

DDSU1820a

Single-Phase Energy Meter (TOU)



MULTIFUNCTIONAL MEASUREMENT

- Accurate Measurement Voltage, Current, Power, Power Factor, Frequency, etc
- 0.2% Accuracy on Voltage and Current

REVENUE METERING

- Bi-Directional Energy: Import Energy, Export Energy
- IEC62053-22 0.5S
- TOU, Four Tariffs, 14 Schedules

POWER QUALITY ANALYSIS

- THD and Individual Harmonics to 31st
- Waveform Record

OVER/UNDER LIMIT ALARM

- Over or Under Setting Limit
- Power Measurement Parameters can be Set
- Alarm can Trigger the Relay Output

APPLICATIONS

- Commercial Complex/Mall
- Power Distribution



- Light Rail Transit System
- Energy Management Systems



- University/School
- Building Automation



- Industrial Facility Metering
- Industrial Enterprise



FEATURES

Metering

- Phase-to-Neutral Voltage, Line-to-Line Voltage, Current
- Active Power, Reactive Power, Apparent Power, Power Factor
- Frequency
- Load Nature
- Energy

Energy and Energy Record

- Bi-Directional Energy
- Single-Phase Energy
- Monthly Energy Record

Time of Use (TOU)

- Two TOU Settings can Automatically Switch at the Setting Time
- Four Tariffs, 12 Seasons, 14 Schedules
- DST Function
- Weekend and 10-Year Holiday Settings

Power Quality

- Voltage Unbalance, Current Unbalance
- THD and Individual Harmonics to 31st
- Crest Factor, THFF, K Factor
- Voltage and Current Phase Angles

