

## How to update

REFUsoI 08K...23K

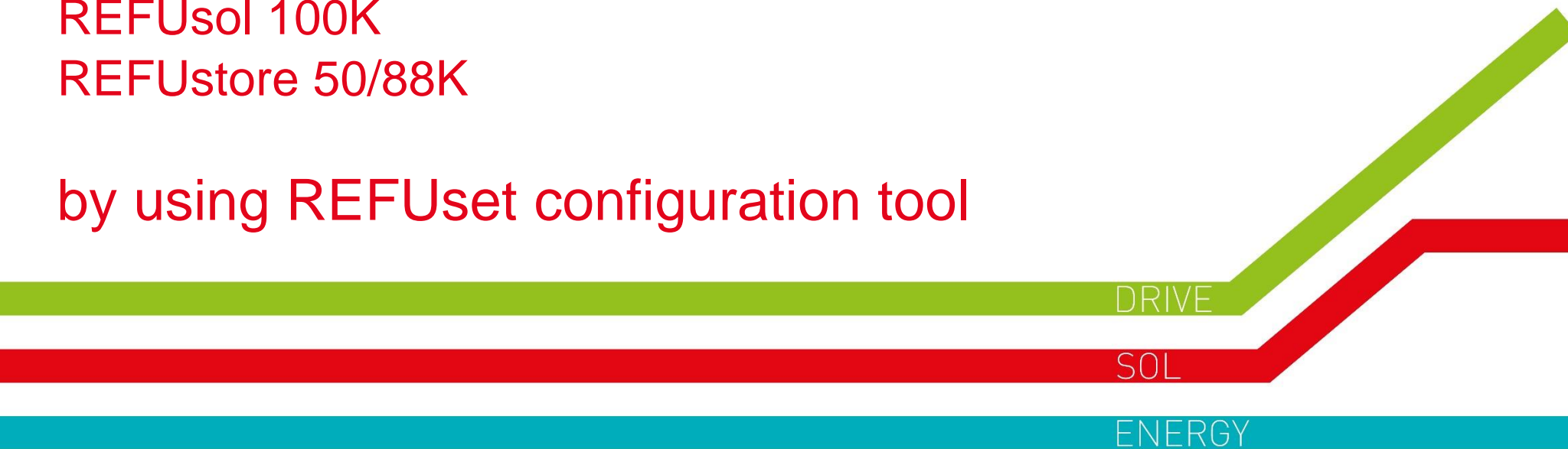
REFUsoI 40/46K

REFUsoI 24/48K-UL

REFUsoI 100K

REFUstore 50/88K

by using REFUset configuration tool



## Download REFUset and get Firmware package

Visit our website: [www.refu.com](http://www.refu.com) and in the download area you can find REFUset configuration tool:

<https://www.refu.com/en/downloads/product-specific/>

Download the setup file and install it in your computer.

You can also download the Firmware version of the inverter you want to update or you can ask our customer support center in order to send it to you.

Please note that there are 3 different types of Firmware depending on the device type:

- For Solar inverters REFUsol 08K...23K, REFUsol 40/46K & REFUsol 24/48K-UL
- For Solar inverters REFUsol 100K
- For REFUstore 50K/88K

# Install REFUset and connect to inverter

Once the installation is made, connect your PC to inverter by using an Ethernet cable.

Then double click the icon in order to launch REFUset



Connection window opens:

- Select the IP Address of the Inverter that you want to connect to
- Click “Ok” icon

*Note: PC and Inverter must be under the same Local Network*

*Check Network Connections → Ethernet → Internet Protocol Version 4 (TCP/IPv4)*

A screenshot of the REFUset application window. The title bar reads 'REFUset'. Below the title bar, there is a 'Connect method' dropdown menu set to 'Static'. The main area is divided into two sections: 'Interface' and 'Protocol'. In the 'Interface' section, the 'Ethernet' radio button is selected. Under 'Ethernet', there are three options: 'IP address' (selected) with a text box containing '192 . 168 . 130 . 30', 'Host name' with an empty text box, and 'TCP port' with a spinner box set to '21063'. The 'COM' radio button is unselected. Under 'COM', there is a 'Port' dropdown menu set to 'COM3 - Standard Serial over Blu'. In the 'Protocol' section, there is a 'USS address' spinner box set to '0'. At the bottom right, there are 'Ok' and 'Cancel' buttons.

