



Scan for User Manual

## 1 Product Introduction

M1-40 is a single-phase meter designed for electricity monitoring and power metering in PV system and other scenarios. It is small in size and easy to use, and offers precise power metering.

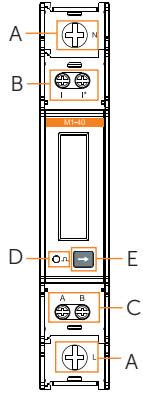
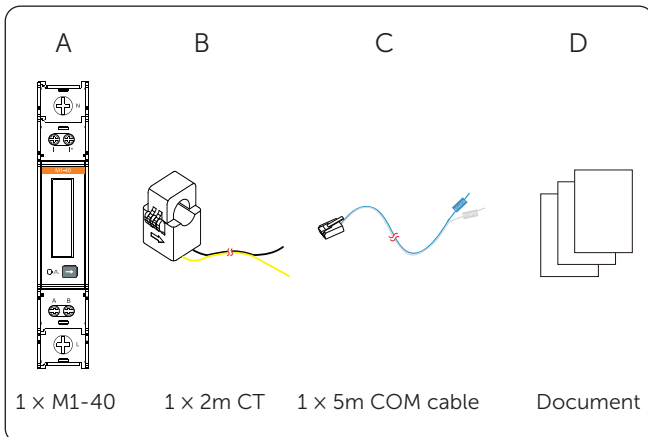


Figure 1-1 M1-40 appearance

Table 1-1 Description of meter appearance

No.	Type	Marking	Definition
A	Terminal	L	UL terminal, connected to the L wire of the grid
		N	UN terminal, connected to the N wire of the grid
B	Terminal	I*	Current input terminal, connected to the I* wire of CT
		I	Current output terminal, connected to the I wire of CT
C	Terminal	A	RS485 terminal A
		B	RS485 terminal B
D	Indicator		Pulse indicator, flashes when the meter is working normally
E	Function button	→	Used to switch the display item

## 2 Scope of Delivery



## 3 Typical Networking Diagrams

The following diagrams use European TN-S for example, and are for reference only.

