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### **INTRODUCTION**

Sitrad Pro is the new version of the already renowned Full Gauge Controls software for remote management of refrigeration, heating, air conditioning, and solar heating installations.

Using Sitrad Pro is very easy. It was created so that anyone can enjoy its benefits without the need for much knowledge of technology, meeting the strictest market requirements because it was developed by one especially dedicated engineering team from Full Gauge Controls.

Even so, we have developed this tutorial to facilitate your first steps when using the software.

If you have any questions, please contact us by e-mail at comex@fullgauge.com

### DOWNLOAD

Sitrad Pro is available to be downloaded for free at www.sitrad.com. Download the software and install it following the step by step instructions of the installation wizard.

### **REGISTRATION KEY**

Upon finishing Sitrad Pro installation, you must perform a registration procedure to get the software registration key.

But don't worry, Sitrad Pro is completely free - the registration key is for application usage control purposes only.

Please access the *link highlighted in the image aside* to perform the registration.

A new registration key will be generated at the end of the registration procedure. The key must be typed on the registration screen above to enable access.



x

Software registration - Sitrad

#### IMPORTANT INFORMATION

» A new key is required for each Sitrad Pro installation;

» After the first registration on the site, you will not be required to fill in all the data. Just input your e-mail and the data will be filled in for you;

» If the key is already being used in another Sitrad Pro that is installed in another computer, the software will remain locked until a valid key is provided.

» If the computer is formatted and keeps the same hardware components, the same key that was used before formatting can be used.

### FIRST STEPS

# **Sitcad** PRO **Bem-Vindo!** Você está prestes a vivenciar uma nova experiência em gerenciamento remoto. Se você acabou de instalar o Sitrad Pro, recomendamos que faça esta visita guiada para aprender os primeiros passos e realizar a configuração inicial desta instalação.

Próxima > Fech

When running Sitrad Pro for the first time, the Welcome window will be opened. We recommend you to follow all steps to understand the operation of the system. At this moment you will configure the most important points for the operation of Sitrad Pro, among which: Administrator login and e-mail for password recovery, e-mail server (it will be responsible for sending alarms and for the password recovery procedure in case you forget it), basic security settings, and initial registration of Full Gauge Controls Converters and Instruments.

# ACCESSING THE LOCAL SERVER





# Access the Local Server using the following data:

User: admin

Password: admin

If you have changed the password, use the new one.

### Sitrad Pro Splash Screen

S SITRAD - 1.2.2					- 5 ×
Sitrad PRO Mana	egement Configurations Reports Defrost	and Events		Administrator Local Server	
List of devices					
Filter items	Server Information				
🕒 🗊 🖉 🗙 💠 👳	Disconnect     Add converter	🥕 Edit server			
Local Server	General Information				
Demonstration Server	-				
	Company:	Name Loca	Server		
		Versão	1.2.2		
		Server Status Conr	ected		
	Click here to add an image	IP address/Port 127.0	0.0.1:8001		
		Location			
		Connected user Adm	nistrator		
	Converters on this server	Туре	Status	Version	Versão
Full Gauge					

## **REGISTER CONVERTERS**

If you have not registered Converters and Instruments on the initial configuration tab, follow the steps below:

1. You can register a converter by clicking on the button marked "Add Converter (+)" on the server screen

Another option is to click on the button highlighted on the side to automatically register a converter that is connected to the computer or in the network.

### 2. Click on "Search Automatically".

Sitrad Pro will automatically locate all converters connected to the computer or in the internal network.

To register a converter:

4. Double click on the desired converter

5. Click on "Save"

#### Note:

In specific cases, use the other options for manual registration, for example, when you need to access an Ethernet converter that is not on the same computer network.

Sitrad Pro allows communicating with the converter TCP-485\* using the MAC address (Check whether the converter is Version 03). This makes the prior configuration of this converter unnecessary, just connect it to the network.





## **REGISTER INSTRUMENTS**

After all converters are registered, you can start to register instruments. There are two options for that:



The search can be made automatically in all addresses of the RS-485 network or in a specific instrument address. When the instrument is located, the registration is made automatically and the instrument will be visible on the left side column.

