

## SDM120P

### Single-Phase Multi-function DIN Rail Meter



- Measures kWh, kW,PF, Hz, V, A.
- Bi-directional measurement IMP & EXP kWh
- Two pulse outputs
- Din rail 35mm
- 45A direct connection
- Better than Class 1 accuracy

### *User Manual V1.0*

### Application

The energy-meters are used to measure single-phase applications like residential, utility and Industrial. The unit measures and displays various important electrical parameters. It equipped with a white back-lighted LCD screen for perfect reading. The compact design and din rail installation provides an easy and economical solution for your metering demand.

## PART 1 Specification

### General Specifications

Voltage AC (Un)	230V
Voltage Range	176~276V AC
Base Current (Ib)	5A
Max. Current (Imax)	45A
Mini Current (Imin)	0.25A
Starting current	0.4% of Ib
Power consumption	<2W/10VA
Frequency	50/60Hz(±10%)
AC voltage withstand	4KV for 1 minute
Impulse voltage withstand	6KV-1.2uS waveform
Overcurrent withstand	30Imax for 0.01s
Pulse output rate	
-Pulse Output 1	1000imp/kWh (Export)
-Pulse Output 2	1000imp/kWh ( Import)
Display	LCD with white backlit
Max. Reading	99999.9kWh

### Accuracy

Voltage	0.5% of range maximum
Current	0.5% of nominal
Frequency	0.2% of mid-frequency
Power factor	1% of Unity
Active power	1% of range maximum
Active energy	Class 1 IEC62053-21 Class B EN50470-1/3

**Environment**

Operating temperature	-25°C to +55°C
Storage and transportation temperature	-40°C to +70°C
Reference temperature	23°C ± 2°C
Relative humidity	0 to 95%, non-condensing
Altitude	up to 2000m
Warm up time	3s
Installation category	CAT III
Mechanical Environment	M1
Electromagnetic environment	E2
Degree of pollution	2

**Output**

**Pulse Output**

The meter provides two pulse outputs. Both pulse outputs are passive type.

Pulse output 1 is 1000 imp/kWh for export kWh.

Pulse output 2 is 1000imp/kWh for import kWh.

**Mechanics**


Din rail dimensions	18x118x64 (WxHxD) DIN 43880
Mounting	DIN rail 35mm
Ingress protection	IP51 (indoor)
Material	Self-extinguishing UL94V-0

## PART 2 Operation

**Initialization Display**

When it is powered on, the meter will initialize and do self-checking.

1		<p>Full Screen It will last for 3 seconds.</p>
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2		Software version in kind prevail It will last for 3 seconds.
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After the self-checking program, the meter display will show total active energy (kWh)

**Scroll Display by Button**

There is a button on the front panel of the meter.

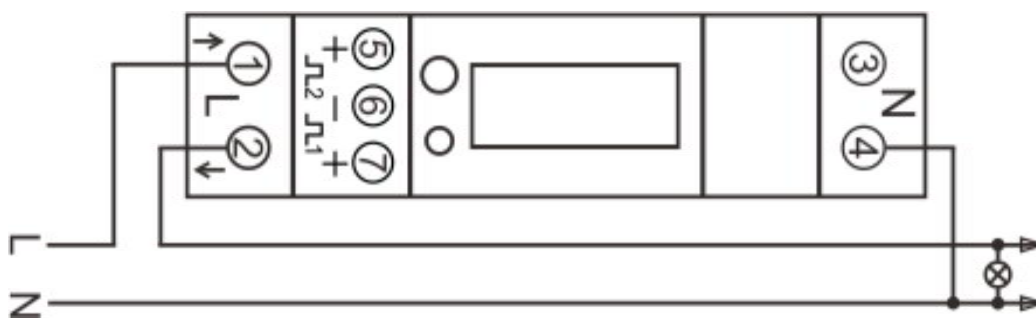
After initialization and self-checking program, the meter display the measured values. The default page is total kWh. If the user wants to check other information, he needs to press the scroll button on the front panel.

