



QuickTune

USER GUIDE V1.0x



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1. PRESENTATION

The **QuickTune** software was developed for the **NOVUS** line of controllers and indicators. With a friendly and practical interface, it facilitates the configuration and management of the devices. Communication is performed through the USB interface, RS485 interface or a TCP/IP connection. In addition, it has several functionalities, such as a diagnostic tool to check information on the status of alarms and configured parameters, and it offers a dynamic visualization of the process.

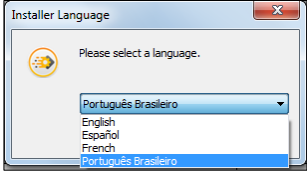

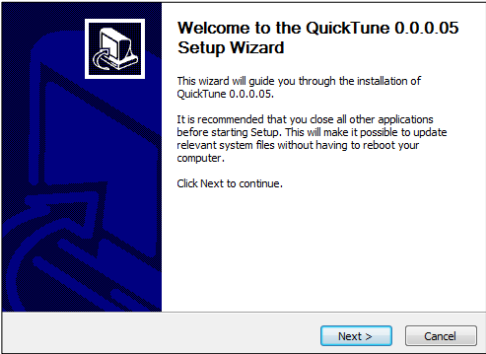
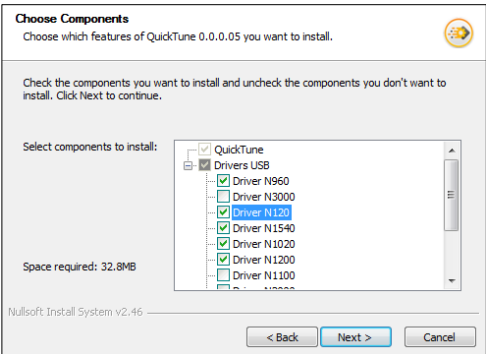
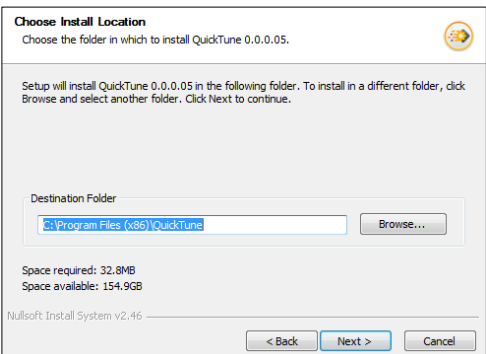
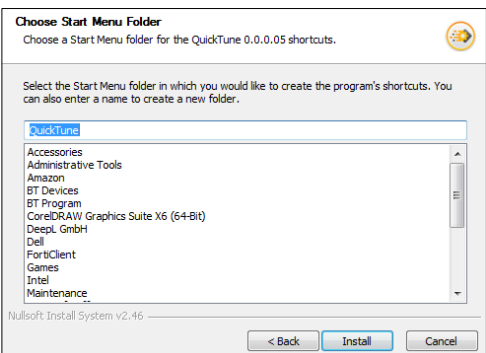
This manual provides a description of the features and quick examples on how to configure the software. You should check the specific operation manual for detailed instructions on each device parameter.

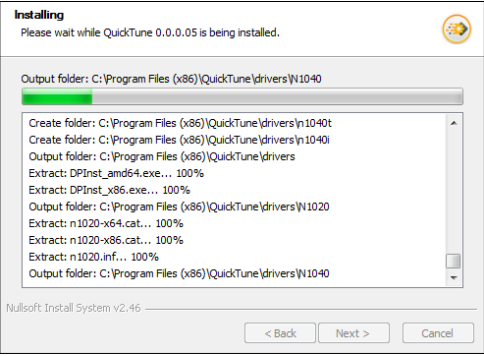
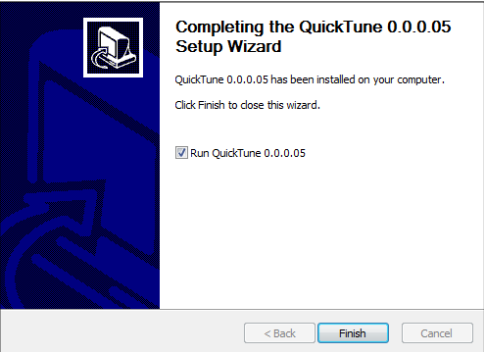

You can download the software free of charge from our website www.novusautomation.com, in the Download Area.

2. INSTALLATION AND REQUIREMENTS

2.1 INSTALLATION

To install **QuickTune**, just run the **QuickTuneSetup.exe** file, available on our website, and follow the step-by-step instructions below:

	Step 1: Select the installation language.
	Step 2: Once you have selected the installation language, click OK to proceed.
	Step 3: Click Next .
	Step 4: Select the drivers to install and click Next .
	Step 5: Click Browse to define a new installation location. Click Next to maintain the current location.
	Step 6: Select the folder where you want to create the program shortcut. To keep the current location, click Install .

	<p>Step 7: Wait while QuickTune and drivers are being installed. Click Install whenever the software requests you to install the driver for the selected devices in step 4.</p>
	<p>Step 8: Click Finish to finish the installation.</p>
	<p>Step 9: The QuickTune software has been successfully installed and the main screen will be displayed.</p>

2.2 MINIMUM SYSTEM REQUIREMENTS

- Computer with dual core processor of 2 GHz or higher;
- 4 GB of RAM (8 GB recommended);
- Monitor and video card with minimum resolution of 1280 x 720;
- 1 GB of hard disk space;
- Windows 8 or higher operating system (Windows 10 or higher recommended);
- USB port;
- Network interface (to use features that require Internet access).

3. STARTING QUICKTUNE

QuickTune has five buttons: **Read Device**, **Create Configuration**, **Diagnostic** and **Open Configuration**, located in the center of the application, and **Options**, located at the bottom left of the application.



Figure 1 Home screen

3.1 READ DEVICE

It allows you to read the device to be configured by the software. The connection can be via USB interface, RS485 interface or via TCP/IP connection.

This functionality will be described in detail in the chapter [READING DEVICES](#).

3.2 CREATE CONFIGURATION

It allows you to create a configuration for a device to be selected on the connection screen. Once created, this configuration can be saved for later use. You can access it via the Open Configuration function. It is not necessary for the device to be connected to the software.

This functionality will be described in detail in chapter [CONFIGURING DEVICES](#).

3.3 DIAGNOSTIC

It allows you to view diagnostic information about alarms and inputs and outputs of the connected device. In addition, this section presents data on the status of the variable processes of the device.

This functionality will be described in detail in chapter [DEVICES DIAGNOSTICS](#).

3.4 OPEN CONFIGURATION

It allows you to open a configuration file created using the **Create Configuration** function. You can carry out the process in two ways: Through a search in some specific directory of the computer, where the file was saved, or by selecting a recent file from the list presented by the software.

This functionality will be described in detail in the chapter [OPEN CONFIGURATION](#).

3.5 OPTIONS

It allows you to configure **QuickTune** preferences, such as the default language and checking for updates automatically.

This functionality will be described in detail in the [PREFERENCES](#) chapter.

4. READING DEVICES

The **Read Devices** button on the **QuickTune** home screen has three tabs, one for each connection mode and device read: USB, RS485 and TCP/IP. It allows you to read and configure any connected device.

4.1 USB

As shown in the figure below, this tab displays the devices connected to the computer via the USB interface:

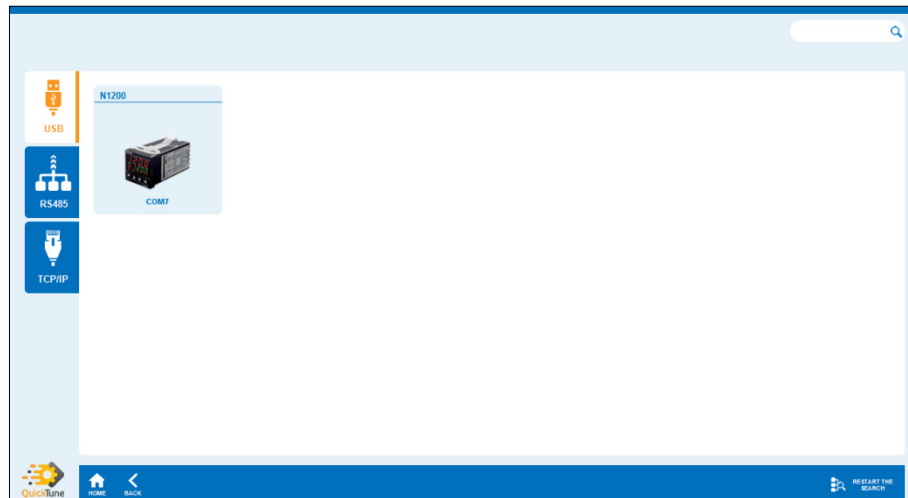


Figure 2 USB connection

Clicking on the device will allow you to access and edit its configuration parameters, as shown in chapter [CONFIGURING DEVICES](#) of this manual.

