

SolarSync

EV Charger

SolarSync is a brand under Battpulse Tech

Who am I?

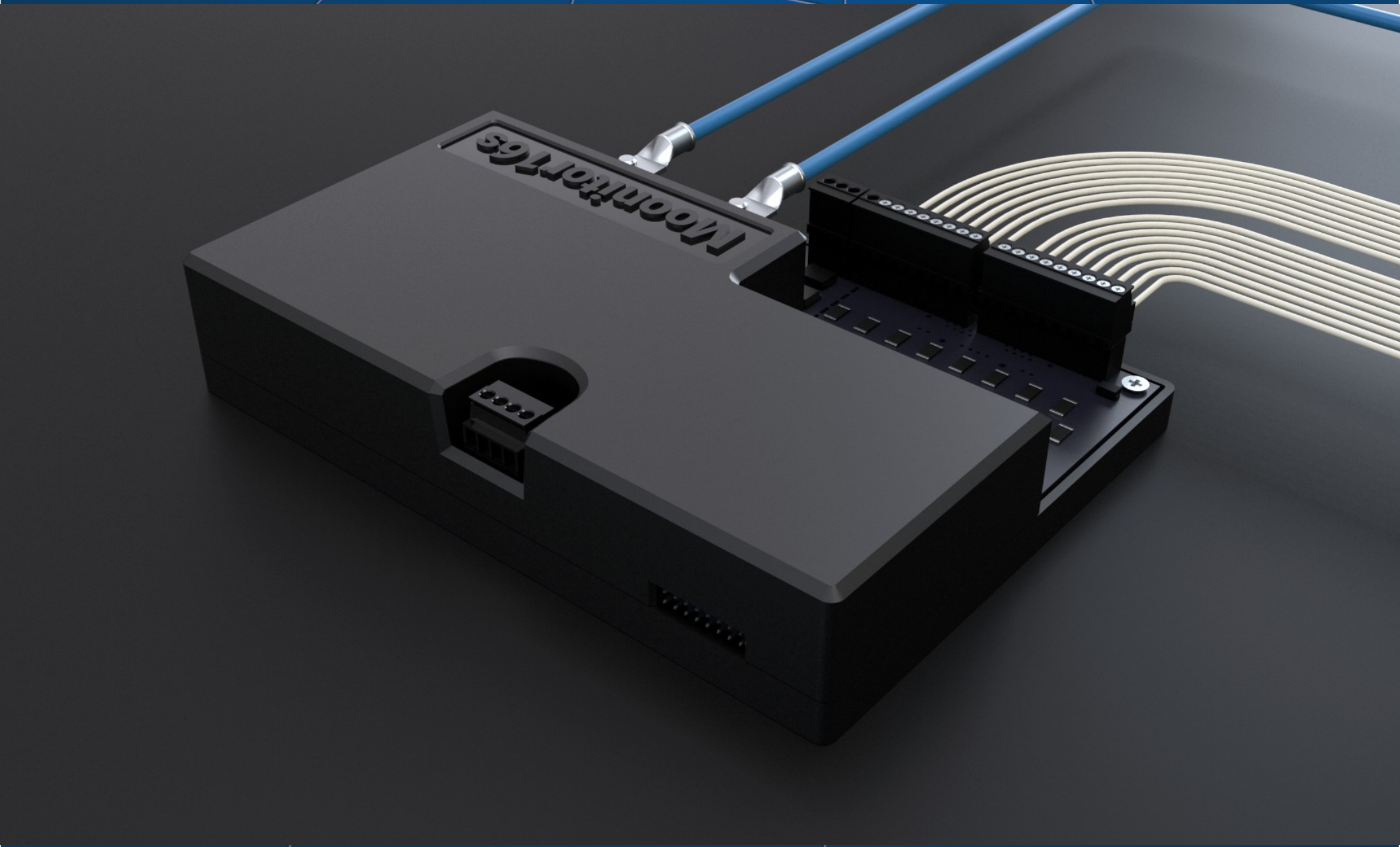
Sarper Önal –

Electronics developer & founder of Battpulse Tech (Brandevoort)

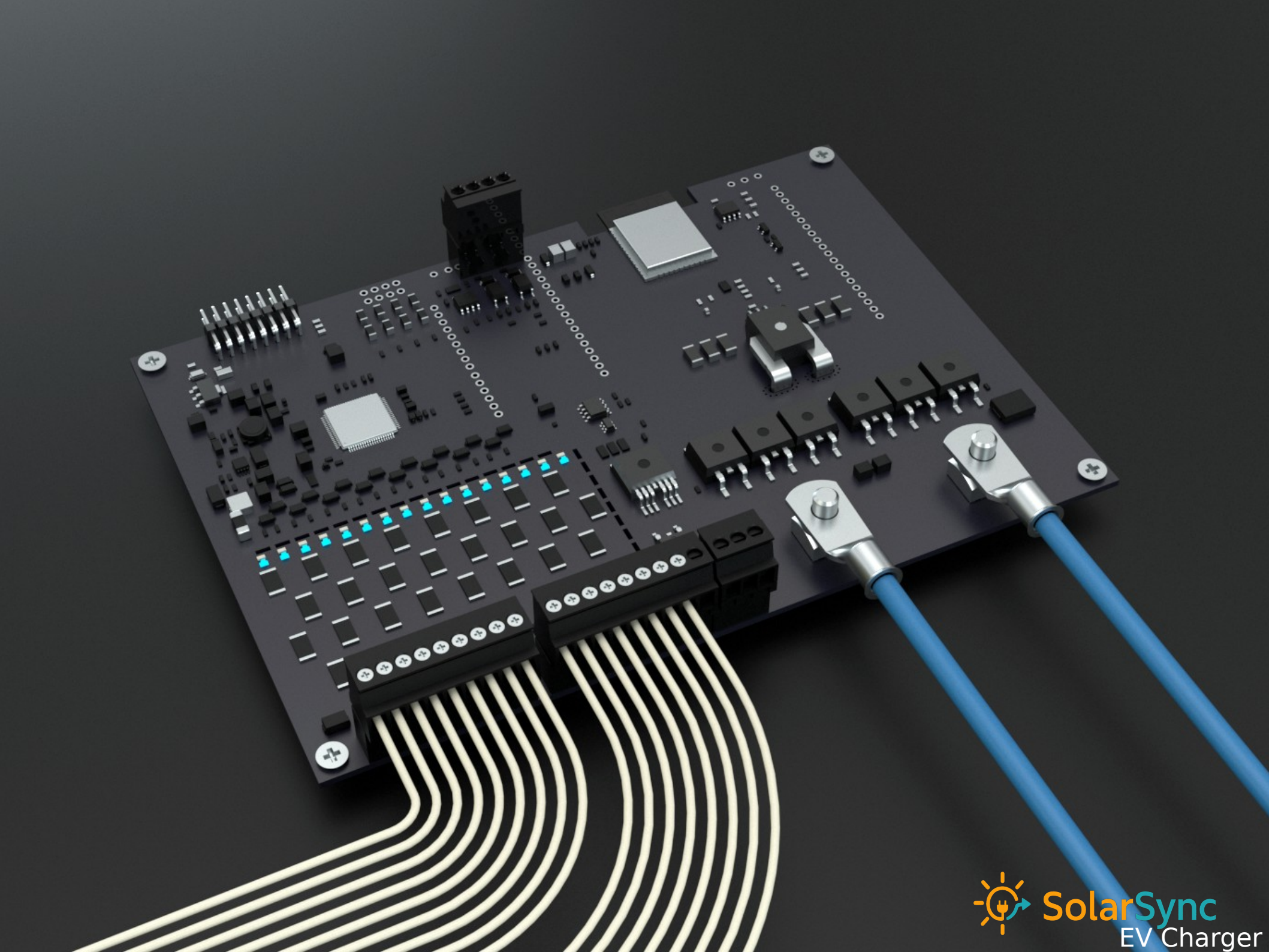
15+ years in BMS & EV electronics across NL/EU