# Main window

REFUset is connecting to inverter and main window opens.

On left side you can see basic data of the inverter:

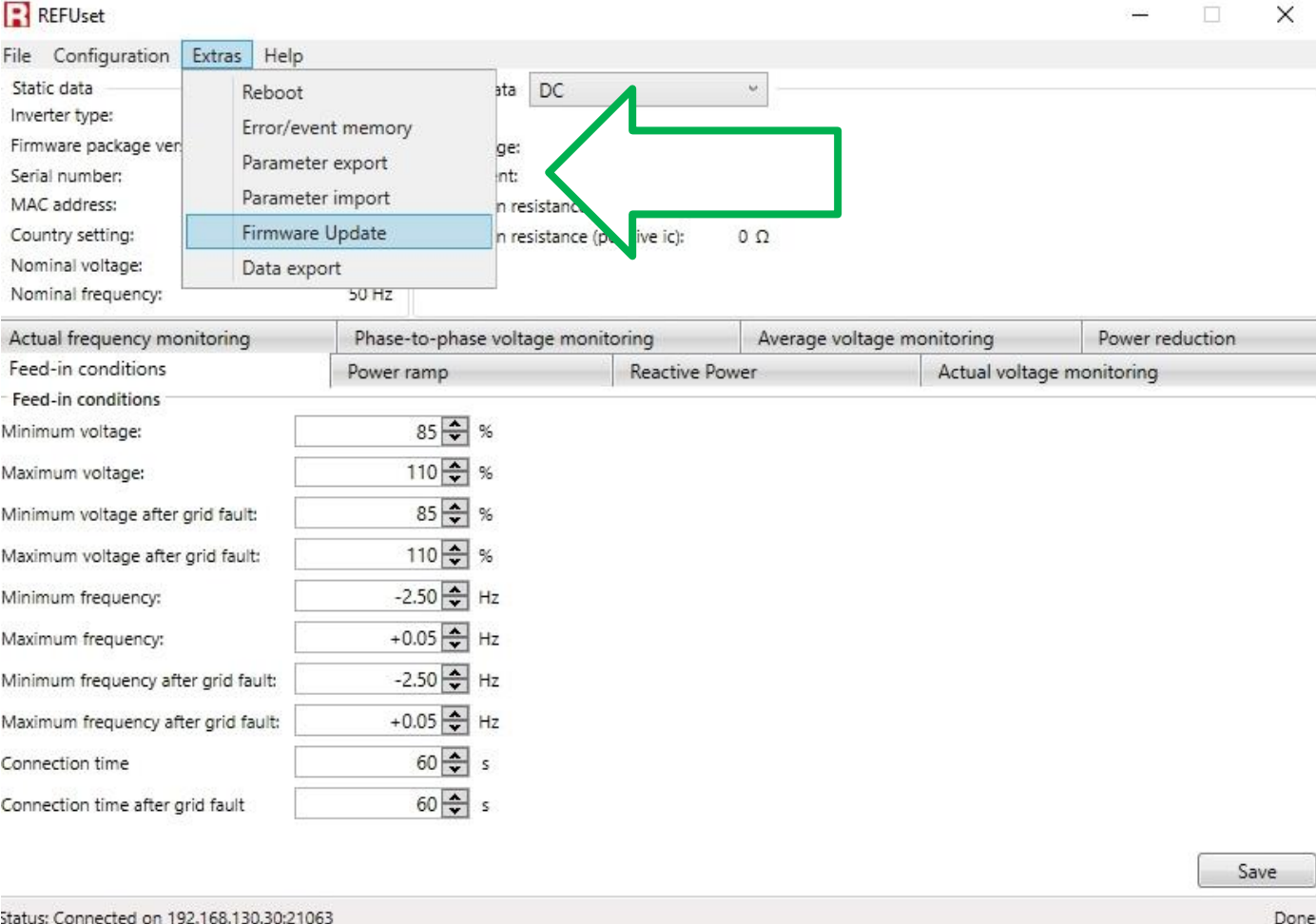
- ✓ Type
- ✓ Firmware version installed
- ✓ Serial Number
- ✓ Country settings

