ORION ITALIA

Software Setup User's Manual

Manual P/N: OISS GBM MAY/2019



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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.

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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 <u>.NET4.5</u> 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.





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.

Control Panel\Programs\Programs and Features									
÷	🕆 🚺 > Control Pa	anel > Programs > Programs and Features			~	Search Program	ms and Features	,p	
	Control Panel Home	Uninstall or change a program							
	View installed updates	To uninstall a program, select it from the list and then	click Uninstall, Change, or Repair.						
•	Turn Windows features on or								
	off	Organize 🔻 Uninstall						?	
		Name	Publisher	Installed On	Size	Version		^	
		📒 Microsoft System CLR Types for SQL Server 2016 RC0	Microsoft Corporation	2016-04-04	17.0 MB	13.0.1100.286			
		Microsoft Visual C++ 2008 Redistributable - x64 9.0.3	Microsoft Corporation	2016-04-06	1.03 MB	9.0.30729.4148			
		Microsoft Visual C++ 2008 Redistributable - x86 9.0.3	Microsoft Corporation	2016-04-06	8.69 MB	9.0.30729.4148			
		🖟 Microsoft Visual C++ 2012 Redistributable (x64) - 11.0	Microsoft Corporation	2016-04-04	20.5 MB	11.0.60610.1			
		🕼 Microsoft Visual C++ 2012 Redistributable (x86) - 11.0	Microsoft Corporation	2016-04-04	17.3 MB	11.0.60610.1			
		🖟 Microsoft Visual C++ 2013 Redistributable (x64) - 12.0	Microsoft Corporation	2016-04-04	20.5 MB	12.0.21005.1			
		🖟 Microsoft Visual C++ 2013 Redistributable (x86) - 12.0	Microsoft Corporation	2016-04-04	17.1 MB	12.0.21005.1			
		🕼 Microsoft Visual C++ 2015 Redistributable (x64) - 14.0	Microsoft Corporation	2016-04-04	22.4 MB	14.0.23918.0			
		🕼 Microsoft Visual C++ 2015 Redistributable (x86) - 14.0	Microsoft Corporation	2016-04-04	18.7 MB	14.0.23918.0			
		🏘 Microsoft Web Deploy 3.6	Microsoft Corporation	2016-04-04	17.7 MB	3.1238.1962			
		NVIDIA Driver 3D Vision 341.92	NVIDIA Corporation	2016-04-01	33.4 MB	341.92			
		NVIDIA Driver audio HD 1.3.30.1	NVIDIA Corporation	2016-04-01	8.41 MB	1.3.30.1			
		NVIDIA Driver grafico 341.92	NVIDIA Corporation	2016-04-01	479 MB	341.92			
		Prerequisites for SSDT	Microsoft Corporation	2016-04-04	13.8 MB	12.0.2000.8			
		Prerequisites for SSDT RC0	Microsoft Corporation	2016-04-04	14.5 MB	13.0.1100.286			
		😹 Realtek High Definition Audio Driver	Realtek Semiconductor Corp.	2016-04-08	30.1 MB	6.0.1.6662			
		Skype [™] 7.22	Skype Technologies S.A.	2016-05-02	158 MB	7.22.109			
		Software Setup for Orion Italia Devices	Orion Italia	2016-09-15	3.09 MB	1.0.0.11		~	

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.

🛈 Setu	ip.exe
i	Install .NET 4.5
	This application requires the .NET Framework 4.5. Click the Install button to get started.
	Install Cancel

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)

	8
Stato installazione Attendere. Installazione di .NET Framework in corso	Microsoft .NET
Stato download:	0
Download di netfx_Full_LDR.mzz	
Stato installazione:	0
Installazione di componenti necessari per .NET Framework	
	Annulla

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.

