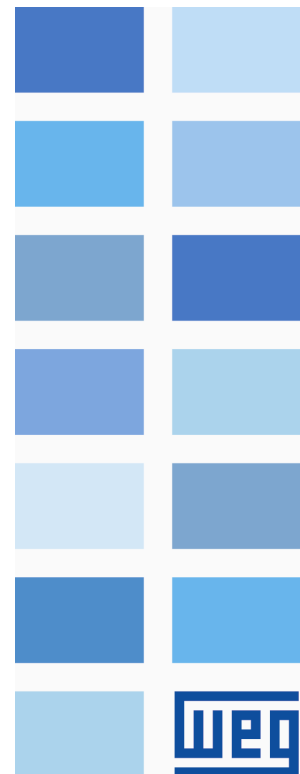


Firmware Update via WPS

Micro Mini Drives

Technical Support Manual





Technical Support Manual

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SUMMARY OF REVISIONS

The information below describes the reviews made in this manual.

Revision	Description
R00	First edition.

The table below shows which firmware version of the device is available for updating via WPS.

Device	Device version	WPS version
ADW300HB G2	V1.00 or superior	2.50 or superior
CFW100 G2	V4.00 or superior	2.50 or superior
CFW300	V3.00 or superior	2.50 or superior
CFW300-2	V2.00 or superior	2.50 or superior
CFW300-CETH	V3.00 or superior	2.50 or superior

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1 GENERAL INFORMATION

The purpose of this manual is to describe the procedures for updating the drive firmware and accessories (where applicable). This manual should be used in conjunction with the device manuals.

**DANGER!**

It is prohibited the reproduction of the contents of this manual, in whole or in part, without the written permission of the manufacturer.

1.1 TERMINOLOGY AND DEFINITIONS

1.1.1 Terms and Definitions Used

CO/DN/PB/ETH: Interface CANopen, DeviceNet, ProfibusDP or Ethernet.

HMI: human-machine interface; device which allows controlling the motor, viewing and changing the inverter parameters. It features keys to control the motor, navigation keys and graphic LCD display.

WPS: Programming Software “WEG Programming Suite”.

2 TOOLS

This chapter presents the materials used for the firmware update by the user.

2.1 SOFTWARE

2.1.1 WPS

It is necessary to have the WPS Programming Software (" WEG Programming Suite ") installed on your PC. This software is available for download on the website www.weg.net or through the link [downloadcenter/wps](#).

2.2 HARDWARE

The hardware interface required for the connection between the PC and the device to be updated (frequency inverter or accessory) depends on each device family.

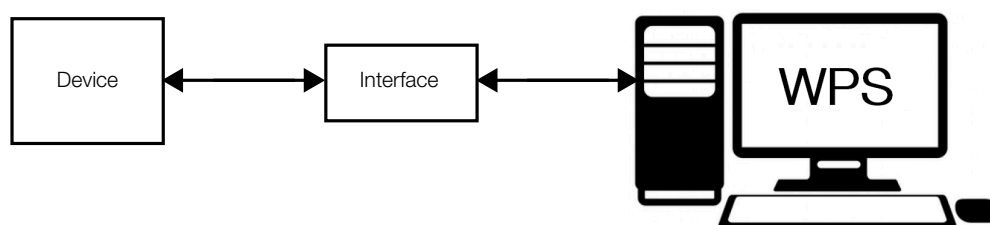


Figure 2.1: Interface between device and PC

**WARNING!**

It is recommended to keep the device turned off during setup (before making connections).

**NOTE!**

For further details, see to the installation, configuration and operation guide of the corresponding expansion module, available for download on the website: www.weg.net.

2.2.1 ADW300HB G2

The communication module available for updating the ADW300HB G2 frequency inverter is the USB-RS485 Interface Converter. However, to connect these two devices, it is necessary to use the adapter cable for USB-RS485 converter (see [Section 2.2.1.1 Confection the Adapter Cable for USB-RS485 Converter on page 2-2](#)). The interconnection between the frequency inverter, the adapter cable and the interface converter is shown in [Figure 2.2 on page 2-2](#).

**WARNING!**

Only turn-on the ADW300HB G2 inverter, after connecting the hardware interface elements.

