# Software

# SuperDrive G2 15.1.0.4776

**User's Manual** 





# **User's Manual**

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# 1 SuperDrive G2

Contents of this chapter:

<u>Welcome</u>

<u>Contact</u>

# Start

Click the Welcome button to start.

Welcome

# 1.1 Welcome

# Welcome to SuperDrive G2 15.1.0.4776 !

Thank you for using SuperDrive G2, a windows based graph tool for parameter setting, command and monitoring of drives.

SuperDrive G2 is a computer tool for making the use of drives as easy and convenient as possible.

SuperDrive G2 provides user-friendly tools for viewing, manipulating, and exchanging data with the drive. Data can be retrieved, changed and stored.

#### **Main Features**

- Online identification of connected drive;
- Offline configuration of drive;
- Parameter transfer from computer to the drive;
- Parameter transfer from drive to the computer;
- Offline editing of the parameters stored on the computer;
- Online editing of the parameters in drive;
- Monitoring of the drive status;
- Command operations (motor stop/run, jog, forward/reverse, local/remote, etc);
- Supports multiple databases for standard and special firmware version;
- RS232, RS485, USB and Ethernet point-to-point serial communication;
- Graphical monitoring of parameters;
- Configuration, import and visualization of variables stored in Trace function of the drive (CFW-11, CFW-11M G2, SCA-06 and CTW900)
- Project importation and exportation;
- Project conversion;
- Online help.

#### NOTE!

Some features are not available in all drives.

# 1.2 Contact

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SuperDrive G2 15.1.0.4776 Technical Support: Contact a local branch or representative. Contact Us: <u>http://www.weg.net/</u> Publication Date: 04/2019

# 2 Introduction

Contents of this chapter:

System Requirements

Supported Drives

User's Manual

# 2.1 System Requirements

Item	Description
Processor	1 GHz or faster processor
Operating System	Windows 7 / 8 / 8.1 / 10 (x86, x64) with latest service pack available or upgrade
	You must have administrator privileges to install the software
Momony	Windows (x86) - 1 GB or more recommended
менюгу	Windows (x64) - 2 GB or more recommended
Display Color	High color resolution (16 bits) or more
Dianlay Decolution	1024x768 pixels
	1280x1024 pixels or higher-resolution screen recommended
Disk Space	2 GB of free disk space
Pointing Device	Mouse or compatible pointing device
Java Runtime Environment	It is not necessary to install java; SuperDrive G2 already includes a suitable JRE 8.
	Mozilla Firefox 66 or greater
	Opera 58 or greater
	Internet Explorer 9/10/11 (Windows 7)
Internet Browcer	Internet Explorer 10/11 (Windows 8, 8.1)
	Internet Explorer 11 (Windows 10)
	JavaScript enabled
	Browser should support Cascading Style Sheets (CSS1) and JavaScript
Printer	Inkjet or laser compatible with the OS; required only if need printing data.

(x86) = 32-bit Edition. (x64) = 64-bit Edition.

# 2.2 Supported Drives

The following table shows drives and firmware versions that each database supplied with SuperDrive G2 supports.

Drive SuperDrive G2
---------------------

		15.1.0.4776			
	1.0X	Х			
	1.1X	Х			
	1.3X	Х			
	1.6X	X			
	2.0X	X			
	2.46	X			
	2.50	X			
	2.51	X			
	3.0X	X			
	3.11	X			
	3 12	X			
	3.12	×			
	3 30	×			
	3.30	× ×			
	2 22	×			
	2.32	A			
	2.55	<u> </u>			
	3.5X	X			
	3.90	X			
	4.01	<u> </u>			
	4.10	<u> </u>			
	4.20	X			
	4.21	X			
	5.1X	X			
	5.2X	X			
CFW-11	5.30	X			
	5.31	X			
	5.33	Х			
	5.35	X			
	5.36	Х			
	5.4X	Χ			
	5.7X	Χ			
	5.8X	X			
	15.16	Х			
	15.30	Х			
	15.78	Х			
	15.84	Х			
	15.90	Х			
	15.91	X			
	15.97	X			
	45.11	X			
	45.12	X			
	45.80	X			
	55.20	<u> </u>			
	55.82	X			
	65.12	X			
	65.83				
	85.33	Y			
	05.5Z	^Y			
	05.02	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~			
	05.04	<u>Λ</u>			
	85.90	X			
CFW-11RB	2.0X	<u> </u>			
	2.1X	X			
CFW-11M G2	1.1X	X			
CFW701	1.2X	Х			

	2.0X	Х
	2.1X	Х
	12.07	Х
	1.0X	Х
	1.2X	Х
CFW700	2.00	Х
	2.0X	Х
	2.2X	Х
	1.1X	Х
C FINE OO	1.5X	Х
CFW500	1.8X	Х
	2.0X	Х
	1.3X	Х
CFW501	1.5X	Х
	1.8X	Х
	1.1X	Х
	2.0X	Х
C F14/100	2.1X	Х
CFW100	2.2X	X
	2.3X	X
	2.4X	Х
	1.5X	Х
MW500	1.60	Х
	2.0X	Х
	1.0X	Х
ECW500	1.1X	Х
	1.3X	Х
	1.0X	Х
DI C 1 1 0 1	1.2X	Х
PLC 11-01	1.4X	Х
	1.7X	Х
	1.0X	Х
	1.2X	Х
PLC II-02	1.4X	Х
	1.7X	Х
CTWOOO	1.0X	Х
C1W900	1.1X	Х
	1.1X	Х
	1.2X	Х
SCA-06	1.4X	Х
	1.5X	Х
	1.7X	Х
	1.3X	Х
	1.4X	Х
SSW-06	1.6X	Х
	1.7X	Х
	1.8X	X
	1.2X	X
	1.3X	Х
55W-U/	1.4X	X
	1.5X	X
	1.3X	X
SSW-08	1.4X	<u> </u>
	1.5X	<u> </u>

	1.3X	Х
	1.4X	Х
	1.5X	Х
	1.6X	Х
	10.0X	Х
CFW-09 PM	11.3X	Х
	12.0X	Х

#### NOTE!

$\bigcap^{(1)}$	SSW-06	1.3X -	From version	1.31	and on
<b>(</b> 2)	SSW-07	1.2X -	From version	1.21	and on
(3)	CFW700	1.0X -	From version	1.02	and on

As new firmware versions are created, additional databases are added to SuperDrive G2.

The additional databases can be found on the Internet at the manufacturer's web site (see <u>Contact</u>).

If your drive uses a special firmware version (customized version), SuperDrive G2 needs an additional database. Request this additional database for the manufacturer.

The software allows communication only with the drive types listed in the above table.

Firmware is the software which controls the drive. To find out which is the firmware version, read parameter P0023.

### **Older Versions**

The following tables show drives and firmware versions that each database supplied with SuperDrive G2 supports.

Drive		SuperDrive G2						
		12.0.0	12.1.0	13.0.0.3103	14.0.0.3677	15.0.0.4707		
	1.0X	Х	Х	X	Х	Х		
	1.1X	Х	Х	Х	Х	Х		
	1.3X	Х	Х	Х	Х	Х		
	1.6X	Х	Х	X	Х	Х		
	2.0X	Х	Х	Х	Х	Х		
	2.46	Х	Х	X	Х	Х		
	2.50	Х	Х	X	Х	Х		
	2.51	Х	Х	X	Х	Х		
	3.0X	Х	Х	Х	Х	Х		
CFW-II	3.11	Х	Х	Х	Х	Х		
	3.12	Х	Х	Х	Х	Х		
	3.1X	Х	Х	Х	Х	Х		
	3.30	Х	Х	Х	Х	Х		
	3.31	Х	Х	Х	Х	Х		
	3.32	Х	Х	Х	Х	Х		
	3.33	X	X	X	X	X		
	3.5X	Х	Х	X	Х	Х		
	3.90	Х	Х	X	Х	Х		

	4.01	X	X	Х	Х	X
	4.10	Х	Х	Х	Х	Х
	4.20	Х	Х	Х	Х	Х
	4.21	Х	Х	Х	Х	Х
	5.1X	Х	Х	Х	Х	Х
	5.2X		Х	Х	Х	Х
	5.30	Х	Х	Х	Х	Х
	5.31	Х	Х	Х	Х	Х
	5.33			Х	Х	Х
	5.4X	Х	Х	Х	Х	Х
	5.7X			X	Х	X
	5.8X		X	X	Х	X
	15.16	X	X	Х	Х	X
	15.30					Х
	15.78				Х	Х
	15.84	Х	X	Х	Х	Х
	15.90	X	X	Х	Х	Х
	15.91	X	X	X	X	X
	15.97	X	X	X	Х	X
	45.11	X	X	X	Х	X
	45.12	X	X	X	Х	X
	45.80					X
	55.82					X
	65.1X	X	X	X	Х	X
	85.32		X	X	Х	X
	85.82				Х	X
	85.84					X
	85.90					X
CFW-11RB	2.0X		X	X	X	X
	2.1X					X
CFW-11M G2	1.1X					X
	1.2X	X	X	X	X	X
CFW701	2.0X	X	X	X	X	X
	2.1X					X
	12.07				X	X
	1.0X	X	X	X	X	X
	1.2X	X	X	X	X	X
CFW700	2.00	X	X	X	X	X
	2.0X	X	X	X	X	X
	2.2X			Y		X
	1.1X	X	X	X	X	X
CFW500	1.5X	X	X	X	X	X
	1.8X	X	X	X	X	X
	2.0X		X	X	X	X
	1.3X	X	X	X	X	X
CFW501	1.5X	X	X	X	X	X
	1.8X	X	X	X	Х	X

	1.1X	Х	Х	Х	Х	Х
	2.0X	х	Х	Х	Х	Х
C E14/100	2.1X	Х	Х	Х	Х	Х
CFW100	2.2X	Х	Х	Х	Х	Х
	2.3X	Х	Х	Х	Х	Х
	2.4X	Х	Х	Х	Х	Х
	1.5X	Х	Х	Х	Х	Х
MW500	1.60				Х	Х
	2.0X					Х
	1.0X	Х	Х	Х	Х	Х
ECW500	1.1X		X	Х	Х	Х
	1.3X					Х
	1.0X	Х	Х	Х	Х	Х
	1.2X	Х	X	Х	Х	Х
PLC 11-01	1.4X	Х	X	Х	Х	Х
	1.7X	Х	Х	Х	Х	Х
	1.0X	Х	X	Х	Х	Х
PLC11-02	1.2X	Х	Х	Х	Х	Х
1 LC 11 02	1.4X	Х	Х	Х	Х	Х
	1.7X	X	X	X	Х	X
CTW900	1.0X	X	X	X	X	X
	1.1X	Х	X	X	Х	Х
	1.1X	X	X	X	X	Х
	1.2X	Х	X	X	X	Х
SCA-06	1.4X	Х	X	X	Х	Х
	1.5X	Х	X	X	X	Х
	1.7X				Х	X
	1.3X	X	X	X	Х	Х
	1.4X	Х	X	X	Х	Х
SSW-06	1.6X	X	X	X	Х	X
	1.7X	X	X	X	Х	Х
	1.8X	X	X	X	Х	X
	1.2X	X	X	X	X	X
SSW-07	1.3X	X	X	X	X	X
	1.4X	X	X	X	X	X
	1.5X	X	X	X	X	X
	1.3X	X	X	X	X	X
SSW-08	1.4X	X	X	X	X	X
	1.5X	X	X	X	X	X
	1.1X	X	X	X	X	X
	1.3X	X	X	X	X	X
SSW7000	1.4X	X	X	X	X	X
	1.5X			X	X	X
	1.6X				X	X
0.5.4	10.0X	X	X	X	X	X
CFW-09 PM	11.3X	X	X	X	X	X
	12.0X	Х	X	X	Х	Х

Drive			SuperD	rive G2	
Drive		11.0.0	11.1.0	11.2.0	11.3.0
	1.0X	Х	Х	Х	Х
	1.1X	Х	Х	Х	Х
	1.3X	Х	Х	Х	Х
	1.6X	Х	Х	Х	Х
	2.0X	Х	Х	Х	Х
	2.46	X	X	X	Х
	2.50	X	Х	Х	Х
	2.51	X	X	X	Х
	3.0X	X	X	X	Х
	3.11	Х	Х	Х	Х
	3.12	X	X	X	X
	3.1X	X	X	X	X
	3.30			Х	Х
CFW-11	3.31			Х	Х
	3.32			Х	Х
	3.33			Х	Х
	3.5X	X	X	X	X
	3.90	X	X	X	X
	4.01	X	X	X	X
	4.10	X	X	X	X
	4.20			X	X
	5.18	Y	Y	Y	Y
	5.20				× ×
	5.50			^	^ 
	5.31				X
	5.4X			X	X
	65.1X				Х
C FW/701	1.2X	X	X	X	Х
CI W/01	2.0X	Х	Х	Х	Х
	1.0X	Х	Х	Х	Х
C FW700	1.2X	X	X	X	Х
	2.00			Х	Х
	2.0X	Х	Х	Х	Х
C FW/500	1.1X	X	X	X	Х
	1.5X	Х	Х	Х	Х
	1.3X				X
CrwbUI	1.5X				Х
	1.1X	Х	Х	Х	Х
	2.0X	Х	Х	Х	Х
CFW100	2.1X		X	X	X
0	2.2X			Х	Х
	2.32				Y
MMEOO	1 5			V	N N
MW 500	1.5X	X	X	X	X
ECW500	1.0X	X	X	X	X
	1.0X	X	X	X	X
PLC11-01	1.2X	X	X	X	X
	1.4X	X	X	X	X V
PLC11-02	1.07				A Y
	1.27				^

	1.4X	Х	Х	Х	Х
CTW900	1.0X	Х	Х	Х	Х
	1.1X	Х	Х	Х	Х
SCA-06	1.2X	Х	Х	Х	Х
	1.4X			Х	Х
	1.3X	Х	Х	Х	Х
CCW 06	1.4X	Х	Х	Х	Х
5500-00	1.6X	Х	Х	Х	Х
	1.7X	Х	Х	Х	Х
	1.2X	Х	Х	Х	Х
SSW-07	1.3X	Х	Х	Х	Х
	1.4X	Х	Х	Х	Х
SCM 09	1.3X	Х	Х	Х	Х
5500-06	1.4X	Х	Х	Х	Х
SSW7000	1.1X	Х	Х	Х	Х
	10.0X	Х	Х	Х	Х
CFW-09 PM	11.3X	Х	Х	Х	Х
	12.0X	Х	Х	Х	Х

Drive							Sup	erDriv	e G2					
Dive		8.80	8.90	9.00	9.10	9.20	9.30	9.40	9.50	9.60	9.70	9.80	9.90	10.00
	1.0X	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
	1.1X	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	X
	1.3X	X	X	X	X	X	X	X	X	X	X	X	X	X
	1.6X	X	X	X	X	X	X	X	X	X	X	X	X	X
	2.0X	X	X	X	X	X	X	X	X	X	X	X	X	X
	2.46				X	X	X	X	X	X	X	X	X	X
	2.50				Х	X	X	Х	Х	Х	X	X	X	X
	2.51				Х	Х	Х	Х	Х	Х	Х	Х	Х	X
	3.0X		Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
	3.11					Х	Х	Х	Х	Х	Х	Х	Х	Х
	3.12					Х	Х	Х	Х	Х	Х	Х	Х	Х
	3.1X							Х	Х	Х	Х	Х	Х	Х
	3.30													
CFW-11	3.31													
	3.32													
	3.33													
	3.5X										Х	Х	Х	Х
	3.90				Х	Х	Х	Х	Х	Х	Х	Х	Х	X
	4.01									Х	Х	Х	Х	X
	4.10									Х	Х	Х	Х	х
	4.20													
	5.1X													Х
	5.30													
	5.31													
	5.4X													
	65.1X													
	1.2X					Х	Х	Х	Х	Х	Х	X	Х	Х
	2.0X											Х	Х	Х
CFW700	1.0X	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х

	1.2X							Х	Х	Х	Х	Х	Х	Х
	2.0X											Х	Х	Х
	1.1X					Х	Х	Х	Х	Х	Х	Х	Х	х
CFW500	1.5X											х	Х	х
	1.3X													
CFW501	1 5X													
	1.1								v	v	v	v	v	v
	2.07								~	~	~	~	×	× ×
CFW100	2.0X												^	^
	2.1X													
	2.3X													
MW500	1.5X													
ECW500	1.0X									Х	Х	X	Х	Х
	1.0X	Х	Х	X	Х	X	X	Х	X	Х	Х	Х	Х	Х
PLC11-01	1.2X	Х	Х	Х	Х	Х	X	Х	X	Х	Х	Х	Х	Х
	1.4X	Х	X	Х	X	Х	X	Х	X	Х	X	X	Х	Х
	1.0X	Х	X	X	X	X	X	X	X	X	Х	X	Х	Х
PLC11-02	1.2X	Х	X	X	X	X	X	X	X	X	Х	X	Х	Х
	1.4X	Х	X	X	X	X	X	X	X	X	Х	X	Х	Х
CTW900	1.0X						Х	Х	Х	Х	Х	Х	Х	Х
	1.1X	Х	Х	Х	Х	X	X	Х	X	Х	Х	Х	Х	Х
SCA-06	1.2X						Х	Х	Х	Х	Х	X	Х	Х
	1.4X													
	1.3X	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
	1.4X	Х	X	Х	X	Х	Х	Х	Х	Х	Х	X	Х	Х
3300-00	1.6X	Х	X	X	X	X	X	Х	X	Х	X	X	Х	Х
	1.7X	Х	X	Х	X	Х	X	Х	X	Х	X	X	Х	Х
	1.2X	Х	X	X	X	X	X	X	X	X	X	X	Х	Х
SSW-07	1.3X	Х	X	Х	X	Х	X	Х	X	Х	X	X	Х	Х
	1.4X	Х	X	X	X	X	X	Х	Х	Х	Х	Х	Х	Х
SSW-08	1.3X	Х	X	X	X	X	Х	Х	Х	Х	Х	Х	Х	X
	1.4X	Х	X	X	X	X	Х	Х	Х	Х	Х	Х	Х	Х
SSW7000	1.1X	Х	X	X	X	X	X	X	X	X	Х	X	Х	Х
	10.0X	Х	X	X	X	X	X	X	X	X	X	X	X	Х
CFW-09 PM	11.3X	Х	X	X	X	X	X	X	X	X	X	X	Х	Х
	12.0X	Х	X	X	X	X	X	X	X	X	X	X	X	X

Drive							Sup	erDriv	e G2					
<b>Drive</b> 1.0X		8.00	8.10	8.11	8.20	8.21	8.30	8.31	8.32	8.33	8.40	8.50	8.60	8.70
	1.0X		Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	х
	1.1X					Х	Х	Х	Х	Х	Х	Х	Х	Х
	1.3X							Х	Х	Х	Х	Х	Х	Х
	1.6X								Х	Х	Х	Х	Х	х
	2.0X												Х	х
CFW-11	2.46													
	2.50													
	2.51													
	3.0X													
	3.11													
	3.12													

	3.1X													
	3.30													
	2.21													
	3.31													
	3.32													
	3.33													
	2.57													
	3.5X													
	3.90													
	4.01													
	4 10													
	4.10													
	4.20													
	5.1X													
	5 30													
	5.50													
	5.31													
	5.4X													
	65.1X													
	1.2V													
CFW701	1.2X													
	2.0X													
	1.0X												х	Х
C FW/700	1.28													
CT W700	1.27													
	2.0X													
	1.1X													
CFW500	1 5X													
	1.57													
CEW501	1.3X													
0111001	1.5X													
	1.1X													
	2.07													
CFW100	2.0X													
	2.1X													
	2.3X													
MW/500	1 5 Y													
1110 300	1.57													
ECW500	1.0X													
	1.0X							Х	Х	Х	Х	Х	Х	Х
PLC11-01	1 2 X										X	X	x	x
. 2011 01	1 41										~	X	X	X
	1.4X											X	X	X
	1.0X									X	X	X	X	X
PLC11-02	1.2X										Х	Х	X	Х
	1.4											v	v	v
	1.47											^	^	^
CTW900	1.0X													Х
	1.1X													x
SCA-06	1 2X													
00/100	1.41													
	1.4X													
	1.3X	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
	1.4X					X	X	X	X	Х	X	X	X	X
SSW-06	1.6X										X	X	X	X
	1.07										~	~	~	
	1./X													Х
	1.2X				X	X	Х	X	Х	Х	Х	X	X	X
SSW-07	1.3X						Х	Х	Х	Х	Х	Х	Х	Х
	1.41													
	1.4X													

CCW 09	1.3X				Х	Х	Х	Х	Х	Х	Х	Х
5510-08	1.4X											
CCW/7000	1.1X											
5511/000	1.2X											
	10.0X		Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
CFW-09 PM	11.3X				Х	Х	Х	Х	Х	Х	Х	Х
	12.0X						Х	Х	Х	Х	Х	Х

### NOTE!

 $O_{(2)}^{(1)}$  SSW-06 1.3X - From version 1.31 and on  $O_{(2)}^{(2)}$  SSW-07 1.2X - From version 1.21 and on  $O_{(3)}^{(3)}$  CFW700 1.0X - From version 1.02 and on

# 2.3 User's Manual

The user's manual, in several formats, can be found in the folders indicated below, where the SuperDrive G2 is installed.

# PDF

Folder: \help\en\_US\PDF Example: C:\WEG\SuperDrive G2 15.1.0.4776\help\en\_US\PDF

# HTML

Folder: \help\en\_US\HTML Example: C:\WEG\SuperDrive G2 15.1.0.4776\help\en\_US\HTML

# СНМ

Folder: \help\en\_US\CHM Example: C:\WEG\SuperDrive G2 15.1.0.4776\help\en\_US\CHM

# **3 Getting to Know the Environment**

Contents of this chapter:

Main Window

Project Tree

# 3.1 Main Window

The main window allows accessing and navigating specific areas of the application.

On the main window, the user can create and open drive (equipments) projects with several functionalities, depending on the availability of each drive.

The main window contains the following elements:

**01** - Menu Bar: allows access to the software commands; the commands are accessible under certain conditions.

**02** - Toolbar: displays buttons that quickly access an application command.

**03** - Panel with Checkboxes: displays or hides other panels.

**04** - WEG Web Site: click to open the WEG website in the browser.

**05** - Help Panel: displays help in 3 languages English, Spanish, Portuguese, in html, chm and pdf formats.

**06** - Project panel: shows the project name and its path.

**07** - Communication panel: shows the selected connection type and settings.

**08** - Project tree: shows the project with the drive information and file list.

**09** - Appearance panel: shows position, language and look & feel buttons.

**10** - Status Bar: located at the bottom of the screen. The status bar provides a description of the command or button on which the cursor is placed.

S SuperDrive G2			_		×
Project Drive Tools H	lelp				
		¹ <mark>₽.,  </mark>			
Website Panel	Help Panel	Project Panel Communication Panel Appearance Panel			
weg		http://www.weg.net/			
Help - I	English IM PDF	Ayuda - Español Ajuda - Português HTML CHM PDF HTML CHM PDF	]		
-	Project Name	Project Path			
	Project1	C:\WEG\SuperDrive G2 15.0.0.4672\Projects\Project1			
[ <u></u>					
изв 🖞	Transmission D	USB driver version unavailable lelay = 0 ms Response Delay = 0 ms Time-out = 500 ms			
USB V	Transmission D 11 V55.82 200 - 240 V 10A meters.par id1.trend	USB driver version unavailable ielay = 0 ms Time-out = 500 ms			
USB V	Transmission D 11 V55.82 200 - 240 V 10A meters.par id1.trend	USB driver version unavailable relay = 0 ms Time-out = 500 ms			
USB V Project Project1	Transmission D 11 V55.82 200 - 240 V 10A meters.par id1.trend English	USB driver version unavailable lelay = 0 ms Time-out = 500 ms / 8A Language Look and Feel Español Deutsch Português Mative Metal Close the project to change the option	N	mbus	

# 3.2 Project Tree

The project tree contains the following elements:

**01** - Project Name: the name of the project given by the user when saving the file for the first time.

**02** - Drive Identification: the drive model that displays the device name, firmware version, and rated voltage and current. Some drives may not contain the rated voltage and/or rated current.

**03** - par extension file: parameter file.

**04** - trend extension file: file with the trend graphic.

**05** - trace extension file: file with the trace graphic.



#### Safety

# 4 Safety

Contents of this chapter:

Safety Notice

Copyright Notice

# 4.1 Safety Notice

The use of this software can change the operation or the performance of the drive. The user is responsible for the adoption of all necessary precautions to ensure the safety of the equipment and involved personnel. Before this Software is used, read carefully all Instruction of the Online Help. The non observation of these instructions can cause serious damages to the equipment and result in serious personnel injuries.

