ORION ITALIA

Software Setup User's Manual

Manual P/N: OISS GBM MAY/2019

Via G. Orsi 35, 29100 Piacenza [PC] – Italia
Telefono: ++ 39 0523 591161, Fax: ++ 39 0523 593898, Internet: www.orionitalia.com

SYMBOLS IN THE TEXT AND THEIR MEANING

It indicates an IMPORTANT INFORMATION, any information with that symbol refers to any information that software users have to be aware of. Pay attention to the information signaled by this symbol, as it refers to situation that require CAUTION AND WARNING: any operation by users who ignore these information could provoke an unexpected behavior which could damages objects or people.

.

TABLE OF CONTENTS

1. INTRODUCTION
1.1 Software setup allows users to

2. SYSTEM REQUIREMENTS
2.1 Minimum system requirements
2.2 Additional requirements

3. INSTALLATION

4. USING THE SOFTWARE SETUP
4.1 Offline mode
4.2 Online mode

1. Introduction

Orion Italia Software Setup is a software for a set of Orion Italia devices. This software allows users to retrieve data and setup Orion Italia devices remotely via COM (i.e. RTU) and/or TCP (i.e. Ethernet) communications.

IMPORTANT NOTE: Orion Italia Software Setup has to be used **ONLY WITH** Orion Italia devices.

1.1 SOFTWARE SETUP ALLOWS USERS TO

- Create configuration files which contain device setpoints;
- Access devices remotely via COM and/or TCP;
- Access devices remotely to retrieve actual values and current setpoints;
- Access devices events remotely via COM and/or TCP, if target device supports events;
- Setup devices remotely by sending new setpoints;
- Print current devices setup as PDF file;
- Print current configuration file setup as PDF file.

2. System Requirements

The Recommended Minimum System Requirements allow customers to easily install and use the Orion Italia Software Setup. Usually, machines that run Windows Vista SP2, Windows 7, Windows 8 and its derivative versions, and Windows 10 and its derivative versions can support the program.

IMPORTANT NOTE: Orion Italia Software Setup is not supported by Windows XP and predecessors.

2.1 MINIMUM SYSTEM REQUIREMENTS

- 1 gigahertz (i.e. GHz) or faster 32-bit (i.e. x86) or 64-bit (i.e. x64) processor;
- 1 gigabyte (i.e. GB) RAM for 32-bit processors or 2 GB RAM for 64-bit processors;
- 50 megabytes (i.e. MB) available hard disk space;
- Framework .NET4.5 or newer installed.

2.2 ADDITIONAL REQUIREMENTS (ADDITIONAL FEATURES)

- COM port / USB-To-Serial adapter;
- Ethernet port;
- A PDF reader installed;
- Internet access **IF AND ONLY IF** .NET Framework 4.5 or newer is not already installed.

Product graphics may vary based on your system configuration and Software Setup version.

3. Installation

Double click on the setup file (e.g. Setup.exe, OrionItaliaSoftwareSetup.exe) to run the Orion Italia Software Setup installation.
The Orion Italia Software Setup installation will run in background and install the program. This installation creates a shortcut in the user's Desktop and in the user's Start Menu to run the program, and a folder with the necessary files on the user's PC. Figure 1 and Figure 2 show created shortcuts.
Once the installation is done, the Orion Italia Software Setup is automatically executed. Users may double-check the correct installation via "Control Panel" -> "Programs and Features" by looking for "Software Setup for Orion Italia Devices" program. Figure 3 and Figure 4 show the installed program automatically executed for the first time, and "Software Setup for Orion Italia Devices" highlighted in "Program and Feature" window.

Figure 1 shows user's desktop shortcut to run Orion Italia Software Setup.

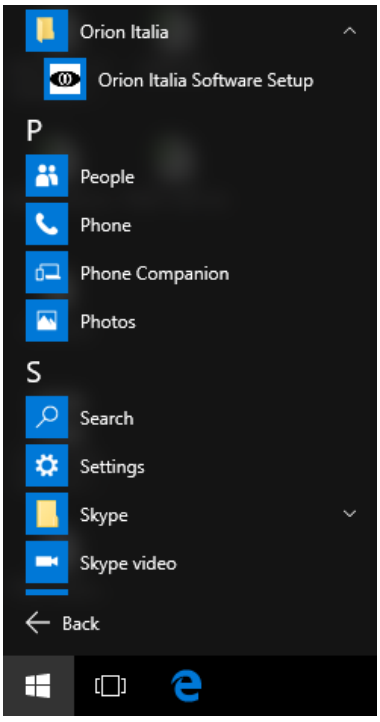

Figure 2 shows user's Start Menu shortcut to run Orion Italia Software Setup.

Figure 3 shows Orion Italia Software Setup executed. The Software Setup window represents the program main window, which in this case does not contain any configuration yet.

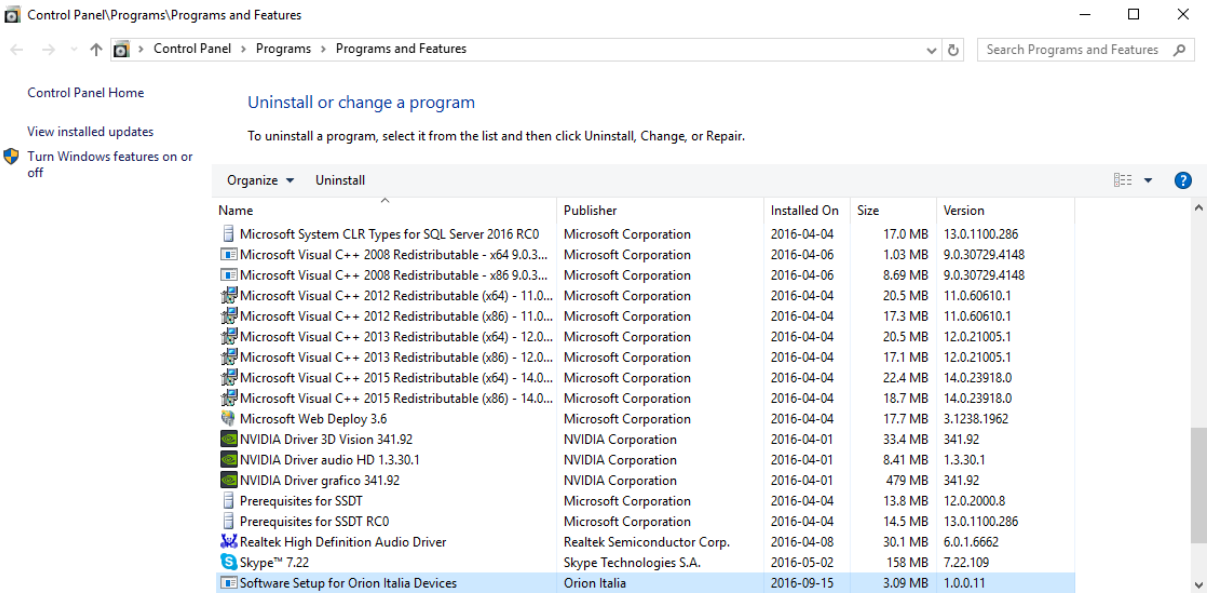

Figure 4 shows "Software Setup for Orion Italia Devices" highlighted in the "Programs and Features" window. If "Software Setup for Orion Italia Devices" appears in the "Program and Features" window, then the installation was successful.

IMPORTANT NOTE: Orion Italia Software Setup requires Framework .NET 4.5 or newer. If it is not already installed on user's PC, the installation will inform the user and ask the permissions to install it. Figure 5 and Figure 6 show a configuration of user's PC without .NET Framework.

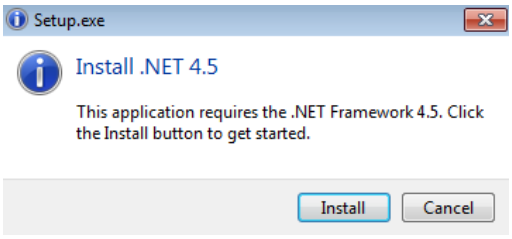

Figure 5 shows that the setup installation has found .NET 4.5 missing on user's PC. Additionally, Figure 5 shows that setup installation allows user to install .NET Framework (it will download the necessary files from internet)

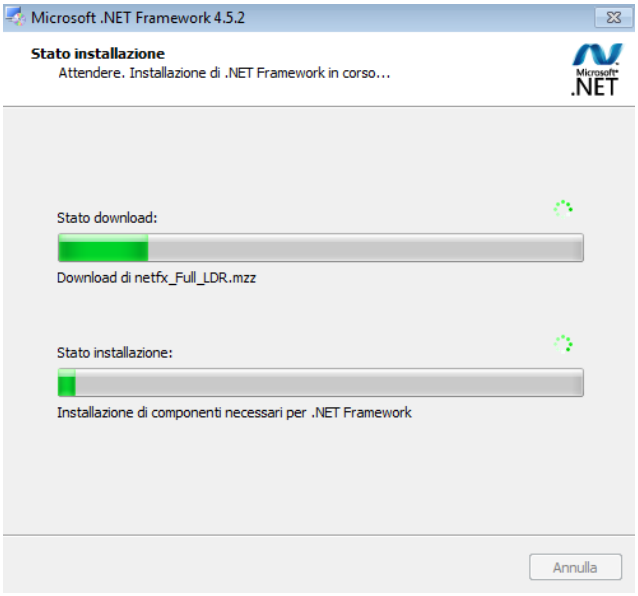

Figure 6 shows .NET Framework installation on Software Setup installation.

4. Using the Software Setup

Orion Italia Software Setup has been developed to be simple and direct. In fact, it has five main elements which allow users to handle the configurations of Orion Italia devices. Figure 7 shows an overview of Software Setup main elements.

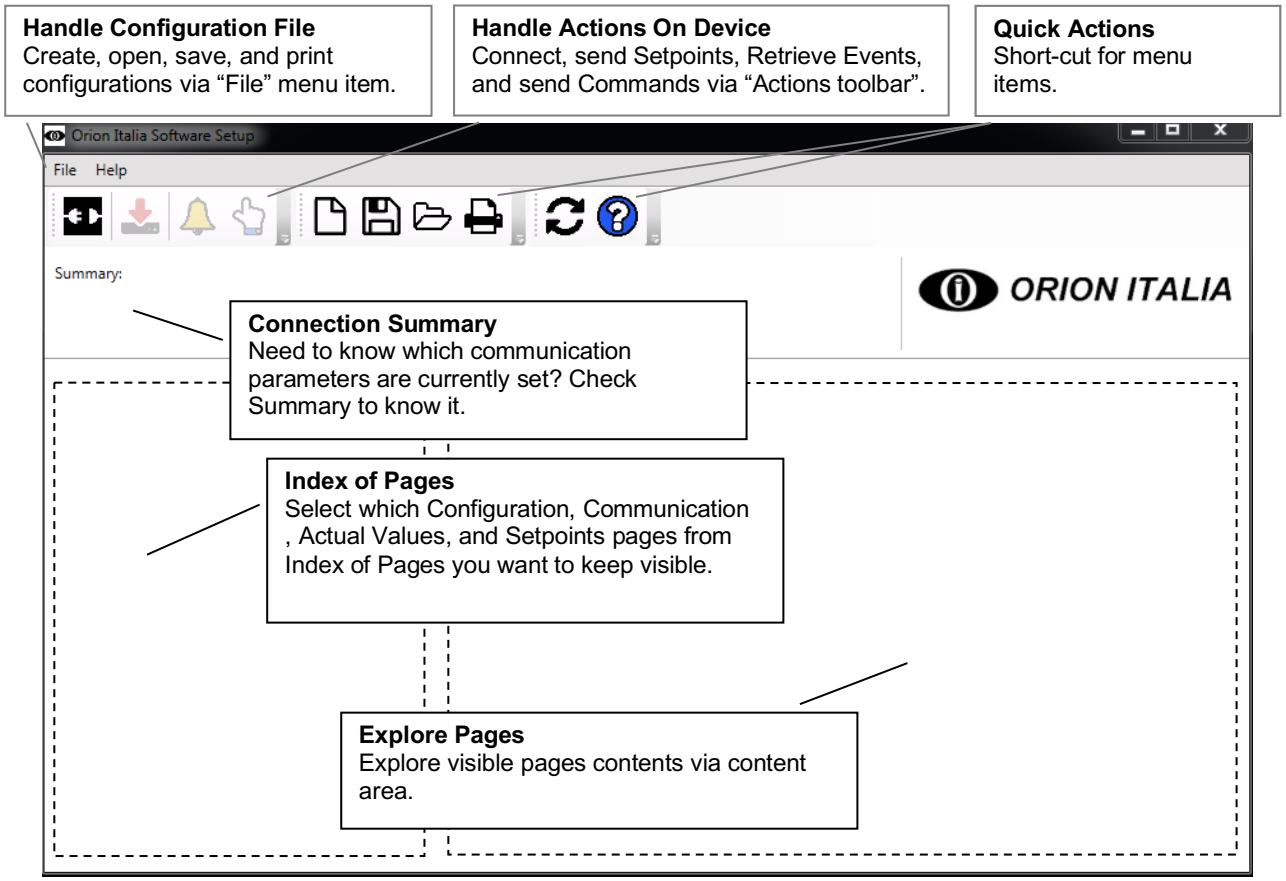

Figure 7 shows an overview of Software Setup main elements. These elements allow users to create, load, save and print configurations, to connect and interact remotely with Orion Italia devices, to select which pages and page elements should be visible in the software.

Operation modes:

- Offline mode is designed to create and save configurations while not connected to devices;
- Online mode is designed to access remotely the device to retrieve and change current setup;

4.1 OFFLINE

Offline mode allows users to create and manage the configuration while not connected to any device.
For example, the user can create a new configuration via “New configuration” from “File menu” by selecting the required product, model, and version. Figures from Figure 8 to Figure 26 show use cases and examples of offline mode.

Figure 8 shows software elements that allow users to manage devices configurations.

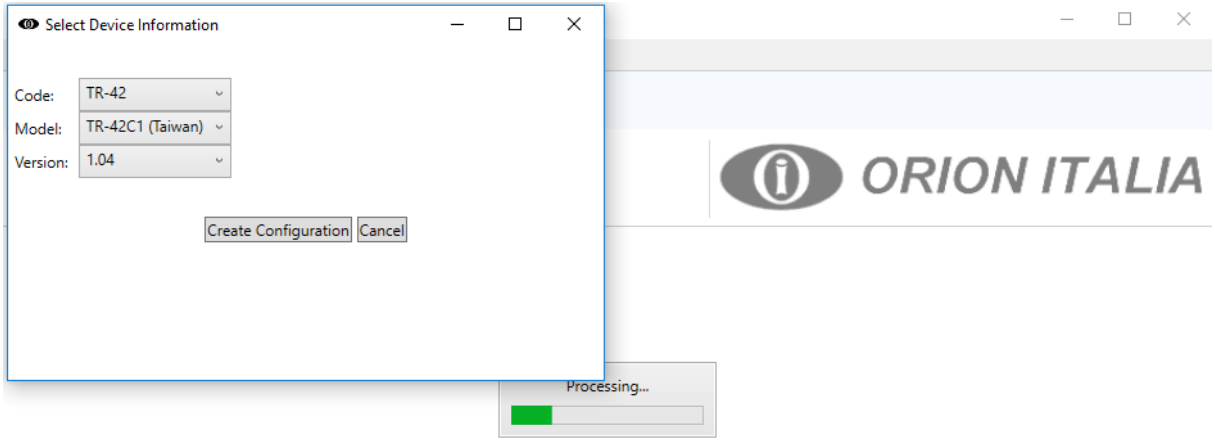

Figure 9 shows the device selection when a new configuration is created.