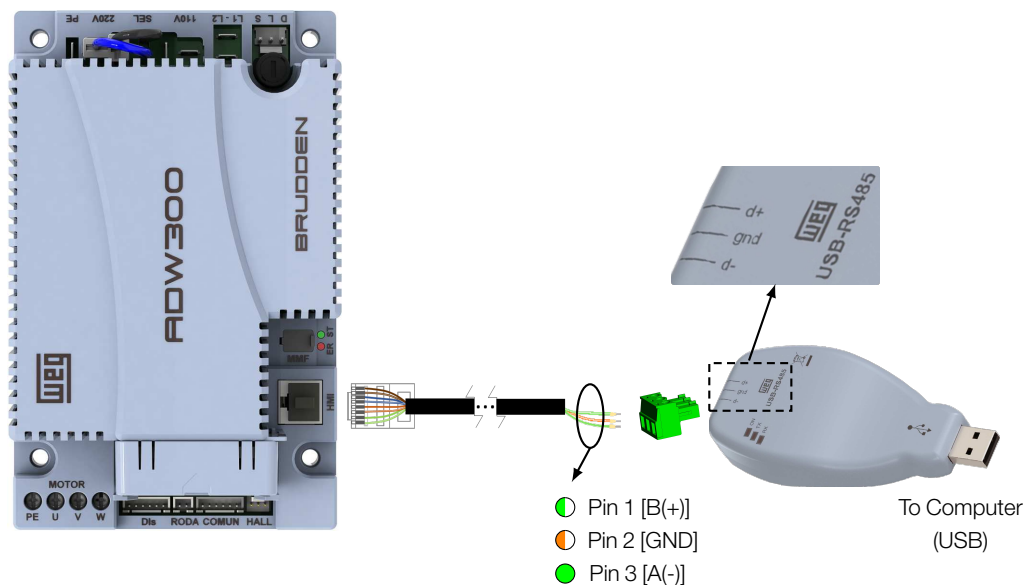


Figure 2.2: Interface available for the ADW300HB G2



NOTE!

The USB-RS485 converter does not necessarily have to be the model shown in the [Figure 2.2 on page 2-2](#). Any converter from any manufacturer can be used. However, it is recommended to use the USB-RS485-N interface converter (item 14389292).

2.2.1.1 Confection the Adapter Cable for USB-RS485 Converter

The materials needed for confection the adapter cable are described in the table below.

Table 2.1: Materials for making the adapter cable

List of materials		
Reference	Description	Quantity
A	CABO ETHERNET CAT5 4PX24AWG	1000mm
B	CONNECTOR RJ45-M 180° IN CABLE 8P8C	1 UN
C	WIRE FERRULE 0,25mm²/12mm YL	3 UN

To make the cable, follow the recommendations below:

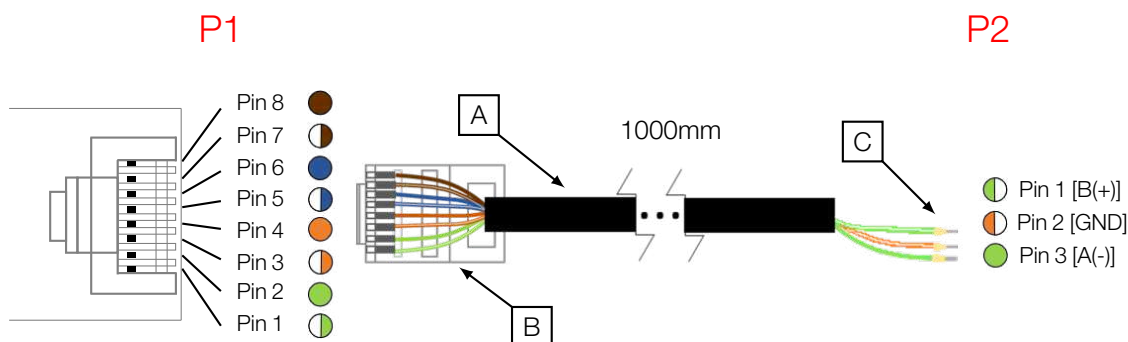


Figure 2.3: Instruction for confection the adapter cable for USB-RS485 converter

1. Use a CAT5 Ethernet 4PX24AWG cable with a maximum of 1000mm.
2. At both termination of the CAT5 Ethernet cable (P1 and P2) the stripping should be approximately 10mm, and the colored wires should not be stripped or tinned.
3. In P2, keep only the three highlighted wires with a length of 10mm, the rest can be cut near to the protection of the Ethernet cable.

4. Place wire ferrule on the three wires in P2.

2.2.2 CFW100 G2

The communication modules available for updating the CFW100 G2 frequency inverter are: CFW100-CRS485 or CFW100-CUSB.



Figure 2.4: Interfaces available for the CFW100 G2

2.2.3 CFW300/CFW300-2

The communication modules available for updating the CFW300 and CFW300-2 frequency inverters are: CFW300-CRS485, CFW300-CRS232 or CFW300-CUSB.

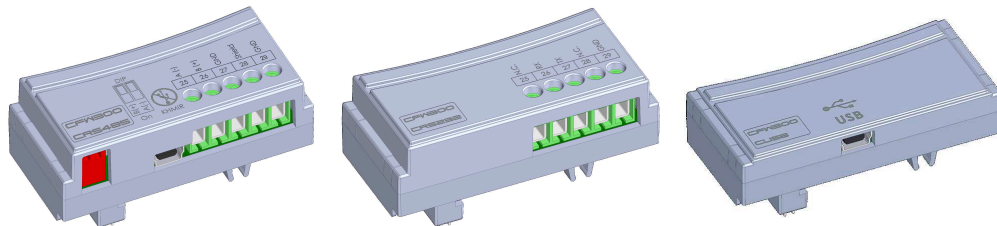


Figure 2.5: Interfaces available for the CFW300 and CFW300-2

2.2.4 CFW300-CETH



NOTE!

This configuration (interface) is used exclusively to update the CFW300-CETH accessory.

For updating the firmware of the CFW300-CETH communication device, it is necessary to use a CAT5 Ethernet cable. However, the CFW300-CETH device must be connected to a CFW300 frequency inverter, which will exercise as the power source for the device. Such interconnections are shown in [Figure 2.6 on page 2-4](#).



WARNING!

Only turn-on the CFW300 frequency inverter after completing all connections.

2



Figure 2.6: Interface between accessory CFW300-CETH and PC

3 PROCEDURE

This chapter presents the procedures for updating the firmware by the user. With the setup installed, according to [Figure 2.1 on page 2-1](#), open the WPS software and perform the procedures below.