If the device is not displayed, you can click the **Restart the Search** button at the bottom of the screen to refresh the page.

If the connection screen has many devices, you can enter the name of the desired device in the search field at the top of the screen to make the process easier.

4.2 RS485

As shown in the figure below, this tab displays not only the devices currently connected and communicating with the software via RS485, but also displays all devices that have at some point already communicated with **QuickTune**:

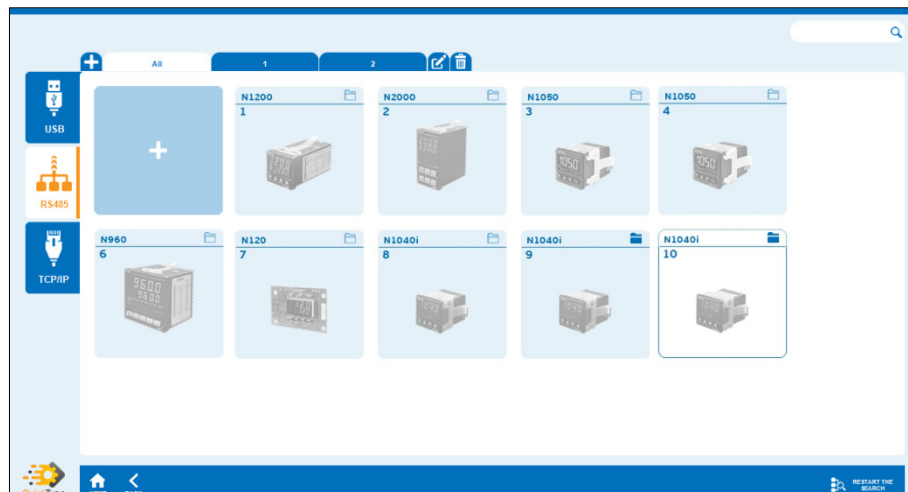


Figure 3 RS485 connection

To add a new device via RS485, it will be necessary to configure the RS485 connection, as shown in the [RS485 NETWORK MANAGEMENT](#) section of this chapter, by clicking the “+” button.

Clicking on the device will allow you to access and edit its configuration parameters, as shown in chapter [CONFIGURING DEVICES](#) of this manual.

If the device is not displayed, you can click the **Restart the Search** button at the bottom of the screen to refresh the page.

If the connection screen has many devices, you can enter the name of the desired device in the search field at the top of the screen to make the process easier.

4.2.1 RS485 NETWORK MANAGEMENT

To add a device to **QuickTune** via an RS485 connection, you must click the “+” button in **Figure 3** and, as shown in the following figure, configure the parameters of the Network Management window:

The screenshot shows the 'NETWORK MANAGEMENT' dialog box. It has two columns. The left column, titled 'NETWORK:', contains a dropdown menu with 'Add new network' selected, a text input field for 'NETWORK NAME:', and a 'NETWORK TYPE:' section with three radio buttons: 'Address:' (selected), 'Address range:', and 'Scan network:'. Each radio button has associated input fields for address and range. The right column, titled 'RS485 NETWORK PARAMETERS', contains several dropdown menus: 'COM:' (set to COM7), 'Bits by seconds:' (set to 19200), 'Timeout (ms):' (set to 3000), 'Parity:' (set to Even), 'Stop bits:' (set to 1), and 'GROUP NAME:' (set to None). At the bottom of the dialog are three buttons: 'CANCEL', 'REMOVE', and 'OK'.

Figure 4 RS485 network management

- **NETWORK:** Selecting the **Add New Network** option allows you to set specific parameters for a new network. You can also change the configuration of a network already created by selecting it in this parameter.
- **NETWORK NAME:** It allows you to add a name of up to 20 characters to the network to be created.
- **NETWORK TYPE:** It allows you to define the type of network to be created.
 - **Address:** Option to be used when you know the address of the device you want to connect to. When creating a network with this option, the figure of a generic and gray device will appear on the connection screen. You must click on the figure to read it via RS485 and then perform the correct identification of the device configured.
 - **Address range:** Option to be used when you know the address range you want to connect to. When creating a network with this option, the figure of a generic and gray device will appear on the connection screen. You must click on the figure to read it via RS485 and then perform the correct identification of the device configured.
 - **Scan network:** Option to be used when you do not know the address of the devices you want to connect to. Scanning the network will allow you to perform a search from the selected addresses (from 1 to 247).
- **RS485 NETWORK PARAMETERS:** It allows you to set RS485 network parameters.
 - **COM Port:** It allows you to select the COM port to make the connection.
 - **Bits per second:** It allows you to define the Bits per second to be used to make the connection: 9600 or 19200.
 - **Timeout (ms):** It allows you to set the connection Timeout period: From 0 to 99999.
 - **Parity:** It allows you to set the connection parity: Even or Odd.
 - **Stop bits:** It allows you to set the connection Stop Bits: In this case, only 1.
- **GROUP NAME:** It allows you to add the network to any previously created group (For information on how to create a group, see the [GROUPS](#) section of this chapter).

Once the network has been configured, you must click the **Ok** button to finish the process. When opening the configuration of a connection already created, you can delete it by clicking on the **Remove** button.

4.3 TCP/IP

As shown in the figure below, this tab displays not only the devices currently connected and communicating with the software via TCP/IP connection, but also displays all devices that have at some point already communicated with **QuickTune**:

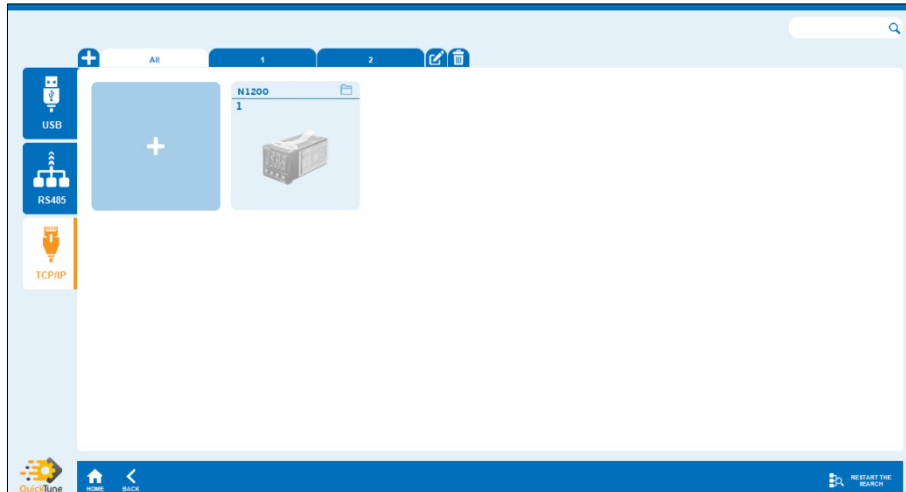


Figure 5 TCP/IP connection

To add a new device via TCP/IP, it will be necessary to configure the TCP/IP connection, as shown in the [TCP/IP NETWORK MANAGEMENT](#) section of this chapter, by clicking the “+” button

Clicking on the device will allow you to access and edit its configuration parameters, as shown in chapter [CONFIGURING DEVICES](#) of this manual.

If the device is not displayed, you can click the **Restart the Search** button at the bottom of the screen to refresh the page.

If the connection screen has many devices, you can enter the name of the desired device in the search field at the top of the screen to make the process easier.

4.2.2 TCP/IP NETWORK MANAGEMENT

To add a device to **QuickTune** via a TCP/IP connection, you must click the “+” button in **Figure 5** and, as shown in the following figure, configure the parameters of the **Network Management** window:

Figure 6 TCP/IP Network management

- **NETWORK:** Selecting the **Add New Network** option allows you to set specific parameters for a new network. You can also change the configuration of a network already created by selecting it in this parameter.
- **NETWORK NAME:** It allows you to add a name of up to 20 characters to the network to be created.
- **NETWORK TYPE:** It allows you to define the type of network to be created.
 - **Address:** Option to be used when you know the address of the device you want to connect to. When creating a network with this option, the figure of a generic and gray device will appear on the connection screen. You must click on the figure to read it via TCP/IP and then perform the correct identification of the device configured.
 - **Address range:** Option to be used when you know the address range you want to connect to. When creating a network with this option, the figure of a generic and gray device will appear on the connection screen. You must click on the figure to read it via TCP/IP and then perform the correct identification of the device configured.
 - **Scan network:** Option to be used when you do not know the address of the devices you want to connect to. Scanning the network will allow you to perform a search from the selected addresses (from 1 to 247).
- **TCP/IP NETWORK PARAMETERS:** It allows you to set RS485 network parameters.
 - **IP/URL:** It allows you to enter the IP or URL to be used to make the connection.