0	Orion Italia Software Setup	_		×
File	Help			
	New configuration			
	Open configuration			
	Save configuration			
	Save configuration as		ΔI I	Δ
	Print +			
	Exit			
		a		

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

@ Sel	ect Device Information	_	×	X
Code: Model: Version	TR-42 ~ TR-42C1 (Taiwan) ~ 1.04 ~ Create Configuration Cancel	_	Proce	sing

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

Orion Italia Software Setup	– 🗆 X
File Help	
💶 📩 🔔 🙄 🚬	
Summary:	
lp Address: 192.168.1.1	
Modbus Id: 1	
Software Setup Pages	
Configuration Device Properties	
Configuration Communication Properties	
Actual Values Pages	
Actual Values Page	
Setpoints Pages	
Setpoints Page	

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.).

Orion Italia Software Setup				-		×
File Help						
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Summary: Ip Address: 192.168.1.1 Modbus Id: 1			ORION	ITA	L	ΙΑ
Software Setup Pages Configuration Device Properties Configuration Communication Properties Actual Values Pages Actual Values Page	Configuration Device Properties Code: TR-42 Model: TR-42C1 (Taiwan) Version: 1.04	Configuration file description:	This is my first configuration file fo	r a TR42TN	VI devic	el
Setpoints Pages Setpoints Page	Store Cancel					

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.

Orion Italia Software Setup

Summary: Ip Address: 192.168.1.1	ORION ITALI	Ά
Modbus Id: 1 Software Setup Pages Configuration Device Properties Configuration Communication Properties Actual Values Pages Actual Values Page Setpoints Pages Setpoints Page	Setpoints Page General Configurations RTD Connected Three RTD Inputs Connected * FAN Active * RTD For Command FAN Three RTD Inputs for Command Fan * Weekly Automatic On FAN Active * Parity BN1 (8 bits Data, Parity NONE, 1 bit Stop) * Slave Address 1 * L1 Value 120 *C * FAN Low Value 36 *C * FAN High Value 40 *C * BAUDRATE 9600 Bps *	

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".

Orion Italia Software Setup	- 🗆 X
File Help	
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Summary: Ip Address: 192.168.1.1 Modbus Id: 1	ORION ITALIA
Software Setup Pages Configuration Device Properties Configuration Communication Properties Actual Values Pages Actual Values Page Setpoints Page Setpoints Page	Setpoints Page General Configurations RTD Connected Four RTD Inputs Connected FAN Active RTD For Command FAN Four RTD Inputs for Command Fan Weekly Automatic On FAN Active Parity BN1 (8 bits Data, Parity NONE, 1 bit Stop) Slave Address 1 CL1 Value 121 C FAN Low Value 36 C FAN High Value 40 C BAUDRATE
	9600 Bps 👻

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

Manual Value	Editing		_		×	– – ×	
Setpoint Name:	L1 Value						
Value:	121 °C						
Ranges and Steps:	If (0 <= Value < 219)	then steps =	1				
New Value:	121						
		Store	Cancel			ORION ITALIA	^
	y			_		Four RTD Inputs Connected \vee	
Act	tual Values Page			F	P	rocessing	
Setpoints Pages				F 📕		□ [D Inputs for Command Fan)	
S	etpoints Page			Wee	ekly Auto	omatic On FAN Active 👻	
2				Pari	ty 8N1	(8 bits Data Parity NONE 1 bit Stop)	
				Class	o Addro		
				SIdV	e Addre	55 I ¥	
			L1 Va	ue 121	°C 🔺		
			L2 Va	ue 130	°C 🔺		
			FAN L	ow Value	36 °C	<u>A</u> V	
			FAN H	ligh Valu	e 40 °C		
			BAU	ORATE			
				960	00 Bps		

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.