# 4.2 Copyright Notice

This computer program is protected by copyright law and international treaties. Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.

# 5 What's New

Contents of this chapter:

What's New - This Version

What's New - Previous Versions

# 5.1 What's New in this Version

# SuperDrive G2 15.1.0.4776

04/02/2019

New Features:

- Communication with CFW-11 V5.35 was included,
- Communication with CFW-11 V5.36 was included,
- Communication with CFW-11 V55.20 was included,
- Communication with CFW-11 V65.83 was included.

Improvements:

- Database was improved for CFW500 V2.0X,
- Database was improved for MW500 V2.0X,
- Java JRE update from V1.8.0\_192 to V1.8.0\_202.

Bugfixes:

- Correction of the Trace function whose graph presented incorrect values,
- Serial communication where communication did not work for modbus addresses larger than 1.

# 5.2 What's New in Previous Versions

# SuperDrive G2 15.0.0.4707

11/09/2018

New Features:

- Communication on Ethernet network: CFW-11, CFW500, MW500, SCA-06 and ECW500,
- Communication with the new product CFW-11M G2 V1.1X,
- Communication with CFW-11 V85.90 was included,
- Communication with CFW-11 V85.84 was included,
- Communication with CFW-11 V55.82 was included,
- Communication with CFW-11 V45.80 was included,
- Communication with CFW-11 V15.30 was included,
- Communication with CFW-11RB V2.1X was included,
- Communication with CFW700 V2.2X was included,
- Communication with CFW701 V2.1X was included,
- Communication with MW500 V2.0X was included,
- Communication with ECW500 V1.3X was included.

Improvements:

- New information added to the main window: project, project path, communication, centering button, centering and expanding button, languages, selection of look&feel, buttons for help in various formats and languages,
- About window new information on the Java in use, operating system and user was added,
- WEG USB Driver update from V10.00 to V11.00 (automatic installation),
- FTDI USB Driver update from V2.12.16 to V2.12.28 (automatic installation),
- Java JRE update from V1.8.0\_144 to V1.8.0\_192.

Bugfixes:

• Correction on the database for CFW100 V2.3X.

# SuperDrive G2 14.0.0.3677

09/26/2017

New Features:

- Project Conversion;
- Added communication with CFW11 V15.78;
- Added communication with CFW11 V85.82;
- Added communication with CFW701 V12.07;
- Added communication with MW500 V1.60;
- Added communication with SCA-06 V1.7X;
- Added communication with SSW7000 V1.6X.

#### Improvements:

- Trend function improved performance when browsing the chart;
- Java update JRE from V1.8.0\_102 to V1.8.0\_144;
- Some icons were updated;
- Database update for CFW700 V1.2X;
- Database update for CFW501 V1.8X;
- Minor visual update about, project information, writing parameters to drive , offline parameters editor and monitoring parameters window.

Bugfixes:

- Database correction for CFW700 V2.0X;
- Database correction for CFW500 V2.0X.

# SuperDrive G2 13.0.0.3103

09/26/2016

New Functions:

- Compatible with Windows 10;
- Added communication with CFW11 V5.7X;
- Added communication with CFW11 V5.33;
- Added communication with SSW7000 V1.5x.

Enhancements:

- Trend function improved performance when browsing the chart;
- WEG USB Driver V10.00 new version with automatic installation;
- FTDI USB Driver V2.12.16 new version with automatic installation;
- Java update JRE from V1.8.0\_74 to V1.8.0\_102.

#### Corrections:

- ECW500 Status Window, modifications: from "Start" to "On", from "Stop" to "Off";
- Database correction for CFW700 V2.0X;
- Database correction for CFW500 V2.0X;
- Database correction for CFW500 V1.8X;
- Database correction for ECW500 V1.1X;
- CFW700 Manual correction about USB connection availability.

# SuperDrive G2 12.1.0

03/14/2016

New Functions:

- Communication with CFW-11RB V2.0X;
- Communication with ECW500 V1.1X;
- Communication with CFW500 V2.0X;
- Communication with CFW-11 V85.32;
- Communication with CFW-11 V5.2X;
- Communication with CFW-11 V5.8X;
- Function to import databases;
- Function search available both parameter and monitor editor.

#### Enhancements:

• Improvements in Trend: Graph showing with better performance and new options to pause, save, calculate instant reading time interval and new graphic display time ranges.

Corrections:

- Correction in function to Import Projects;
- Communication with CFW500 V1.8X;
- Communication with CFW501 V1.8X;
- Communication with MW500 V1.5X;
- Communication with CFW700 V2.0X.

# SuperDrive G2 12.0.0

09/30/2015

New Functions:

- Windows 8.1 (x86, x64) is supported;
- German language is supported;
- Function to change voltage in project (CFW11 only);
- Communication with CFW11 V4.21;
- Communication with CFW11 V15.16;
- Communication with CFW11 V15.84;
- Communication with CFW11 V15.90;
- Communication with CFW11 V15.91;
- Communication with CFW11 V15.97;
- Communication with CFW11 V45.11;
- Communication with CFW11 V45.12;
- Communication with CFW100 V2.4X;
- Communication with CFW500 V1.8X;
- Communication with CFW501 V1.8X;
- Communication with SCA-06 V1.5X;
- Communication with SSW7000 V1.3X;

- Communication with SSW7000 V1.4X;
- Communication with PLC11-01 V1.7X;
- Communication with PLC11-02 V1.7X;
- Communication with CTW900 V1.1X;
- Communication with SSW06 V1.8X;
- Communication with SSW07 V1.5X;
- Communication with SSW08 V1.5X.

#### Enhancements:

- Reduced the response time when connected with CFW11;
- Visual improvements (new icons);
- Improvement in presentation of option Projects (in Options > Projects);
- USB driver update;
- Communication with CFW11 V3.5X, added database in german language;
- Communication with CFW11 V5.4X, added database in german language;
- Communication with CFW11 V65.1X, added database in german language;
- Communication with CFW500 V1.5X, added database in german language;
- Communication with CFW700 V2.0X, added database in german language;
- Communication with MW500 V1.5X, added database in german language.

Corrections:

- Communication with CFW11 V5.4X;
- Communication with ECW500 V1.0X.

# SuperDrive G2 11.3.0

09/24/2014

New Functions:

- Function Save As project;
- Function Rename project;
- New options for printing parameters;
- Function Remove project;
- Export graphics and parameters to CSV format files;
- Function Security System for CFW11 V65.1X;
- Function Trace for CTW900;
- Communication with CFW501 V1.3X;
- Communication with CFW501 V1.5X;
- Communication with CFW11 V65.1X;
- Communication with CFW11 V5.31;
- Communication with CFW700 V2.0X line 600V;
- Communication with CFW701 V2.0X line 600V;
- Communication with CFW100 V2.3X.

#### Enhancements:

- Added operation mode in the status window of ECW500;
- Allow change the default folder where projects are stored.

#### Corrections:

- Database correction of ECW500 V1.0X;
- Database correction of CFW100 V2.2X (english);
- Correction in printing parameters where overlapping characters could occur.

# SuperDrive G2 11.2.0

05/21/2014

The following features were added:

- Communication with MW500 V1.5X;
- Communication with CFW100 via Bluetooth;
- Communication with CFW100 V2.2X;
- Communication with SCA-06 V1.4X;
- Communication with CFW11 V5.4X;
- Communication with CFW11 V5.30;
- Communication with CFW11 V4.20;
- Communication with CFW11 V3.30;
- Communication with CFW11 V3.31;
- Communication with CFW11 V3.32;
- Communication with CFW11 V3.33.

Minor changes:

- Correction of instability during printing parameters;
- Database correction of CFW500 V1.1X;
- Database correction of CFW500 V1.5X;
- Database correction of CFW700 V2.0X;
- Database correction of CFW701 V2.0X.

### SuperDrive G2 11.1.0

02/06/2014

The following features were added:

• Communication with CFW100 V2.1X.

Minor changes:

- Correction in Trace function where there was error in the read/write configuration,
- Fix reading of parameters that were not saved correctly when the reading was taken before saving the project.

# SuperDrive G2 11.0.0

12/03/2013

The following features were added:

• Compatible with Windows 8 x86, Windows 8 x64

Minor changes:

- Indication on the parameter list of what has changed (different from standard);
- Fixed the window of Speed Reference to CFW100, CFW500, CFW700/701, CFW11, CTW900, which presented incorrect values;
- Fixed the New File Parameters function (offline generation of files parameters with default values), where the parameters firmware version, rated current of the drive and rated voltage of the drive had incorrect values;
- Fixed the Trend function which stored incorrectly content 0 when reading error occurred;
- Communication with CFW701 V2.0x, database correction.

# SuperDrive G2 10.00

10/07/2013

The following features were added:

• Communication with CFW11 V5.1X.

# SuperDrive G2 9.90

09/13/2013

The following features were added:

• Communication with CFW100 V2.0X.

# SuperDrive G2 9.80

08/22/2013

The following features were added:

- Communication with CFW500 V1.5X;
- Communication with CFW700 V2.0X;
- Communication with CFW701 V2.0X;
- Communication with SSW7000 V1.2X.

# SuperDrive G2 9.70

07/12/2013

The following features were added:

• Communication with CFW-11 V3.5X.

# SuperDrive G2 9.60

07/05/2013

The following features were added:

- Communication with ECW500 V1.0X;
- Communication with CFW-11 V4.01;
- Communication with CFW-11 V4.10;
- Improved communication with drives (RS232 and RS485);
- Language change no longer requires program restart;
- Automatic loading of database on alternative language.

Minor changes:

- Communication with CFW-11 V3.1x, database correction;
- Communication with CFW100 V1.1x, database correction;
- Communication with CTW900 V1.0x, database correction;
- Several improvements in Identify Drive and Communication Setup windows.

# SuperDrive G2 9.50

10/05/2012

The following features were added:

- Communication with CFW100 V1.1X;
- Size and position of windows are saved;
- Project importation and exportation.

Minor changes:

• Communication with CFW701 V1.2X, database correction.

### SuperDrive G2 9.40

05/03/2012

The following features were added:

- Communication with CFW11 V3.1X;
- Communication with CFW700 V1.2X.

Minor changes:

• Communication with CFW700 V1.0X, database correction.

# SuperDrive G2 9.30

03/16/2012

The following features were added:

- Communication with CTW900 V1.0X;
- Communication with SCA-06 V1.2X.

# SuperDrive G2 9.20

12/05/2011

The following features were added:

- Communication with CFW500 V1.1X;
- Communication with CFW701 V1.2X;
- Communication with CFW-11 V3.11;
- Communication with CFW-11 V3.12.

### SuperDrive G2 9.10

09/27/2011

The following features were added:

- Trend in the function and Trace, minimum, maximum and legend are now saved when the graph is closed;
- Communication with CFW-11 V2.46;
- Communication with CFW-11 V2.50;
- Communication with CFW-11 V2.51;
- Communication with CFW-11 V3.90.

Minor changes:

- Communication with CFW-11 V3.0x, database correction;
- Communication with CFW700 V1.0x, database correction.

# SuperDrive G2 9.00

05/27/2011

The following features were added:

• Offline programming.

# SuperDrive G2 8.90

04/05/2010

The following features were added:

• Communication with CFW-11 V3.0x.

# SuperDrive G2 8.80

02/22/2010

The following features were added:

- Communication with SSW7000 V1.1x;
- Communication with SSW-07 V1.4x;
- Communication with SSW-08 V1.4x;
- Compatible with Windows 7 x86, Windows 7 x64;
- Compatible with Windows Vista x86, Windows Vista x64;
- Compatible with Windows XP x86, Windows XP x64.

# SuperDrive G2 8.70

10/20/2010

The following features were added:

- Communication with SCA-06 V1.1x;
- Communication with SSW-06 V1.7x.

# SuperDrive G2 8.60

08/10/2010

The following features were added:

• Communication with CFW700 V1.0x.

# SuperDrive G2 8.50

03/05/2010

The following features were added:

- Communication with CFW-11 V2.0x;
- Communication with CFW-11 + PLC11-01 V1.4x;

• Communication with CFW-11 + PLC11-02 V1.4x.

### SuperDrive G2 8.40

09/08/2009

The following features were added:

- Identify Drive address selection,
- <u>Write Parameters to Drive</u> destination address selection;
- Communication with CFW-11 + PLC11-01 V1.2x;
- Communication with CFW-11 + PLC11-02 V1.2x;
- Communication with SSW-06 V1.6x.

# SuperDrive G2 8.33

05/15/2009

The following features were added:

• Communication with CFW-11 + PLC11-02 V1.0x.

# SuperDrive G2 8.32

12/18/2008

The following features were added:

- Communication with CFW-09 PM V12.0x;
- Communication with CFW-11 V1.6x.

# SuperDrive G2 8.31

05/20/2008

The following features were added:

- Communication with CFW-11 V1.3x;
- Communication with CFW-11 + PLC11-01 V1.0x.

# SuperDrive G2 8.30

04/16/2008

The following features were added:

- Trend function,
- Communication with CFW-09 PM V11.3x;
- Communication with SSW-07 V1.3x;
- Communication with SSW-08 V1.3x.

# SuperDrive G2 8.21

08/31/2007

The following features were added:

• Communication with CFW-11 V1.1x;

• Communication with SSW-06 V1.4x.

# SuperDrive G2 8.20

08/01/2007

The following features were added:

- Communication with SSW-07 V1.2x;
- Communication with CFW-09 PM V10.0x;
- New baud rate for RS232: 4800 bps.

Minor changes:

- Option "Always on Top" was removed from several windows;
- New layout in monitoring windows;
- It is no more necessary to reopen the project after changing Communication Setup.

# SuperDrive G2 8.11

04/24/2007

Minor changes:

- Updated CFW-11 data base;
- New baud rate for RS232: 57600 bps.

# SuperDrive G2 8.10

03/29/2007

The following features were added:

- Communication with CFW-11 V1.0x;
- USB point-to-point serial communication;
- Reference speed monitoring of CFW-11;
- Trace function;
- Language selection: English, Portuguese and Spanish.

Minor changes:

- Monitor Parameters: a divider offers user-controlled resizing of two components: parameters and messages;
- Monitor Parameters: if the user press the right button of the mouse in the messages container, a small popup menu appears with the option to clean the messages;
- Monitor Parameters and Edit Parameters File: OK and Cancel buttons were replaced with Close button;
- Monitor Keypad: validation of parameter value;
- Monitor Keypad: the user may now type a value directly into the parameter field;
- Always on top functionality is not selected any more when a window is opened;
- Parameters conversion for hexadecimal and binary now supported.

# SuperDrive G2 8.00

12/20/2006

Initial Version:

- Automatic identification of connected drives;
- Parameter transfer from computer to the drive;
- Parameter transfer from drive to the computer;
- Offline editing of the parameters stored in files on the computer;
- Monitoring (visualization and change) of drive parameters;
- Monitoring of the drive status and command operations (motor stop/run, jog, forward/ reverse, local/remote, etc);
- Supports multiple databases for special firmware version;
- RS232 point-to-point serial communication;
- Online help.

# 6 Installation/Uninstalation

Contents of this chapter:

Before Installing

Installing

<u>Uninstalling</u>

**USB** Driver

# 6.1 Before Installing

Check the following items before installing SuperDrive G2:

- If the microcomputer meets the <u>System Requirements;</u>
- Your antivirus software must allow you to install software;
- If the SuperDrive G2 version is compatible with your drive, see <u>Supported Drives</u>.

# 6.2 Installing

When installing a newer version of SuperDrive G2 it is recommended that you first <u>uninstall</u> the previous version and re-boot your system to make sure the installation executes correctly.

Close all open programs currently running to prevent interference with the installation process.

To install SuperDrive G2, please follow the steps below.

# Installation

**01** - You must be logged in as an administrator to install the program; if you're using a standard account, the application will fail to run;

**02** - If User Account Control (UAC) is enabled (Control Panel > User Accounts > Change User Account Control Settings), you will be notified before the installer starts the installation and try to make a change in the Windows configuration; click Yes to confirm that you allow the program to make changes to your computer, otherwise you can not install the program;

**03** - You should also run the installer with elevated privileges; to do so, right-click installer displays a menu; click Run as administrator;

	Open
9	Run as administrator
	Troubleshoot compatibility
	Executar com o processador gráfico $>$
	Pin to Start
	7-Zip >
	CRC SHA
2	Edit with Notepad++
	Defraggler >
K	Scan for viruses
Κ	Check reputation in KSN
È	Share
<b>S</b> Î	TortoiseSVN >
	Pin to taskbar
	Restore previous versions
	Send to
	Cut
	Сору
	Create shortcut
	Delete
	Rename
	Properties

**04** - Select the language and click OK.

Select Se	tup Language X
S L≁	Select the language to use during the installation:
	English ~
	OK Cancel

**05** - In the install wizard, respond to the License Agreement, then click Next.

Setup - SuperDrive G2 15.0.0.4672 —		×
License Agreement Please read the following important information before continuing.		
Please read the following License Agreement. You must accept the terms of agreement before continuing with the installation.	this	
LICENSE TO USE FREEWARE SOFTWARE SUPERDRIVE G2	_	^
Dear User,		
<ul> <li>Read the terms contained in the present document before installing the software.</li> <li>Only proceed with the installation if you fully agree with the terms of this license.</li> <li>This license to use is destined exclusively for software freeware SuperDrivin all its versions launched up until this date, being applicable, except for an provision from WEG Group stating otherwise, for future versions as well.</li> </ul>	ve G2, Iy	~
• I accept the agreement		
○ I <u>d</u> o not accept the agreement		
<u>N</u> ext >	Ca	ancel
06 - Click Next.		
S Cature SumarDaina C2 15 0.0 4672		~

Setup - SuperDrive G2 15.0.0.4672	_		×
<b>Information</b> Please read the following important information before continuing.		(	
When you are ready to continue with Setup, click Next.			
Before installing the software, it is necessary to uninstall previous vers	sions.		
< <u>B</u> ack <u>N</u> ext >		Car	ncel

**07** - Specify an empty folder within which to install SuperDrive G2. Verify that the installation location is correct and that you have available disk space for the installation.
Setup - SuperDrive G2 15.0.0.4672	-		×
Select Destination Location Where should SuperDrive G2 15.0.0.4672 be installed?			Ð
Setup will install SuperDrive G2 15.0.0.4672 into the followi	ng fold	er.	
To continue, click Next. If you would like to select a different folder,	click Br	owse.	
C:\WEG\SuperDrive G2 15.0.0.4672	В	rowse	
At least 1.420,6 MB of free disk space is required.			
< <u>B</u> ack <u>N</u> ex	t >	Car	ncel

**08** - Confirm to create the empty folder.

Folder Do	es Not Exist	$\times$
?	The folder: C:\WEG\SuperDrive G2 15.0.0.4672 does not exist. Would you like the folder to be created?	
	<u>Y</u> es <u>N</u> o	

09 - Click Next.

LS Setup - SuperDrive G2 15.0.0.4672	_		×
Select Components Which components should be installed?		Ģ	
Select the components you want to install; clear the components you install. Click Next when you are ready to continue.	ou do not	want to	_
SuperDrive G2 15.0.0.4672 - Full Installation		~	,
< <u>B</u> ack <u>N</u> er	xt >	Can	cel

**10** - Select the program group to create program's shortcuts and click Next.

<u>I</u> §_ Setup - SuperDrive G2 15.0.0.4672	-		$\times$
Select Start Menu Folder Where should Setup place the program's shortcuts?			Ð
Setup will create the program's shortcuts in the following Sta	rt Meni	u folder.	
To continue, click Next. If you would like to select a different folder, o	lick Bro	wse.	
WEG\SuperDrive G2 15.0.0.4672	Bro	owse	
Don't create a Start Menu folder			
< <u>B</u> ack <u>N</u> ext	>	Car	ncel

**11** - Select the program's shortcuts you want as additional icons: create a desktop icon and create a quick launch icon. Click Next.

Setup - SuperDrive G2 15.0.0.4672	—		×
Select Additional Tasks Which additional tasks should be performed?		¢	
Select the additional tasks you would like Setup to perform while ins G2 15.0.0.4672, then dick Next.	talling Su	perDrive	
Additional shortcuts:			
Create a desktop shortcut			
< <u>B</u> ack <u>N</u> er	xt >	Car	ncel

**12** - Please review or change any settings. Click Install to begin the installation.

Setup - SuperDrive G2 15.0.0.4672 —		×
Ready to Install Setup is now ready to begin installing SuperDrive G2 15.0.0.4672 on your computer.	(	
Click Install to continue with the installation, or click Back if you want to review or change any settings.	or	
Destination location: C:\WEG\SuperDrive G2 15.0.0.4672	^	•
Setup type: SuperDrive G2 15.0.0.4672 - Full Installation		
Selected components: SuperDrive G2 Program files Documentation English		
Spanish German		,
<	2	
< <u>B</u> ack <u>Install</u>	Car	ncel

💱 Setup - SuperDrive G2 15.0.0.4672 —		Х	
Installing Please wait while Setup installs SuperDrive G2 15.0.0.4672 on your computer.			3
Extracting files C:\WEG\SuperDrive G2 15.0.0.4672\database\CFW11_V401_en-US.db			
	Ca	ancel	]

**13** - Click Finish to complete the setup.

🚆 Setup - SuperDrive G2 15.0.0	0.4672	_		$\times$
	Completing the Super 15.0.0.4672 Setup W Setup has finished installing SuperDriv your computer. The application may be the installed shortcuts. Click Finish to exit Setup.	rDrive /izard re G2 15.0 re launched	e G2	on ting
	E	inish		

# 6.3 Uninstalling

If necessary, you can uninstall SuperDrive G2 using the following procedures.

## Uninstall

**NOTE!** As indicated below, use the Programs and Features utility to remove SuperDrive G2. Do not manually delete files and folders.

### Windows 10

The following example is executed on Windows 10. For other systems, the procedures are similar. Some data are intentionally invisible, as they vary according to the version.

**01** - You must be logged in as an administrator to remove the program; if you're using a standard account (non-administrator), then you can not remove the software;

**02** - If User Account Control (UAC) is enabled (Control Panel > User Accounts > Change User Account Control Settings), you will be notified before starting the removal and try to make a change in the Windows configuration; click Yes to confirm that you allow the program to make changes to your computer, otherwise you can not remove the program;

**03** - Right mouse click on Start button, and then select Programs and Features option.

Apps and Features
Mobility Center
Power Options
Event Viewer
System
Device Manager
Network Connections
Disk Management
Computer Management
Windows PowerShell
Windows PowerShell (Admin)
Task Manager
Settings
File Explorer
Search
Run
Shut down or sign out
Desktop

**04** - Select SuperDrive G2 from the list and click Uninstall.

← Settings	– 🗆 X
命 Home	Apps & features
Find a setting $ ho$	SuperDrive G2 15.0.0.4672 1,39 GB WEG 17/10/2018
Apps	Tips 334 KB Microsoft Corporation 12/08/2018
詎 Apps & features	
≌ Default apps	TortoiseSVN 1.7.15.25753 (64 bit)         38,8 MB           TortoiseSVN         17/01/2018
邱 Offline maps	Voice Recorder16,0 KBMicrosoft Corporation12/08/2018
Apps for websites	Vulkan Run Time Libraries 1.0 1,66 MB LunarG, Inc. 21/06/2018
□ Video playback	Weather 16,0 KB
	Microsoπ Corporation 12/08/2018
	Web Media Extensions16,0 KBMicrosoft Corporation12/08/2018
	WEG Programming Suite 2.40         670 MB           WEG         15/06/2018
	WEG USBIO Driver v11.00 WEG Equipamentos Eletricos 21/06/2018

← Settings	– 🗆 X
命 Home	Apps & features
Find a setting	SuperDrive G2 15.0.0.4672 1,39 GB WEG 17/10/2018
Apps	15.0.0.4672
≣ Apps & features	Modify Uninstall
i⊐ Default apps	Tips 334 KB
邱 Offline maps	TortoiseSVN 1.7.15.25753 (64 bit) 38,8 MB
Apps for websites	TortoiseSVN 17/01/2018
□ Video plavback	Voice Recorder 16,0 KB Microsoft Corporation 12/08/2018
	Vulkan Run Time Libraries 1.0 1,66 MB LunarG, Inc. 21/06/2018
	Weather16,0 KBMicrosoft Corporation12/08/2018
	Web Media Extensions16,0 KBMicrosoft Corporation12/08/2018
	WEG Programming Suite 2.40 670 MB

4	Settings		-	- 🗆 X
ណ៍	Home	App	os & features	
			This app and its related in	nfo will be
FI	nd a setting $\mathcal{P}$	S	WEG	
Арр	s		15.0.0	Uninstall
E	Apps & features		Modify	Uninstall
Et	Default apps		Tips	334 KB
		<b>Y</b>	Microsoft Corporation	12/08/2018
₫ <u>1</u>	Offline maps	<b>*</b>	TortoiseSVN 1.7.15.25753 (64 bit)	38,8 MB
[↑]	Apps for websites	6.66	TortoiseSVN	17/01/2018
			Voice Recorder	16,0 KB
	Video playback	Ŧ	Microsoft Corporation	12/08/2018
	Charton		Vulkan Run Time Libraries 1.0	1,66 MB
1	Startup		LunarG, Inc.	21/06/2018
			Weather	16,0 KB
			Microsoft Corporation	12/08/2018
		ris.	Web Media Extensions	16,0 KB
			Microsoft Corporation	12/08/2018
		NPS	WEG Programming Suite 2.40	670 MB

**05** - Follow the instructions to remove the software.

SuperDrive	e G2 15.0.0.4672 Uninstall	×
?	Are you sure you want to completely remove SuperDrive G2 15.0.0.4672 and all of its components?	
	<u>Y</u> es <u>N</u> o	]

SuperDrive G2 15.0.0.4672 Uninstall	×
Uninstall Status Please wait while SuperDrive G2 15.0.0.4672 is removed from your computer.	S ↓↓
Uninstalling SuperDrive G2 15.0.0.4672	
c	lancel

SuperDrive	e G2 15.0.0.4672 Uninstall	×	
1	SuperDrive G2 15.0.0.4672 was successfully removed from your computer.		
	ОК		

# 6.4 USB Driver

The WEG USB driver and the FTDI USB driver (Virtual COM Port) are automatically installed during the installation of SuperDrive G2.

