

CHINT DDSU 666

CHINT DDSU666 Single-Phase Smart Energy Meter User Manual

Model: DDSU 666

1. INTRODUCTION

The CHINT DDSU666 is a single-phase smart electronic energy meter designed for accurate measurement of electrical energy. It features a DIN35mm rail mounting, direct connection for 5(80)A current, and an RS485 interface supporting Modbus RTU protocol. This meter is MID certified, ensuring reliable and compliant energy monitoring for various applications in industrial, mining, hotel, school, and public building environments.





Figure 1: Front view of the CHINT DDSU666 Smart Energy Meter.

2. SAFETY INFORMATION

WARNING: Always cut off the power supply before any installation, wiring, or maintenance work to avoid electric shock. Wear insulating gloves and safety glasses to ensure your safety. Installation and maintenance should only be performed by qualified personnel in accordance with local electrical codes and regulations.

Your browser does not support the video tag.

Video 1: Official CHINT DDSU666 Installation Guide. This video provides a visual guide for safe installation and operation procedures. Please ensure to follow all safety precautions mentioned in the video and this manual.

3. PRODUCT OVERVIEW

The CHINT DDSU666 is a compact and intelligent energy meter with the following key features:

- **Single-Phase Direct Connection:** Designed for 5(80)A current.
- **DIN35mm Rail Mounting:** Easy installation in standard distribution boards.
- **RS485 Communication:** Supports Modbus-RTU protocol for remote control and data acquisition.
- **MID Certified:** CE-EMC and CE-LVD certified with Class 1 accuracy (+/-1%).
- **Wide Operating Temperature:** -10°C to +45°C (extreme: -25°C to +75°C).
- **Measured Values:** Displays instantaneous power (kW), voltage (V), current (A), power factor (PF), frequency (Hz),

imported energy (EIMP kWh), exported energy (EEXP kWh), and total energy (kWh).