- Built SolarSync EV charger to keep façades beautiful and maximise self-consumption
- Built home storage systems from EV cars for sustainable houses

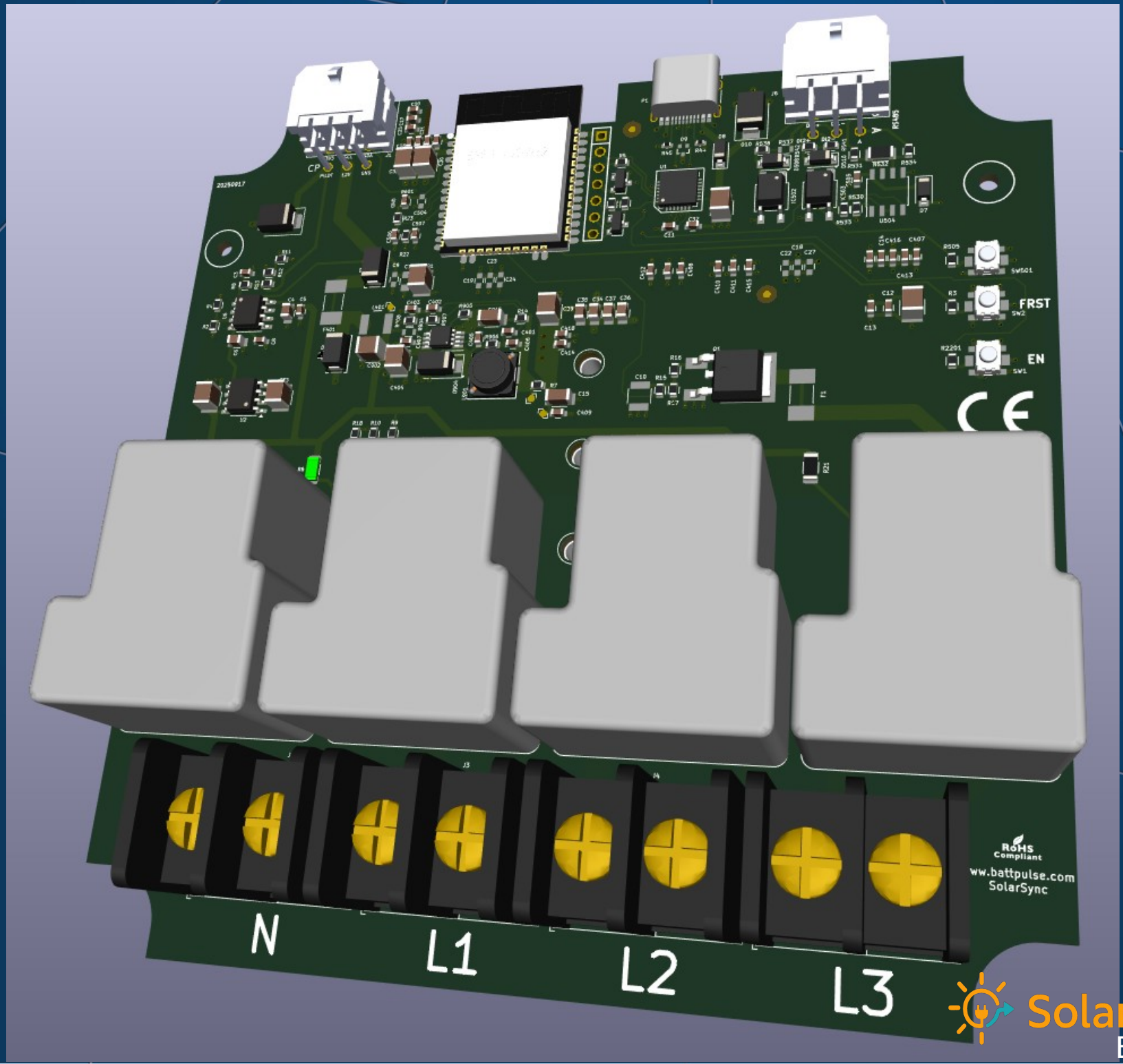




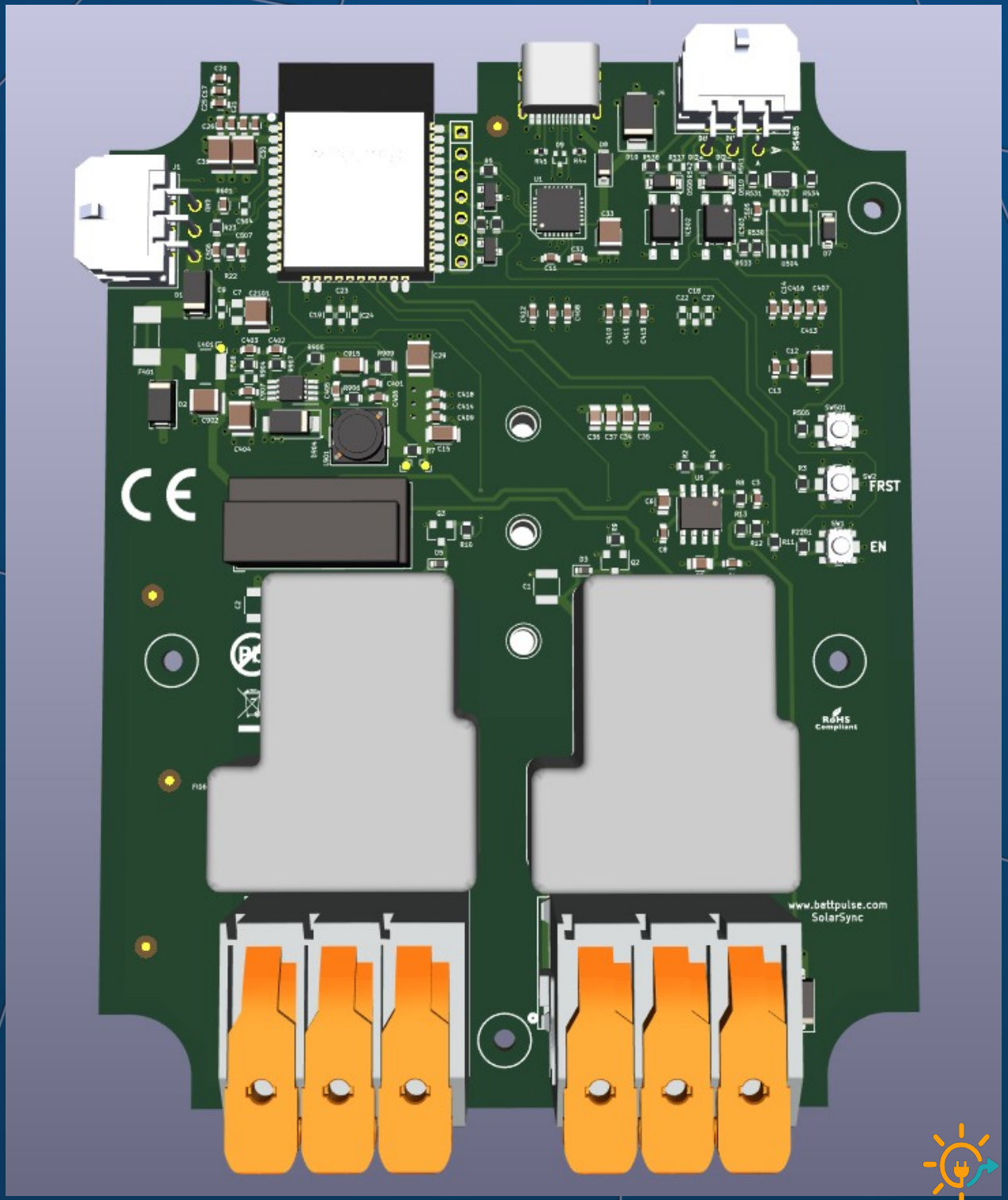
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EV Charger