	Press the button, the LCD display will scroll the measurements.  Keep pressing the button for 3 seconds, the meter will enter into set-up mode.
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1		Total active energy (kWh) Display format: 0000.00→9999.99→10000.0→99999.9→0000.00
2		Import active energy (kWh) Display format: 0000.00→9999.99→10000.0→99999.9→0000.00
3		Export active energy (kwh) Display format: 0000.00→9999.99→10000.0→99999.9→0000.00
4		Voltage (V)

5		Current (A)
6		Active power (W)
7		Frequency ( F )
8		Power factor ( PF )
9		Software version in kind prevail

Wiring Diagram



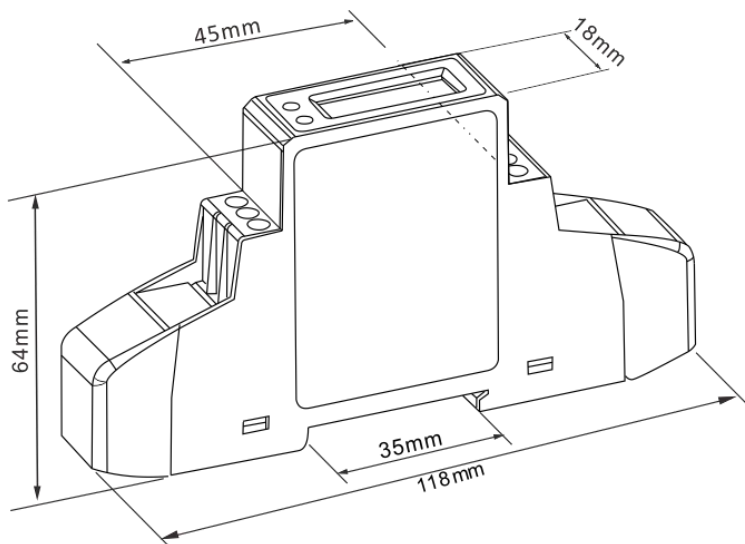
1 / 2: L-in/ L-out

3 / 4: N

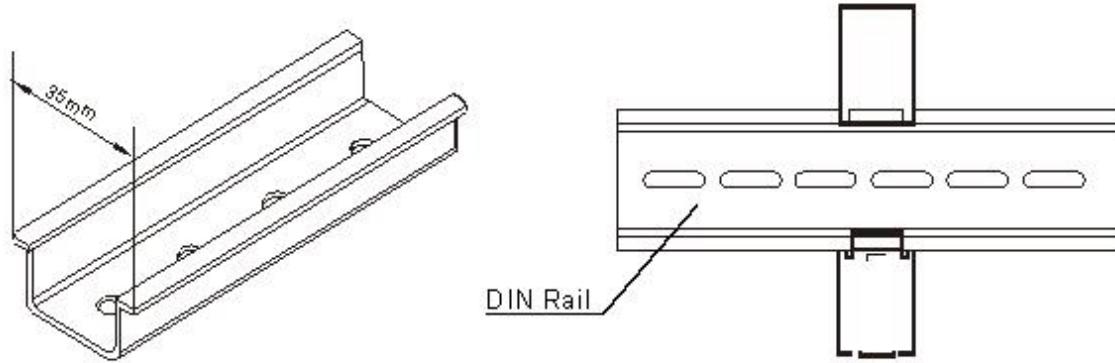
5 / 6 / 7: Pulse Output 2 + / COM / Pulse Output 1 -

Load Terminals ①②③④	Measurement Connection	Screw Connection
	Strip Length	8-9mm
	Screw	M4
	Rigid/supple	2.5-10mm <sup>2</sup>
	Tightening torque	1.5Nm
	Model	PZ2
Pulse Terminals ⑤⑥⑦	Measurement Connection	Screw Connection
	Strip Length	4.5-5mm
	Fixed/flexible (Wire Range)	0.5-1.5mm <sup>2</sup> (22~14 AWG)
	Tightening torque	0.2Nm
	Model	PZ0

### Dimensions



Installation



If there is any question, please feel free to contact:

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