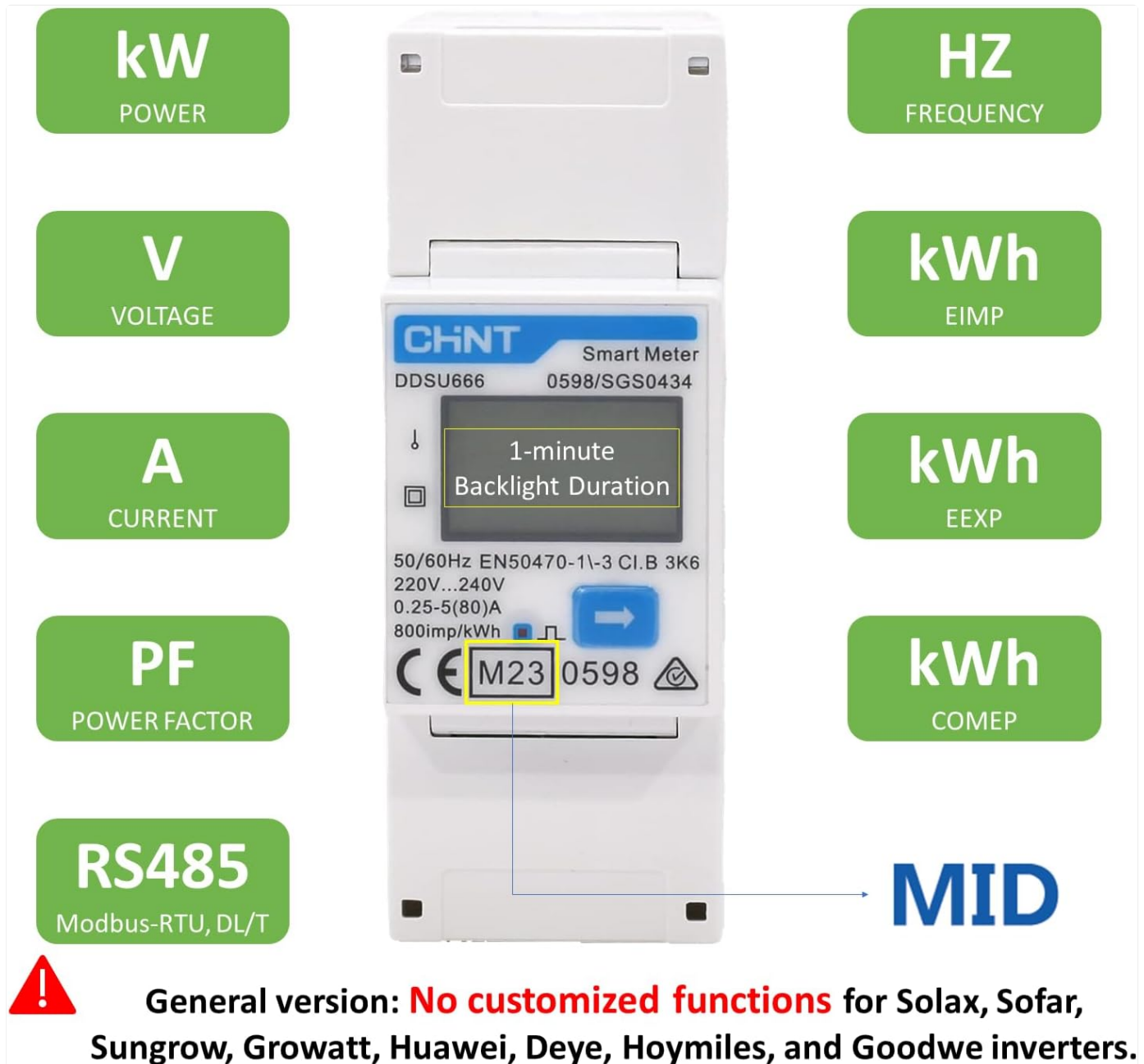


Figure 2: Display interface showing various measured parameters.

Important Note: This product is the universal version of CHINT DTSU666/DTSU666-CT/DDSU666/DDSU666-CT models. It is not compatible with inverters, Wallbox charging stations, or other devices requiring customized functionalities such as output power limitation and load balancing.

DDSU666/-CT

Standardversion VS kundenspezifischer Version

Standard Version VS Custom Version

Standardversion Standard Version



- RS485 Schnittstelle, unterstützt Modbus RTU
- RS485 interface, supports Modbus RTU
- Kompatibel mit gängigen Anwendungen für zuverlässige Energiemessung
- Compatible with common applications for reliable energy measurement
- Unterstützt grundlegende Funktionen ohne Anpassungen
- Supports basic functions without customizations

Kundenspezifische Version Custom Version



DDSU666-H for Huawei



DDSU666 for Hoymiles

Beispiel
Example

- Anpassungen für spezifische Wechselrichter und Ladestationen
- Custom adjustments for specific inverters and charging stations
- Unterstützt maßgeschneiderte Protokolle und Funktionen
- Supports customized protocols and features
- Customized for Huawei, Sungrow, FoxESS, SolaX, Sofar, Growatt,, Deye, Hoymiles, Goodwe...



We only offer the standard version of the DDSU666/-CT.
For custom versions, please contact the manufacturer directly.

Figure 3: Comparison between the standard version (DDSU666) and custom versions of CHINT meters, highlighting the standard version's Modbus RTU support and general energy measurement capabilities.

4. SETUP AND INSTALLATION

Before installation, carefully read these instructions to ensure the meter is suitable for your intended use and to select an appropriate installation location. Ensure all necessary tools are available.

4.1. Tools Required

- Wire stripper
- Crimping pliers
- Appropriate cables and terminals
- Flat-head screwdriver
- Electric screwdriver (optional)

4.2. Mounting the Meter

The DDSU666 meter is designed for DIN rail mounting (35mm).

1. Align the top of the meter with the upper edge of the DIN rail.
2. Use a flat-head screwdriver to pull down the lower latch, then press the base of the meter firmly onto the rail to secure it.
3. To remove the meter, pull down the latch with a flat-head screwdriver, lift the base of the device to detach it from the DIN rail, then tilt it forward for easy removal.