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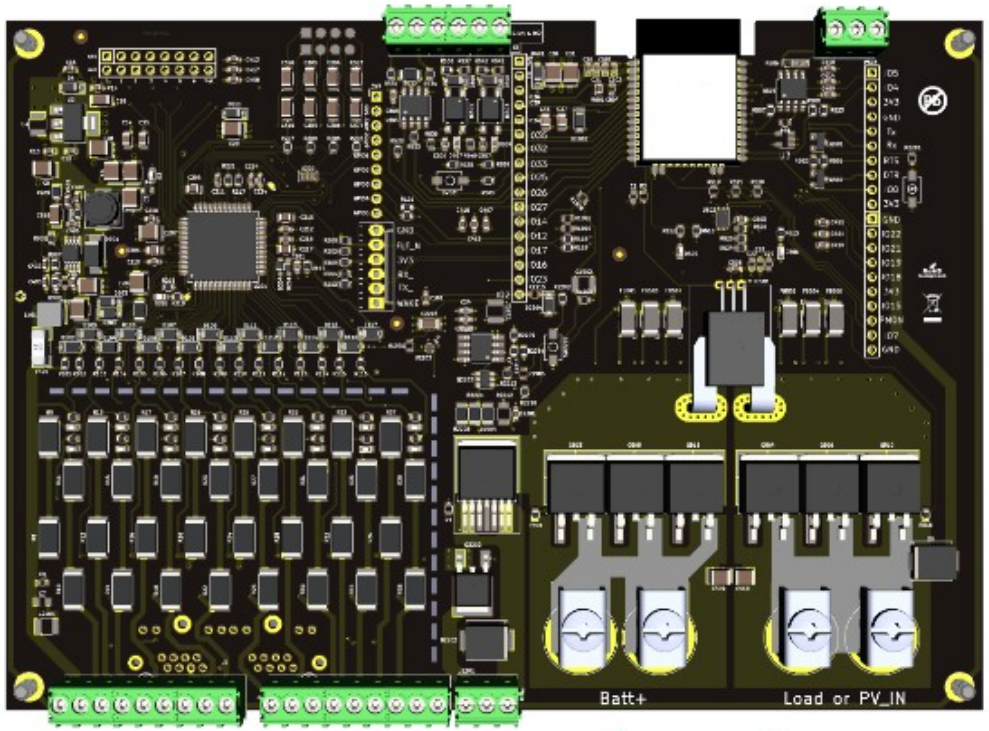

Moonitor16s
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2 Series 3 parallel 300Watt solar system
each panel has 39V open circuit voltage



Positive

GND

14S system,
Batt14,15,16
are shorted

Emergency Cut

Inverter

GND Switching for
Emergency cut

100amp Max

1amp Max

1amp Max

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ViewSonic
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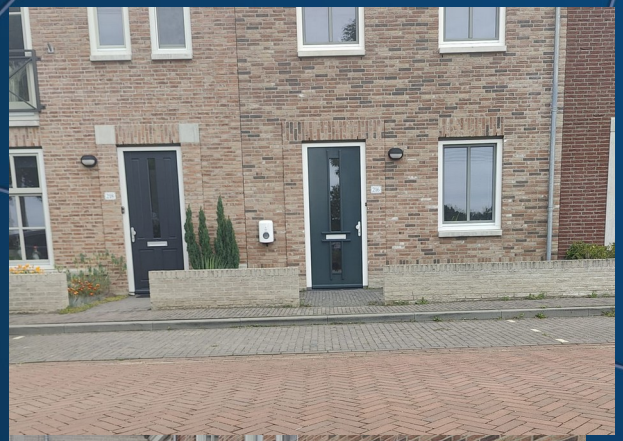
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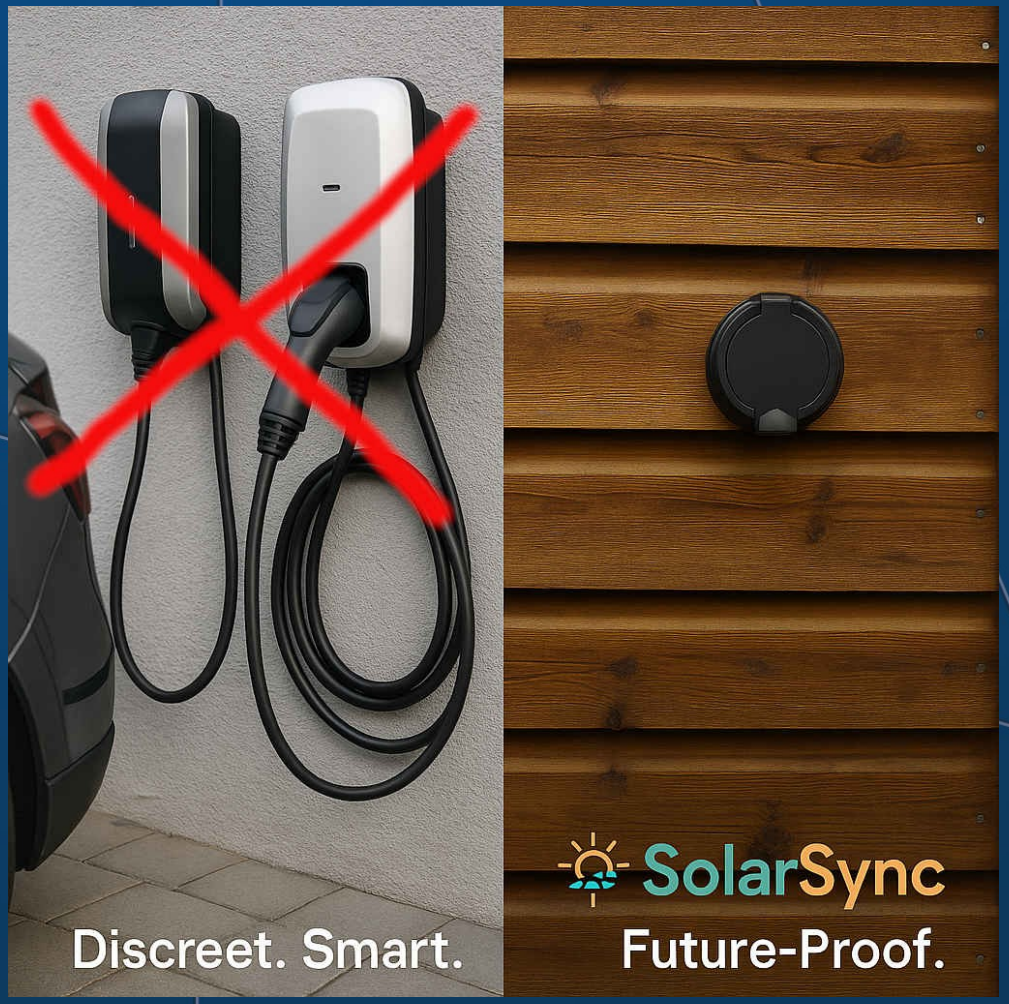
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The current problem