**NOTE!**

It is not necessary to have a project or resource created for the device to be updated.

3.1 SHORTCUT FOR FIRMWARE DOWNLOAD

The device firmware update from WPS can be accessed through the “Online” menu. Check [Figure 3.1](#) below:

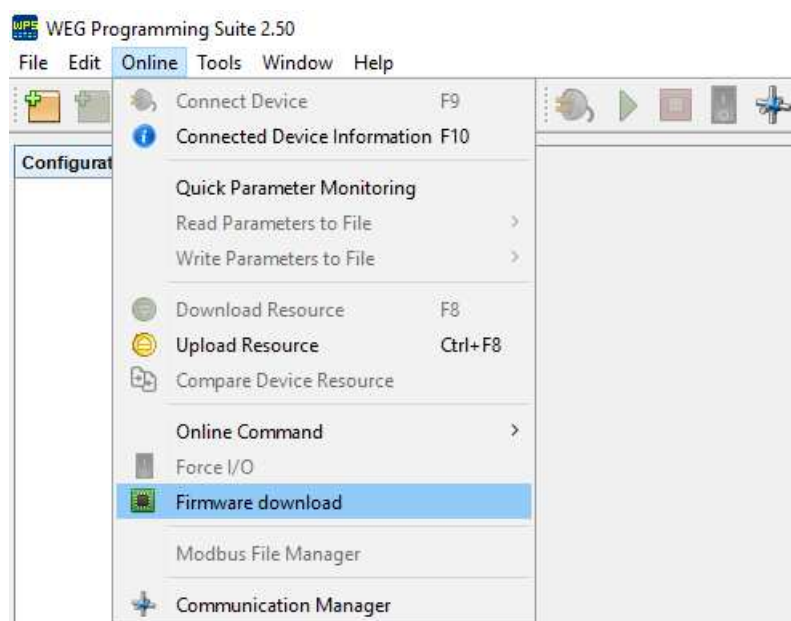
3

Figure 3.1: Shortcut “Online” -> “Firmware download”

3.2 DEVICE SELECTION

Select the device to be updated. If you cannot find your device in the list, check if you already have the firmware update functionality via WPS through the [Compatibility Table on page 0-5](#). Otherwise, you will need to activate the plugin for the device in WPS. For more information on activating plugins in WPS, see [Chapter 4 WPS PLUGINS on page 4-1](#).

Firmware download

Steps

1. **Device selection**
2. Communication configuration
3. Firmware download data

Device selection

Type: CFW300

Version: 3.00

Voltage: 110 - 127 Vac

Current: 1.6 A

Identify Device

☐ Select file

Features

The CFW300 frequency inverter is a high-performance product which allows speed and torque control of three-phase induction motors. This product provides the user with the options of vector WEG (VFW) or scalar (V/f) control, both programmable.

Figure 3.2: Device selection -> "Type"

3.3 SELECTION OF FIRMWARE FILE



NOTE!

The firmware file (binary) for download must be obtained, in advance, from the supplier / technical assistance.

Select the firmware file with the desired version. Use the recommendations of the [Figure 3.3 on page 3-3](#) to search for the firmware. Once selected, click on "Next".



NOTE!

It is not necessary to know the values of the voltage and current fields of the device. It is recommended to keep the data preloaded.