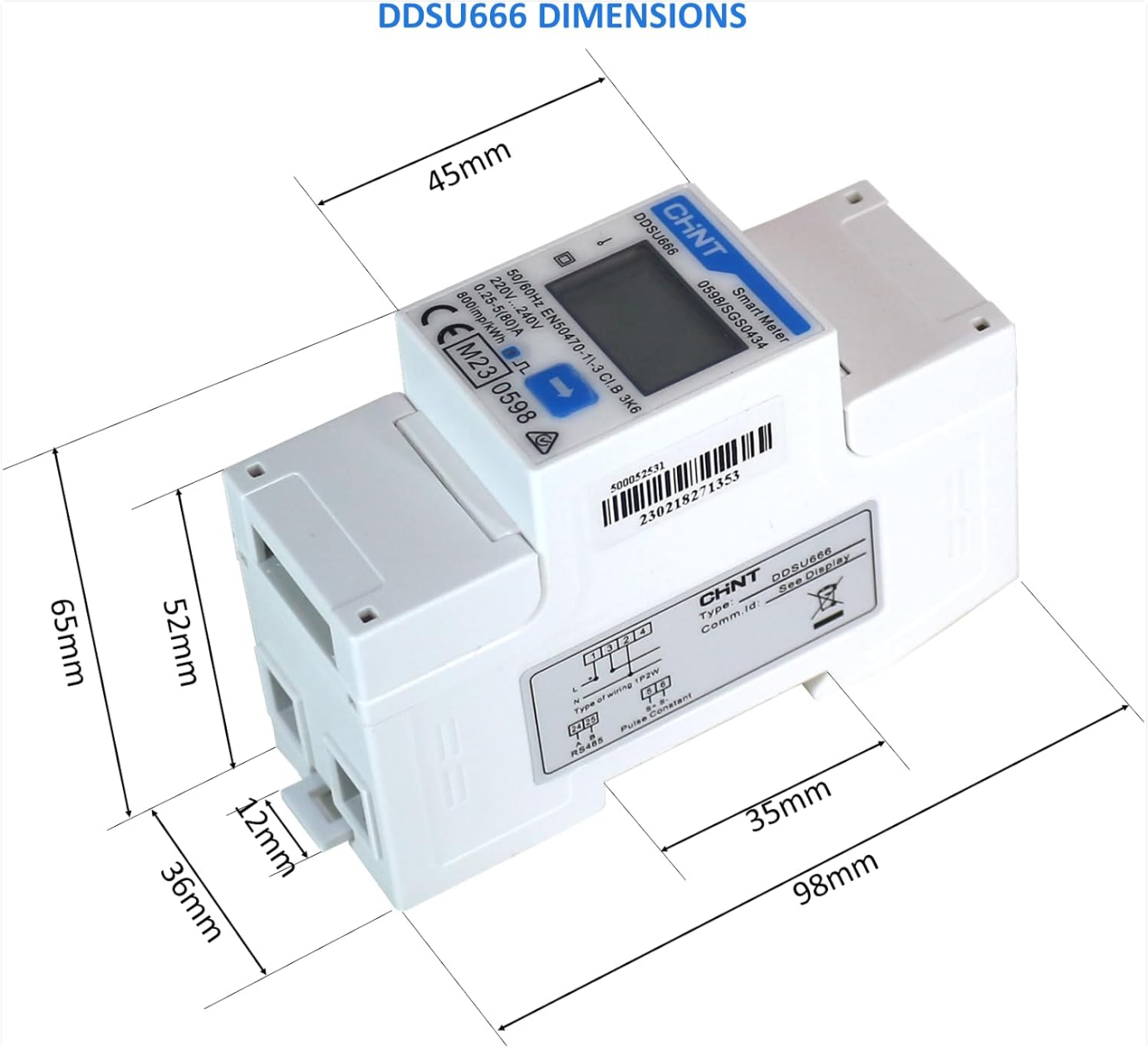


Figure 4: The DDSU666 meter securely mounted on a DIN rail.

4.3. Wiring Connections

Before wiring, select a cable cross-sectional area appropriate for the product's rated current to ensure a safe and efficient connection. Users can choose between two wiring options: top-in/bottom-out or bottom-in/top-out.

- Use a wire stripper to remove 9 to 11 mm of copper cable sheath.
- Use crimping pliers to crimp the terminal to the end of the cable, ensuring a reliable connection.

Table 1: Recommended Wire Specifications

Wires	Port Description	Port No.	Type	Cross-sectional Area	Outside Diameter

Wires	Port Description	Port No.	Type	Cross-sectional Area	Outside Diameter
Voltage and Current Wire	L or UL, I* (Bottom-in Top-out)	1	Multi-core outdoor copper cable	4mm ² ~25mm ²	5mm~10mm
	N or UN (Bottom-in Top-out)	2			
	L or UL, I* (Top-in Bottom-out)	3			
	N or UN (Top-in Bottom-out)	1			
Communication Cables	RS4851A	24	Two-core outdoor twisted pair shielded cable	0.25mm ² ~1.5mm ²	4mm~11mm
	RS4851B	25			
	RS4852A (optional)	5 (optional)			
	RS4852B (optional)	6 (optional)			

**The wiring method is subject to the actual product.*



Figure 5: Wiring diagram for the DDSU666 meter. Terminals 1 and 3 correspond to the phase (L) of the power supply and load, while terminal 2 corresponds to the neutral (N) of the power supply. Terminals 24 and 25 are for RS485 communication (A and B respectively).