Wallboxes look bulky; cables and housings clutter beautiful façades.
Vandalism/theft risk for exposed units.

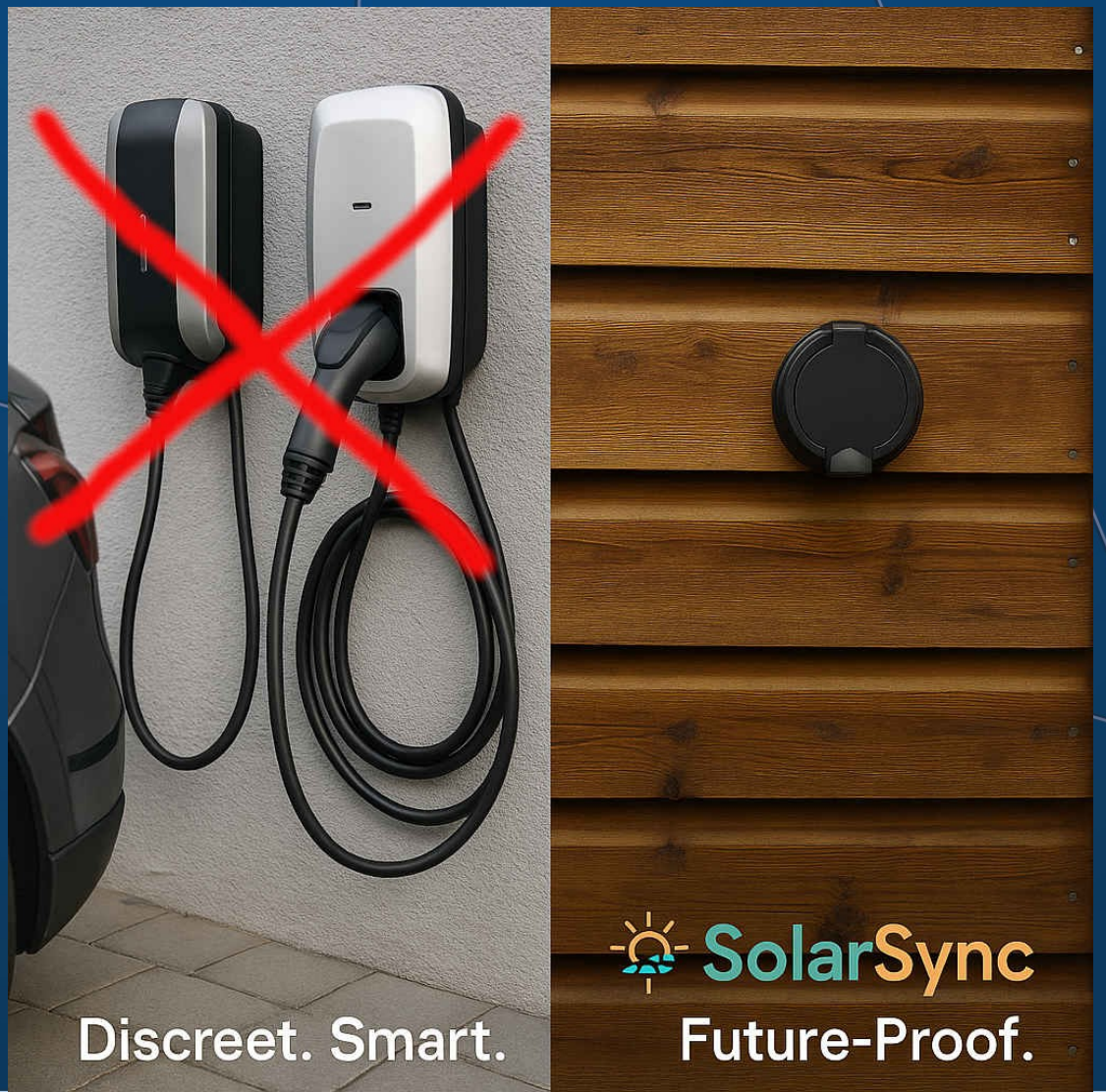




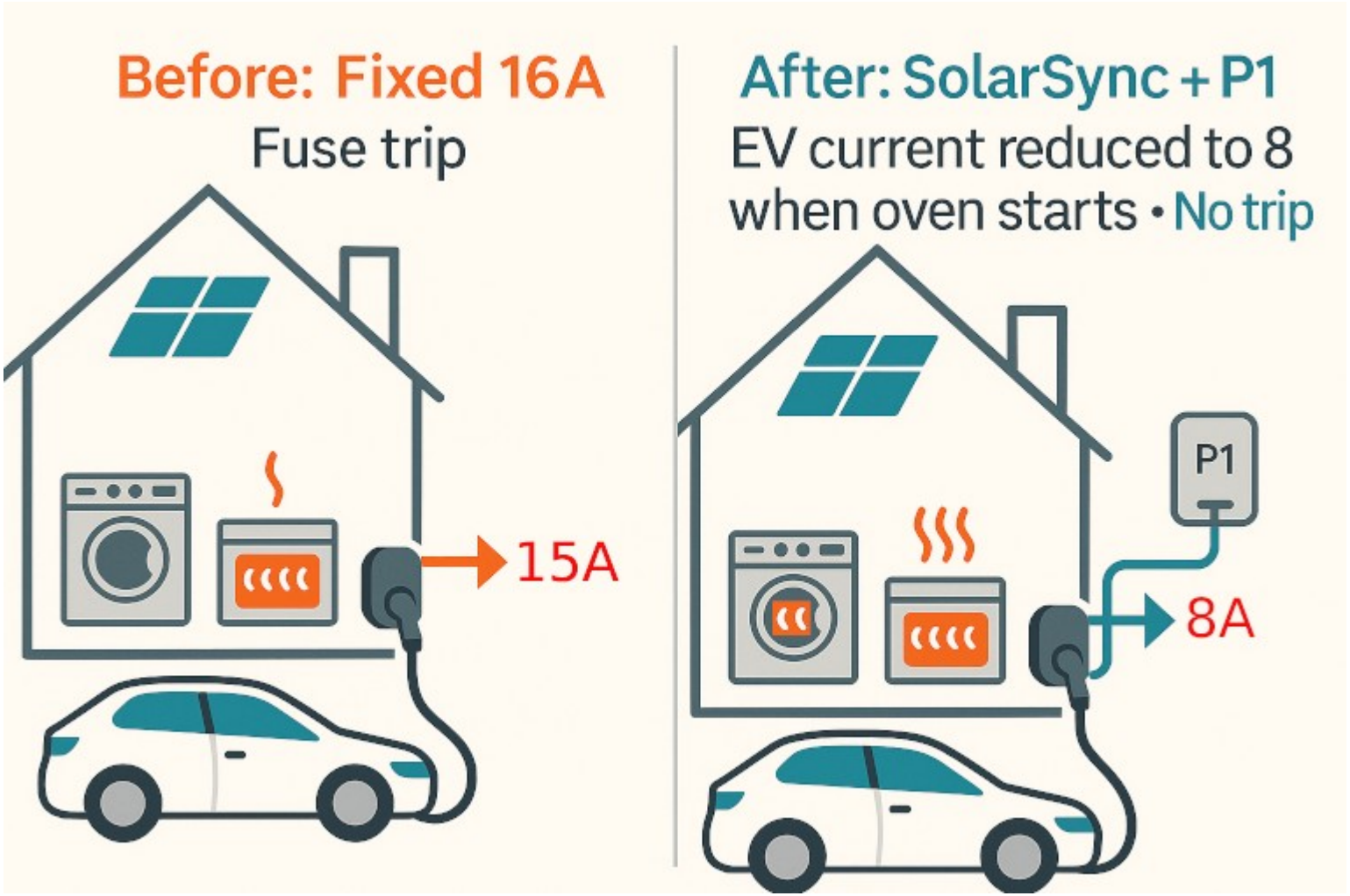


Homeowners want solar-first charging but don’t want a “tech box” on the wall.





Problem and solution



- Grid capacity: fuse trips when multiple home loads start during charging.
  Solution: P1 Meter integration

Problem and solution

Quiet & compact: no humming wallbox.

Discreet outlet with protective cap; charger intelligence sits in-wall / indoors.
Over distance turn on and off capability.
Theft-resistant: nothing valuable to steal outside; tamper-hard design.
Aesthetic options: wood, brick, plaster — blends with façade.
Sun & rain proof: outdoor cap + ingress protection; cable only when charging.

All regular charger functions (schedule, limits, auth options).
Solar-only mode: charges only from surplus PV.
Home-sync (dynamic load): will not trip fuses; adapts when appliances start.

What makes it different?

Conventional wallbox

- Big box on the wall
- Attractive to thieves/vandalism
- Visually dominant
- Often fixed cable mess

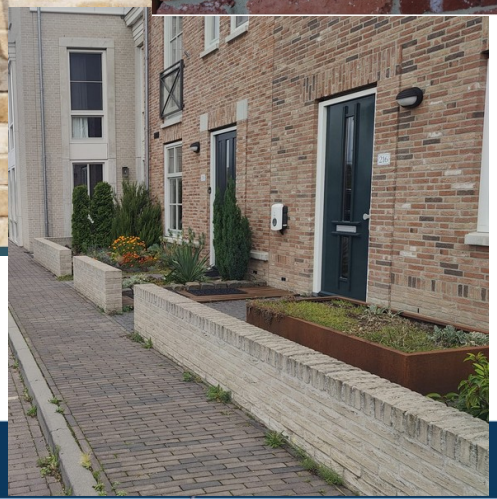
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- Minimal outside: just a neat cap
- In-wall/indoor electronics
- Low visual impact, tidy
- Only cable visible when actually charging





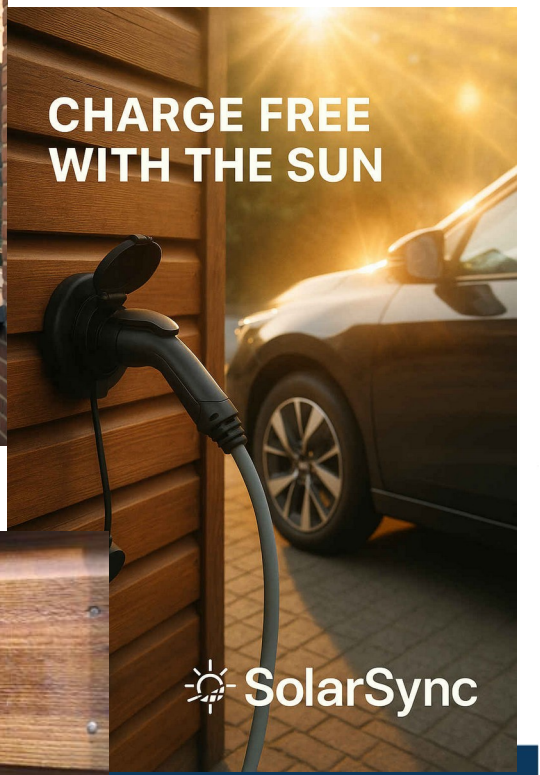












Look and feel

- Matches the neighbourhood’s chic, traditional aesthetic.
- Discreet cap maintains the rhythm of cladding/brick joints.
- Colour/finish variants to satisfy HOA/architectural guidelines.

How it works

- SolarSync measures home import/export and total load.
- It sets the EV charge current via the pilot signal.
- When sun is strong → current increases; when you start an appliance → current decreases.