- **Timeout (ms):** It allows you to set the connection Timeout period: From 0 to 99999.
- **Port:** It allows you to set the connection port.
- **Protocol:** It allows you to define the protocol to be used during the connection: "Modbus TCP" or "Modbus RTU over TCP".
- **GROUP NAME:** It allows you to add the network to any previously created group (For information on how to create a group, see the [GROUPS](#) section of this chapter).

Once the network has been configured, you must click the **Ok** button to finish the process. When opening the configuration of a connection already created, you can delete it by clicking on the **Remove** button.

4.4 GRUPOS

You can create a group to bring devices together in a more organized way and make searching and viewing easier. **QuickTune** allows you to create up to 7 groups, including the "All" group, which is the software default and contains a list with all devices already connected.

RS485 and TCP/IP groups are shared, but each device will only appear in the section related to its connection medium. Devices connected via RS485 and inserted in Group 1, for example, will only appear in the Group 1 tab of the RS485 tab. The same will happen with devices connected via TCP/IP. Editing the name or deleting a group, however, will be valid for both **QuickTune** tabs.

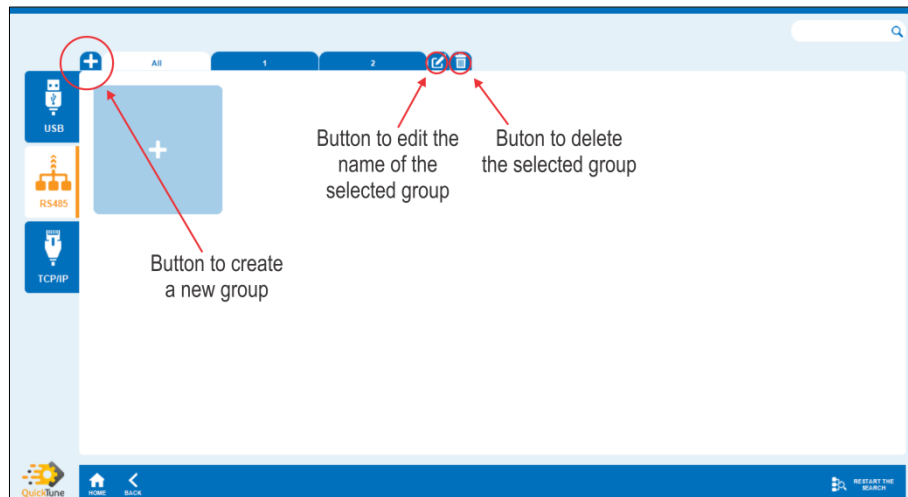


Figure 7 Groups creation

Once the group has been created, there are two ways to add a device to it:

- 1 Click the "+" button and add the device, making the connection through the **Network Management** window (For more information, see [RS485](#) and [TCP/IP](#) sections of this chapter);
- 2 On the "All" connection screen, right click on the connected device and add it to the desired group. This action will only work if a group has already been created.

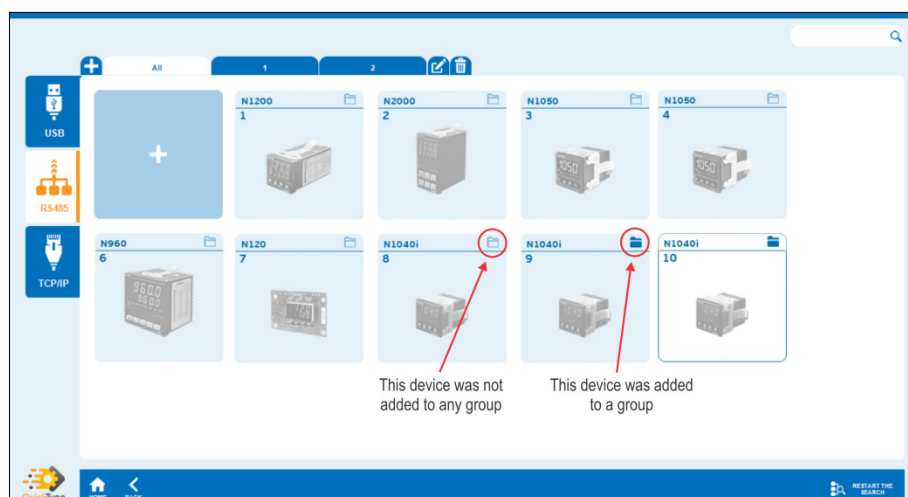


Figure 8 Devices added to groups

5. CONFIGURING DEVICES

The **Create Configuration** button on the **QuickTune** home screen allows you to create a setup for the selected device. To perform this procedure, it is not necessary that the device is connected to the computer and software. A configuration created through this section can be saved for later use.

As shown in the figure below, this tab presents a list with all **NOVUS** controllers and indicators and, once any of them is selected, you can confirm the model for which you want to create the configuration and observe information such as description and version of the descriptor:

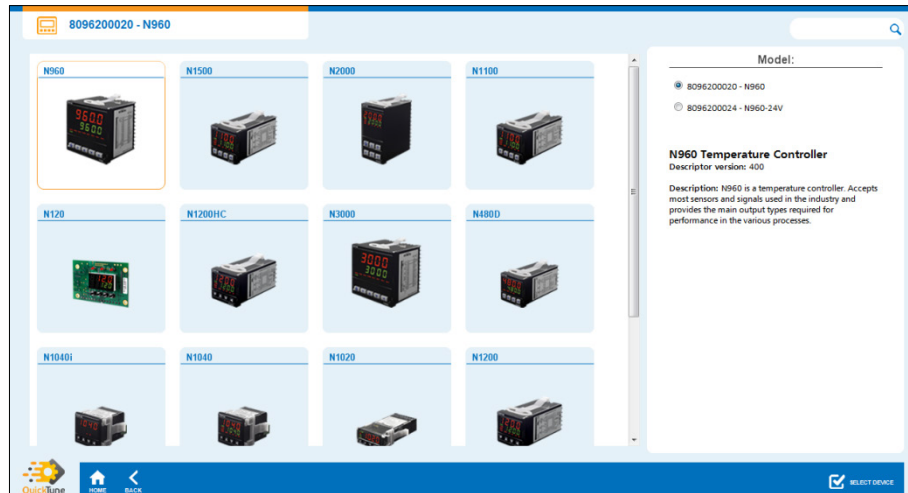


Figure 9 Creating a configuration

Once you have selected the device and model you want, click the **Select Device** button to be redirected to the configuration screen, as shown below:

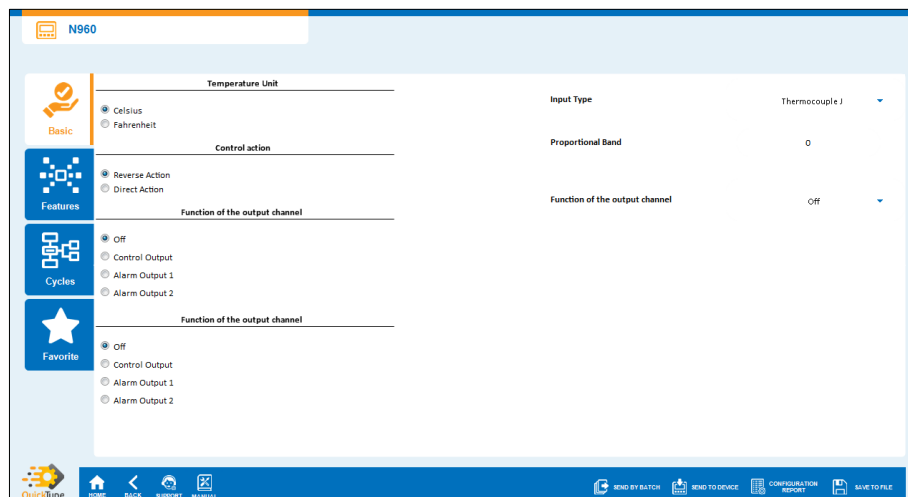


Figure 10 Configuration screen

The specific parameters of each tab change depending on the differences in configuration between each device, but the **Basic**, **Features**, **Cycles** and **Favorite** tabs, located on the left side of the software, will always be the same. The same applies for the lower menu, with the **Home**, **Back**, **Support**, **Manual**, **Send by Batch**, **Convert Model**, **Send to Device**, **Configuration Report**, **Save to File**, and **Firmware Update** buttons. Its functions will be further explained within this chapter and will be presented according to the selected tab.

5.1 “BASIC” TAB

The initial tab of this section, shown in **Figure 10**, contains, as its name implies, basic and essential information for using the device, such as input type, control action, temperature unit, and input and output channel functions.

You can download the device manual by clicking the **Manual** button, located on the **QuickTune** bottom menu, to understand the specific operation of each parameter to be configured.