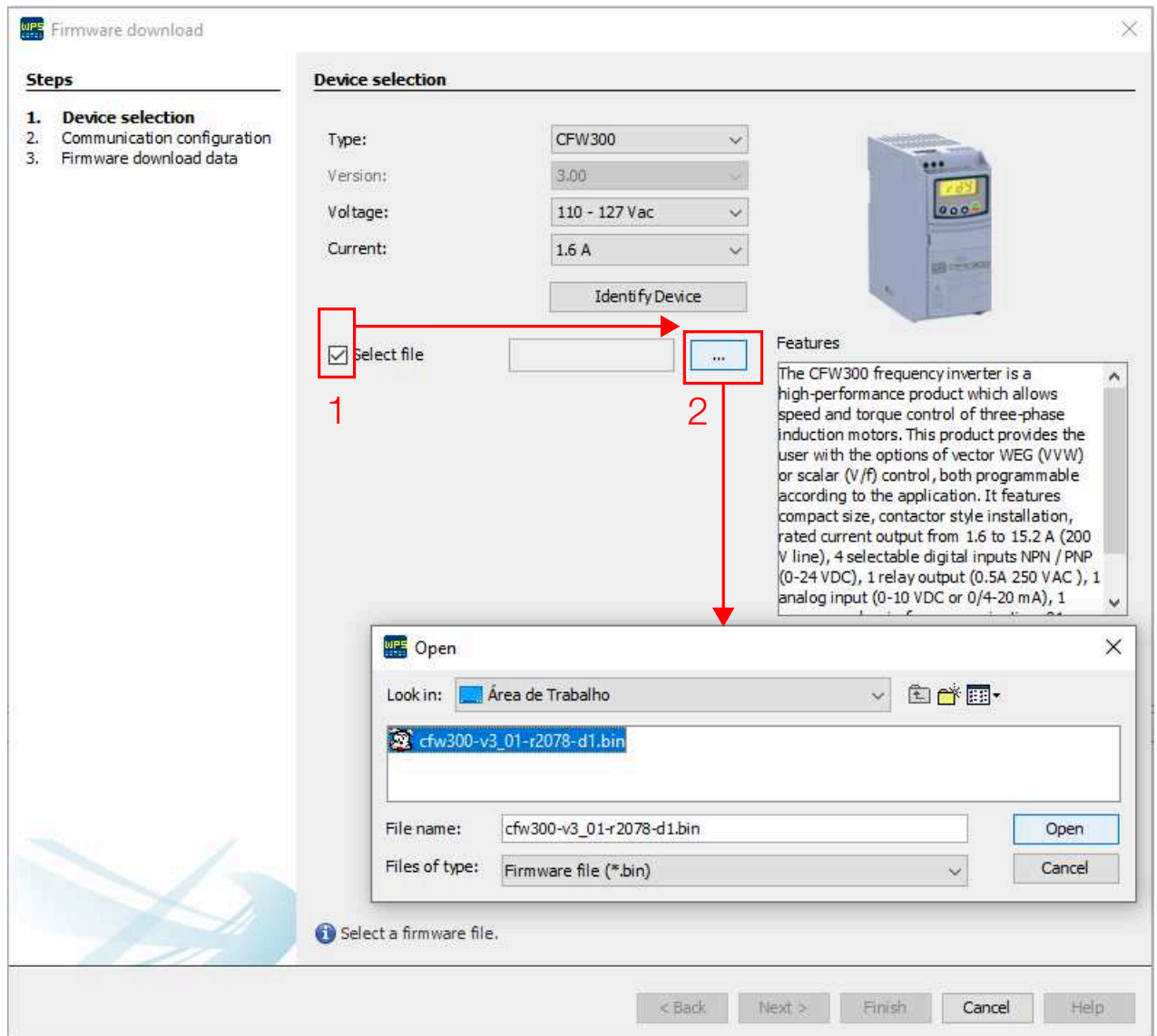


Figure 3.3: Select a firmware file

3.4 COMMUNICATION CONFIGURATION

The physical layers available for the firmware download are: Serial (over PC's USB) and Ethernet (exclusive for updating the CFW300-CETH accessory).

3.4.1 Serial

For the correct configuration of the serial port to be used in the communication, it is necessary to use the Windows Device Manager (indicates the serial port connected to the equipment). The computer name in the device manager is purposely unreadable. The [Figure 3.4](#) shows how to check the COM port used.

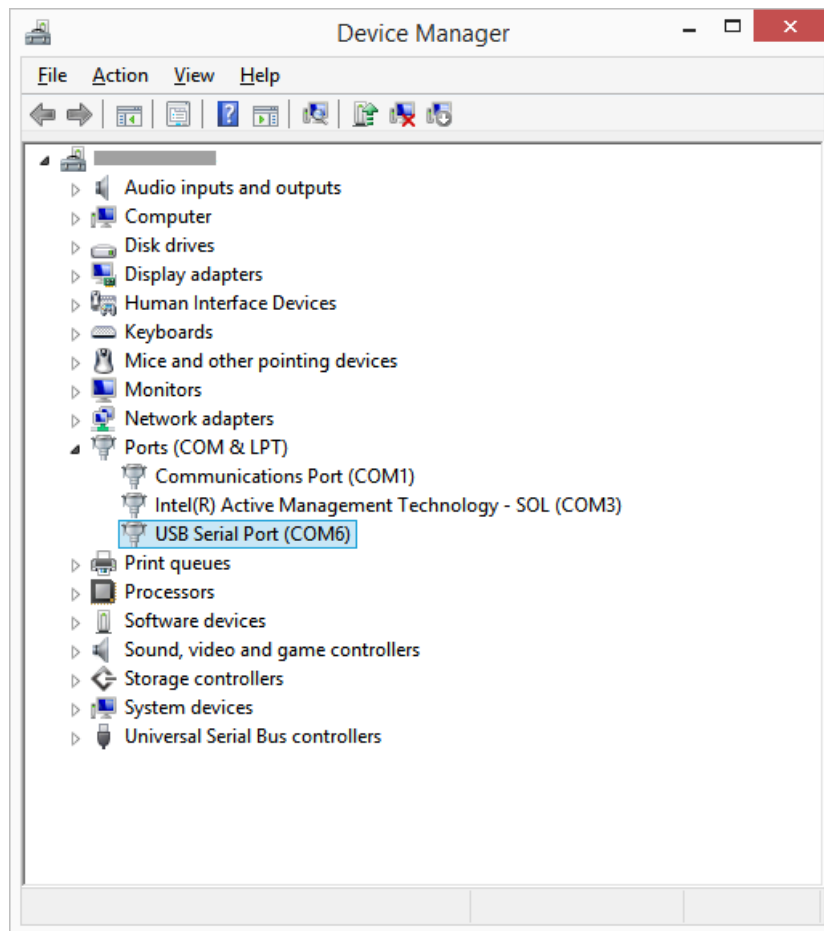


Figure 3.4: Device Manager (Windows)

The interface configuration setup shown in [Figure 3.5 on page 3-5](#) must be in accordance with parameters P308, P310, P311 and P312 adjusted on the device. Click on “Test” and after identification (Online device), click on “Next”.

**NOTE!**

Never change the values of parameters P308, P310, P311 and P312 during a connection. Changing these parameters causes an instant communication loss between the PC and the equipment.

