



RSGD 45mm Monitor Software

Rev 1.0

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Chapter 1 Introduction

1.1 Foreword

The RSGD 45mm is a self-learning 2-phase controlled soft starter with a dedicated algorithm for general purpose applications.

The purpose of this document is to outline information on the monitoring software which can be used to monitor internal parameters as well as downloading of historical data from the RSGD 45mm general purpose soft starter. Should there be any problems that cannot be solved with the information provided in this guide, contact our technical representative who will be willing to help you.

1.2 Product inspection

Please check the following when receiving and unpacking RSGD units:

- The product is the one specified in your purchase order
- Check if there are any damages caused by transportation. In case of any problem, do not install the product and contact Carlo Gavazzi sales representative.

We suggest keeping the original packing in case it is necessary to return the instrument to our After Sales Department. In order to achieve the best results with your product, we recommend reading the instruction manual carefully. If the product is used in a way not specified by the producer, the protection provided by the product may be impaired.

1.3 Precautions

For your safety, the following symbol is to remind you to pay attention to safety instructions on configuring and installing RSGD. Be sure to follow the instructions for higher safety.



This symbol indicates a particularly important subject or information.

Please read this manual thoroughly before using the device. Should there be any problem using the product which cannot be solved with the information provided in the manual, contact your nearest Carlo Gavazzi distributor or our sales representatives to help you. Check that the device is installed in accordance with the procedures as described in this manual.

The manufacturer accepts no liability for any consequence resulting from inappropriate, negligent or incorrect installation or adjustment of the optional parameters of the equipment. The contents of this guide are believed to be correct at the time of printing. In the interests of commitment to a policy of continuous development and improvement, the manufacturer reserves the right to change the specification of the product or its performance, or the content of the guide without notice.

Chapter 2 Software Installation

2.1 System requirements

The monitoring software is designed to run on:

- Windows 7
- Windows 8/8.1
- Windows 10

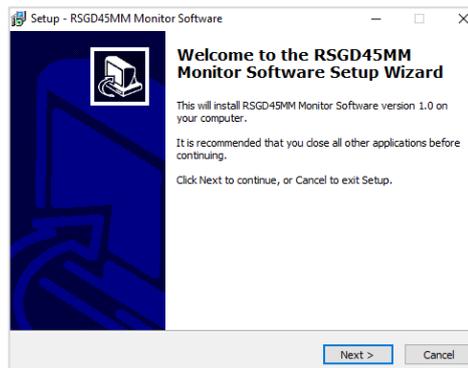
2.2 Software setup file

If the PC meets the above system requirements, you can download the latest version of the software from our website:

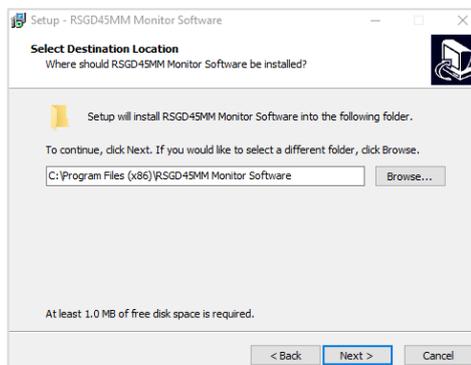
http://gavazziautomation.com/nsc/HQ/EN/soft_starters).

2.2 Installing the software

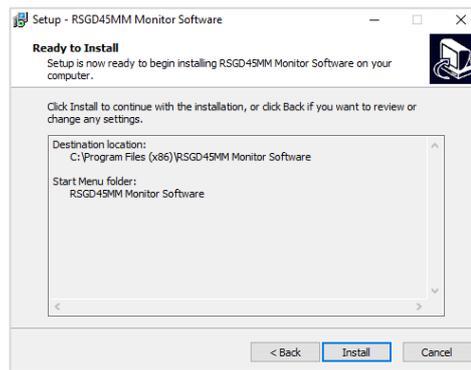
If the setup file is downloaded successfully, you can start installing the software by unzipping the file and then run the setup.exe file. The following window will appear:



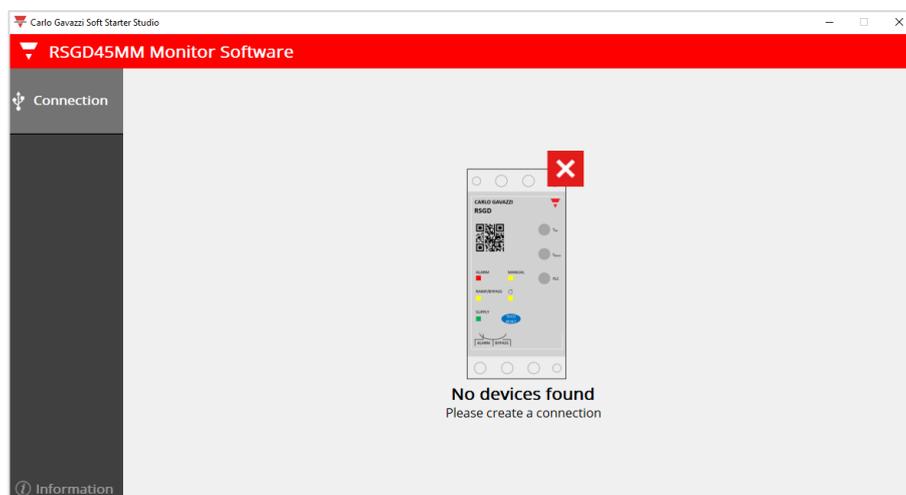
Click next to progress through the Install Wizard and install the software. Choose a location to install the software or click next to continue with the default location.



Click next to start the installation.



Once the installation is complete, you should see the Carlo Gavazzi logo on your desktop. Double click to open the software. The following screen will appear:



2.3 Uninstalling the software

When you uninstall the software, the files installed by the RSGD45MM monitor software will be removed from your PC.

The following steps instruct you to uninstall the software from your PC.

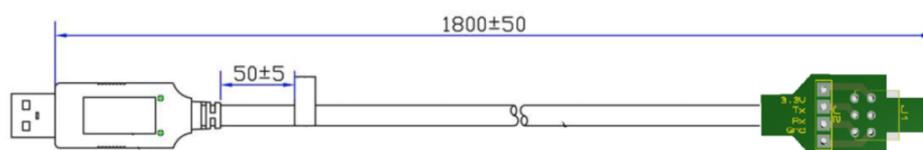
- Open the Control Panel in Windows and under Programs, click on Uninstall a program
- Select the monitoring software and click on Uninstall

Chapter 3 RS-USB Cable Installation

3.1 RS-USB Cable

The RS-USB cable is a USB to TTL galvanically isolated serial cable designed to allow easy connection and communication between PC and RSGD 45mm software.

3.2 Dimensions



3.3 Driver for RS-USB cable

If the PC does not recognise the RS-USB cable, please download the USB driver from our website (http://gavazziautomation.com/nsc/HQ/EN/soft_starters) and then install it to allow the cable to work with COM port applications for Windows.

3.4 Connection



Turn off the power on RSGD before connecting the cable.



If there is an error during communication, please check the wiring connection and restart the RSGD45mm monitor software.

3.5 Establishing communication

In order to be able to establish communication between the PC and the RSGD, you will need to:

- correctly connect the RS-USB cable as explained in Section 3.4 and;
- apply power to the soft starter.



A minimum voltage of 230VAC single phase must be connected to L1-L3 for RSGD40 models.



For RSGD60 models apply the correct voltage level across A1-A2 terminals as follows:

- RSGD60...GG: 100~230VAC

Chapter 4 RSGD45mm Monitor Software

4.1 Software structure

The RSGD45mm monitoring software is a user-friendly software that can be used to read real time data as well as downloading historical data from the RSGD 45MM soft starters. It consists of two main windows:

- *Connection*
- *Dashboard*

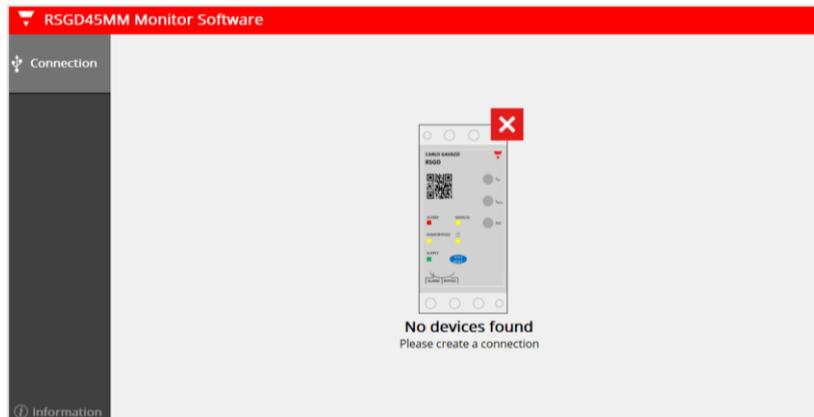


The dashboard is only accessible when the PC establishes communication with the device.