The screenshot shows the REFUset application window. The title bar reads 'REFUset'. The menu bar includes 'File', 'Configuration', 'Extras', and 'Help'. The interface is divided into several sections:

- Static data:** Inverter type: REFUstore 88K; Firmware package version: 310-01-02-07-S; Serial number: 320000001; MAC address: 502DF40F36D1; Country setting: Germany-AR-N 4105; Nominal voltage: -∞ V; Nominal frequency: 50 Hz.
- Actual data:** A dropdown menu is set to 'DC'. Below it, DC voltage: 0 V; DC current: 0 A; Insulation resistance (negative ic): 0 Ω; Insulation resistance (positive ic): 0 Ω.
- Monitoring tabs:** 'Actual frequency monitoring' is selected. Other tabs include 'Phase-to-phase voltage monitoring', 'Average voltage monitoring', 'Power reduction', 'Feed-in conditions', 'Power ramp', 'Reactive Power', and 'Actual voltage monitoring'.
- Feed-in conditions:** A list of parameters with adjustable values:
  - Minimum voltage: 85 %
  - Maximum voltage: 110 %
  - Minimum voltage after grid fault: 85 %
  - Maximum voltage after grid fault: 110 %
  - Minimum frequency: -2.50 Hz
  - Maximum frequency: +0.05 Hz
  - Minimum frequency after grid fault: -2.50 Hz
  - Maximum frequency after grid fault: +0.05 Hz
  - Connection time: 60 s
  - Connection time after grid fault: 60 s
- Buttons:** A 'Save' button is located at the bottom right.
- Status:** 'Status: Connected on 192.168.130.30:21063' is shown at the bottom left, and 'Done' is at the bottom right.