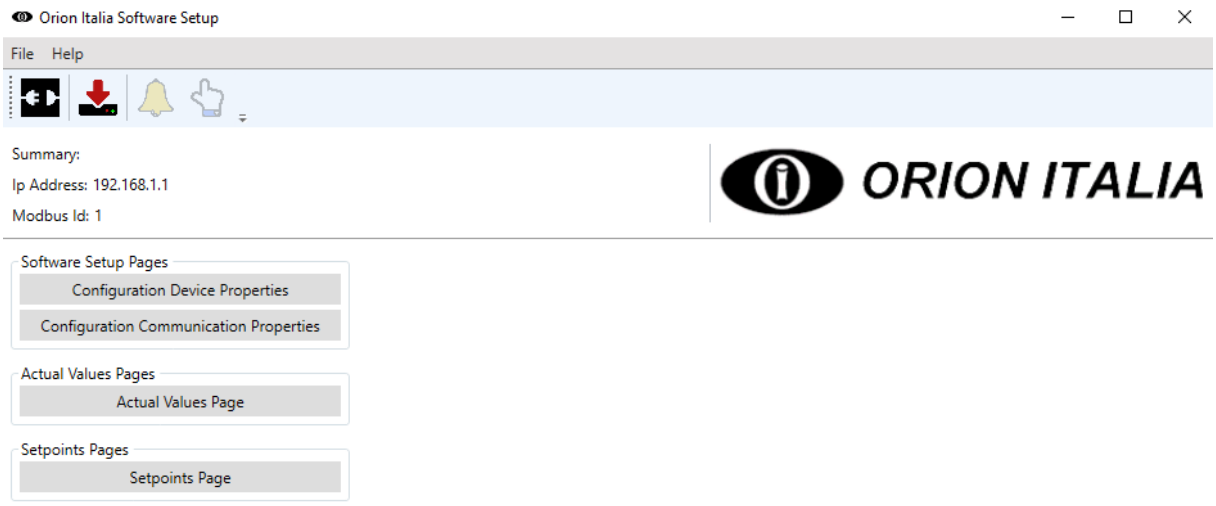

Figure 10 shows a brand new configuration for a TR-42 device. NOTE that all new and loaded configuration will start with default communication properties (e.g. IP address set to 192.168.1.1, 127.0.0.1, etc.).

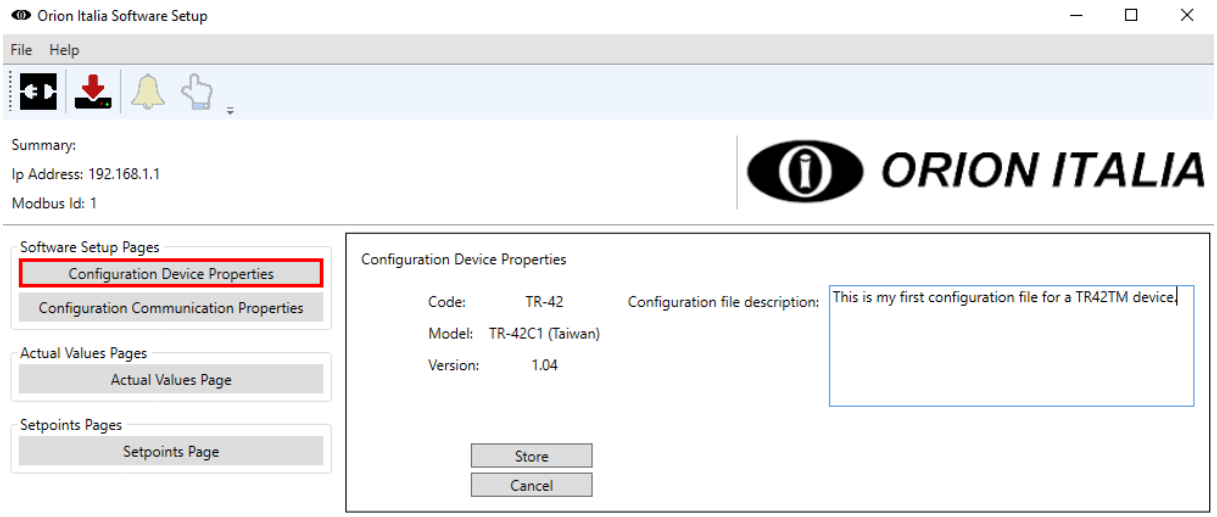

Figure 11 shows the selection of "Configuration Device Properties" page. This page contains information about device code, model, and version. Additionally, this page contains a brief description of current configuration. For example, configuration file description may be useful to describe and recall device context to users.

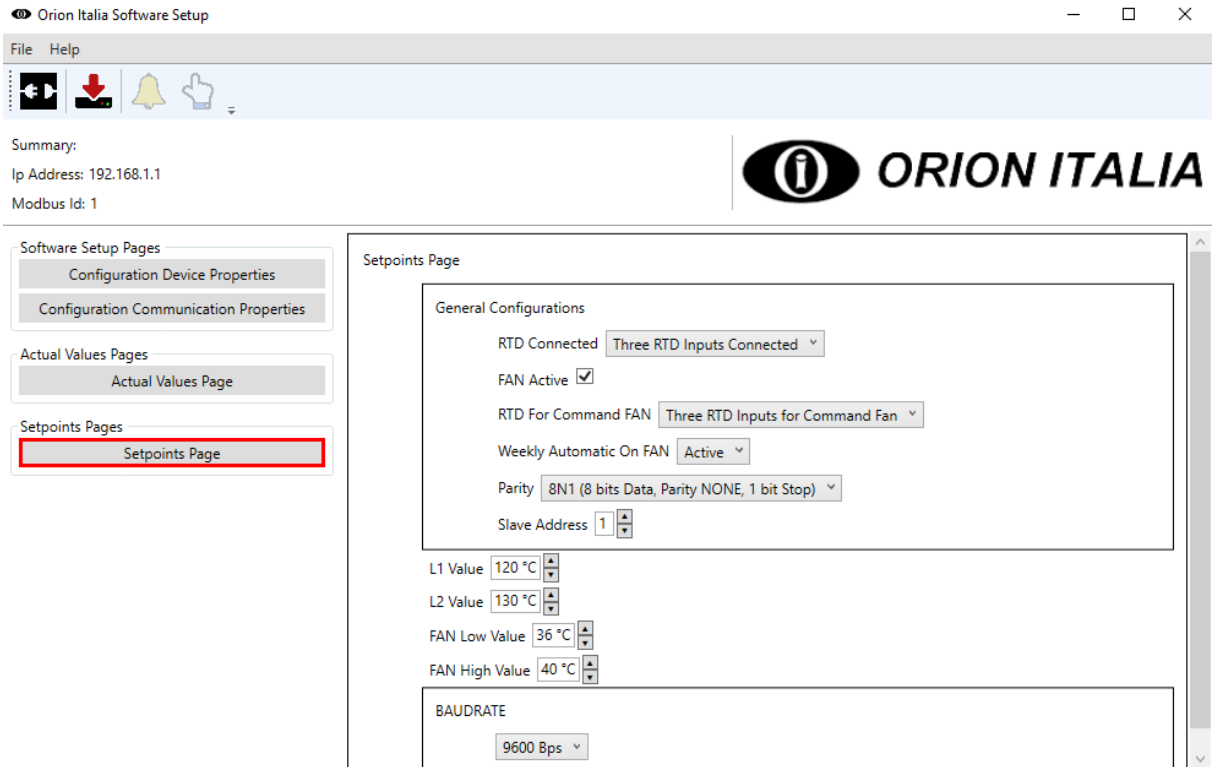

Figure 12 shows Setpoints Page selection. This page contains TR-42 device setpoints which can be set via software setup. NOTE that all edits in Setpoints Pages are not applied until Setpoints are not sent via "Send Setpoints to Device" button in “Actions Toolbar”.

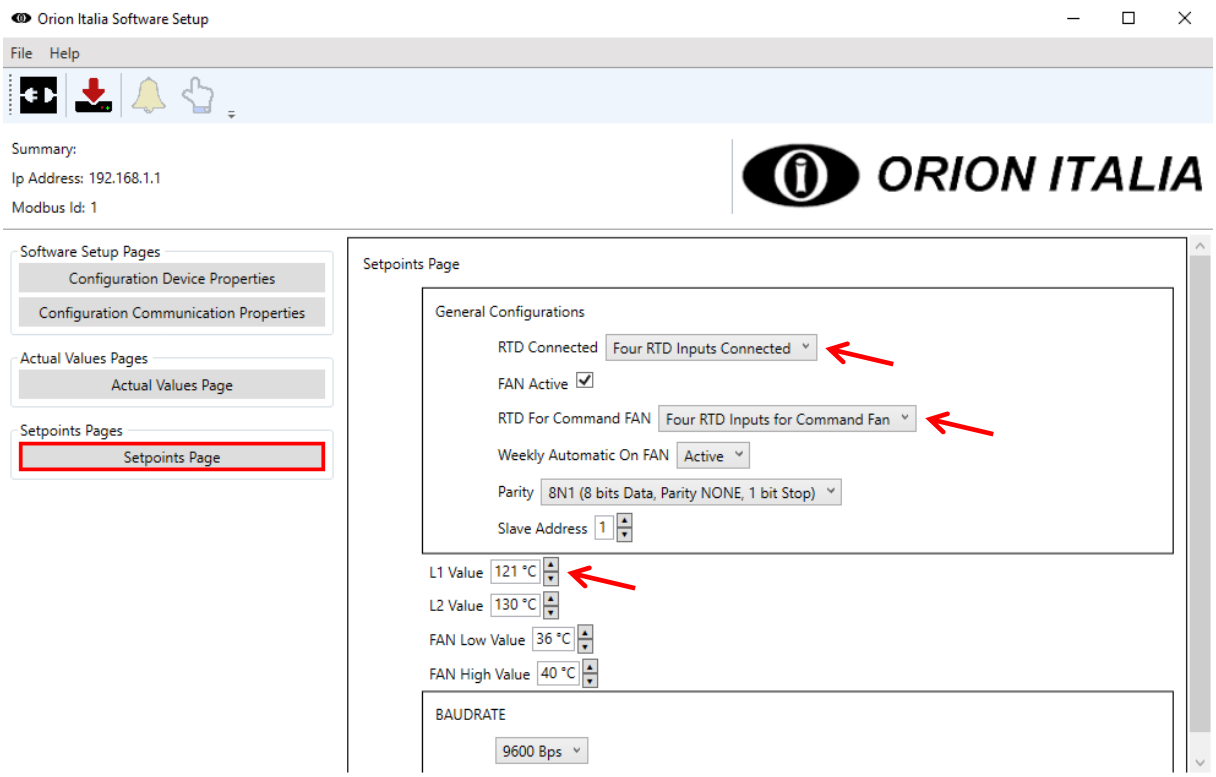

Figure 13 shows the editing of Setpoints values via "increment/decrease" buttons and drop down menu.

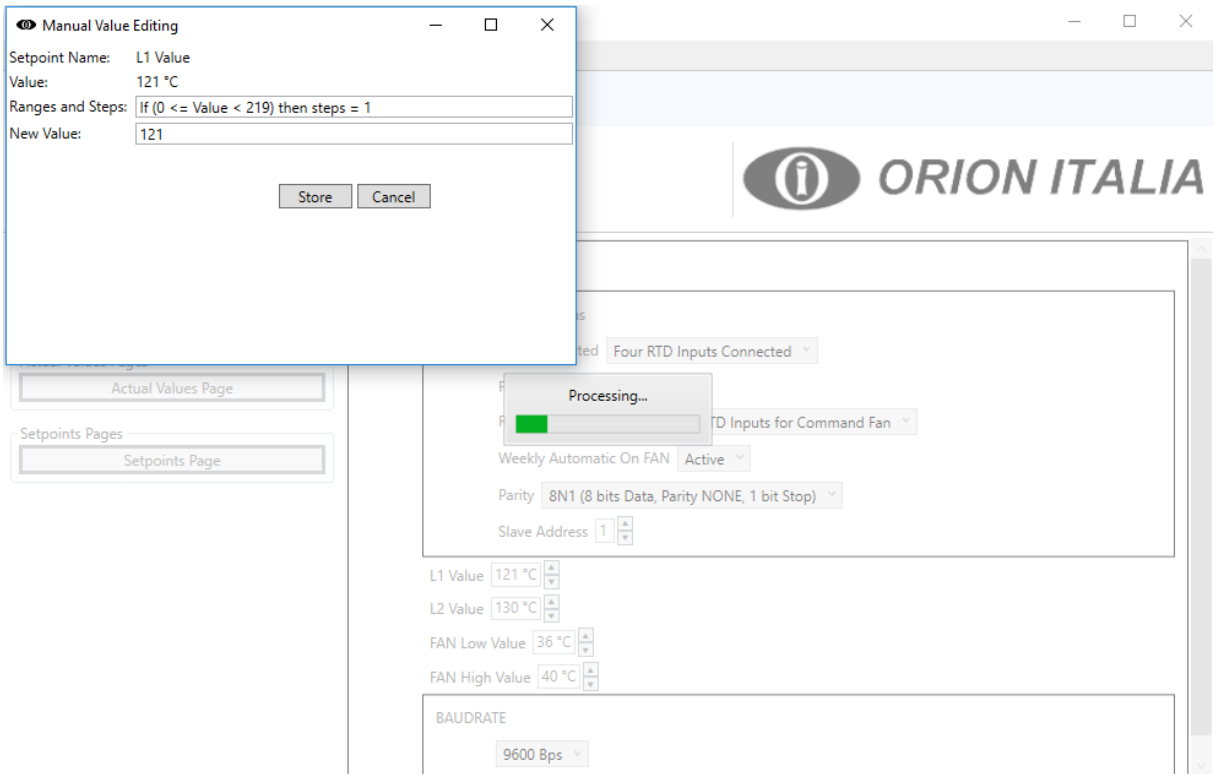

Figure 14 shows "L1 Value" value editing via "Manual Value Editing" window instead of "increment/decrease" buttons. This window can be recalled by double clicking on discrete values.

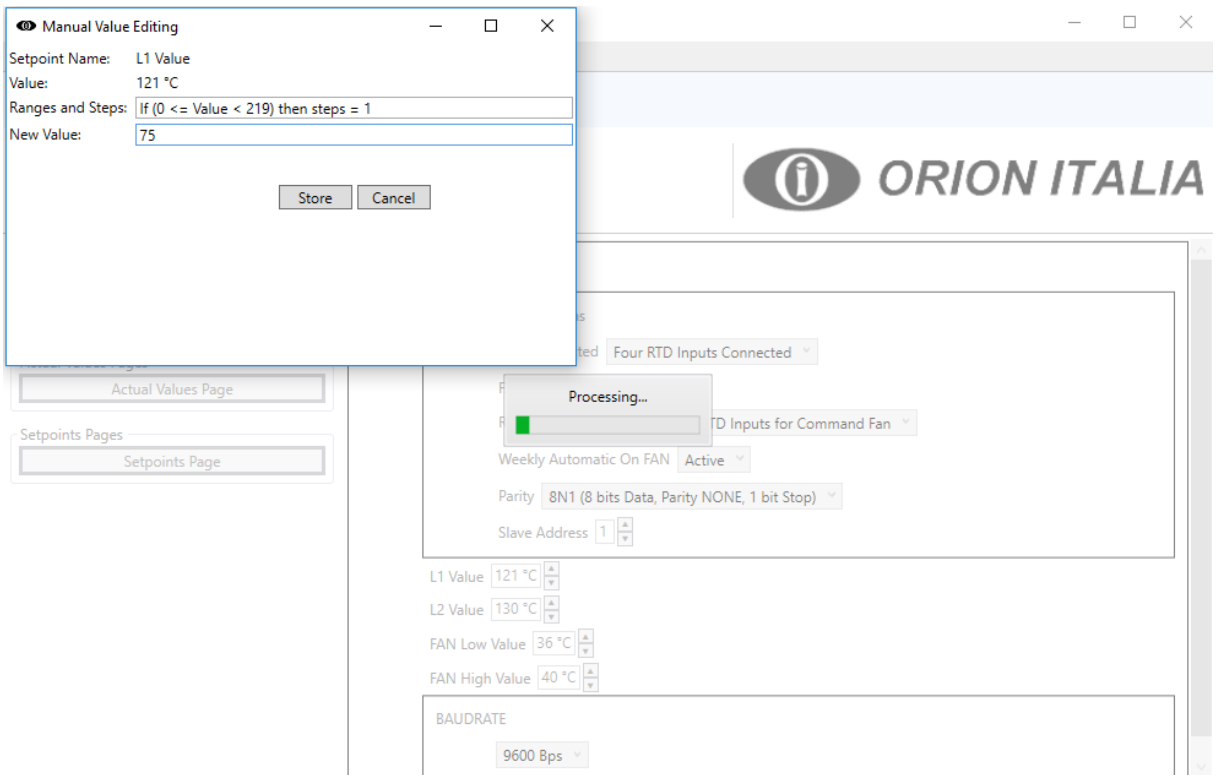

Figure 15 shows a value change of "L1 Value" setpoint value.