Alarms

- Over or Under Setting Limit
- Power Measurement Parameters can be Set

Terminal Temperature Measurement

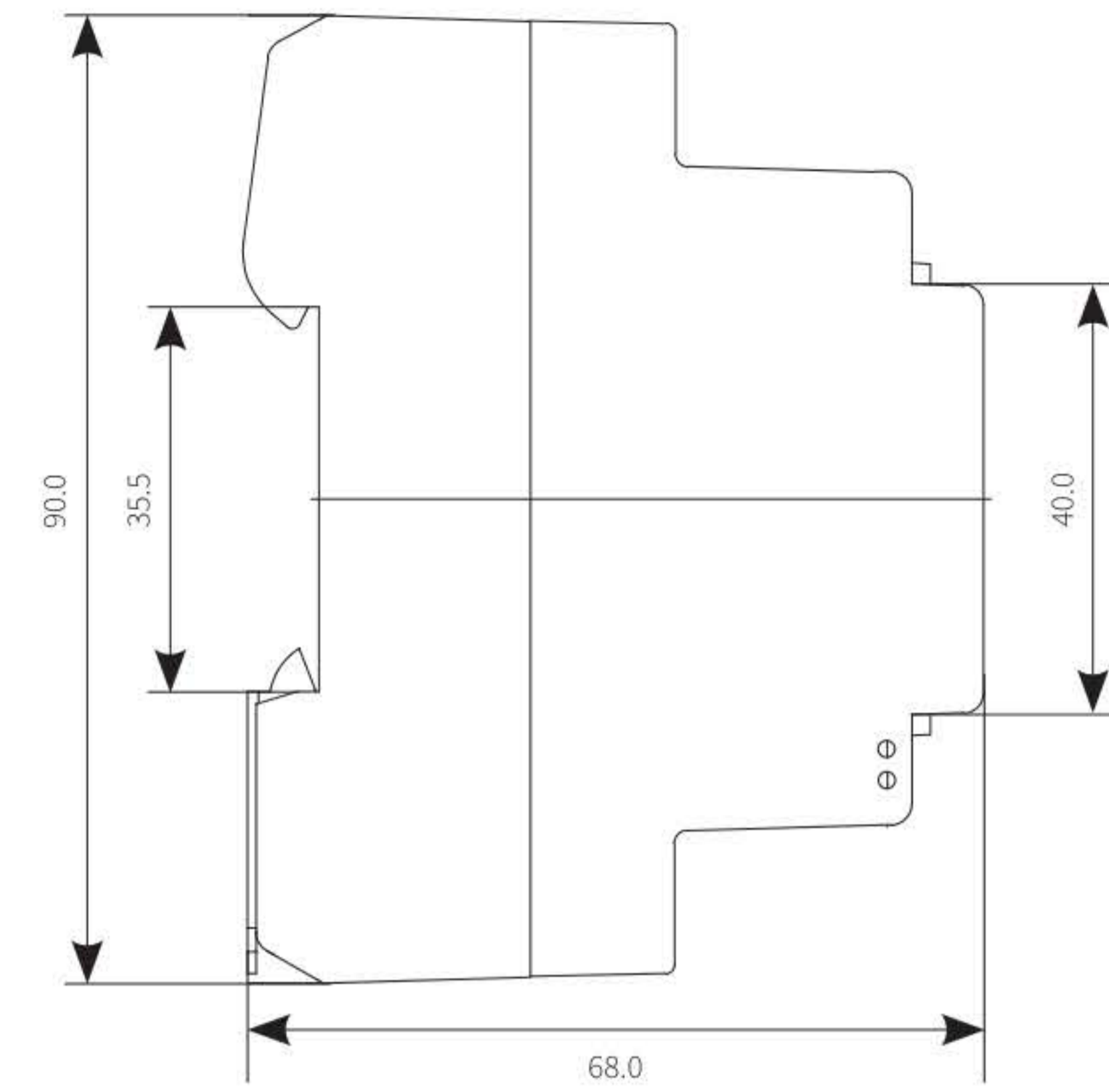
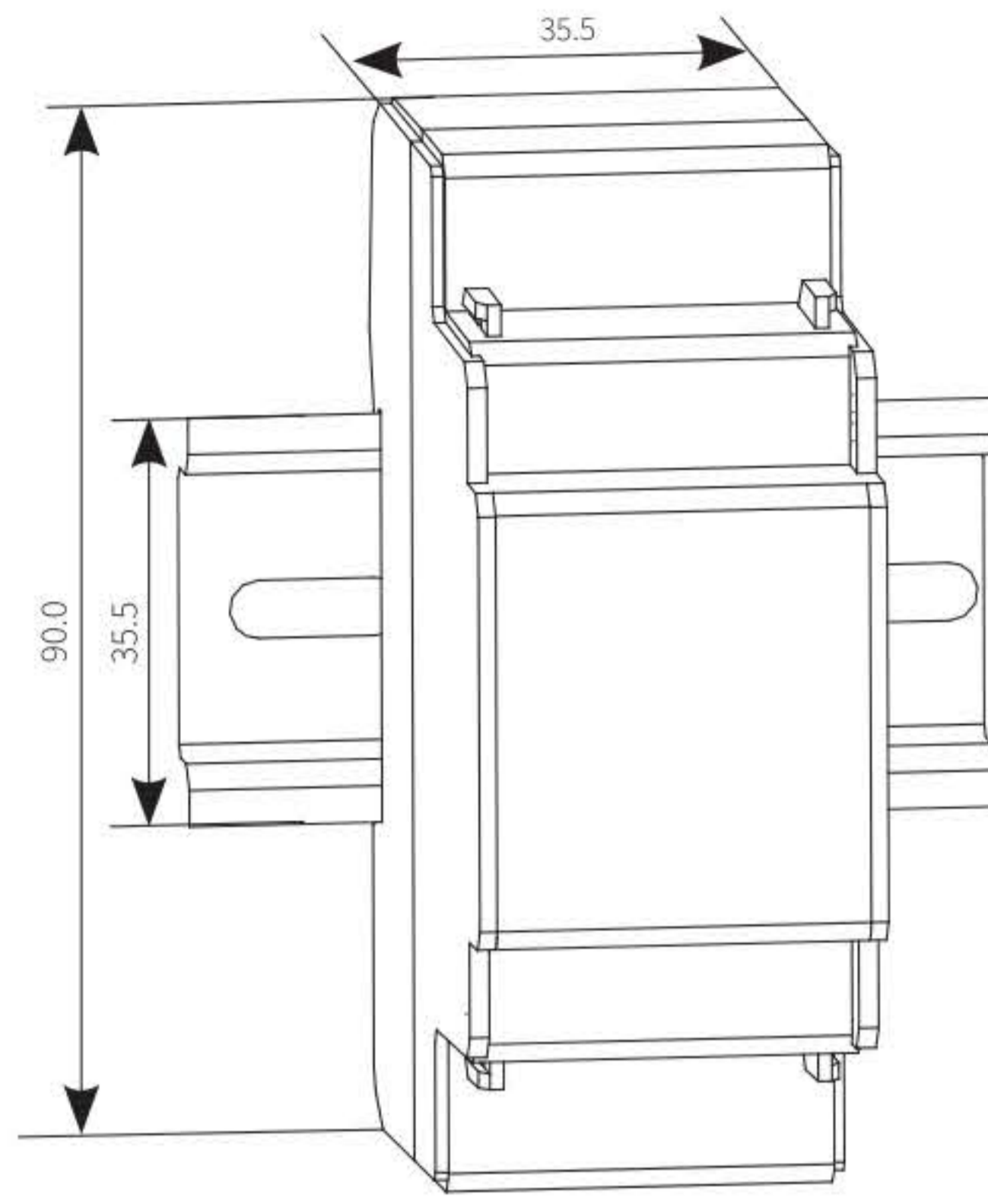
- Three Circuits Direct Measurement
- Built-In Sensor

