

1. Intelligent metering terminal



Typical Application Scheme of DC EV Charger



High-accuracy electrical variables measurement
Energy metering



Communication protocol:
Modbus-RTU
DL/T645



Protection grade:
IP54



Operating temperature range:
-40°C~+70°C



CE Certification
RoHS Certification
IEC62053-41:2021



Executive standards
JJG1149

◦ Single charging plug PD195Z-CD31F



◦ Double charging plug PD195Z-CD32F



Product Introduction

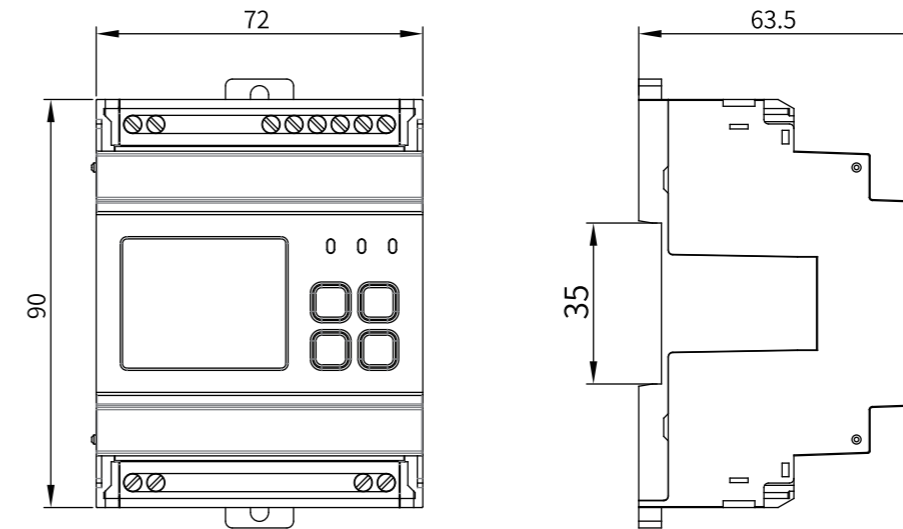
PD195Z-CD31F DC energy meter is applicable to DC EV charger. It can measure the voltage, current and power of one DC circuit, provide accurate metering function, and have RS485 communication interface to realize remote data transmission.



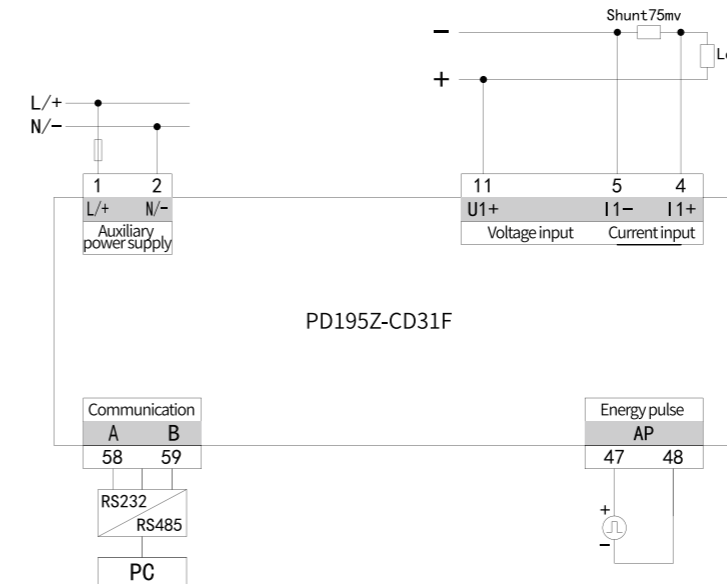
Technical Parameter

Electrical Characteristics		
Accuracy	Voltage, current: Class 0.5, Power: Class 1 Energy: Class B	
Voltage input	Rated voltage U_n	DC 1000V CATII
	Over voltage	Continuous: 1.2 U_n
	Power consumption	≤ 0.2 W
Current input	Rated value I_n	75mV (input via shunt)
	Minimum current	0.05 I_n
	Maximum current	1.2 I_n
	Start-up current	0.004 I_n
	Power consumption	≤ 0.1 W
Working power supply		
Rated range	AC/DC: 80~270V or DC: 9~36V	
Power consumption	≤ 5 VA or ≤ 2 W	
Communication Characteristics		
RS485 communication port	Modbus-RTU protocol or DL/T645 protocol optional, baud rate up to 38400bps	
Multi-functional output interface		
Energy pulse	Pulse width 80ms \pm 20ms	
Real-time clock		
Error	≤ 0.5 s/24h	
Mechanical Characteristics		
Dimension (mm)	72 \times 90 \times 63.5	
IP protection	Front case: IP54, rear case IP20	
Environmental Characteristics		
Working temperature	(-40 ~ 70) $^{\circ}$ C	
Storage temperature	(-40 ~ 70) $^{\circ}$ C	
Relative humidity	(5 ~ 95)% (no condensation)	
Altitude	≤ 2000 m	
Comply to standards		
GB/T 33708-2017		
IEC61326-1		
IEC61010-1		

Dimension (mm)



Wiring



Meter function terminals shall be numbered uniformly, as shown in the following table

Power Supply	1,2	AC/DC
Current signal	4,5	Current input (75mV shunt)
Voltage signal	4,11	Voltage input
Energy pulse output	47,48	Active energy pulse output
RS485 communication	58,59	A and B respectively

Note: 1. 1 and 2 are meter auxiliary power supplies. Please ensure that the power supplies are suitable for this series of products to prevent damage to the products.

