V2C

PHOTOVOLTAIC CONNECTION

TRYDAN

1. TRYDAN PHOTOVOLTAIC CONNECTION

The Trydan charging point can be connected to the photovoltaic electrical system in three ways:
1. Via the slave included in the charger

V2C 2.0 slave

2. Through direct connection to the PV inverter.
Up to version 1.5, compatibility with:
- Huawei (with S-Huawei dongle)
- Fronius
- Kostal
- Solax
- Future additions: Riello, Ingeteam, Greenheiss

3. Through meters from other manufacturers.
Up to version 1.5, compatibility with:
- Shelly EM

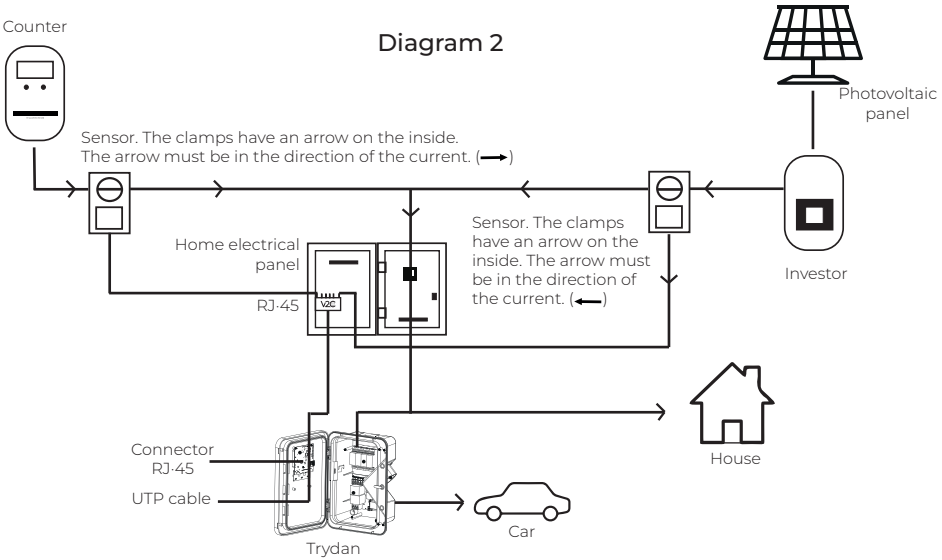
The installation can be either single-phase or three-phase. In the equipment with direct connection to photovoltaic inverter, they do not need any type of additional meter.

2. CONNECTON WITH SLAVE V2C 2.0

The recharge point comes with one clamp as standard (single-phase) or 3 clamps (three-phase), the installer must purchase an additional clamp or 3 clamps in the case of three-phase.

*** The current clamp must not be subjected to any physical change as this would alter the measurement waveform. Thus, the slave should be positioned so that it does not move to prevent it from disconnecting from the current clamp.*
A UTP cable shall be connected from Trydan with RJ45 connector on the control board. The UTP cable will extend from the load point to the meter panel where the V2C 2.0 slave with the current clamps will be located.

Diagram 2



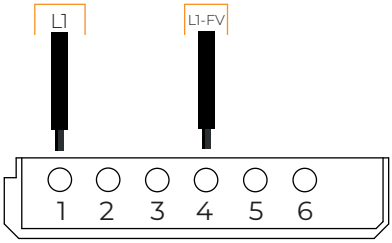
The installation should preferably be done according to scheme 2. If the installation has a lot of reactive power, it would be ideal to install it according to scheme 1, since the measurements will be more accurate.

Installation according to diagram 2

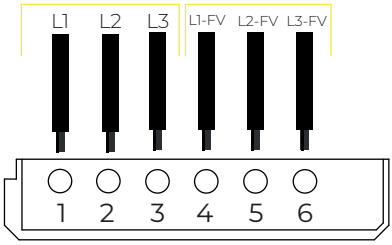
Connect the sensors to the slave. Positions 1, 2 and 3 correspond to the house connection. Positions 4, 5 and 6 correspond to the photovoltaic output.

If the equipment is single-phase in photovoltaic installation, connect 1 (housing) and 4 (photovoltaic). If it is three-phase in photovoltaic installation, connect 1, 2, 3 (housing) and 4, 5, 6 (photovoltaic).