**NOTE!**

For more information on configuring the serial interface (parameters P308, P310, P311 e P312), refer to the Modbus RTU user manual of the corresponding device, available on site: www.weg.net.

Firmware download

Steps

1. Device selection
- 2. Communication configuration**
3. Firmware download data

Communication configuration

Communication manager

Host:

Port:

Device

Preset:

Physical layer: ☐ USB ☒ Serial (over USB) ☐ Ethernet ☐ Configured connections

Configuration

Porta:

Baudrate:

Data bits:

Stop bits:

Parity:

Unit ID:

Timing [ms]

Transmission delay:

Response delay:

Timeout:

Current connection: Test

Status:

Communication Manager online.

Device online.

[WEG, CFW300 200 - 240 Vac | 280 - 340 Vdc 4.2 A, V3.00]

< Back
Next >
Finish
Cancel
Help

Figure 3.5: Serial Communication configuration

3.4.2 Ethernet



NOTE!

This configuration (interface) is used exclusively to update the CFW300-CETH accessory.

To allow communication among the device and PC, they need to have an compatible IP address configuration. It means the IP address must be at the same range, according to netmask. To configure the IP address of PC on the Windows platform, go to "Network Connections", open "Properties" of the desired unit and use the settings below:

- IP address: 192.168.0.2
- Subnet mask: 255.255.255.0

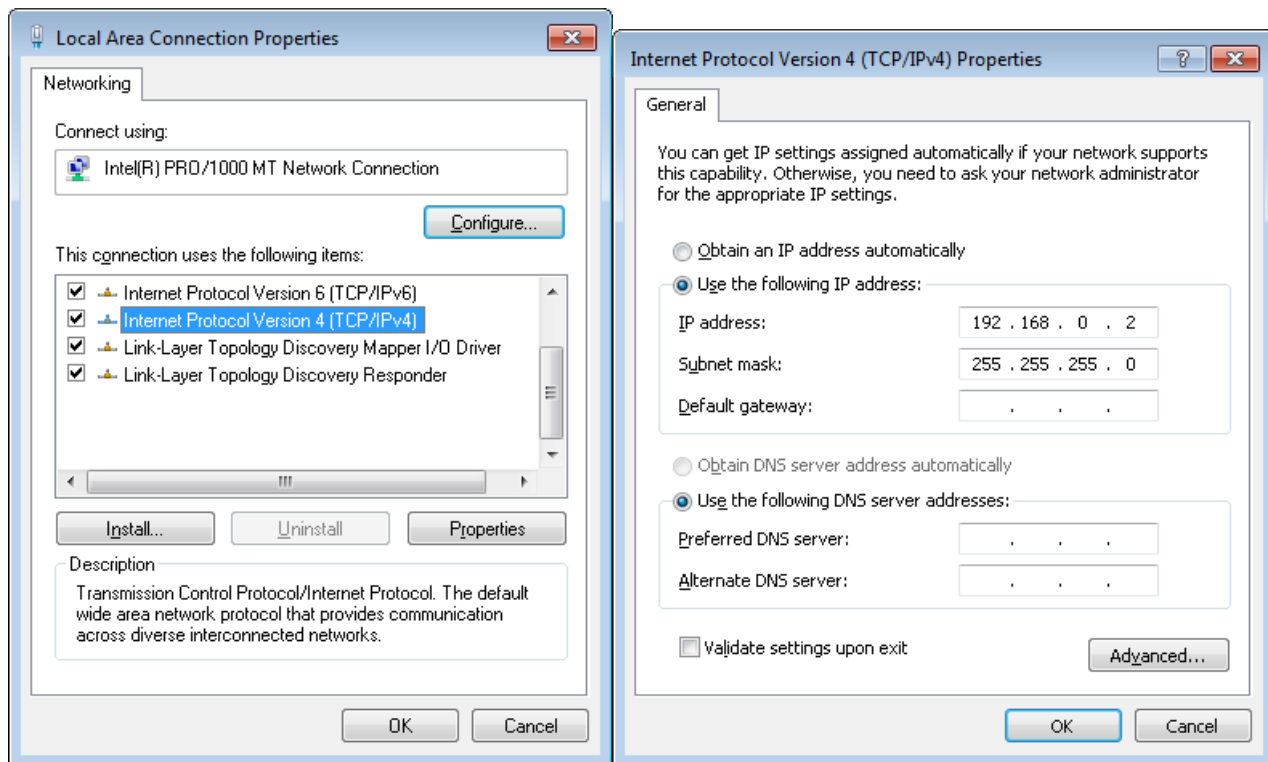


Figure 3.6: PC IP Address Configuration

The interface configuration setup indicated in the [Figure 3.7 on page 3-7](#) must be in accordance with the parameters set on the device, where:

- IP address: "P851.P852.P853.P854"
- TCP port: "P865"
- Unit ID: 254 (fixed value)



NOTE!

- These parameters allow you to program the IP address of the Ethernet interface and it is valid only if P850 = 0 (Parameters).
- Subnet mask: P855 = 24 (255.255.255.0).
- After changing this configuration, for the modification to be effective, the equipment must be turned off and then turned on again.

After performing the above procedures, click on "Test" and after identification (Online Device), click on "Next".