4.2 Connections

The following procedure must be followed to establish connection with the device:

1. Click on the *Connection* menu.



2. Select the port that you had connected the RS-USB cable with the PC and click on the Connect icon.

Connection ✔	
Port	COM3 ↻
Address	1
Baud Rate (bit/s)	9600
Parity	None
Connect >	

If connection is successful, the following message will appear:

Communication is established!

If connection is not successful, one of the following messages will be displayed:

Comport is already open! Please choose another comport.

Cause: The selected comport is probably being used by another software.

Corrective action: Close any software that may be using the selected comport.

**Communication was not established!
Check comport or supply.**

Cause: a) Comport is not properly connected

b) The soft starter is switched off

Corrective actions: a) Open the Device Manager in Windows and check the comport that is being used by the RS-USB cable.

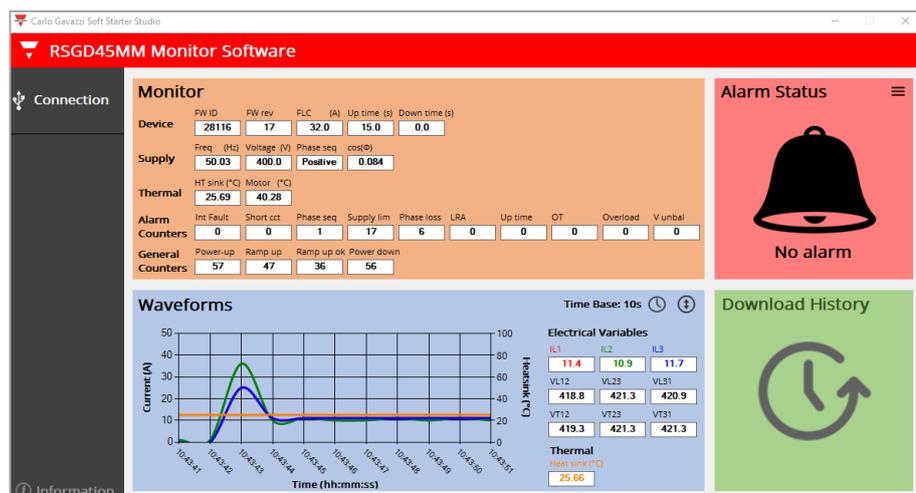
b) Apply power to the soft starter.

4.3 Dashboard

The dashboard provides information on the soft starter in real time.

It contains 4 widgets:

- Monitor
- Waveforms
- Alarm status
- Download history



a. Monitor

This widget lists the instantaneous variables available in the RSGD 45MM into 5 groups:

Device	Contains information on device firmware version and user settings
Supply	Contains information on input mains
Thermal	Heatsink and virtual motor temperatures
Alarm counters	Counters of the various alarms generated by RSGD
General counters	Counters related to usage of RSGD

b. Electrical variables

This widget is similar to an oscilloscope where the user can monitor the following variables:

- Current in each phase (I L1, I L2, I L3)
- Heatsink temperature

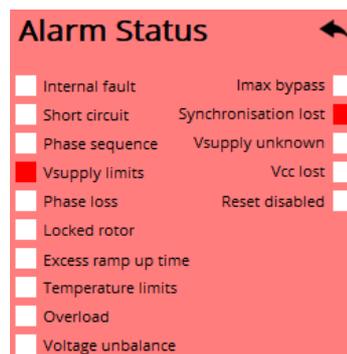
Scope icons description		
Icon	Definition	Description
	Time base	4x time bases: 10s, 20s, 30s, 40s
	Current range	4x current ranges: 0~50A, 0~100A, 0~150A, 0~200A

c. Alarm status

If an alarm is triggered, the alarm status widget will appear as shown in the following figure.



