

ENSTO

eFiller



Installation instructions
Operation instructions

RAK130_ENG
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Ensto eFiller Charging Point

1. Introduction

This installation instruction and user guide is for the Ensto eFiller charging point. Even if the features and appearance of the different eFiller versions varies, the installation and usage of the product will always follow the principles described in this guide.

2. Safety Instructions

- *eFiller must be installed by electrically skilled person.*
- *Read this instruction manual before installation and usage of the charging point.*
- *The instruction manual must be stored in a safe location and be available for future installation and service.*
- *Follow the guidelines in the instruction manual when installing and using the charging point.*
- *The installation must be done according to the local safety regulations, restrictions, dimensioning, rules and standards.*
- *The information provided in this manual in no way exempts the user of responsibility to follow all applicable rules and safety standards.*

3. Installation Instructions

Delivery contains

- eFiller charging point
- Plug holder
- Installation accessories
- Installation and Operation instructions

Items needed

- Ratchet wrench set
- Torx key set
- Power drill with bore bit
- Screws and possible accessories for wall installation

3.1 Before Installation

Remove the eFiller from it's package. Do not to scratch the surface of the eFiller after removal from the package.

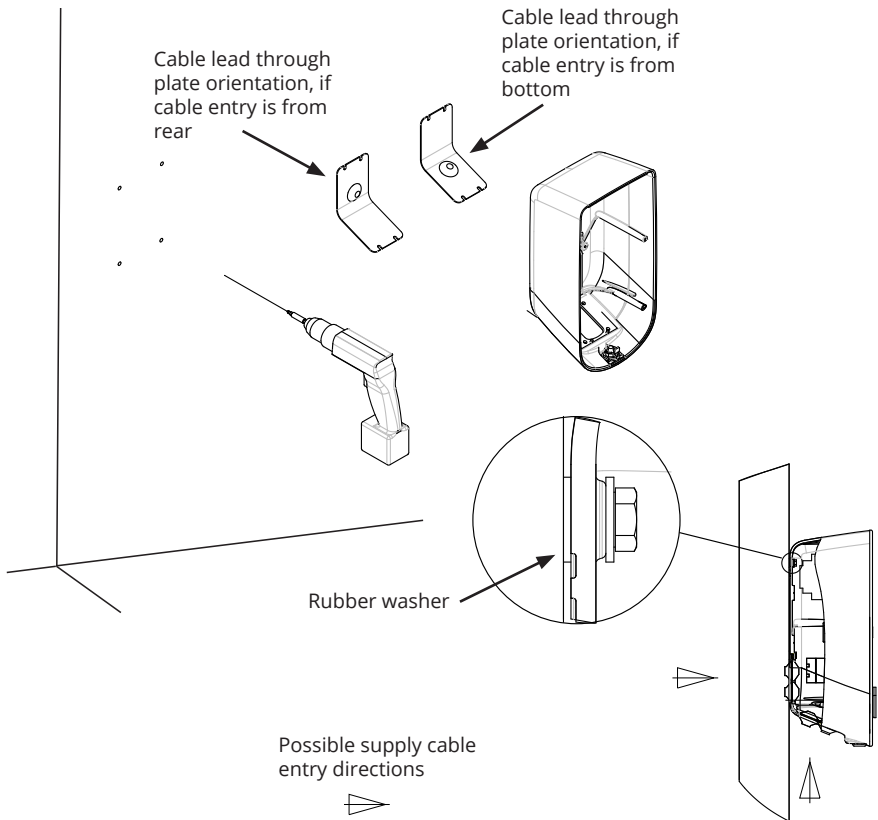


3.2 Installation to Wall

When selecting the installation location, make sure that the wall material is suitable and robust. The mounting surface should be flat and vertical ($\pm 10^\circ$).

- Remove the stainless steel top cover by removing the four torx screws.
- Take the cable routing into consideration when planning the installation. The supply cable can be routed into the enclosure from the rear or bottom. Install the lead through plate depending on the cable entry direction.
- Prepare the wall for installation and select the screw type depending on the wall type. Recommended screw diameter is 6mm - 8mm. The mounting screw spacing is 120mm x 185mm. Exercise extreme caution when drilling holes in the wall. Make sure there are no electrical cables inside the wall.
- Select the drill size to match the screw size.
- Drill open the mounting hole points in the back of the aluminum enclosure.
- Install the aluminum enclosure to the wall.
- Place rubber washers between the wall and the enclosure.

