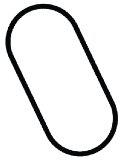
ETREL

ETREL INCH FAMILY

TROUBLESHOOTING FOR USERS

DOCUMENT VERSION: 1.1

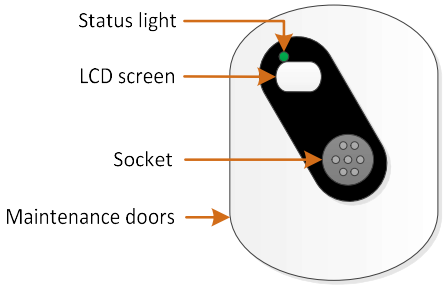


1 ABOUT TROUBLESHOOTING DOCUMENT

Before trying to maintain or troubleshoot the charging station you should carefully read the instructions below to become familiar with the charger, its elements and to prevent any injuries to the charging station and yourself during the troubleshooting process.

Document will provide you the description of most common problems that can happen and potential solutions that can be done without the need to send the charging station back to the service company.

2 CHARGING STATION PARTS



ACCESSORIES NEEDED

To access the maintenance doors you will need some accessories. Depending on the type of door you will either need key, which was send with the charging station, to unlock the lock or hex screw driver if the doors don't have the lock, just the normal hex screw (2.5mm).

Figure 1: Maintenance doors with hex screw

Figure 2: Maintenance doors with lock and keys

TECHNICAL INFORMATION STICKER

You can locate the technical information sticker on the inner side of the maintenance doors. It holds the basic charging station information, model type and serial number. When support is contacted it is important that you know the charging station model type so the support can quickly help you with your problems.

Figure 3: Sticker with technical information

3 | ERRORS AND WEB INTERFACE

During the operation of the charging station various errors can occur that can cause charging station to stop working. Errors are displayed on the LCD screen. When user connects to the charging station's web interface he can check all the errors in the event list. Additional info about each error will be displayed.

CONNECTION TO WEB INTERFACE

Users can connect to the charging station web interface using the charging station IP address. Default IP address can be found on the information sticker on the inner part of the maintenance doors. IP of the charging station can be manually changed. If you did this and forgot the new created IP you can always revert back to the default IP by resetting the charging station.

When IP address is written in the internet browser and the computer is in the same local network you will be connected to the web interface.

To determine if your computer is in the same network as charging station ping the station using the CMD command ping with the IP of the station. You can change computer network in the network settings.

To ping the station connect to Command Prompt by searching for it in windows search functionality.

