Installation manual
CheckWatt CM10 and Solax X3-ULTRA inverter
Updated 2024-09-26

Installation of CheckWatt CM10 and the Solax inverters is performed according to their manuals. This manual describes how communication between the CheckWatt CM10 and Solax inverter is established.

Communication between CM10 and inverter is carried over modbus RTU (RS-485) via ethernet cable CAT6 FTP.
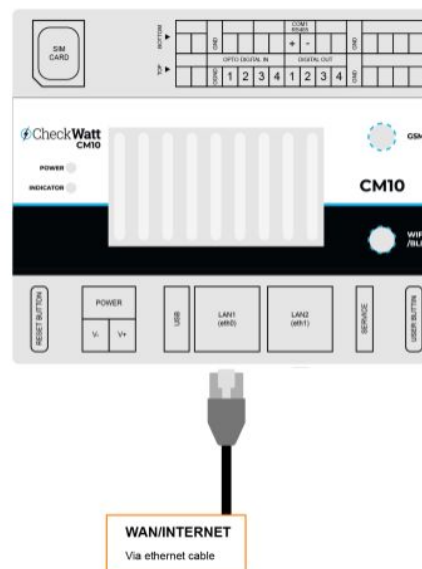
Max inverters per CM10: 1

⌀CheckWatt

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415 02 Göteborg
SWEDEN

www.checkwatt.se
info@checkwatt.se
+46 101 88 65 65

Connect the WAN (Ethernet cable) between the property's router* and **LAN 1 (eth0)** on the CM10 for internet connection to the CM10.
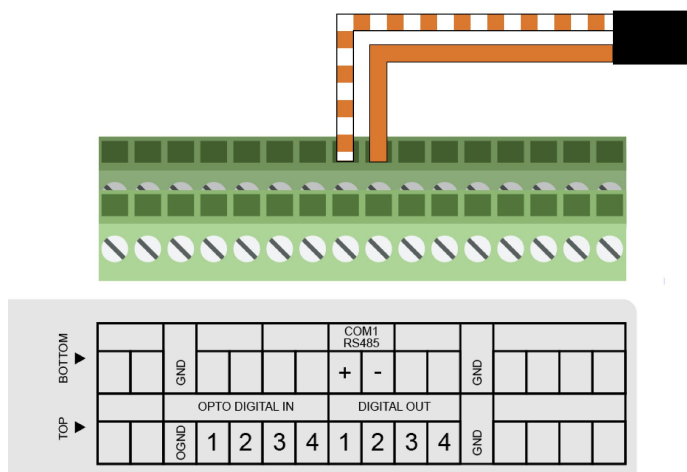** or other network equipment such as PLC-modem, wifi-repeater or network switch.*

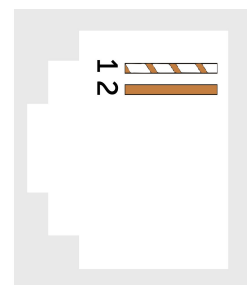*NOTE! LAN 1 and LAN 2 must not be mixed up as they have different functions.*

The **ethernet** cable needs to be **stripped** on **one side** where pin 1 (orange/white) and pin 2 (orange) represent 485A and 485B, respectively.

Connect the **orange/white** cable to terminal **#8** on the rear row marked **COM +**.