List of devices 4	
Filter items	Search for Instruments
<ul> <li>Image: Intervention of the second s</li></ul>	Selected converter: USB Version 2
✓ Z USB Version 2	Search all instruments
🔲 MT-512Ri plus [001]	• Search by address:
Demonstration Server	Q Search
	Address
	1 MT-512Ri plus [001]

### Instrument Display Screen



### Instrument Parameters

# MT-512Ri Plus [001]



Φ	۹	Ð	٦	ē -	١
---	---	---	---	-----	---

Code	Description	Min. value	Max. value		Unity Current va	alue
SET	Control temperature (setpoint)	-50.0	75.0	°C	4.0	
F02	Local callbration (offset)	-5.0	5.0	°C	3.0	
F03	Minimum set allowed to the end user	-50.0	75.0	۹C	-50.0	
F04	Maximum set allowed to the end user	-50.0	75.0	Button	s and Functions in the	
F05	Differential control (hysteresis)	0.1	20.0	Instrur	nent parameters screen	
F06	Delay to turn refrigeration output on	0	999	ð	Update values	
F07	Refrigeration time	1	999			
F08	Defrost time duration	0	999	۹	Function Filter	
F09	Initial status on energize the instrument	0 - refrig	1 - Defrost	<b>4</b> 1	Delivery of Recipes	
F10	Locked indication when entering in defrost	0 - No	1 - Yes		Delivery of Necipes	
F11	Delay on energize the instrument	0	240	Û	Print parameters	
F12	Additional time on 1° cycle end	0	240		Save parameters as a <u>new</u>	
·					recipe	



**Function in BOLD:** Means that this function has changed and is different from the Factory Default

Copy parameters to the Clipboard

0

# ALARM CONFIGURATION

Ala	Alarms Notification Settings									
Φ	\$ Q									
Description		Virtual	Enabled	Minimum	Maximum	Current value	Ignored in	Configure [F9]		
Commu	nication f	ailure		$\checkmark$					Configure	
Sensor disconnected or faulty			<ul> <li>Image: A start of the start of</li></ul>					Configure 1		
Temperature alarm outside the configured limits			$\checkmark$				27.7		Configure	
Alarm relative to setpoint			$\checkmark$				23.7		Configure	

### ALARM INHIBITION

Sitrad Pro also allows the inhibiting alarms for a certain time. You will need to fill out a Justification because this information will be recorded in the Sitrad Pro Event Log.



In the alarm configuration window, you can configure several types of alarms, which may change according to the instrument. To configure the desired alarm:

### 1. Click on "Configure"

2. Enable the Alarm (Non-virtual alarms - generated by the instruments themselves - cannot be disabled)

3. Define the limits;

### 4. Save.

Number of Alarms

Occurring



### ACKNOWLEDGING ALARMS

Al	arm o	occurre	nces					E	B Rec	ognize	*	Back
φ							2				Showing	g 1 occurrences
✓	Recognize	Server	Converter	Instrument	Description	End date of occurrence	Recognized by	In	hibited	Date of occ	urrence	Reconhecido por
	- '	Contains:	T contains:	contains:	▼ contains:	▼ equal to:	T no filter:	r -	- 7	equal to:	T	contains:
	$\checkmark$	Local Server	USB Version 2	MT-512E Log [002]	Sensor disconnected or faulty	8/7/2017 10:30:26 AM						
	1											

# The acknowledged alarms will be saved in the Sitrad Pro Event Log.

We will talk about the Event Log later.

# 1. Select the Alarm you want to Acknowledge

2. Click on "recognize".

### ALARM INHIBITION



The Sitrad Pro also allows to inhibit alarms for a determined period. But to do so, it will be necessary justify this action once it will go to the event log of Sitrad Pro.

# LISTING MODE (VIEWER)

The Listing Mode allows viewing all the instruments connected to one or more servers in the same window.