- Solar-only option: uses only surplus PV (no grid import).

Regular Charger

- User sets a fixed max current.
- Charger ignores how much surplus Solar Energy is available.
- Other appliances turn on → grid import spikes; Fuse trips, next day you see it on the bill.

SolarSync

- Checks live surplus via the P1 meter.
- Matches EV current to exact surplus (or to a user-defined limit).
- If appliances start, SolarSync ramps down to keep the main fuse safe and avoid paid import.
- You can net-zero charge your car using only your own solar.

Why constructors care

Cleaner façades → happier municipalities and buyers.

Consistent exterior detail; colour-matched caps.

Low impact on heritage façades.

Faster install during construction (Only a cap on the wall, finish at handover).

Future-proof: upgradeable electronics, software updates on the air.

Commercial edge: add a high-end, eco feature to listings.

No damagable plastic housing for sun or rain, future proof on plastic recovery

Policy & market context (NL)

- Netting / feed-in rules are evolving; reimbursements for surplus are trending lower and may include constraints or costs during congestion. Like UK/Germany/Belgium
- Homeowners are motivated to self-consume solar instead of exporting at low value.
- SolarSync enables surplus-to-mobility directly: more value kept at home.

Net-Zero charging (surplus-only)

- Checks live surplus via the P1 meter.
- Matches EV current to exact surplus (or to a user-defined limit).
- If appliances start, SolarSync ramps down to keep the main fuse safe and avoid paid import.
- You can net-zero charge your car using only your own solar.

User experience

- Modes: Eco (solar-only) / Balanced / Fast.
- App for limits, schedules, and history.
- Charge without app if desired (simple plug-in defaults).
- Cable management: nothing on the wall when not in use.