5.2 “FEATURES” TAB

This tab brings the configurable features of the device, divided into a menu composed of the sections **Signal Input**, **Control**, **Protection**, **Tuning**, **Alarms**, **RS Programs** and **Serial Communication**. It is possible, however, that some device does not have protection parameters, for example. In this case, the **Protection** tab will remain missing.

You can download the device manual by clicking the **Manual** button, located on the **QuickTune** bottom menu, to understand the specific operation of each parameter to be configured.

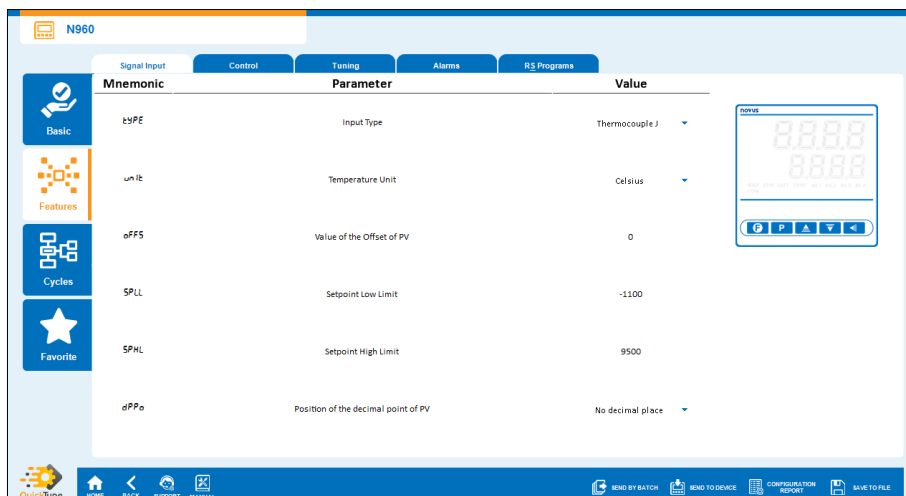


Figure 11 “Features” tab

This tab also features a dynamic figure to the right of the screen to reproduce the physical screen of the device and which will display the mnemonic and the selected value whenever a parameter is set, as shown in **Figure 12**. In this figure, the **Input Type** parameter was configured with the **Thermocouple K**:

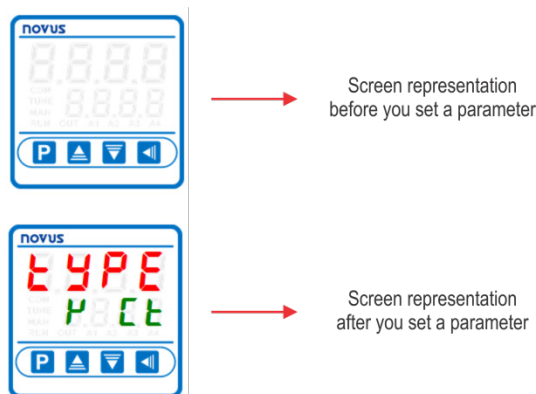


Figure 12 Mnemonics

The colors, design and font of the mnemonics used in the screen representation may vary according to the device selected. **Figure 12**, for example, refers to the **N1200** device.

5.2.1 PROGRAMS

Also in this section, the **Programs** tab has a tool to configure the programs of Ramps and Soaks. To access it, just click the **RAS Tool** button, as shown below:

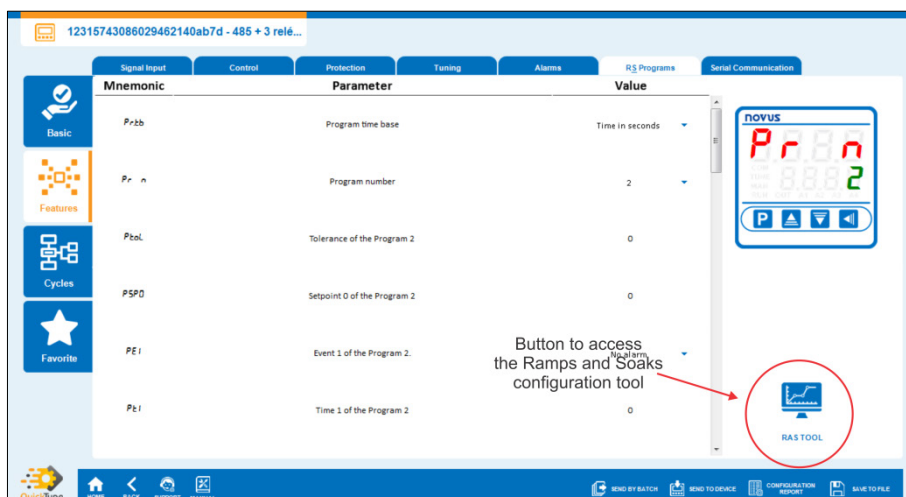


Figure 13 Ramps and Soaks Tool Button

By clicking this button you will be redirected to the screen of the figure below. In this screen you can configure each parameter of each program, always limited to the number of programs allowed by the device, as shown in the upper tabs of **QuickTune**. The **N1200**, for example, allows the configuration of up to 7 programs, called **P1** to **P7**.

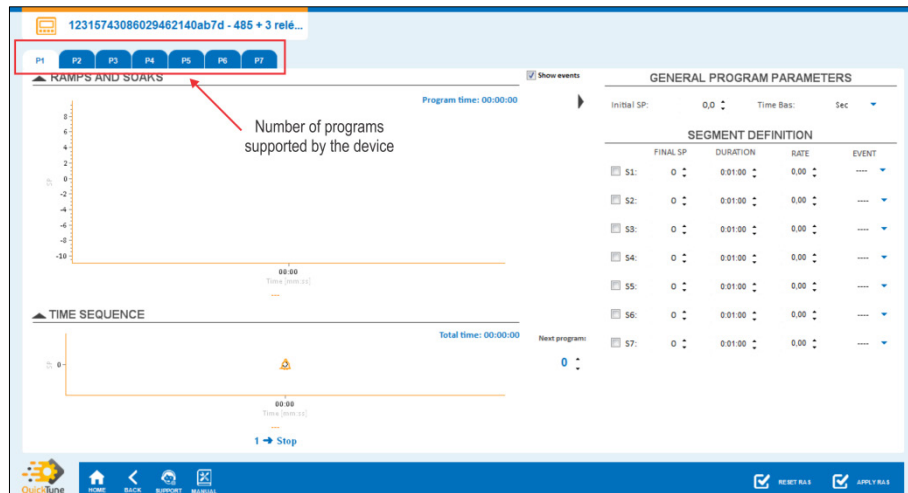


Figure 14 Programs supported by the device

To configure a program, as shown in the figure below, you must configure the general parameters of the program and the specific parameters of each segment:

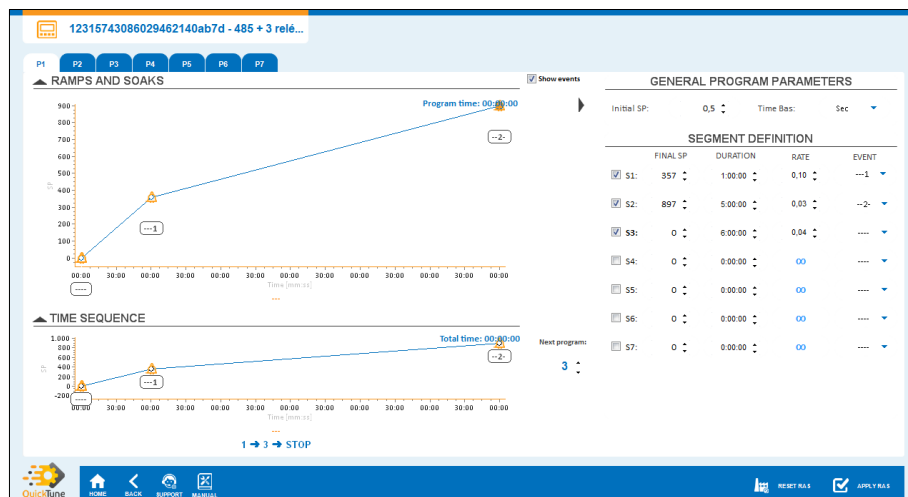


Figure 15 Program example

The figure above shows an example of programming Program 1 (P1) of Ramps and Soaks. The selected device allows 7 segments per program (only 3 were enabled). In the **General Program Parameters** section, the initial Setpoint of this program was set to a value equal to 0.5 and the time base was set to seconds.

The segments of ramps and soaks are defined by the corresponding Setpoint values. Segment 1, for example, is defined by the initial Setpoint of the program, and the value is defined by the final Setpoint of segment 1 (Final Setpoint 1). Segment 2 (S2) is defined by the Final SP 1 and the value is defined by the Final SP 2. This occurs successively until the last segment, which is defined by Final SP 6 and Final SP 7.

The start of each segment depends on the end of the previous segment.