Figure 1



3.3 Supply Connection

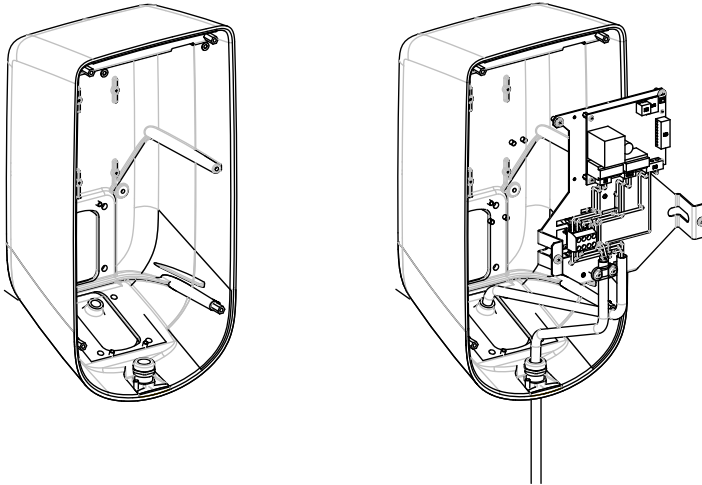
The supply cable routing must be proper. Ensure the sufficient supply cable sizes in the installation. No additional loads in the same supply line.

See figure 2.

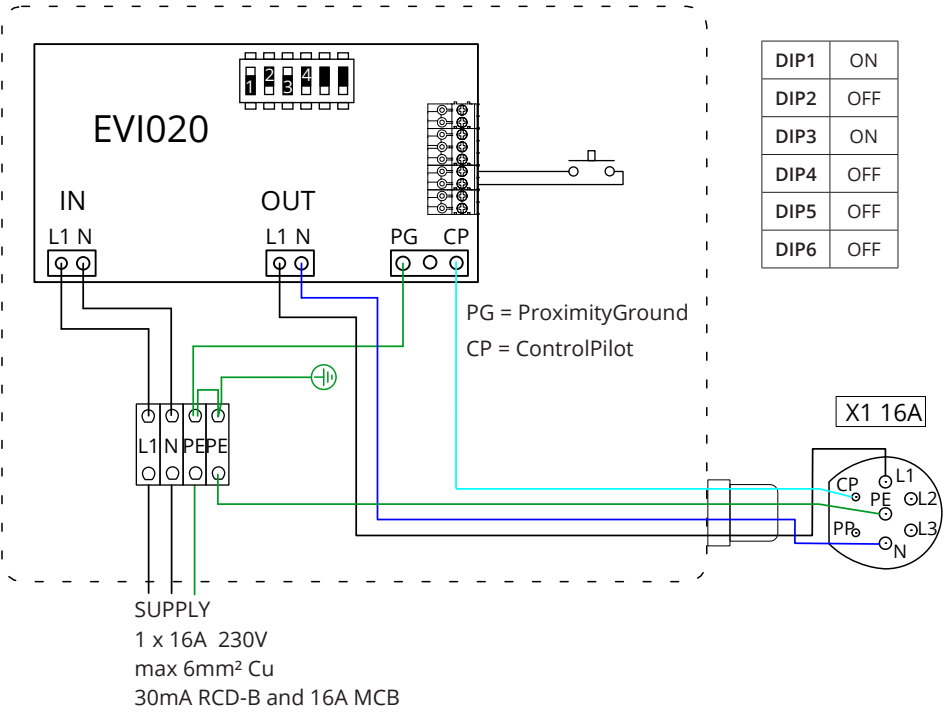
- Pull the supply cable through the cable lead through plate 350mm - 400mm measured from the lead through.
- Remove the sheath of the supply cable at the length of max. 250mm.
- Cut the leads in different lengths so that the PE cable is the longest and strip them at the length of 23mm.
- Connect the supply cable leads to the supply connectors according to the connection diagram. Ensure strain relief to the cables by fastening it on the cable support that is located under the supply connectors.