## **WEG USB Driver**

The WEG USB driver can be found in the USB\_Driver folder where SuperDrive G2 is installed.

Example: C:\WEG\SuperDrive G2 15.1.0.4776\USB\_Driver\USBIO

## **FTDI USB Driver**

The FTDI USB driver can be found in the USB\_Driver folder where SuperDrive G2 is installed.

Example: C:\WEG\SuperDrive G2 15.1.0.4776\USB\_Driver\FTDI

# 7 Menus

Contents of this chapter:

Project	<u>Drive</u>	Tools	<u>Help</u>
New	Identify Drive	<u>Options</u>	<u>Contents</u>
<u>Open</u>	Communication Setup	Import Database	<u>About</u>
<u>Close</u>	Security System	Convert Project	
<u>Save</u>	Security System (Session)	Simplified Conversion Log	
Save As	New Parameters File	Remove Simplified Conversion	
<u>Remove</u>	Edit Parameters File	Full Conversion Log	
Import	Remove Parameters File	Remove Simplified Conversion	
Export	Export Parameters File		
<u>Change Voltage</u>	Read Parameters from Drive		
Print	Write Parameters to Drive		
Project Information	Monitor Parameters		
Exit	Monitor using Keypad		
	<u>Monitor Status</u>		
	Monitor Speed Reference		
	Trend		
	Remove Trend File		
	Export Trend File		
	Trace Function		
	Remove Trace File		
	Export Trace File		

# 7.1 Project

New Open Close Save Save As Remove Import Export Change Voltage Print Project Information Exit

### 7.1.1 New

### ACCESS

Toolbar: Menu: Project > New Shortcut Key: Ctrl+N

### FUNCTION

Creates a new project with a standard name.

### DESCRIPTION

Drive Identification window is presented. See <u>Identify Drive</u>.

#### 7.1.2 Open

### ACCESS

Toolbar: Poject > Open Shortcut Key: Ctrl+O

#### **FUNCTION**

Opens a previously saved project.

### DESCRIPTION

User must select a project folder and open the project.

The project name and the drive information are shown in the Project Window.

S Select Project	ct	>	<
Look <u>i</u> n:	Projects	<ul> <li>2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</li></ul>	
Recent Items	Project1	Project Name Project 1 Creation date: Thu Aug 02 08:27:57 BRT 2018 Last Modification: Thu Aug 02 08:28:37 BRT 2018 Description:	
This PC		CFW-11 V55.82 200 - 240 V 10A / 8A	
Network			
	Folder <u>n</u> ame:	C:\Projects\SuperDriveG2\trunk\Projects\Project1 Open Project	]
	Files of type:	All Files  V Cancel	

### 7.1.3 Close

## ACCESS

Toolbar: Project > Close Shortcut Key: none

### FUNCTION

Closes the project.

### DESCRIPTION

If the project contains unsaved data, a save request dialog will be shown.

## 7.1.4 Save

### ACCESS

Toolbar: Project > Save Shortcut Key: Ctrl+S

## FUNCTION

Saves the project.

## DESCRIPTION

Enabled if the project has unsaved changes.

When the project is first time saved, a dialog is shown with the following information:

- Name type a name for the new project. If the specified name is invalid or already exists, a warning message will be prompted.
- Location a default location is shown, but can be changed.
- Folder view only.
- Description type the project description. It can be changed later in the Project Information.

## 7.1.5 Save As

### ACCESS

Toolbar: Menu: Project > Save As Shortcut Key: Ctrl+D

## FUNCTION

Saves a project with different name.

## DESCRIPTION

Enabled when a project is created or opened.

When Save As function runs, a dialog is shown with the following information:

- Name type a name for the new project. If the specified name is invalid or already exists, a warning message will be prompted.
- Location a default location is shown, but can be changed.
- Folder view only.
- Description type the project description. It can be changed later in the Project Information.

### 7.1.6 Remove

### ACCESS

Toolbar: Menu: Project > Remove Shortcut Key: none

## FUNCTION

Erases the current project.

## DESCRIPTION

Enabled when a project is open.

When Remove function runs, a confirmation dialog is shown with the following information:

- Name name of the project which is going to be deleted.
- Location a default location is shown.
- Folder project's location is shown.
- Description the project description is shown.

Buttons

- OK Button: confirms the exclusion of current project.
- Cancel Button: keeps the current project.

S Remov	e X
Name:	CFW11-V55.82-200-240V-10A-8A-Ethernet-My
Location:	C:\WEG\SuperDrive G2 15.0.0.4502\Projects\
Folder:	/EG\SuperDrive G2 15.0.0.4502\Projects\CFW11-V55.82-200-240V-10A-8A-Ethernet-My
Description:	
	Are you sure you want to delete this project?
	OK Cancel

### 7.1.7 Import

## ACCESS

Toolbar: Menu: Project > Import Shortcut Key: none

### FUNCTION

Imports a previously exported project.

### DESCRIPTION

User must select a project file with extension sdg2z and click the Import button.

This project will be imported into the default folder for projects.

If the project or any of the files already exist, the user will receive a confirmation box to overwrite the project.

If the user chooses to overwrite the conflicting files will be overwritten, otherwise, no files will be overwritten and the project will not be imported.

If, during import of the project, another project is open, then it will be closed. If data is not saved, a confirmation window appears allowing the user to save changes, discard them, or cancel the operation.

When completed the import process, the project will be imported automatically open.

#### 7.1.8 Export

### ACCESS

Toolbar: Menu: Project > Export Shortcut Key: none

#### FUNCTION

Exports the current project to a file.

#### DESCRIPTION

The project must be open.

Click the Export button. Initially the default filename is the name of the project, which can be changed.

Clicking the save button, the file is created with the extension sdg2z which can be imported using the Import function.

#### 7.1.9 Change Voltage

#### ACCESS

Toolbar: Menu: Project > Change Voltage Shortcut Key: none

#### FUNCTION

Allow to migrate the currently opened project to a new one, with another model of CFW11

drive.

## DESCRIPTION

User must have a project opened.

This option loads an wizard to help changing the model of drive and checking its parameters. If there are no compatible drives to the current model, no options will be presented to choice.

### 7.1.10 Print

## ACCESS

Toolbar: 🚔 Menu: Project > Print Shortcut Key: Ctrl+P

## FUNCTION

Prints the parameters file selected in the Project Window.

## DESCRIPTION

Prints all parameters stored in the parameters file:

- Parameter number.
- User's settings.
- Unit.

## 7.1.11 Project Information

### ACCESS

Toolbar: Project > Project Information Shortcut Key: Ctrl+I

## FUNCTION

Adds or modifies project information.

## DESCRIPTION

Shows the following information:

- Name the name of the project. View only.
- Location the location of the project. View only.
- Folder the folder where the project is. View only.
- Description type the project description.

Name, Location and folder can not be changed after it is first time saved. See <u>Save</u>.

Description can be changed at any time.

### 7.1.12 Exit

### ACCESS

Toolbar: 🕞 Menu: Project > Exit Shortcut Key: Ctrl+Q

### FUNCTION

Exits SuperDrive G2.

### DESCRIPTION

SuperDrive G2 asks the user if he wishes to exit. If the project contains unsaved data, a save request dialog will be shown.

## 7.2 Drive

**Identify Drive** Communication Setup Security System Security System (Session) New Parameters File Edit Parameters File Remove Parameters File Export Parameters File Read Parameters from Drive Write Parameters to Drive Monitor Parameters Monitor Using Keypad Monitor Status Monitor Speed Reference Trend Remove Trend File Export Trend File **Trace Function** Remove Trace File Export Trace File

## 7.2.1 Identify Drive

## ACCESS

Toolbar: Menu: Drive > Identify Drive Shortcut Key: none

### FUNCTION

Automatic identification of the drive (drive must be connected to computer) or user select the drive manually.

### **APPEARANCE**

Identify Drive	×
Drive Type	
Address: 1 No drive configured.	Remove
Identification Type Automatic Identification (Drive must be con Manual Identification (drive is not connected)	inected) :d)
Automatic Identification	
Connection Type: USB	
Start from address;	Scan
O	K Cancel

### DESCRIPTION

#### **Drive Type**

If no drive is configured, it shows the address and "No Drive Configured" message.

If any drive is configured, the following information is displayed:

- Address.
- Type.
- Firmware version.
- Nominal voltage.
- Nominal current.

Remove button: clears the Drive Type field (remove the drive configuration).

#### **Automatic Identification**

Identify Drive	×
Drive Type	
Address: 1 No drive configured.	Remove
Identification Type Automatic Identification (Drive must be con Manual Identification (drive is not connected Automatic Identification	inected) :d)
Connection Types USP	
Connection Type: USB	
Start from address:	Scan
0	K Cancel

- Connection Type: USB => When USB is selected in Communication Setup window,
- Connection Type: Serial => When Serial is selected in Communication Setup window,
- Connection Type: Bluetooth => When Bluetooth is selected in Communication Setup window,
- Connection Type: Ethernet => When Ethernet is selected in Communication Setup window.

Scan button: scans for drives connected to the computer. If any drive is connected, configuration is presented. The scan is finished when a drive is identified.

Start from Address button: to select the initial address of the scan when the connection type is serial; for USB connection, this button is disabled.

#### **Manual Identification**

Identify Drive	×
Drive Type	
Address: 1 No drive configured.	Remove
Identification Type Automatic Identification (Drive must be cor Manual Identification (drive is not connected)	nnected) ed)
Manual Identification	
Drive Type	Accessory
0	K Cancel

Drive Type Button: select the drive model, firmware version and nominal voltage / current.

Accessory Button: selects the accessory when it exists; select accessory name and firmware version.

#### **General Buttons**

OK button: applies changes and closes the window.

Cancel button: discard all changes and closes the window.

#### **Selection - Drive Type**

The drive need not to be connected to the computer.

#### Example:

Drive Type		×
Drive:		
CFW-09PM CFW100 CFW-11M-G2 CFW-11RB	^	Software Version: V5.70 ~
CFW-11 CFW500 CFW501	v	Rated Voltage/Current: 200 - 240 V 105A / 86A 🗸
		OK Cancel

### 7.2.2 Communication Setup

#### ACCESS

Toolbar: Menu: Drive > Communication Setup Shortcut Key: none

### **FUNCTION**

This dialog box allows you to configure the PC communication port to match the setting on the drive for proper communication.

#### APPEARANCE

	Serial	Bluetoot	th C	) Ethernet
Timina:				
Field	Value	Unit	Default	Range
Transmission Delay	0	ms	0	[0 20000]
Response Delay	0	ms	0	[0 20000]
Time-out	500	ms	100	[100 20000]
Recommended Version:	USBIO Driver Ver	sion 3.11 Build 0	) (release), API V	ersion 2.32
Installed Version:				
Note:				

## DESCRIPTION

Select the connection type: USB, Serial, Bluetooth or Ethernet.

USB

Connection Typ	e:				
● USB ○ Serial		O Bluetooth			
Timing:					
Fiel	d	Value	Unit	Default	Range
Transr	mission Delay	0	ms	0	[0 20000]
Res	sponse Delay	0	ms	0	[0 20000]
	Time-out	500	ms	100	[100 20000]
Recomment	ded Version:	USBIO Driver Vers	ion 3.11 Build 0	) (release), API V	ersion 2.32
Insta	lied version:				
	Note:				

For USB no adjustment is necessary.

Get Version Button: Click this button to read the version of USB driver installed on the microcomputer.

Installed Version Field: displays the version of USB driver installed on the microcomputer.

Recommended Version Field: displays the correct version of USB driver should be installed on the computer.

Note Field: displays a message indicating whether the USB driver installed is OK or not.

Message on Note Field	User Action
USB driver Ok!	Nothing to do, USB driver correctly installed.
Reasons - No drive (equipment) is connected to the PC - Old USB driver - No USB driver installed See online help.	Install the USB driver available in USB_Driver\USBIO folder where SuperDrive G2 is installed. To install: run setup.exe and follow the installation wizard.

The following timing settings are available for USB:

Timing Ran	e Default
------------	-----------

Transmission Delay (ms)	0 20000	0
Response Delay (ms)	0 20000	0
Time-out (ms)	100 20000	500

For more details see <u>Drive Parametrization</u>.

#### Serial

Communication Setup				×
Connection Type:				
⊖ USB (●	Serial		h C	Ethernet
Timing:				
Field	Value	Unit	Default	Range
Transmission Delay	0	ms	0	[0 20000]
Response Delay	0	ms	0	[0 20000]
Time-out	100	ms	100	[100 20000]
Serial:				
Equipment	User Settin	g ~		
Serial Port	COM4	~		
Data Bits	8	~		
Stop Bits	2	~		
Parity	No Parity	~		
Baud Rate	9600	~		
				OK Cancel
				Cancel

For RS232 you need to adjust some values. The communication protocol is Modbus-RTU.

Connection Type	Serial Port Settings	Range	Default
RS232	Baud rate (bps)	4800, 9600, 19200, 38400 or 57600	9600
	Data bits	8	8
	Stop bits		2
	Parity	No Parity, Even or Odd	No Parity

In addition to the possibility of manual configuration of the fields, it is also possible to load factory default values of each drive.

The model is selected in the Equipment checkbox.

After the drive is selected, the fields are automatically defined.

The following timing settings are available for Serial:

Timing	Range	Default
Transmission Delay (ms)	0 20000	0
Response Delay (ms)	0 20000	0
Time-out (ms)	100 20000	500

For more details see <u>Drive Parametrization</u>.

#### Bluetooth

Communication Setup				×
Connection Type:				
	Serial	Bluetoo	th	) Ethernet
Timing:				
Field	Value	Unit	Default	Range
Transmission Delay	0	ms	0	[0 20000]
Response Delay	50	ms	50	[50 20000]
Time-out	1000	ms	1000	[1000 20000]
Bluetooth:				
Equipment	CFW 100			
Serial Port	COM4			
Data Bits	8			
Stop Bits	1			
Parity	Even			
Baud Rate	19200			
Note: For the proper operation of the CFW100 inverter with the CFW100-CBLT module, parameters P310, P311 and P312 must be set with the factory default values. For further details refer to the CFW100 programming manual version V2.0X or above.				
				OK Cancel

#### The following timing settings are available for Bluetooth:

Timing	Range	Default
Transmission Delay (ms)	0 20000	0
Response Delay (ms)	0 20000	50
Time-out (ms)	100 20000	500

It may be necessary to increase the response delay to avoid communication errors.

#### Ethernet

Communication Setup				×
Connection Type:				
O USB	Serial	Bluetoo	th	Ethernet
Timing:				
Field	Value	Unit	Default	Range
Transmission Delay	0	ms	0	[0 20000]
Response Delay	0	ms	0	[0 20000]
Time-out	5000	ms	5000	[5000 20000]
Ethernet:				
Field	Value	Defau	ılt	Range
IP Address	192.168.0.10	192.168.	0.10	XXXX.XXXX.XXXX.XXXX
Port	502 🚔	502		165535
Unit ID	255 🚔	255		1 255
				OK Cancel

Set the fields as indicated below.

Сатро	Padrão
Endereço IP	192.168.0.10
Porta	502
Unidade Id	255

Use these values for communication with WEG drives.

#### Buttons

OK: applies changes and closes the window. Cancel: discard all changes and closes the window.

## 7.2.3 Security System

## ACCESS

Toolbar: Menu: Drive > Security System Shortcut Key: none

## FUNCTION

The Security System allows you to configure a password to lock online parameters edition during a communication between PC and the drive.

The offline activities and/or the execution of commands are not locked by Security System.

### DESCRIPTION

The Security System - when available - allows to enable, disable or change current drive's password. These operations are done in online mode.

SuperDrive G2 shows a message alerting the user if current drive does not have Security System capabilities.

WARNING! Define a strong password to the Security System. Use uppercase and lowercase letters and numbers intercalated. Minimal requirement for password in SuperDrive G2 is one digit, but is strongly recommended to define a password with at least eight characters.

Keep your password in a safe place.

Security System		
Security System		
S	Enabled [1]	
[2] Disable Security System	Click the button to disable Security System in drive	
[3] Change current password	Click the button to change the password in drive	
	Close	[4]

**[1]** Presents the current Security System state. It could be: Enabled, Disabled or Communication Failure;

[2] This button Disables the Security System (when the current state is Enabled) or Enables the Security System (when the current state is Disabled);

- [3] This button changes the current Security System password;
- [4] This button closes the Security System window.

### 7.2.4 Security System (Session)

## ACCESS

Toolbar: 🛁 Menu: Drive > Security System (Session) Shortcut Key: none

### FUNCTION

The Security System (Session) allows you to temporarily unlock online parameters edition during a communication between PC and the drive. By this option, it is not necessary to disable permanently the Security System. So, when the current project is closed the Security System is automatically enabled, locking the online parameters edition.

### DESCRIPTION

The Security System (Session) - when available - allows to online parameters editing. This operation is done in online mode.

SuperDrive G2 shows a message alerting the user if current drive does not have Security System capabilities.

To allow the temporary online parameters edition it is mandatory you inform the password which is stored in drive.

This option is only available if the drive (which is connected to PC) already have a password to the Security System.

To access any functionality with access to edit a parameter, SuperDrive G2 asks if the user wants to allow the temporary online edition of parameters. The answer to this question keeps in SuperDrive G2 until the current project is closed.

To lock the temporary online edition of parameters just close the current project, or click over

the icon + - it corresponds to the Security System (Session) - and confirm the locking of online parameters edition in the confirmation message.

### 7.2.5 New Parameters File

### ACCESS



Menu: Drive > New Parameters File Shortcut Key: none

## FUNCTION

Creates a new parameters file with factory setting.

### DESCRIPTION

If the project does not exist, a project name is requested to save. If the project already exists, a parameters file name is requested.

#### Buttons

Save: saves the parameters file and closes window.

Cancel: discard all changes and closes the window.

The filename must be specified by user and it it created with factory setting.

The file created is shown in Project Window (list of drive files).

This new file can be changed using Edit Parameters File.

S Save		$\times$
Save įn:	CFW11-V55.82-200-240V-10A-8A-Ethernet-My 🔗 🔊 🔝 🕶	
File <u>n</u> ame:	Save	
Files of type	e: Parameters Content File  Cancel	

### 7.2.6 Edit Parameters File

### ACCESS

Toolbar: Menu: Drive > Edit Parameters File Shortcut Key: none

### FUNCTION

It opens a parameters file previously saved. It allows viewing and changing the parameters in the offline editor.

## PRESENTATION

		Find Ne	ext Match en	tire cell contents				
Number	Function	Minimum	Maximum	Factory Setting	User Setting	Unit	Comparison	
0	Access to Parameters	0	9999	0	0			
1	Speed Reference	0	18000	0	0	rpm		
2	Motor Speed	0	18000	0	0	rpm		
3	Motor Current	0	4500	0	0	A		
ł	DC Link Voltage (Ud)	0	2000	0	0	V		
5	Motor Frequency	0	300	0	0	Hz		
5	VFD Status	0	7	0: Ready	0: Ready			
7	Motor Voltage	0	2000	0	0	V		
<u>.</u>	Motor Torque	-1000	1000	0	0	%		
10	Output Power	0	6553,5	0	0	kW		
12	DI8 to DI1 Status	00h	FFh	00h	00h			
13	DO5 to DO1 Status	00h	1Fh	00h	00h			
14	AO1 Value	0	100	0	0	%		
15	AO2 Value	0	100	0	0	%		
16	AO3 Value	-100	100	0	0	%		
.7	AO4 Value	-100	100	0	0	%		
18	AI1 Value	-100	100	0	0	%		
19	AI2 Value	-100	100	0	0	%		
20	AI3 Value	-100	100	0	0	%		
21	AI4 Value	-100	100	0	0	%		
23	Software Version	0	655,35	1,1	1,1			
27	Accessories Config. 1	00h	FFFFh	00h	00h			
28	Accessories Config. 2	00h	FFFFh	00h	00h			
29	Power Hardware Config	00h	FFFFh	00h	00h			
30	IGBTs Temperature U	-20	150	0	0	°C		
31	IGBTs Temperature V	-20	150	0	0	°C		
32	IGBTs Temperature W	-20	150	0	0	°C		
33	Rectifier Temperature	-20	150	0	0	°C		
34	Internal Air Temp.	-20	150	0	0	°C		
36	Fan Heatsink Speed	0	15000	0	0	rpm		
77	Motor Overload Status	0	100	0	0	%		

### DESCRIPTION

The user must select a file name in the Project Window and double-click on the file name or press Edit Parameters File.

The program will display a general view of all available parameters in a separate window. To edit a parameter, double-click on the user setting of the parameter that you wish to edit.

The following fields are available:

- Parameter number.
- Function.
- Minimum value.
- Maximum value.
- Factory setting.
- User's setting.

• Unit.

When the parameter is read-only, the user's setting field is disabled (it cannot be edited).

The user types the parameter value and presses Enter. Only values between minimum and maximum are allowed.

Some parameters present a simple list of values in a single column. The user can select entries from the list with the mouse. Only an item at a time can be selected.

The user can search information in the parameter table by informing the text or value to be searched and clicking on **Find Next**. When checking the option **Match entire cell contents**, the system searches for events where the entire cell content is equal to the searched term.

#### Buttons

Close: applies the changes if the user selects Yes and closes the window.

#### Log Panel

#### 01

When the parameter file was generated by the project converter (see <u>Convert Project</u>), a message informs that the user must review the parameters as follows.

Offline Parameters Editor X				
$(\mathbf{i})$	The parameters were generated by project conversion.			
	Please review the parameters.			
	ОК			

#### 02

In this case, there is a simplified log file and a full log file available associated to the parameter file.

In the window, a panel (Project Conversion Log) appears with 2 buttons.

- Button 📅 : shows the simplified conversion log.
- Button 🔚 : shows the full conversion log.

Find What:		Find Next	Match en	tire cell contents				
Project Conversion L	.og: She	ows simplified conversion	on log.		Shows full con	version log.		
Number	Function	Minimum	Maximum	Factory Setting	User Setting	Unit	Comparison	
	Access to Parameters	0	9999	0	0			
	Speed Reference	0	18000	0	0	rpm		
	Motor Speed	0	18000	0	0	rpm		_
	Motor Current	0	4500	0	0	A		
	DC Link Voltage (Ud)	0	2000	0	0	V		
	Motor Frequency	0	300	0	0	Hz		
	VFD Status	0	7	0: Ready	0: Ready			_
	Motor Voltage	0	2000	0	0	V		
	Motor Torque	-1000	1000	0	0	%		_
)	Output Power	0	6553,5	0	0	kW		
	DI8 to DI1 Status	00h	FFh	00h	00h			
	DO5 to DO1 Status	00h	1Fh	00h	00h			
ł	AO1 Value	0	100	0	0	%		
5	AO2 Value	0	100	0	0	%		
	AO3 Value	-100	100	0	0	%		
,	AO4 Value	-100	100	0	0	%		
	AI1 Value	-100	100	0	0	%		
	AI2 Value	-100	100	0	0	%		
	AI3 Value	-100	100	0	0	%		
	AI4 Value	-100	100	0	0	%		
1	Software Version	0	655,35	1,1	1,1			
1	Accessories Config. 1	00h	FFFFh	00h	00h			
3	Accessories Config. 2	00h	FFFFh	00h	00h			
)	Power Hardware Config	00h	FFFFh	00h	00h			
)	IGBTs Temperature U	-20	150	0	0	°C		
1	IGBTs Temperature V	-20	150	0	0	°C		
2	IGBTs Temperature W	-20	150	0	0	°C		
3	Rectifier Temperature	-20	150	0	0	°C		
4	Internal Air Temp.	-20	150	0	0	°C		
5	Fan Heatsink Speed	0	15000	0	0	rpm		
7	Motor Overload Status	0	100	0	0	%		
								_

#### 03

When exiting the window, the system asks the user if the parameters review has been completed.