Manual Value	Editing		-		×				_		\times
Setpoint Name:	L1 Value										
Value:	121 °C										
Ranges and Steps:	If (0 <= Value < 219)) then steps = 1									
New Value:	75										
		Store	Cancel			s	(1)	ORIOI	N IT,	AL	IA
Act	tual Values Page			F		ted Four RTD Input	s Connected 👋				
				R		Tocessing	D Inputs for Comman	d Fan 👋			
Setpoints Pages											
S	Setpoints Page			VVe	ekly Aut	omatic On FAN Acti	ve				
				Par	ity 8N1	(8 bits Data, Parity N	IONE, 1 bit Stop) 👋				
				Sla	ve Addre	ess 1					
			L1 Val	Je 121	°C 🔺						
			L2 Val	Je 130	°C						
			FAN L	ow Valu	e 36 °C	*					
			FAN H	igh Valı	ue 40 °C						
			BAUE	RATE							
				96	00 Bps						~

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

Orion Italia Software Setup

Summary: Ip Address: 192.168.1.1 Modbus Id: 1 Software Setup Pages Configuration Device Properties Configuration Communication Properties Actual Values Pages Actual Values Pages Setpoints Page Setpoints Pages Setpoints Page Image: Setpoints Page Setpoints Page L1 Value 75 °C the L2 Value 130 °C the FAN Low Value 36 °C the FAN High Value 40 °C the BAUDBATE	File Help		
Summary: Ip Address: 192.168.1.1 Modbus Id: 1 Software Setup Pages Configuration Device Properties Configuration Communication Properties Actual Values Pages Actual Values Page Setpoints Page Setpoints Page Ceneral Configurations RTD Connected Four RTD Inputs Connected ↓ FAN Active ✓ RTD For Command FAN Four RTD Inputs for Command Fan ↓ Weekly Automatic On FAN Active ✓ Parity ®N1 (8 bits Data, Parity NONE, 1 bit Stop) ↓ Slave Address 1 ★ L1 Value 75 ℃ ★ FAN High Value 40 ℃ ★	Đ 🛃 🔔 🖕		
Software Setup Pages Configuration Device Properties Configuration Communication Properties General Configurations Actual Values Pages RTD Connected Four RTD Inputs Connected ∨ FAN Active I RTD For Command FAN Setpoints Pages Weekly Automatic On FAN Setpoints Page Weekly Automatic On FAN Setpoints Page Use Parity BN1 (8 bits Data, Parity NONE, 1 bit Stop) ∨ Slave Address 1 L1 Value 75 *C FAN Low Value 26 *C FAN High Value 40 *C BAUDRATE 9600 8ps ∨	Summary: Ip Address: 192.168.1.1 Modbus Id: 1	(I) ORION ITALIA	ł
	Software Setup Pages Configuration Device Properties Configuration Communication Properties Actual Values Pages Actual Values Page Setpoints Pages Setpoints Page	Setpoints Page General Configurations RTD Connected Four RTD Inputs Connected ` FAN Active I RTD For Command FAN Four RTD Inputs for Command Fan ` Weekly Automatic On FAN Active ` Parity BN1 (8 bits Data, Parity NONE, 1 bit Stop) ` Slave Address 1 I L1 Value 75 *C FAN Low Value 36 *C FAN High Value 40 *C BAUDRATE 9600 Bps `	

Figure 16 shows "L1 Value" value updated.

					_								\sim
Manual Valu	e Editing		-	_		×					_		^
Setpoint Name:	L1 Value												
Value:	75 °C												
Ranges and Steps	If (0 <= Value < 219)	then steps =	= 1										
New Value:	131												
													1.0
		Chang	Consel) Ur	KION	/	4L	IA
		Store	Cancel										
-													
													_
							15						
							tod Faus DTD Jacou	to Constant V					
	9~				-		Four KTD Inpu	its connected					
A	ctual Values Page				F	P	rocessing						
					R		-	TD Inputs for Comma	and Fan \vee				
Setpoints Pages													
	Setpoints Page									×			
				L2	Value va	lue has	been changed to 13	32 °C in order to keep v	value conditio	ns			
				sat	tisfied!								
			l	1									
				-									
				-									
			F	AN LO	w value	50 C	Υ.						
			F	AN Hi	igh Value	40 °C	A						
			Γ		-		- 121						
				BAUD	RATE								
					9600) Bps							
													\sim

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.