After connecting the cables, tighten the screws firmly to ensure the stability and safety of the connection. The recommended torque for terminal screws 1, 2, 3, and 4 is 0.9-1.1 Nm (maximum 1.7 Nm). For terminal screws 5, 6, 24, and 25, the recommended torque is 0.15 Nm to 0.25 Nm (maximum 0.4 Nm).

5. OPERATING INSTRUCTIONS

Once the meter is correctly installed and powered on, the display will activate and show energy data. The meter automatically cycles through various parameters. You can also manually cycle through them using the blue arrow button on the front panel.

5.1. Display Parameters

The DDSU666 meter displays the following key parameters:

- **kWh (EIMP):** Imported Active Energy (total consumption).

- **kWh (EEXP):** Exported Active Energy (if applicable, e.g., solar).
- **kW:** Instantaneous Active Power.
- **V:** Voltage.
- **A:** Current.
- **Hz:** Frequency.
- **PF:** Power Factor.

The display has a 1-minute backlight duration to conserve energy.

6. MAINTENANCE

The CHINT DDSU666 meter is designed for long-term, reliable operation with minimal maintenance. To ensure optimal performance and longevity:

- Keep the device clean and free from dust, dirt, and moisture. Use a soft, dry cloth for cleaning.
- Periodically inspect all wiring connections to ensure they remain tight and secure. Loose connections can lead to inaccurate readings or safety hazards.
- Do not attempt to open the meter casing or perform any internal repairs. This may void the warranty and pose a safety risk.
- If the meter is exposed to extreme temperatures or humidity outside its specified operating range, allow it to return to normal conditions before use.

7. TROUBLESHOOTING

If you encounter issues with your DDSU666 meter, refer to the following common troubleshooting steps:

7.1. Meter Does Not Display After Powering On

- **Check Wiring:** Verify that all power and communication cables are correctly connected to their respective terminals as per the wiring diagram (Figure 5). Ensure no wires are loose or incorrectly terminated.
- **Check Supply Voltage:** Confirm that the supply voltage is within the specified range of 220V to 240V. An abnormal voltage can prevent the meter from functioning.

If the problem persists after checking these points, or if the issue is not listed here, please contact your local supplier or a qualified electrician for assistance.

8. SPECIFICATIONS

Parameter	Value
Model	DDSU 666
Connection Type	1P2W (Single-Phase, 2-Wire)
Accuracy Class	Class 1.0 for active energy
Nominal Voltage (Un)	220V, 230V, 240V
Operating Range	0.85Un ~ 1.15Un
Rated Current	5(80)A
Frequency	50Hz or 60Hz

Parameter	Value
Power Consumption	≤ 1W, 8VA
Display Type	LCD (6 characters of 7 segment display)
Digital Size	5.3mm × 2.8mm
Communication Interface	RS485
Communication Protocol	Modbus-RTU
Working Temperature Range	-10°C to +45°C
Limited Temperature Range	-25°C to +75°C
Relative Humidity (Annually average)	≤ 75%
Dimensions (L x W x H)	98mm × 65mm × 36mm

DDSU666 SPECIFICATION

Unit: mm

Large LED Display

Low consumption

Bi-Direction Measurement

HIGH ACCURACY

Measurement	
Connection type	1P2W
Accuracy	Class 1.0 for active
Voltage	
Nominal voltage (Un)	220V, 230V, 240V
Operating range	0.85Un ~ 1.15Un
Power consumption	≤ 1W, 8VA
Current	
5(80)A	
Frequency	
50Hz or 60Hz	
LCD Display	
6 characters of 7 segment display	
Digital size	5.3mm × 2.8mm
LED Indication	
Pulse Indication	
Measured Values	
Total kWh	
Instantaneous kW, Vrms, Irms, frequency, power factor	
Communications	
RS485	
Protocol	Modbus-RTU
Environmental	
Working temperature range	-10° C to +45° C
Limited temperature range	-25° C to +75° C
Relative humidity(Annually average)	≤ 75%
Dimensions	
Dimensions	98mm ×65mm × 36mm

Figure 6: Detailed technical specifications of the DDSU666 meter.