- Yes: the system does not inform or ask about the parameter review anymore.
- No: the system keeps informing or asking about the parameter review.

### 7.2.7 Remove Parameters File

## ACCESS



Menu: Drive > Remove Parameters File Shortcut Key: none

## FUNCTION

Removes the parameters file.

## APPEARANCE

Remove	Parameters File X	
?	Do you really want to remove file C:\Projects\SuperDriveG2\trunk\Projects\Project1\Parameters.par?	
	<u>Y</u> es <u>N</u> o	

### DESCRIPTION

User must select a filename in the Project Window.

SuperDrive G2 will ask the user to confirm deleting the file.

### 7.2.8 Export Parameters File

## ACCESS

Toolbar: Menu: Drive > Export Parameters File Shortcut Key: none

## FUNCTION

Exports the content of a parameters file to another file in CSV format.

## DESCRIPTION

User must select a parameters file name in Project Window.

SuperDrive G2 requests user to confirm the file export. In affirmative case, a window is shown with the following options:

S Export Param	eters File			×
Look <u>i</u> n:	CFW11-V55.82-Ethern	et	✓ 🥬 📂▼	
<b>P</b> -			 Field delimiter:	
Recent Items			<ul> <li>Semicolon</li> </ul>	
			◯ Comma	
Desktop				
Documents			Field separator:	
			◯ Single quotes	
This PC			O Double quotes	
<b>N</b> I-bash			No character	
Network				
	File <u>n</u> ame: Parameters	S.CSV	Export	
	Files of type: Parameter	file exported	↓ Cancel	

- Field delimiter. Options: semicolon or comma.
- Field separator. Options: single quotes, double quotes or without quotes.
- The name of the new file, in CSV format.
- Buttons to export and to cancel the export.

### 7.2.9 Read Parameters from Drive

### ACCESS

Toolbar: Menu: Drive > Read Parameters from Drive Shortcut Key: none

#### FUNCTION

It reads all the parameters from the drive to the computer.

#### APPEARANCE



## DESCRIPTION

All the parameters are saved in a computer file.

The user specifies the file name.

Then the user can view or edit the parameters.

#### **Parameters File Generated By the Project Converter**

If the parameters file was generated by the project converter, it is not possible to overwrite the file by reading the parameters from the drive.

An error message appears.



It is only possible to overwrite this file after the parameters review ( $\underline{Edit Parameters File}$  function).

### 7.2.10 Write Parameters to Drive

## ACCESS

Toolbar: Menu: Drive > Write Parameters to Drive Shortcut Key: none

## FUNCTION

It sends all the parameters from the computer to the drive.

### DESCRIPTION

The user must select a file name in the Project Window.

Some parameters can only be changed when the drive is disabled (motor stopped).

#### Serial

Select the drive address to which you want to send the parameters.

Write Paramete	ers To Drive		×
Source		Target	
		Select the des	stination address:
Address:	1	Address:	<b>↓</b>
Drive :	CFW500 V2.05 200 - 240 V	Drive :	CFW500 V2.05 200 - 240 V
			OK Cancel

Press the OK button to start.

#### **USB / Bluetooth / Ethernet**

To start writing all parameters, the user must answer Yes to confirm the action.

Write Parameters To Drive X			
?	Do you really want to write all parameters to the drive?		
	File = Parameters.par		
	Yes <u>N</u> o		

#### **Parameters File Generated By the Project Converter**

If the parameters file was generated by the project converter, it is not possible to write the parameters to the drive.

#### An error message appears.


It is only possible to send the parameters to the drive after the parameters review (<u>Edit</u> <u>Parameters File</u> function).

### Parameter Writing Sequence (All Drives Except for CFW500 / CFW501 / MW500)

The parameters are sequentially written from the first to the last parameter (from the lowest to the highest number).



#### At the end, a message pops up.



An error log may pop up in case some writing error occurs.



S Communication Log	×
Description of a set of a large	
Parameter 90: read only;	
Parameter 91: read only;	
Parameter 92: read only;	
Parameter 93: read only;	
Parameter 94: read only;	
Parameter 95: read only;	
Parameter 96: read only;	
Parameter 97: read only;	
Parameter 100: successfully written - Value = 200;	
Parameter 101: successfully written - Value = 200;	
Parameter 102: successfully written - Value = 200;	
Parameter 103: successfully written - Value = 200;	
Parameter 104: successfully written - Value = 0;	
Parameter 105: successfully written - Value = 2;	
Parameter 120: successfully written - Value = 1;	
Parameter 121: successfully written - Value = 90:	
Parameter 122: successfully written - Value = 150:	
Parameter 123: successfully written - Value = 150;	
Parameter 124: successfully written - Value = 90:	
Parameter 125: successfully written - Value - 300:	× .
Γ	-1
	Close

### Parameter Writing Sequence (CFW500 / CFW501 / MW500)

The parameters are sequentially written from the first to the last parameter (from the lowest to the highest number) except for P312.

Parameter P312 (Serial Protocol) is only written at the end of the writing process.



Thus, in case of a writing error in a parameter, P312 is not written at the end of the writing process, and the user can send the parameters to the drive again.



On the other hand, if the parameters were all successfully written, then P312 is also sent to the drive.



An error log may pop up in case some writing error occurs.



S Communication Log	×
Decementer 001 road only	
Parameter 90: read only;	
Parameter 91: read only;	
Parameter 92: read only;	
Parameter 93: read only;	
Parameter 94: read only;	
Parameter 95: read only;	
Parameter 96: read only;	
Parameter 97: read only;	
Parameter 100: successfully written - Value = 200;	
Parameter 101: successfully written - Value = 200;	
Parameter 102: successfully written - Value = 200;	
Parameter 103: successfully written - Value = 200;	
Parameter 104: successfully written - Value = 0;	
Parameter 105: successfully written - Value = 2;	
Parameter 120: successfully written - Value = 1;	
Parameter 121: successfully written - Value = 90;	
Parameter 122; successfully written - Value = 150;	
Parameter 123: successfully written - Value = 150:	
Parameter 124: successfully written - Value = 90:	
Decemeter 125: successfully written - Value - 300:	¥
	Close

## 7.2.11 Monitor Parameters

# ACCESS



Menu: Drive > Monitor Parameters Shortcut Key: none

# FUNCTION

Monitors all parameters in a grid. Allows to view and change the parameters in the online editor.

# APPEARANCE

Find What:		Find Nex	t 🗌 Match ent	ire cell contents				
Number								
	Function	Minimum	Maximum	Factory Setting	User Setting	Unit	Comparison	
0	Access to Parameters	0	9999	0	0			
1	Speed Reference	0	18000	0	89	rpm		
2	Motor Speed	0	18000	0	0	rpm		
3	Motor Current	0	4500	0	0	A		
4	DC Link Voltage (Ud)	0	2000	0	300	V		
5	Motor Frequency	0	1020	0	0	Hz		
5	VFD Status	0	7	0: Ready	0: Ready			
7	Motor Voltage	0	2000	0	0	V		
9	Motor Torque	-1000	1000	0	0	%		
10	Output Power	0	6553,5	0	0	kW		
11	Output cosPhi	0	1	0	0			
12	DI8 to DI1 Status	0000000b	11111111b	0000000b	0000000b			
13	DO5 to DO1 Status	0000000b	00011111b	0000000b	0000001b			
14	AO1 Value	0	100	0	0	%		
15	AO2 Value	0	100	0	0	%		
16	AO3 Value	-100	100	0	0	%		
17	AO4 Value	-100	100	0	0	%		
18	AI1 Value	-100	100	0	5,05	%		
19	AI2 Value	-100	100	0	5	%		
20	AI3 Value	-100	100	0	5	%		
21	AI4 Value	-100	100	0	-100	%		
23	Software Version	0	655,35	0	55,82			
25	DI 16 to DI9 Status	0000000b	1111111b	0000000b	0000000b			
26	DO13 to DO6 Status	0000000b	11111111b	0000000b	0000000b			
27	Accessories Config. 1	00h	FFFFh	00h	00h			
28	Accessories Config. 2	00h	FFFFh	00h	50h			
26 27 28	DO13 to DO6 Status Accessories Config. 1 Accessories Config. 2	00000000b 00h 00h	11111111b FFFFh FFFFh	0000000b 00h 00h	0000000b 00h 50h			

# DESCRIPTION

The program will show an overview of all the available parameters in a separate window. When SuperDrive G2 is online with a drive, it will show information from the drive being monitored. To edit a parameter double click on the parameter's user setting you would like to edit.

The following fields are available:

- Parameter number;
- Function;
- Minimum value;
- Maximum value;
- Factory setting;
- User's setting;
- Unit;
- Comparison.

When the parameter is read-only, the user's setting field is disabled (it can't be edited).

The user types the parameter value and press Enter. Only values between minimum and maximum are allowed.

In the online mode, to save the parameters in a file it is necessary confirming the action when the window is closed.

Some parameters shows a simple list of values in a single column. The user can select list entries with the mouse. Only one item can be selected at a time. When the user selects an item, any previously selected item is deselected first.

The user also can search for information in the parameter table typing the text or value to search and clicking on **Find Next**. By checking the **Match entire cell contents** option, the system searches for instances where the contents of the entire cell are equal to the search term.

## 7.2.12 Monitor using Keypad

# ACCESS

Toolbar: 🔀 Menu: Drive > Monitor using Keypad Shortcut Key: none

# FUNCTION

Monitors one parameter and sends commands to the drive.

## APPEARANCE

Monitor Using	Keypad	×
Parameter		
2 🖨	Motor Speed	
	0 rpm	
Commands		
JOG	3	LOC REM
		0
General Enable	General Disable	Reset
	3 ms	

## DESCRIPTION

The following information related to the parameter are shown:

- Parameter number.
- Function.
- User's setting.
- Unit.

The user can view/change one parameter at a time.

Besides the parameters number there is a pair of tiny arrow buttons that let the user select the parameter number from an ordered sequence.

When the parameter is read-only, the user can't change the parameter value.

When the parameter can be changed, a button is available for changing the parameter's user setting.

Clicking on this button opens a new window where the user can change the parameter's user setting and press the Send button. Only values between minimum and maximum are allowed.

Some parameters shows a simple list of values in a single column. The user can select list entries with the mouse. Only one item can be selected at a time.

The drive commands window has buttons as described below.

#### **Command Buttons**

- Jog.
- Direction of rotation (forward/reverse).
- Local/Remote.
- Start.
- Stop.
- General Enable.
- General Disable.
- Reset.

To use these command buttons in SuperDrive G2, some parameters must be programmed to the serial/USB option:

- CFW-11 / CFW700 / CFW701 / CFW500 / CFW501 / MW500 P0220...P0228;
- CFW100 P220, P222, P226...P228;
- SSW-06 / SSW-07 / SSW-08 / SSW7000 P220, P229, P230.

## 7.2.13 Monitor Status

## ACCESS

Toolbar: Menu: Drive > Monitor Status Shortcut Key: none

## FUNCTION

Shows the status of the drive.

# DESCRIPTION

The drive status window has indicators as described below.

### CFW-11 / CFW-11M G2 Status

- Drive Status;
- Direction of Rotation: Forward/Reverse;
- Local/Remote;
- General Enable;
- Ramp Enable;
- Jog.

Monitor Status X
Status
Ready
Forward
Local
General Enable
Ramp Enable
Jog
23 ms

### **CFW-11RB Status**

- Drive Status;
- General Enable;
- Ramp Enable.

### CFW700 / CFW701 Status

- Drive Status;
- Direction of Rotation: Forward/Reverse;
- Local/Remote;
- General Enable;
- Ramp Enable;
- Jog.

Monitor Status X
Status
Run
Forward
Local
General Enable
Ramp Enable
Jog
95 ms

### CFW500 / CFW501 / MW500 Status

- Drive Status;
- Direction of Rotation: Forward/Reverse;
- Local/Remote;
- General Enabled;
- Motor running;
- Jog;
- Configuration Mode;
- Alarm;
- Fault.

### **CFW100 Status**

- Drive Status;
- Direction of Rotation: Forward/Reverse;
- Local/Remote;
- General Enabled;
- Motor running;
- Jog;
- Configuration Mode;
- Alarm;
- Fault.

### ECW500 Status

- Drive Status;
- State of Limiters;
- State of Digital Inputs;
- Events.

Monitor Status	×
Status	
ECW	/500 Disabled
Runnir	ng startup ramp
Limiters	
LUF Enabled	LEOC Enabled
LEUC Enabled	LTOC Enabled
Digital Inputs	
On	Off
Increment	Decrement
MTVC	MECC
Enable Online	Disable Online
Enable Parallel	Disable Parallel
Pre Position	Reset Alarms
Backup	
Operation Mode	
MTVC	MECC
MPFC	Droop
Open Loop	MRPC
Backup	Auto-Tuning
Event	Date
EV003: Alarm Reset	07/31/2018 15:03:09
EV008: LUF stopped	07/27/2018 16:02:39
EV000: ECW off	07/27/2018 16:02:39
WELLIS' DWF DRACHEALIT	07/27/2018 16:02:37

### Status do CTW900

- Drive Status;
- Accelerating;
- Decelerating;
- Jog;
- Blocked;
- Configuration Mode;
- Auto-Ajuste;
- Segunda Rampa;
- Local/Remoto;
- Horário/Anti-horário;
- Invertendo;
- Subtensão;
- Alarme;

- Falha;
- DIs;
- DOs.

Monitor Status	Х
Status	
Ready	
Accelerating	
Decelerating	
Jog	
Blocked	
Configuration Mode (P0692=0)	
Self-Tuning	
Second Ramp	
Local	
Forward	
Reverting	
Undervoltage	
Alarm (P0048=0)	
Fault (P0049=0)	
DI8DI1	
DO5DI1	
31 ms	

### SSW-06 / SSW-07 / SSW-08 Status

- Drive Status;
- Direction of Rotation: Forward/Reverse;
- Local/Remote;
- General Enable;
- Motor Running;
- Jog;
- Accelerating;
- Current Limit;
- Full Voltage;
- Decelerating;
- Braking;
- Reverting;
- Main Power On;
- Bypass.

### SSW7000 Status

- Drive Status;
- Direction of Rotation: Forward/Reverse;
- Local/Remote;
- General Enable;
- Motor Running;
- Jog;
- Accelerating;
- Full Voltage;
- Bypass;
- Decelerating;
- Braking;
- Reverting;
- Delay P0831;
- Main Power On;
- Configuration Mode;
- Alarm;
- Fault.

## 7.2.14 Monitor Speed Reference

# ACCESS

Toolbar:

Menu: Drive > Monitor Speed Reference Shortcut Key: none

# FUNCTION

Shows the speed reference of the drive.

# **APPEARANCE**

Monitor Speed Reference X									
P0683	P0683								
Serial/USB Speed R	]								
Range :	-72007200	]							
Current value :	10	RPM 🗸							
New Value :	10	Send							
	15 ms								

# DESCRIPTION

There are 6 fields which show data related to speed reference:

- Speed Reference RPM or 13 bits
- Parameter

- User Setting
- Minimum
- Maximum
- New User Setting

The user can type a new value in New User Setting field and press Send button. Only values between minimum and maximum value are allowed.

The new value will appear in User Setting field after the drive has changed the value.

## 7.2.15 Trend

## ACCESS

Toolbar: Menu: Drive > Trend Shortcut Key: none

## **FUNCTION**

Captures signal values from drives and displays it as a graph. Data can also be saved, printed and exported.

Up to ten drive signals can be monitored.

The Trend is for low to medium sampling rates.

## APPEARANCE

S Tre	end																		×
Export	Print	Pan	Zoom	+	-	Resto	re Wid	lth F	Restore Heigh	nt /	Auto height   Le	gend							
											No data ava	ilable							
# Vis	ible	Color	Desc	ription	n				Time (Select	ion)	Value (Selection	) Un	t Minim	um	Maximum	Time (	(Last read)	Value (Last read)	Unit
Add	Channel Add Rem	Channel ove Cha	nnel	Tin Tir Sa	ne Co me sp amplir	onfig ban (s) ng rate	10 s 200	ms ontinu	~  uous	Rei	cord Start	Pause		Stop	Sav	e	War fron a loi low	ning: acquiring da n many channels f ng time and with a sampling rate may	ta 🔺 or a 🗸

# DESCRIPTION

The following items are presented below:

- Configuring Trend,
- Acquiring Trend Data,
- Viewing Trends,
- Export Trends,
- Print Trends,
- Disk Usage.

# **Configuring Trend**

#### **Adding Channels**

To add a channel, choose Add Channel.

Add Channel	Time Config	Record
+ Add Channel	Time span (s) 10 s 🗸 🗸	
	Sampling rate 200 ms	Start Pause Stop Save
Remove Channel	Continuous	

In the Add Channel dialog box, enter the channel information. Use the drop down list to select the channel variable.

S Add Channel						
Index:	1					
Data type:	Parameter 🗸					
Parameter:	P0000 Access to Parameters $\sim$					
Minimum:	0					
Maximum:	9999					
	OK Cancel					

Once the channel is added to the trend, the range (upper and lower limits of Y-axis) and other properties related can be set.

To set the channel range and other properties:

- 1. Select the desired channel,
- 2. Set the maximum and minimum limits of the Y-axis labels and change the color of the line used to draw the signal.

To hide channels in the trend:

- 1. Select the desired channel,
- 2. Uncheck the visibility property.

NOTE! To redisplay hidden channels, check the visibility property again.

#### **Removing Channels**

To remove a channel from the trend

- 1. Select the desired channel,
- 2. Choose Remove Channel.

Add Channel	Time Config	Record	
+ Add Channel	Time span (s) 10 s 🗸		
- Remove Channel	Sampling rate 200 ms	Start Pau	use Stop Save

#### **Configuring the Time Axis**

The range of the time (horizontal axis) visible on the graph can be changed by using the Trend Time Axis drop down list.

The time axis requires a range in seconds.

Add Channel	Time Config	Record
+ Add Channel	Time span (s) 10 s 🗸	
- Remove Channel	Sampling rate 200 ms	Start Pause Stop Save

#### Selecting the Sampling Rate

Adjust the sampling period when needed.

The sampling period requires a value in milliseconds, between 200 ms (0.2 s) and 86,400,000 ms (24h).

This is the period of time until next channels be acquired.

Add Channel	Time Config	Record	
+ Add Channel	Time span (s) 10 s 🗸		
- Remove Channel	Sampling rate 200 ms	Start Pau	ise Stop Save

Check the box to calculate continuously the faster sampling rate.

This sampling rate may vary according to communication type between drive and PC and the amount of channels being acquired simultaneously.

When this option is enabled, data are read as fast as possible:

Add Channel	Time Config	Record		
+ Add Channel	Time span (s) 10 s 🗸 🗸		11	1
	Sampling rate 200 ms	Start F	Pause Stop	Save
Remove Channel	Continuous			

<b>NOTE!</b> Enable <b>Continuous</b> option to read data from channels as fast as possible.
Communications' baud rate, etc. While capturing, the Trend displays the values of the channels.
In an ideal condition, these are the minimal sampling rate for each communication type: - USB: at least 150 ms. Add 50 ms for each channel being observed.
<ul> <li>Serial: at least 150 ms. Add 50 ms for each channel being observed.</li> <li>Bluetooth: at least 350 ms. Add 300 ms for each channel being observed.</li> </ul>

To monitor for a long period of time, use a high sampling interval.

Otherwise, the amount of points being constantly processed should cause slowdowns and instability during the graphic presentation.

Use the equation below to estimate the amount of points in the graphic.

Amount of Points = <u>Channels Quantity x Time of Acquisition (s)</u> Sampling Rate (ms) / 1000 Results over than 20,000 points may cause slowdowns and instability:

#### **Opening Graph**

A dialog box prompts you to view the graph:



Message while updating chart on screen:

Rec	ord									
				2						
	Start	Pause	Stop	Save						
Updating chart. Please wait.										

### **Acquiring Trend Data**

#### **Capturing and Saving Trends**

After channels were added to Trend, you must start capturing to view the trend on the graph.

There are four options available: Start, Pause, Stop and Save.

The options **Start, Pause** and **Stop** requires communication with drive.

- Start Button: Press **Start** button to start trending.
- Pause Button: Click **Pause** when is necessary analysing data during the acquisition.

While it is enabled, the acquisition still running but the last data read are not shown in the graph.

To scroll Trend, choose **Pause**. Clicking over the graphic will show up the scroll bar (only if there is part of the graphic not shown in the visible area).

When **Pause** is deselected, the graphic shows last data being acquired.

- Stop Button: Press **Stop** to stop trending of the selected signals. The acquired data are not save yet.
- Save Button: Press **Save** to store the acquired data.

SuperDrive G2 offers an option to save a trend for later analysis without a drive connected.

The files have the extension **.trend**.

A dialog box is shown. Type the filename and click **Save**:

S Save		×
Save in:	Project1 🗸 🧳 😥 🛄 🗸	
File <u>n</u> ame:	Save	
Files of typ	Trend File Cancel	
NOT	Έ!	

While data is being acquired, Trend shows last channels's data in graphic. When the graphic is scrolled during the data acquisition, it stops showing the last data read.

To revert it, is necessary to **Restore Width** (it is placed above the graphic).

# **Viewing Trends**

To open a previously saved trend, select the file with the **.trend** extension in the Project Window and then choose menu **Drive > Trend**.

It is not necessary to have the drive connected while viewing previously saved trends.

You can move through the samples using the scroll bar to examine data in detail.

#### **Using the Cursor**

To activate this marker press the **left mouse button** over the graph area.

The marker can be moved by clicking the mouse over the trend screen.

The selected sample time and value of each channel are indicated.

S Tre	nd								
Export	Print	Pan	Zoom	+	-	Restore Width	Restore Height	Auto height	Legend

#### Zoom

You can zoom in and zoom out of the trend.

To zoom in on the trend, choose + or **Zoom** and place the mouse pointer at the top left corner of the area you want to zoom in.

Click and hold the left mouse button then drag the pointer to draw a rectangle and release the mouse button.

The view of the trend zooms in.

To zoom out of the trend, choose -. The view of the trend zooms out. Horizontal Zoom Out stops when the width reaches its original value.

#### Scroll (Pan)

You can scroll the trend using the mouse.

To scroll Trend, choose Pan.

Click and hold the left mouse button at the graph area then drag the pointer to move graph in direction the mouse is moved.

## **Export Trends**

The currently displayed trend can be exported to a PNG file.

To export a trend:

- 1. Open the trend you want to export,
- 2. Choose Export,
- 3. Enter a filename for the PNG file.

S Trend								
Export Print	Pan	Zoom	+	-	Restore Width	Restore Height	Auto height	Legend



### **Print Trends**

The currently displayed trend can be printed.

To print a trend:

- 1. Open the trend you want to print,
- 2. Choose Print.

S Tre	nd								
Export	Print	Pan	Zoom	+	-	Restore Width	Restore Height	Auto height	Legend

**NOTE!** When printing or exporting, it is recommended to set the legend visible.

# Disk Usage

Trend creates temporary files during data acquiring. These information are needed to estimate how much disk space will be required for trend files:

- Number of channels,
- Time interval (total in s),
- Sampling rate (in ms).

Use the equation below to estimate necessary amount of free disk space:

Disk Space = <u>Number of Channels x Time Interval (s) x 25</u> Sampling Rate (ms) / 1000

### Examples

Case 1

Monitor 5 channels during 100 s (1:40:00) at 200 ms sampling rate:

Disk Space =  $\frac{5 \times 100 \times 25}{200 / 1000}$  = 62 Kb

Case 2

Monitor 10 channels during 14400 s (4:00:00) at 500 ms sampling rate:

Disk Space =  $\frac{10 \times 14400 \times 25}{500 / 1000}$  = 7 Mb

Case 3

Monitor 4 channels during 2592000 s (30 days) at 500 ms sampling rate:

Disk Space =  $\frac{4 \times 2592000 \times 25}{500 / 1000}$  = 518 Mb

Case 4

Monitor 2 channels during 864000 s (10 days) at 2000 ms sampling rate:

Disk Space =  $\frac{2 \times 864000 \times 25}{2000 / 1000}$  = 21 Mb

### 7.2.16 Remove Trend File

## ACCESS

Toolbar: Menu: Drive > Remove Trend File Shortcut Key: none

## FUNCTION

Remove all trend files.