Single-phase + photovoltaic



Three-phase + photovoltaic



Installation with direct connection to the inverter

- Huawei connection settings:
  https://v2charge.com/wp-content/uploads/2022/08/Trydan-Manual_Huawei-Inverters.pdf
- Solax connection settings:
  https://v2charge.com/wp-content/uploads/2022/08/Trydan-Manual_-Solax-Inverter.pdf
- Fronius Primo connection settings:
  https://v2charge.com/wp-content/uploads/2022/08/Trydan-Manual_Fronius-Primo-Inverter.pdf

Installation with external meters

- Connection setup for Shelly:
  https://v2charge.com/wp-content/uploads/2022/08/Trydan-Manual_-Shelly-Meter.pdf

Future updates

Photovoltaic system installation with only one current clamp. From version 1.7 onwards, it will be possible to balance the PV system using a clamp. This mode can also be used in community parking. The disadvantage is that it will not be possible to see the PV generation in the app.

3. CONFIGURATION OF THE APP FOR PHOTOVOLTAIC MODES

You must have previously configured the photovoltaic mode.
https://v2charge.com/how-to-activate-dynamic-control/

Recharging points with the dynamic power control function can select the maximum power of the installation in the APP configuration or through the portal. The power selection can be selected by hours, as well as differentiating between weekends and weekdays.

By accessing the recharging point configuration menu, it is possible to configure the recharging point via WIFI or Bluetooth (only devices with this configuration). The power configuration can only be done if the dynamic control is previously activated correctly.

Enter the section 'Configure Dynamic Control'.

In the first screen you will be able to configure the maximum and minimum intensity between which the dynamic control will work. If your installation is limited to 20 amps, you will not be able to exceed the 20 amps indicated. Slide the drop-down to select the maximum intensity of your installation and the minimum intensity of your installation you want to charge.

In the installation power configuration section, you will be able to select the maximum contracted power in the same one. Access it to configure the hourly time slots.

In this section, you will have your time slots, both through Bluetooth and Wifi. If you want to modify the current ones, you will have to delete and add them. If you do not have any, it is the moment to add the time slots. The time slots differentiate between days weekdays (Monday to Friday) to Saturday and Sunday.

4. PHOTOVOLTAIC OPERATING MODES

This allows optimizing the recharge, so that always giving priority to the consumption of the existing installation, the car only recharges with the solar generation of the same or we can take advantage of this solar energy to recharge our car much faster.

Previous Steps
Previamente, tendrá que haber configurado su punto de recarga con el control dinámico que disponga.

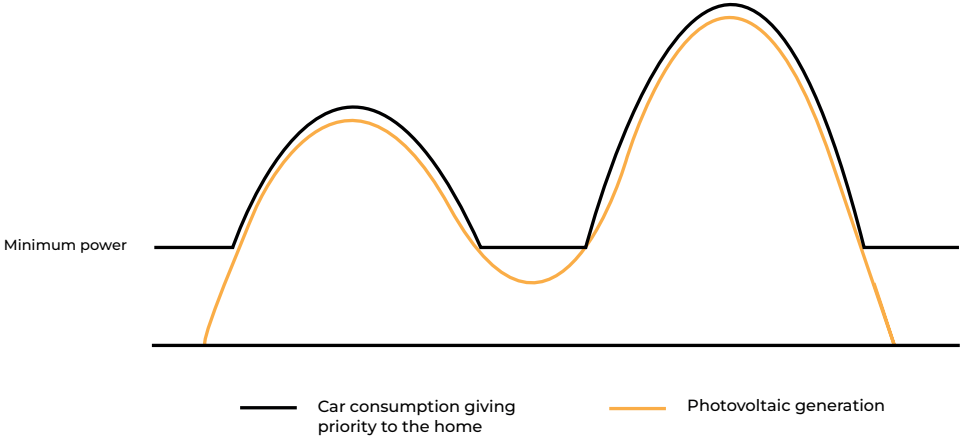
- Installation and configuration of the dynamic recharge control:
  https://drive.google.com/uc?id=1OiuynER-IWhjRkk-whIaTgUYy-I2EY6q&export=download
- How to activate the dynamic power control:
  https://v2charge.com/how-to-activate-dynamic-control/
- How to set the dynamic control power:
  https://v2charge.com/how-to-set-up-the-dynamic-power-control/

Operating modes

In the previous link, once configured the dynamic control mode "with photovoltaic", it will allow us to select the mode we want depending on the time, it will also allow us to select between weekend and rest of the week. We will have to configure an interesting programming for us and this mode will always be compatible with the timer.