By clicking on the triple bar icon found on the top right corner of this widget, the user can identify which fault was triggered by the soft starter.



d. Download history

The user can download a history file (in CSV (.csv) format) which contains information about the last 32 starts performed. For further information on the content of the history file we advise you to contact Carlo Gavazzi sales support.

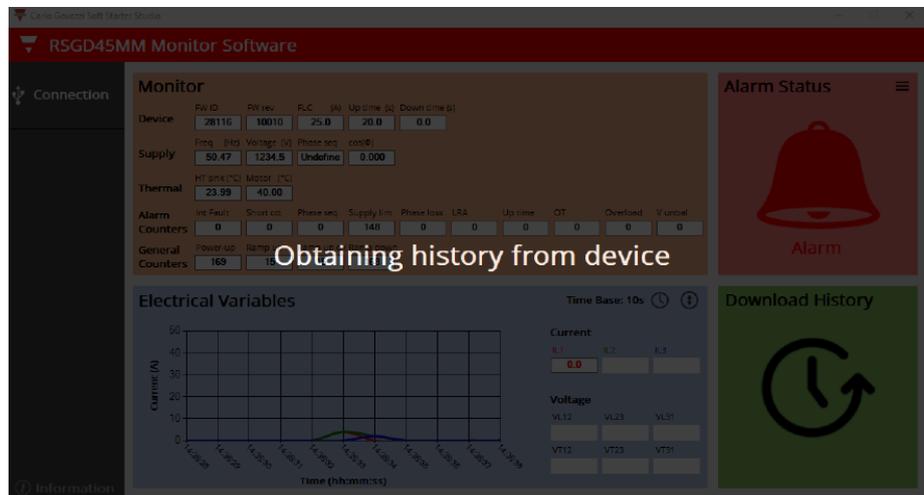
The following procedure describes the steps required to download the history file:

1. Click on the Download history widget



Make sure that motor is not running (i.e. soft starter is not in ramp/bypass state).

2. The software starts to extract history data from device. This process takes 5 seconds and then the software continues to monitor the device data.