IMPORTANT NOTICE: *eFiller needs to be installed to a dedicated supply line, which is equipped with 30mA residual current device (RCD-B) and 16A circuit breaker (MCB).*

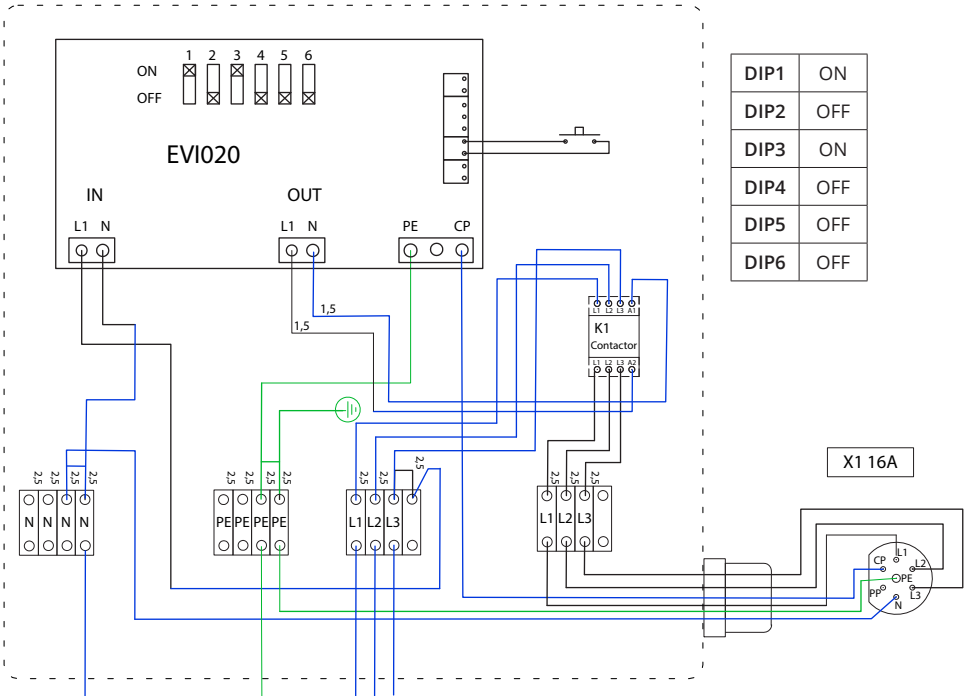
Figure 2



EVH020.02H



EVH050.02H



SUPPLY
 3 x 16A 230V
 30mA RCD-B and 16A MCB

3.4 Charging Current Limitation

Configure the maximum allowed charging current with DIP switches at the charging controller. The maximum current can be defined according to the following table.

NOTE! The configuration must be done by electrically skilled person.

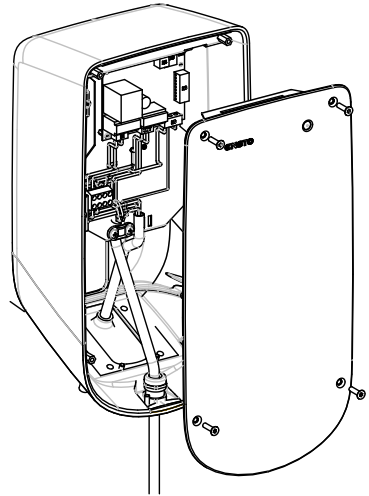
To get to the control unit the front cover must be removed by loosening the four torx screws.

DIP1	DIP2	DIP3	DIP4	DIP5	DIP6	Maximum charging current
OFF	OFF	OFF	OFF	OFF	OFF	6A
ON	OFF	OFF	OFF	OFF	OFF	8A
OFF	ON	OFF	OFF	OFF	OFF	10A
ON	ON	OFF	OFF	OFF	OFF	12A
OFF	OFF	ON	OFF	OFF	OFF	14A
ON	OFF	ON	OFF	OFF	OFF	16A EVH020.02H default 3 x 16A EVH050.02H default

3.5 Top Cover Installation

- Install the stainless steel top cover to its place with four torx screws. See figure 3.
- After the eFiller charging point is installed, turn on the electricity to the supply line.
- When the green light in the eFiller cover turns on, the charging point is ready to use for charging.