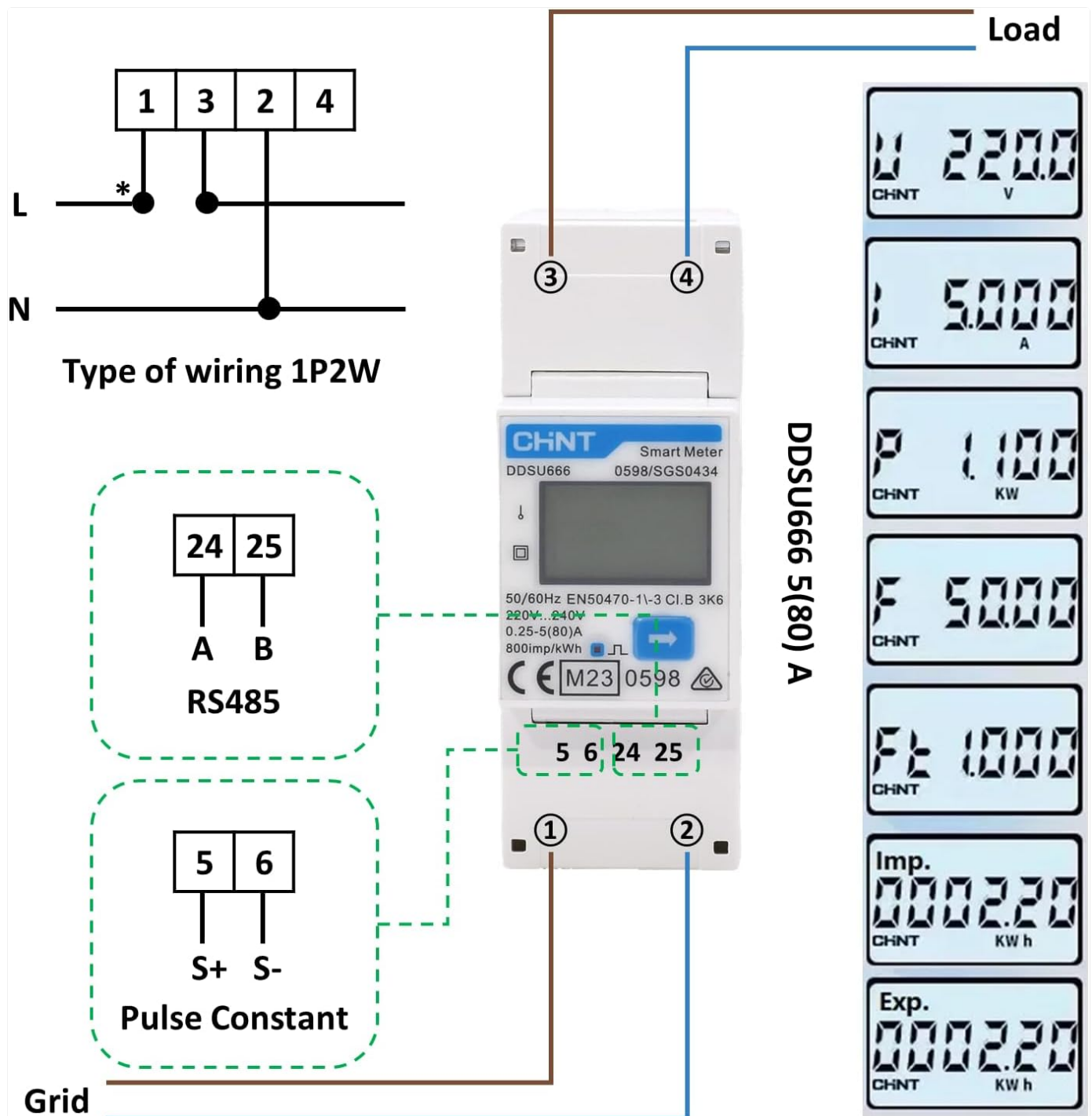


Figure 7: Dimensions of the DDSU666 meter and view of the terminal connections.

9. WARRANTY AND SUPPORT

For detailed warranty information, terms, and conditions, please refer to the warranty card or documentation included with your CHINT DDSU666 energy meter. Keep your original purchase receipt as proof of purchase for any warranty claims. For technical support, troubleshooting assistance beyond what is provided in this manual, or service inquiries, please contact your authorized CHINT dealer or the point of purchase. You may also visit the official CHINT website for additional resources and contact information.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Answered questions about this manual

How do I reset the CHINT DDSU 666 single-phase smart energy meter?

Based on the available manual for the CHINT DDSU 666, there is no mention of a user-accessible "reset" button or a software reset procedure to clear energy data (kWh) directly from the device interface....

[Read full answer](#)