561

DJSF1352-D 系列直流电能表

DJSF1352-D Series DC power meter

安装使用说明书 V1.1

Installation and Operation Instruction V1.1

安科瑞电气股份有限公司

ACREL CO., Ltd.

申　　明

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DECLARATION

This company reserve power of revision of product specification described in this manual, without notice. Before ordering, please consult local anget for the latest specification of product.

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1 概述 Overview

DJSF1352-D导轨式直流电能表主要针对直流充电桩设计，可测量直流系统中的电压、电流、功率以及电能等。

The DJSF1352-D rail-mounted DC power meter, specifically designed for DC charging piles, is capable of measuring voltage, current, power, and energy, among other parameters.

2 型号 Model

型号 Model	说明 Clarification
DJSF1352-D-360	直流电能表(最大测量电流 360A) DC Energy Meter(Maximum current 360A)
DJSF1352-D-600	直流电能表(最大测量电流 600A) DC Energy Meter(Maximum current 600A)
DJSF1352-L	液晶显示模块（用于 DJSF1352-D-600 扩展显示） LCD Display Module(For DJSF1352-D-600 extended display)

3 技术参数 Technical parameters

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Technical parameters</td><td colspan="2">指标
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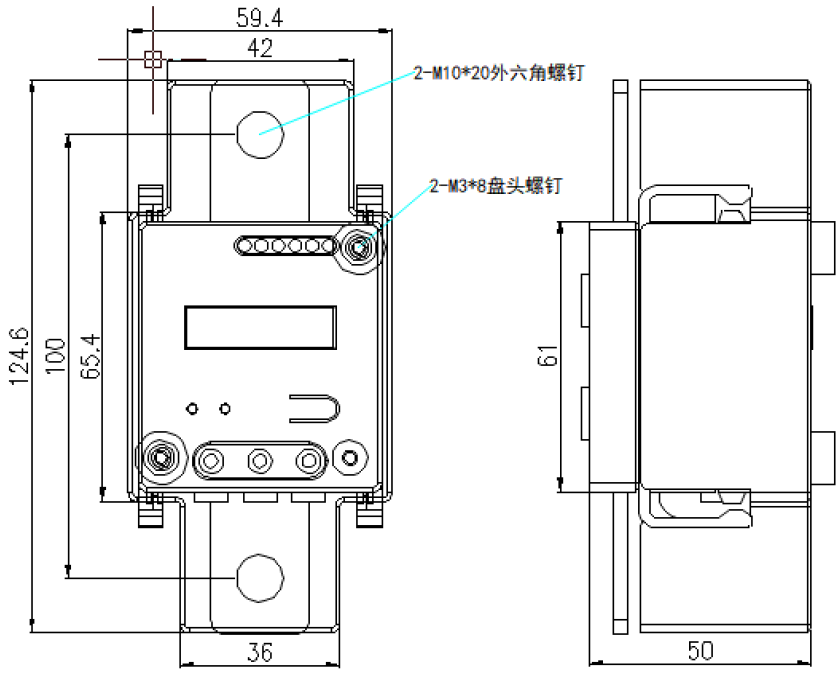
<tr><td rowspan="3">输入
Input</td><td rowspan="2">标称值
Nominal value</td><td>电压输入
Voltage input</td><td>电流输入
Current input</td></tr>
<tr><td>DC 0-1000V</td><td>DJSF1352-D-360:100(360)A
DJSF1352-D-600:4-90(600)A</td></tr>
<tr><td>功耗
Power consumption</td><td colspan="2">电压：≤0.2VA，电流≤0.1VA
Voltage: ≤0.2VA, current ≤0.1VA</td></tr>
<tr><td colspan="2">精度等级
Accuracy class</td><td colspan="2">B 级（1 级）
Class B(Class 1)</td></tr>
<tr><td rowspan="5">功能
Function</td><td>显示
Display</td><td colspan="2">段码式液晶屏（LCD）
segment LCD screen (LCD)</td></tr>
<tr><td>通信接口
Communication Interface</td><td colspan="2">RS485</td></tr>
<tr><td>通信协议
Communication protocol</td><td colspan="2">Modbus-RTU,DL/T 645-2007,DLT698</td></tr>
<tr><td rowspan="2">脉冲输出
Pulse output</td><td colspan="2">一路秒脉冲输出，一路电能脉冲输出
A second pulse output, a energy pulse output</td></tr>
<tr><td colspan="2">见仪表菜单设置中 SYS->PLUS 中显示，例：显示 100，即为 100imp/kWH
See the SYS->PLUS display in the meter menu settings. For example: The meter displays 100, which is 100imp/kWH</td></tr>
<tr><td rowspan="2">工作电源
Power Supply</td><td>电压范围
Voltage range</td><td colspan="2">DC 9—36V</td></tr>
<tr><td>功耗
Power consumption</td><td colspan="2">≤ 3W</td></tr>
</table>