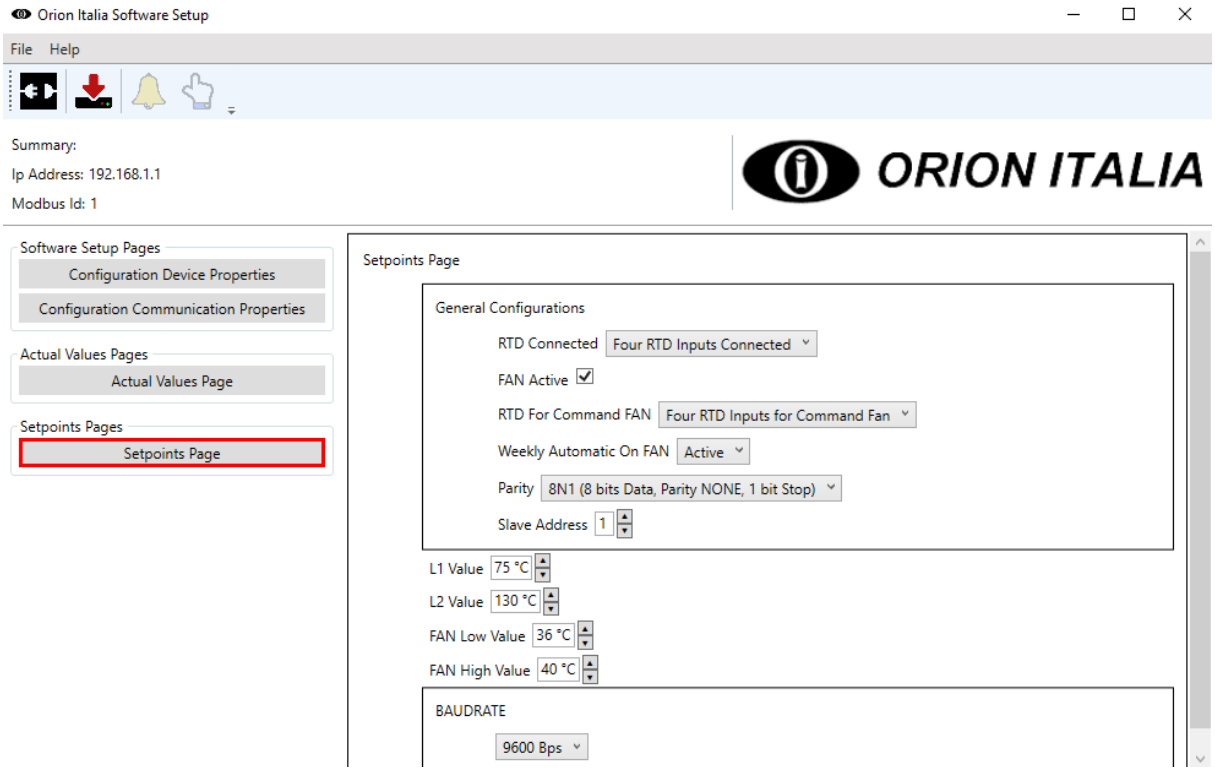

Figure 16 shows “L1 Value” value updated.

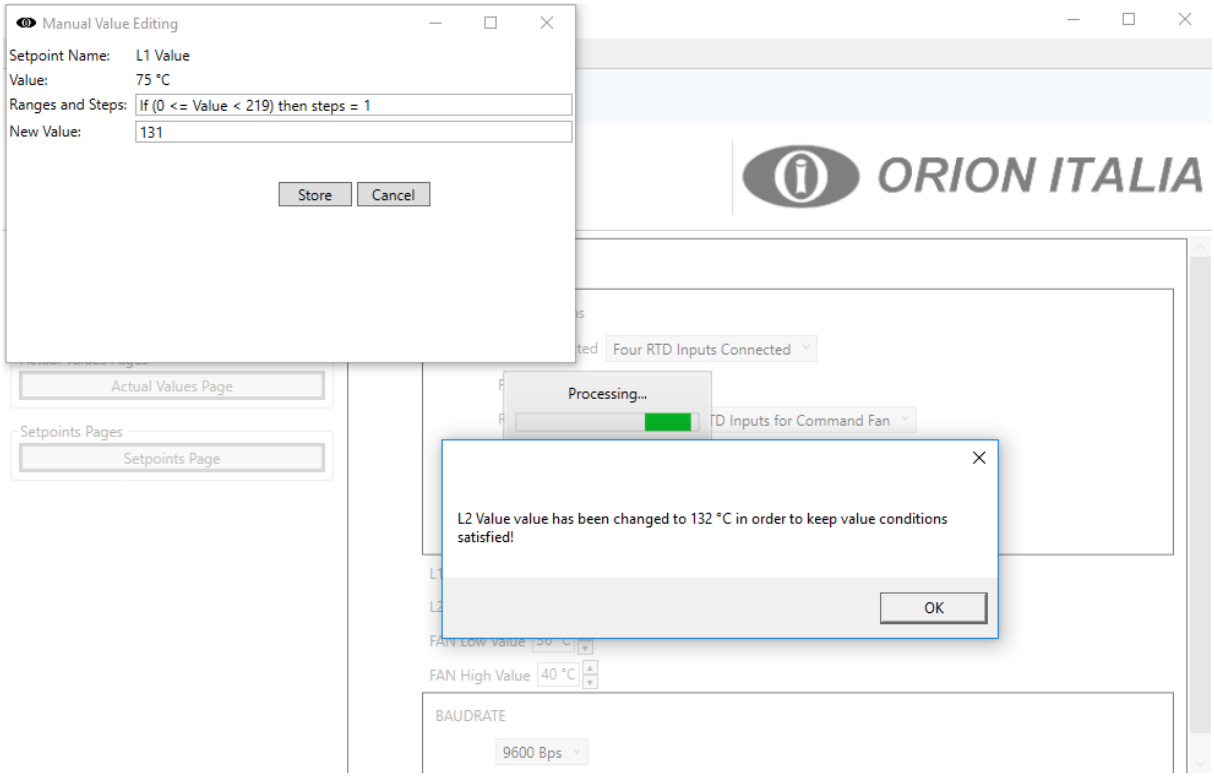

Figure 17 shows that in case of values that are not compliant, the software setup informs users about its actions in order to keep setpoints conditions, ranges, and steps satisfied. For example, this figure shows that "L1 Value" is changed to 131, which is greater that "L2 Value". However "L2 Value" has as condition that it has to be greater than "L1 Value". In this case, software setup automatically increases "L2 Value" in order to keep such condition respected.

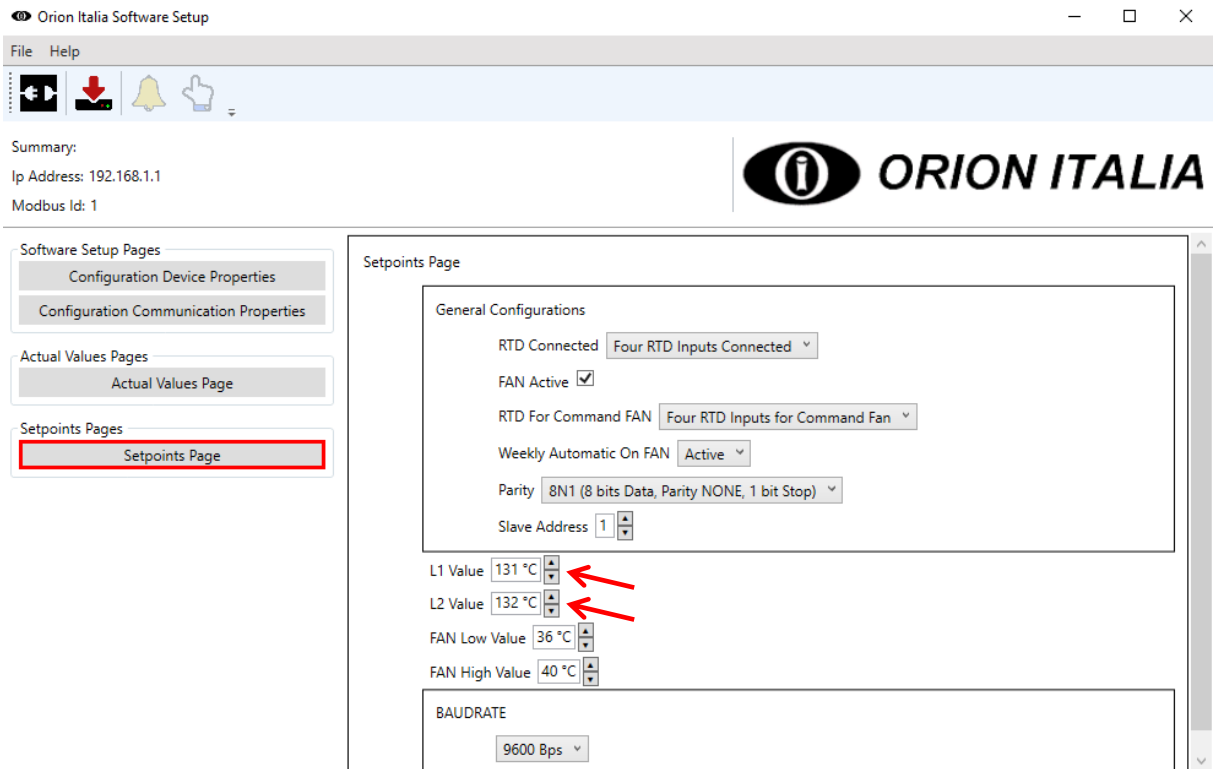

Figure 18 shows Figure 17 value change results.

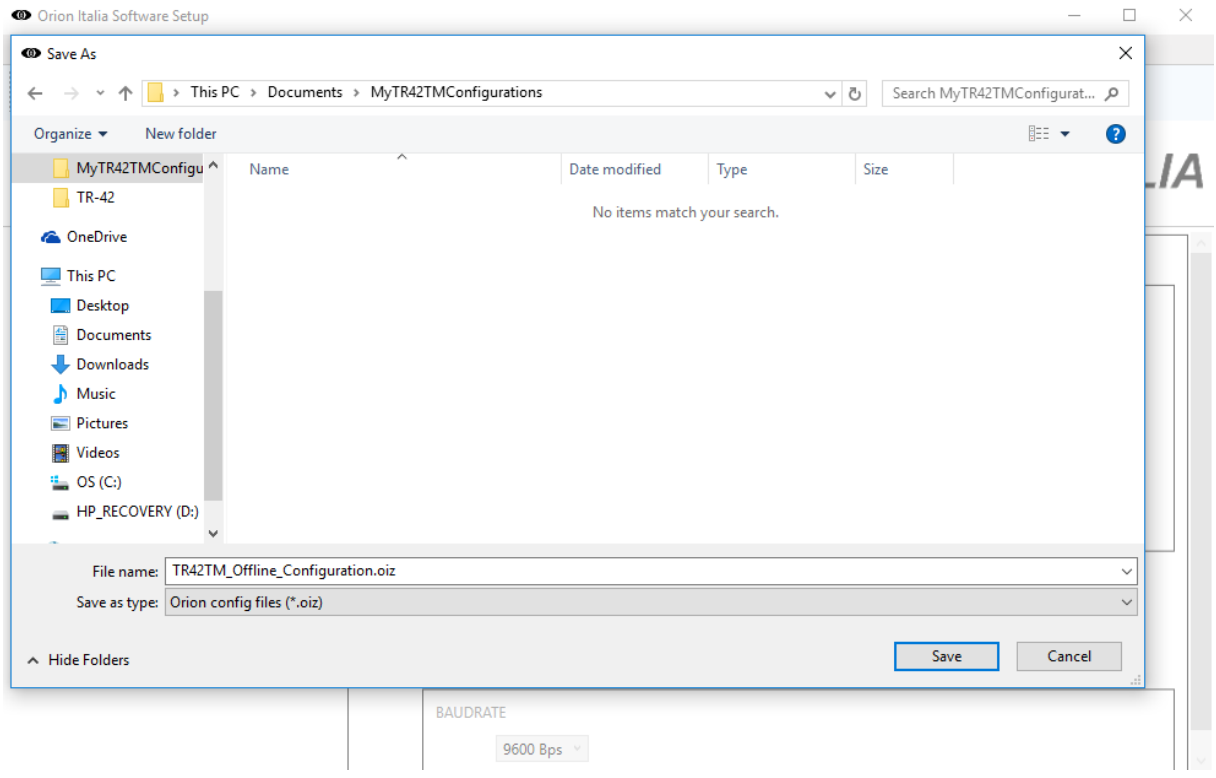

Figure 19 shows the "Save as" of a configuration via "Save configuration as..." of "File Menu".

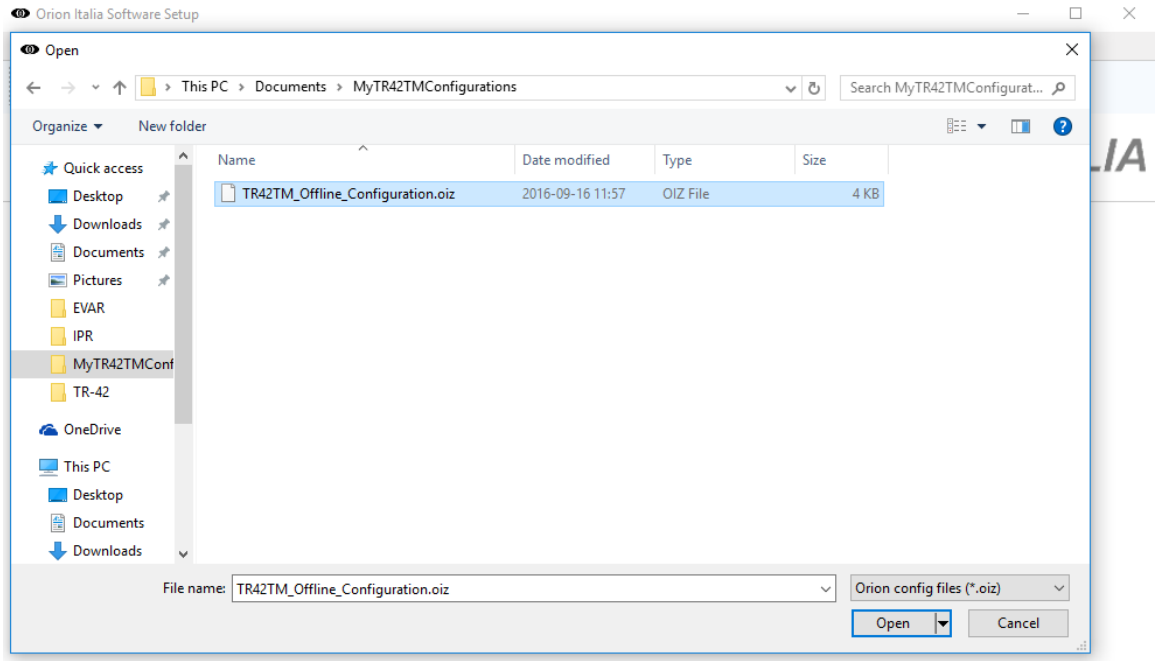

Figure 20 shows the "Open configuration" of "File Menu".