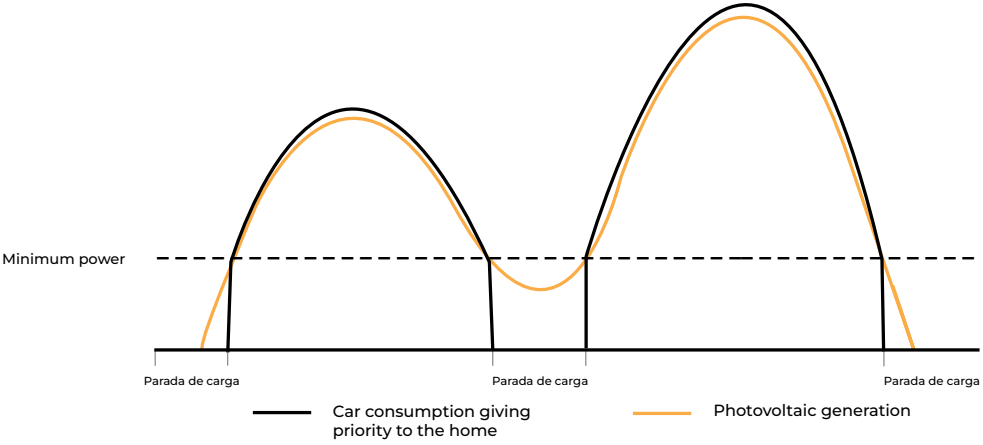
Create your schedule to optimize your costs. The programming can be done with your APP or with the portal www.v2c.cloud.

- PV + Minimum Power: The car will charge at the power being generated by the home's surplus self-consumption photovoltaic system and will charge at least at the minimum intensity selected.



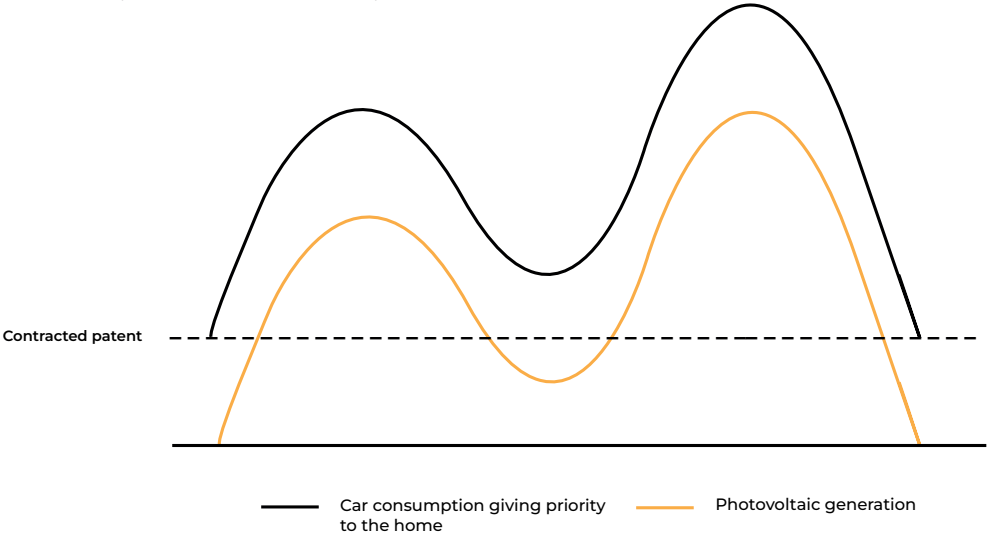
· This mode is especially interesting for cloudy days, where some clouds may interfere with the generation of photovoltaic energy. It is also interesting for those cars that do not allow to restart the recharge once stopped. The car will copy your self-consumption generation line, always giving priority to the house.
· The symbol is a "sun" plus the word "MIN".
· Note: select the minimum intensity in your mobile or on the web:

- FV Exclusive: The car will only charge with the power generated by the self-consumption photovoltaic system and will not require the house. If it does not have enough PV power, the recharge is stopped.



· There are vehicles on the market that do not allow recharging to resume once stopped.
· It will adjust the consumption curve to the generated solar power.
· The symbol is only a "sun".
· You will need a decent solar installation, as the minimum charging power of an electric car is 1.2kW.

- Network + Photovoltaic: Mode also called maximum power. Allows charging above the contracted power: PV + Contracted power.



· Allows charging at maximum power, taking advantage of your contracted power plus photovoltaic generation.
· Recommended for use in night mode. In this case the photovoltaic will be 0.

CHARGING UP

YOUR TOMORROW

www.v2charge.com