# LISTING MODE FUNCTIONS

The information in the Listing mode is the same as in the Managerial mode but reduced.



You can access the instrument Screen or Parameters even in the Listing mode:



### INSTRUMENT STATUS





RE	PO	R	٢S
		1.7.1	

S SITRAD - 1.2.2							- 8	7	×
Sitrad	<b>⊙</b> Management	¢ Configurations	E Reports	Defrosts and Events	Administrator Local Server	<b>A</b> <sup>2</sup>	ô	6	)
Poports Config	uration								

#### Sitrad Pro allows creating the following types of reports: Create reports wizard Graphical Report | shows all information recorded in Sitrad Pro by an instrument in a Cartesian plane. Welcome to the wizard for generating Sitrad reports. *Text Report* | shows all information recorded in Sitrad Pro Choose from the options below and click "Next" to move to the by an instrument in text mode (spreadsheet). next steps of the wizard. Alarm Report | shows all alarms which occurred during the period in the selected instrument. *Temperature overview* | you can select the exact moment Graph Report you want to know the temperature. This report will inform O Text Report the current temperature (Set Point), the deviation between Alarm Report the measured temperature and the Set Point, the process Temperature Overview the instrument was in, and the instrument Status. O Predefined Report **Predefined report** | when a report is generated, you can save its predefinitions, allowing the quicker generation of new reports in the future, and helping users who need to perform this procedure several times per day/week have the ability to access the information always in the same instrument and in the same period. The predefinitions contain models of instruments, values, state of the outputs, and period. Next > Cancel

### **GRAPHICAL REPORT** | **EDITING**



# Sampling Report

8 Q ō xls

#### Text Report

Undefined Selected report predefinition:

•	t 51	Deviation relative to setpoint	Ambient Temperature	Current process	DEFROST output	Setpoint Output REFRIG	Date
23.6			27.6	Refrigeration	Off	4 On	8/7/2017 10:33:55 AM
23.6			27.6	Refrigeration	Off	4 On	8/7/2017 10:34:25 AM
23.7			27.7	Refrigeration	Off	4 On	8/7/2017 10:29:19 AM
23.7			27.7	Refrigeration	Off	4 On	8/7/2017 10:29:20 AM
23.7			27.7	Refrigeration	Off	4 On	8/7/2017 10:32:24 AM
23.7			27.7	Refrigeration	Off	4 On	8/7/2017 10:32:54 AM
23.7			27.7	Refrigeration	Off	4 On	8/7/2017 10:33:24 AM
23.7			27.7	Refrigeration	Off	4 On	8/7/2017 10:48:39 AM
23.7			27.7	Refrigeration	Off	4 On	8/7/2017 10:49:11 AM
23.8			27.8	Refrigeration	Off	4 On	8/7/2017 10:29:52 AM
23.8			27.8	Refrigeration	Off	4 On	8/7/2017 10:30:24 AM
23.8			27.8	Refrigeration	Off	4 On	8/7/2017 10:30:54 AM
23.8			27.8	Refrigeration	Off	4 On	8/7/2017 10:31:24 AM
23.8			27.8	Refrigeration	Off	4 On	8/7/2017 10:31:54 AM
23.8			27.8	Refrigeration	Off	4 On	8/7/2017 10:34:57 AM
	_		27.8	Refrigeration	Off	4 On	8/7/2017 10:35:29 AM
			27.8	Refrigeration	Off	4 On	8/7/2017 10:45:39 AM
			27.8	Refrigeration	Off	4 On	8/7/2017 10:46:09 AM
			27.8	Refrigeration	Off	4 On	8/7/2017 10:46:39 AM
Save			27.8	Refrigeration	Off	4 On	8/7/2017 10:47:09 AM
			27.8	Refrigeration	Off	4 On	8/7/2017 10:47:39 AM
			27.8	Refrigeration	Off	4 On	8/7/2017 10:48:09 AM
Print	Ō		27.9	Refrigeration	Off	4 On	8/7/2017 10:36:29 AM
			27.9	Refrigeration	Off	4 On	8/7/2017 10:36:59 AM
			27.9	Refrigeration	Off	4 On	8/7/2017 10:45:09 AM
Expo			27.9	Refrigeration	Off	4 On	8/7/2017 10:49:41 AM
	XIS		20	Defrigeration	0#	4.0%	9/7/2017 10/25-50 AM

🔦 Back

Predefinition

Options



Q Filter in the Report

### **PREDEFINED REPORT**

After saving the predefinition of the desired report, just follow the steps below to generate a new report.