工频耐压 Power frequency withstand voltage		电源//信号输入//其他回路 4.4KV/1min Power supply // Signal input / / Other circuits 4.4kV/1min
冲击耐压 Impulse withstand voltage		±6KV
绝缘电阻 Insulation resistance		≥ 40M Ω
平均无障碍工作时间 Average barrier-free working hours		≥50000h
环境 Environment	温度 Temperature	工作温度：-40℃～+70℃； 贮存温度：-40℃～+70℃ working temperature: -40 °C ~ +70 °C; Storage temperature: -40℃~+70℃
	湿度 Humidity	≤95%RH，不结露，不含腐蚀性气体 ≤95%RH, no condensation, no corrosive gas
	海拔 Altitude	≤2000m

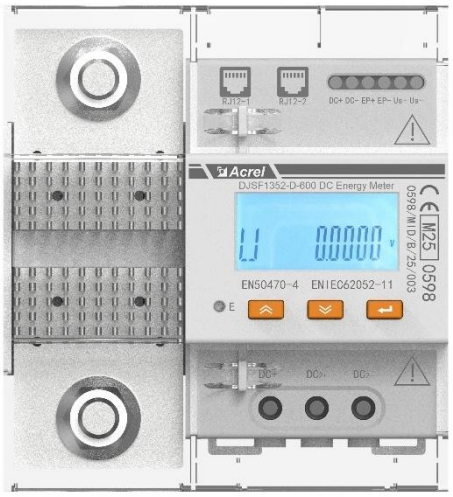
4 安装指南 Installation guide

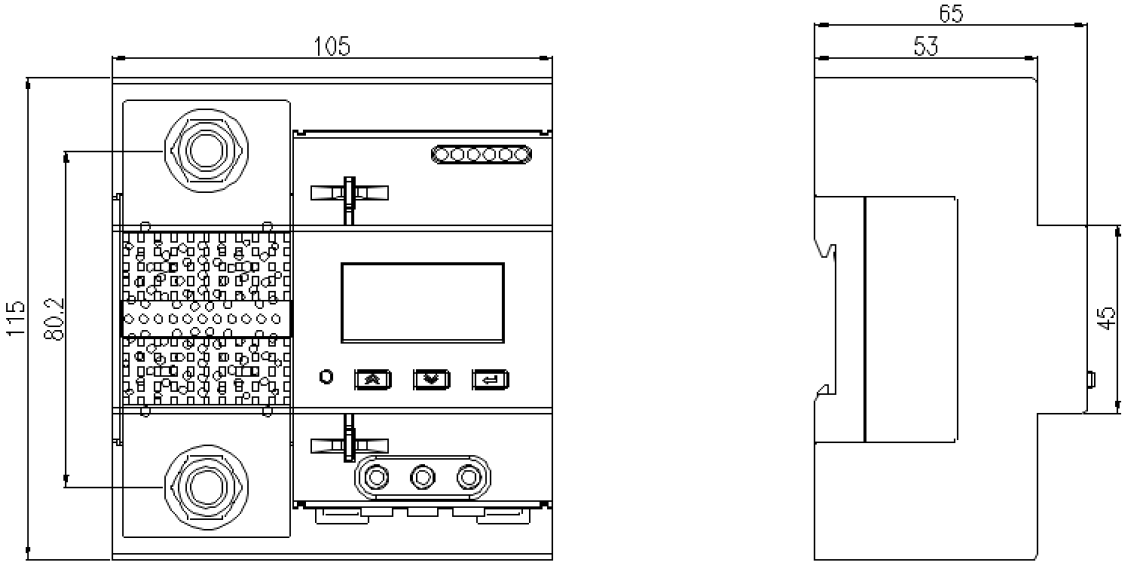
4.1 外形及安装尺寸 Shape and installation dimensions