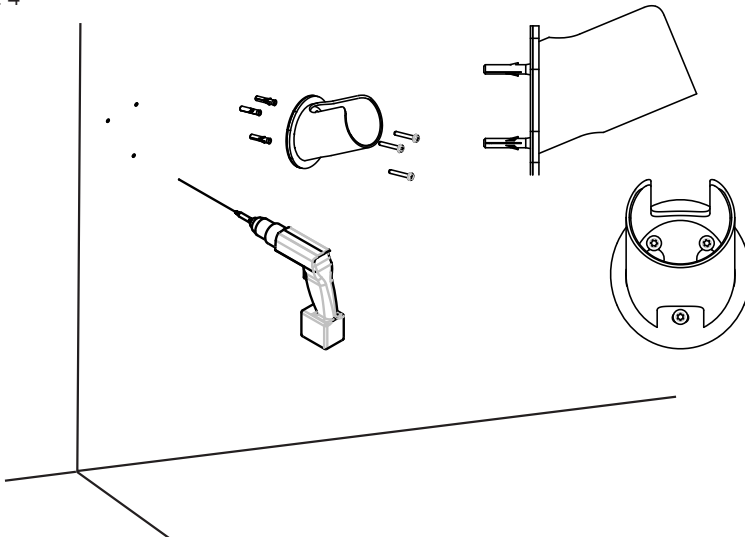
Figure 3



3.6 Plug Holder Installation

- Install the plug holder to a wall so that the plug is handy to pick up and the placement is practical compared to location of the parked vehicle.
- When selecting the installation location, make sure that the wall material is suitable and robust. The mounting surface should be flat and vertical ($\pm 10^\circ$).
- Prepare the wall for installation and use screws delivered in the package.
- Install the holder to the wall. After installation, place the charging plug to the holder. See figure 4.

Figure 4



4. User Instructions

4.1 Start Charging

- Pick up the plug from the holder.
- Connect the plug to your vehicle.

4.2 Stop Charging

- Disconnect the plug from your vehicle.
- Put the plug back to the holder.

4.3 User Interfaces

The eFiller charging point has indicator lights to tell the status of the charging.

The charging sequence and indicator light operation is as follows:

Sequence	Indicator
Ready to charge	Green, stable
The charging cable is connected properly to the vehicle	Green, blinking
The charging cable is connected and waiting for the vehicle to start charging (for example timer charging)	Green, blinking
Charging	Blue, stable
The charging cable is connected and the vehicle has ended charging (for example the battery is full)	Green, blinking
Malfunction	Red, stable
No supply power for charging point	No light

5. Troubleshooting

5.1 The vehicle is not charging

- Ensure that the charging cable is properly connected to the vehicle.
- Ensure from the vehicle that the vehicle has no timer charging activated. If it is active, enable instant charging from the vehicle.
- Ensure from the indicator light that the charging point supply power is on (the indicator light is green). If not, check the status of the residual current device (RCD-B) and circuit breaker (MCB) at the power supply line.
- Ensure that when you connect the charging cable to a vehicle, the indicator light blinks green to indicate a good connection to the vehicle.
- Ensure from the charging point that the indicator light is not red.



5.2 The indicator light is red

Potential errors and corrective actions:

- Unsupported configuration on the eFiller charging current limitation. Check the position on the DIP switches inside the charging point according to the table on page 7.
Notice that opening the cover can only be done by electrically skilled person.
- Missing protective earth (PE). Check the PE availability from the supply line and condition of the charging cable.
- Error in the vehicle communication. Disconnect the vehicle, reset the charging point by turning supply voltage off and on. Retry charging.
- Software error. Disconnect the vehicle, reset the charging point by turning supply voltage off and on. Retry charging.
- The vehicle requires ventilation. In case the vehicle requires ventilation during charging, eFiller does not allow charging.

5.3 The vehicle is charging slower than expected

- Ensure from the vehicle that the vehicle has no timer charging activated. If the timer charging is activated, the charging time may be different than expected.
- Ensure from inside of the charging point the configuration of the current limitation DIP switches. If the charging current limitation is set to a lower charging current than assumed, the charging time is longer.
Notice that opening the cover can only be done by electrically skilled person.
- Ensure that there is no charging current limitation features in use at the vehicle.