# Firmware Update

Using Menu bar navigate to:  
Extras → Firmware Update



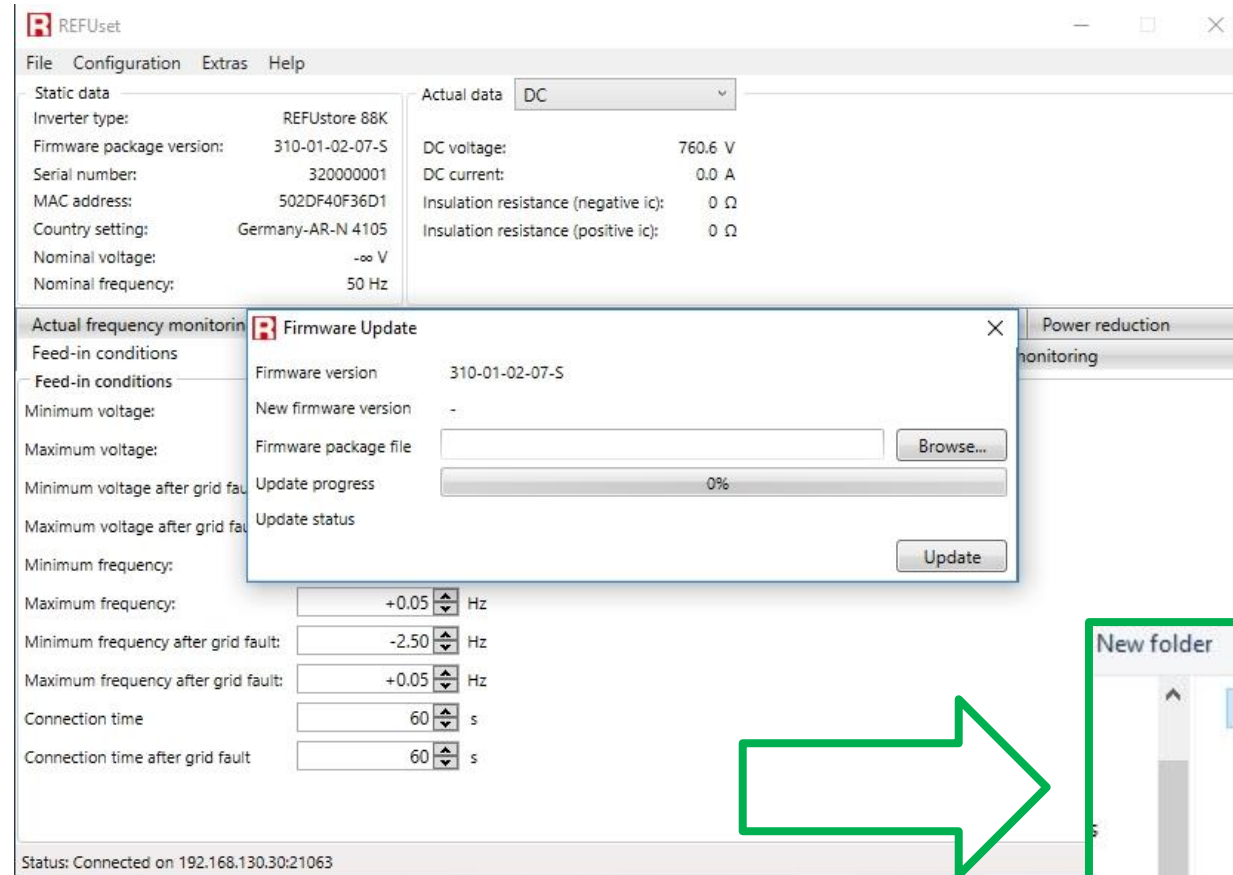
The screenshot shows the REFUset software interface. The 'Extras' menu is open, and the 'Firmware Update' option is highlighted. A green arrow points to the 'Firmware Update' option. The interface includes a menu bar (File, Configuration, Extras, Help), a main panel with various settings (Static data, Inverter type, Firmware package version, Serial number, MAC address, Country setting, Nominal voltage, Nominal frequency), and a bottom section with monitoring and power reduction settings. A 'Save' button is visible at the bottom right, and the status bar shows 'Status: Connected on 192.168.130.30:21063'.

| Actual frequency monitoring         | Phase-to-phase voltage monitoring | Average voltage monitoring | Power reduction           |
|-------------------------------------|-----------------------------------|----------------------------|---------------------------|
| Feed-in conditions                  | Power ramp                        | Reactive Power             | Actual voltage monitoring |
| Minimum voltage:                    | 85 %                              |                            |                           |
| Maximum voltage:                    | 110 %                             |                            |                           |
| Minimum voltage after grid fault:   | 85 %                              |                            |                           |
| Maximum voltage after grid fault:   | 110 %                             |                            |                           |
| Minimum frequency:                  | -2.50 Hz                          |                            |                           |
| Maximum frequency:                  | +0.05 Hz                          |                            |                           |
| Minimum frequency after grid fault: | -2.50 Hz                          |                            |                           |
| Maximum frequency after grid fault: | +0.05 Hz                          |                            |                           |
| Connection time                     | 60 s                              |                            |                           |
| Connection time after grid fault    | 60 s                              |                            |                           |