(1) DJSF1352-D-360

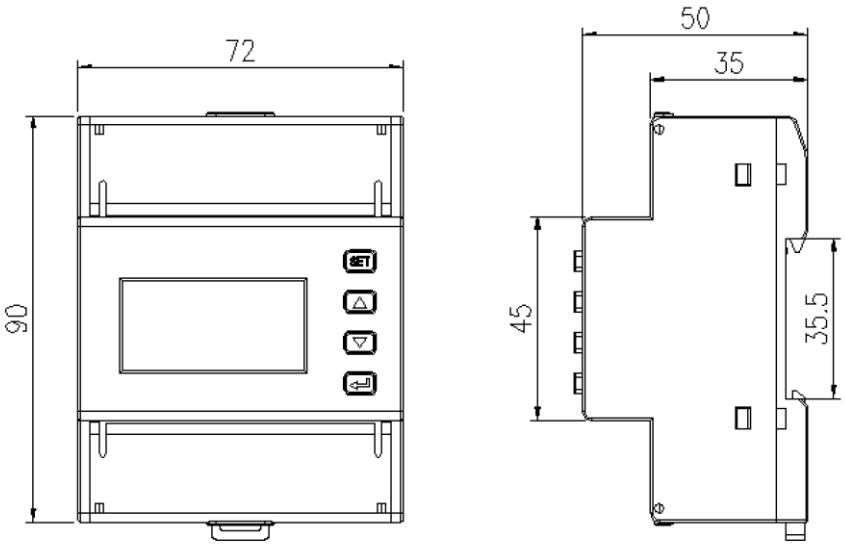


(2) DJSF1352-D-600





(3) DJSF1352-L



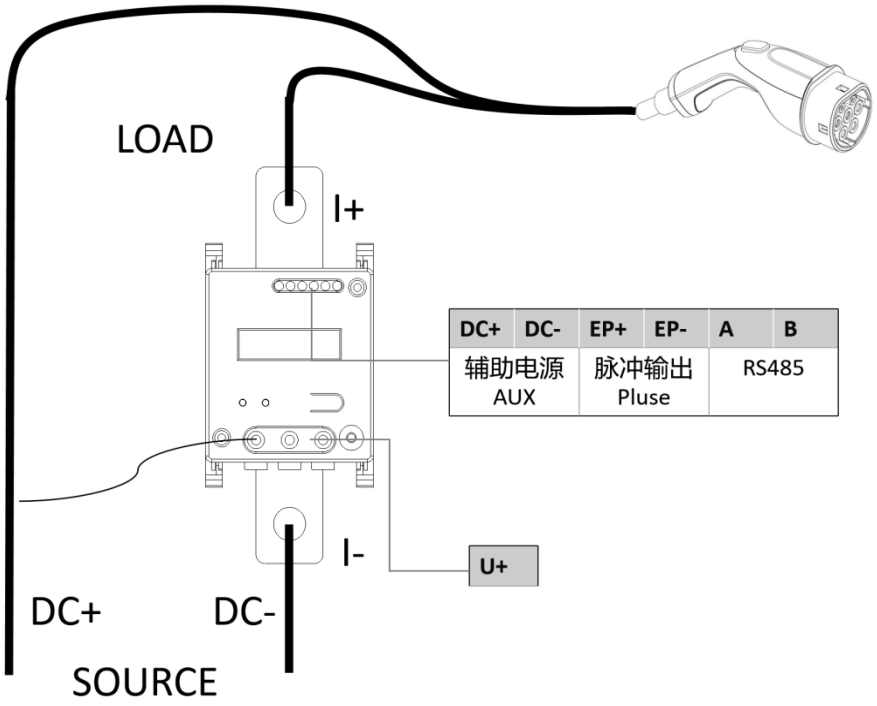
4.2 产品安装 Product installation

采用标准的 DIN35mm 导轨式安装

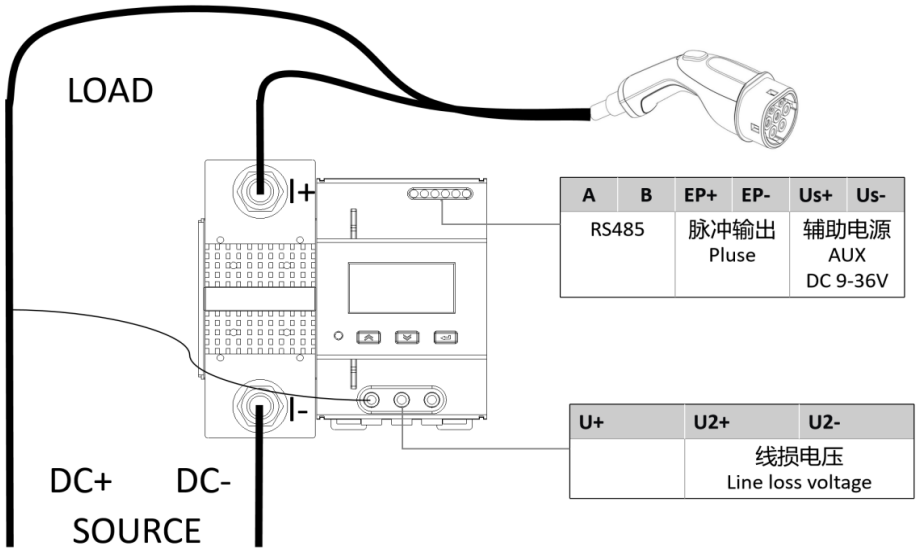
The meter adopts the standard DIN35mm rail-mounting design.

4.3 端子及接线 Terminals and wiring

(4) DJSF1352-D-360



(5) DJSF1352-D-600

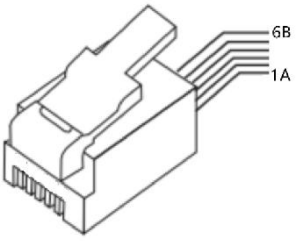


(1) 扩展 RS485 通讯端子（RJ12 口）

Expanded RS485 communication terminal (RJ12 port)

RJ12-1					
1	2	3	4	5	6
485-A			GND	+12V	485-B

RJ12-2					
1	2	3	4	5	6
485-A					485-B



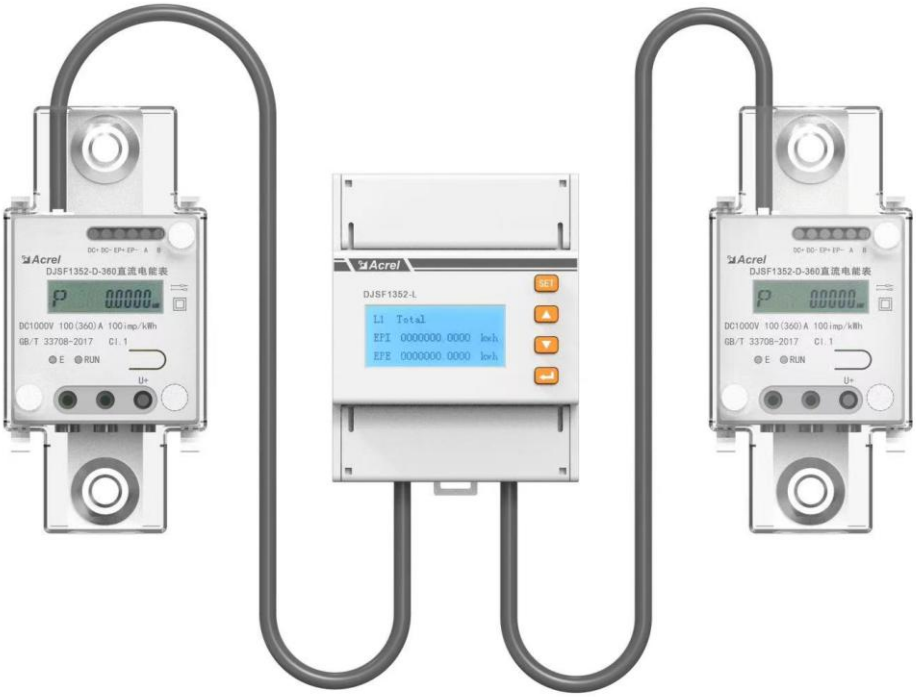
用于扩展显示模块（见4.4）

For expanding the display module(see 4.4)

4.4 显示模块接线 Display module wiring

1*显示模块+1*直流电能表

1*Display Module + 1*DC Energy Meter



1*显示模块+2*直流电能表

1*Display Module + 2*DC Energy Meter

4.5 注意事项 Precautions

4.5.1 通信接口接线Communication interface wiring

在进行 RS485 通讯连接时，建议采用屏蔽双绞线，每芯截面至少为 0.5mm2，分别连接 A、B 端，并确保屏蔽层可靠接地。布线过程中应避免将通讯线与强电电缆或其他强电场环境并行，以减少电磁干扰，保证通信的稳定性。

The recommended communication connection utilizes a three-core shielded cable, with each core having a cross-sectional area of no less than 0.5mm^2, connected to A and B respectively, and the shielding layer grounded. The wiring should be kept away from strong cables or other strong electric field environment.