Example scenarios

- Checks live surplus via the P1 meter.
- Matches EV current to exact surplus (or to a user-defined limit).
- If appliances start, SolarSync ramps down to keep the main fuse safe and avoid paid import.
- You can net-zero charge your car using only your own solar.

FAQ – Frequently asked questions

Compatibilty with all EVs? → Standard IEC 61851 pilot control.

What if no solar? → Works like a normal smart charger; solar-only optional.

Three-phase? → 1 phase and 3 phase options are available.

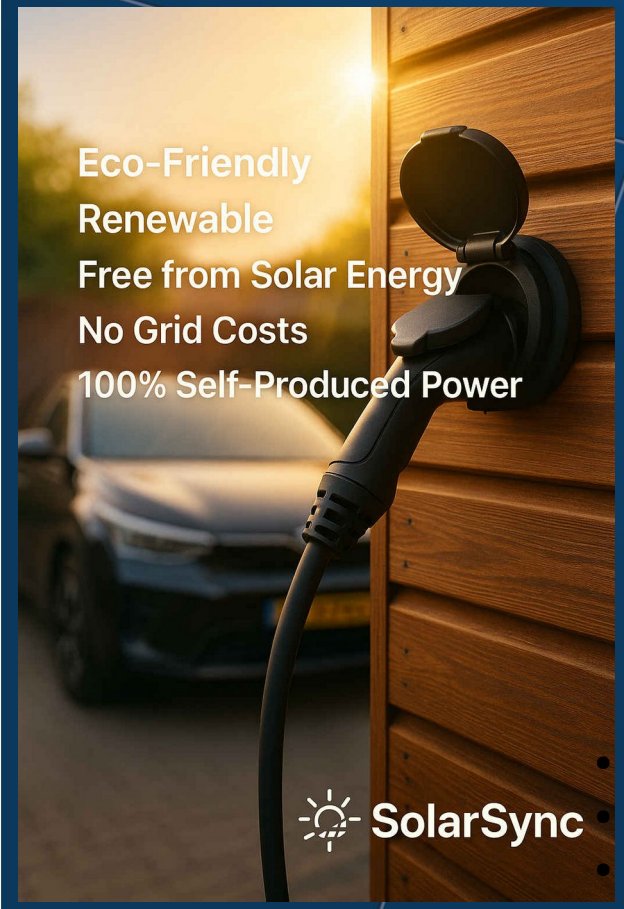
How do you know surplus? → From the P1 meter import/export data.

What about home batteries? → Coordinate charging using BMS signals/SoC rules.

What about permits? → Standard electrical work; coordinate with certified installer.

SolarSync

EV Charger



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- 0629652539



Moonitor16S Battery Monitor Cell States Settings

Wifi	
SSID	FASTWEB-A1U6J4
Password	V3S714B94O
Voltage	
Under Voltage Alarm	3.1
Under Voltage Cut	2.99
Over Voltage Alarm	3.95
Over Voltage Cut	3.97
Balance Voltage	3.94
Current Limits	
Charging	40
Discharging	65
Temperature Cutoffs	
MCU Temperature Cut off	90
AUX Temperature Cut off	30
Cells	
Cell Count	14
Balance Cell Count	5
Aux	
Aux Count	5

Soft Restart Save

Log Type	Value
Local IP	192.168.1.129
Alarms	6
Loop Counter	8406
Free Heap	166848
Hardware version	V2
Software version	V5.0