Connect the **orange** cable to terminal **#9** on the rear row marked **COM -**.
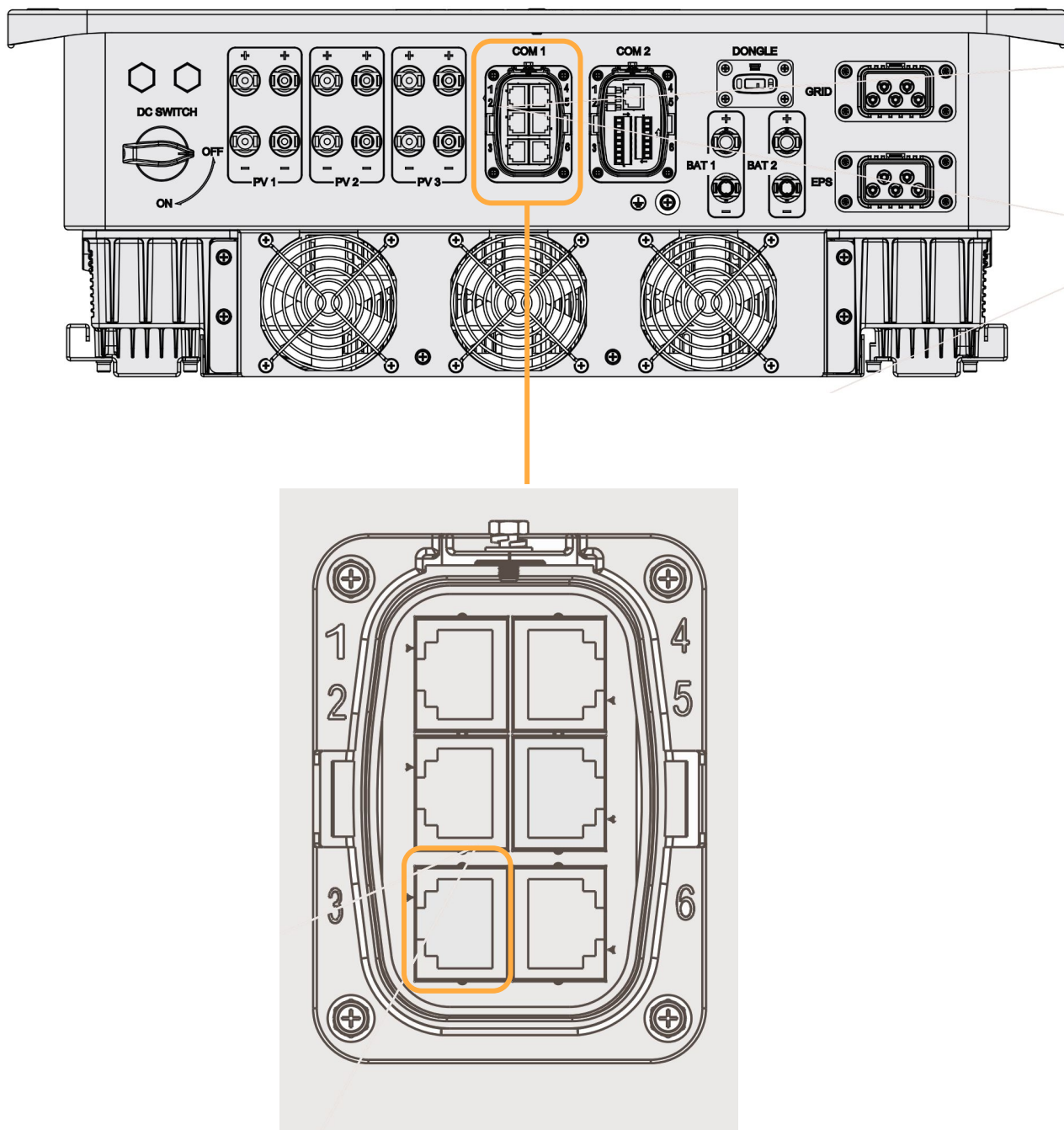
RS485
1: REMOTE_485A
2: REMOTE_485B

Installation: Internetuppkoppling och kommunikation
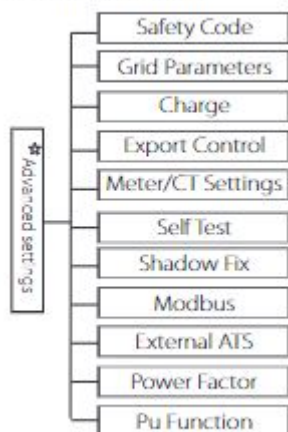
Connect the **ethernet** cable through the entry marked **COM 1**. Connect the cable to **port 3**, bottom left of the image,

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Settings

To ensure proper communication, the baud rate must be set in the SolaX inverter. This can be done under Advanced Settings.

➤ Advance settings

Safety Code
Grid Parameters
Charge
Export Control
Meter/CT Settings
Self Test
Shadow Fix
Modbus
External ATS
Power Factor
Pu Function

Advanced settings

Baud Rate set to **9600**.
Adress set to 1.

Modbus	
Baud Rate:	19200

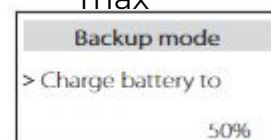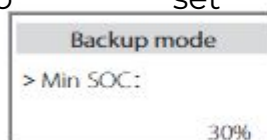| Modbus	
Address:	1

Verification charge/discharge

If charge or discharge does not work, double check the settings for Backup mode..

It is possible to set max and min SoC in backup mode.

Set **Min SoC: 15%**
Set **Charge battery to: 100%**
to avoid any restrictions..

Backup mode	
> Min SOC:	30%

Backup mode	
> Charge battery to	50%

Do **not** change the default password. If it is changed, the CM10 can not control the inverter.

Verification of RS-485 cabling

There have been reports of a sensitive RJ45 port on the inverter. The following values have been measured with a multimeter on a working installation.

GND - Pin 4 (blue): 4.5 V
GND - Pin 5 (blue/white) 0V
Pin 4 (blue) - Pin 5 (blue/white): 2.3 V

Firmware update of the inverter

An update of the inverter is required for the control to function.

Send the following email to SolaX.

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to: service.nordic@solaxpower.com
Subject: Solax Inverter Update for VPP Services with CheckWatt [SERIALNUMBER]

Please update the following system for VPP Services with CheckWatt.

Inverter model: Solax X3-Ultra

S/N: XXXXXXXXXXXXXX

Required version: ARM: 8.55, DSP: 7.53.

[Following part only if it is a T30 battery]
Battery model: XXXXXXXXXXXXX
Required version: BMS 4.00 or later.

Regards [Name]

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