4.5.2 端子螺丝扭力terminal screw torque

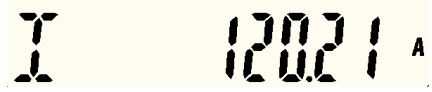
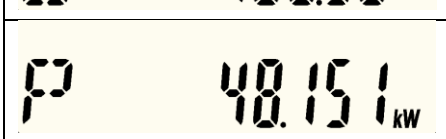
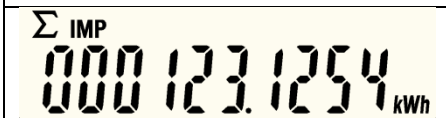
规格 Specification	推荐扭矩值 Recommended Torque Value	备注 Remarks
M2 端子 M2 Terminal	0.2 N·m	用于通讯 A、B，脉冲 EP+、EP-，辅助电源 Us+、Us-拧固 Tighten the screws for communication A, B, pulse EP+, EP-, and auxiliary power supply Us+, Us-.
M3 螺钉 M3 Screw	0.5 N·m	用于电压端子、外壳连接拧固 For tightening the voltage terminal and the housing connection.
M10 螺钉 M10 Screw	25 N·m	用于分流器两端电流线缆固定 For fixing the current cables at both ends of the shunt.

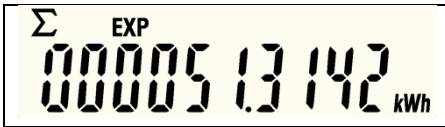
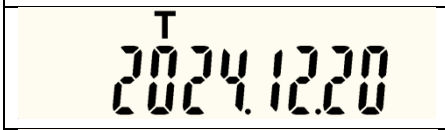
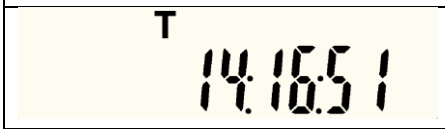
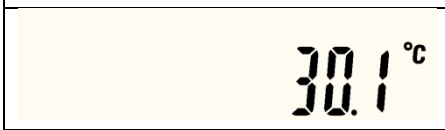
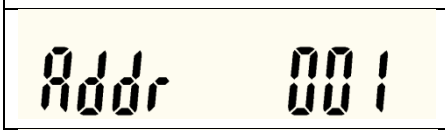
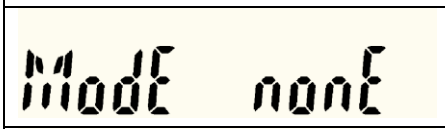
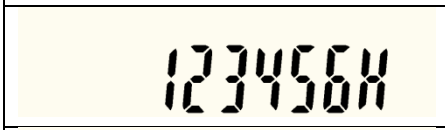
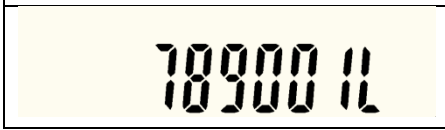
5 使用指南 Operation guide

5.1 测量参数 Measurement parameters

使用按键可切换显示界面，使用内容如下：

The display interface can be switched by using the buttons. The usage contents are as follows

显示示例 Display example	内容 Content	显示示例解析 Analysis of the Displayed Examples
	电流 current	120.21A
	电压 voltage	400.56V
	功率 power	48.151kW
	正向有功电能 forward Active Energy	123.1254kwh

	反向有功电能 reverse Active Energy	51.3142kwh
	年月日 year、month、day	2024-12-20
	时分秒 hour、minute、second	14:16:51
	仪表内部温度 the internal temperature of the instrument	30.1℃
	modbus 地址 the slave address	1
	RS485 波特率 RS485 Baud Rate	9600
	RS485 校验方式 RS485Parity mode	无校验：none （偶校验：even、奇校验：odd）
	DLT-645 地址高八位 The upper eight bytes of the DLT - 645 address	123456789001
	DLT-645 地址低八位 The lower eight bytes of the DLT - 645 address	