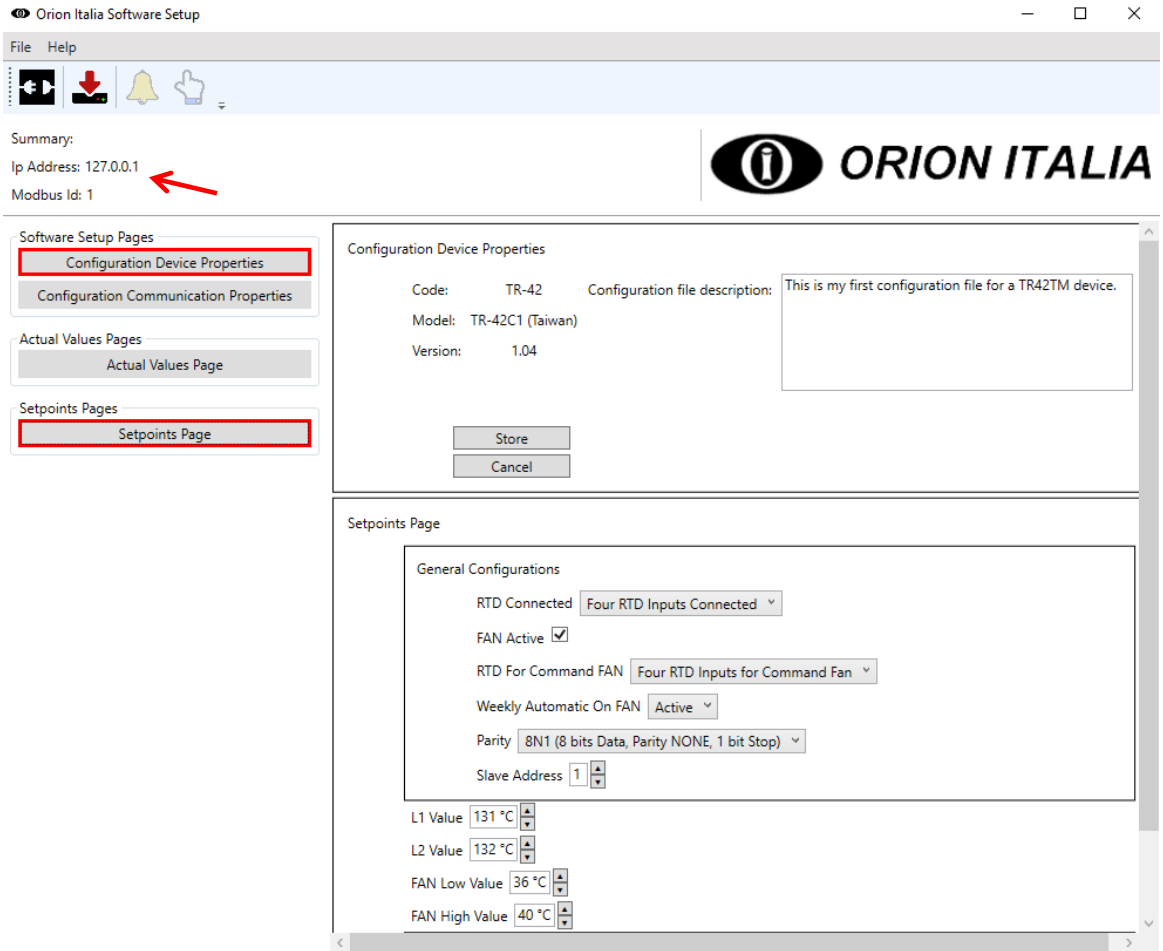

Figure 21 shows the setpoints values and configuration device properties loaded via configuration file. NOTE that communication properties are not loaded.

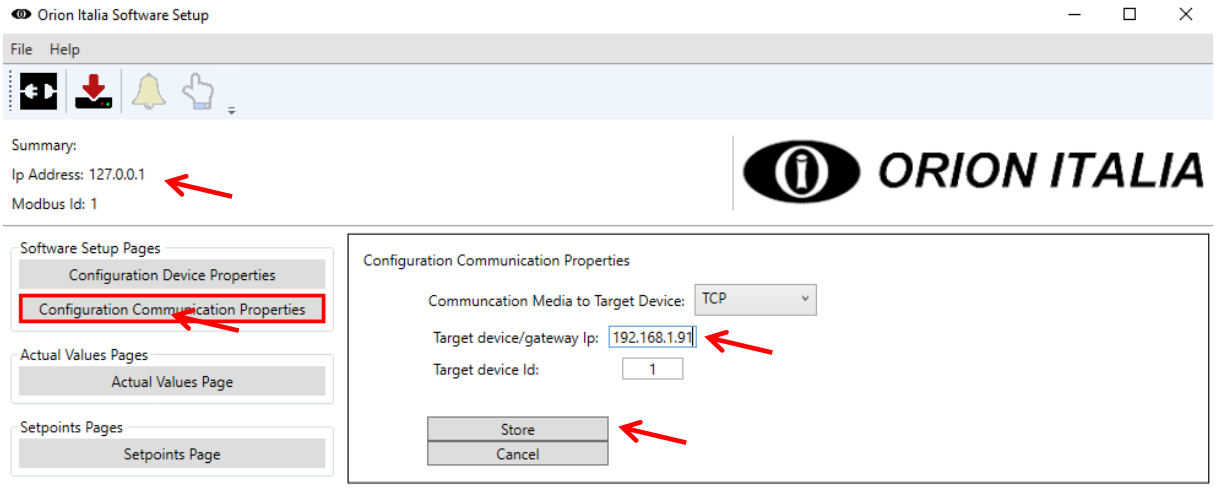

Figure 22 shows that communication properties are not stored until "Store" button is not pressed. User can always check current communication parameters from "Summary".

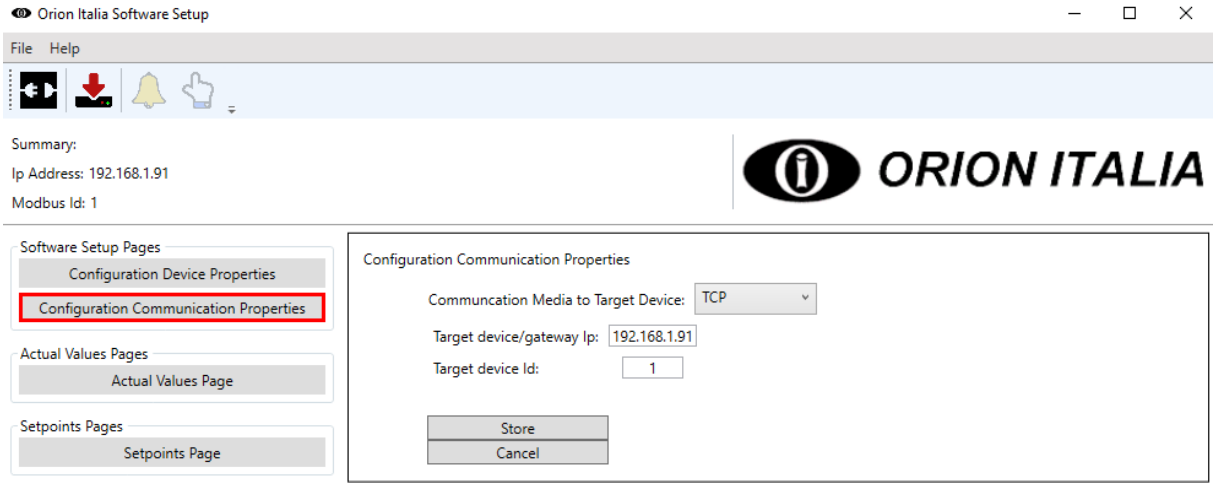

Figure 23 shows the communication configuration to communicate with a TR-42 device via Ethernet. Target TR-42 device should be reachable at IP address "192.168.1.91" and Slave Id "1".

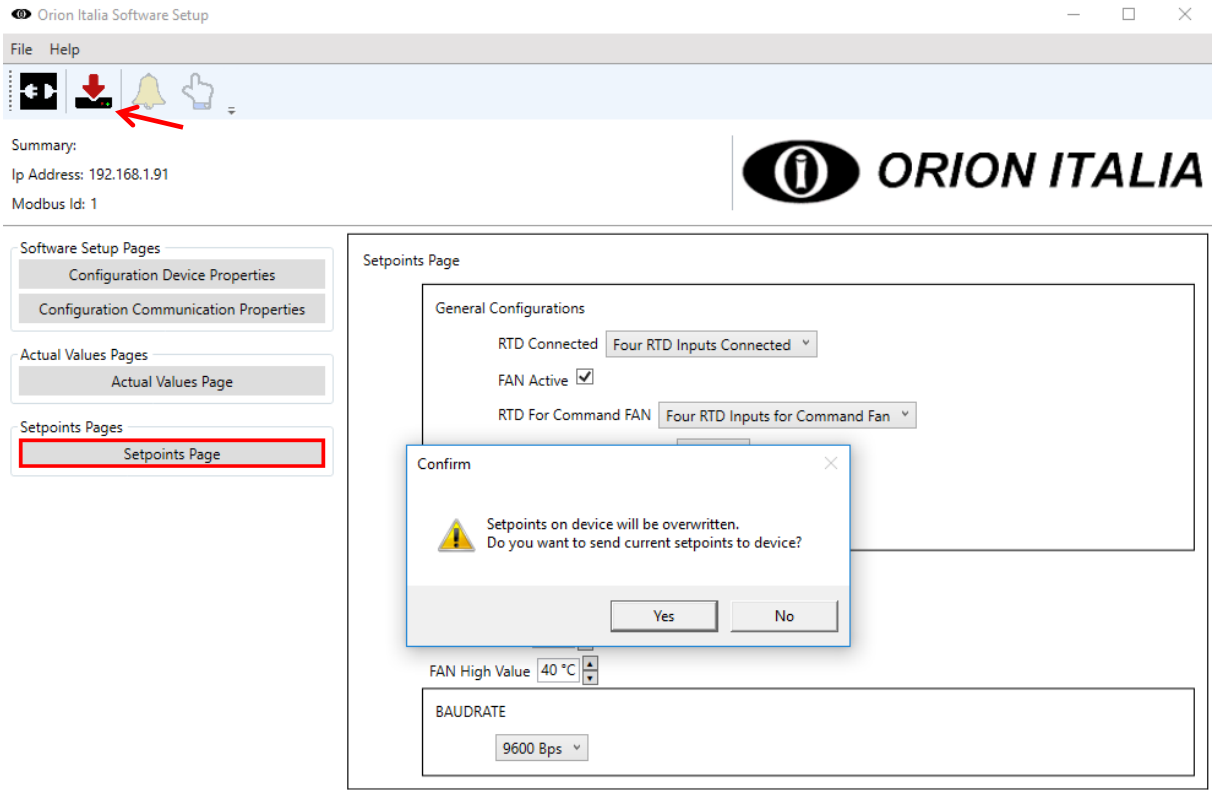

Figure 24 shows the confirmation message generated by "Send Setpoints to Device" action.

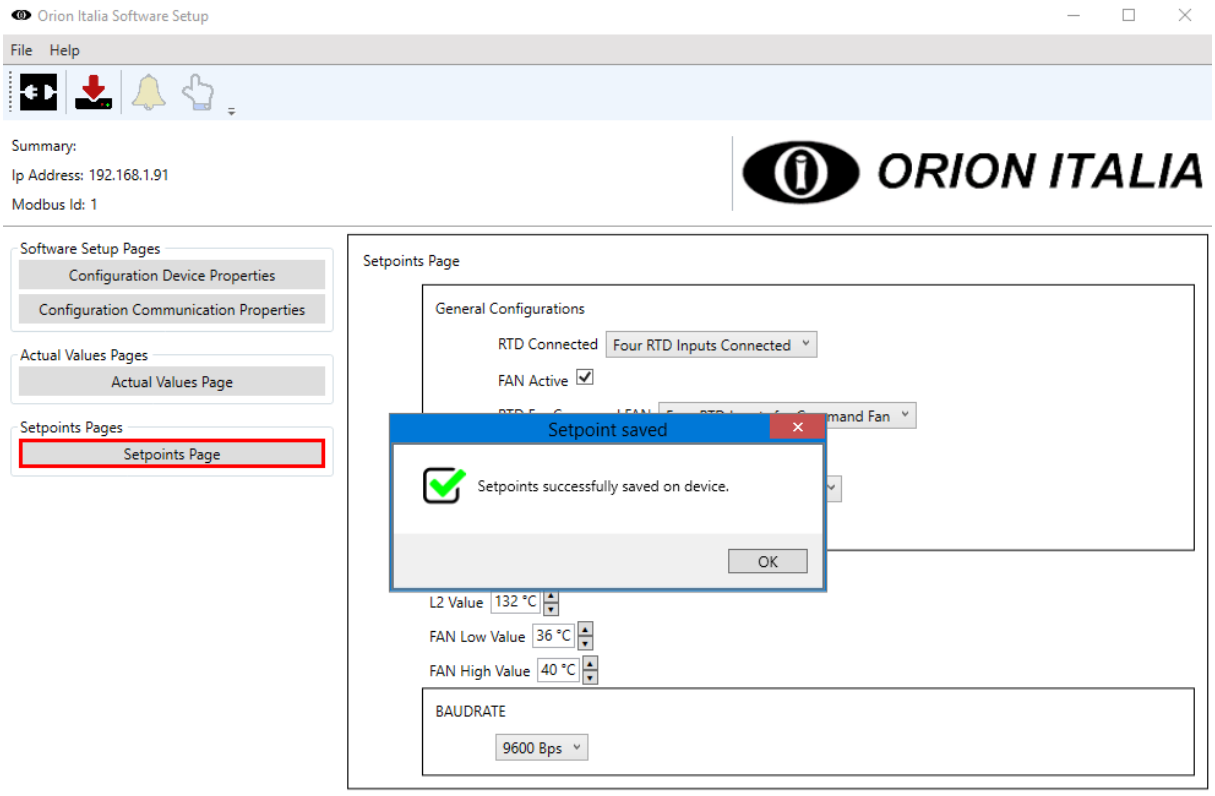

Figure 25 shows the software setup confirmation message stating the setpoints were successfully sent to the device.

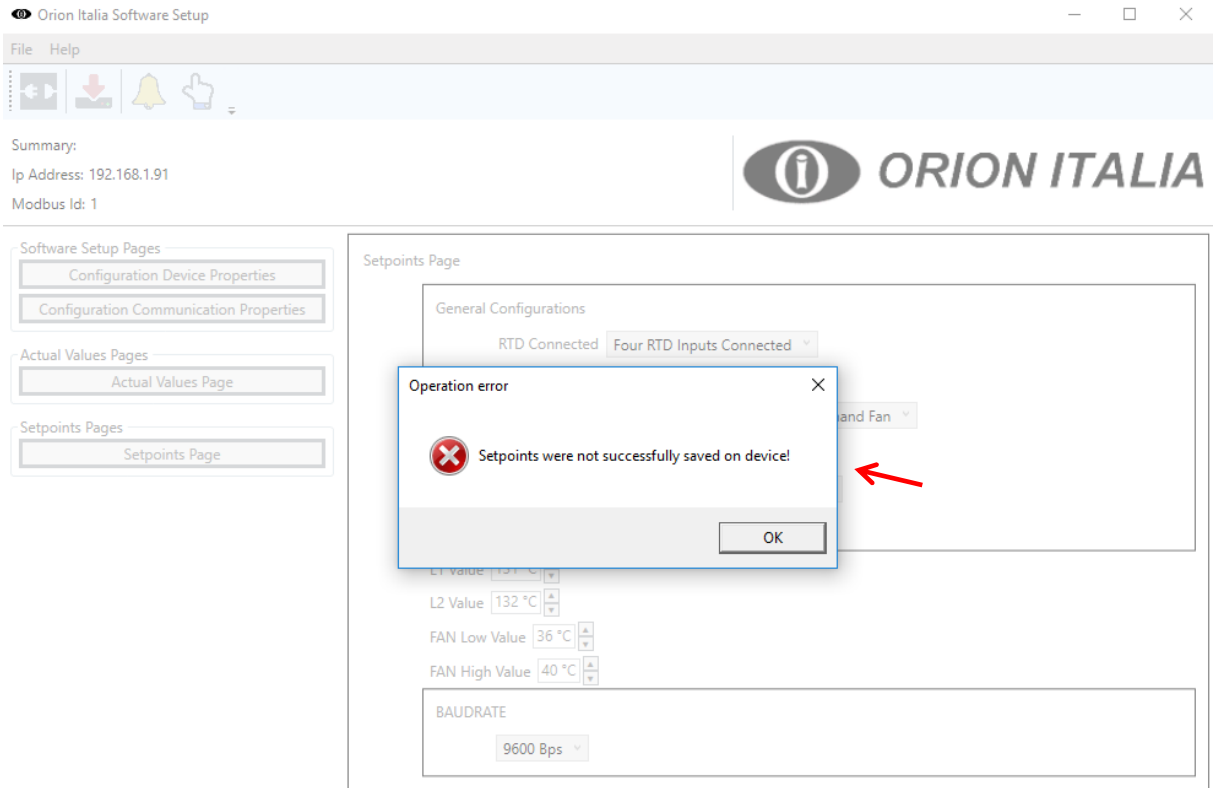

Figure 26 shows software setup "Operation error" message if setpoints were not successfully sent to device. NOTE that in case of sending new communication setpoints (e.g. Baudrate, parity, etc.), the software setup may return an "Operation error" message also if setpoints were successfully sent. For example, if users send to device a new baudrate, then once device baudrate is updated the current software setup baudrate is not valid anymore.