			_		
1	Create reports wizard		2	Create reports wizard	
	Welcome to the wizard for generatin	g Sitrad reports.			
Select the option "predefined report"	Choose from the options below and next steps of the wizard.	click "Next" to move to the	Select the desired predefinition and click	n Select predefined settings:	
	Graph Report		"next"		
	Text Report				
	Alarm Report			< Back Next > Cancel	
	Temperature Overview				
	Predefined Report				
3	Create reports wizard				
You will	Filter items	<ul> <li>Select the reporting period</li> </ul>	bo	— <b>—</b>	
the ontions	▲ 🔽 🚍 Local Server	◯ Last 15 minutes	O Last 10 hours		
are already	✓ Z USB Version 2	Last 30 minutes	Last 15 hours		
defined.	▲ ✓ ■ MT-512Ri plus [001]	C Last 1 hour	Retroactive days		
	Setpoint	Last 5 hours	Fixed period		
Just click	Deviation relative to setpoint S1				
on the "Conorato"	Current process				
button to	Utput REFRIG				
view your	DEFROST output				
Report.	All None Measurements Inputs/Outputs				
		< Back	Generate	Cancel	

# SERVER CONFIGURATION



I	💄 Users	Create new users
	💄 Administrator	
I	🙎 Groups	Manage / Create Groups
	🙎 Administrators	
	🙎 Technicians	
	🙎 Operators	
	<ul> <li>Permissions</li> </ul>	Edit Access Permissions
	🏟 Preferences	For Full Gauge Controls use only
	Event Log	Sitrad Pro Event Log
I	🌲 Alarms	General alarm configurations
	🈭 Alarms Notifications	
	🛓 Alarms by user	Define which alarms each user will receive
I	🔹 General settings	Sitrad Pro General Configurations
	🞽 Email server	E-mail configurations
	🔒 Security	General Configurations
	🏦 Company Information	General Configurations
	Presets	General Configurations
	😼 Macros	General Configurations
	💼 Schedulings	General Configurations
	Demonstration Server	

## USER REGISTRATION

All fields with \* must be filled so that the registration can be completed. The E-mail is necessary to the password recovery and to receive alerts.

User registration		
Account information		
Login 😣	Block after	Last login
Set password	Change password after	Inactivity time
Blocked	Super Administrator	ogin
Personal information     Add Image		
Name 🚼	Email	
Phone	Email confirmation	
	Receive alarms by email	
Location information		
Time Zone	Language	
(UTC-03:00) Brasilia 👻	English	•
Permissions for user groups		
2 Add		
Devices Permissions		
Lise the list below to relate converters and instruments with	this usor	
Cose the list below to relate converters and instruments with     ✓	uns user.	

### **USER GROUPS**

This option allows Managing and Generating new User Groups. As a factory default, the system has three groups of users with predefined access permissions. However, the system administrator is free to assign and remove permissions.

The predefined groups of Sitrad Pro are:

**Administrator** With full system access

### Technician

With access to all system functions, except to manage Users and Permission Groups

### Operator

Basically views and generates reports only

The access rights are configured in the function Permissions.

### **Users Groups View**

	Name	Description	Enabled
2	Administrators	User group with permissions on all application features.	$\checkmark$
2	Technicians	User group with permissions to perform some maintenance and issues in the application, without access to user	$\checkmark$
2	Operators	User group with more restricted permissions in the application, view only the basic features, reports and alarms	$\checkmark$

### ALARMS

This field must be configured according to the customer needs.