5.2 参数修改 Parameter modification

在测量显示菜单的任意显示项下，长按相应按钮即可进入“PASS”界面，系统会提示输入密码，默认密码为 0001。若密码输入错误，屏幕将显示“0000”，此时可重新输入。若密码输入正确，则可进行参数设置。设置完成后长按  进入“SAVE”界面，按  键，切换为“YES”后按  则保存并退出，在“no”下按  则不保存直接退出。

When viewing any display item, press and hold to access the "PASS" interface. You will be prompted to enter a password; the default is 0001. Press again to proceed. If the password is entered incorrectly, return to "0000" and try again. If entered correctly, you can proceed to set the parameters. Press  for a long time to enter the "SAVE" interface, press  to switch to "YES", then press  to SAVE and exit, and press  when switching to "NO" to exit directly, with no need to "SAVE".

可设置项：

Settable Data Items:

符号 Symbol		含义 Meaning	范围 Scope
SYS	diSP	上电后首界面 the initial interface after powering on	0-12
	diSP.tim	轮显时间 scrolling display time	1-90(s)

	blCd	背光时间 backlight duration	0-9999(s) 0：常亮 constantly illuminated
	Code	密码 password	0-9999
	Ep.dot	电能小数位数 decimal places of electrical energy	2、3、4
	Clr EP	清除电能 clear electrical energy	密码修改为 9996 后清除电能 After the password is changed to 9996, the electrical energy will be cleared
	PULS	脉冲常数 pulse constant	600A:1-100 300A:1-300
IN	NEg.U	电压反接 reverse voltage connection	off/on
	NEg.I	电流反接 reverse current connection	off/on
	LESS.U	电压屏蔽值 voltage shielding value	0%～20.0%
	LESS.I	电流屏蔽值 current shielding value	0%～20.0%
	LESS.EP	起动功率 starting power	0%～2.5%
bUS	Addr	设备地址 device address	1-247
	bAud	波特率 baud rate	1200、2400、4800、9600、19200、38400
	Mode	校验方式 parity	无校验：none 偶校验：even 奇校验：odd 2 位停止位：2bit
	Baud2	第二路通讯波特率 baud rate of the second communication channel	1200、2400、4800、9600、19200、38400
	Mode2	第二路通讯波校验方式 parity of the second communication channel	无校验：none 偶校验：even 奇校验：odd 2 位停止位：2bit
	dlt.4FE	645 回复增加前导符 FE the 645 reply adds a leading symbol "FE"	Add0：不加前导符 add4：加 4 个前导符 FE
dAtE		日期 date	
tiME		时间 time	
vEr		软件版本号 Software version number	

6 通讯指南 Communication Guide

6.1 概述 Overview

DJSF1352-D 仪表采用 Modbus-RTU 协议：“9600，8，n，1”，其中 9600 为默认波特率，可通过编程修改为 1200、2400、4800、9600 等，8 表示有 8 个数据位；n 表示无奇偶校验位；1 表示有 1 个停止位。

The DJSF1352-D meter uses the Modbus-RTU protocol: “9600, 8, n, 1”， where 9600 is the default baud rate, which can be programmed to change to 1200, 2400, 4800, 9600, etc. 8 means there are 8 data bits ;n indicates no parity; 1 indicates 1 stop bit.

6.2 Modbus 协议 Modbus protocol

RO：只读　　R/W：读写　　RO: Read Only　R/W: Read/ Write

地址 Address	名称 Name	类型 Type	备注 Note	word
0-1	直流电压值 DC voltage value	RO	浮点，单位 V Float, unit V	2
2-3	直流电流值 DC current value	RO	浮点，单位 A Float, unit A	2
4-5	功率值 Power value	RO	浮点，单位 kW Float, unit KW	2
6-9	总正向有功电能 Total positive active energy	RO	64 位无符号整形，单位 0.1WH，高字节在前，低字节在后 unit WH, high byte is first, low byte is later	4
10-13	总反向有功电能 Total reverse active energy	RO		4
14-17	正向有功电能（去线损） Positive active energy(excluding line losses)	RO		4
18-21	反向有功电能（去线损） Reverse active energy(excluding line losses)	RO		4
22-23	正向线损有功电能 Positive active energy of line loss	RO	32 位无符号整形，单位 0.1WH，高字节在前，低字节在后 unit WH, high byte is first, low byte is later	2
24-25	反向线损有功电能 Reverse active energy of line loss	RO		2
26	温度 Temperature	RO	16 位有符号整形，单位 0.1℃	1

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