If you need to contact Ensto related to faulty operation of eFiller, please prepare to tell the order number (V.....). You will find the order number on the nameplate on the enclosure bottom.

6. Maintenance Instructions

With well-done maintenance you can ensure a long lifetime of the charging point and keep the warranty valid.

Please proceed the following maintenance once in a month:

- Test the residual current device (RCD-B) at the supply line. Usually RCD's have a test button for this purpose. There might be local requirements on the RCD manual test interval, but Ensto recommends testing once a month. In case of failed test the RCD must be changed.
- Check the plug holder and the charging plug from possible dirt. Remove possible dirt.
- Check the condition of the charging plug and the charging cable for wear out or mechanical damage. If damaged, please replace necessary parts with new ones.

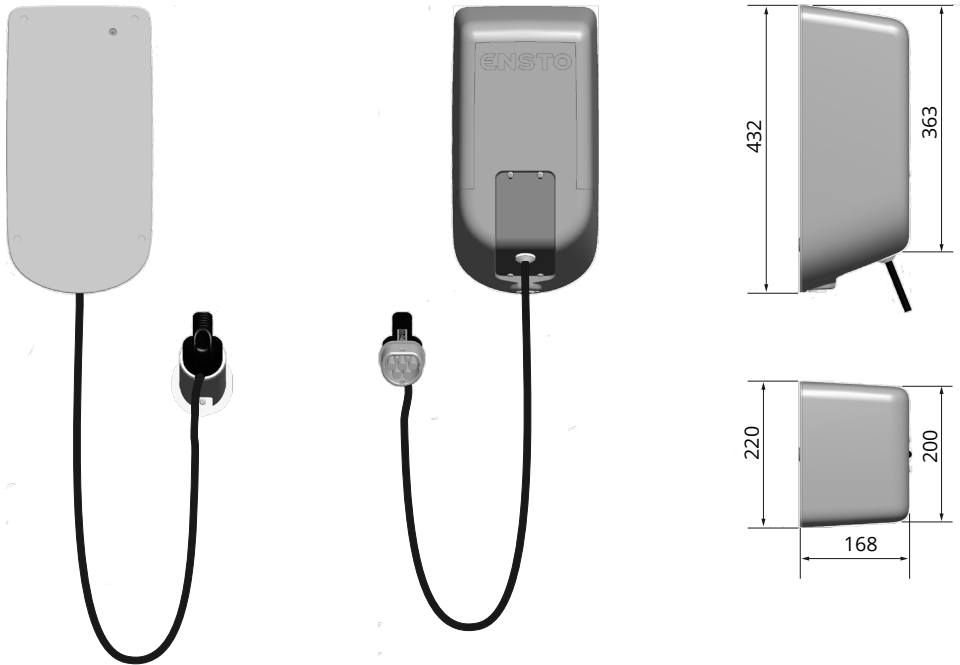
7. Warranty

The warranty period for Ensto electric vehicle charging point is 3 years from the date of purchase but no longer than 4 years from the date of manufacture, if there is no other agreement. The warranty is not applicable if the maintenance is not performed according to the instructions.

Warranty conditions, see www.ensto.com.

8. Dimension Drawing

EVH020.02H / EVH050.02H



9. Technical Data

Product code	EVH020.02H	EVH050.02H
Charging connector	Type2 plug	
Charging connectors	1	
Charging current max.	16A 1-phase	3 x 16A 3-phase
Charging output	3.6 kW	11 kW
Nominal voltage	230V 1-phase	230V/400V 3-phase
Nominal current	1 x 16 A	3 x 16 A
Nominal frequency	AC 50/60 Hz	
Supply connectors	3 (N, L, PE)	5 (L1, L2 L3,N, GND)
Supply connector type	Screw terminal Cu 2,5 - 6 mm ²	
Number of cable throughs	1	
Installation	Directly to wall	
Dimensions	432 x 220 x 168 mm	
Weight	9 kg	
Length of charging cable	4 m	
Enclosure class	IP44	
Shock protection rate	IK10	
Operating temperature	-30 ... +50 °C	
Operating humidity	95% non condensating	
Standby power consumption	<1W typical	
Functional features	Status indicator LED's	



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