You must select the **Show Events** option, located at the top of the "Ramps and Soaks" chart, to check and define the events associated with each segment of Ramps and Soaks.

The "Sequence in Time" chart shows a complete view of all the programs linked to form the control loop. This chart presents information such as the total time, events, sequence of programs and other details that allow you to analyze the complete cycle.

You can set the connection of this program (in this case P1) with the following (in this case P3) to the right of this chart. Connections between programs do not have to follow any rules and you can define them any way you like. You can connect P1 with P3, as in this example, but you could also connect with any other program, as with P7 or even P1 (loop). If you set the program to 0, this program will not follow any other.

Both charts can be manipulated with the mouse cursor. Positioning the mouse cursor on the lines of the chart will also allow you to view specific information about the desired point, as shown in the figure below:

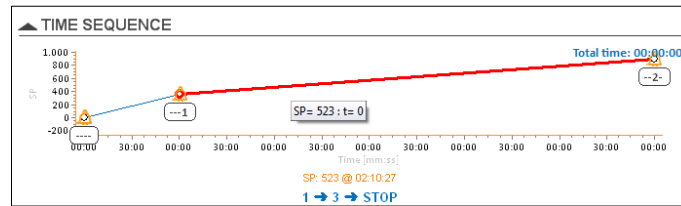


Figure 16 Positioning the mouse cursor

After creating the setting, you can click the **Apply RAS** button, located at the bottom of the screen, to save and finish the procedure. Once you have done this, you will be redirected back to the program screen in the “Resources” tab, as shown in **Figure 13**.

If you need to restart the process, clicking on the **Reset RAS** button, also located at the bottom of the screen, allows you to delete the settings made so far.

5.3 “CYCLES” TAB

This tab brings the configurable cycles of the device, divided into a menu composed of sections **Operation**, **Tuning**, **RS Programs**, **Alarms**, **Scale**, **Inputs and Outputs** and **Calibration**. It is possible, however, that some device does not have the tuning cycle, for example. In this case, the **Tuning Cycle** tab will remain missing.

You can download the device manual by clicking the **Manual** button, located on the **QuickTune** bottom menu, to understand the specific operation of each parameter to be configured.

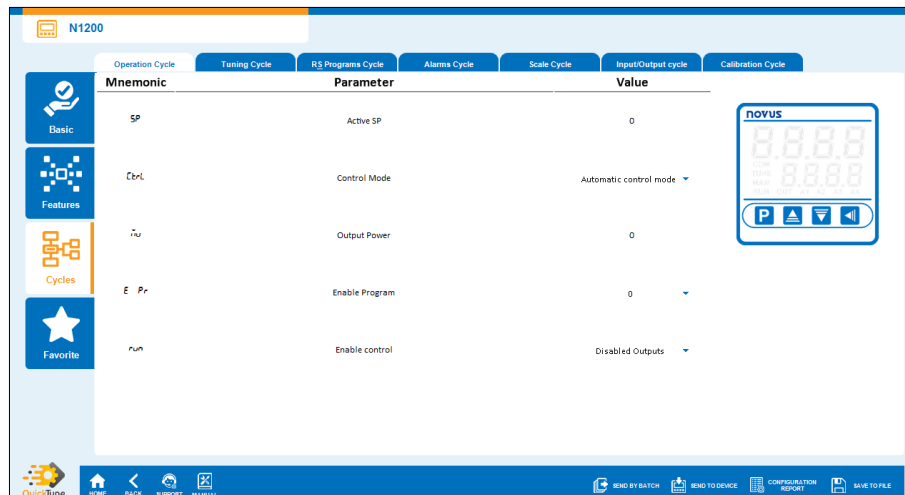


Figure 17 Cycles

The operation of this tab is very similar to the “Resources” tab. It also has a dynamic figure, located on the right, to reproduce the physical screen of the device. This screen will show the mnemonic and the selected value whenever a parameter is set, as shown in **Figure 12**.

The colors, design and font of the mnemonics used in the screen representation vary according to the device selected.

As with the Programs screen in the “Features” tab, the Program Cycle screen in the “Cycles” tab has a specific tool for configuring the Ramps and Soaks programs. The operation of both is identical (see section [“FEATURES” TAB](#) of this chapter). To access it, just click the **RAS Tool** button, as shown below:

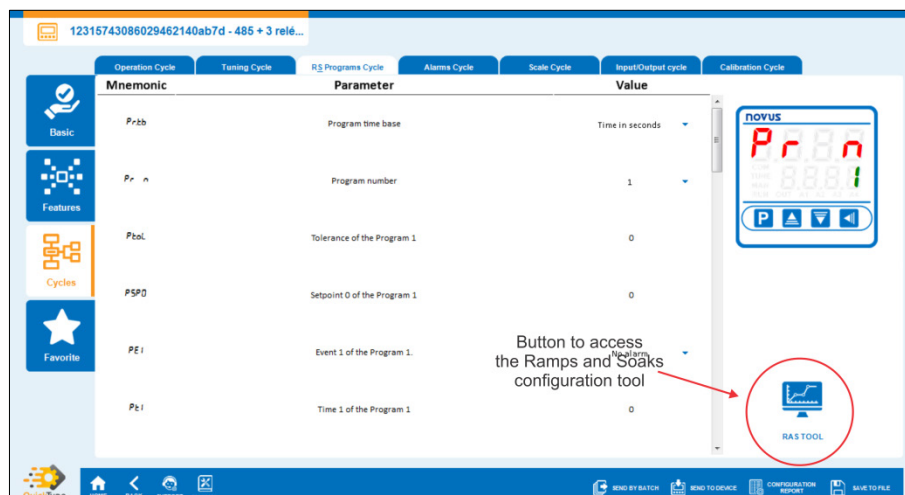


Figure 18 Button for the Ramps and Soaks tool

5.4 “FAVORITE” TAB

This section allows you to create a set of favorite settings for the device. If the read device has a previously saved favorite setting, instead of the “Basic” tab, this will be the first tab to be displayed. If no settings have been created so far, **QuickTune** will display the following screen:

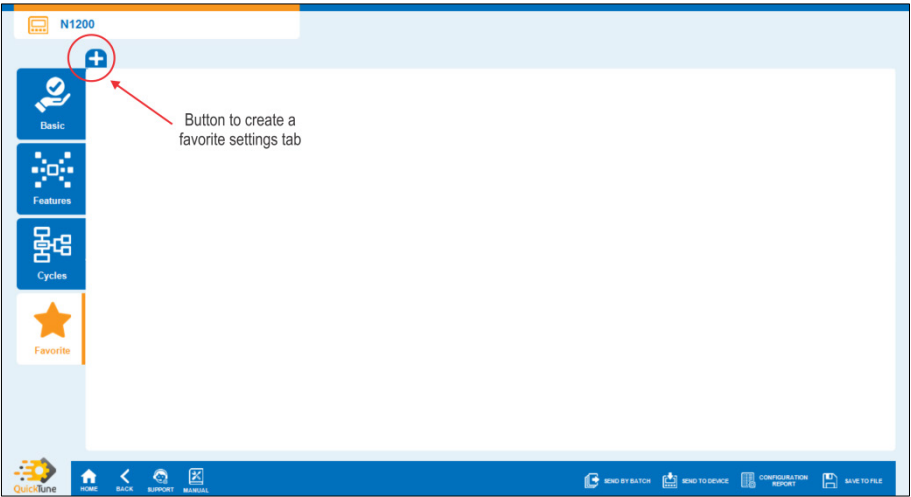


Figure 19 Favorites

As shown in the figure above, clicking the “+” button allows you to create a new set of favorite settings. **QuickTune** allows you to create up to 7 favorites. You can define a specific name for this selection, check the desired parameters and, if necessary, change the order of importance between them, as shown in the figure below:

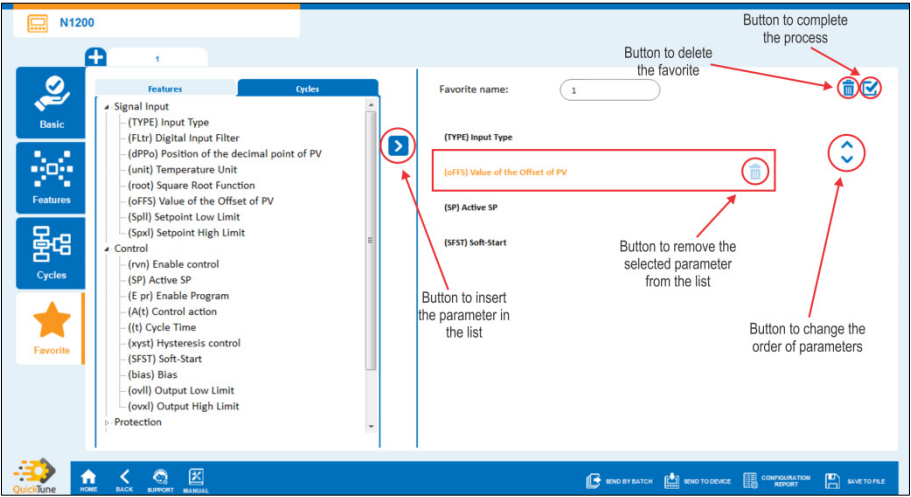



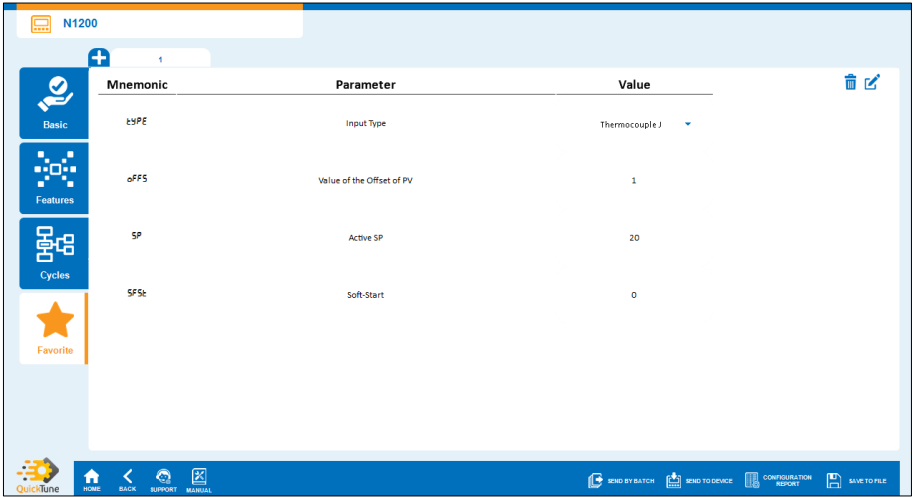
Figure 20 Favorite screen buttons

You can set the display mode of the parameter list by selecting the option “Features” or the option “Cycles”:

“Features” Display Mode	“Cycles” Display Mode

Figure 21 Parameters display modes

Once you have finished selecting your favorite parameters, you must click the  button, as shown in **Figure 20**, to complete the procedure. **QuickTune** will then display the information as follows:



Mnemonic	Parameter	Value
ISPE	Input Type	Thermocouple J
oFFS	Value of the Offset of PV	1
SP	Active SP	20
SFSs	Soft-Start	0

Figure 22 Favorite created

Set the desired parameters and select any of the options from the bottom menu (**Export Favorite** or **Send to Device**, for example, as shown in the [BOTTOM MENU](#) section of this chapter) to proceed.
To return to the editing part of this favorite or delete it, you must click on the buttons marked in the figure above.

5.5 BOTTOM MENU

This section has a set of buttons, located at the bottom of the screen, as shown below:



Figure 23 Menu buttons

5.5.1 HOME

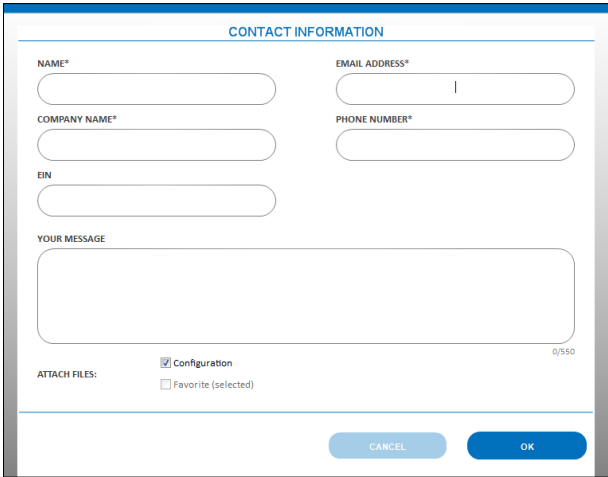
This button allows you to return to the **QuickTune** home screen. When switching screens, you will be asked whether to save the configuration to file or send the configuration to the connected device.

5.5.2 BACK

This button allows you to return to the previous **QuickTune** screen. When switching screens, you will be asked whether to save the configuration to file or send the configuration to the connected device.

5.5.3 SUPPORT

This button allows you to contact Technical Support via a message and will present a screen like the one in the image below:



CONTACT INFORMATION

NAME* EMAIL ADDRESS*

COMPANY NAME* PHONE NUMBER*

EIN

YOUR MESSAGE

ATTACH FILES: ☒ Configuration ☐ Favorite (selected)

CANCEL OK

Figure 24 Message to Technical Support

After filling in the required fields marked with an asterisk, you can add a message of up to 550 characters and attach the configuration file and the file of your favorite configurations (see section [“FAVORITE” TAB](#) of this chapter). If you have not configured any favorites, this box will remain in grey, as in the example above.
You must click **OK** to send the message. **NOVUS** Technical Support will contact you by e-mail or by phone as soon as the message is received and analyzed.

5.5.4 MANUAL

This button allows **QuickTune** to redirect you to the online page of the product manual, available on the **NOVUS** website and displayed in your favorite browser. On this page you can view the PDF version of the manual.

This option requires an Internet connection.

5.5.5 CONVERT MODEL

This button allows you to convert the model from an older version to a more current version, keeping the same values for the configured registers and, if the current firmware version presents new registers, keeping the new registers with the default configuration.

This function is especially useful when you have a configuration file of an old firmware version and you want to update a device with the current firmware.

CONVERT THE CURRENT MODEL TO THE NEW MODEL

CURRENT MODEL	CURRENT MODEL DESCRIPTION	NEW MODEL	NEW MODEL DESCRIPTION
8154000020 - N1540	N1050 + 100~240 VAC	81540000320 - N1540-485	N1540 + RS485 + 100~240 VAC
8154000030 - N1540-24V		81540000330 - N1540-485-24V	

CANCEL OK

Figure 25 Convert model

5.5.6 SEND BY BATCH

This button allows you to send a batch configuration, that is, to several devices through the selected COM port, as shown below:

BATCH CONFIGURATION

COM:

N1040 USB (COM8) ▼

CANCEL OK

Figure 26 Batch configuration

For devices with RS485 interface, **QuickTune** also features the **Send Options** parameter, which will allow you to set the send mode:

BATCH CONFIGURATION

COM:

N1040 USB (COM8) ▼

SEND OPTIONS

☒ Always send to the address: 1

☐ Automatic sending to:

☐ Increase address automatically;

☐ Change the address before sending;

CANCEL OK

Figure 27 Send options

Options of this parameter:

- **Always send to the address:** It allows you to send a batch configuration to the address configured in this parameter.
- **Automatic sending to:** It allows you to add more than one address to send a batch configuration. The devices will follow the order specified in this parameter and must be separated by a semicolon. Example: 1;2;3-7;
- **Increase address automatically:** It allows the Modbus address to be recorded sequentially: 1, 2, 3, 4, 5,...
- **Change the address before sending:** Allows you to enter the address to be recorded for each process.

5.5.7 SEND TO DEVICE

This button allows you to send the settings made to the connected device.

5.5.8 SAVE TO FILE

This button allows you to save the created configuration in a file with extension *.qtc in the indicated place. Later, this file can be opened via the **Open Configuration** button located on the home screen (see chapter [OPEN CONFIGURATION](#)) or by two clicks on the file itself.

5.5.9 EXPORT FAVORITE

This button, available only on the **Favorite** tab, will open a Windows window that allows you to export your favorite setting in *.qtf file format, except in a location to be determined.

5.5.10 CONFIGURATION REPORT

This button allows you to generate a configuration report with the values of all the device parameters, as shown below:


			<i>Device Name:</i>	<i>N1040</i>
			<i>Firmware version:</i>	<i>211</i>
			<i>Archive created in:</i>	<i>11/05/2020 10:06:40</i>
Mnemonic	Parameter	Value		
tyPE	Input Type	Thermocouple J		
dPPo	Position of the decimal point of PV	No decimal place		
un it	Temperature Unit	Celsius		
SPLL	Setpoint Low Limit	-110		
SPHL	Setpoint High Limit	950		
SP	Active SP	0		
REt	Control action	Reverse Action		
REun	Auto tune enable	Tuning off		
Pb	Proportional Band	0		
HYSct	Hysteresis control	0		
SFSct	Soft-Start	0		
out1	Function of the output channel	Off		
out2	Function of the output channel	Off		
out3	Function of the output channel	Off		
out4	Function of the output channel	Off		
IEou	Percentage output value that will be transfer to MV when the SAFE output function is enabled.	0		
Lbdct	Time interval for the LBD function	0		
FuR1	Alarm 1 Functions	Alarm off		
FuR2	Alarm function 2	Alarm off		
bLR1	Initial Blocking of Alarm	0		
bLR2	Initial Blocking of Alarm	0		
FLtr	Digital Input Filter	5		
oFF5	Value of the Offset of PV	0		
Raddr	Slave Address	1		
bRud	Communication Baud Rate	Speed of 115200 kbps		
Prty	Parity of the serial connection	Without parity		
Prot	Protection Level by password	1		
rStr	Restore	0		

Figure 28 Report

In order to facilitate later identification, this document features a footer with fields for device name, firmware version and file creation date. It can be printed and/or saved with a *.pdf extension.