## DESCRIPTION

User must select a filename in the Project Window.

SuperDrive G2 will ask the user to confirm deleting all trend files.

## 7.2.17 Export Trend File

## ACCESS

Toolbar: Menu: Drive > Export Trend File Shortcut Key: none

## **FUNCTION**

Exports the content of a trend file to another file in CSV format.

### DESCRIPTION

User must select a trend file name in the project tree.

SuperDrive G2 requests user to confirm the file export.

In affirmative case, a window is shown with the following options:

Export Trend File		×
Look in:	CFW11-314-Trend	✓ 🏂 📂
8		- Field delimiter:
Recent Items		<ul> <li>Semicolon</li> </ul>
		⊖ Comma
Desktop		
Documents		Field separator:
		○ Single quotes
This PC		
Network		No character
	File name: V3.2.csv	Export
	Files of type: Parameter file exported	∼ Cancel

- Field delimiter. Options: semicolon or comma.
- Field separator. Options: single quotes, double quotes or without quotes.
- The name of the new file, in CSV format.
- Buttons to export and to cancel the export.

## 7.2.18 Trace

## ACCESS

Toolbar: Menu: Drive > Trace Shortcut Key: none

### FUNCTION

It presents a graph of acquired trace function's data.

# APPEARANCE

S Tra	ace Fund	tion											×
Export	Print	Pan	Zoor	n   -	+ -	Restore Width	Restore Height A	uto heigł	nt   Leger	nd			
Export Print Pan Zoom + - Restore Width Restore Height Auto height Legend													
#	Visible	Colo	or D	escri	ption	Time (Selection)	Value (Selection)	Unit	Minimum	Maximum	Time (Last read)	Value (Last read)	Unit
											Config	Trace Acqui	ire data

## DESCRIPTION

The window presents a graph of trace channel's data for the selected file. If no file is selected, a blank graph is presented.

Press the button Config Trace to configure the trace function.

### **Trace Function Configuration**

A window with trace configuration parameters is presented.

Use the editable fields to change parameters contents.

The editable fields have the factory default value (if no file was selected), or the values from the previously saved file.

- Read configuration to read the trace configuration parameters from the drive. The parameters settings will be read from the drive and presented in the window.
- Write configuration to send the trace configuration to the drive. The configuration parameters are sent to the drive.
- Start Trace used to start the trace function on the drive. The start trace command is sent to the drive.
- Close to close the configuration window.
- Acquire data to acquire trace function data.

#### Trace Function Acquisition

If the trace function status is not complete, the trace function status monitor window is presented.

While the status is not complete, the button OK is disabled and the acquisition can not be performed.

When the status is complete, all programmed trace channel's data is acquired.

When the acquisition is complete please type the file name where all trace information and channel's data is to be stored.

Trace Function	x
Waiting for Trace complete status to start acquisitio	m
576 – Trace Function Status 3: Concluded	
OK Cancel	

#### **Graph Visualization**

Trace channel's data is presented in a graph. The channel information table is presented below the graph.

- # trace channel's index.
- Visible shows/changes channel's visibility in the graph.
- Color shows/changes the color which represents channel's data in the graph.
- Description trace channel's acquired variable description.
- Sample time time of the selected sample in the chart.
- Sample value value of the selected sample in the chart.
- Unit trace channel's data unit.
- Minimum shows/changes the lower bound for the axis of this channel in the graph.
- Maximum shows/changes the upper bound for the axis of this channel in the graph.

A black vertical line is shown at the trigger position. At the top of the graph is the trigger description.

#### **Graph Manipulation**

It is possible to change the sample cursor position by clicking at the graph. A toolbar with the following options can be found above the graph:

- Export: exports the graph area as a PNG image.
- Print: prints the graph area.
- Pan: changes to Pan Mode.
- Zoom: changes to Zoom Mode.
- Zoom +: magnifies the graph area.
- Zoom -: zoom out the graph area.
- Restore width: restores the initial width of the horizontal axis.
- Restore height: restores the initial height of the vertical axis.
- Auto height: automatic height depending on the maximum or minimum values of the samples.
- Legend: shows/hide the graph legend.

### Pan Mode

In Pan Mode press the mouse button over the graph area and drag to move the graph in the desired direction.

### Zoom Mode

In Zoom Mode press the mouse button over the graph area and drag to draw a zoom box. Release the mouse button to magnify the selected graph area.

### 7.2.19 Remove Trace File

## ACCESS

Toolbar: Menu: Drive > Remove Trace File Shortcut Key: none

## FUNCTION

Remove all trace files.

## DESCRIPTION

User must select a filename in the Project Window.

SuperDrive G2 will ask the user to confirm deleting all trace files.

## 7.2.20 Export Trace File

## ACCESS

Toolbar: Menu: Drive > Export Trace File Shortcut Key: none

## FUNCTION

Exports the content of a trace file to another file in CSV format.

## DESCRIPTION

User must select a trace file name in the project tree.

SuperDrive G2 requests user to confirm the file export.

Export Trace File				×
Look <u>i</u> n:	CFW11-5	70-200-240V-10A-8A	<ul> <li>Ø E</li> </ul>	۶ 🛄 -
Recent Items			<ul> <li>Field delimit</li> <li>Semicol</li> </ul>	er:
Desktop			🔿 Comma	
Documents			Field separa	ator:
This PC			<ul> <li>Single q</li> <li>Double</li> </ul>	uotes
Network			No char	acter
	File <u>n</u> ame:	P1.csv		Export
	Files of <u>type</u> :	Parameter file exported		✓ Cancel

In affirmative case, a window is shown with the following options:

- Field delimiter. Options: semicolon or comma.
- Field separator. Options: single quotes, double quotes or without quotes.
- The name of the new file, in CSV format.
- Buttons to export and to cancel the export.

# 7.3 Tools

Options Import Database Convert Project Simplified Conversion Log Remove Simplified Conversion Log Full Conversion Log Remove Simplified Conversion Log

## 7.3.1 Options

# ACCESS

Toolbar: Menu: Tools > Options Shortcut Key: none

# FUNCTION

Allows the user to select options for SuperDrive G2.

# PRESENTATION

Dptions >	<
Language Print Projects	
Language	1
Select Language: English ~	
Alternative Database Language Order:	
English	
Español Português	
Deutsch	
Apply	

# DESCRIPTION

The options are available via tabbed menu. To access them, click over the tab name:

- Language
- Print
- Projects

### Language

Allows the user to select a language.

Three languages are available:

- English,
- Spanish,
- German,
- Portuguese.

Besides the language selection of the software, the user can change the priority language selection of alternative database, which occurs when the selected drive does not have support for the selected language.

When successfully applies a language change, system presents a confirmation message.

Options		×
Language Print Projects		
Language		
Select Language:	English $\checkmark$	
Alternative Database Langua	ge Order:	
English		
Español Português		
Deutsch	T	
	Apply	

### Print

Allows the user to select the parameters printing options.

Four options are available:

- Print all parameters;
- Print all parameters, highlight changes in bold font (when compared to standard values);
- Print all parameters, highlight changes in red font (when compared to standard values);
- Print changed parameters only (when compared to standard values).

Options 2	×
Language Print Projects	
Parameters File	
All parameters	
○ All parameters, highlight changes in bold font	
O All parameters, highlight changes in red font	
○ Changed parameters only	
	-

### Projects

Allows the user to select the main projects folder, when SuperDrive G2 projects are stored.

This option presents the current main projects folder, where is possible to change this path: You must close the project before accessing this function. Otherwise, while a project is open SuperDrive G2 disables this option.

Options	×
Language Print Projects	
Default Projects Folder	
Current Path:	
C:\WEG\SuperDrive G2 15.0.0.4672\Projects	
New:	
Use default folder	
Please close the project before accessing this option.	
	Apply

Options	×
Language Print Projects	
Default Projects Folder	
Current Path:	
C:\WEG\SuperDrive G2 15.0.0.4672\Projects	
New:	
Use default folder	
	Apply

[1] Current path and folder where projects are stored.

[2] New path where projects will be stored. This field only updates after you choose a new path throws items [3] or [4].

[3] When selecting this option, the system restores the standard path and folder where projects will be stored.

[4] This button selects a new path where projects will be stored.

[5] This button apply the changes. It will be available only if there were changes.

# 7.3.2 Import Database

# ACCESS

Toolbar: Menu: Tools > Import Database Shortcut Key: none

# FUNCTION

Allows the user to import or update databases for SuperDrive G2.

# DESCRIPTION

User must select a Database Package file. The information of the selected Database Package is displayed in the Import Database window.

**NOTE!** Ensure there is no project open before access this function.

## 7.3.3 Convert Project

# ACCESS

Toolbar: P Menu: Tools > Convert Project Shortcut Key: none

# FUNCTION

This function allows converting a project from one firmware version to another firmware version.

# PRESENTATION

S Convert Project			×
Description		Steps	
This function allows converting a project of a firmware version into another firmware version. It is possible to select the firmware version, rated voltage and current in the target project. Accessory, when available, can also be selected. A new project will exceeded. The original project will not be changed.		1 - Enter the name of the target project. 2 - Select the firmware version, rated voltage and rated current of the target drive. 3 - Select the accessory and the firmware version, when available. 4 - Click the button to start the conversion of the project. Display the fields to fill in / select, and the button to start the conversion	
Original Project		Target Project	
Project Name:	Project1	Project Name:	Project1_Converted_001
Project Path:	C:\WEG\SuperDrive G2 15.0.0.4672\Projects\Project1	Project Path:	C:\WEG\SuperDrive G2 15.0.0.4672\Projects\Project1_Converted_001
Original Drive		Target Drive	
Drive:	CFW-11	Drive:	CFW-11
Firmware Version:	V5.40	Firmware Version:	V5.70 🗸
Rated Voltage/Current:	200 - 240 V 105A / 86A	Rated Voltage/Current:	200 - 240 V 105A / 86A 🗸 🗸 🗸
Original Accessory		Target Accessory	
Accessory:	PLC11-02	Accessory:	PLC11-02 v
Firmware Version:	V1.75	Firmware Version:	٧1.75 ~
Convert Project		Result after Conversion	
Warning Message:	After the conversion, please, check all the parameters in the target project.		
Convert Project	Click the button to start the conversion of the project.	Shows simplified c	onversion log. Shows full conversion log.
			Close

The project conversion window, shown above, has 10 panels, which are presented in a simplified way below:

Description	Steps
Original Project	Target Project
Original Drive	Target Drive
Original Accessory	Target Accessory
Convert Project	Result after the Conversion

Each panel has the following information:

- Description: brief description of the convert project function.
- Steps: indicate the fields to be changed/selected, and the button to start the project conversion.
- Original Project: source project name, as well as its path.
- Target Project: target project name, as well as its path.
- Original Drive: model, firmware version and voltage/rated current.
- Target Drive: model, firmware version and voltage/rated current.
- Original Accessory: source accessory name and firmware version, when available.
- Target Accessory: target accessory name and firmware version, when available.
- Convert Project: button to start the project conversion; this button is enabled under certain conditions.
- Result after the Conversion: presents a progress bar during the project conversion, showing a success or error status at the end of the conversion; 2 buttons are available: simplified conversion log and full conversion log.

## DESCRIPTION

It is possible to select the firmware version, rated voltage and current in the target project.

Accessory, when available, can also be selected.

A new project will be created.

Source project will not be modified.

#### Checkbox - Show the fields to fill in/select and button to start conversion

The user can click on the checkbox to highlight the fields (orange) which must be modified before starting the project conversion.

S Convert Project			×
Description This function allows converting a project of a firmware version into another firmware version. It is possible to select the firmware version, rated voltage and current in the target project. Accessory, when available, can also be selected. A new project will created. The original project will not be changed. Original Project		Steps 1 - Enter the name of the t 2 - Select the firmware ver 3 - Select the accessory ar 4 - Click the button to star Display the fields to fill i Target Project	target project. sion, rated voltage and rated current of the target drive. d the firmware version, when available. t the conversion of the project. n / select, and the button to start the conversion
Project Name:	Project1	Project Name:	Project1_Converted_001
Project Path:	C:\WEG\SuperDrive G2 15.0.0.4672\Projects\Project1	Project Path:	C:\WEG\SuperDrive G2 15.0.0.4672\Projects\Project1_Converted_001
Original Drive Drive: Firmware Version: Rated Voltage/Current:	CFW-11 V5.40 200 - 240 V 105A / 86A	Target Drive       Drive:     CFW-11       Firmware Version:     V5.70       Rated Voltage/Current:     200 - 240 V 105A / 86A	
Original Accessory		Target Accessory	
Accessory:	PLC11-02	Accessory:	PLC11-02 🗸
Firmware Version:	V1.75	Firmware Version:	V1.75 v
Convert Project Warning Message: Convert Project	After the conversion, please, check all the parameters in the target project.	Result after Conversion	noversion log
		Srivys sinplified d	Shows full conversion rug.

#### How to Convert the Projects

- **01** Fill in the name of the target project.
- **02** Select the firmware version, rated voltage and rated current of the target drive.
- **03** Select the accessory and firmware version, when available.
- **04** Click on the button to start the project conversion.
- **05** Click Yes to start the project conversion.







Convert	Project	$\times$
?	Project converted successfully!	
	Please, refer to the conversion log for complete information. All parameters must be checked.	
	Do you wish to view the conversion log (one for each parameters file)?	
Simpli	fied Conversion Log No	

- Simplified Conversion Log: opens the simplified conversion log viewer.
- Full Conversion Log: opens the full conversion log viewer.
- No: return to the project conversion window.

**08** - It returns to the project conversion window after closing the log viewer.

It is possible to view the conversion log.

2 buttons are available:

- Simplified Conversion Log: opens the simplified conversion log viewer.
- Full Conversion Log: opens the full conversion log viewer.

S Convert Project			×
Description This function allows converting a project of a firmware version into another firmware version. It is possible to select the firmware version, rated voltage and current in the target project. Accessory, when available, can also be selected. A new project will be created. The original project will not be changed.		Steps 1 - Enter the name of the 2 - Select the firmware very 3 - Select the accessory ar 4 - Click the button to star Display the fields to fill	target project. rsion, rated voltage and rated current of the target drive. nd the firmware version, when available. t the conversion of the project. in / select, and the button to start the conversion
Original Project		Target Project	
Project Name:	Project1	Project Name:	Project1_Converted_001
Project Path:	C:\WEG\SuperDrive G2 15.0.0.4672\Projects\Project1	Project Path:	C:\WEG\SuperDrive G2 15.0.0.4672\Projects\Project1_Converted_001
Original Drive		Target Drive	
Drive:	CFW-11	Drive:	CFW-11
Firmware Version:	V5.40	Firmware Version:	V5.70 🗸
Rated Voltage/Current:	200 - 240 V 105A / 86A	Rated Voltage/Current:	200 - 240 V 105A / 86A 🗸 🗸 🗸
Original Accessory		Target Accessory	
Accessory:	PLC11-02	Accessory:	PLC11-02 ~
Firmware Version:	V1.75	Firmware Version:	V1.75 V
Convert Project		Result after Conversion	
Warning Message:	After the conversion, please, check all the parameters in the target	100 %	
	project.	Project converted successfully!	
Convert Project	Click the button to start the conversion of the project.	Shows simplified o	conversion log. Shows full conversion log.
			Close

**09** - Exit the Project Conversion Window.

When exiting the window, after the successful project conversion, the system asks if the user wants to open the new project that has been generated.

Convert Project		×
?	Open new converted project?	
	Yes <u>N</u> o	

- Yes: closes the original project and opens the new created project.
- No: returns to the main window of the SuperDrive G2, keeping the source project open.

#### **Review of the Parameters Generated in the Target Project**

In the Convert Project panel, a warning message tells the user to check all the parameters after conversion.

Therefore, the user must open the target project and review the content of the parameters in the <u>offline parameter editor</u>, changing the content if necessary.

In the parameter editor, after the edition, the system asks the user if the review is complete (yes or no).

It is necessary to review the parameters in order to be able to send the converted parameters to the drive or to read the parameters and overwrite the converted parameters.

If the parameters are not reviewed, the system will allow neither reading nor writing the converted parameters.

### **Conversion Log**

The (simplified or full) conversion log can then be viewed. See the chapters:

- Simplified Conversion Log.
- Full Conversion Log.

#### **Rules Used in the Project Conversion**

#### 01

- Reason: Parameter in the source project does not exist in the target project
- Action: Non-existent parameter in the target project

#### 02

- Reason: Target parameter is read-only
- Action: Factory setting of the target parameter assumed

#### 03

- Reason: Content of the source parameter is equal to the factory setting
- Action: Factory setting of the target parameter assumed

#### 04

- Reason: Source parameter content is between the maximum and minimum of the target parameter
- Action: Source parameter content is copied to the target parameter content

#### 05

- Reason: Source parameter content is out of the limits of the target parameter
- Action: Factory setting of the target parameter assumed

#### 06

- Reason: Target parameter is new (it does not exist in the source project)
- Action: Factory setting of the target parameter assumed

## 7.3.4 Simplified Conversion Log

### ACCESS

Toolbar: Menu: Tools > Simplified Conversion Log Shortcut Key: none

## FUNCTION

It displays the simplified conversion log, generated by the convert project function.

This log includes the parameter conversions, but only new parameters or parameters whose content has been changed in the target project.

# PRESENTATION

S Log Viewer		×		
Parameters_summary.log				
Print Click the	button to print			
Project Conversion		^		
Date: 2018-10-18 Time: 08:14:21.259				
Original Project:	Projectl			
Drive Type: Firmware Version:	CFW-11			
Rated Voltage:	200 - 240 V 1554 / 864			
Accessory: Firmware Version:	PLC11-02 V1.75			
Target Project:	Projectl_Converted_001			
Drive Type: Firmware Version:	CFW-11 V5.70			
Rated Voltage: Rated Current:	200 - 240 V 105A / 86A			
Accessory: Firmware Version:	PLC11-02 V1.75			
Simplified Conversion Log				
Parameters File: Parameters.par				
P0273 Iq Filter	= 0 s -> New parameter			
P0274 Iq D0x Hysteresis	= 2 % -> New parameter			
P0358 Encoder Fault Confi	g. = 3: All -> Parameter content was changed (factory setting)			
P0397 Slip Compens.	= 1: On Mot/Reg -> Parameter content was changed (factory setting)			
P0414 Magnetization Time	= 0 s -> New parameter			
P0430 PM Type	= 0: Standard -> New parameter	~		
		Close		

# DESCRIPTION

The log viewer shows the log where it is possible to view from the beginning to the end, with a horizontal and vertical scroll bar.

- Print Button: sends the log to the current printer.
- Close Button: closes the window.

#### **Simplified Conversion Log Content**

The log has the following information:

- Date.
- Time.
- Original project name, including the drive model, firmware version, rated voltage/current, firmware version/accessory.
- Target project name, including the drive model, firmware version, rated voltage/current, firmware version/accessory.
- Parameters file name.
- List of new/changed parameters, where each parameter presents: number, description, content, and applied action (only new parameters or the ones whose content has been changed by the project converter).

# 7.3.5 Remove Simplified Conversion Log

# ACCESS

Toolbar: Menu: Tools > Remove Simplified Conversion Log Shortcut Key: none

# FUNCTION

It removes the simplified conversion log.

# PRESENTATION

Remove	Simplified Conversion Log	×
?	Do you really want to remove file C:\Projects\SuperDriveG2\Desktop\trunk\Projects\Project1_Converted_001\p1_summary.lo	g?
	<u>Y</u> es <u>N</u> o	

# DESCRIPTION

When clicking on the button or menu item **Remove Simplified Conversion Log**, a message prompts the confirmation to remove the file.

- Yes: removes the file.
- No: aborts the operation.

# 7.3.6 Full Conversion Log

## ACCESS

Toolbar: Menu: Tools > Full Conversion Log Shortcut Key: none

# FUNCTION

It displays the full conversion log, generated by the **Convert Project** function.

This log includes the conversions of all the parameters.

## PRESENTATION
S Log Viewer			×
Parameters.log			
Print	Click the button to print		
Project Conversion			^
Date: 2018-10-1 Time: 08:14:21.	8 259		
Original Project:	Project1		
Drive Type: Firmware Version: Rated Voltage: Rated Current: Accessory: Firmware Version:	CFW-11 V5.40 200 - 240 V 105A / 86A PLC11-02 V1.75		
Target Project:	Project1_Converted_001		
Drive Type: Firmwware Version: Rated Voltage: Rated Current: Accessory: Firmwware Version:	CFW-11 V5.70 200 - 240 V 105A / 86A PLC11-02 V1.75		
Full Conv	version Log		
Parameters File: Pa	arameters.par		
Original	Target	Original -> Target	
P0000 Access to Par	ameters P0000 Access to Parameters	0 -> 0	
Reason = Content o Action = Factory s	of original parameter is equal to the fa etting of the target parameter assumed	actory setting	
P0001 Speed Referer	ce P0001 Speed Reference	0 rpm -> 0 rpm	
Reason = Target pa Action = Factory s	arameter is read only etting of the target parameter assumed		
P0002 Motor Speed	P0002 Motor Speed	0 rpm -> 0 rpm	~
		Clos	se

## DESCRIPTION

The log viewer shows the log where it is possible to view from the beginning to the end, with a horizontal and vertical scroll bar.

- Print Button: sends the log to the current printer.
- Close Button: closes the window.

#### **Full Conversion Log Content**

The log has the following information:

- Date.
- Time.
- Original project name, including the drive model, firmware version, rated voltage/current, firmware version/accessory.
- Target project name, including the drive model, firmware version, rated voltage/current, firmware version/accessory.
- Parameters file name.
- List of all the parameters of the target project, where each parameter presents: number/ description of the original project, number/description of the target project, original and target parameter content, reason and applied action.

## 7.3.7 Remove Full Conversion Log

## ACCESS

Toolbar: Menu: Tools > Remove Full Conversion Log Shortcut Key: none

## FUNCTION

It removes the full conversion log.

## PRESENTATION

Remove	Full Conversion Log	Х
?	Do you really want to remove file C:\Projects\SuperDriveG2\Desktop\trunk\Projects\Project1_Converted_001\p1.lo	og?
	<u>Y</u> es <u>N</u> o	

## DESCRIPTION

When clicking on the button or menu item **Remove Full Conversion Log**, a message prompts the confirmation to remove the file.

- Yes: removes the file.
- No: aborts the operation.

## 7.4 Help

<u>Contents</u> <u>About</u>

### 7.4.1 Contents

## ACCESS

Toolbar: Menu: Help > Contents Shortcut Key: none

## FUNCTION

Opens the online help.

## DESCRIPTION

A comprehensive online documentation is available. The documentation can be printed.

### 7.4.2 About

## ACCESS

Toolbar: S Menu: Help > About Shortcut Key: none

## FUNCTION

Displays information about SuperDrive G2 version, build, etc.

## DESCRIPTION

Displays the following information:

- Software name.
- Version.
- Build.
- Launch date.
- Copyright.
- Simplified software description.
- Operational systems where the software can run.
- Java informations.