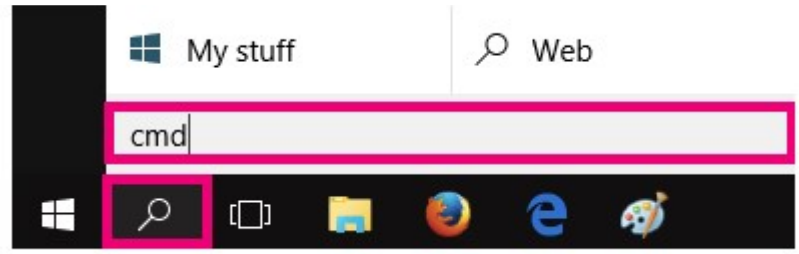


Figure 4: Search for cmd using windows search functionality

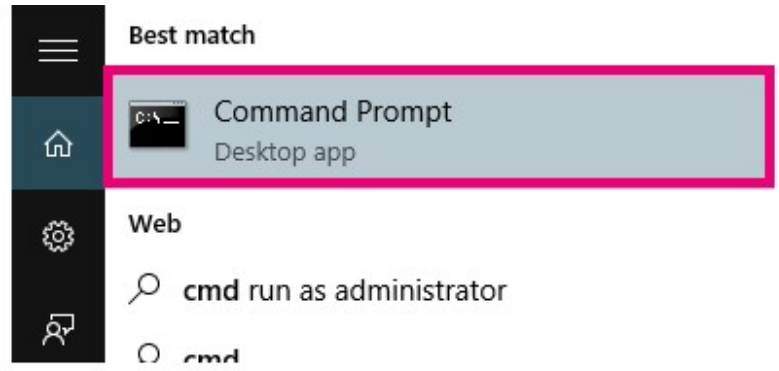


Figure 5: Open Command Prompt

In the Command Prompt write ping and IP address you would like to ping

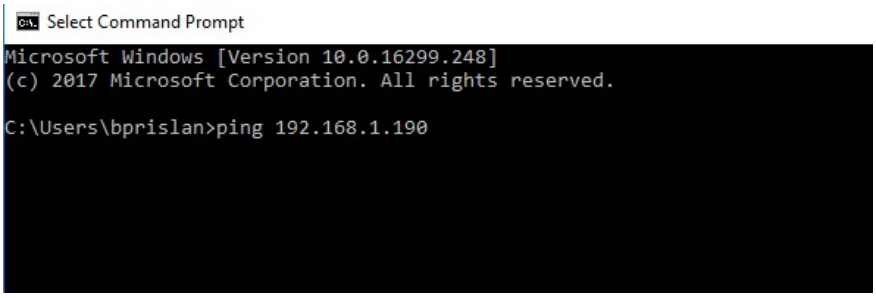


Figure 6: Ping the charging station IP address

If the ping is not successful you computer might be in different network segment and you can change the segment in network settings to the one of the charging station.

STATUS LIGHT DESCRIPTION

Power up

Status light	Normal operation	Problem	Solution
Fast blinking green light	Charging station's backup battery are charging. At the first power up it can take up to 10 min. If backup battery is full green light will blink slowly.	If the light is blinking fast more than 10 min there might be a problem with the backup battery.	Inform the support about the status of your charging station.
Slowly blinking green light	LCD screen is preparing to turn on. Heating system is trying to heat the LCD before it is turned ON.	If the green light is blinking slowly for more than 10 minutes and the LCD hasn't been turned on, there might be a problem with the LCD.	You should call the support.

Steady glowing green light	Charging station is ready to be used.	/	/
No lights	/	If charging station is not responding after it is powered up, something might be wrong with connection.	Check that the cables are connected to the charging station and that they are not damaged. Check the protection element if either RCD or overcurrent protection has been tripped. Activate the protection. If nothing helps call the support.
Green light is blinking	LCD is turned on and charging station is ready to be used.	LCD is turned on but freezes and is unresponsive.	Try resetting the charging station. If the problem repeats there might be a problem with the software. You should call the support.

Operation

Operation	**Problem**	**Solution**
Charging station is in	If charging station doesn't	Try resetting the charging station. If this doesn't help call

sleep mode.	wake up when either LCD is touched, EV is connected or RFID is used, something might be wrong with the charging station.	the support.
Charging station is in charging mode or is in standby mode.	LCD screen is not responding to our touches.	Try resetting the charging station. If the problem is not solved call the support
Authentication process	Using the RFID card to identify doesn't seem to work. There is no confirmation sound when card is swiped below LCD screen.	Is RFID module installed in the charging station? Check on the web interface that the charging station is not in the plug and charge mode. If the settings are correct and the RFID can't be identified call the support, there might be a problem with RFID module.
Charging the EV or in a standby mode.	Very loud fan noise.	Fan might be damaged. Call the support.

During the charging

Operation	**Problem**	**Solution**
Charging initiation.	Charging doesn't start.	Are there any errors or messages displayed on the screen? Check that the power supply cables are properly connected and there is no damage on the cables. Call the support.
Charging	"Waiting for vehicle"	First option is that EV is not ready to charge. This happens

initiation.	message displayed on LCD.	when all charging conditions are not met. Some EVs for example need all doors shut before the charging can begin. You should check the EV documentation if there are any specific condition that you haven't taken into account. Second option why the message is displayed is due to the scheduling of the charging. If you can set the charging schedule directly in the EV it is possible that the charging is scheduled for later time.
Charging is taking place	Power displayed on the LCD screen is constantly 0 kW and the scheduled charging was not chosen.	EV might be already fully charged or this can either be the issue with how phases are connected or Rogowski coil used for measuring the power might be broken. You should call the support.
Charging is taking place	“Paused by vehicle” message is displayed on the LCD screen	Your battery might be already fully charged.
Charging is taking place	Charging power is lower than the native power.	Battery might be full or EV is balancing the battery. Charging station might be limiting the output due to power management.
Charging has concluded	Charging cable is locked inside the socket and can’t be removed.	Multiple solutions exist to solve the issue: -Removing the cable from the EV will send the signal to unlock the cable. -You can turn off the charging station and turn it back on. If these two solutions don’t solve the problem you will have to call the support.

