



NO: 13040503.0072.01

Instruction for DCM3366D-X-W1 Electronic DC Energy Meter

Guangdong Yada Electronics Co.,Ltd

Content

1. General	1
2. Specification & Main technical parameters	2
2.1 Specification	2
2.2 Technical parameters	3
3. Display and operating	5
3.1 Display and button operating	5
3.2 Characters introductions	6
4. Dimension diagram and Wiring diagram	7
4.1 External Dimension	7
4.2 Wiring diagram	7
5. Transport storage	9
6. Warranty and service	9

1. General

DCM3366D DC energy meter is a new type product of our company which adopts LCD display and RS485 communication with the microcomputer. It is suitable to be used for batteries, solar panels power DC signal measurement and energy metering equipment. It also can be used for industrial and mining enterprises, civil construction, building automation and other modern DC system for distribution.

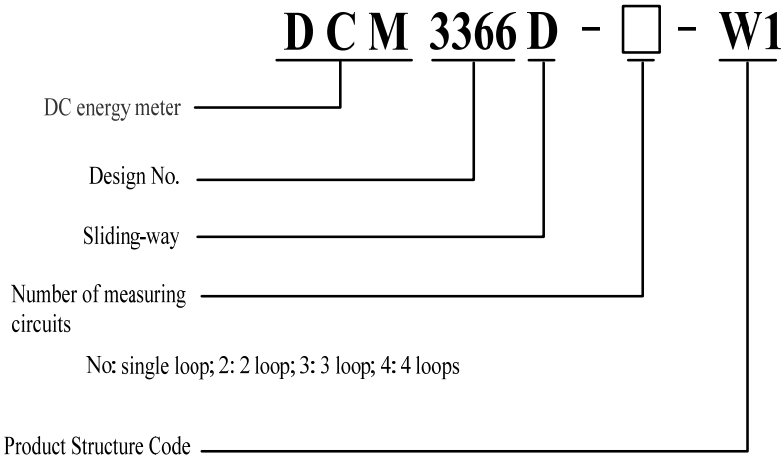
This meter should be fixed in the inside or outside to use, and the environmental temperature to apply in is $-25^{\circ}\text{C}\sim+60^{\circ}\text{C}$, relative humidity is not more than 85%(temperature is 25°C). It should not contain corrosive gas in the air. Avoid the impact of the salt spray, high electromagnetic radiation and condensation etc.

DCM3366D series provides many different types of products which can meet domestic and international market specific requirements.

Main function:

- ✧ Positive/ reverse power can be measured separately.
- ✧ Measuring 1-loop DC voltage in real time,measuring DC current power of 4branches circuit.
- ✧ Monthly statement of energy for last 12months of each branches.
- ✧ Load recording, can be settable from voltage, current, power and energy.
- ✧ Storage space of load recording: the data capacity is not less than 40 days at interval of 1 minute when recording positive energy.
- ✧ RS-485 communication port, complying with DL/T645-2007 and Modbus-RTU communication protocol.

Type definition:



2. Specification & Main technical parameters (The following parameters are subject to the nameplate)

2.1 Specification

- ✧ Accuracy class: 0.5class, 1 class, 2 class
- ✧ Rated voltage(U_n): 24V、48V、100V、350V、500V、700V, The rated voltage is greater than the 500V required for the measurement of the Less than 100V by the voltage divider.
- ✧ Rated current(I_b): 50A、100A、200A etc. can be set, Use DC0~4V or 0~20mA sensor input.
- ✧ The range of power supply: DC20V~60V、AC85V~265V or DC85V~330V optional.

2.2 Technical parameters

2.2.1 The basic error

Under the rated voltage(U_n), the basic error of meter error limit should not exceed the table.

Load current (I) variation range	Error limit	
	0.5 class	1 class
$0.05I_b \leq I < 0.5I_b$	$\pm 1.0\%$	$\pm 1.5\%$
$0.5I_b \leq I \leq 1.2I_b$	$\pm 0.5\%$	$\pm 1.0\%$

2.2.2 Operating voltage range

Specified operating voltage	$0.8U_n \sim 1.1U_n$
Extended operating voltage	$0.6U_n \sim 1.1U_n$

2.2.3 Creeping

Short-circuit current meter under the reference conditions, Voltage circuit are applied $1.1U_n$ and $0.8U_n$, in 20min time meter should not have a pulse output or pulse output representative of light no flicker.

2.2.4 Power output

- ◇ Meter with $DC \pm 12V$ power output, provide power supply for dedicated sensor.
- ◇ Output voltage deviation is less than 5% (only when the load), balance of positive and negative output power up to 2W.