Firmware download

Steps

1. Device selection
- 2. Communication configuration**
3. Firmware download data

Communication configuration

Communication manager

Host: localhost

Port: 34502

Device

Preset: CFW300-CETH

Physical layer: ☐ USB ☐ Serial (over USB) ☒ Ethernet ☐ Configured connections

Configuration

IP address: 192.168.0.10

TCP port: 502

Unit ID: 254

Timing [ms]

Transmission delay: 0

Response delay: 0

Timeout: 5000

Current connection: Ethernet/Modbus-TCP/192.168.0.10:502/@254#0#0#5000 **Test**

Status:

Communication Manager online.
Device online.
[WEG, CFW300-CETH, V 3.00]

< Back Next > Finish Cancel Help

Figure 3.7: Ethernet Communication configuration



NOTE!

For more information on configuring the ethernet interface (parameters P850 to P855 and P865), refer to the Ethernet user manual for the corresponding device, available on the website: www.weg.net.

3.5 FIRMWARE DOWNLOAD DATA



NOTE!

It is recommended before downloading the firmware:

- Confirm the data in the “Data download firmware” window (see [Figura 3.8 on page 3-8](#));
- Check if the SoftPLC application is stopped (set P901 = 0, if necessary);
- Make sure the device is not in operation (motor running).

After confirming the data from [Figure 3.8 on page 3-8](#), click “Finish” to close the wizard and start the firmware download.

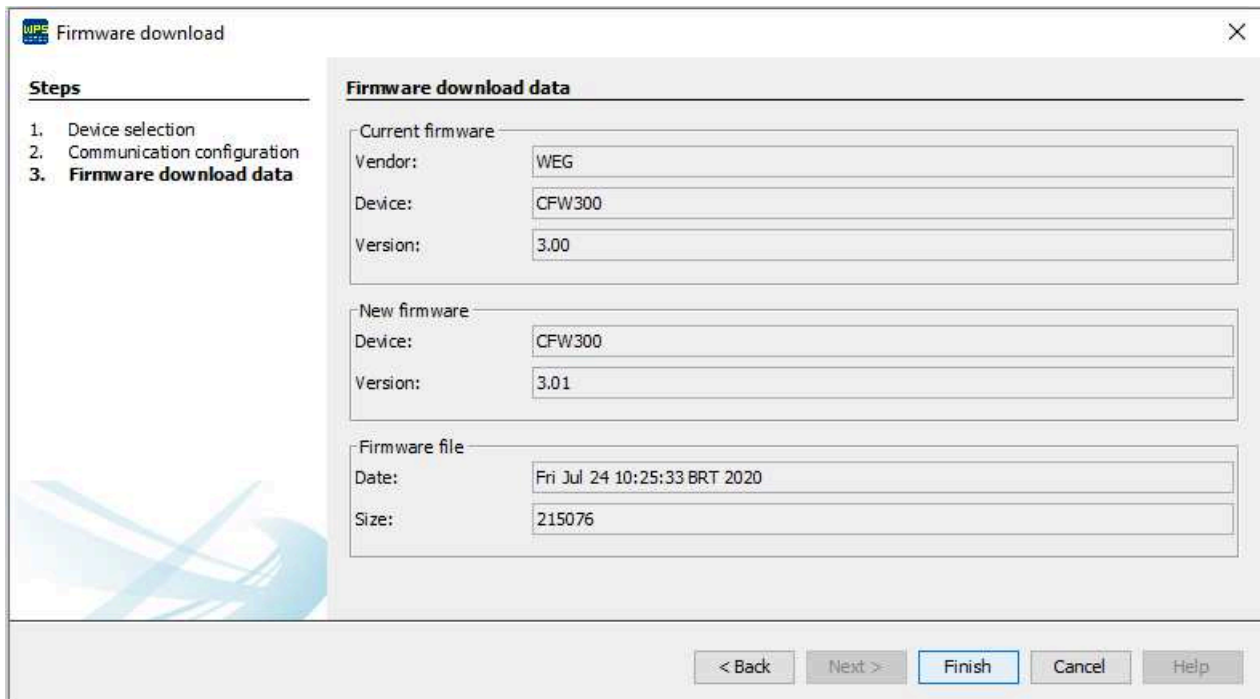


Figure 3.8: "Firmware download data" Window

The firmware download starts, wait for the process to complete. The informations are presented in the Output window and status bar as the figure below:

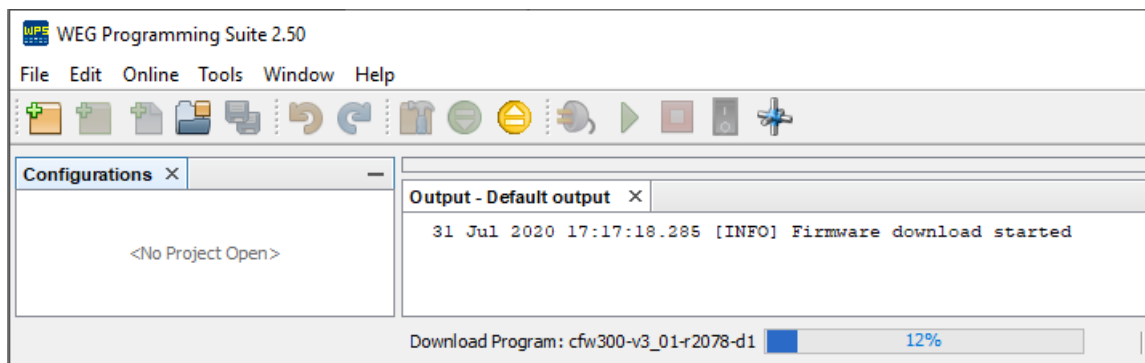


Figure 3.9: Firmware download started

After completing the download process, a message in the Output window is displayed and a device reset occurs. Depending on the device, it is necessary to configure the communication parameters to communicate with the WPS again.