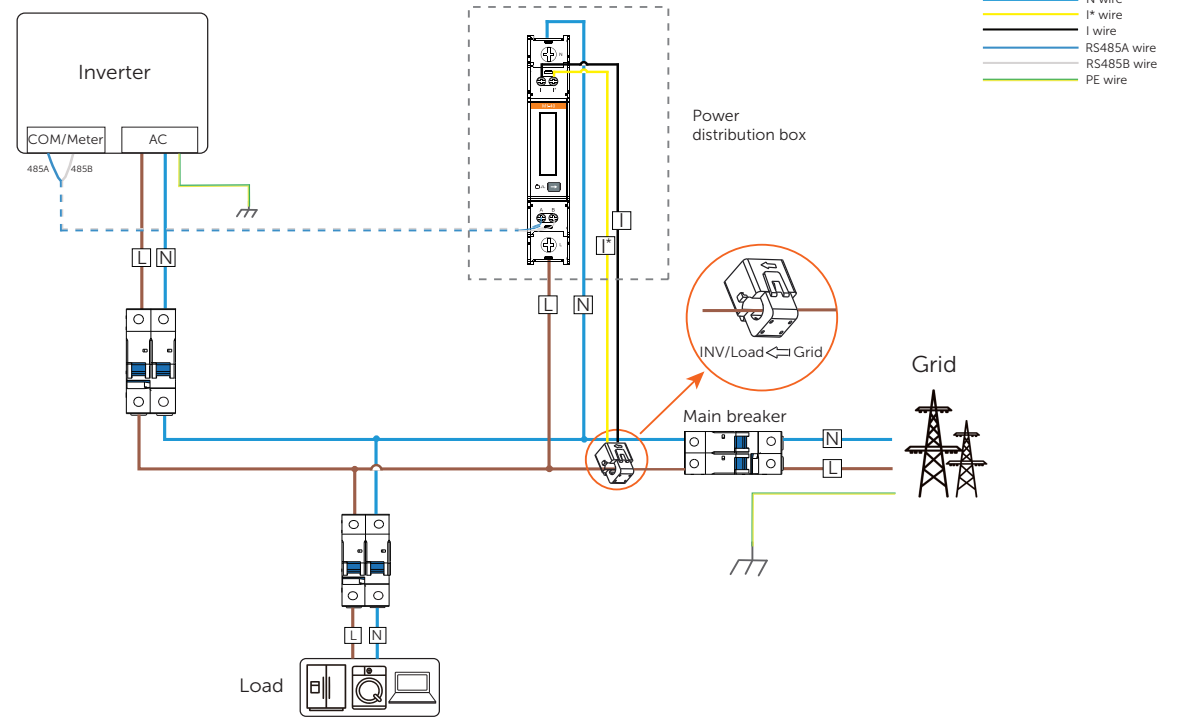


Figure 3-1 Networking through RS485 cable

The meter can also work with Wi-BR to transmit data within up to 200 m horizontally and 20 m vertically\*.

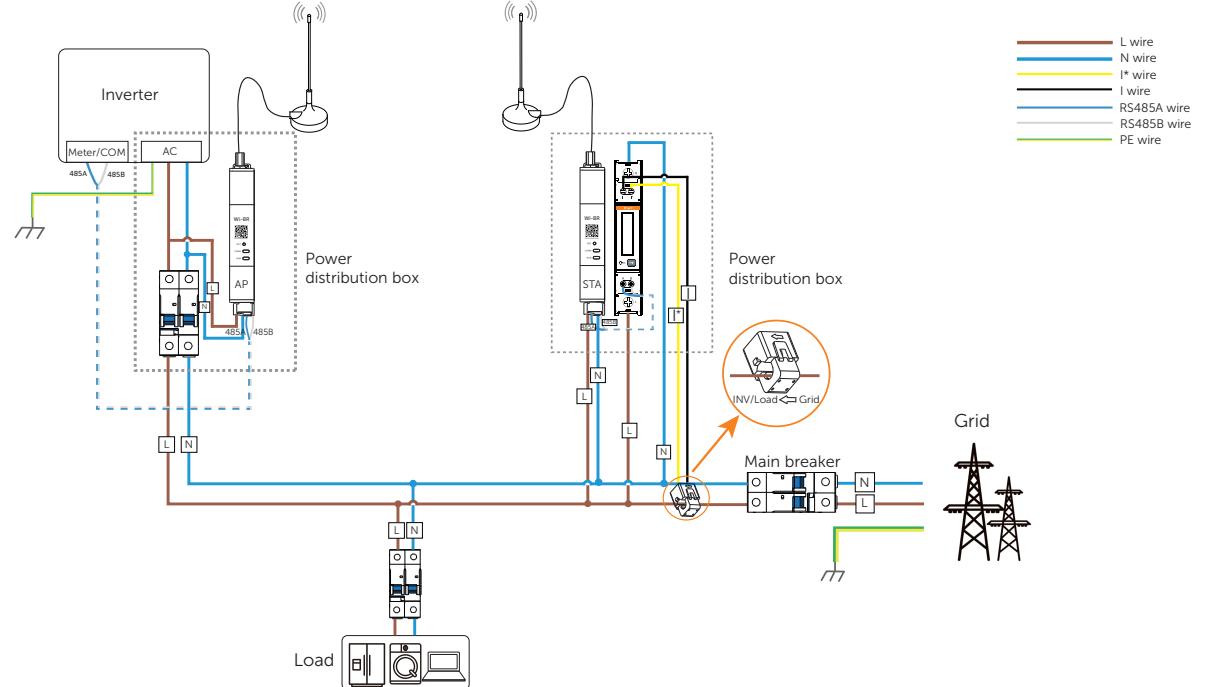





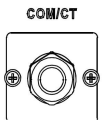
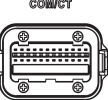
Figure 3-2 Wireless data transmission through Wi-BR

Note: The transmission data of Wi-BR comes from test results conducted in SolaX laboratories.



## 4 Compatible Inverters and Pin Definition

Table 4-1 SolaX inverter models and pin definition

Inverter series	Terminal type	Connector type	Pin No.	Pin definition
X1-HYB LV		RJ45	4	485A
			5	485B
X1-AC		RJ45	7	485A
			8	485B
<ul style="list-style-type: none"> <li>X1-HYB G4</li> <li>X1-FIT G4</li> <li>X1-IES</li> <li>X1-VAST</li> </ul>		RJ45	4	485A
			5	485B
<ul style="list-style-type: none"> <li>X1-MINI G4</li> <li>X1-BOOST G4</li> </ul>		RJ45	4	485A
			5	485B
X1-SMART G2		Quick-connect terminal	4 / 11	485A
			5 / 12	485B

\*Note: Two pairs of terminals are available for meter connection on X1-Smart G2, and the pins in the same box are a pair.