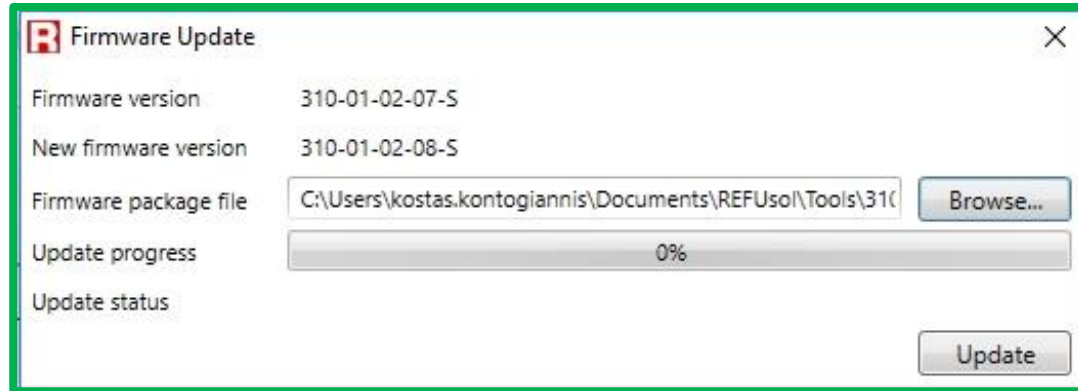
# Selecting Firmware package (.rfwps)

Using “Browse...” icon, navigate to the location that you have saved the new Firmware package and select it.

REFU's Firmware packages have the file extension “.rfwps”



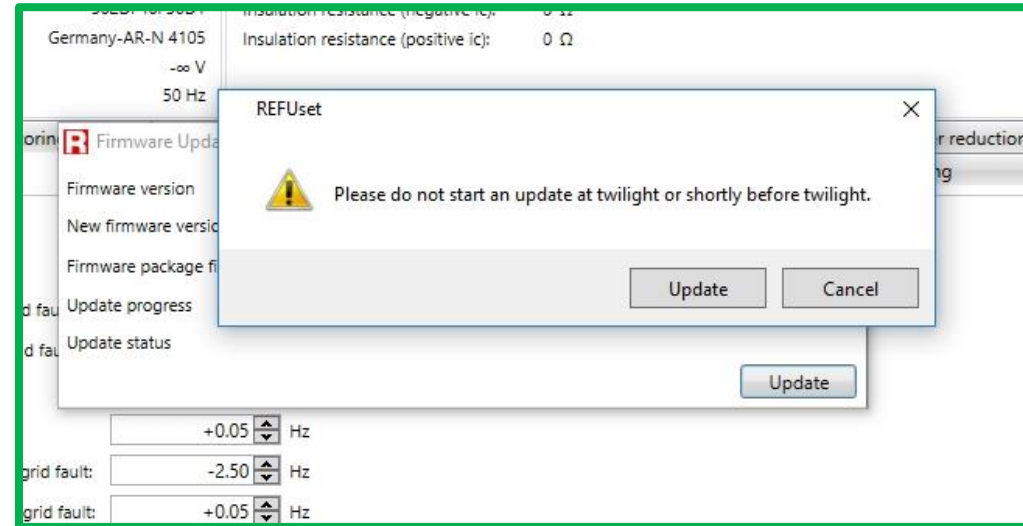
# Update



Click on “Update” icon.

A message will appear informing you that you should not update solar inverters if time is close to sunset.

Then click on “Update” again.