2.2.5 Power Consumption

voltage line	$\leq 1W$
current line	$\leq 0.5W$
power supply line	$\leq 5W$

2.2.6 Working conditions

Working temperature range	-25℃~60℃
Limit working temperature range	-40℃~70℃
Storage and transport limit temperature	-40℃~70℃
Relative humidity	<75% (The annual average)

2.2.7 Communication port

Communicationbaudrate	RS485: 1200/2400/4800/9600bps optional The default baud is 2400
data format	E-8-1
Communication protocol	DL/T645-2007 Communication protocol Modbus-RTU

2.2.8 EMC

Insulation strength	voltage / Power / Frame: 2.0kV/min communication/power supply: 2.0kV/min
VESD	Contact discharge8 kV Air discharge8 kV
Fast pulse group immunity	2kV
Surge immunity	2kV/4kV

2.2.9 Parameters

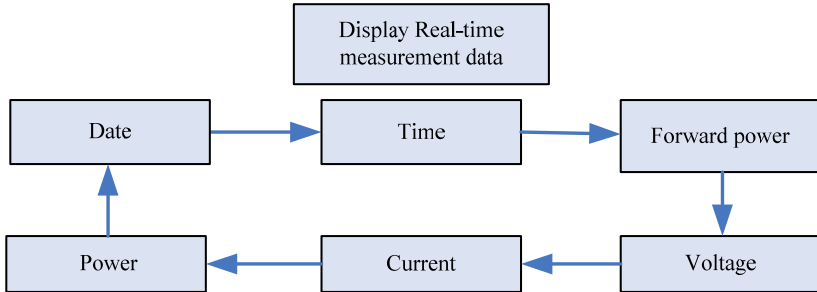
- ✧ Dimension: 72±0.5mm×76±0.5mm×63±0.5mm
- ✧ Weight: about0.5kg

3. Display and operating

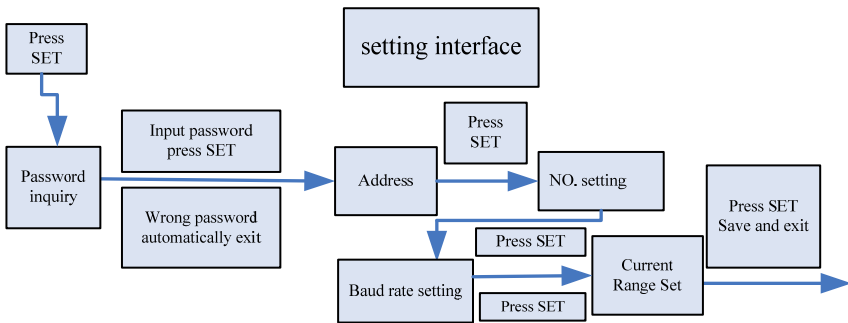
3.1 Display and button operating

Display interface is composed of display screen, three buttons, four LED lights, “▲”, “▼”, “SET” button.

Press “▲”、“▼” can cycle display date, time, energy, voltage, current and power.



Press “SET” to enter setting interface

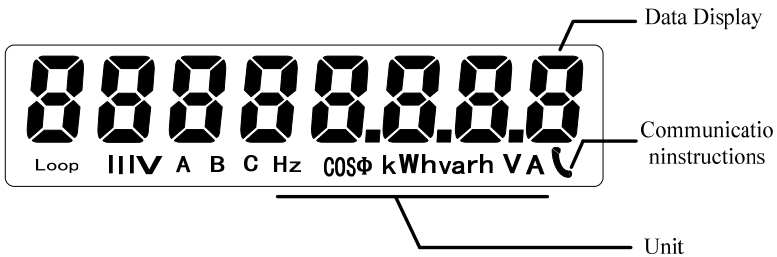


Entering a password, modify the address, table number, baud rate, by "▲" select value, "▼" shift

Buttons cannot wake up the LCD display when the meter powered off.

Pulse indicating: Energy pulse indicating, red, flickers when the forward power energy is consumed otherwise out.

3.2 Characters introductions



Picture 1 LCD display interface for reference

LCD display character and display description contrast

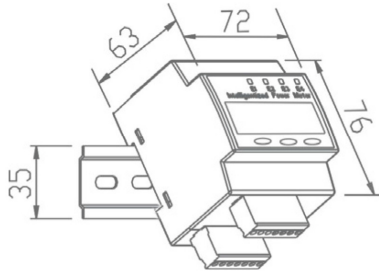
LCD display	Caption	LCD display	Caption
P5d 3366	Password3366	02400 E	Baud Rate and Parity
XR 146034	The high 6 bit of bar code	14-12-30	Date
LR300051	The low 6 bit of bar code	11:48:30	Time
ãRdr 33	Modbus address	000 kWh	Energy
[ã1 0100	Current range of the 1 st loop	22999 V	Voltage
[ã2 0600	Current range of the 2 st loop	7100 A	Current
[ã3 0600	Current range of the 3 st loop	14829 kW	Power

Note: There are four-loop displaying for energy, current and power and the symbols are

1(I), 2(II), 3(III), 4(IV).

