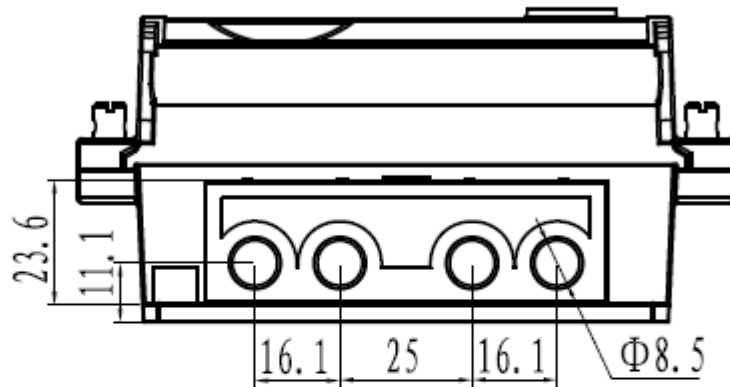
4.1 Front view, side view and dimensions



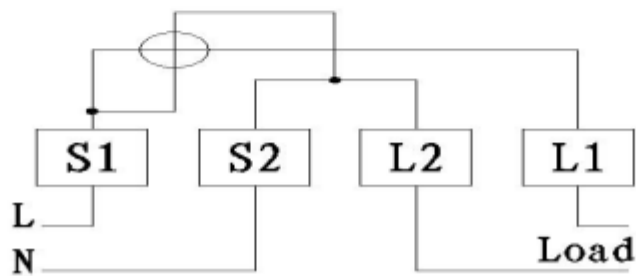
4.2 Mounting holes and dimensions



4.3 Terminal box dimensions



4.4 Connection





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5 Meter Function Introduction

5.1 Specification

Item	Sub-item	Parameter
Basic	Meter Type	Single Phase Two Wires
	Active Accuracy	Class 1.0 (IEC 62053-21)
	Rated voltage Un	230 V Voltage Range: 0.7Un~1.3Un
	Operating frequency	50Hz
	Measuring current (A)	5(90)A
	Starting current	0.004Ib
	Pulse constant	1600imp/kWh
	Power consumption	Current circuit power consumption $\leq 1VA$ Voltage circuit power consumption $\leq 2W/5VA$
	Operating temperature range	-10°C ~ +60°C
Type Testing	IEC Standard	IEC 62052-11, IEC 62053-21
Measurement	Active Energy	Active energy import(Q1 + Q4)+export(Q2 + Q3)
LED& Display	LED	1 Current reverse indicator(yellow) 1 Active pulse output(red) 1 Power on indicator(green)
	Decimal of Energy display	6+2 (Can be set)
	Display items	Display total active energy
Communication	Local Comm. Port 1	Optical : 300bps~9600bps
	Local Comm. Protocol	IEC62056-21 C mode
Mechanical	Terminal Box	BS Standard
	Enclosure protection	IP54 (indoor)
	Seal	2 Meter cover seals 1 Meter terminal cover seal
	Meter Case	90%PC+10%GF
	Against mechanical stroke	IEC62052-11



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Item	Sub-item	Parameter
	and shake	parts 5.2.2.1, 5.2.2.2 & 5.2.2.3
	Dimensions(LxWxH)	142.3mmx124.3mmx59mm
	Weight	Approx. 0.35kg

5.2 Meter Function

5.2.1 Measurement

- 1) Measurement mode: active energy = import(|Q1|+|Q4|)+export(|Q2|+|Q3|);
- 2) Class index: active: class 1.0;
- 3) The measurement contents: Total active energy.

5.2.2 Display

5.2.2.1 LCD display

- 1) The LCD full-screen display as below:



- 2) LCD Symbol

LCD symbol	Description
88888888	Display: total active energy
←	Energy reverse symbol
kWh	Active energy unit

5.2.2.2 Display items

Meter display total active energy when power on; when power off, LCD do not shut up and display total active energy continually.

5.2.3 Communication

Meter support optical communication, the Communication rate is 300bps~9600bps, communication protocol is IEC62056-21 C mode.