Alarm Notification Registration	🔒 Save	🖉 Cancel
- General settings		
Inhibit alarms during the defrost.		
Alarm inhibit time after defrost (in minutes)		
0 2		
Show notifications on the SITRAD screen		
– Email settings –		
Send notifications by email		
Minimum time between sending alarms (minutes)		
3		
Alarms resending time (minutes)		
15 🔹		
Subject		
SITRAD - Alarms alert on installation		
Email addressed to		

# ALARMS PER USER

This function defines which alarms each user will receive.

Alarms by	/ user	🔒 Save
Users	Alarms	
Administrator	Filter         Select all None Expand all Collapse all         ▲       ♥         ♥       ♥         ●       ♥ <tr< td=""><td></td></tr<>	

### **GENERAL SAFETY SETTINGS**

This field must be configured according to the customer needs.

Security settings	🗟 Save	⊘ Cancel
— Login settings ————		
Blocking by login failures (attempts)	mpts. ng.	
Minimum time to lock (hours)		
2		
Determines a maximum amount of time between unsuccessful login attempts before proceeding to d	isable the account	
- Change or retrieve password		
Force password change (days)		
0		
Forces the user to change the password periodically.		
Validity of the temporary password (days)		
0		
Minimum time that user cannot reuse a password already used previous for to make the password cl	hange.	
✓ Prevent password reuse (days)		
24		
Minimum time that the user can not reuse a password that is already registered when changing pass	word.	

### **E-MAIL CONFIGURATION**

Which will send e-mails

If you have not configured the e-mail server in the initial tab, configure it in this function. This function must be configured with the customer data.

Sending Email		🔒 Save	🖉 Cancel
- SenderInformation			-
Sender name			
Sender email			
- Sending Server Informantion			
List of most common e-mail servers	<b>v</b>		
SMTP server address	Server port		
	25		
Authentication user			
Authentication password			
Server requires secure connection (SSI /STARTTI S)			
Ves  No			
Test e-mail			

### COMPANY INFORMATION

This function allows inserting the name and image of the company. This information is displayed when a report is generated or on Sitrad Pro homepage.

Company Information	📄 Save	🖉 Cancel						
Company configuration								
Company name								
Company logo								
<u>Click here to add an image</u>								
Load 🔋 Clear								

### **REGISTRATION OF RECIPES**

This function allows making a prior configuration of a certain instrument so that this recipe can be sent to several instruments later. This function facilitates the configuration of several instruments of the same model that will perform the exact same function. Typically used in the production line. The recipe name, instrument model, instrument version, and units of measurement (if available) are defined on the screen below.

Preset registration		B Save	🖉 Back			
General Information Functions						
Specific information						
Preset name	Created by					
Test	Administrator					
Instrument model	Creation date					
MT-512E Log 👻	8/7/2017 1:14:56 PM					
Version						
v. 9 or higher 👻	v. 9 or higher 🔹					
Operation models						
Measure CELSIUS						

Then the values of each function are defined. And at the end, just Save it.

Preset i	🔒 Save	e ⊘ Back			
General Informat	ion Functions				
Code	Description	Min. value	Max. value	Unity	Current value
SET	Desired temperature (Setpoint)	-50.0	75.0	°C	4.0
F02	Sensor indication displacement (Offset)	-5.0	5.0	°C	0.0
F03	Minimum setpoint allowed to the end user	-50.0	75.0	°C	-50.0
F04	Maximum setpoint allowed to the end user	-50.0	200.0	°C	75.0
F05	Control differential (hysteresis)	0.1	20.0	°C	1.0
F06	Operating Mode	0 - refrig	1 - heat		0 - refrig
F07	Minimum output-on time	0	999	sec	20
F08	Minimum output-off time	0	999	sec	20
F09	Refrigeration time (interval between defrosts)	1	999	min	240
F10	Defrosting time	0	999	min	30

# CADASTRO DE MACROS

Macros are basically a rule that is applied to the instrument at a certain time.



# SCHEDULED EVENTS

This function allows scheduling Macros, Reports, and Alarm Inhibitions. The events must be scheduled according to the customer needs.