# Update procedure

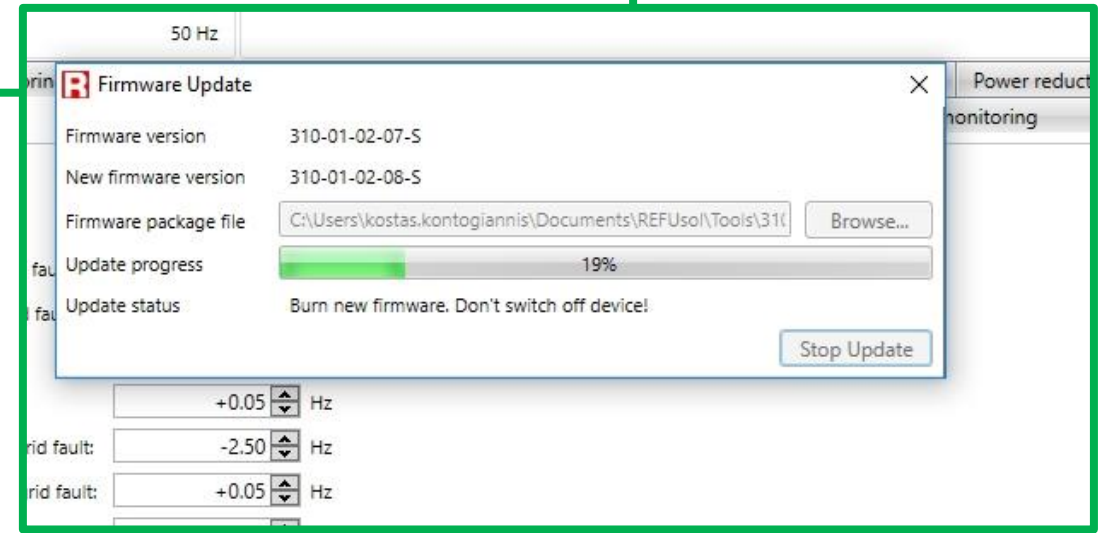
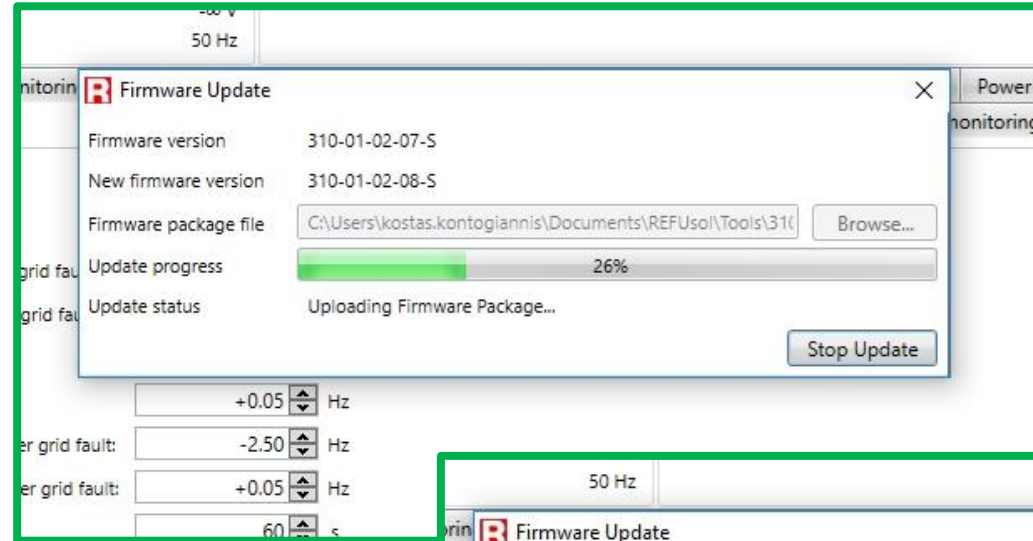
Updating has two stages:

1. Uploading new Firmware from PC to inverter
2. Inverter is updating (burn)

Note:

During the Update Procedure, Display and LED's of Inverter will go "On" and "Off" and change status various times.