4 RESETING THE CHARGING STATION

Charging station can be either soft or hard reset. This can be done by opening the side maintenance doors either with key or hex screwdriver depending on the maintenance door type and pressing the button inside the maintenance opening.

If you hold the button from 3 s to 5 s the charging station will go through the soft reset, which can be useful if you experience problems with the operation of charger. If the problem is not serious charging station may work normally after the soft reset.

Holding the button from 10 s to 15 s will activate the hard reset that will revert all the charging station settings to the default ones (username and password of the web interface, station's IP and other settings).

Figure 7: Reset button inside the maintenance opening

5 RESET AND TEST THE PROTECTION ELEMENTS

RCD

To ensure that the RCD (if installed) is working properly RCD should be tested, by pressing the "Test" button at least once per month. By doing this appropriate operation of RCD is guaranteed. If this is not

done the protected device can be dangerous to users and potential malfunction can be life-threatening.

The test button on the RCD unit allows user to verify the correct operation of the device by passing a small current through the RCD unit. This simulates a fault by creating an imbalance in the sense coil. If the RCD does not trip when this button is pressed, then the device must be replaced. You have to change the device also when the fid was tripped but you can't move the switch back into active position. To change the RCD please call the support number.

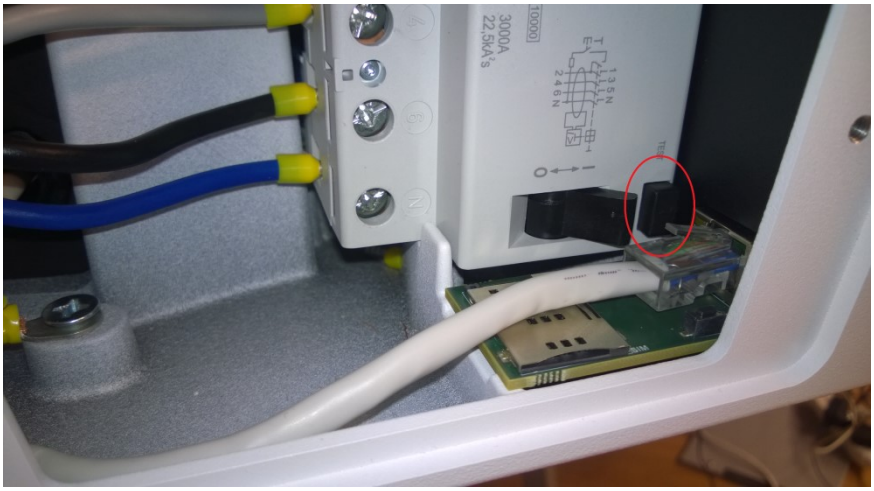


Figure 8: RCD test button

OVERCURRENT PROTECTION

Check the overcurrent protection (if installed) once a year for, any visible damages on the surface. If the overcurrent protection is tripped and the switches can't returned to the active position something is wrong with the protection and needs to be changed by maintenance crew.

6 | UPGRADING THE CHARGING STATION

Multiple elements in the charging station can be either changed or upgraded, if for example owner wants additional functionalities available.

CONNECTION ELEMENT

Charging station has space to include one protection element inside: overcurrent protection, RCD protection or certified MID meter, used to check the energy measurements. During the operation owners can see that different protection is needed or that MID meter should be installed and the protection elements can be included inside the electrical cabinet.

FAN

Basic model of the Etrel Inch charging station comes without the fan. Fan unit can be installed later if it is determined that is needed to improve the charging station operation.

COMMUNICATION MODULE

Basic model of the charging station comes with the ethernet modul for the communication. Owners can upgrade the charging station so that communication can be established using PLC, GSM or through Wi-Fi.

CABLE LOCKING MECHANISM

Cable locking mechanism is meant for public station to protect the charging cable from theft. It is normally not instelled in the private stations. If owner needs cable locking mechanism installed it can be added on the request.