About	×
Supe	rDrive G2
htt	tp://www.weg.net/
SuperDrive G2	15.0.0
Copyright(C) 2006-2018 WE	G. All rights reserved.
Software for Parametri	zation of Drives.
For Windows 7 / 8 / 8.1	/ 10 (x86, x64).
Java Version:	1.8.0_192
Java Home:	C:\WEG\SuperDrive G2 15.0.0.4693\jre
Java Vendor:	Oracle Corporation
JRE Vendor URL:	http://java.oracle.com/
Operating System Architecture:	x86
Operating System Name:	Windows 10
Operating System Version:	10.0
User Working Directory:	C:\WEG\SuperDrive G2 15.0.0.4693
User Home Directory:	C: \Users \uizcm
User Account Name:	luizcm
	ОК

# 8 Communication

Contents of this chapter:

Drive Parametrization

**USB** Connection

USB Connection - Virtual COM Port

RS232 Connection

RS485 Connection

**Bluetooth Connection** 

Ethernet Connection

RS232 Cable

USB Cable

Ethernet Cable

USB to Serial Adapter

Bluetooth USB Adapter

Ethernet Network Adapter

Before Trying to Establish Communication

**Exception During Monitoring** 

## 8.1 Drive Parametrization

The following parameters must be set as below:

Drive	Connection Type	Paramete r	Description	Recommended
		0723	Anybus Identification	19 = EtherNet/IP or 21 = Modbus-TCP or 23 = PROFINET IO
		0841	Communication Rate	0 = Auto
CFW-11	Ethernet	0842	Time-out Modbus TCP	0
		0843	IP Address Configuration	0 = Parameters
		0844	IP1 Address	192
		0845	IP2 Address	168
		0846	IP3 Address	0
		0847	IP4 Address	10

Drive Connection Type		Paramete r	Description	Recommended
CFW-11 CFW-11RB CFW-11M G2	CFW-11 CFW-11RB (WEG) CFW-11M G2			
CFW700	<u>RS485</u>	0308 0310	Serial Address Serial Baud Rate	1 1 = 19200 bits/s
CFW701		0311 0308 0310	Serial Bytes Config. Serial Address Serial Baud Rate	1 = 8 bits, even parity, 1sb 1 1 = 19200 bits/s
		0311	Serial Bytes Config.	1 = 8 bits, even parity, 1sb 2 = Modbus RTU [with plug-in
CFW500	<u>RS485</u>	0312	Serial Protocol	6 = HMIR (1) + Modbus RTU (2) [with plug-in module CFW500-CUSB, CFW500- CRS232 or CFW500-CRS485]
CFW501				7 = Modbus RTU (2) [with plug-in module CFW500-CUSB, CFW500-CRS232 or CFW500- CRS485]
	<u>USB (Virtual</u> <u>COM Port)</u>	0312	Serial Protocol	6 = HMIR (1) + Modbus RTU (2) [with plug-in module CFW500-CUSB]
	(FTDI)			7 = Modbus RTU (2) [with plug-in module CFW500-CUSB]
		0800	Ethernet Module Identification	1 = Modbus TCP or 2 = EtherNet/IP or 3 = PROFINET IO
CEW500		0803	Ethernet Communication Rate	0 = Auto
MW500	<u>Ethernet</u>	0806	Watchdog Modbus TCP	0.0 65.5 s
		0810	IP Address Configuration	0 = Parameters
		0811	IP1 Address	192
		0812	IP2 Address	168
		0813	IP3 Address	0
		0814	IP4 Address	10
		0308	Serial Address	1 10200 hite/c
	<u>RS232</u>	0310	Serial Bytes Config	1 = 19200  DILS/S $1 = 8  bits even parity 1cb$
		0312	Serial Protocol	2 = Modbus RTU
MW500		0308	Serial Address	1
		0310	Serial Baud Rate	1 = 19200 bits/s
	<u>RS485</u>	0311	Serial Bytes Config.	1 = 8 bits, even parity, 1sb
		0312	Serial Protocol	2 = Modbus RTU [with plug-in

Drive	Connection Type	Paramete r	Description	Recommended
				<pre>module CFW500-IOS] 6 = HMIR (1) + Modbus RTU (2) [with plug-in module CFW500-CUSB, CFW500- CRS232 or CFW500-CRS485] 7 = Modbus RTU (2) [with plug-in module CFW500-CUSB,</pre>
	USB (Virtual COM Port)	0312	Serial Protocol	CFW500-CRS232 or CFW500- CRS485] 2 = Modbus RTU (1) [with plug-in module CFW500-CUSB] 6 = HMIR (1) + Modbus RTU (2) [with plug-in module CFW500-CUSB]
	<u>RS485</u>	0308 0310 0311	Serial Address Serial Baud Rate Serial Bytes Config.	1 1 = 19200 bits/s 1 = 8 bits, even parity, 1sb 2 = Modbus BTU
CFW100	USB (Virtual	0312 0308 0310	Serial Protocol Serial Address Serial Baud Bate	2 = Modbus RT0 1 1 = 19200 bits/s
	(FTDI)	0311 0312	Serial Bytes Config. Serial Protocol	1 = 8 bits, even parity, 1sb 2 = Modbus RTU
	<u>Bluetooth</u>	0770 0771	Bluetooth Device Name Bluetooth PIN	Random number 1234
СТW900	USB (WEG)			
ECW500	<u>RS485</u>	30006 30008 30010	Serial Baud Rate Serial Parity Serial Stop Bits	2 = 38400 bits/s 0 = None 1
	USB (WEG)			
		0800	Ethernet Module Identification	1 = Modbus TCP or 2 = EtherNet/IP or 3 = PROFINET IO
SCA-06	Ethorpot	0803	Ethernet Communication Rate	0 = Auto
	<u>cthemet</u>	0806	Watchdog Modbus TCP	0.0
		0810	IP Address Configuration	0 = Parameters
		0811	IP1 Address	192
		0812	IP2 Address	168
		0813	IP3 Address	0

Drive	Connection Type	Paramete r	Description	Recommended
		0814	IP4 Address	10
		308	SSW Address	1
SSW-06	<u>RS232</u>	312	Serial Protocol	1: MB 9600 N (Modbus-RTU 9600 bps, no parity), 8 bits, 2sb
	USB (Virtual COM Port) (FTDI)			USB Communication Kit (K- USB) should be used, which is supplied with the product
SSW-07		308	SSW Address	1
SSW-07	<u>RS232</u>	312	Serial Protocol	1: MB 9600 N (Modbus-RTU 9600 bps, no parity), 8 bits, 2sb
	<u>USB</u>			
SSW7000	(WEG)			
		308	Serial:Address	1
CEW-00 PM	00000	310	Serial:Bit Rate	1: 9600 bps
	<u>KJZJZ</u>	311	Serial:Data Con.	3: 8b, no parity, 2sb
		312	Serial:Protocol	2: Modbus-RTU

## 

Drive and SuperDrive G2 must use the same settings. For CFW-09 PM, P308, P310 and P311 can be changed, see Frequency Inverter Manual -CFW-09 PM. For CFW700, P0308, P0310 and P0311 can be changed, see Programming and Maintenance Manual - CFW700. For SSW, P308 and P312 can be changed, see Serial Communication Manual. (1) CFW500 - Port 1 - terminals 12, 14, 16. (2) CFW500 - Port 2 - USB, DB9 or RS485 connector (terminals 20, 22, 24).

# 8.2 USB Connection

The drive should be located at a distance shorter than 3 m from the computer.

This connection is made with <u>USB Cable</u>, supplied with drive user's guide.

USB Driver: user must install the USB driver available at USB\_Driver\USBIO folder.

## CFW-11 / CFW-11RB / CFW-11M G2

Figure below shows how to connect a computer to the drive (USB).





Switch off the drive before making the connections.

- 1. The USB connector is in the front cover of the drive.
- 2. Connect the type B connector of usb cable to the usb connector of the drive.
- 3. Connect the type A connector of usb cable to the computer usb port.
- 4. Check if in the SuperDrive G2 <u>Communication Setup</u> the selected connection type is USB.

## СТW900



#### WARNING!

Switch off the drive before making the connections.

- 1. The USB connector is in the front cover of the drive.
- 2. Connect the type B connector of usb cable to the usb connector of the drive.
- 3. Connect the type A connector of usb cable to the computer usb port.
- 4. Check if in the SuperDrive G2 <u>Communication Setup</u> the selected connection type is USB.

## SCA-06



#### WARNING!

Switch off the drive before making the connections.

- 1. The USB connector is in the front cover of the drive.
- 2. Connect the type B connector of usb cable to the usb connector of the drive.
- 3. Connect the type A connector of usb cable to the computer usb port.
- 4. Check if in the SuperDrive G2 <u>Communication Setup</u> the selected connection type is USB.

## SSW7000



### WARNING!

Switch off the drive before making the connections.

- 1. The USB connector is in the front cover of the drive.
- 2. Connect the type B connector of usb cable to the usb connector of the drive.

- 3. Connect the type A connector of usb cable to the computer usb port.
- 4. Check if in the SuperDrive G2 <u>Communication Setup</u> the selected connection type is USB.

## CFW700 / CFW701

Figure below shows how to connect a computer to the drive (USB).



#### WARNING!

Switch off the drive before making the connections.

This connection is available in CFW700's HMI since S/N 1024003697. This connection is available in CFW701's HMI since S/N 1023801859.

- 1. The USB connector is in the drive's HMI.
- 2. Connect the type mini-B connector of <u>usb cable</u> to the usb connector of the drive.
- 3. Connect the type A connector of usb cable to the computer usb port.
- 4. Check if in the SuperDrive G2 <u>Communication Setup</u> the selected connection type is USB.

## 8.3 USB Connection - Virtual COM Port

The drive should be located at a distance shorter than 3 m from the computer.

This connection is made with <u>USB Cable</u>, supplied with drive user's guide.

USB Driver: user must install the USB driver available at USB\_Driver\FTDI folder.

### **SSW-06**

Figure below shows how to connect a computer to the drive (USB).



Device manager in Windows indicates which serial port is connected to the drive.

The computer name in device manager is purposely unreadable.

🗄 Device Manager	_	$\times$
<u>File Action View H</u> elp		
🔶 🤿 📰 🗐 👔 🛐 🖳 💺 关 🕒		
✓ 書		 
Audio inputs and outputs		
> 🍃 Batteries		
> 🚯 Bluetooth		
> 👰 Cameras		
> 🛄 Computer		
> 👮 ControlVault Device		
> 🚘 Disk drives		
> 🏣 Display adapters		
> 🎽 Firmware		
> 🛺 Human Interface Devices		
> 📖 Keyboards		
> Memory technology devices		
> III Mice and other pointing devices		
> 💻 Monitors		
> 🚍 Network adapters		
V 🛱 Ports (COM & LPT)		
USB Serial Port (COM6)		
> 🚍 Print queues		
> Processors		
> P Security devices		
> 🔓 Smart card readers		
Software devices		
Sound, video and game controllers		
> Storage controllers		
> E System devices		
V Universal Serial Bus controllers		

OUSB       Serial       O Bluetooth       O Ethernet         Timing:       Iming:       Iming:       Iming:       Iming:         Field       Value       Unit       Default       Range         Transmission Delay       0       ms       0       [0 20000]         Response Delay       0       ms       0       [0 20000]         Time-out       100       ms       100       [100 20000]         Time-out       100       ms       100       [100 20000]         Werial:       Equipment       SSW-06           Equipment       SSW-06            Serial Port       COM6            Data Bits       8            Stop Bits       2            Parity       No Parity             Baud Rate       9600	Johneedon Ty	pe.				
Timing:FieldValueUnitDefaultRangeTransmission Delay0ms0[0 20000]Response Delay0ms0[0 20000]Time-out100ms100[100 20000]Serial:Serial PortCOM6Serial PortCOM6Data Bits8Stop Bits2ParityNo ParityBaud Rate9600	) USB	C	) Serial			) Ethernet
FieldValueUnitDefaultRangeTransmission Delay0ms0[0 20000]Response Delay0ms0[0 20000]Time-out100ms100[100 20000]Serial:SSW-06~~Serial PortCOM6~~Data Bits8~Stop Bits2~ParityNo Parity~Baud Rate9600~	iming:					
Transmission Delay0ms0[0 20000]Response Delay0ms0[0 20000]Time-out100ms100[100 20000]Serial:Serial PortSSW-06~Serial PortCOM6~Data Bits8~Stop Bits2~ParityNo Parity~Baud Rate9600~	Fie	ld	Value	Unit	Default	Range
Response Delay0ms0[0 20000]Time-out100ms100[100 20000]Serial:EquipmentSSW-06~Serial PortCOM6~Data Bits8~Stop Bits2~ParityNo Parity~Baud Rate9600~	Trans	mission Delay	0	ms	0	[0 20000]
Time-out     100     ms     100     [100 20000]       Serial:     Equipment     SSW-06     ~       Serial Port     COM6     ~       Data Bits     8     ~       Stop Bits     2     ~       Parity     No Parity     ~       Baud Rate     9600     ~	Re	sponse Delay	0	ms	0	[0 20000]
Serial: Equipment SSW-06 ~ Serial Port COM6 ~ Data Bits 8 ~ Stop Bits 2 ~ Parity No Parity ~ Baud Rate 9600 ~		Time-out	100	ms	100	[100 20000]
Equipment       SSW-06         Serial Port       COM6         Data Bits       8         Stop Bits       2         Parity       No Parity         Baud Rate       9600	erial:					
Serial Port       COM6         Data Bits       8         Stop Bits       2         Parity       No Parity         Baud Rate       9600		Equipment	SSW-06	~		
Data Bits     8       Stop Bits     2       Parity     No Parity       Baud Rate     9600		Serial Port	COM6	~		
Stop Bits     2       Parity     No Parity       Baud Rate     9600		Data Bits	8	~		
Parity No Parity $\checkmark$ Baud Rate 9600 $\checkmark$		Stop Bits	2	~		
Baud Rate 9600 🗸		Parity	No Parity	~		
		Baud Rate	9600	~		



Switch off the drive before making the connections.

- 1. Connect the mini-B connector of usb cable to the usb connector of the drive.
- 2. Connect the type A connector of usb cable to the computer usb port.
- 3. In device manager check which serial port is connected.
- 4. Check if in the SuperDrive G2 <u>Communication Setup</u> the selected connection type is serial.
- 5. The serial port in the window of communication setup window should be the same serial port that appears in the device manager, where the USB cable is connected.

## CFW500 / CFW501

Figure below shows how to connect a computer to the drive (USB).



Device manager in Windows indicates which serial port is connected to the drive. The computer name in device manager is purposely unreadable.



USB	Serial			) Ethernet
iming:				
Field	Value	Unit	Default	Range
Transmission Delay	0	ms	0	[0 20000]
Response Delay	0	ms	0	[0 20000]
Time-out	100	ms	100	[100 20000]
erial:				
Equipment	CFW500	~		
Serial Port	COM6	~		
Data Bits	8	~		
Stop Bits	1	$\sim$		
Parity	Even	$\sim$		
Baud Rate	19200	~		



Switch off the drive before making the connections.

- 1. Connect the mini-B connector of usb cable to the usb connector of the drive.
- 2. Connect the type A connector of usb cable to the computer usb port.
- 3. In device manager check which serial port is connected.
- 4. Check if in the SuperDrive G2 <u>Communication Setup</u> the selected connection type is serial.
- 5. The serial port in the window of communication setup window should be the same serial port that appears in the device manager, where the USB cable is connected.

## CFW100

Figure below shows how to connect a computer to the drive (USB).



Device manager in Windows indicates which serial port is connected to the drive. The computer name in device manager is purposely unreadable.

🚦 Device Manager	_	×
<u>File Action V</u> iew <u>H</u> elp		
♦ ♦ 🗊 🗒 🖉 🗊 🖳 💺 × ♦		
✓ ≜		
> 4 Audio inputs and outputs		
> 🦢 Batteries		
> ଃ Bluetooth		
> 👰 Cameras		
> 💻 Computer		
> 🖵 ControlVault Device		
> 🚘 Disk drives		
🔉 🏣 Display adapters		
> 🎽 Firmware		
> 🛺 Human Interface Devices		
> 🔤 Keyboards		
> Memory technology devices		
> III Mice and other pointing devices		
> 🛄 Monitors		
> 🖵 Network adapters		
🗸 🛱 Ports (COM & LPT)		
USB Serial Port (COM6)		
> 🚍 Print queues		
>  Processors		
> IP Security devices		
> 🔒 Smart card readers		
Software devices		
> 4 Sound, video and game controllers		
> 🍇 Storage controllers		
> 🏣 System devices		
> 🏺 Universal Serial Bus controllers		

onnection rype:					
) USB	Ser	ial	Bluetooth		) Ethernet
iming:					
Field		Value	Unit	Default	Range
Transmission	Delay	0	ms	0	[0 20000]
Response	Delay	0	ms	0	[0 20000]
Tir	ne-out	100	ms	100	[100 20000]
erial:					
Equi	pment	CFW100	~		
Seri	al Port	COM6	~		
Da	ta Bits	8	$\sim$		
St	op Bits	1	~		
	Parity	Even	~		
Bau	d Rate	19200	$\sim$		



Switch off the drive before making the connections.

- 1. Connect the mini-B connector of usb cable to the usb connector of the drive.
- 2. Connect the type A connector of usb cable to the computer usb port.
- 3. In device manager check which serial port is connected.
- 4. Check if in the SuperDrive G2 <u>Communication Setup</u> the selected connection type is serial.
- 5. The serial port in the window of communication setup window should be the same serial port that appears in the device manager, where the USB cable is connected.
- 6. Never change values in **P308**, **P310** and **P312** during a connection. Changing these parameters instantly causes connection lost between PC and drive.

## MW500

Figure below shows how to connect a computer to the drive (USB).

## WARNING!

With the drive turned off, be sure that position 1 of DipSwitch S10 is OFF, as shown below:



Device manager in Windows indicates which serial port is connected to the drive. The computer name in device manager is purposely unreadable.



incedon type:				
USB	Serial			) Ethernet
ning:				
Field	Value	Unit	Default	Range
Transmission Delay	0	ms	0	[0 20000]
Response Delay	0	ms	0	[0 20000]
Time-out	100	ms	100	[100 20000]
rial:				
Equipment	MW 500	~		
Serial Port	COM6	~		
Data Bits	8	~		
Stop Bits	1	$\sim$		
Parity	Even	$\sim$		
Baud Rate	19200	$\sim$		



Switch off the drive before making the connections.

- 1. Connect the mini-B connector of usb cable to the usb connector of the drive.
- 2. Connect the type A connector of usb cable to the computer usb port.
- 3. In device manager check which serial port is connected.
- 4. Check if in the SuperDrive G2 <u>Communication Setup</u> the selected connection type is serial.
- 5. The serial port in the window of communication setup window should be the same serial port that appears in the device manager, where the USB cable is connected.

# 8.4 RS232 Connection

The RS-232 standard (Recommended Standard 232) is only used in peer-to-peer communication, that is, it accepts two devices for communication: one master and one slave.

The drive, which is the slave, must be located less than 10 meters away from the computer (master).

### SSW-06

Figure below shows how to connect a computer to the drive (RS232 point-to-point).





Switch off the drive before making the connections.

- 1. Opens the front cover of the drive.
- 2. Connect the <u>RS232 PC/Drive Serial Cable</u> to the X2 serial connector.
- 3. Plug DB9 connector directly into any one of the computer serial COM port. Use one of the available serial ports, since this information will be necessary later on SuperDrive G2 <u>Communication Setup</u> during operation.
- 4. Configure the communication parameters on the drive. The communication parameters are described in <u>Drive Parametrization</u>.

## SSW-07

Figure below shows how to connect a computer to the drive (RS232 point-to-point).





- 1. Take out the optional plug-in cover.
- 2. Replace the cover with the optional plug-in module. Make sure that the module is connected.
- 3. Insert the DB9 connector of the <u>RS232 Connection Cable</u> to the optional module (XC41 connector) and tighten the screws to fix the connector.
- 4. Plug DB9 connector directly into any one of the computer serial COM port. Use one of the

available serial ports, since this information will be necessary later on the SuperDrive G2 <u>Communication Setup</u> during operation.

5. Configure the communication parameters on the drive. The communication parameters are described in <u>Drive Parametrization</u>.

#### **SSW-08**



#### WARNING!

Switch off the drive before making the connections.

- 1. Take out the optional plug-in cover.
- 2. Replace the cover with the optional plug-in module. Make sure that the module is connected.
- 3. Insert the DB9 connector of the <u>RS232 Connection Cable</u> to the optional module (XC41 connector) and tighten the screws to fix the connector.
- 4. Plug DB9 connector directly into any one of the computer serial COM port. Use one of the available serial ports, since this information will be necessary later on the SuperDrive G2 <u>Communication Setup</u> during operation.
- 5. Configure the communication parameters on the drive. The communication parameters are described in <u>Drive Parametrization</u>.

#### MW500



### WARNING!

Switch off the drive before making the connections.

- 1. Be sure that accessory RS232 Serial Interface Module is present and correctly connected to the drive.
- 2. Connect the DB9 connector from <u>RS232 Connection Cable</u> to the DB9 serial connector of RS232 Serial Interface Module.
- 3. Plug the another DB9 connector of cable directly into any one of the computer serial COM port. Use one of the available serial ports, since this information will be necessary later on the SuperDrive G2 <u>Communication Setup</u> during operation.
- 4. Configure the communication parameters on the drive. The communication parameters are described in <u>Drive Parametrization</u>.

### CFW-09 PM



#### WARNING!

Switch off the drive before making the connections.

- 1. Remove the keypad (HMI) from the inverter.
- 2. Install RS232 Serial Interface Module in place of the keypad.
- 3. Connect the <u>RS232 PC/Drive Serial Cable</u> to the XC7 serial connector.
- 4. Plug DB9 connector directly into any one of the computer serial COM port. Use one of the available serial ports, since this information will be necessary later on the SuperDrive G2 <u>Communication Setup</u> during operation.
- 5. Configure the communication parameters on the drive. The communication parameters are described in <u>Drive Parametrization</u>.

# 8.5 RS485 Connection

The RS-485 standard (Recommended Standard 485) is a serial communication standard.

Based on differential signaling over a twisted pair, it is ideal for transmission at high speeds, over long distances and in environments prone to electromagnetic interference.

It allows communication between several elements (multipoint) on the same data network.

RS-485 is not a protocol, but simply an electrical interface.

The drive, which is the slave, must be located less than 1000 meters away from the computer (master).

## CFW700 / CFW701

Figure below shows how to connect a computer to the drive (RS485 point-to-point).



Device manager in Windows indicates which serial port is connected to the USB RS485 converter.

The computer name in device manager is purposely unreadable.



OUSB Serial OBluetooth Timing: Field Value Unit D Transmission Delay 0 ms Response Delay 0 ms Time-out 100 ms Serial: Equipment CFW700 ✓ Serial Port COM6 ✓ Data Bits 8 %	Serial       Bluetooth         Value       Unit       Def         elay       0       ms       0         elay       0       ms       0         out       100       ms       10         nent       CFW700       ~       10         Port       COM6       ~       10         Bits       8       ~       10         ate       19200       ~       100	Default 0 0	C Ethernet
Timing: Field Value Unit D Transmission Delay 0 ms Response Delay 0 ms Time-out 100 ms Serial: Equipment CFW700 Serial Port COM6 Data Bits 8	ValueUnitDefelay0ms0elay0ms0out100ms10out100ms10outCFW700 $\checkmark$ PortCOM6 $\checkmark$ Bits8 $\checkmark$ Bits1 $\checkmark$ ate19200 $\checkmark$	Default 0 0	Range [0 20000]
Field     Value     Unit     D       Transmission Delay     0     ms     0       Response Delay     0     ms     0       Time-out     100     ms     0       Serial:	ValueUnitDefelay0ms0elay0ms0out100ms10out100ms10outCFW700 $\checkmark$ PortCOM6 $\checkmark$ Bits8 $\checkmark$ Bits1 $\checkmark$ ate19200 $\checkmark$	Default 0 0	Range [0 20000]
Transmission Delay       0       ms         Response Delay       0       ms         Time-out       100       ms         Serial:	elay       0       ms       0         elay       0       ms       0         out       100       ms       10         nent       CFW700       ~       10         Port       COM6       ~       10         Bits       8       ~       10         ate       19200       ~       100	0	[0 20000]
Response Delay     0     ms       Time-out     100     ms       Serial:	elay       0       ms       0         -out       100       ms       10         nent       CFW700       ~       0         Port       COM6       ~       0         Bits       8       ~       0         Bits       1       ~       0         ate       19200       ~       0	0	
Time-out     100     ms       Serial:	out     100     ms     10       nent     CFW700     ~       Port     COM6     ~       Bits     8     ~       Bits     1     ~       arity     Even     ~       Image: state     19200     ~	100	[0 20000]
Serial: Equipment CFW700 V Serial Port COM6 V Data Bits 8 V	Port CFW700 \vee Bits 8 \vee Bits 1 \vee rity Even \vee ate 19200 \vee	100	[100 20000]
Equipment CFW700 V Serial Port COM6 V Data Bits 8 V	CFW700       V         Port       COM6       V         Bits       8       V         Bits       1       V         arity       Even       V         Late       19200       V		
Serial Port COM6  Data Bits 8	Port COM6 ~ Bits 8 ~ Bits 1 ~ arity Even ~ ate 19200 ~		
Data Bits 8	Bits 8 ~ Bits 1 ~ arity Even ~ tate 19200 ~		
	Bits 1 ~ arity Even ~ Late 19200 ~		
Stop Bits 1 🗸	arity Even v Late 19200 v		
Parity Even 🗸	late 19200 🗸		
Baud Rate 19200 🗸			



Switch off the drive before making the connections.

- 1. Connect the type B connector of USB cable to the USB connector of the USB RS485 converter.
- 2. Connect the type A connector of USB cable to the computer usb port.
- 3. In device manager check which serial port is connected.
- 4. Check if in the SuperDrive G2 <u>Communication Setup</u> the selected connection type is serial.
- 5. The serial port in the window of communication setup window should be the same serial port that appears in the device manager, where the USB cable is connected.

## CFW500 / CFW501

Figure below shows how to connect a computer to the drive (RS485 point-to-point).



Device manager in Windows indicates which serial port is connected to the USB RS485 converter.