Orion Italia Software Setup	- 🗆 X
File Help	
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Summary: Ip Address: 192.168.1.1 Modbus Id: 1	(I) ORION ITALIA
Software Setup Pages Configuration Device Properties Configuration Communication Properties Actual Values Page Actual Values Page Setpoints Pages Setpoints Page	Setpoints Page General Configurations RTD Connected Four RTD Inputs Connected × FAN Active ✓ RTD For Command FAN Four RTD Inputs for Command Fan × Weekly Automatic On FAN Active × Parity 8N1 (8 bits Data, Parity NONE, 1 bit Stop) × Slave Address 1 ★ L1 Value 131 *C ★ FAN Low Value 36 *C ★ FAN High Value 40 *C ★ BAUDRATE 9600 Bps ×

Figure 18 shows Figure 17 value change results.

Orion Italia Software Setup		
🕼 Save As		×
\leftarrow \rightarrow \checkmark \uparrow \square \rightarrow This PC \rightarrow Documents \rightarrow I	/lyTR42TMConfigurations	✓ ♂ Search MyTR42TMConfigurat
Organize 👻 New folder		≣≡ ▾ ?
MyTR42TMConfigu A Name	Date modified Type No items match your search.	Size
This PC Control Co		
Downloads Music Pictures Videoc		
<pre>HP_RECOVERY (D:)</pre>		
File name: TR42TM_Offline_Configuration	oiz	
Save as type: Orion config files (*.oiz)		~
∧ Hide Folders		Save Cancel
	BAUDRATE 9600 Bps	

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

Orion Italia Software Setup					_	
Open						×
\leftarrow \rightarrow \checkmark \uparrow \square \rightarrow This	PC > Documents > MyTR42TMConfigura	tions		✓ Ö Seard	h MyTR42TMConfigurat	<i>م</i> .
Organize 👻 New folder					== -	0
A Quick access	Name	Date modified	Туре	Size		.IA
📃 Desktop 🖈	TR42TM_Offline_Configuration.oiz	2016-09-16 11:57	OIZ File	4 KB		
🖊 Downloads 🖈						
🔮 Documents 🖈						
📰 Pictures 🛛 🖈						
EVAR						
IPR						
MyTR42TMConf						
TR-42						
a OneDrive						
💻 This PC						
Desktop						
Documents						
🔶 Downloads 🗸 🗸						
File nar	me: TR42TM_Offline_Configuration.oiz			~ Orio	n config files (*.oiz)	~
				(Dpen 😽 Cancel	

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

Orion Italia Software Setup	- 🗆 X
File Help	
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Summary:	
Ip Address: 127.0.0.1	O ORION ITALIA
Modbus Id: 1	
Software Setup Pages Configuration Device Properties	Configuration Device Properties
Configuration Communication Properties	Code: TR-42 Configuration file description: This is my first configuration file for a TR42TM device.
Actual Values Pages	Model: TR-42C1 (Taiwan)
Actual Values Page	Version: 1.04
Setpoints Pages	
Setpoints Page	Store
	Cancel
	Setpoints Page
	General Configurations
	RTD Connected Four RTD Inputs Connected Y
	FAN Active 🗹
	RTD For Command FAN Four RTD Inputs for Command Fan 👻
	Weekly Automatic On FAN Active 🗡
	Parity 8N1 (8 bits Data, Parity NONE, 1 bit Stop) 👻
	Slave Address 1
	L1 Value 131 °C
	L2 Value 132 °C 🔺
	FAN Low Value 36 °C
	FAN High Value 40 °C

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

Orion Italia Software Setup	– 🗆 X
File Help	
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Summary:	
Ip Address: 127.0.0.1	
Modbus Id: 1	
Software Setup Pages Configuration Device Properties Configuration Communication Properties Actual Values Pages Actual Values Page	Configuration Communication Properties Communcation Media to Target Device: TCP Target device/gateway Ip: 192.168.1.91 Target device Id: 1
Setpoints Pages Setpoints Page	Store Cancel

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

Orion Italia Software Setup	- 🗆 X
File Help	
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Summary: Ip Address: 192.168.1.91 Modbus Id: 1	(I) ORION ITALIA
Software Setup Pages Configuration Device Properties Configuration Communication Properties Actual Values Page Actual Values Page	Configuration Communication Properties Communcation Media to Target Device: TCP Target device/gateway Ip: 192.168.1.91 Target device Id: 1
Setpoints Pages Setpoints Page	Store Cancel

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".