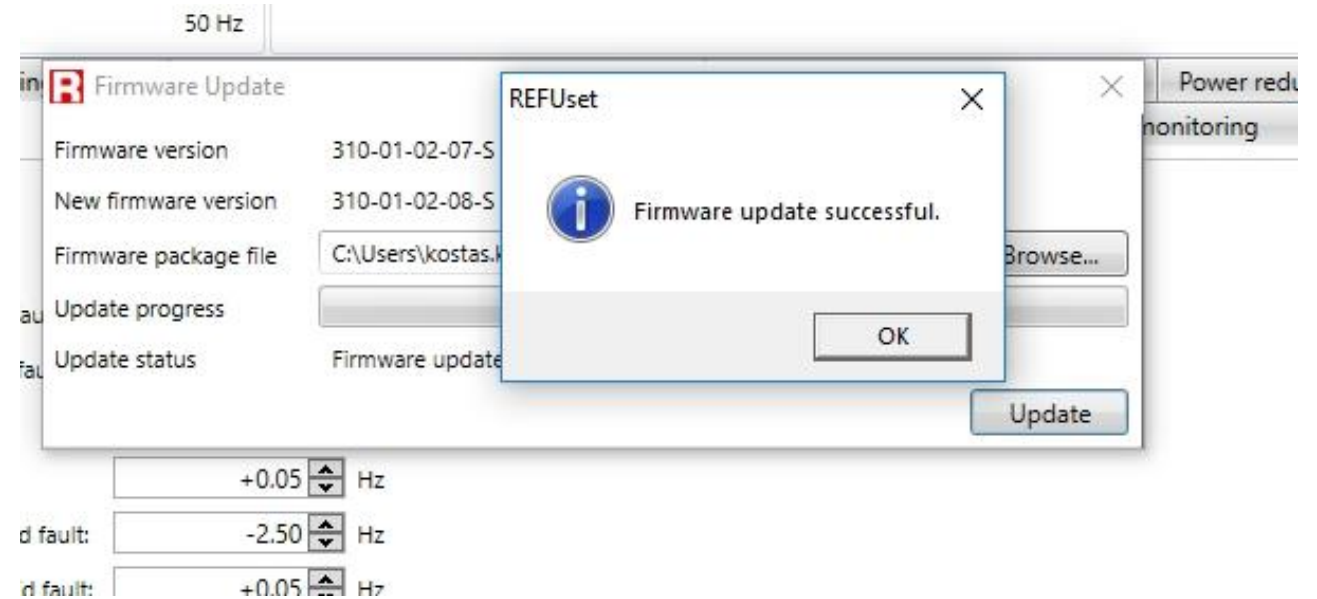
Do not switch off the device!





# Successful Update

Once update is over, a message will appear.  
Click “OK” and REFUset will reconnect to inverter.



# New Firmware installed

There you can see the new  
Firmware package version



The screenshot shows the REFUset software interface. The 'Static data' section displays the following information:

|                           |                   |
|---------------------------|-------------------|
| Inverter type:            | REFUstore 88K     |
| Firmware package version: | 310-01-02-08-S    |
| Serial number:            | 320000001         |
| MAC address:              | 502DF40F36D1      |
| Country setting:          | Germany-AR-N 4105 |
| Nominal voltage:          | -∞ V              |
| Nominal frequency:        | 50 Hz             |

The 'Actual data' section shows the following information:

|                                      |         |
|--------------------------------------|---------|
| DC voltage:                          | 760.7 V |
| DC current:                          | 0.0 A   |
| Insulation resistance (negative ic): | 0 Ω     |
| Insulation resistance (positive ic): | 0 Ω     |

The 'Feed-in conditions' section displays the following settings:

|                                     |          |
|-------------------------------------|----------|
| Minimum voltage:                    | 85 %     |
| Maximum voltage:                    | 110 %    |
| Minimum voltage after grid fault:   | 85 %     |
| Maximum voltage after grid fault:   | 110 %    |
| Minimum frequency:                  | -2.50 Hz |
| Maximum frequency:                  | +0.05 Hz |
| Minimum frequency after grid fault: | -2.50 Hz |
| Maximum frequency after grid fault: | +0.05 Hz |
| Connection time:                    | 60 s     |
| Connection time after grid fault:   | 60 s     |

The status bar at the bottom indicates: Status: Connected on 192.168.130.30:21063. A 'Save' button is visible in the bottom right corner.