2. Please connect the detailed wiring terminals according to the wiring diagram on the specific product case.

3. Do not connect the current terminal in suspension to avoid displaying wrong values.

Product model

PD195Z-CD32F DC energy meter is applicable to DC EV charger. It support to measure the voltage, current and power of two DC circuits, provide accurate metering function, and have RS485 communication interface to realize remote data transmission.



Product model	Measurement (2 channels)				Communication	Energy pulse
	Voltage U	Current I	Power P	Energy E		
PD195Z-CD32F	DC 1000V	DC 75mV	■	■	1 channel	2 channels

Product model

Electrical Characteristics

Accuracy	Voltage, current: Class 0.5, Power: Class 1 Energy: Class B	
Voltage input	Rated voltage U_n	DC 1000V CATII
	Over voltage	Continuous: $1.2U_n$
	Power consumption	≤ 0.2 W
Current input	Rated value I_n	75mV (input via shunt)
	Minimum current	0.05 I_n
	Maximum current	1.2 I_n
	Start-up current	0.004 I_n
	Power consumption	≤ 0.1 W

Working power supply

Rated range	AC/DC: 80~270V or DC: 9~36V
Power consumption	≤ 5 VA or ≤ 2 W

Communication Characteristics

RS485 communication port	Modbus-RTU protocol or DL/T645 protocol optional, baud rate up to 38400bps
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Multi-functional output interface

Energy pulse	Pulse width 80ms \pm 20ms
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Real-time clock

Error	≤ 0.5 s/24h
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Mechanical Characteristics

Dimension (mm)	72 \times 90 \times 63.5
IP protection	Front case: IP54, rear case IP20

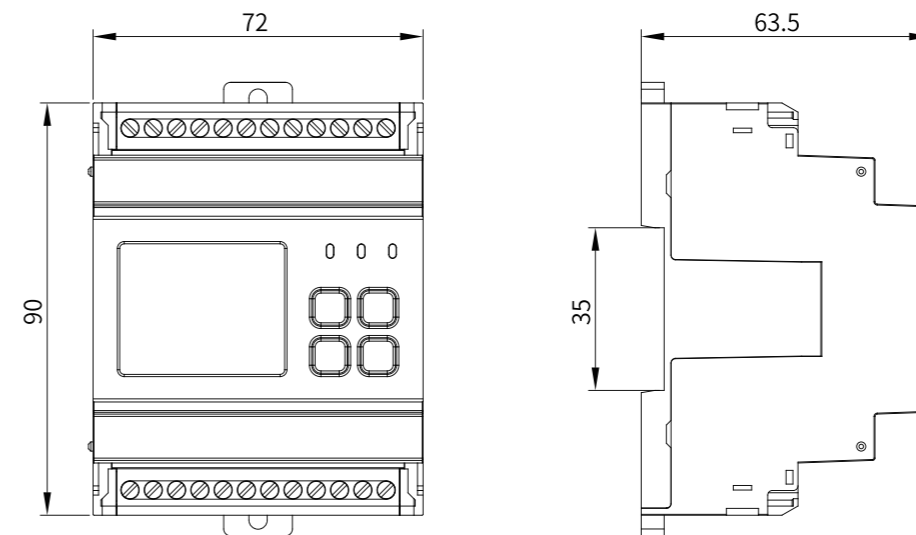
Environmental Characteristics

Working temperature	(-40~70) $^{\circ}$ C
Storage temperature	(-40~70) $^{\circ}$ C
Relative humidity	(5~95)%(no condensation)
Altitude	≤ 2000 m

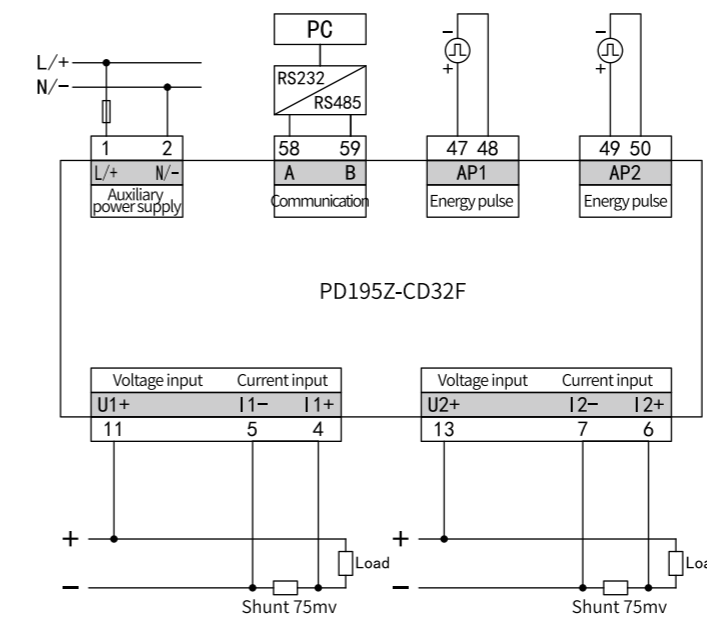
Comply to standards

GB/T 33708-2017
IEC61326-1
IEC61010-1

Dimension (mm)



Wiring



Meter function terminals shall be numbered uniformly, as shown in the following table:

Power Supply	1,2	Auxiliary working power supply
Current signal	4,5,6,7	75mV input
Voltage signal	11,13	DC voltage input
Energy pulse output	47,48,49,50	47,49 is the positive end of the passive output, which is connected to the positive end of the external power supply
RS485	58,59	A and B respectively

- Note: 1. 1 and 2 are meter auxiliary power supplies. Please ensure that the power supplies are suitable for this series of products to prevent damage to the products.
2. Please connect the detailed wiring terminals according to the wiring diagram on the specific product case.
3. Do not connect the current terminal in suspension to avoid displaying wrong values.