Orion Italia Software Setup	- 🗆 X
File Help	
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Summary: Ip Address: 192.168.1.91 Modbus Id: 1	(I) ORION ITALIA
Software Setup Pages Configuration Device Properties	Setpoints Page
Configuration Communication Properties Actual Values Pages Actual Values Page Setpoints Pages Setpoints Page	General Configurations RTD Connected Four RTD Inputs Connected × FAN Active RTD For Command FAN Four RTD Inputs for Command Fan × Confirm Setpoints on device will be overwritten. Do you want to send current setpoints to device? Yes No FAN High Value 40 °C BAUDRATE 9600 Bps ×

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

Orion Italia Software Setup	- 🗆 ×
File Help	
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Summary:	
lp Address: 192.168.1.91	
Modbus Id: 1	
Software Setup Pages	Setpoints Page
Configuration Communication Properties	General Configurations
	RTD Connected Four RTD Inputs Connected Y
Actual Values Pages	
Actual values Page	
Setpoints Pages	Setpoint saved
Setpoints Page	Setpoints successfully saved on device.
	ОК
	L2 Value 132 °C
	FAN Low Value 36 °C
	FAN High Value 40 °C
	BAUDRATE
	9600 Bps ×

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

Orion Italia Software Setup	- 🗆 ×
File Help	
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Summary:	
lp Address: 192.168.1.91	
Modbus Id: 1	
Software Setup Pages	Setpoints Page
Configuration Device Properties	
Configuration Communication Properties	General Configurations
Actual Values Pages	RTD Connected Four RTD Inputs Connected 👋
Actual Values Page	Operation error X
Setpoints Pages	and Fan \vee
Setpoints Page	Setpoints were not successfully saved on device!
	ОК
	L2 Value $132 \degree C$
	FAN Low Value 36 °C
	FAN High Value 40 °C
	BAUDRATE
	9600 Bps 🕑

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.

Orion Italia Software Setup	— — ×	ć
File Help		
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Summary:		
lp Address: 192.168.1.1		4
Modbus Id: 1		
Software Setup Pages	Configuration Communication Deparation	٦
Configuration Device Properties	Configuration Communication Properties	
Configuration Communication Properties	Communcation Media to Target Device: TCP v	
	Target device/gateway lp: 192.168.1.1	
Actual Values Pages	Target device ld: 1	
Actual Values Page		
Setpoints Pages	Store	
Setpoints Page	Cancel	

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).

Orion Italia Software Setup	– 🗆 X
File Help	
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Summary:	
lp Address: 192.168.1.1	COD ORION ITALIA
Modbus Id: 1	
Software Setup Pages Configuration Device Properties Configuration Communication Properties Actual Values Pages Actual Values Page	Configuration Communication Properties Communcation Media to Target Device: Target device/gateway lp: 192.168.1.1 Target device ld: 1
Setpoints Pages Setpoints Page	Store Cancel

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

Orion Italia Software Setup	– 🗆 X
File Help	
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Summary: Ip Address: 192.168.1.1 Modbus Id: 1	(I) ORION ITALIA
Software Setup Pages Configuration Device Properties Configuration Communication Properties Actual Values Pages Actual Values Page Setpoints Pages Setpoints Page	Configuration Communication Properties Communcation Media to Target Device: COM (RTU) v Target COM port: v Target device Id: 0 Target device Baudrate: v Store Cancel

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.

Orion Italia Software Setup	
File Help	
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Summary:	
Ip Address: 127.0.0.1	
Modbus Id: 1	
Software Setup Pages Configuration Device Properties	Configuration Communication Properties
Configuration Communication Properties	Communcation Media to Target Device: COM (RTU) 🔻
Actual Values Pages	Target COM port: COM1 🔹
Actual Values Page	Target device Id: 1
	Target device Baudrate: 9600 🔹
Setpoints Pages	
Serpoints Page	Store
	Cancel
L	

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.