DB
Autokraft
25


bestlog
bestlog
bestlog



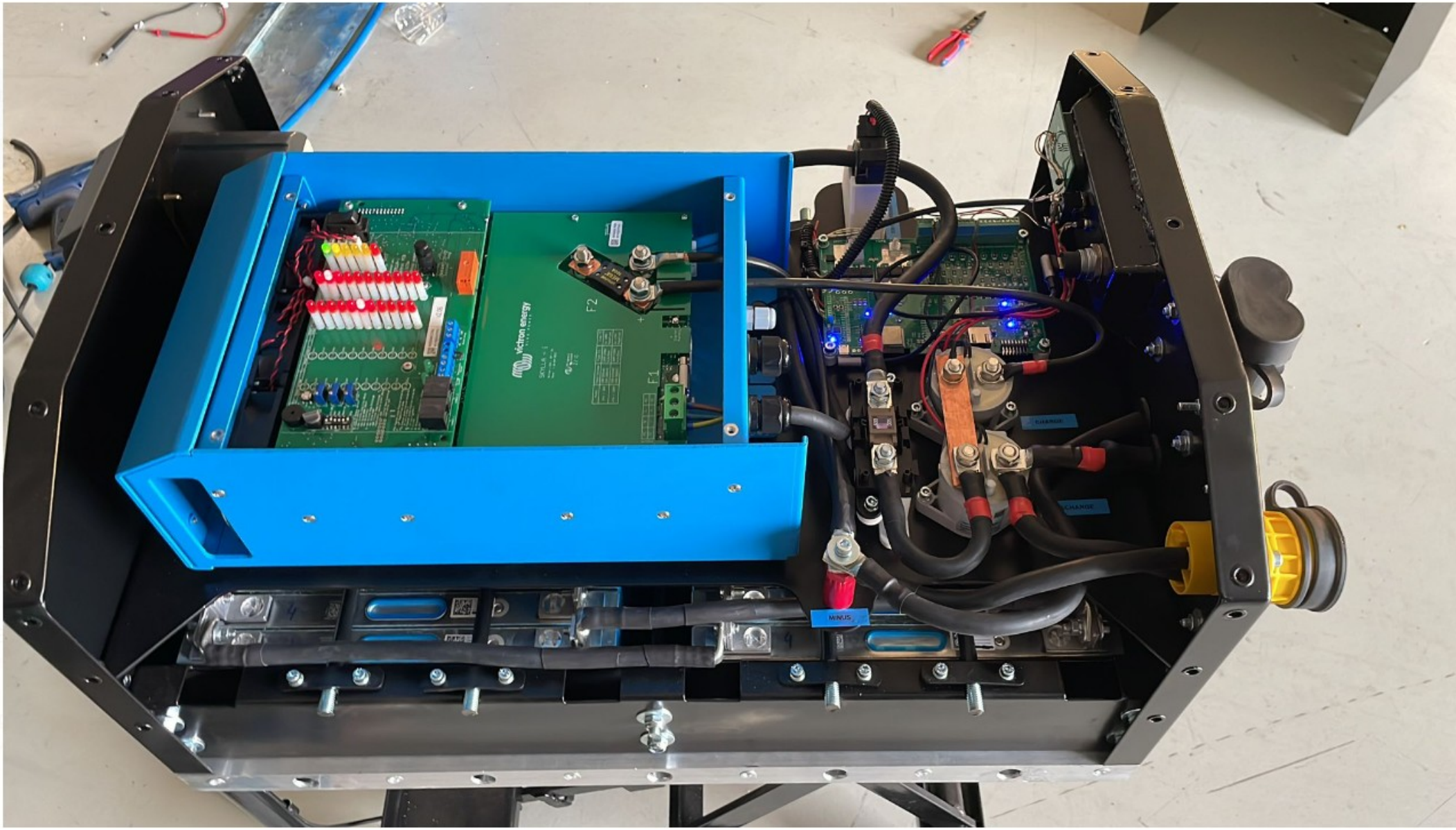


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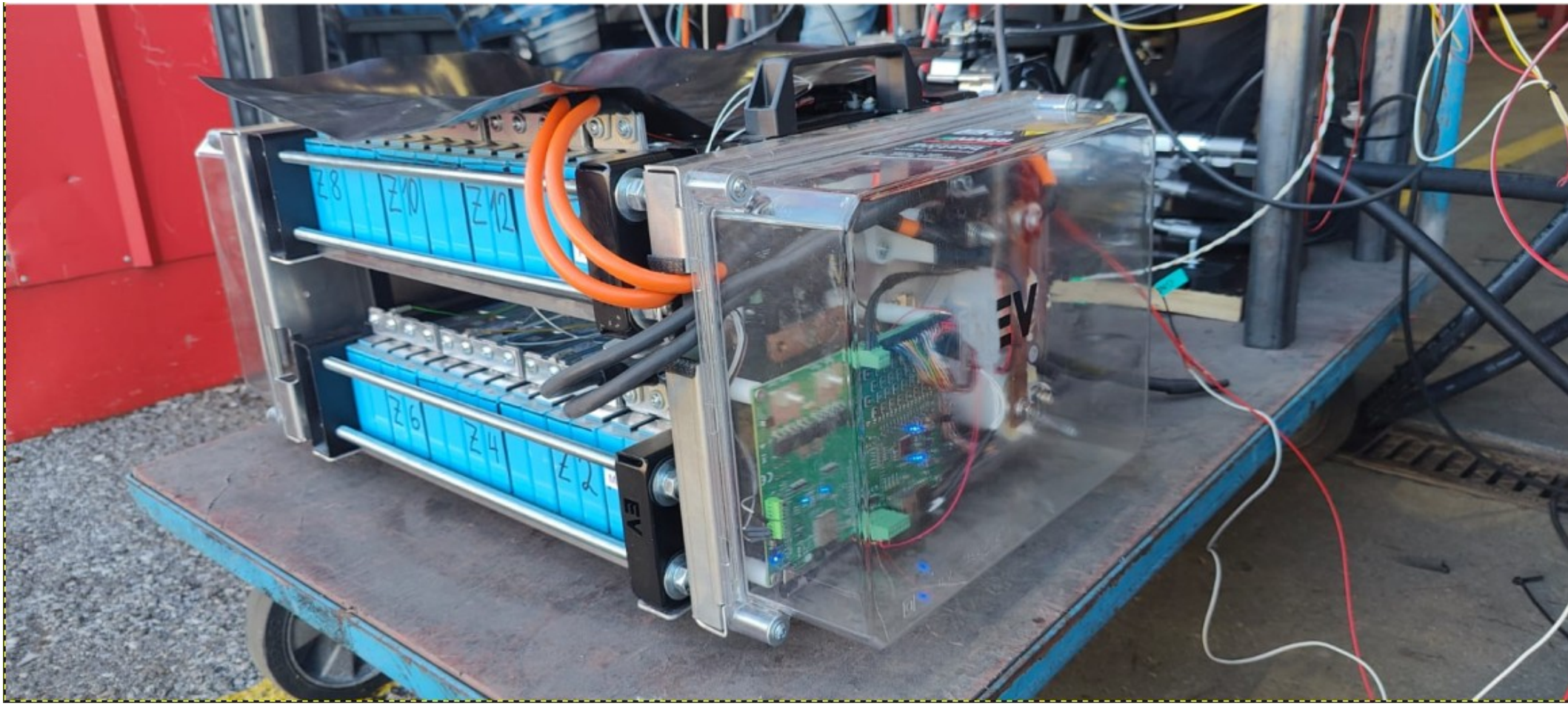
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victron energy
F2
F1
CHARGE
CHARGE
MINUS