Display

- OLED
- Two Languages: Chinese and English

DIMENSIONS

Unit: mm



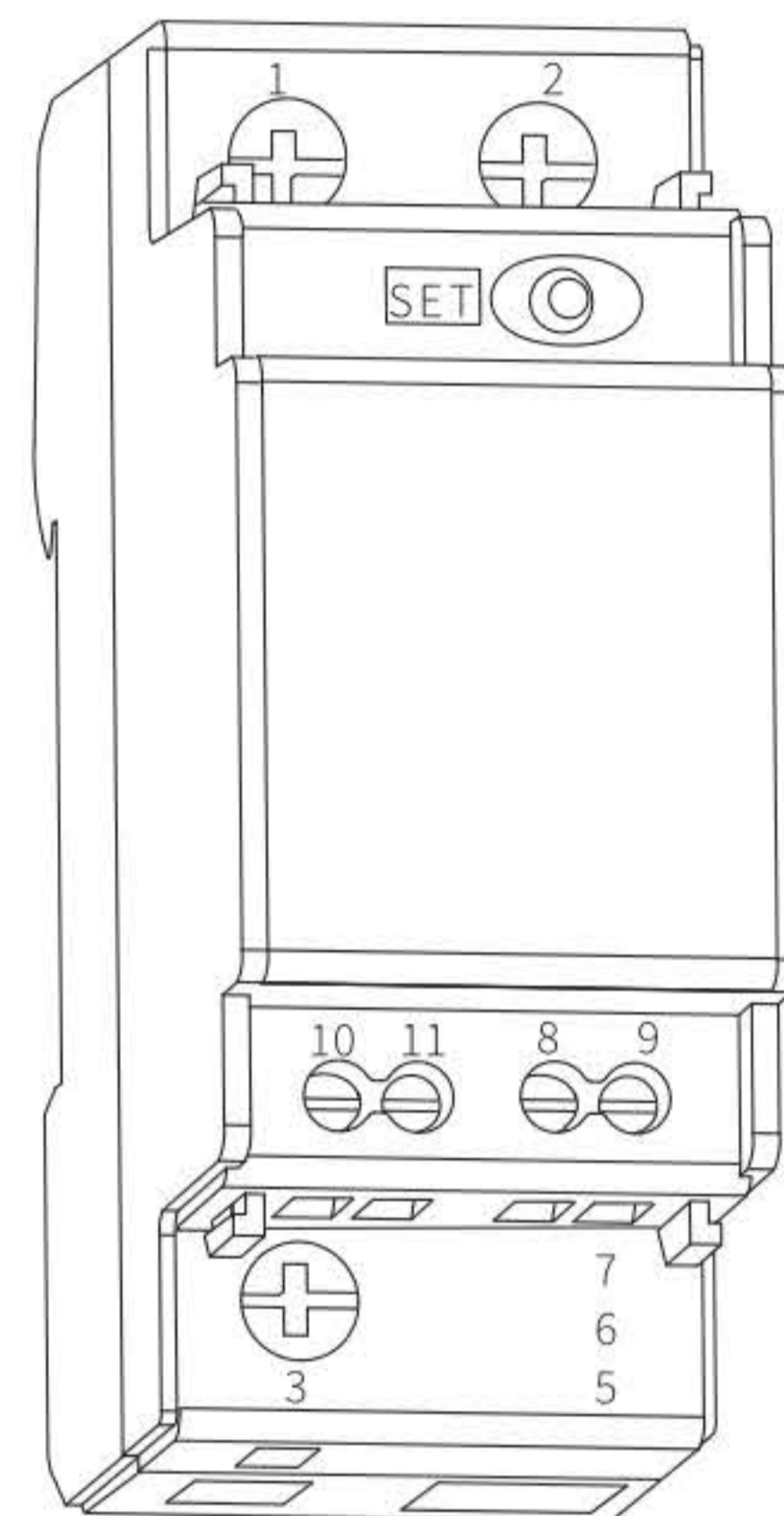
Side View

TERMINAL DIAGRAM

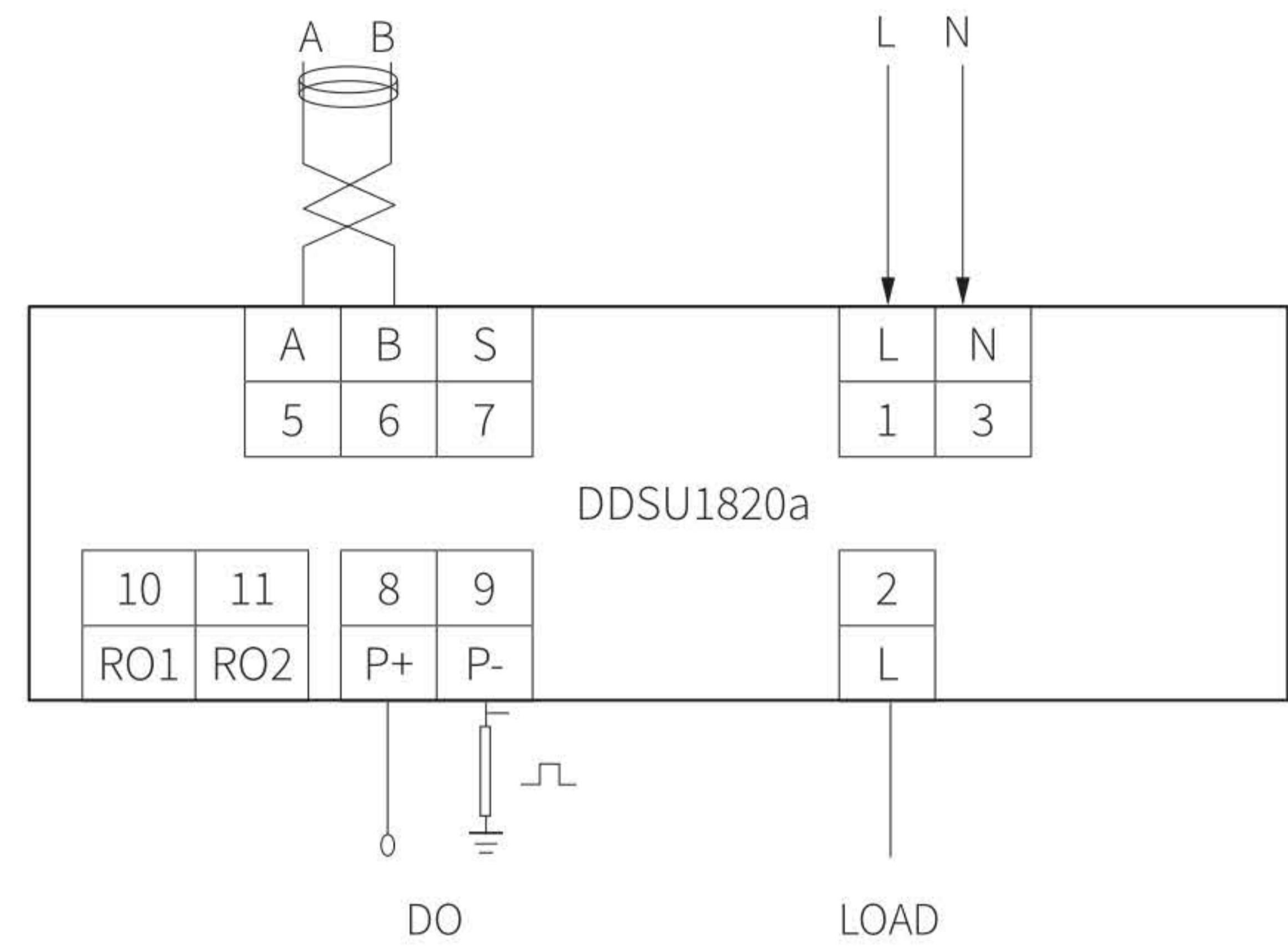
1	2
L↓	↑L

10	11	8	9
RO11	RO12	P+	P-

3	5	6	7
N	A	B	S



TYPICAL WIRING



SPECIFICATION

Measurement Accuracy

Parameters	Accuracy	Resolution	Range
Voltage	0.2%	0.1 V	175 V ~ 265 V
Current	0.2%	0.001 A	0.25 A ~ 80 A
Active Power	0.5%	0.001 kW	-20 kW ~ 20 kW
Reactive Power	0.5%	0.001 kvar	-20 kvar ~ 20 kvar
Apparent Power	0.5%	0.001 VA	0 ~ 20 kVA
Power Factor	1%	0.001	-1.000 ~ 1.000
Frequency	0.05%	0.01 Hz	50 or 60 Hz ($\pm 5\%$)
Active Energy	0.5S	0.01 kWh	0 ~ 2000000 kWh
Reactive Energy	0.5%	0.01 kvarh	0 ~ 2000000 kvarh
Apparent Energy	0.5%	0.01 kVAh	0 ~ 2000000 kVAh
THD & Harmonics	2%	0.01	2nd ~ 31st
Temperature	± 2 °C	0.1 °C	-20 ~ 150 °C

Operating Conditions

Metering	Parameters	Specification
Voltage	Nominal Voltage	230 V AC
	Voltage (Max)	230 V AC (-20% ~ +15%)
	Load	≤ 0.6 W
	Range	230 V AC (-20% ~ +15%)
	Accuracy	0.5%
Current	Reference Current I_{ref}	20 A