## 5 Cable Requirements

Table 5-1 Required cables and specification

Usage	Terminal marking	Cable type (Recommended)	Sectional area (mm <sup>2</sup> )	Outer diameter (mm)	Prepared by
Voltage cable	L	Multi-core outdoor copper wire	1.5~2.5	3~5	User
	N				
CT cable	I*	/	/	/	Supplier
COM cable	RS485A	Two-core outdoor shielded twisted pair cable	0.25~1.5	4~11	Supplier
	RS485B				

## 6 Electrical Connection

### Power Cable Connection

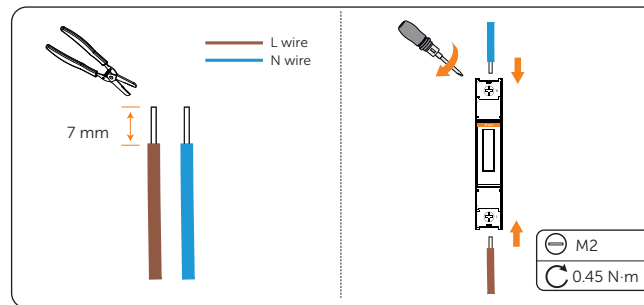


Figure 6-1 Connecting power cables

### CT Connection

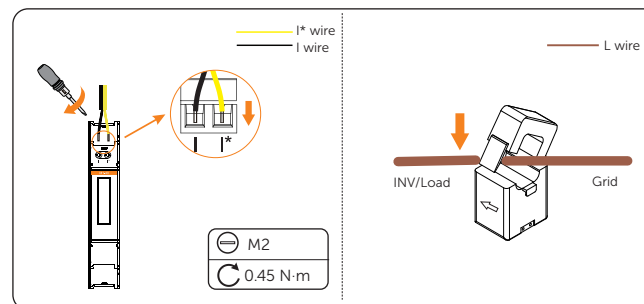


Figure 6-2 Connecting CT cables

## Communication Cable Connection

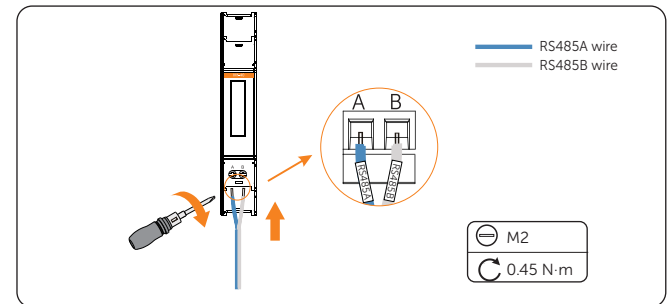


Figure 6-3 Connecting communication cables

## 7 Installation

### NOTICE

We recommend connecting all cables for the meter before mounting it onto the rail.

M1-40 is designed to be installed on the 35 mm DIN rail inside the power distribution box.

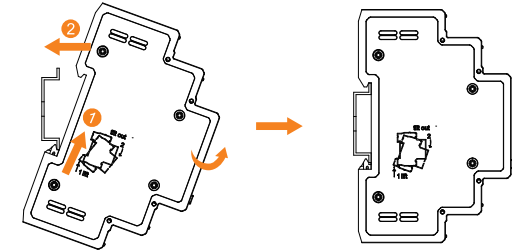


Figure 7-1 Mounting M1-40

## 8 Technical Data

Figure 8-1 Specification

Power grid type	1P2W
Rated voltage	220V...240V
Operating voltage	100 V~288 V
Current	*A/40 mA
Recommended CT specification	100 A/40 mA; 200 A/40 mA
Power consumption	<1.2 W
Measurement accuracy class	Voltage and current: Class 0.5
	Active power: Class 1
	Reactive power: Class 2
Resolution requirement	Active power: 0.1 W
	Frequency: 0.001 Hz
Frequency	45 Hz~65 Hz
Frequency tolerance	0.01 Hz
Operating temperature	-40°C to +70°C
Operating humidity	≤95% , non-condensing
Operating altitude	<4000 m
Degree of protection	IP20
Dimensions (W × H × D)	18 mm × 100 mm × 65.5 mm