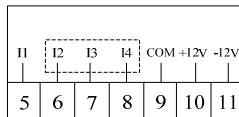
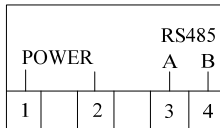
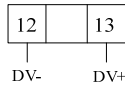
4. Dimension diagram and Wiring diagram

4.1 External Dimension (Units: mm, Tolerance: ± 0.5)



4.2 Wiring diagram

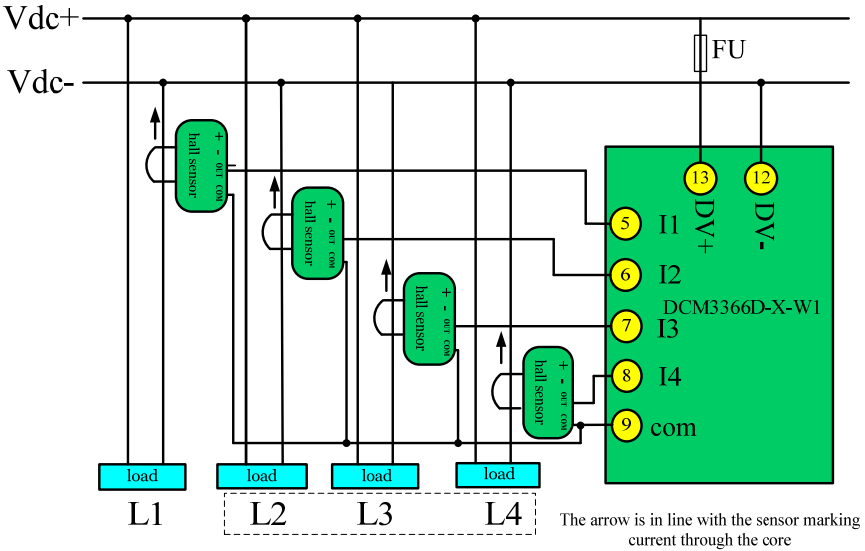
Terminal definition



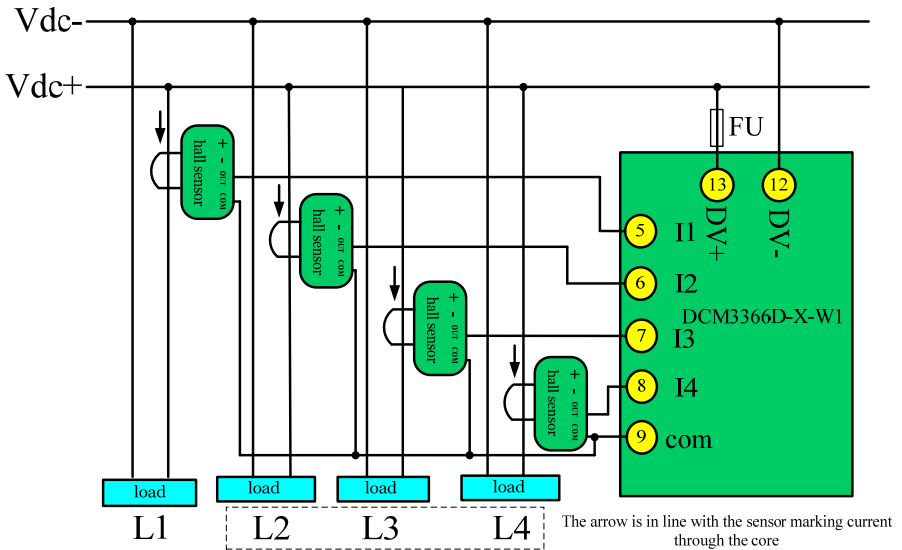
Terminal instruction

1,2	POWER	power supply (regardless positive and negative)
3,4	A,B	RS485 communication
5~8	11~14(Vopti onal)	Current sensor output is positive
9	COM	The common port of sensor input and voltage output
10,11	$\pm 12V$	DC $\pm 12V$ output
12	DV-	Sampling voltag (-)
13	DV+	Sampling voltag (+)

Wiring diagram:



DC negative system connection



DC positive system connection

5. Transport storage

5.1 The products should not be subject to server impact during transportation or taking down the seal, and should follow GB/T13384-2008"General Instrument packaging technology," to transport and store.

5.2 This product belongs to the electronic device, should be avoided heavy impact and collision.

5.3 The ambient temperature should be -40~70℃ for storage, the relative humidity should be no more than 85%.

5.4 The meter should lay under the conditions of the package, a high degree of no more than 5 stacked layers. If find the appearance of damage when unpacking, the meter should not be installed or power-on. Meter should not be stored after the package is taken down. The height of single meter stacked not more than 5 pieces.

6. Warranty and service

Within 18 months after delivery, if find any unconformity on the condition that users have followed the specified requirements of instructions and the sealed mark remains in good condition (or The Power Metering Sector provides relevant certificates), our company is in charge of free repair.

Note: The above pictures are for reference only, the products are subject to the actual product.



Guangdong Yada Electronics Co.,Ltd.

Address: Yada industry park, Gaopugang, Heyuan city,
Guangdong Province.

Zip code: 517000

Website: <http://www.yada.com.cn>

E-mail: market@yada.com.cn

hot-line: 400-830-0868

Copyright, all rights reserved. Specification subject to change
without prior notice.