3. Save the history file at any desirable location on the PC.

Start Number	System Voltage & Phase Sequence	Ramp-up time (s)	Initial firing angle (°)	Current balance setting	Alarm reset mode	Phase sequence alarm mode	Motor overload alarm mode	Current Limit Setpoint (A)	Ramp-down time (s)	ILC setting	Max I.L1 during ramp-up (A)	Max I.L2 during ramp-up (A)	Max I.L3 during ramp-up (A)	IP mode	Time to reach full speed (s)	Time to reach continuous current	Max I.L1 during bypass (A)	Max I.L2 during bypass (A)	Max I.L3 during bypass (A)	Force on leaving bypass (Hz)	Ramp-down duration (s)	Max I.L1 during ramp-down (A)	Max I.L2 during ramp-down (A)	Max I.L3 during ramp-down (A)	Maximum MTC temperature (°C)	Junction Temperature (°C)	Estimated motor temperature (°C)	Soft Starter status after stopping
1	1400V	10	115	33000	Auto	Enabled	Enabled	150	15	Position 5	51	72	48	0	0.503	0.6	11	11	11	1.325	0	11	11	11	25	29	40	Idle
2	1400V	10	115	33332	Auto	Enabled	Enabled	52	15	Position 5	50	71	47	0	0.505	0.602	17	11	11	1.6	0	17	11	11	26	29	40	Idle
3	1400V	10	115	33294	Manual	Enabled	Enabled	50	15	Position 5	51	71	48	0	0.507	0.604	11	11	11	1.3	15.53	11	11	11	26	29	40	Idle
65535	600V	30	255	36518	Manual	Disabled	Disabled	1023	30	Position 7	1023	1023	1023	0	65.535	65.535	1023	1023	1023	1638.4	65.535	1023	1023	1023	205	205	295	295
65536	600V	30	255	36518	Manual	Disabled	Disabled	1023	30	Position 7	1023	1023	1023	0	65.535	65.535	1023	1023	1023	1638.4	65.535	1023	1023	1023	205	205	295	295
65537	600V	30	255	36518	Manual	Disabled	Disabled	1023	30	Position 7	1023	1023	1023	0	65.535	65.535	1023	1023	1023	1638.4	65.535	1023	1023	1023	205	205	295	295
65538	600V	30	255	36518	Manual	Disabled	Disabled	1023	30	Position 7	1023	1023	1023	0	65.535	65.535	1023	1023	1023	1638.4	65.535	1023	1023	1023	205	205	295	295
65539	600V	30	255	36518	Manual	Disabled	Disabled	1023	30	Position 7	1023	1023	1023	0	65.535	65.535	1023	1023	1023	1638.4	65.535	1023	1023	1023	205	205	295	295
65540	600V	30	255	36518	Manual	Disabled	Disabled	1023	30	Position 7	1023	1023	1023	0	65.535	65.535	1023	1023	1023	1638.4	65.535	1023	1023	1023	205	205	295	295
65541	600V	30	255	36518	Manual	Disabled	Disabled	1023	30	Position 7	1023	1023	1023	0	65.535	65.535	1023	1023	1023	1638.4	65.535	1023	1023	1023	205	205	295	295
65542	600V	30	255	36518	Manual	Disabled	Disabled	1023	30	Position 7	1023	1023	1023	0	65.535	65.535	1023	1023	1023	1638.4	65.535	1023	1023	1023	205	205	295	295
65543	600V	30	255	36518	Manual	Disabled	Disabled	1023	30	Position 7	1023	1023	1023	0	65.535	65.535	1023	1023	1023	1638.4	65.535	1023	1023	1023	205	205	295	295
65544	600V	30	255	36518	Manual	Disabled	Disabled	1023	30	Position 7	1023	1023	1023	0	65.535	65.535	1023	1023	1023	1638.4	65.535	1023	1023	1023	205	205	295	295
65545	600V	30	255	36518	Manual	Disabled	Disabled	1023	30	Position 7	1023	1023	1023	0	65.535	65.535	1023	1023	1023	1638.4	65.535	1023	1023	1023	205	205	295	295
65546	600V	30	255	36518	Manual	Disabled	Disabled	1023	30	Position 7	1023	1023	1023	0	65.535	65.535	1023	1023	1023	1638.4	65.535	1023	1023	1023	205	205	295	295
65547	600V	30	255	36518	Manual	Disabled	Disabled	1023	30	Position 7	1023	1023	1023	0	65.535	65.535	1023	1023	1023	1638.4	65.535	1023	1023	1023	205	205	295	295
65548	600V	30	255	36518	Manual	Disabled	Disabled	1023	30	Position 7	1023	1023	1023	0	65.535	65.535	1023	1023	1023	1638.4	65.535	1023	1023	1023	205	205	295	295
65549	600V	30	255	36518	Manual	Disabled	Disabled	1023	30	Position 7	1023	1023	1023	0	65.535	65.535	1023	1023	1023	1638.4	65.535	1023	1023	1023	205	205	295	295
65550	600V	30	255	36518	Manual	Disabled	Disabled	1023	30	Position 7	1023	1023	1023	0	65.535	65.535	1023	1023	1023	1638.4	65.535	1023	1023	1023	205	205	295	295
65551	600V	30	255	36518	Manual	Disabled	Disabled	1023	30	Position 7	1023	1023	1023	0	65.535	65.535	1023	1023	1023	1638.4	65.535	1023	1023	1023	205	205	295	295
65552	600V	30	255	36518	Manual	Disabled	Disabled	1023	30	Position 7	1023	1023	1023	0	65.535	65.535	1023	1023	1023	1638.4	65.535	1023	1023	1023	205	205	295	295
65553	600V	30	255	36518	Manual	Disabled	Disabled	1023	30	Position 7	1023	1023	1023	0	65.535	65.535	1023	1023	1023	1638.4	65.535	1023	1023	1023	205	205	295	295
65554	600V	30	255	36518	Manual	Disabled	Disabled	1023	30	Position 7	1023	1023	1023	0	65.535	65.535	1023	1023	1023	1638.4	65.535	1023	1023	1023	205	205	295	295
65555	600V	30	255	36518	Manual	Disabled	Disabled	1023	30	Position 7	1023	1023	1023	0	65.535	65.535	1023	1023	1023	1638.4	65.535	1023	1023	1023	205	205	295	295



The last 32 starts performed by the RSGD are memorized in a FIFO (first-in, first-out) type queue. When the RSGD has more than 32 starts recorded in its history, the earlier starts will be overwritten.