The computer name in device manager is purposely unreadable.



O USB       ● Serial       ● Bluetooth       ● Ethernet         Timing:	onnection rype.				
Timing:         Field         Value         Unit         Default         Range           Transmission Delay         0         ms         0         [0 20000]           Response Delay         0         ms         0         [0 20000]           Response Delay         0         ms         100         [0 20000]           Time-out         100         ms         100         [100 20000]           Serial:	USB 💽 S	Serial	OBluetooth		) Ethernet
FieldValueUnitDefaultRangeTransmission Delay0ms0[0 20000]Response Delay0ms0[0 20000]Time-out100ms100[100 20000]Serial:100[100 20000]Serial: </td <td>iming:</td> <td></td> <td></td> <td></td> <td></td>	iming:				
Transmission Delay       0       ms       0       [0 20000]         Response Delay       0       ms       0       [0 20000]         Time-out       100       ms       100       [100 20000]         Serial:	Field	Value	Unit	Default	Range
Response Delay         0         ms         0         [0 20000]           Time-out         100         ms         100         [100 20000]           Serial:	Transmission Delay	0	ms	0	[0 20000]
Time-out       100       ms       100       [100 20000]         Serial:       Equipment       CFW500       ~         Serial Port       COM6       ~         Data Bits       8       ~         Stop Bits       1       ~         Parity       Even       ~         Baud Rate       19200       ~	Response Delay	0	ms	0	[0 20000]
Serial: Equipment CFW500 Serial Port COM6 Data Bits 8 Stop Bits 1 Parity Even Baud Rate 19200	Time-out	100	ms	100	[100 20000]
EquipmentCFW500Serial PortCOM6Data Bits8Stop Bits1ParityEvenBaud Rate19200	erial:				
Serial PortCOM6Data Bits8Stop Bits1ParityEvenBaud Rate19200	Equipment	CFW500	~		
Data Bits8Stop Bits1ParityEvenBaud Rate19200	Serial Port	COM6	~		
Stop Bits     1       Parity     Even       Baud Rate     19200	Data Bits	8	~		
Parity Even ~ Baud Rate 19200 ~	Stop Bits	1	~		
Baud Rate 19200 🗸	Parity	Even	~		
	Baud Rate	19200	~		



Switch off the drive before making the connections.

- 1. Connect the type B connector of USB cable to the USB connector of the USB RS485 converter.
- 2. Connect the type A connector of USB cable to the computer USB port.
- 3. In device manager check which serial port is connected.
- 4. Check if in the SuperDrive G2 <u>Communication Setup</u> the selected connection type is serial.
- 5. The serial port in the window of communication setup window should be the same serial port that appears in the device manager, where the USB cable is connected.

## CFW100

Figure below shows how to connect a computer to the drive (RS485 point-to-point).



Device manager in Windows indicates which serial port is connected to the USB RS485 converter.

The computer name in device manager is purposely unreadable.

🚦 Device Manager	_	×
<u>F</u> ile <u>A</u> ction <u>V</u> iew <u>H</u> elp		
(⇔ →) 🗊 🗐 🛐 🧾 🖳 💺 🗙 📀		
✓ ≞		
> 4 Audio inputs and outputs		
> 🦢 Batteries		
> ଃ Bluetooth		
> 👰 Cameras		
> 💻 Computer		
> 🖵 ControlVault Device		
> 👝 Disk drives		
> 🏣 Display adapters		
> 🎽 Firmware		
> 🎮 Human Interface Devices		
> 🔤 Keyboards		
> Memory technology devices		
> II Mice and other pointing devices		
> 🛄 Monitors		
> 🖵 Network adapters		
🗸 🛱 Ports (COM & LPT)		
USB Serial Port (COM6)		
> 🚍 Print queues		
> D Processors		
> IP Security devices		
> 🛃 Smart card readers		
> 📱 Software devices		
🔉 🐗 Sound, video and game controllers		
> 🍙 Storage controllers		
> 🏣 System devices		
> 🏺 Universal Serial Bus controllers		

USB	Serial	OBluetooth	n 🔿 Ethernet	
iming:				
Field	Value	Unit	Default	Range
Transmission Dela	ay O	ms	0	[0 20000]
Response Dela	ay O	ms	0	[0 20000]
Time-ou	ut 100	ms	100	[100 20000]
erial:				
Equipmer	nt CFW100	~		
Serial Po	rt COM6	~		
Data Bi	ts 8	~		
Stop Bi	ts 1	$\sim$		
Parit	ty Even	$\sim$		
Baud Rat	te 19200	~		



Switch off the drive before making the connections.

- 1. Connect the type B connector of USB cable to the USB connector of the USB RS485 converter.
- 2. Connect the type A connector of USB cable to the computer USB port.
- 3. In device manager check which serial port is connected.
- 4. Check if in the SuperDrive G2 <u>Communication Setup</u> the selected connection type is serial.
- 5. The serial port in the window of communication setup window should be the same serial port that appears in the device manager, where the USB cable is connected.

## MW500

Figure below shows how to connect a computer to the drive (RS485 point-to-point).



Device manager in Windows indicates which serial port is connected to the USB RS485

#### converter.

The computer name in device manager is purposely unreadable.

📇 Device Manager	_	$\times$			
<u>File Action View H</u> elp					
🔶 🤿 📰 🗐 👔 🛐 🖳 💺 关 🕒					
✓ 書		 			
Audio inputs and outputs					
> 🍃 Batteries					
> 🚯 Bluetooth					
> 👰 Cameras					
> 💻 Computer					
> 🚽 ControlVault Device					
> 👝 Disk drives					
> 🏣 Display adapters					
> 🎽 Firmware					
> 🛺 Human Interface Devices					
> 🔤 Keyboards					
> Memory technology devices					
> III Mice and other pointing devices					
> 🛄 Monitors					
> 🖵 Network adapters					
🗸 🛱 Ports (COM & LPT)					
USB Serial Port (COM6)					
> 🚍 Print queues					
> Processors					
> IP Security devices					
> 📕 Smart card readers					
> 📱 Software devices					
> 4 Sound, video and game controllers					
> 🍇 Storage controllers					
> 🏣 System devices					
> 🏺 Universal Serial Bus controllers					
nnecuon Type:	_				
----------------	-------	-------	------------	---------	-------------
USB	Seria	al	OBluetooth	C	) Ethernet
ning:					
Field		Value	Unit	Default	Range
Transmission D	elay	0	ms	0	[0 20000]
Response De	elay	0	ms	0	[0 20000]
Time	-out	100	ms	100	[100 20000]
rial:					
Equipr	nent	MW500	~		
Serial I	Port	COM6	~		
Data	Bits	8	$\sim$		
Stop	Bits	1	$\sim$		
Pa	arity	Even	~		
Baud R	Rate	19200	~		



### WARNING!

Switch off the drive before making the connections.

- 1. Connect the type B connector of USB cable to the USB connector of the USB RS485 converter.
- 2. Connect the type A connector of USB cable to the computer USB port.
- 3. In device manager check which serial port is connected.
- 4. Check if in the SuperDrive G2 <u>Communication Setup</u> the selected connection type is serial.
- 5. The serial port in the window of communication setup window should be the same serial port that appears in the device manager, where the USB cable is connected.

# ECW500

Figure below shows how to connect a computer to the drive (RS485 point-to-point).



Device manager in Windows indicates which serial port is connected to the USB RS485 converter.

The computer name in device manager is purposely unreadable.



In SuperDrive G2, select the serial port correctly in Communication Setup window as follows.

USB       Serial       Bluetooth       Ethernet         iming:       Field       Value       Unit       Default       Range         Transmission Delay       0       ms       0       [0 20000]         Response Delay       0       ms       0       [0 20000]         Time-out       100       ms       100       [100 20000]         erial:       Equipment       ECW500       ~	USB       ● Serial       ● Bluetooth       ● Ethernet         iming:       Field       Value       Unit       Default       Range         Transmission Delay       0       ms       0       [0 2000]         Response Delay       0       ms       0       [0 2000]         Time-out       100       ms       100       [100 2000]         erial:       Equipment       ECW500       ✓       [100 2000]         Serial Port       COM6       ✓       ✓       [100 2000]         Baud Rate       38400       ✓       ✓       ✓	0.0.1			
Fining:       Field       Value       Unit       Default       Range         Transmission Delay       0       ms       0       [0 20000]         Response Delay       0       ms       0       [0 20000]         Time-out       100       ms       100       [100 20000]         Serial:	Field       Value       Unit       Default       Range         Transmission Delay       0       ms       0       [0 2000]         Response Delay       0       ms       0       [0 2000]         Time-out       100       ms       100       [100 2000]         Serial:	<ul> <li>Serial</li> </ul>	⊖ Bluetoot	th	) Ethernet
FieldValueUnitDefaultRangeTransmission Delay0ms0[0 20000]Response Delay0ms0[0 20000]Time-out100ms100[100 20000]Gerial:Serial PortCOM6Data Bits8Stop Bits1ParityNo ParityBaud Rate38400	FieldValueUnitDefaultRangeTransmission Delay0ms0[0 2000]Response Delay0ms0[0 2000]Time-out100ms100[100 2000]Serial: </td <td></td> <td></td> <td></td> <td></td>				
Transmission Delay       0       ms       0       [0 20000]         Response Delay       0       ms       0       [0 20000]         Time-out       100       ms       100       [100 20000]         Serial:	Transmission Delay       0       ms       0       [0 2000]         Response Delay       0       ms       0       [0 2000]         Time-out       100       ms       100       [100 2000]         Serial:	Field V	alue Unit	Default	Range
Response Delay       0       ms       0       [0 20000]         Time-out       100       ms       100       [100 20000]         Serial:	Response Delay       0       ms       0       [0 200]         Time-out       100       ms       100       [100 200]         Serial:	Transmission Delay	0 ms	0	[0 20000]
Time-out     100     ms     100     [100 20000]       Serial:     Equipment     ECW500     ~       Serial Port     COM6     ~       Data Bits     8     ~       Stop Bits     1     ~       Parity     No Parity     ~       Baud Rate     38400     ~	Time-out     100     ms     100     [100 200]       Serial:     Equipment     ECW500     ~       Serial Port     COM6     ~       Data Bits     8     ~       Stop Bits     1     ~       Parity     No Parity     ~       Baud Rate     38400     ~	Response Delay	0 ms	0	[0 20000]
Serial: Equipment ECW500 ~ Serial Port COM6 ~ Data Bits 8 ~ Stop Bits 1 ~ Parity No Parity ~ Baud Rate 38400 ~	Serial: Equipment ECW500 \v Serial Port COM6 \v Data Bits 8 \v Stop Bits 1 \v Parity No Parity \v Baud Rate 38400 \v	Time-out 1	.00 ms	100	[100 20000]
Equipment       ECW500       ✓         Serial Port       COM6       ✓         Data Bits       8       ✓         Stop Bits       1       ✓         Parity       No Parity       ✓         Baud Rate       38400       ✓	Equipment       ECW500       ✓         Serial Port       COM6       ✓         Data Bits       8       ✓         Stop Bits       1       ✓         Parity       No Parity       ✓         Baud Rate       38400       ✓				
Serial Port       COM6         Data Bits       8         Stop Bits       1         Parity       No Parity         Baud Rate       38400	Serial PortCOM6Data Bits8Stop Bits1ParityNo ParityBaud Rate38400	Equipment	ECW500 V		
Data Bits8Stop Bits1ParityNo ParityBaud Rate38400	Data Bits8Stop Bits1ParityNo ParityBaud Rate38400	Serial Port	COM6 🗸		
Stop Bits     1       Parity     No Parity       Baud Rate     38400	Stop Bits     1     ~       Parity     No Parity     ~       Baud Rate     38400     ~	Data Bits	8 ~		
Parity     No Parity       Baud Rate     38400	Parity     No Parity       Baud Rate     38400	Stop Bits	1 ~		
Baud Rate 38400 🗸	Baud Rate 38400 🗸	Parity	No Parity 🗸 🗸		
		Baud Rate	38400 🗸		



## WARNING!

Switch off the drive before making the connections.

- 1. Connect the type B connector of USB cable to the USB connector of the USB RS485 converter.
- 2. Connect the type A connector of USB cable to the computer USB port.
- 3. In device manager check which serial port is connected.
- 4. Check if in the SuperDrive G2 <u>Communication Setup</u> the selected connection type is serial.
- 5. The serial port in the window of communication setup window should be the same serial port that appears in the device manager, where the USB cable is connected.

# 8.6 Bluetooth Connection

Bluetooth is a global wireless and low-power-consumption communication standard that allows data exchange between devices over short distances.

The data exchange is done by means of radiofrequency, allowing a device to detect the other, regardless of their positions, as long as they are within a certain distance range.

The drive must be less than 1 m, 10 m or 100 m from the computer, depending on the Bluetooth technology available on your PC.

Class	Range
Class 1	Up to 100 m (330 ft)
Class 2	Up to 10 m (33 ft)
Class 3	Up to 1 m (3 ft)

However, the use of Bluetooth devices requires pairing for communication.

To pair devices is to establish a connection between two Bluetooth devices (in this case, between a computer and the driver).

# CFW100

The topics below present details on the use of the Bluetooth technology.

The steps presented in this chapter are valid for Windows 10.

For other operating systems (Windows 7 / 8 / 8.1), the steps are similar; see Windows help.

### Drive with CFW100-CBLT Accessory

Make sure the drive has the Bluetooth communication module called CFW100-CBLT.

Make sure the drive has parameters P310, P311 and P312 set to the factory default values.

If the computer does not have Bluetooth technology, use a <u>adaptador USB Bluetooth</u>.

#### NOTA!

Once the Bluetooth is enabled on the computer, do not remove or replace the Bluetooth USB adapter during use.

For the proper operation of the CFW100 inverter with the CFW100-CBLT module, parameters P310, P311 and P312 must be set to the factory default values. During communication, the values of parameters P308, P310, P311 and P312 must not be changed. Otherwise, communication between the drive and the SuperDrive G2 will be lost.



#### Módulo de Comunicação Bluetooth

Make sure the LED of the drive Bluetooth communication module is on (ACTIVE). That indicates the CFW100-CBLT module is active.

The CFW100-CBLT communication module has two LEDs that indicate the communication status:

**01** - Red LED (ACTIVE): indicates the CFW100-CBLT module is active.



**02** - Green LED (STATUS): indicates the serial communication service of the CFW100-CBLT module is active.

That means that, after the successful pairing, when the SuperDrive G2 starts communication with the CFW100 - for example, reading a drive parameter - the green LED turns on and will remain on even if no communication occurs between the drive and the SuperDrive G2. The LED will only turn off when the drive is turned off. When the drive is turned back on, the green LED remains off.



#### PC with Active Bluetooth

Make sure the Bluetooth interface on the computer is turned on or the Bluetooth USB adapter is connected to the PC and working. The Bluetooth logo will appear on Windows taskbar.



The Bluetooth status on the PC can also be checked on Windows Settings window.

**01** - One of the ways to view the settings is described below.

- 1. Press the key WIN + R,
- 2. Type ms-settings: bluetooth
- 3. Press OK
- 4. The Bluetooth settings window will open and you can check if the Bluetooth is active.

The window below illustrates the operation.

💷 Run	×
	Type the name of a program, folder, document, or Internet resource, and Windows will open it for you.
<u>O</u> pen:	ms-settings:bluetooth ~
	OK Cancel <u>B</u> rowse

The blue button below indicates the Bluetooth is active on the computer.

← Settings	- 🗆 X
② Home	Bluetooth & other devices
Find a setting	+ Add Bluetooth or other device
Devices	Bluetooth
Bluetooth & other devices	On On
品 Printers & scanners	Now discoverable as "BRJGSN314823"
() Mouse	Mouse, keyboard, & pen
🖽 Touchpad	Microsoft <sup>®</sup> 2.4GHz Transceiver v7.0
📼 Typing	Other devices
🖉 Pen & Windows Ink	
🕞 AutoPlay	524E310
🖞 USB	

**02** - A second way to view the settings is described below.

Windows Start Menu > Settings > Devices > Bluetooth & other devices = check if the Bluetooth status is active.

## CONNECT THE COMPUTER TO THE DRIVE VIA BLUETOOTH

Only two steps are necessary to prepare the environment to use the Bluetooth:

**01** - First, it is necessary to pair Windows with the drive (see item **Pairing Windows with the Drive**),

**02** - Then you should configure the SuperDrive G2 for Bluetooth communication (see item **Configuring the Bluetooth Communication on the SuperDrive G2**).

After those two steps, the SuperDrive G2 will be ready to communicate with the drive via Bluetooth.

#### Pairing Window with the Drive

At the first use, Windows requests the execution of some additional steps as follows.

**01** - Turn on the CFW100 (with Bluetooth) and make it discoverable.

**02** - Click Windows Start Menu button on the left corner of the screen. After that, select the Settings icon.



**03** - On the Settings window, clique on Devices.



**04** - The Devices window pops up. On the left menu of such window, select Bluetooth & other devices.

Make sure the Bluetooth technology is activated in Windows (Bluetooth button ON).

← Settings	- 🗆 X
l Home	Bluetooth & other devices
Find a setting $\rho$	+ Add Bluetooth or other device
Devices	Bluetooth
Bluetooth & other devices	On On
品 Printers & scanners	Now discoverable as "BRJGSN314823"
🖱 Mouse	Mouse, keyboard, & pen
🗔 Touchpad	Microsoft <sup>®</sup> 2.4GHz Transceiver v7.0
📼 Typing	Other devices
🖉 Pen & Windows Ink	
ြာ AutoPlay	<b>524E310</b>
D USB	

**05** - Click on the Add Bluetooth or other device button.

← Settings	- 🗆 X
談 Home	Bluetooth & other devices
Find a setting $\wp$	+ Add Bluetooth or other device
Devices	Bluetooth
Bluetooth & other devices	On On
品 Printers & scanners	Now discoverable as "BRJGSN314823"
🖱 Mouse	Mouse, keyboard, & pen
Touchpad	Microsoft <sup>®</sup> 2.4GHz Transceiver v7.0
📟 Typing	Other devices
🖉 Pen & Windows Ink	
AutoPlay     AutoPlay	<b>S24E310</b>
🖞 USB	

**06** - The Add a device window pops up.





Add a device	$\times$
Add a device	
choose the kind of device you want to add.	
Bluetooth Mice, keyboards, pens, or audio and other kinds of Bluetooth devices	
Wireless display or dock Wireless monitors, TVs, or PCs that use Miracast, or wireless docks	
Everything else Xbox controllers with Wireless Adapter, DLNA, and more	
Cancel	

**08** - At this moment, Windows starts looking for Bluetooth devices.



**09** - Windows shows the device found on the screen. In this case, a CFW100 was found. The code shown is the content of parameter 770 (P770 = 7367).

Click on the device found.



NOTA! Always use a unique code (content of P770) for each drive.

**10** - Some Bluetooth devices require authentication before pairing.

The CFW100 is a device that requires authentication. A message will be displayed on the window with a code generated by Windows.

Always accept that code (it may be a different number from the one shown below).

Click the Connect button to continue.

Add a	device		×
Ado	d a device		
Make conn	e sure your device is turned on and di ect.	scoverable. Sele	ct a device below to
ŗ	7367 Connecting Press Connect if the PIN on 7367 mat 794395	ches this one.	
	Connect		Cancel
			Cancel
			Cancel

**11** - At this moment, Windows executes the pairing and shows a message saying that the device is ready to go.



**12** - A Windows notification usually pops up saying the device is ready. That notification disappears automatically.



**13** - Also on the Devices window, with the Bluetooth & other devices selected (menu on the left of the window), the paired device (CFW100) appears on the paired device list as shown below.

← Settings	– 🗆 X
Ome	Bluetooth & other devices
Find a setting $\begin{subarray}{c} \end{subarray} \end{subarray}$	+ Add Bluetooth or other device
Devices	Bluetooth
Bluetooth & other devices	On On
品 Printers & scanners	Now discoverable as "BRJGSN314823"
() Mouse	Mouse, keyboard, & pen
🗔 Touchpad	Microsoft <sup>®</sup> 2.4GHz Transceiver v7.0
Typing	Other devices
🖉 Pen & Windows Ink	7367 Paired
လူ AutoPlay	DELL P190S
🖞 USB	
	S24E310

### **Configuring the Bluetooth Communication on the SuperDrive G2**

On the SuperDrive G2, it is necessary to configure the same output serial COM port that Windows reserved for Bluetooth. See the steps below.

**01** - Open the Windows Bluetooth settings window (**Bluetooth & other devices**).

← Settings		- 🗆 X	
② Home		Bluetooth & other devices	
Find a setting	٩	+ Add Bluetooth or other device	
Devices		Bluetooth	
Bluetooth & other	devices	On On	
뮵 Printers & scanner	'S	Now discoverable as "BRJGSN314823"	
() Mouse		Mouse, keyboard, & pen	
🗔 Touchpad		Microsoft® 2.4GHz Transceiver v7.0	
📟 Typing		Other devices	
cℬ Pen & Windows Ir	ık	Diner devices	
AutoPlay     AutoPlay		DELL P190S	
🖞 USB			
		S24E310	

**02** - Move the scroll bar to find the link **More Bluetooth options**. Click on that link.

← Settings	– 🗆 X
Ome	Bluetooth & other devices
Find a setting	Related settings Devices and printers
Bluetooth & other devices	Sound settings
品 Printers & scanners	Display settings
() Mouse	More Bluetooth options Send or receive files via Bluetooth
🖬 Touchpad	
📟 Typing	Have a question?
🖉 Pen & Windows Ink	Get help
AutoPlay	Make Windows better
D USB	Give us feedback

**03** - Windows **Bluetooth Settings** window pops up. Select the **COM Ports** tab.

For each Bluetooth device, 2 COM ports are used. Check which is the output COM port (Output Direction).

In this example, the output COM4 port will be used in the configuration of the SuperDrive G2.

👌 Bluet	ooth Settin	gs		×
Options	COM Ports	Hardware	2	
This Po whethe with ye	C is using t er you need our Bluetoo	he COM (se d a COM po oth device.	erial) ports listed below. To determine ort, read the documentation that came	
Port	Di	rection	Name	
COM	4 0	utgoing	7367 'AMP-SPP'	
COM	15 In	coming	7367	
			A <u>d</u> d <u>R</u> emove	
			OK Cancel Apply	

**04** - In the Windows device manager, you can also see the serial ports used by the Bluetooth interface.

In this example, the ports are COM4 and COM5.



**05** - On the SuperDrive G2, Communication Setup window, select the connection type (Bluetooth).

USB	⊖ Se	Serial 🔘 Bluetoc		th C	Ethernet	
-				[		
Field		Value	Unit	Default	Range	
Transmission	Delay	0	ms	0	[0 20000]	
Response	Delay	50	ms	50	[50 20000]	
Tim	ne-out	1000	ms	1000	[1000 20000]	
Equip Seria	oment al Port	User Se COM	tting 6			
Stop Bits 1						
	Parity	Ever	ı			
Baud	Rate	1920	0			
Note: For the proper o P310, P311 and P312 For further details ref	operation must be s er to the (	of the CFW 100 ii et with the facto CFW 100 program	nverter with the ry default value ming manual ve	: CFW100-CBLT m s. rsion V2.0X or ab	nodule, parameters	

**06** - On this window, you can see the fields:

- Transmission delay,
- Response delay,
- Time out and
- Data on the serial port (read only) used by the Bluetooth.

You must set the device, serial port, data bits, stop bits, parity and baud rate of the serial port selected for Bluetooth.

In order to do that, click on the field of the current equipment (in this example **User Setting**) or the **Serial** radio button.

**07** - On the RS232 serial communication window, set the equipment and the serial port as previously observed in the Bluetooth settings.

The other fields should also be set (data bits, stop bits, parity and baud rate).

In this example, the output port is COM4.

) USB	Ser	rial		C	) Ethernet
liming:					
Field		Value	Unit	Default	Range
Transmission	Delay	0	ms	0	[0 20000]
Response	Delay	0	ms	0	[0 20000]
Tir	me-out	100	ms	100	[100 20000]
Serial:					
Equi	ipment	CFW100	~		
Seri	al Port	COM4	~		
Da	ta Bits	8	~		
St	op Bits	1	~		
	Parity	Even	~		
Bau	d Rate	19200	~		

**08** - Return to the Bluetooth interface on this window. Check if the port used by the Bluetooth is the same as the one previously selected in the RS232 serial interface.