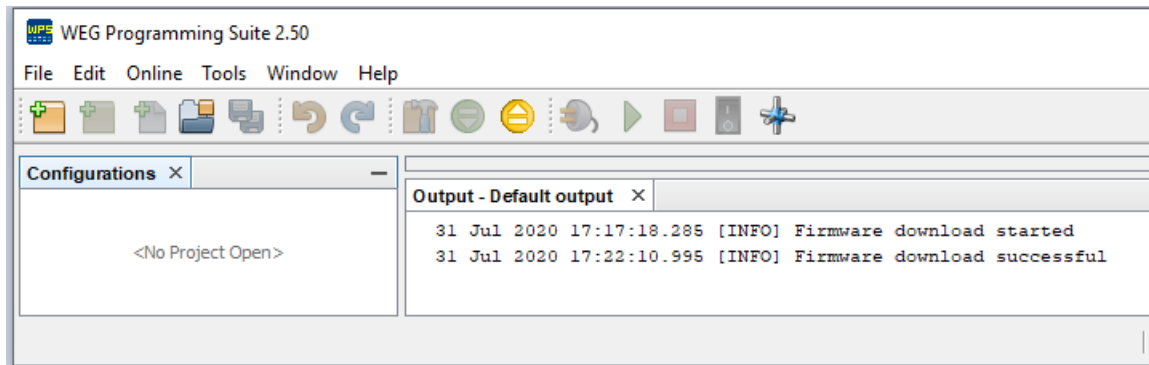


Figure 3.10: Firmware download successfully

3


NOTE!

After completing the step indicated in [Figure 3.10 on page 3-9](#), it is recommended to check the corresponding parameter (P023 or P025) to verify that the firmware version has been updated correctly.



NOTE!

The firmware update process will not be completed if the binary file is incompatible or corrupted.

4 WPS PLUGINS

The page containing information and settings for the WPS plugins can be accessed through the menu “Tools” according to [Figura 4.1](#) below:

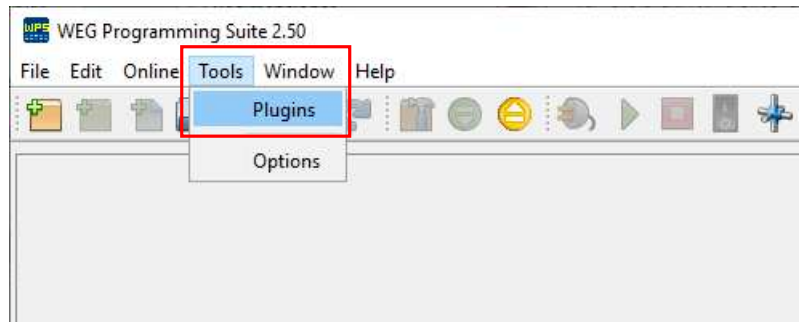


Figure 4.1: Shortcut “Tools” -> “Plugins”

To activate a previously installed plugin, follow the instructions according to the [Figure 4.2](#) below:

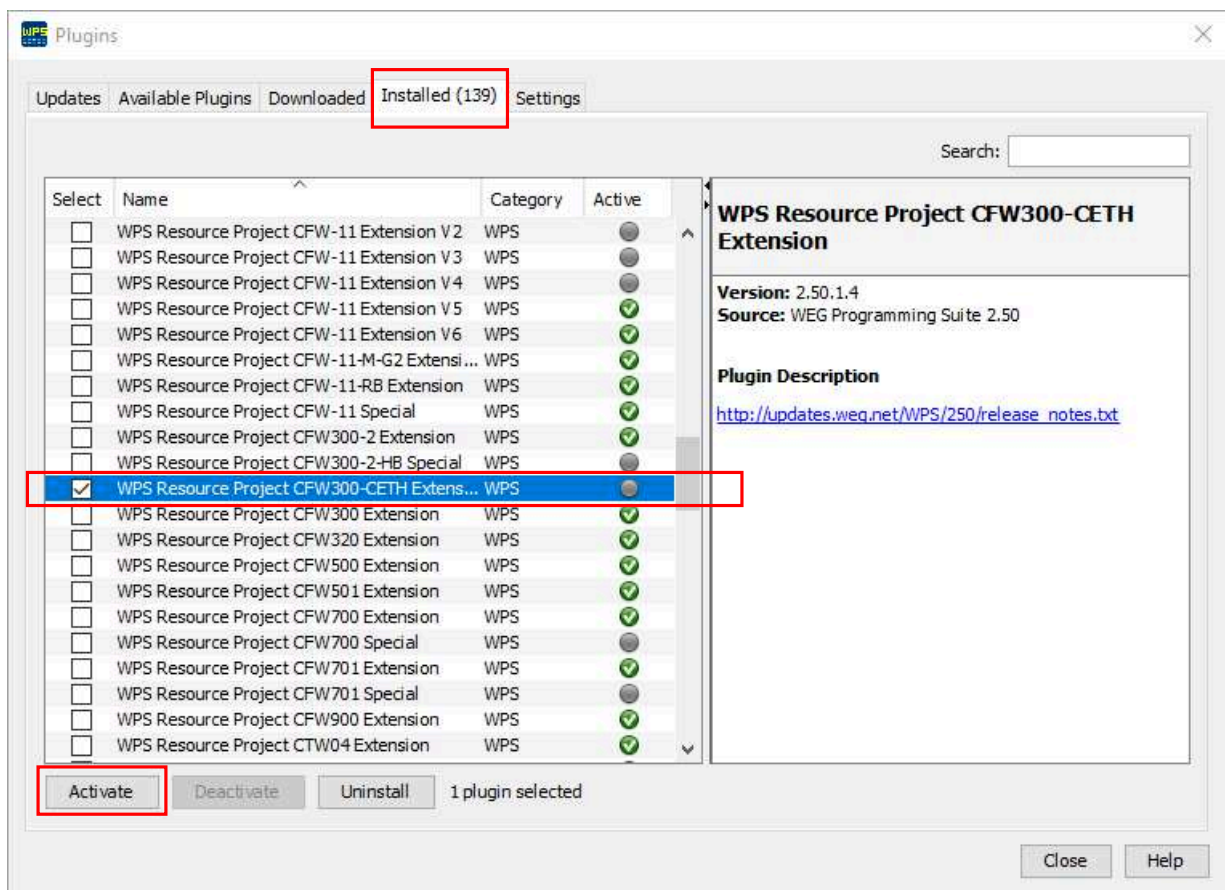


Figure 4.2: Activating installed plugins



NOTE!

It is recommended to check all available updates following the indications in [Figure 4.3](#). Select all updates and click “Update”.

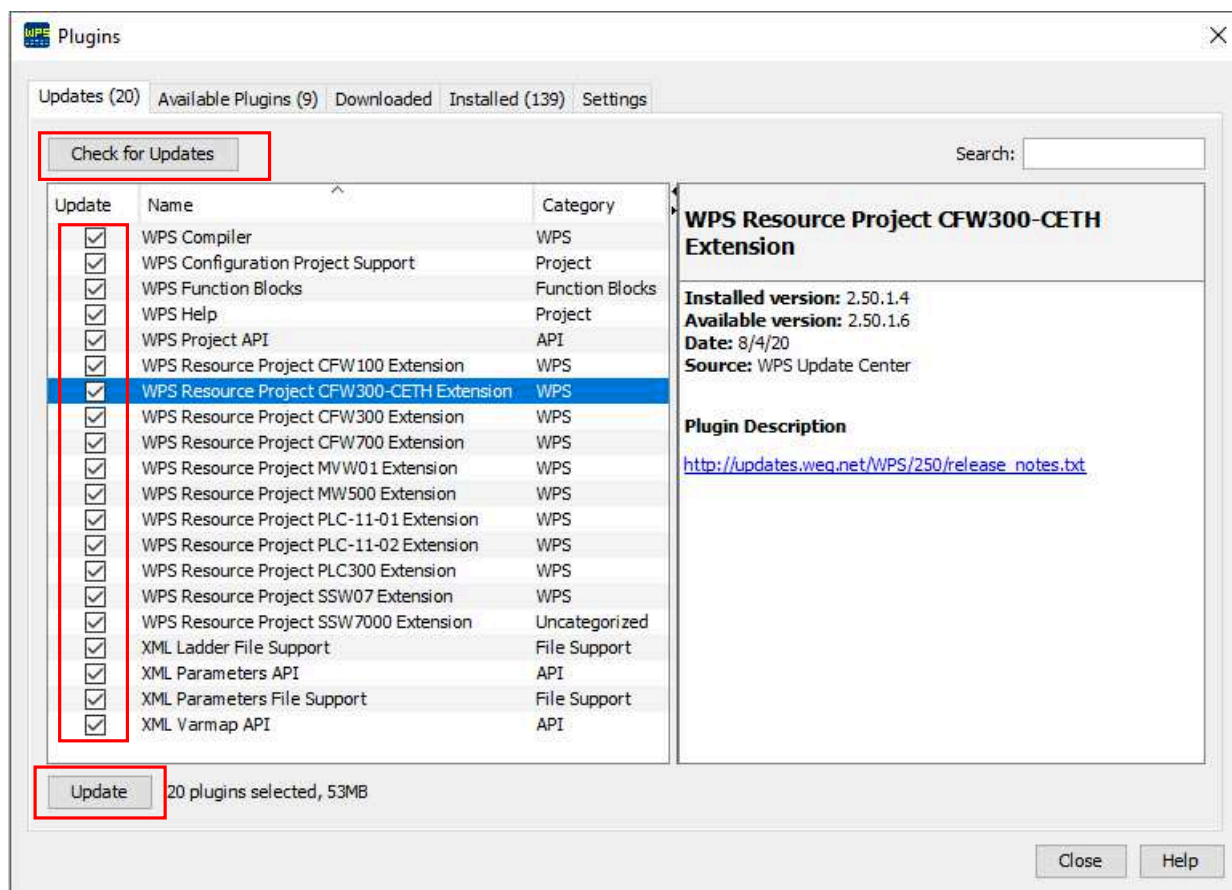


Figure 4.3: Plugins update

**NOTE!**

After updating the plugins, the WPS software will be restarted. If any plugins were previously enabled as shown in Figure 4.2, you will need to activate it again.



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