	Current (Max) I_{max}	80 A
	Current (Min) I_{min}	0.25 A
	Starting Current I_{st}	<20 mA
	Accuracy	0.5%
Frequency	Frequency	45 ~ 65Hz
Energy	Active Energy	0.5S
	Reactive & Apparent Energy	0.5
Light Pulse	Pulse Constant	1000 imp/kWh
	Pulse Width	40 ms
Pulse Output	Voltage	5 ~ 30 V DC
	Current	5 ~ 50 mA
	Pulse Width	10 ~ 999 ms
	Pulse Constant	1 ~ 5000 imp/kWh, Settable
Communication	RS485	Modbus RTU, Baud Rate: 1200 ~ 38400 bps
Relay Output	Type	FORM A
	Switching Voltage	250 V AC or 30 V DC
	Switching Current	5A
	Output Type	Level or Pulse
Operating Environment	Operating Temperature	-25 °C ~ +70 °C
	Storage Temperature	-40 °C ~ +85 °C
	Relative Humidity	5% ~ 95% (Non-Condensing)
	IP Degree of Protection	UL 94V0
Electromagnetic Compatibility	Electrostatic Discharge Immunity	IEC 61000-4-2
	Fast Transients Immunity	IEC 61000-4-4
	Surge Immunity	IEC 61000-4-5
	Radiated Field Immunity	IEC 61000-4-3
	Conducted Disturbances Immunity	IEC 61000-4-6
	Radiated and Conducted Emission	EN 55032 /CISPR 32 Class B

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