#### Macros registration 🖉 Cancel 📄 Save Δ Specific information acro name Created by Creation date admin 8/7/2017 1:21 PM Instruments settings Filter items.. Code Description Min. value Max. value Unity Current value 🔺 🚍 Local Server SET 🔺 컱 USB Version 2 F02 Local calibration (offset) -5.0 5.0 3.0 °C 2 F03 -50.0 75.0 °C -50.0 MT-512Ri plus [001] Minimum set allowed to the end user F04 Maximum set allowed to the end user -50.0 75.0 °C 75.0 MT-512E Log [002] °C F05 Differential control (hysteresis) 0.1 20.0 1.0 MT-530E Super [003] 3 F06 Delay to turn refrigeration output on 0 999 sec 20 F07 Refrigeration time 999 min 240 F08 Defrost time duration 0 999 min 30 F09 1 - Defrost 0 - refrig Initial status on energize the instrument 0 - refrig F10 Locked indication when entering in defrost 0 - No 1 - Yes 0 - No F11 F12 Delay on energize the instrument 0 240 min 0 240 0 Additional time on 1° cycle end 0 min

Select a function from the list above to view its description

Sch	ned	ulings				
Φ		-				
Daily	View	Weekly View	Nonthly View Chr	onological View		
G	Ð	06/08/2017	- 12/08/2017	Schedulings	_ = ×	
- 1		(06) Sun	(07) Mon	Description		
Local				[Description of the schedule]		
LOCAI				Туре	Background color	
100				Macro scheduling 🔹	Orange 👻 -	
200				Start date	Initial time	
300				9/7/2017		
400				0///2017	2:05 PM () +	
500				End date	End time	
600				Ψ.	Œ÷	
700						
800				Macro	-	
1000				· ·	-	
1100					-	
1200						
1300						
1400						
1500					-	
1600						
1700				Save Cancel	Delete Recurrence	

### SITRAD PRO EVENT IOG

Sitrad Pro records all the information, changes, and accesses in its own database so that they can be gueried later. Many different details are recorded, ranging from a simple access to the registration of a new user. Information such as parameter changes is also recorded, even if the changes are made directly in the instrument by physical means.

Aside you can see some examples of information recorded by the Sitrad Pro Event Log.

### Define the date/time



Define severity



Define a specific message to filter Logs

Search the Logs

### **Event Log View**

### Search Settings Start date End date Severity Level 8/7/2017 12:00 AM V 8/7/2017 11:59 PM V All Message 🗘 Filter Search for events

Date	Message	Severity	Urigin	Chart	User
8/7/2017 10:07:58 AM	Serviço iniciado.	Informations	Serviço		System
8/7/2017 10:18:22 AM	Usuário admin autenticado com sucesso.	Audit successes	Login		System
8/7/2017 10:18:38 AM	Password changed to user 'admin'.	Informations	User		Administrator
8/7/2017 10:27:36 AM	Converter 'USB Version 2' successfully saved	Informations	Converter		Administrator
8/7/2017 10:28:37 AM	Instrument MT-530E Super [003] added to the converter USB Version 2.	Informations	Instrument		Administrator
8/7/2017 10:28:37 AM	Alarme 'AUX - Temperature alarm outside the configured limits' do instrumento MT-530E Super [003] no conversor USB Version 2 foi habilitado: Min -10 / máx: 70 / delay 0.	Informations	Virtual alarm		Administrator
8/7/2017 10:28:37 AM	Alarme 'AUX - Humidity alarm outside the configured limits' do instrumento MT-530E Super [003] no conversor USB Version 2 foi habilitado: Min 0 / máx: 100 / delay 0.	Informations	Virtual alarm		Administrator
	Alarme 'AUX - Intra temperature alarm' do instrumento MT-530E Super (003) no conversor				



Full Gauge Controls appreciates your business. For more information or questions about the configuration of Sitrad Pro and/or other Full Gauge Controls software and instruments, please contact us by calling +55 51 3778 3434 or e-mail comex@fullgauge.com