4.2 ONLINE

Online mode allows users to connect remotely to an Orion Italia device. This connection allows users to manage device configuration and status while connected.
Figures from Figure 27 to Figure 46 show use cases and example in online mode.

NOTE that all device setpoints modifications are not applied until they are sent to a target device. Moreover, while actual values data are updated periodically, setpoints values are updated only when the connection is established and when a “Setpoints Page” is selected to be visible (i.e. Setpoints are updated on connection and when “Setpoints Page” button is clicked).

IMPORTANT NOTE: All changes made before “Setpoints Page” selection are lost once setpoints values are updated from the device.

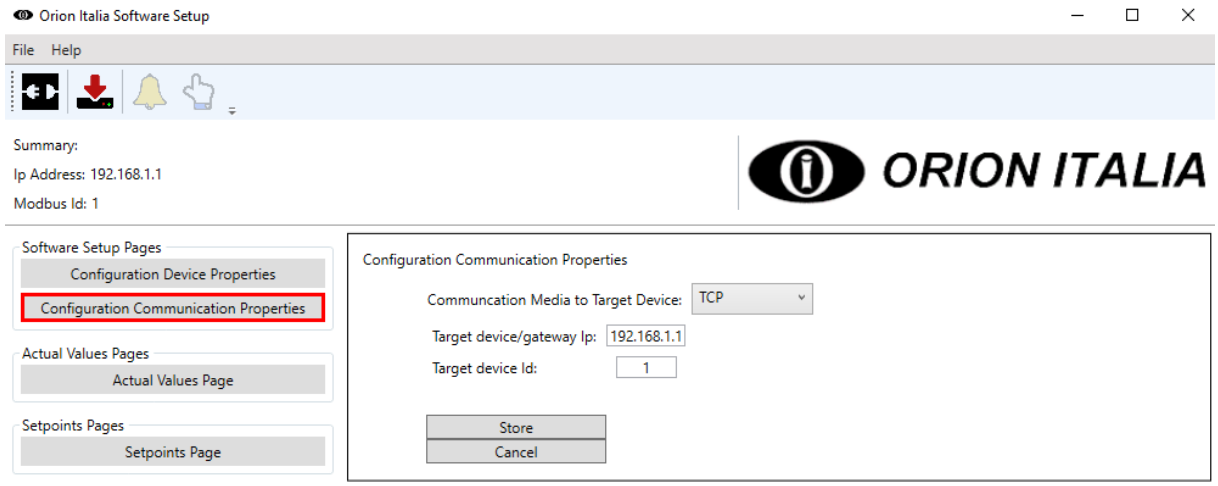

Figure 27 shows the communication properties page. This page is used to setup communication parameters in order to establish a communication with target device (e.g. TR-42 device).

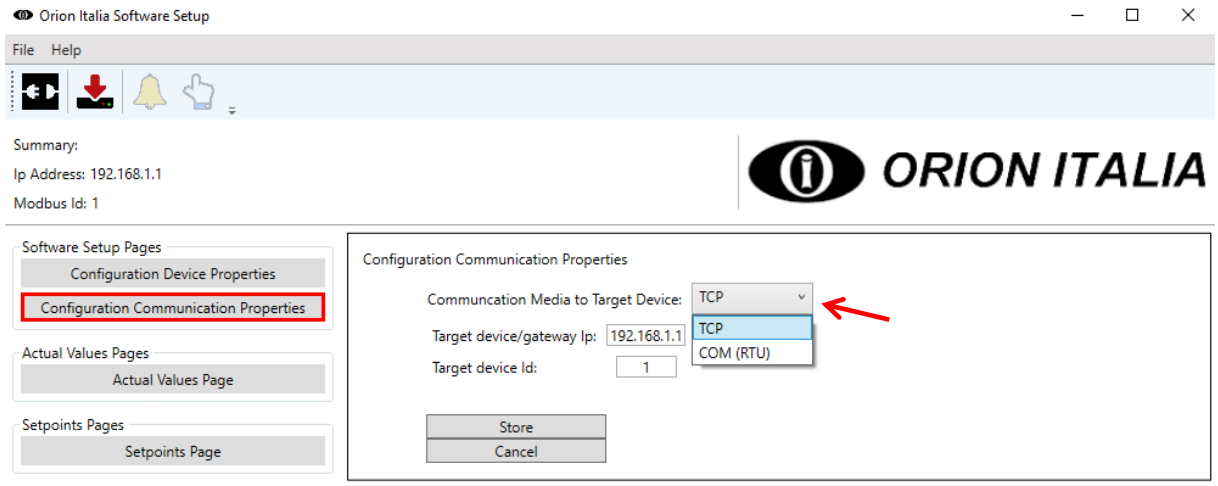

Figure 28 shows possible kinds of communications with the target device: via TCP and via COM/RTU communication.

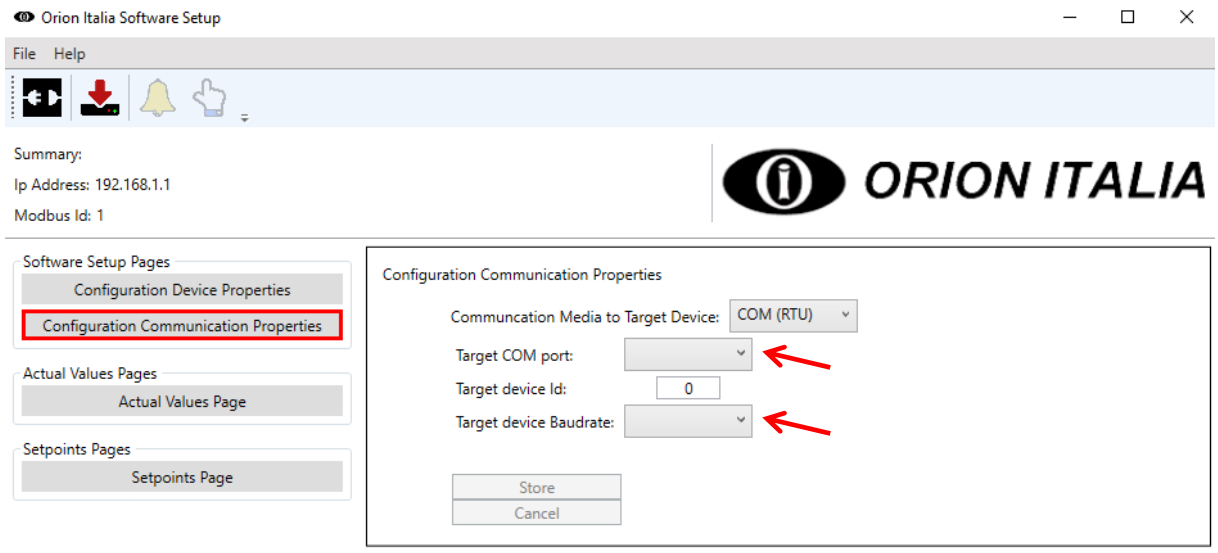

Figure 29 shows an example of COM/RTU communication with no COM port on user's PC. Note that COM port and baudrate lists are automatically updated on current PC COM ports. If COM port and baudrate lists are empty, software setup is not recognizing any COM port available.

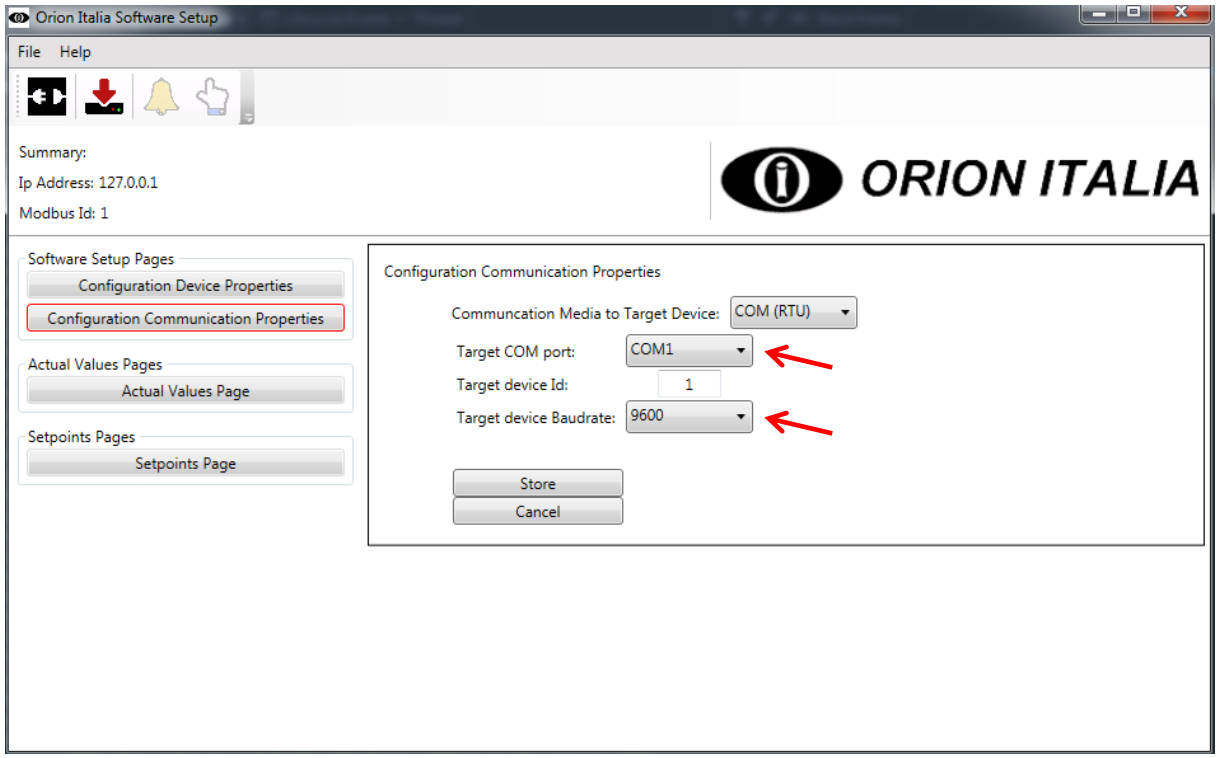

Figure 30 shows an example of COM/RTU communication with COM ports available on user's PC. Note that COM port and baudrate lists are not empty, as software setup is recognizing at least COM1 port as available COM port.

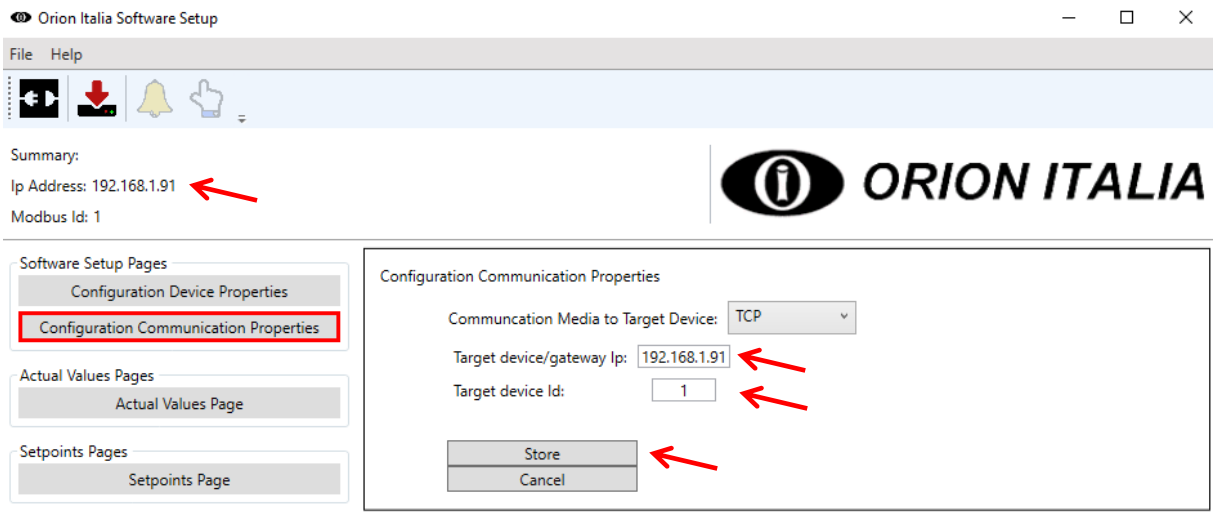

Figure 31 shows an example of setup for a TCP communication. This example communication targets a TR-42 device at IP address "192.168.1.91" and Slave Id "1". NOTE that communication properties are stored once "Store" button is pressed. Moreover, NOTE that users can check current communication properties in "Summary".

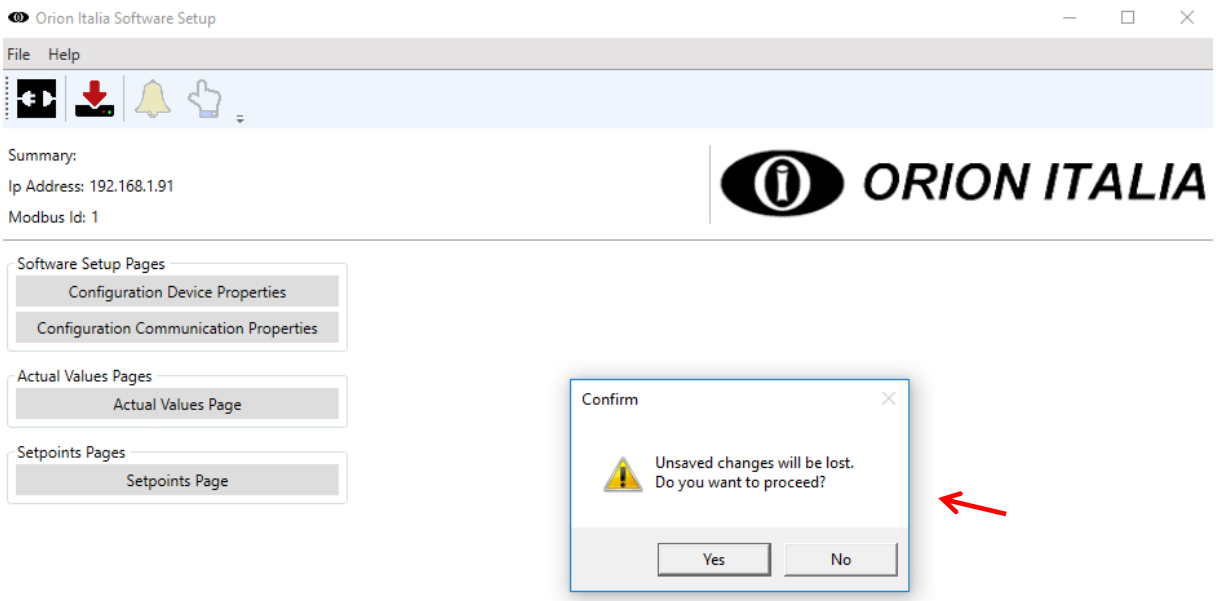

Figure 32 shows the starting phases of communication initialization procedure. In order to establish a communication with the target device "Press to communicate..." button in "Actions toolbar" has to be pressed. This button starts the communication initialization procedure, which begins by confirming the user's action.