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Z8
Z10
Z12
Z6
Z4
Z2
EV
EV

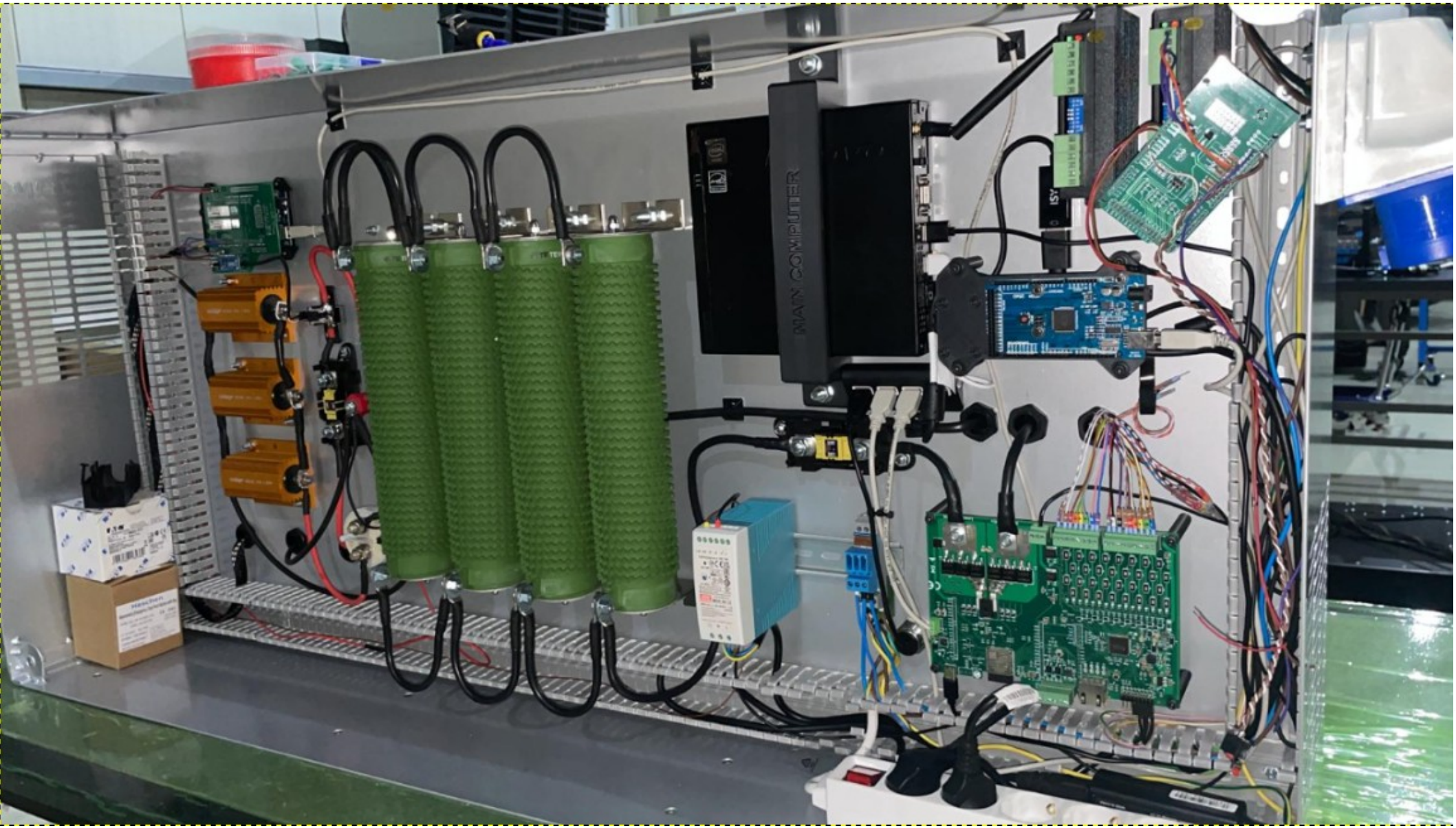


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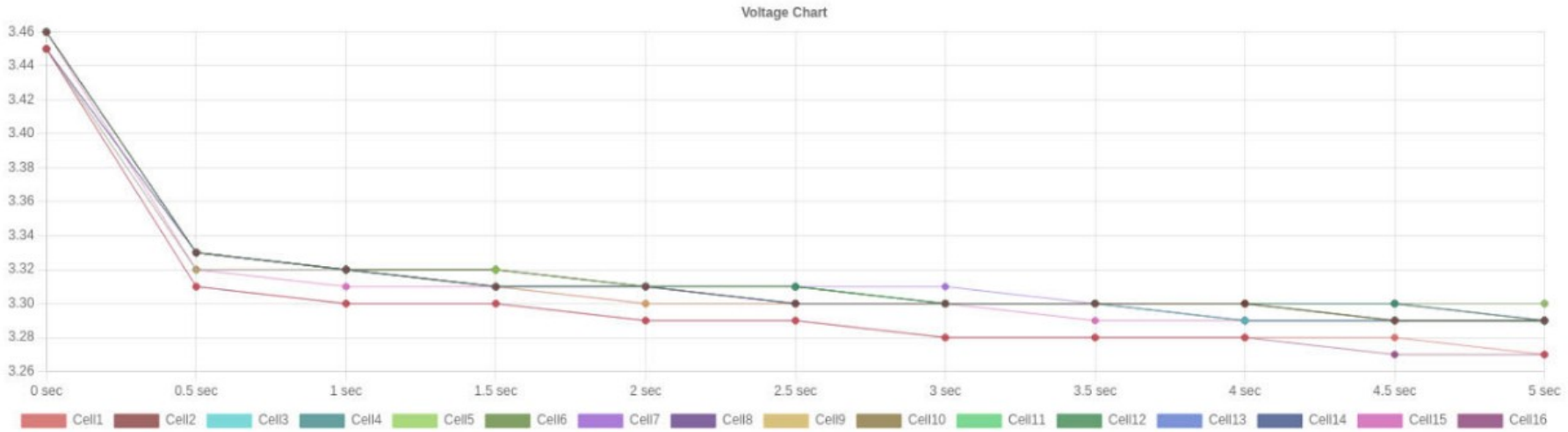


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MAIN COMPUTER

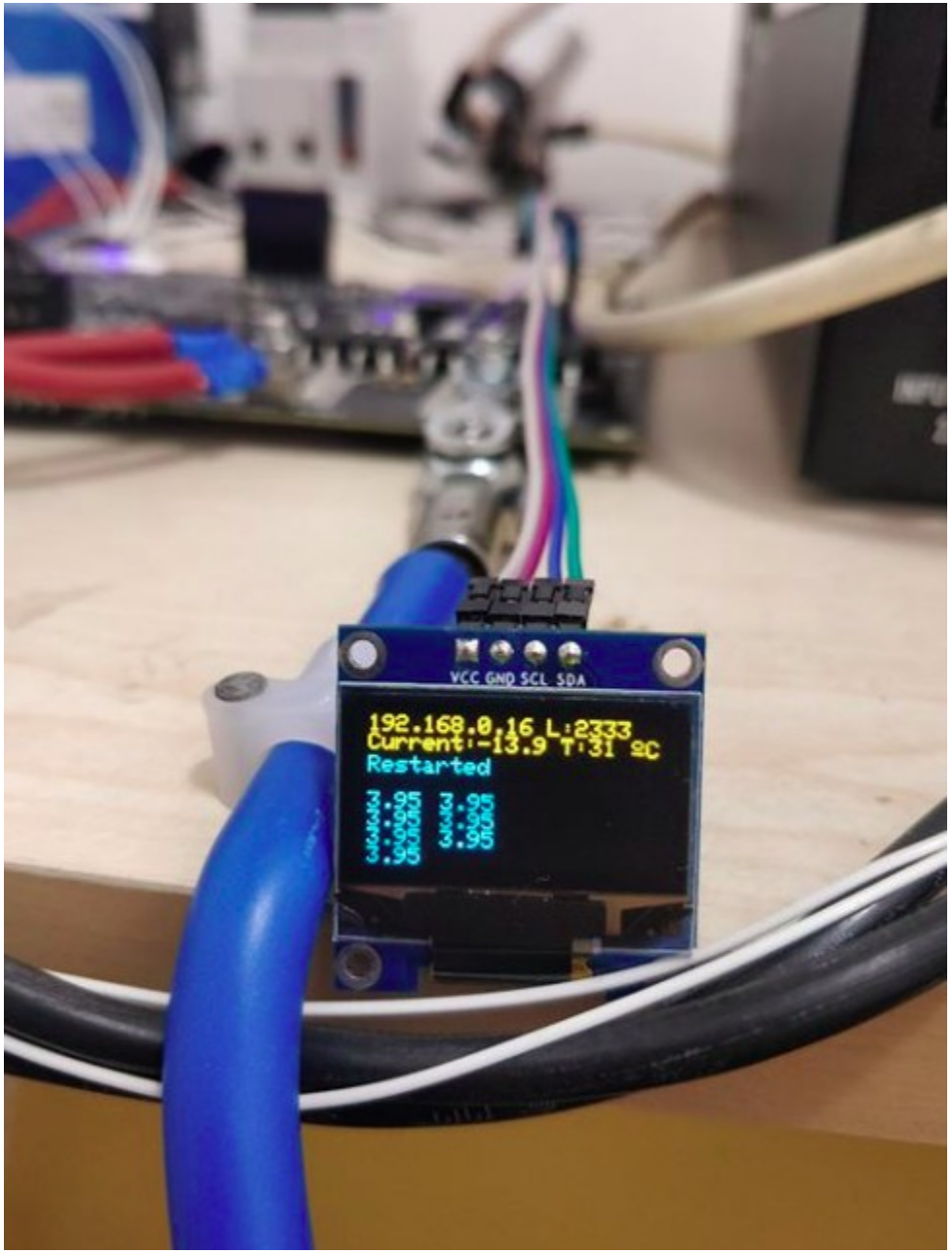
Test Detail

Barcode: 064252788



Field	Cell1	Cell2	Cell3	Cell4	Cell5	Cell6	Cell7	Cell8	Cell9	Cell10	Cell11	Cell12	Cell13	Cell14	Cell15	Cell16
State	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed	Passed
Rint	1.65343	1.59448	1.61438	1.5908	1.55322	1.59153	1.55912	1.58785	1.6269	1.57017	1.58859	1.59743	1.60627	1.5709	1.64164	1.69396

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VCC GND SCL SDA
192.168.0.16 L:2333
Current:-13.9 T:31 °C
Restarted


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SolarSync
EV Charger



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11
12
13