Orion Italia Software Setup		×
File Help		
Summary: Ip Address: 192.168.1.91 Modbus Id: 1	ORION ITALI	A
Software Setup Pages Configuration Device Properties Configuration Communication Properties Actual Values Pages Actual Values Page	Configuration Communication Properties Communcation Media to Target Device: TCP v Target device/gateway lp: 192.168.1.91 Target device ld: 1	
Setpoints Pages Setpoints Page	Store Cancel	

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".

Orion Italia Software Setup	- 🗆 X
File Help	
🗗 📩 🔔 🖕	
Summary:	
Ip Address: 192.168.1.91	COD ORION ITALIA
Modbus Id: 1	
Software Setup Pages	
Configuration Device Properties	
Configuration Communication Properties	
Actual Values Pages	
Actual Values Page	Confirm X
Setpoints Pages	 Unsaved changes will be lost
Setpoints Page	Do you want to proceed?
	Yes No

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.

Orion Italia Software Setup	- 🗆 X
File Help	
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Summary:	
Ip Address: 192.168.1.91	COD ORION ITALIA
Modbus Id: 1	
Software Setup Pages	
Configuration Device Properties	
Configuration Communication Properties	
Actual Values Pages	
Actual Values Page	
Setpoints Pages	
Setpoints Page	

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.

Orion Italia Software Setup		– 🗆 X
File Help		
🔁 📩 🔔 🙄 📮		
Summary:		
Ip Address: 192.168.1.91		ON ITALIA
Modbus Id: 1		
Software Setup Pages		
Configuration Device Properties		
Configuration Communication Properties		
Actual Values Pages		
Actual Values Page	Operation error	x
Setpoints Pages	Communication not established!	
Setpoints Page	Possible reasons: - Wrong communication parameters, - Wiring; - Device not found; - Relay firmware not supported.	*
	ОК	

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.

Orion Italia Software Setup	- D X
File Help	
💶 📩 🔔 🖏 📮	
Summary: Ip Address: 192.168.1.91 Modbus Id: 1	(I) ORION ITALIA
Software Setup Pages Configuration Device Properties Configuration Communication Properties Actual Values Page Actual Values Page Setpoints Pages Setpoints Page	Actual Values Page RTD Input 1 69 °C RTD Input 2 47 °C RTD Input 3 47 °C Maximum RTD Input 1 229 °C Maximum RTD Input 2 48 °C Maximum RTD Input 2 48 °C Maximum RTD Input 3 47 °C General Status L1 Normal ~ L2 Normal ~ FAN Active ~ FAULT Normal ~ FAN WEEKLY Normal ~ Input RTD 1 Normal ~

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

Orion Italia Software Setup	– 🗆 X
File Help	
💶 📥 🔔 🧯	
Summary:	
lp Address: 192.168.1.91	
Modbus Id: 1	
Software Setup Pages	Setopints Page
Configuration Device Properties	
Configuration Communication Properties	General Configurations
Actual Values Pages	RTD Connected Three RTD Inputs Connected Y
Actual Values Page	FAN Active
,	RTD For Command FAN Three RTD Inputs for Command Fan
Setpoints Pages	Weekb Automatic On FAN Automatic M
Setpoints Page	
	Parity 8N1 (8 bits Data, Parity NONE, 1 bit Stop) 🗡
	Slave Address 1 🛓
	L1 Value 120 °C
	L2 Value 130 °C
	FAN High Value 40 C
	BAUDRATE
	9600 Bps *

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.