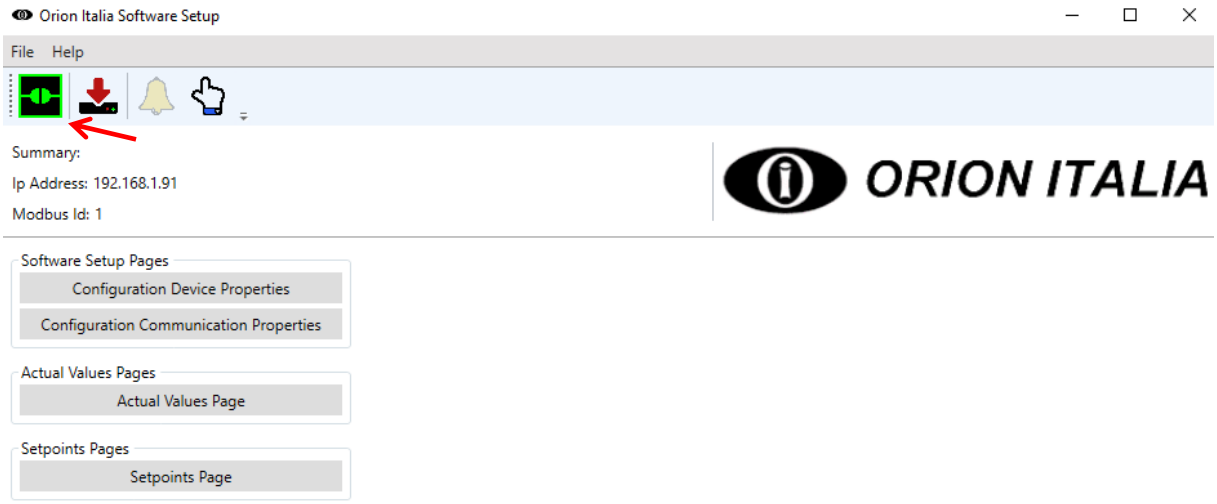

Figure 33 shows the finalization phase of communication initialization procedure with a positive result. If all communication parameters are right and the device is reachable, then the communication is established. NOTE that "communication established" status is showed and highlighted by connected plugs icon with a green background.

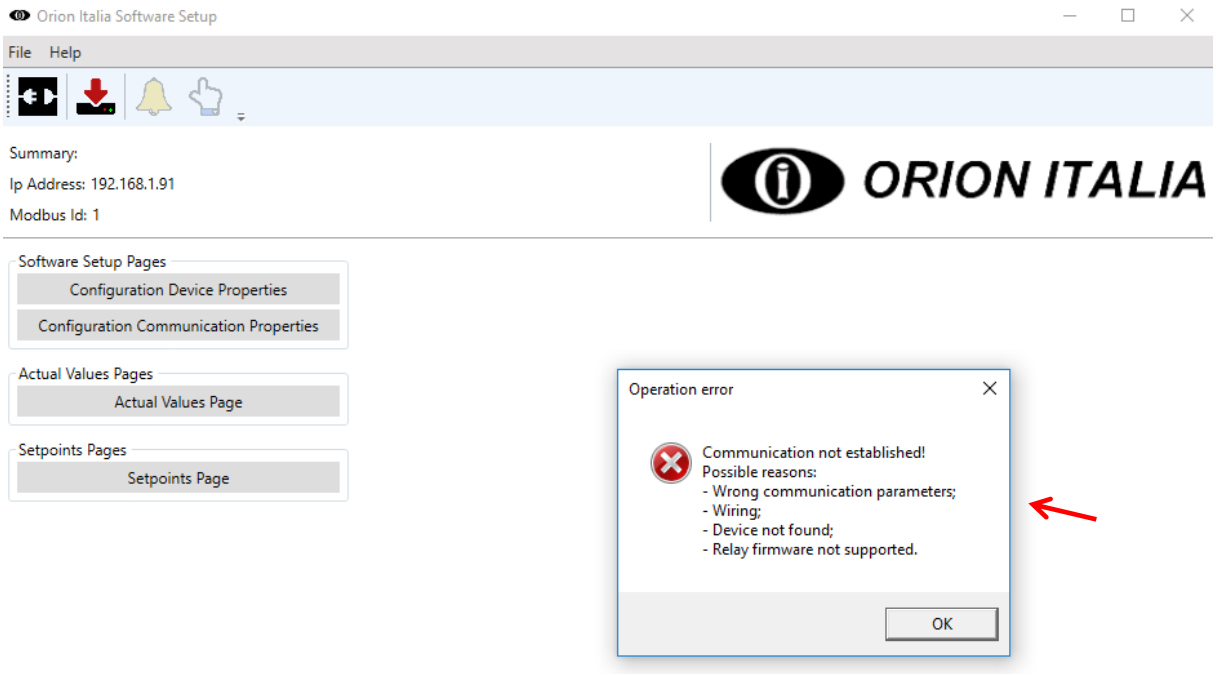

Figure 34 shows the finalization phase of communication initialization procedure with a negative result. NOTE that if any issue in communication initialization is detected, an "Operation error" message is showed.

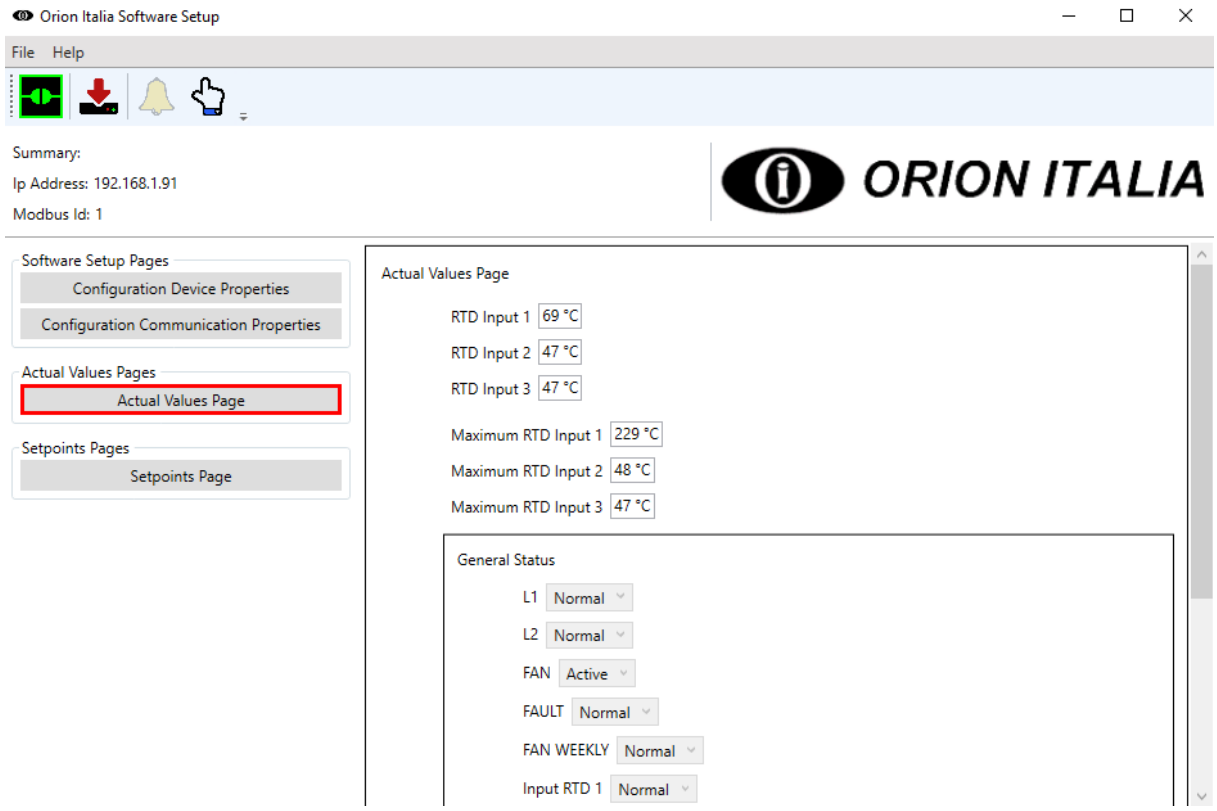

Figure 35 shows values of "Actual Values Page" updated once communication is established. Actual values are updated periodically when communication is established.

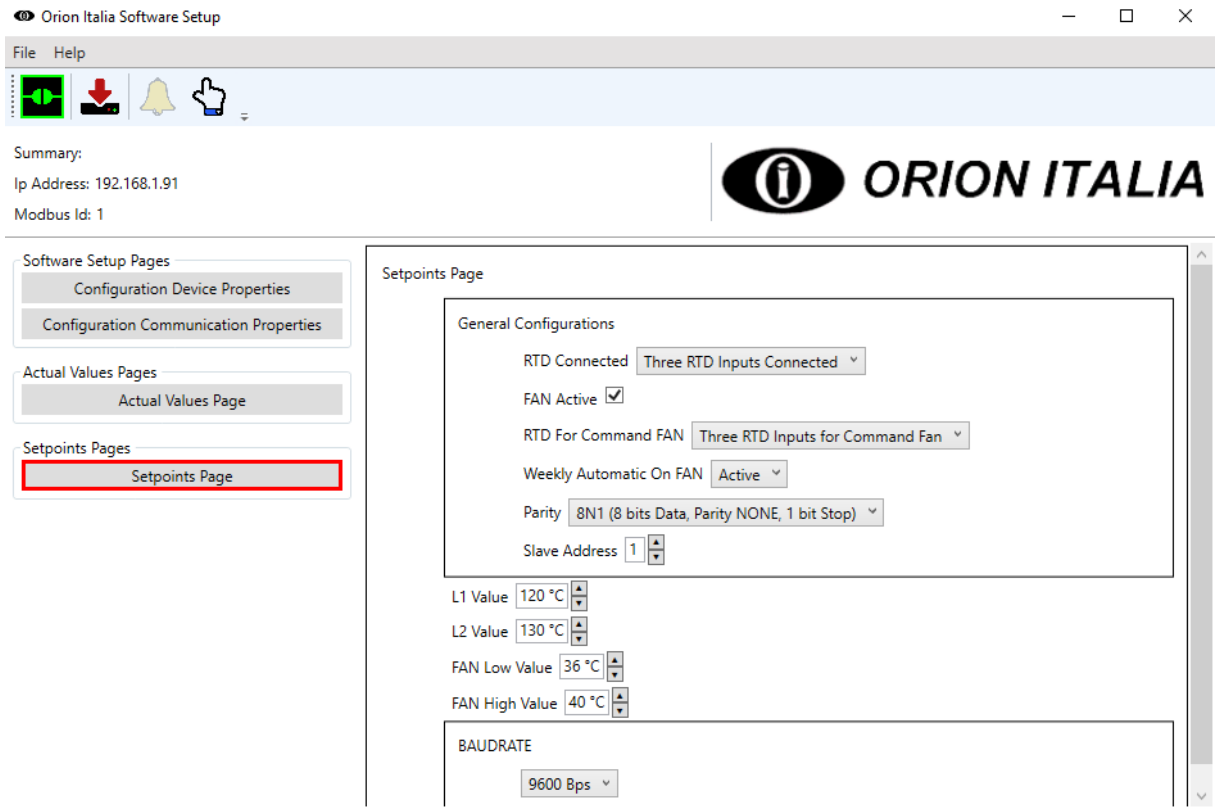

Figure 36 shows values of Setpoints Page" updated once communication is established. Setpoints values are updated only when communication is established and when any button of "Setpoints Pages" is pressed.

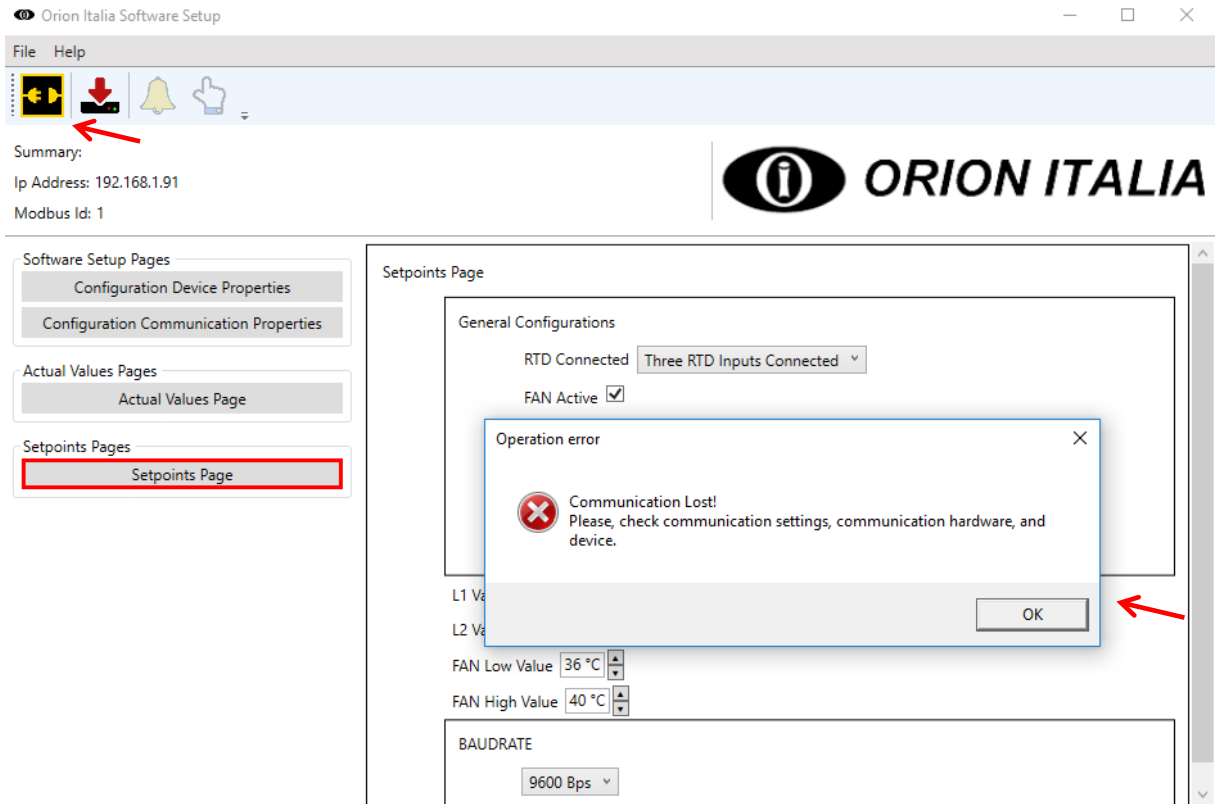

Figure 37 shows an example of communication lost. NOTE that if any communication issue happens when communication is established an "Operation error" message is showed and software setup switches mode to offline mode. Additionally, the communication icon in "Action toolbar" changes to two unplugged plugs with a yellow background. To re-initialize communication after a communication loss, press the unplugged plugs icon in "Action toolbar".

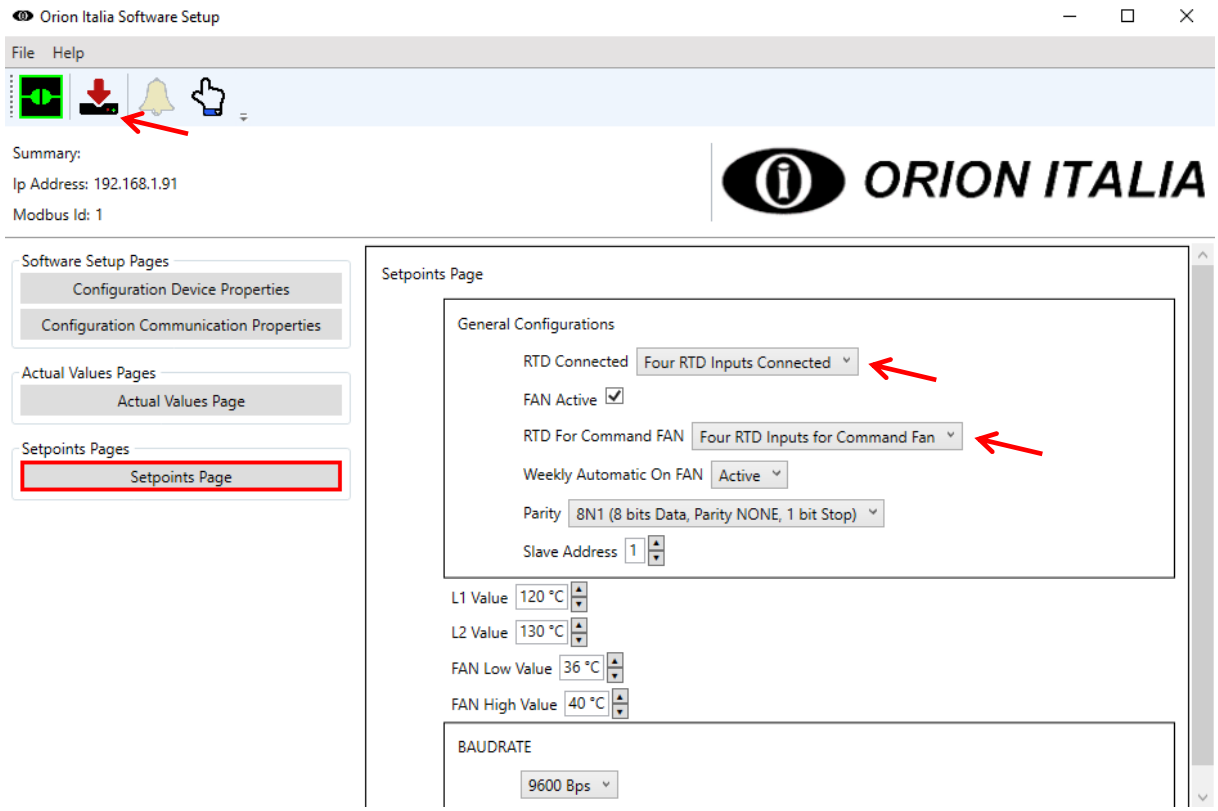

Figure 38 shows setpoints edits while communication is established. NOTE that all setpoints modifications are in scratch memory of software setup until setpoints are sent to the device.