5.5.11 UPDATE FIRMWARE

This button, available only when the device is connected, allows you to update the firmware of the connected device, as shown below:

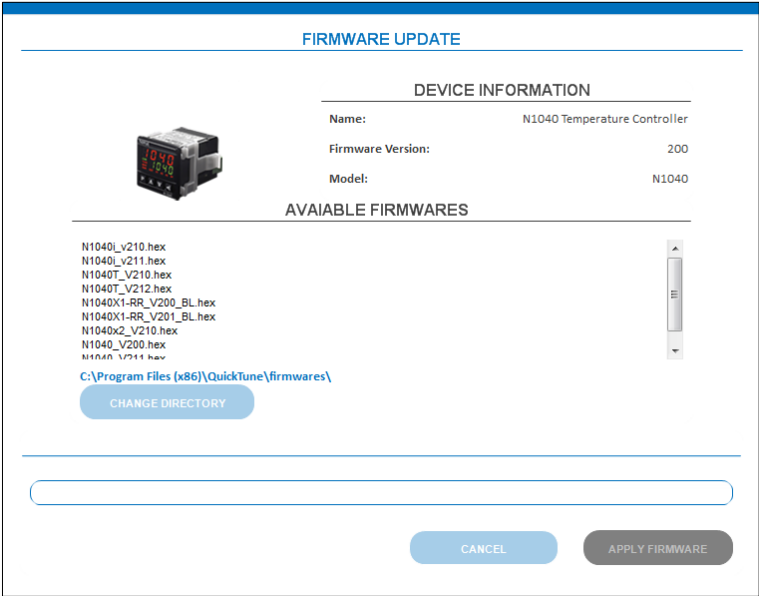


Figure 29 Firmware update

To update the firmware of the selected device, you must select the desired firmware from the list of available firmware and click the **Apply Firmware** button. **QuickTune** will then display the following message, requiring confirmation:

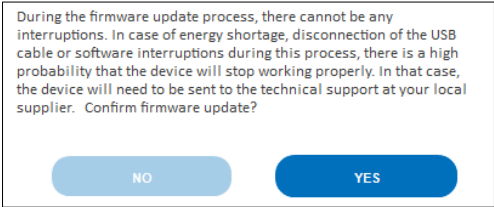


Figure 30 Update confirmation

It is important that no interruptions occur during the firmware update process. Otherwise, the device may present problems. **QuickTune** will display a progress bar, which allows you to track the progress of the process while the firmware is being upgraded:

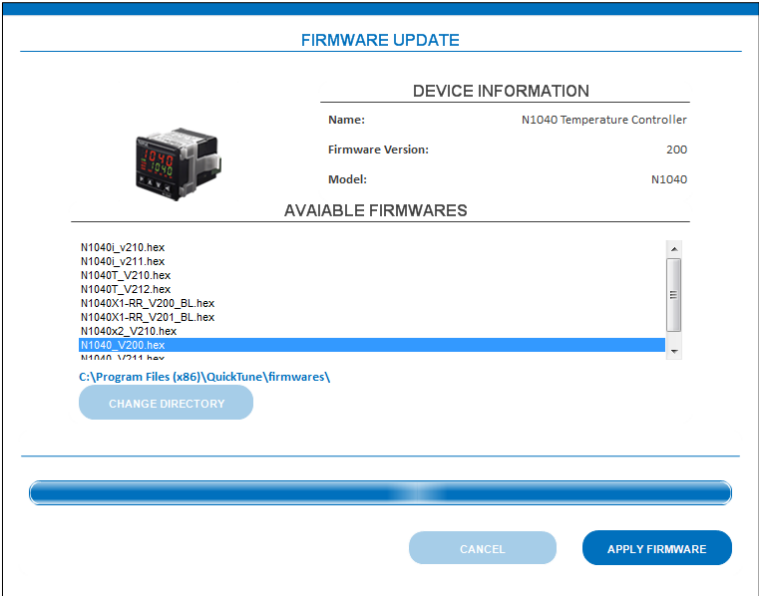


Figure 31 Progress

If the process is completed successfully, **QuickTune** will display a success message and complete the procedure.

6. DEVICES DIAGNOSTICS

The **Diagnostic** button allows you to perform an analysis of the device settings and processes. Before starting the diagnosis, however, you must select the device from the connection screen, as shown below:

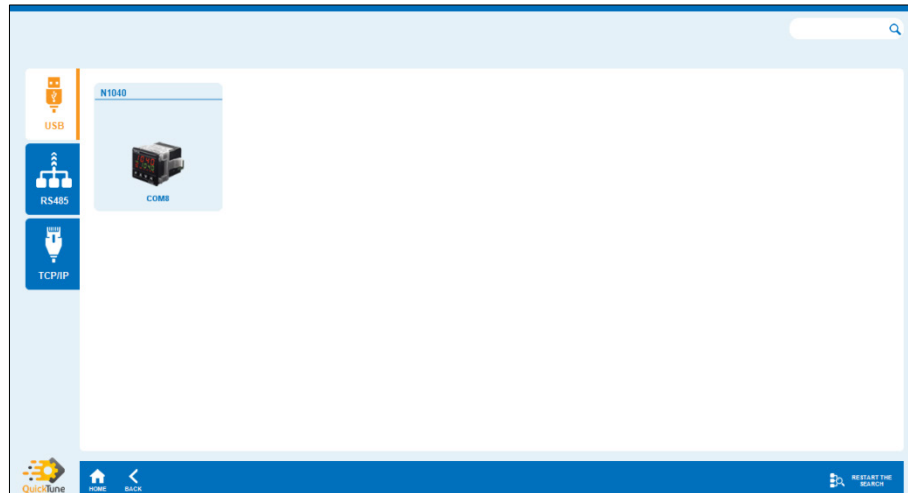


Figure 32 Device selection

You can select a device connected either via USB or a device connected via the RS485 interface or a TCP/IP connection (For more information on connecting devices via the last two options, see the [RS485](#) and [TCP/IP](#) sections of the [READING DEVICES](#) chapter). If the device is not displayed on the connection screen, you can click the **Restart the Search** button to restart the process.

Once the device (in this example, the **N1200**, connected via the USB interface) has been successfully selected, **QuickTune** will display a loading screen and then display a screen similar to the one below:

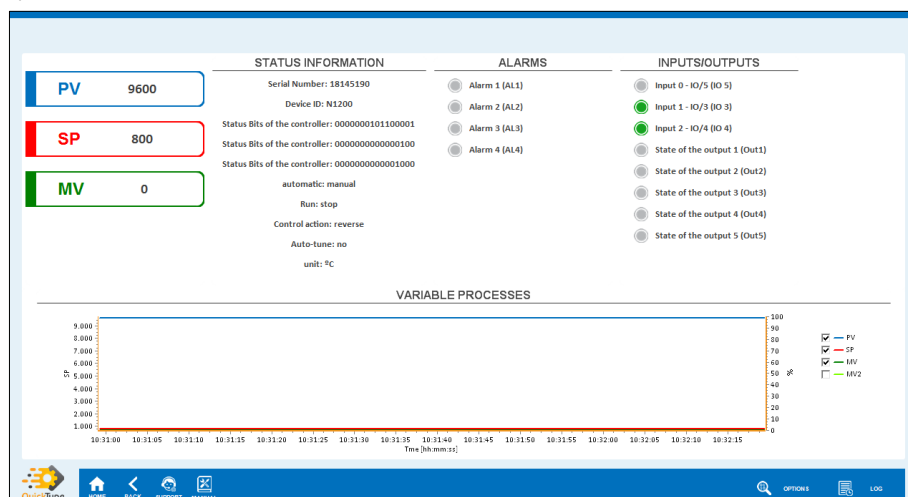


Figure 33 Diagnostics

This screen displays information about the device configuration at the top and the progress of the variable processes in a chart located at the bottom.

Not configurable, the top of the screen is divided into sections that bring status information, alarms, inputs and outputs. It also shows the current PV, SP and MV values.

Gray indicators from the Alarms and Inputs/Outputs sections indicate that the parameter is disabled. Green indicators indicate that the parameter is activated. To view specific information about the current configuration of the connected device, you can click the **Options** button located on the bottom menu, as shown in the [OPTIONS](#) section of this chapter.

The chart can be manipulated with the mouse to zoom in on specific locations and has checkboxes that allow you to enable or disable viewing of PV, SP, MV and MV2 information.

