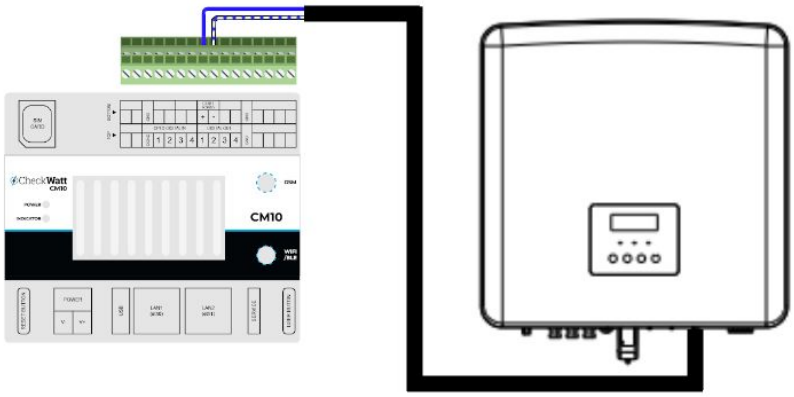
Installation manual

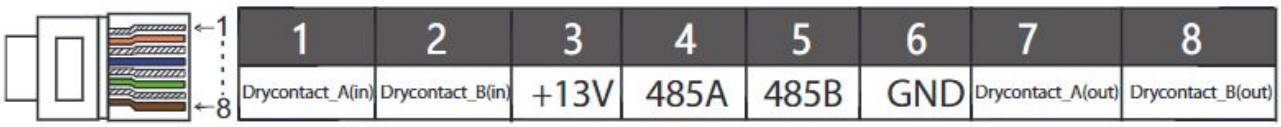
CheckWatt CM10 and Solax inverter
X1 Hybrid/X3 Hybrid/X1 Retro-Fit/X3 Retro-Fit
Updated 2025-04-10

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.



➢ COM PIN Definition

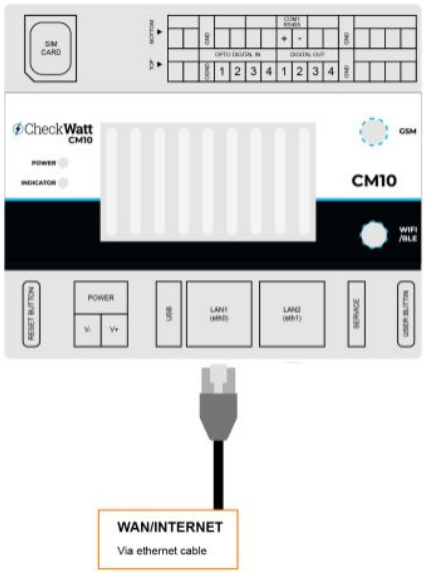


CheckWatt
Gamlestadsvägen 18B
415 02 Göteborg
SWEDEN
www.checkwatt.se
info@checkwatt.se
+46 101 88 65 65

Installation: Internet connection and communication

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.*

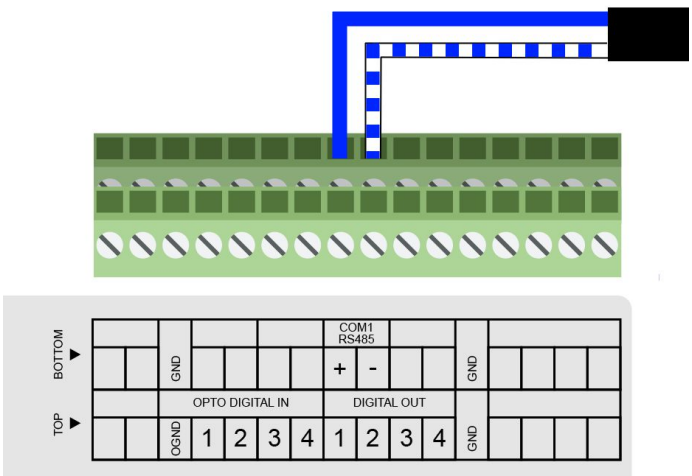
NOTE! LAN 1 and LAN 2 must not be mixed up as they have different functions.



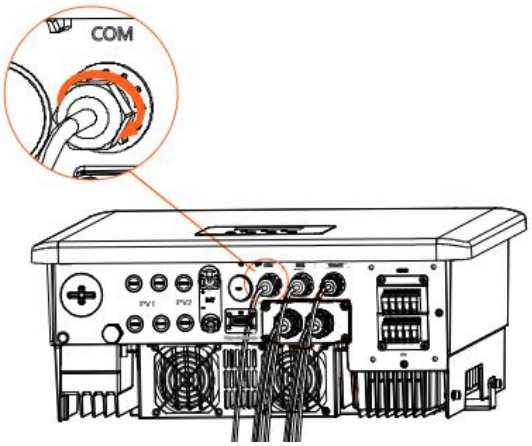
The **ethernet** cable needs to be **stripped** on **one side** where pin 4 (Blue) and pin 5 (blue/white) represent 485A and 485B, respectively.

Connect the **blue** cable to terminal **#8** on the rear row marked **COM +**.

Connect the **blue/white** cable to terminal **#9** on the rear row marked **COM -**.



Connect the ethernet cable to the port marked **COM** on the inverter.



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Firmware update

The inverter needs to be updated by Solax support. This update provides registers for the CM10 to control the Solax inverter. There is also an update that enhances the heating elements in SolaX T30 batteries.

Send the following email to SolaX.

To: service.nordic@solaxpower.com
Subject: Solax Inverter Update for VPP Services with CheckWatt [SERIAL NUMBER]

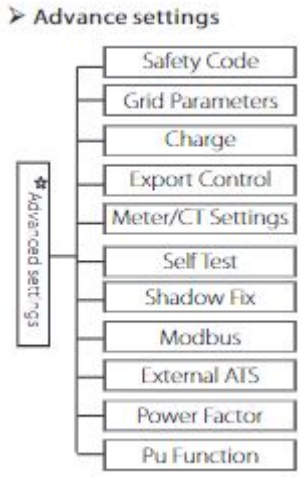
Please update the following system for VPP Services with CheckWatt.
Inverter model: Solax X3 Hybrid G4
S/N: XXXXXXXXXXXXXX
Required version:
ARM: 1.42 or above.
DSP: 1.43 or above.

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

Regards [Name]

Settings

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



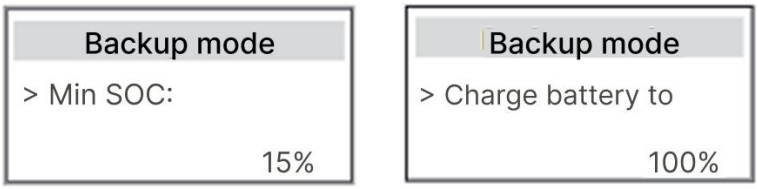
Baud Rate set to **9600**.
Adress set to 1.

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.



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

Additional settings

The T30 batteries feature built-in heating that can be activated when installed in cold environments, helping to maintain performance despite low temperatures.

Navigate to **Battery heating** located under Advanced settings

Battery Heating should be set to **Enable**

Start time should be set to **00:00**

End time should be set to **23:59**

Heating Level should be set to High