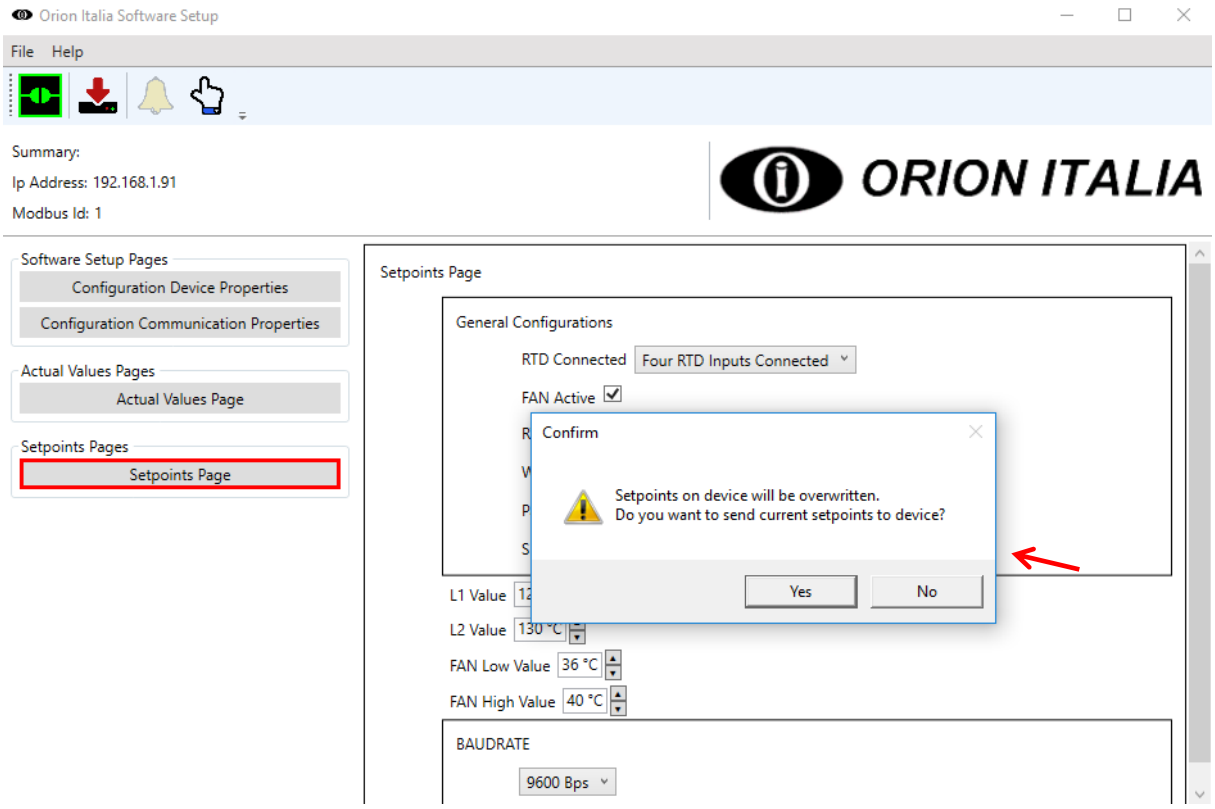

Figure 39 shows the confirmation message generated by "Send Setpoints to Device" action.

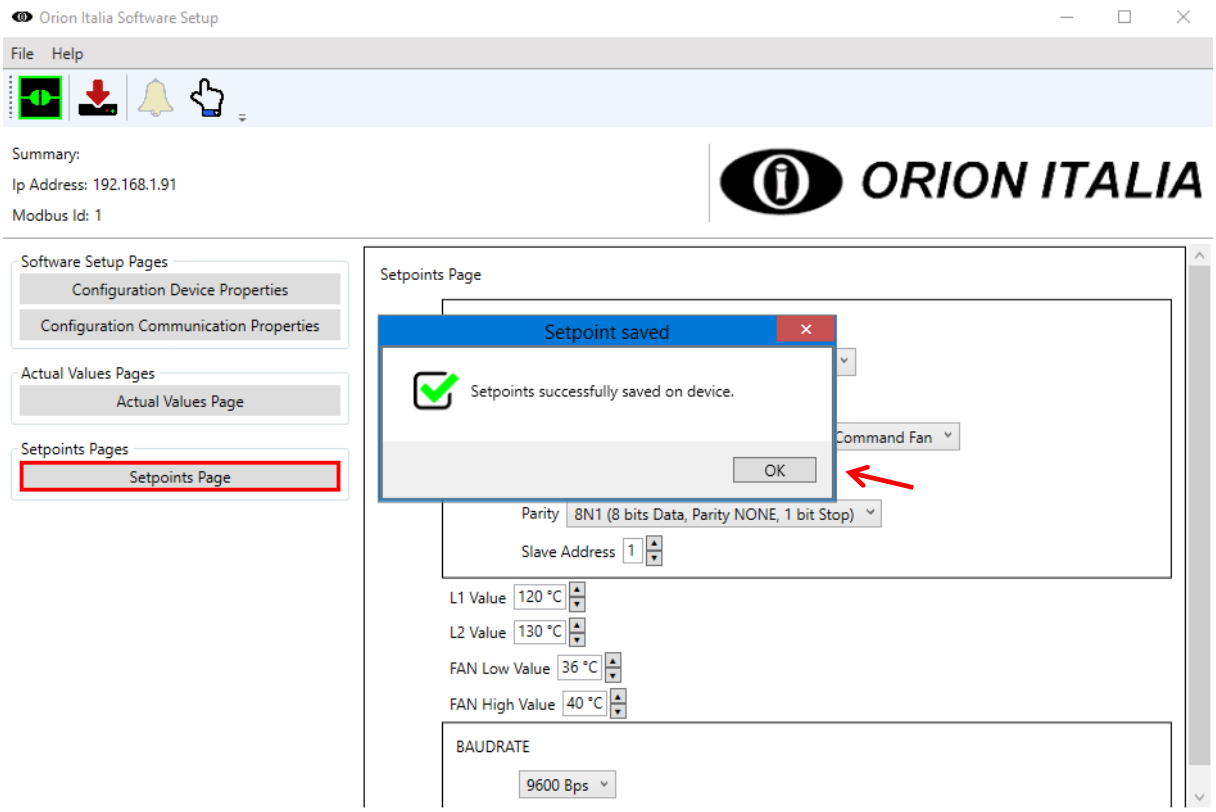

Figure 40 shows the software setup confirmation message that setpoints were successfully sent to the device.

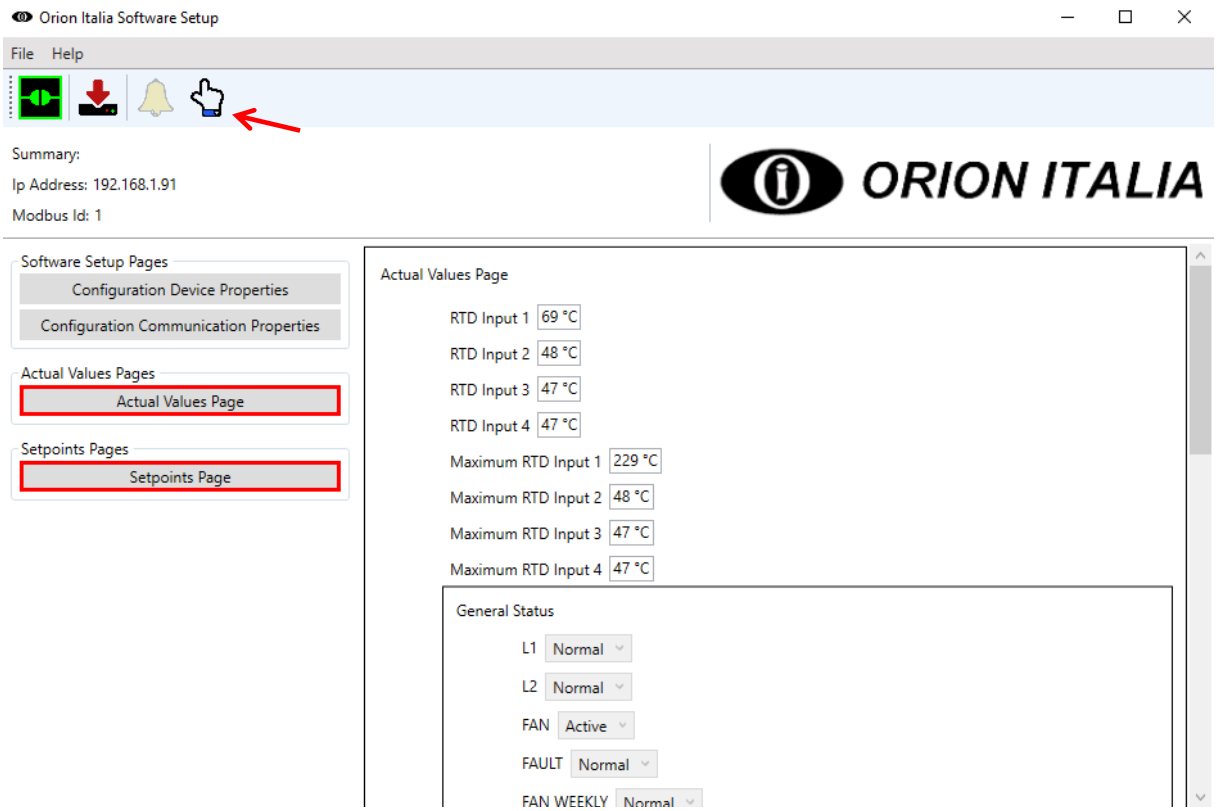

Figure 41 shows "Open Command Window" icon highlighted. Command window is used to send commands to the target device while connected.

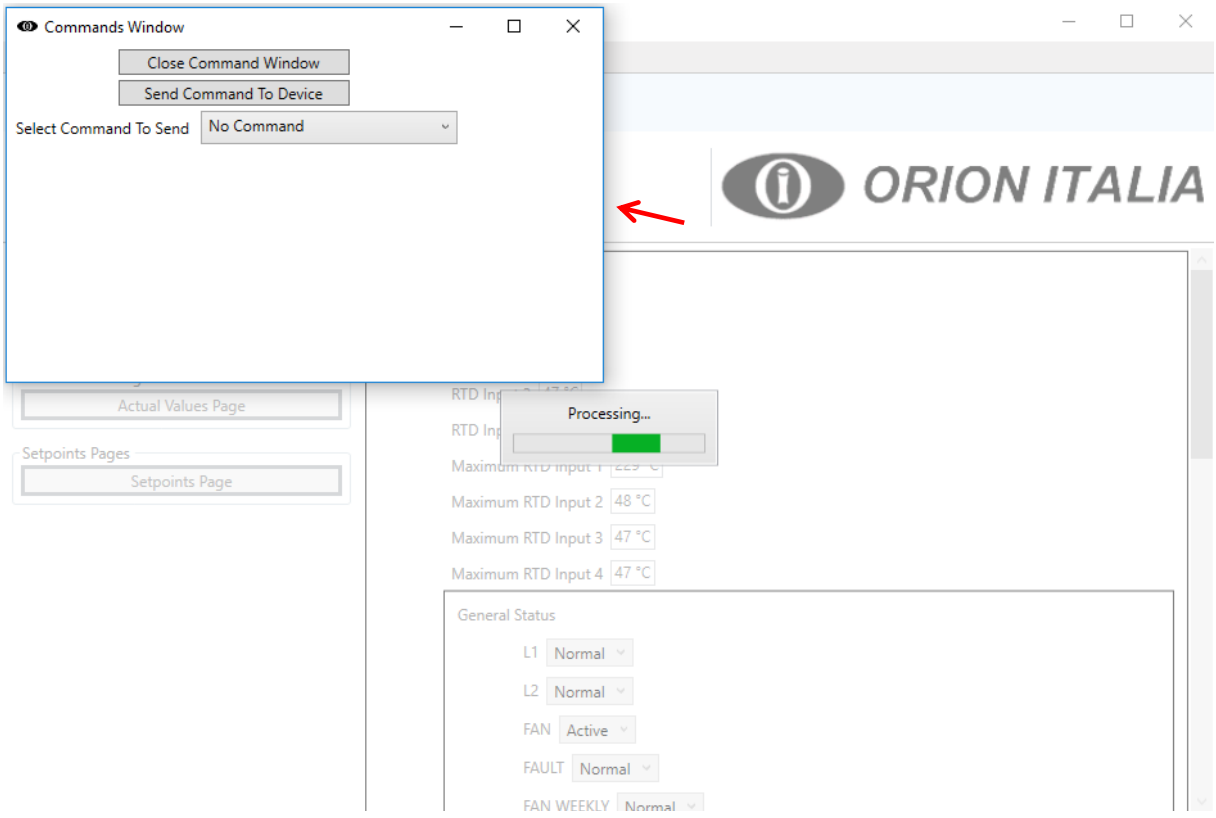

Figure 42 shows command window, which appears when "Open Command Window" in "Action toolbar" is pressed.

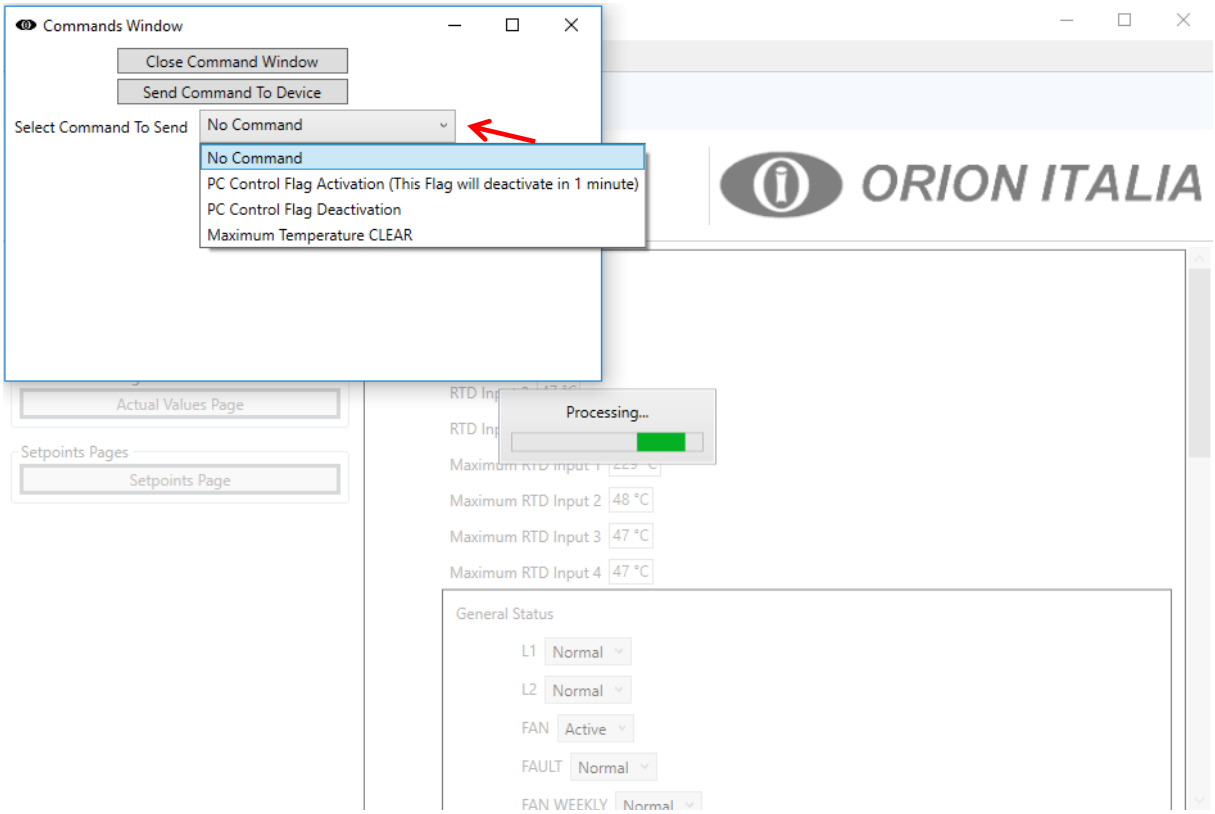

Figure 43 shows how to use the command window . The command window allows users to send commands to the target device. This action is done by selecting a command from the commands list, which contains device available commands.