The **Home**, **Back**, **Support** and **Manual** buttons, located on the bottom menu, have been properly explained in the [BOTTOM MENU](#) section of the [CONFIGURING DEVICES](#) chapter.

6.1 OPTIONS

When you click the **Options** button, **QuickTune** will display a window with the following information:

STATUS WORDS 1	STATUS WORDS 2	STATUS WORDS 3 (SUPPORT)
<input checked="" type="radio"/> Alarm 1 (AL1): inactive	<input checked="" type="radio"/> automatic (Aut): manual	0x0008
<input checked="" type="radio"/> Alarm 2 (AL2): inactive	<input checked="" type="radio"/> Run (Rn): stop	
<input checked="" type="radio"/> Alarm 3 (AL3): inactive	<input type="radio"/> Control action (ActCrtl): reverse	
<input checked="" type="radio"/> Alarm 4 (AL4): inactive	<input checked="" type="radio"/> Auto-tune (AutoTn): no	
<input checked="" type="radio"/> Input 0 - IO/5 (IO 5): inactive	<input type="radio"/> Alarms Initial Blocking (BIA1): yes	
<input type="radio"/> Input 1 - IO/3 (IO 3): active	<input type="radio"/> Alarms Initial Blocking (BIA2): yes	
<input type="radio"/> Input 2 - IO/4 (IO 4): active	<input checked="" type="radio"/> Alarms Initial Blocking (BIA3): no	
	<input checked="" type="radio"/> Alarms Initial Blocking (BIA4): no	
	<input checked="" type="radio"/> unit (Un): °C	
	<input checked="" type="radio"/> State of the output 1 (Out1): 0	
	<input checked="" type="radio"/> State of the output 2 (Out2): 0	
	<input checked="" type="radio"/> State of the output 3 (Out3): 0	
	<input checked="" type="radio"/> State of the output 4 (Out4): 0	
	<input checked="" type="radio"/> State of the output 5 (Out5): 0	

Figure 34 Options screen

This screen brings information about the registers and shows indicators that alternate between gray and green in order to demonstrate whether the register is active or inactive and its configuration.

6.2 LOG

Clicking the **Log** button allows you to view the device logs in real time, as shown below:

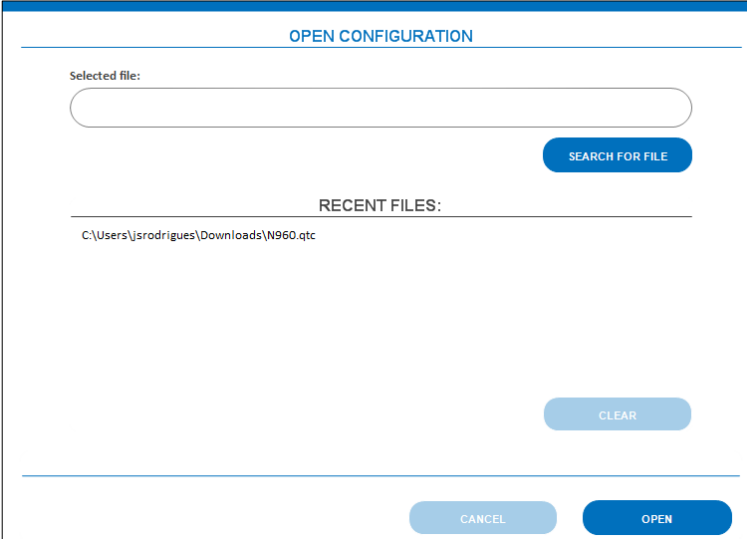
DEVICE
11/05/2020 10:32:53 - Reading the register: Status Word 2 11/05/2020 10:32:53 - Readed value: 4. Read response: Success 11/05/2020 10:32:53 - Closing COM port 11/05/2020 10:32:53 - COM port closed 11/05/2020 10:32:53 - Reading succesfully realized ----- 11/05/2020 10:32:53 - Starting the reading of the registers 11/05/2020 10:32:53 - Validating serial connection parameters 11/05/2020 10:32:53 - Parameters OK 11/05/2020 10:32:53 - Opening COM port 11/05/2020 10:32:53 - COM port open 11/05/2020 10:32:53 - Reading the register: Status Word 3 11/05/2020 10:32:53 - Readed value: 8. Read response: Success 11/05/2020 10:32:53 - Closing COM port 11/05/2020 10:32:53 - COM port closed 11/05/2020 10:32:53 - Reading succesfully realized

Figure 35 Logs

This is a window with dynamic information that will be updated as the process occurs.

7. OPEN CONFIGURATION

The **Open Configuration** button on the **QuickTune** home screen takes you to the window shown in the figure below and allows you to open a previously created setup file, saved on a drive or a network location:



OPEN CONFIGURATION

Selected file:

SEARCH FOR FILE

RECENT FILES:

C:\Users\jsrodrigues\Downloads\N960.qtc

CLEAR

CANCEL OPEN

Figure 36 Open configuration

To select a specific file, created through the **Create Configuration** section (see chapter [CONFIGURING DEVICES](#)), simply click the **Search for File** button. You must select the file in the Windows window that will appear and click the **Open** button to view it.

To select a recent file, you must select it with two mouse clicks in the **Recent Files** section. You can also clear the list of recent files by clicking on the **Clear** button.

After you select the file to edit, **QuickTune** will redirect you to a configuration screen. Details can be better viewed in the [CONFIGURING DEVICES](#) chapter.

8. PREFERENCES

This screen allows you to configure software usage preferences for the **Configuration**, **Feedback**, **Protection**, **Device Search**, **Language** and **Update** sections, as shown below:

The screenshot shows the 'PREFERENCES' screen with a blue header. It is divided into six sections:
1. **CONFIGURATION**: Three radio button options: 'Save changes when you exit a screen', 'Cancel changes when you exit a screen', and 'Ask whether you want to save or cancel the' (which is selected).
2. **FEEDBACK**: A checkbox option 'Allow the software to capture usage information for product improvement'.
3. **PROTECTION**: A 'Password:' label followed by a masked input field with four dots.
4. **DEVICE SEARCH**: A checked checkbox 'Enable automatic search' and a 'Connection screen' dropdown menu.
5. **LANGUAGE:**: An 'English' dropdown menu.
6. **UPDATE**: A checked checkbox 'Check for updates automatically' and a 'CHECK FOR UPDATES' button.
At the bottom, there are 'CANCEL' and 'OK' buttons.

Figure 37 Preferences screen

8.1 CONFIGURATION

- **Save changes when you exit a screen:** QuickTune will log the changes made whenever you change screens during device setup in the **Read Device** section.
- **Cancel changes when you exit a screen:** QuickTune will cancel changes made whenever you change screens during device setup in the **Read Device** section.
- **Ask whether you want to save or cancel the process:** QuickTune will always ask if you want to save or cancel changes made during device setup in the **Read Device** section.

8.2 FEEDBACK

- **Allow the software to capture usage information for product improvement:** If checked, this option allows you to send **QuickTune** usage data to the seller, ensuring the security of your private information. This option includes sending information regarding the most used functions and configured devices and its objective is the continuous improvement of the software.

8.3 PROTECTION

- **Password:** This parameter allows you to set a numeric password of up to eight digits. If it is the same as the connected device, this will allow automatic communication between the device and **QuickTune**. In addition, you will not need to enter the device protection password whenever you change the setting.

If this parameter remains blank or the password is not set for the connected device, QuickTune will prompt you to enter the device password whenever you change the setting.

8.4 DEVICE SEARCH

- **Enable automatic search:** If checked, this option enables automatic search of devices connected to USB or RS485 or TCP/IP networks previously configured during the selected situation.
 - **Starting the software:** QuickTune will automatically search for devices when starting the software.
 - **Connection screen:** QuickTune will automatically search for devices when the connection screen of the **Read Device** tab is displayed.

8.5 LANGUAGE

- This option allows you to select the software display language: Portuguese, English, Spanish or French.

8.6 UPDATE

- **Check for updates automatically:** If checked, this option allows the software to automatically check for updates. Otherwise, you can click the **Check for Updates** button to perform a manual search at the time you judge most appropriate.

This functionality requires active Internet connection.

Regardless of which option you choose (Check for updates automatically or **Check for Updates** button), **QuickTune** will display the following pop-up informing you that there is a new update:

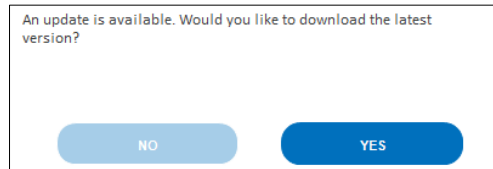


Figure 38 Update

Clicking the **Yes** button will automatically download the new version, which must be installed manually. Clicking the **No** button will close the pop-up, allowing you to return to **QuickTune** navigation.

If the software is already up-to-date or there is no Internet connection, **QuickTune** will display a warning pop-up.