Orion Italia Software Setup	- 🗆 X
File Help	
💶 📩 🔔 🖓 🚬	
Summary:	
lp Address: 192.168.1.91	
Modbus Id: 1	
Software Setup Pages Configuration Device Properties Configuration Communication Properties Actual Values Pages Actual Values Page Setpoints Pages Setpoints Page	Setpoints Page General Configurations RTD Connected Three RTD Inputs Connected FAN Active FAN Active Operation error X Please, check communication settings, communication hardware, and device.
	L1 Va L2 Va FAN Low Value 36 °C * FAN High Value 40 °C * BAUDRATE 9600 Bps *

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".

Orion Italia Software Setup	– 🗆 X
File Help	
🗗 📥 🔔 🖧 🍦	
Summary: Ip Address: 192.168.1.91	ORION ITALIA
Modbus Id: 1	
Software Setup Pages Configuration Device Properties Configuration Communication Properties Actual Values Pages Actual Values Page Setpoints Pages Setpoints Page	Setpoints Page General Configurations RTD Connected FAN Active RTD For Command FAN Four RTD Inputs for Command Fan Weekly Automatic On FAN Active Parity BN1 (8 bits Data, Parity NONE, 1 bit Stop) Slave Address I Yalue 120 °C FAN Low Value 36 °C FAN High Value 40 °C BAUDRATE
	9600 Bps *

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.

Orion Italia Software Setup	- 🗆 X
File Help	
💶 📥 🔔 🖕	
Summary: Ip Address: 192.168.1.91 Modbus Id: 1	(I) ORION ITALIA
Software Setup Pages Configuration Device Properties Configuration Communication Properties Actual Values Page Actual Values Page Setpoints Pages Setpoints Page	Setpoints Page General Configurations RTD Connected FAN Active R Confirm V Setpoints on device will be overwritten. Do you want to send current setpoints to device? S L1 Value 12 Yes No L2 Value 130°C FAN High Value 40°C BAUDRATE 9600 Bps v

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

Orion Italia Software Setup	- 🗆 X
File Help	
💶 📩 🔔 🖧 🏮	
Summary:	
Modbus Id: 1	ORIONITALIA
Software Setup Pages Configuration Device Properties	Setpoints Page
Actual Values Pages Actual Values Page	Setpoint saved
Setpoints Pages Setpoints Page	OK Parity 8N1 (8 bits Data, Parity NONE, 1 bit Stop) × Slave Address 1 ×
	L1 Value 120 °C 👻 L2 Value 130 °C 👻 FAN Low Value 36 °C 👻 FAN High Value 40 °C 👻
	9600 Bps V

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

Orion Italia Software Setup	– 🗆 X
File Help	
💶 📩 🔔 🖓 👡	
Summary:	
Modbus Id: 1	
Software Setup Pages Configuration Device Properties Configuration Communication Properties Actual Values Page Actual Values Page Setpoints Page Setpoints Page	Actual Values Page RTD Input 1 69 °C RTD Input 2 48 °C RTD Input 3 47 °C RTD Input 4 47 °C Maximum RTD Input 1 229 °C Maximum RTD Input 2 48 °C Maximum RTD Input 3 47 °C Maximum RTD Input 3 47 °C Maximum RTD Input 4 47 °C General Status L1 Normal ~ L2 Normal ~ FAN Active ~
	FAULT Normal V

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

Commands Window	- 0	x – – ×
Close Command Window		
Send Command To Device		
Select Command To Send No Command	5	
		ORION ITAL IA
Actual Values Page	RTD Ing	Processing
	RTD Ing	Processing
Setpoints Pages	Maximum Kru in	input i ces e
	Maximum RTD In	Input 2 48 °C
	Maximum RTD In	Input 3 47 °C
	Maximum RTD In	Input 4 47 °C
	General Status	5
	L1 N	Normal ~
	L2 N	Normal ~
	FAN	Active 👋
	FAULT	LT Normal Y
	FAN W	WEEKLY Normal Y

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

Commands Window		– 🗆 X	-	- 🗆 ×
Close C	ommand Window			
Select Command To Send	No Command	~ K		
	No Command PC Control Flag Activation (T PC Control Flag Deactivation Maximum Temperature CLEA	This Flag will deactivate in 1 minute) h AR		TALIA
		RTD Ind		
Setpoints Pages	Page	Processing		
		Maximum RTD Input 2 40 C Maximum RTD Input 3 47 °C Maximum RTD Input 4 47 °C		
		General Status L1 Normal × L2 Normal × FAN Active × FAULT Normal ×		
		FAN WEEKLY Normal		~

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.