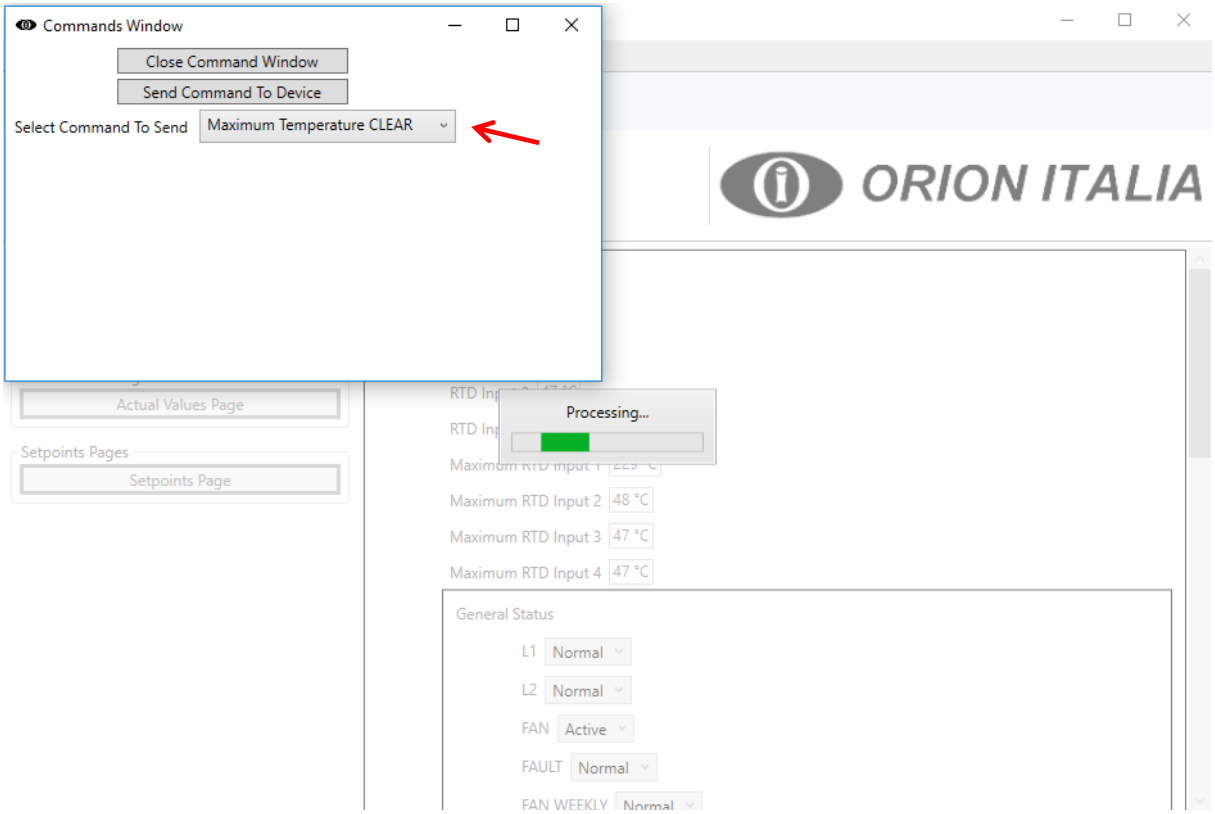

Figure 44 shows "Maximum Temperature CLEAR" command selection.

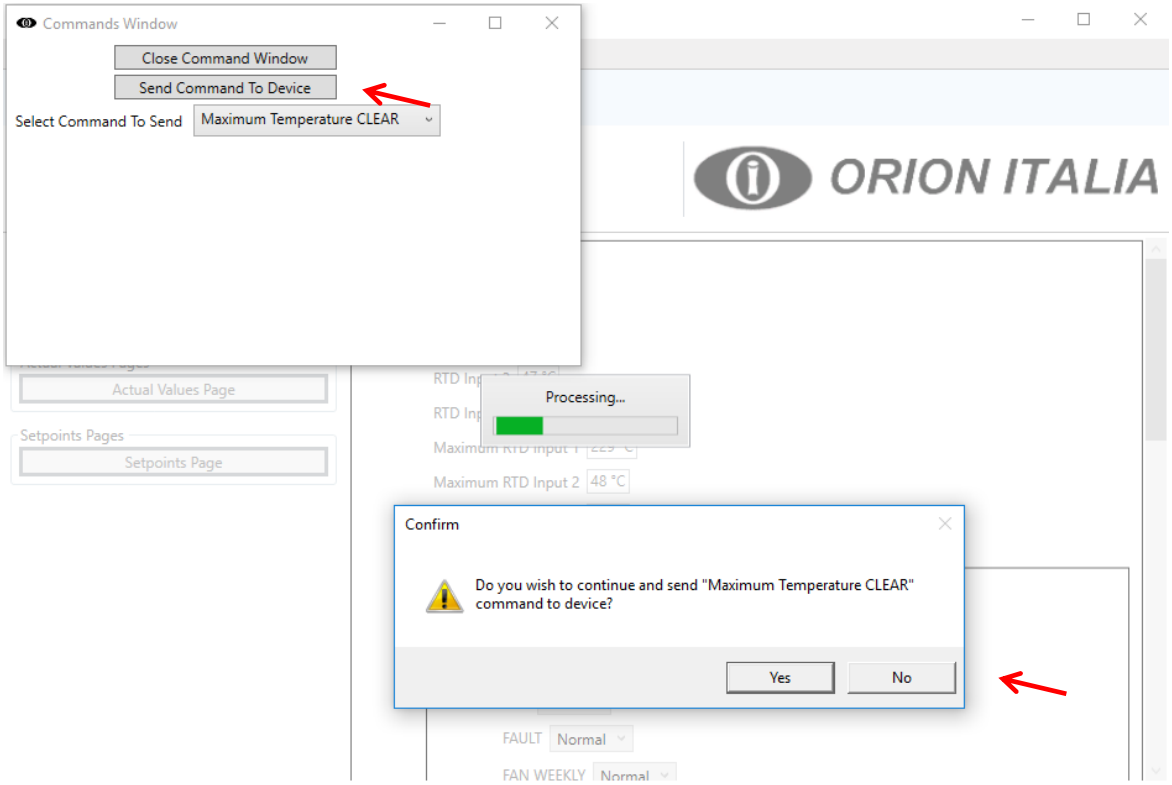

Figure 45 shows "Maximum Temperature CLEAR" command sent via command window to the target device.

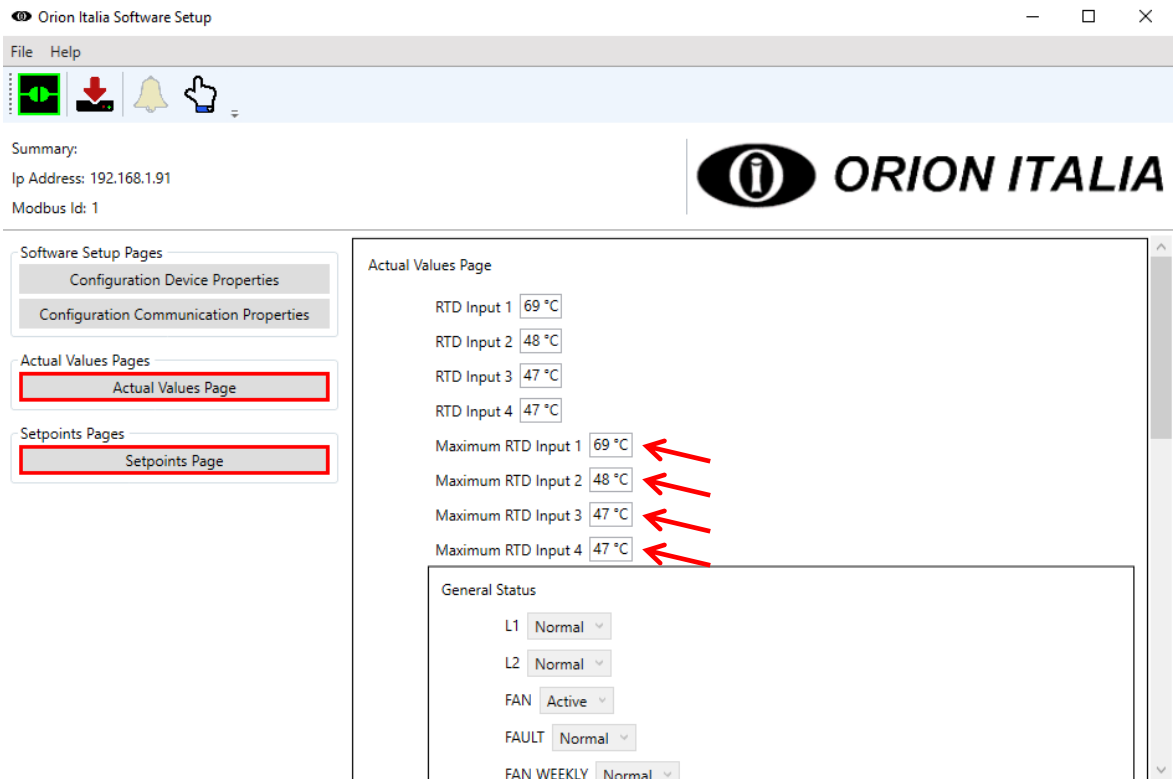

Figure 46 shows the results of "Maximum Temperature CLEAR" command. This command has cleared the previous maximum temperature actual values in the device. Hence, new actual values were updated with the new maximum values. These new maximum values are read from the device and showed to the user by software setup. For example, previous Maximum RTD Input 1 value has changed from 229°C to 69°C.

Figure 47 shows the icon to present device events window. NOTE that events window icon is <u>enabled only when communicating with target device.</u>

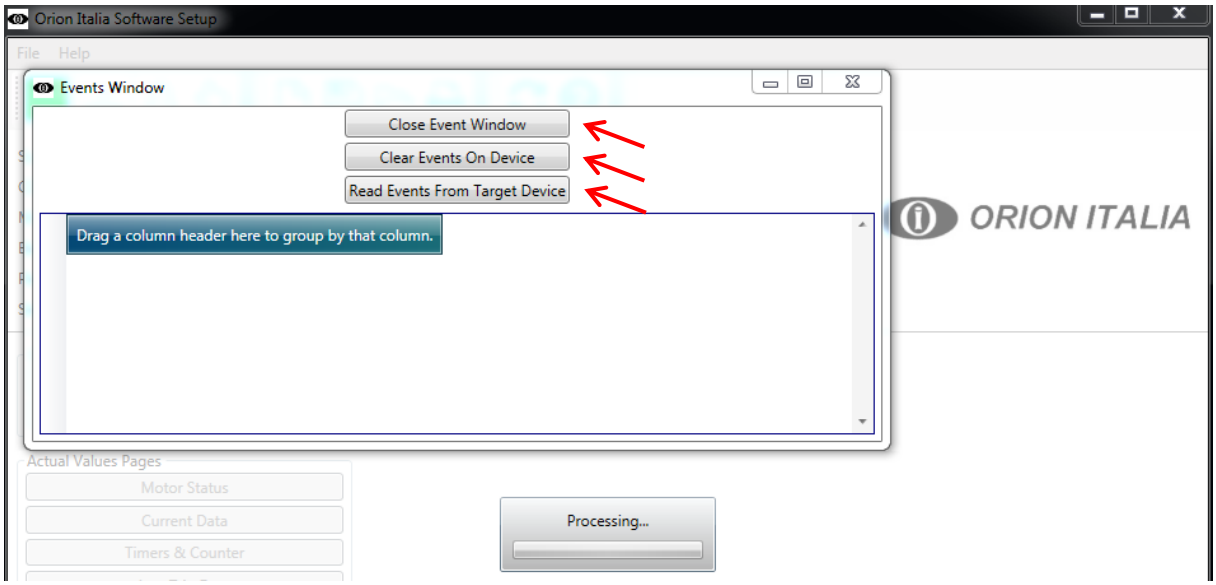

Figure 48 shows events window and its button. These buttons allow users to clear events on device, read events from device, and close the event window.

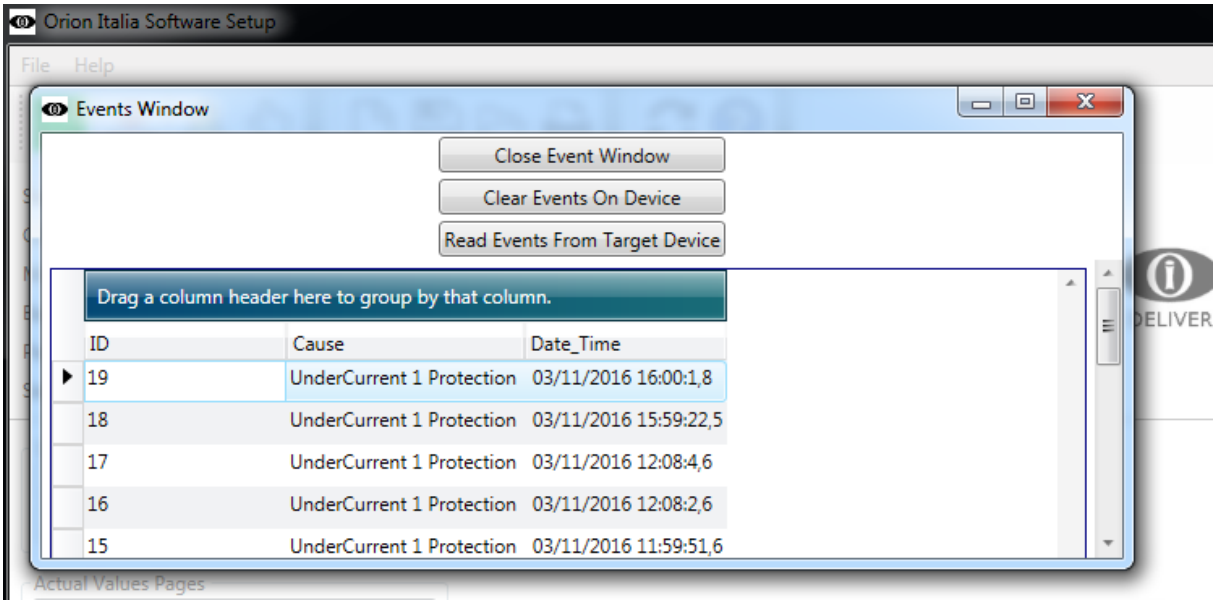

Figure 49 shows and example of events read from target device (e.g. a Motor protection relay).

ORION ITALIA srl Via G. Orsi 35, 29100 Piacenza [PC] – Italia
Telefono: ++ 39 0523 591161, Fax: ++ 39 0523 593898, Internet: www.orionitalia.com