Commands Window	- 0	×	– – ×
Close Command Window			
Send Command To Device			
Select Command To Send Maximum Temperature CLEA			
			ORION ITALIA
			^
		17 00	
Actual Values Page	RTD Inc	Proce	essing
Setpoints Pages	Maximum Kr	U INPUT I	
Setpoints Page	Maximum RT	' D Input 2	48 °C
	Maximum RT	D Input 3	47 °C
	Maximum RT	D Input 4	47 °C
	General Stat	us	
	L1	Norma	1 ~
	L2	Norma	1 ~
	FA	N Activ	e 🗸
	FA	ULT No	rmal Y
	FA	N WEEKL	Y Normal ×

Figure 44 shows "Maximum Temperature CLEAR" command selection.

Commands Window	- 🗆 X	– 🗆 X
Close Command Window Send Command To Device Select Command To Send Maximum Temperature Cl	LEAR V	
		ORION ITALIA
Actual Values Page	RTD Ing	
Setpoints Pages	RTD Ing Maximum KTD Input T	255 G
	Maximum RTD Input 2	× 48 °C
	Do you wish to a command to de	continue and send "Maximum Temperature CLEAR" svice?
		Yes No
	FAULT Not	rmal V Y Normal V

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

Orion Italia Software Setup	– 🗆 X
File Help	
💶 📩 🔔 🛟 🎍	
Summary: Ip Address: 192.168.1.91 Modbus Id: 1	ORION ITALIA
Software Setup Pages Configuration Device Properties Configuration Communication Properties Actual Values Pages Actual Values Page Setpoints Page Setpoints Page	Actual Values Page RTD Input 1 69 °C RTD Input 2 48 °C RTD Input 3 47 °C RTD Input 4 47 °C Maximum RTD Input 1 69 °C Maximum RTD Input 2 48 °C Maximum RTD Input 2 48 °C Maximum RTD Input 4 47 °C General Status L1 Normal ~ FAN Active ~ FAULT Normal ~

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</u> <u>only when communicating with target device.</u>

Orion Italia Software Setup				
Events Window	Close Event Window Clear Events On Device Read Events From Target Device	0 33		
Drag a column header here to g	roup by that column.		-	ORION ITALIA
Actual Values Pages			-	
Motor Status				
	Processing			

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.

Drion Italia Software	e Setup			
Help				
Events Window				х
	Cle	ose Event Window		
	Clea	ar Events On Device		
	Read Eve	ents From Target Device		
Drag a colum	n header here to group by that colu	Jmn.		
Drag a colum ID	n header here to group by that colu Cause	umn. Date_Time		A A
Drag a colum ID 19	n header here to group by that colu Cause UnderCurrent 1 Protection	Jmn. Date_Time 0 03/11/2016 16:00:1,8		
Drag a colum ID 19 18	n header here to group by that colu Cause UnderCurrent 1 Protection UnderCurrent 1 Protection	Umn. Date_Time 0 03/11/2016 16:00:1,8 0 03/11/2016 15:59:22,5		
Drag a colum ID 19 18 17	h header here to group by that colu Cause UnderCurrent 1 Protection UnderCurrent 1 Protection UnderCurrent 1 Protection	Date_Time 03/11/2016 16:00:1,8 03/11/2016 15:59:22,5 03/11/2016 12:08:4,6		
Drag a colum ID 19 18 17 16	n header here to group by that colu Cause UnderCurrent 1 Protection UnderCurrent 1 Protection UnderCurrent 1 Protection UnderCurrent 1 Protection	Date_Time 03/11/2016 16:00:1,8 03/11/2016 15:59:22,5 03/11/2016 12:08:4,6 03/11/2016 12:08:2,6		

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



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