JUSB	O Se	rial	Bluetoot	n (	) Ethernet
iming:					
Field		Value	Unit	Default	Range
Transmiss	sion Delay	0	ms	0	[0 20000]
Respo	nse Delay	50	ms	50	[50 20000]
	Time-out	1000	ms	1000	[1000 20000]
uetooth:					
E	Equipment	CFW10	00		
1	Serial Port	COM	4		
	Data Bits	8			
	Stop Bits	1			
	Parity	Even			
E	Baud Rate	19200	D		
Note: For the prop 2310, P311 and P For further details	per operation 312 must be s s refer to the (	of the CFW 100 in et with the factor CFW 100 program	overter with the ry default value ming manual ve	CFW 100-CBLT n s. rsion V2.0X or ab	nodule, parameters nove.

**09** - Now the SuperDrive G2 is ready to communicate with the CFW100 via Bluetooth.

### Removing a Bluetooth Device from Windows (Unpair)

Below are the steps to remove a Bluetooth device from Windows.

**01** - Click on the Windows Start Menu button on the left corner of the screen. After that, select the Settings icon.





**03** - The Devices window pops up. On the left menu of such window, select Bluetooth & other devices.

The list of paired devices is displayed on the right side of the window.

← Settings	– 🗆 X
Ome	Bluetooth & other devices
Find a setting $\begin{subarray}{c} \end{subarray} \end{subarray}$	+ Add Bluetooth or other device
Devices	Bluetooth
Bluetooth & other devices	On On
品 Printers & scanners	Now discoverable as "BRJGSN314823"
() Mouse	Mouse, keyboard, & pen
🗔 Touchpad	Microsoft <sup>®</sup> 2.4GHz Transceiver v7.0
📼 Typing	
A Pen & Windows Ink	Dther devices 7367 Paired
AutoPlay     AutoPlay	DELL P190S
🖞 USB	
	S24E310

**04** - Select and click the paired device. A Remove button is enabled.

Click on the Remove device button.

← Settings	- 🗆 X
懲 Home	Bluetooth & other devices
Find a setting $\wp$	+ Add Bluetooth or other device
Devices	Bluetooth
Bluetooth & other devices	On On
品 Printers & scanners	Now discoverable as "BRJGSN314823"
🖰 Mouse	Mouse, keyboard, & pen
🖬 Touchpad	Microsoft <sup>®</sup> 2.4GHz Transceiver v7.0
📟 Typing	Other devices
d <sup>₽</sup> Pen & Windows Ink	7367 Paired
(၃) AutoPlay	
🖞 USB	Remove device
	DELL P190S
	S24E310

**05** - A message prompts the confirmation to remove it. Click on Yes.

Are you sure you want to device?	remove this
	Yes

**06** - At this moment, Windows removes the device, and it is erased from the window.

← Settings	- 🗆 X
愆 Home	Bluetooth & other devices
Find a setting $\wp$	+ Add Bluetooth or other device
Devices	Bluetooth
Bluetooth & other devices	On On
品 Printers & scanners	Now discoverable as "BRJGSN314823"
🖱 Mouse	Mouse, keyboard, & pen
Touchpad	Microsoft <sup>®</sup> 2.4GHz Transceiver v7.0
📟 Typing	Other devices
🖉 Pen & Windows Ink	
(ည) AutoPlay	<b>S24E310</b>
🖞 USB	

# ERRORS

**01** - If a pairing error between Windows and the drive occurred, check the following items:

- Check if there are obstacles between the drive and the computer;
- Check if the drive is not too far away from the PC;
- Check if there is another PC with Bluetooth enabled which is trying to connect to the same drive.

# 8.7 Ethernet Connection

Ethernet is an interconnection technology for local networks - Local Area Network (LAN) - based on the transmission of packages. It defines the electric signals for the physical layer, in addition to the package format and protocols for the Media Access Control (MAC) of the OSI model.

Ethernet, however, mainly defines the media and package format. Based on Ethernet, several higher level protocols and services were specified and developed so as to allow the execution of the desired tasks via network, such as package routing, establishment of connection, file transmission and reception, etc. Several of those protocols were also widely spread and used, such as IP, TCP, UDP, FTP and HTTP.

Widely used to interconnect computers in offices, the Ethernet technology also started to be employed in industrial environments to interconnect field equipment. For the industrial

environment, different communication protocols were created based on Ethernet, for instance, Modbus TCP, EtherNet/IP and PROFINET.

Click on the link to go directly to the products: <u>CFW-11</u> <u>CFW500 / MW500</u> <u>SCA-06</u>

### **CFW-11**

The CFW-11 frequency inverter offers the Anybus-CC communication modules as accessory items.

In order to use the SuperDrive G2 with the CFW-11 on Ethernet, an Anybus-CC accessory must be connected to the drive according to the protocol used:

Protocol	Accessory	Image	Description
EtherNet/IP	ETHERNETIP-05		1 Ethernet port
EtherNet/IP	ETHERNET-2P-05	Re Contraction of the second s	2 Ethernet ports with built-in switch
Modbus TCP	MODBUSTCP-05		1 Ethernet port
PROFINET IO	PROFINETIO-05	PROFINE IO	2 Ethernet ports with built-in switch

For further details on the specific characteristics and functionalities of the protocols, refer to the Anybus-CC user's manual of the CFW-11.

#### Example 01 Configuration Using Peer-to-Peer Modbus TCP Protocol - CFW-11

**01** - Install the MODBUSTCP-05 accessory on the CFW-11.



For further information, refer to the Anybus-CC installation guide of the CFW-11.

**02** - View the parameter below (read only), which allows identifying the Ethernet module type connected to the equipment.

Parameter	Description	Adjustable Range	Value
		0 = Inactive	
P0723	Anybus ID	 21 = Modbus TCP	21 = Modbus TCP
		 25 = Reserved	

**03** - View/set the parameters below.

Parameter	Description	Adjustable Range	Value
P0841	Baud Rate	0 = Auto 1 = 10 Mbps, half duplex 2 = 10 Mbps, full duplex 3 = 100 Mbps, half duplex 4 = 100 Mbps, full duplex	0 = Auto
P0842	Time-out Modbus TCP	0 655	0
P0843	IP Address Configuration	0 = Parameters 1 = DHCP 2 = DCP 3 = IPconfig	0 = Parameters
P0844	IP1 Address	0 255	192
P0845	IP2 Address	0 255	168
P0846	IP3 Address	0 255	0
P0847	IP4 Address	0 255	10

**04** - Once the parameters are set, it is necessary to restart the equipment.

It informs the communication module status:

Parameter	Description	Adjustable Range	Value
P0724	Anybus Communicatin Status	0 = Disable 1 = Not Supported 2 = Access Error 3 = Offline 4 = Online	4 = Online

**05** - Configure the Ethernet network in Windows operating system; follow the directions of items 05.01 ... 05.08.

<b>NOTA!</b> If the computer does not have an Ethernet port, it is necessary to use an Ethernet network adapter. For further details, see the topic <u>Ethernet Network Adapter</u> .									
<b>05.01</b> - Open the control panel.									
😨 Control Panel/All Control Panel Items - 🗆 X									
$\leftarrow \rightarrow$		Control I	Panel Items >			~ Ū	Search Control Panel		
<u>F</u> ile <u>E</u> o	lit <u>V</u> iew <u>T</u> ools <u>H</u> elp								
Adjus	t your computer's settings						View by: Large icons 🔻		
1	Administrative Tools		AutoPlay	<b>}</b>	Backup and Restore (Windows 7)	Ą	BitLocker Drive Encryption		
	Color Management	9	Credential Manager	P	Date and Time		Default Programs		
	Device Manager		Devices and Printers		Display	٩	Ease of Access Center		
<b>S</b>	File Explorer Options	0	File History	F	Flash Player (32-bit)	A	Fonts		
9	Gráficos HD Intel®	•	HomeGroup	æ	Indexing Options	Ĵ	Infrared		
	Internet Options		Java	$\langle \rangle$	Keyboard	<b>F</b>	Language		
	Mail (Microsoft Outlook 2013) (32-bit)	9	Mouse	<u>.</u>	Network and Sharing Center	Š	Personalization		
(٢	Phone and Modem	٢	Power Options	õ	Programs and Features	Q	QuickTime (32-bit)		
Mar N	Realtek HD Audio Manager		Recovery	P	Region	-	RemoteApp and Desktop Connections		
	SAP GUI Configuration	Þ	Security and Maintenance	0	Sound	Ģ	Speech Recognition		
	Storage Spaces	0	Sync Center		System		Taskbar and Navigation		
	Troubleshooting	82	User Accounts	•	Windows Defender	1	Windows Firewall		
5	Windows To Go		Work Folders						

**05.02** - Select Network and Sharing Center.

### Communication

🔄 Control Panel \All Control Panel Items - 🗌 X							
$\leftarrow \rightarrow \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	Search Control Panel						
<u>Eile Edit V</u> iew <u>I</u> ools <u>H</u> elp							
Adjust your computer's settings	View by: Large icons 🔻						
Administrative Tools	AutoPlay	Backup and Restore (Windows 7)	R	BitLocker Drive Encryption			
🛐 Color Management	Credential Manager	Date and Time		Default Programs			
Device Manager	Devices and Printers	Display	٩	Ease of Access Center			
File Explorer Options		Flash Player (32-bit)	A	Fonts			
Gráficos HD Intel®	• HomeGroup	lndexing Options		Infrared			
Internet Options	Java		<b>F</b>	Language			
Mail (Microsoft Outlook 2013) (32-bit)	🥏 Mouse	Network and Sharing Center	K	Personalization			
Phone and Modem	Power Options	Programs and Features	Q	QuickTime (32-bit)			
Realtek HD Audio Manager	Recovery	Region	-	RemoteApp and Desktop Connections			
SAP GUI Configuration	Security and Maintenance	Sound	Ų	Speech Recognition			
Storage Spaces	Sync Center	System	<b>¥</b> -	Taskbar and Navigation			
Troubleshooting	🥵 User Accounts	Windows Defender	<b>e</b>	Windows Firewall			
🥪 Windows To Go	Work Folders						

**05.03** - Select the Unidentified network (Public network) by clicking according to the figure. In this case, the link is Ethernet 4.

😨 Control Panel\All Control Panel Items\Network and Sharing Center – 🗆 🗙								
🗧 🔶 👻 🛧 🚆 > Control Par	Search Control Panel		,c					
<u>F</u> ile <u>E</u> dit <u>V</u> iew <u>T</u> ools <u>H</u> elp								
Control Panel Home View your basic network information and set up connections								
View your active networks Change adapter settings								
Change advanced sharing	weg.net	et Access type: Internet						
settings	Domain network	ain network Connections: 🔋 Ethernet						
	<b>Unidentified network</b> Public network	Access type: Connections:	No netw	vork access t 4				
Change your networking settings								
See also	Set up a new connection or	🙀 Set up a new connection or network						
HomeGroup	Set up a broadband, dial-up	Set up a broadband, dial-up, or VPN connection; or set up a router or access point.						
Infrared	Troubleshoot problems	Troubleshoot problems						
Internet Options	Diagnose and repair networ	Diagnose and repair network problems, or get troubleshooting information.						
Windows Firewall								

🕌 Ethernet 4 State	JS		×	
General				
Connection			-	
IPv4 Connectiv	ity:	No network access		
IPv6 Connectiv	ity:	No network access		
Media State:		Enabled		
Duration:		00:13:14		
Speed:		100.0 Mbps		
Details				
Activity			_	
	Sent —	Received		
Bytes:	934.682	793.930		
Properties	₽Disable	Diagnose		
		Close	:	

**05.04** - The network status is displayed. Click on the Properties button.

**05.05** - The Properties window pops up. Select Internet Protocol Version 4 (TCP/IPv4) and click on the Properties button.



**05.06** - The IPV4 Properties window is shown without any addresses configured.

Internet Protocol Version 4 (TCP/IPv4) Properties								
General Alternate Configuration								
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.								
Obtain an IP address automatically								
○ Use the following IP address:								
IP address:								
Sybnet mask:								
Default gateway:								
Obtain DNS server address autor	natically							
Use the following DNS server add	resses:							
Preferred DNS server:								
<u>A</u> lternate DNS server:								
Validate settings upon exit	Ad <u>v</u> anced							
	OK Cancel							

**05.07** - Select the Use the following IP address option.

Fill out the fields with the addresses as follows.

Click on the OK button to end the task.
Internet Protocol Version 4 (TCP/IPv4)	Properties	×				
General						
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.						
O Obtain an IP address automatical	у					
Use the following IP address:						
IP address:	192.168.0.11					
Subnet mask:	255.255.255.0					
Default gateway:	192.168.0.1					
Obtain DNS server address autom	atically					
• Us <u>e</u> the following DNS server addr	resses:					
Preferred DNS server:						
Alternate DNS server:						
Vaļidate settings upon exit	Ad <u>v</u> anced					
	OK Cancel					

**05.08** - At this moment, the Ethernet network is properly configured in Windows operating system.

**06** - In SuperDrive G2, configure the Ethernet connection in the Communication Setup window.

A time-out above 5000 ms is recommended. Lower values may produce faults during communication.

Set the IP Address, Port and Unit ID fields as follows.

Connection Type:				,	
O USB	) Serial	Bluetoot	h	Ethernet	
Timing:					
Field	Value	Unit	Default	Range	
Transmission Delay	0	ms	0	[0 20000]	
Response Delay	0	ms	0	[0 20000]	
Time-out	5000	ms	5000	[5000 20000]	
Field IP Address	Value 192.168.0.10	Defau 192. 168.	lt 0.10	Range XXXX.XXXX.XXXX.XXXX	
Port	502	502		1 65535	
Unit ID	255 🚽	255		1 255	
				OK Cancel	

**07** - Now, communication between the drive and computer is possible.

### Example 02 Configuration Using Peer-to-Peer EtherNet/IP Protocol - CFW-11

**01** - Install the ETHERNETIP-05 accessory on the CFW-11.



For further information, refer to the Anybus-CC installation guide of the CFW-11.

**02** - View the parameter below (read only), which allows identifying the Ethernet module type connected to the equipment.

Parameter	Description	Adjustable Range	Value
		0 = Inactive	
P0723	Anybus ID	 19 = EtherNet/IP	19 = EtherNet/IP
		 25 = Reserved	

**03** - Visualize/ajuste os parâmetros abaixo.

Parameter	Description	Adjustable Range	Value
P0841	Baud Rate	0 = Auto 1 = 10 Mbps, half duplex 2 = 10 Mbps, full duplex 3 = 100 Mbps, half duplex 4 = 100 Mbps, full duplex	0 = Auto
P0842	Time-out Modbus TCP	0 655	No Used
P0843	IP Address Configuration	0 = Parameters 1 = DHCP 2 = DCP 3 = IPconfig	0 = Parameters
P0844	IP1 Address	0 255	192
P0845	IP2 Address	0 255	168
P0846	IP3 Address	0 255	0
P0847	IP4 Address	0 255	10

**04** - Once the parameters are set, it is necessary to restart the equipment.

It informs the communication module status:

Parameter	Description	Adjustable Range	Value
P0724	Anybus Communicatin Status	0 = Disable 1 = Not Supported 2 = Access Error 3 = Offline 4 = Online	4 = Online

**05** - The following steps are the same as those used in Example 01 of the CFW-11.

### Example 03 Configuration Using Peer-to-Peer PROFINET Protocol - CFW-11

**01** - Install the PROFINETIO-05 accessory on the CFW-11.



For further information, refer to the Anybus-CC installation guide of the CFW-11.

**02** - View the parameter below (read only), which allows identifying the Ethernet module type connected to the equipment.

Parameter	Description	Adjustable Range	Value
		0 = Inactive	
P0723	Anybus ID	 23 = PROFINET IO	23 = PROFINET IO
		 25 = Reserved	

**03** - View/set the parameters below.

Parameter	Description	Adjustable Range	Value
P0841	Baud Rate	0 = Auto 1 = 10 Mbps, half duplex 2 = 10 Mbps, full duplex 3 = 100 Mbps, half duplex 4 = 100 Mbps, full duplex	0 = Auto
P0842	Time-out Modbus TCP	0 655	Not Used
P0843	IP Address Configuration	0 = Parameters 1 = DHCP 2 = DCP 3 = IPconfig	0 = Parameters
P0844	IP1 Address	0 255	192
P0845	IP2 Address	0 255	168
P0846	IP3 Address	0 255	0
P0847	IP4 Address	0 255	10

**04** - Once the parameters are set, it is necessary to restart the equipment.

It informs the communication module status:

Parameter	Description	Adjustable Range	Value
P0724	Anybus Communicatin Status	0 = Disable 1 = Not Supported 2 = Access Error 3 = Offline 4 = Online	4 = Online

**05** - The following steps are the same as those used in Example 01 of the CFW-11.

## CFW500 / MW500

In order to use the Ethernet network, it is necessary to install the proper accessory.

There are three different plug-in modules, according to the specified communication protocol:

Protocolo	Accessory	Image	Description
Modbus TCP	CFW500-CEMB-TCP		1 Ethernet port
EtherNet/IP	CFW500-CETH-IP		1 Ethernet port
PROFINET IO	CFW500-CEPN-IO		1 Ethernet port

For further details on the specific characteristics and functionalities of the protocols, refer to the Ethernet user's manual of the CFW500.

#### Example 01 Configuration Using Peer-to-Peer Modbus TCP Protocol - CFW500

**01** - Install the CFW500-CEMB-TCP accessory on the CFW500.



For further information, refer to the installation guide of the corresponding accessory.

**02** - View the parameter below (read only), which allows identifying the Ethernet module type connected to the equipment.

Parameter	Description	Adjustable Range	Value
P0800	Ethernet module identification	0 = Unidentified 1 = Modbus TCP 2 = EtherNet/IP 3 = PROFINET IO	1 = Modbus TCP



Parameter	Description	Adjustable Range	Value
P0803	Ethernet Baud Rate	0 = Auto 1 = 10Mbit/s, half duplex 2 = 10Mbit/s, full duplex 3 = 100Mbit/s, half duplex 4 = 100Mbit/s, full duplex	0 = Auto
P0806	Watchdog Modbus TCP	0,0 65,5 s	0,0
P0810	IP Address Configuration	0 = Parameters 1 = DHCP	0 = Parameters
P0811	IP1 Address	0 255	192
P0812	IP2 Address	0 255	168
P0813	IP3 Address	0 255	0
P0814	IP4 Address	0 255	10

**04** - Once the parameters are set, it is necessary to restart the equipment.

**05** - Configure the Ethernet network in Windows operating system; follow the directions of items 05.01 ... 05.08.

### NOTA!

V

If the computer does not have an Ethernet port, it is necessary to use an Ethernet network adapter. For further details, see the topic <u>Ethernet Network Adapter</u>.

**05.01** - Open the control panel.

### Communication

Control Panel\All Control Panel Items				– 🗆 X
$\leftarrow$ $\rightarrow$ $\checkmark$ $\uparrow$ 🖾 $\rightarrow$ Control Panel $\rightarrow$ All	Control Panel Items >		√ Ū	Search Control Panel
<u>F</u> ile <u>E</u> dit <u>V</u> iew <u>T</u> ools <u>H</u> elp				
Adjust your computer's settings				View by: Large icons 🔻
Administrative Tools	AutoPlay	Backup and Restore (Windows 7)	R	BitLocker Drive Encryption
Color Management	Credential Manager	Date and Time		Default Programs
Device Manager	Devices and Printers	Display	٩	Ease of Access Center
File Explorer Options	a File History	<b>F</b> lash Player (32-bit)	A	Fonts
Gráficos HD Intel®	• HomeGroup	lndexing Options	J	Infrared
Internet Options	Java		<b>F</b>	Language
Mail (Microsoft Outlook 2013) (32-bit)	🥏 Mouse	Network and Sharing Center	Š	Personalization
Phone and Modem	Power Options	Programs and Features	Ø	QuickTime (32-bit)
💀 Realtek HD Audio Manager	Recovery	Region	-	RemoteApp and Desktop Connections
SAP GUI Configuration	Security and Maintenance	Sound	Ŷ	Speech Recognition
Storage Spaces	Sync Center	System		Taskbar and Navigation
Troubleshooting	User Accounts	Windows Defender	<b>e</b>	Windows Firewall
🔛 Windows To Go	Work Folders			

**05.02** - Select Network and Sharing Center.

### Communication

📴 Control Panel\All Control Panel Items				– 🗆 X
$\leftarrow \rightarrow \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	Control Panel Items		~ Ū	Search Control Panel
<u>F</u> ile <u>E</u> dit <u>V</u> iew <u>T</u> ools <u>H</u> elp				
Adjust your computer's settings				View by: Large icons 🔻
Administrative Tools	AutoPlay	Backup and Restore (Windows 7)	R	BitLocker Drive Encryption
🛐 Color Management	Credential Manager	Date and Time		Default Programs
Device Manager	Devices and Printers	Display	٩	Ease of Access Center
File Explorer Options		Flash Player (32-bit)	A	Fonts
Gráficos HD Intel®	• HomeGroup	lndexing Options		Infrared
Internet Options	Java		<b>F</b>	Language
Mail (Microsoft Outlook 2013) (32-bit)	🥏 Mouse	Network and Sharing Center	K	Personalization
Phone and Modem	Power Options	Programs and Features	Q	QuickTime (32-bit)
Realtek HD Audio Manager	Recovery	Region	-	RemoteApp and Desktop Connections
SAP GUI Configuration	Security and Maintenance	Sound	Ų	Speech Recognition
Storage Spaces	Sync Center	System	<b>¥</b>	Taskbar and Navigation
Troubleshooting	🥵 User Accounts	Windows Defender	<b>e</b>	Windows Firewall
🥪 Windows To Go	Work Folders			

**05.03** - Select the Unidentified network (Public network) by clicking according to the figure. In this case the link is Ethernet 4.

Control Panel\All Control Panel Items\Network and Sharing Center						×
🔶 🐳 🛧 🌺 > Control Pan	el > All Control Panel Items > Network	and Sharing Center	~ Ū	Search Control Panel		Q,
<u>F</u> ile <u>E</u> dit <u>V</u> iew <u>T</u> ools <u>H</u> elp						
Control Panel Home	View your basic network infor	mation and set up connect	ions			
Change adapter settings	View your active networks					
Change advanced sharing	weg.net	Access type:	Internet			
settings	Domain network	Connections:	🛱 Ethernet	t		
	<b>Unidentified network</b> Public network	Access type: Connections:	No netw	vork access t 4		
	Change your networking settings					
See also	🙀 Set up a new connection or n	etwork				
HomeGroup	Set up a broadband, dial-up,	or VPN connection; or set up a rout	er or acces	s point.		
Infrared	Troubleshoot problems					
Internet Options	tions Diagnose and repair network problems, or get troubleshooting information.					
Windows Firewall						

📱 Ethernet 4 State	JS		×
General			
Connection			-
IPv4 Connectiv	ity:	No network access	
IPv6 Connectiv	ity:	No network access	
Media State:		Enabled	
Duration:		00:13:14	
Speed:		100.0 Mbps	
Details			
Activity			_
	Sent —	Received	
Bytes:	934.682	793.930	
Properties	<b>₽</b> Disable	Diagnose	
		Close	

**05.04** - The network status is displayed. Click on the Properties button.

**05.05** - The Properties window pops up. Select Internet Protocol Version 4 (TCP/IPv4) and click on the Properties button.



**05.06** - The IPV4 Properties window is shown without any addresses configured.

Internet Protocol Version 4 (TCP/IPv4) Properties					Х		
General	Alternate Configuration						
You car this cap for the	You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.						
0	otain an IP address automatica	ally					
	e the following IP address: —						
<u>I</u> P ad	ldress:						
Subr	net mask:						
Defa	ult gateway:						
() ()	btain DNS server address auto	matically	,				
	e the following DNS server ad	dresses:					
Prefe	erred DNS server:						
<u>A</u> lter	nate DNS server:						
V	alįdate settings upon exit				Advi	anced	
		[		ОК		Cancel	

**05.07** - Select the Use the following IP address option.

Fill out the fields with the addresses indicated below.

Click the OK button to end the task.

Internet Protocol Version 4 (TCP/IPv4) Properties						
General						
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.						
O Obtain an IP address automatical	у					
Use the following IP address:						
IP address:	192.168.0.11					
Subnet mask:	255.255.255.0					
Default gateway:	192.168.0.1					
Obtain DNS server address autom	atically					
• Us <u>e</u> the following DNS server add	resses:					
Preferred DNS server:						
Alternate DNS server:						
Validate settings upon exit Advanced						
	OK Cancel					

**05.08** - At this moment, the Ethernet network is properly configured in Windows operating system.

**06** - In SuperDrive G2, configure the Ethernet connection in the Communication Setup window.

A time-out above 5000 ms is recommended. Lower values may produce faults during communication.

Set the IP Address, Port and Unit ID fields as follows.

Connection Type:					
	Gerial	O Bluetoot	h	Ethernet	
Timing:					
Field	Value	Unit	Default	t Range	
Transmission Delay	0	ms	0	[0 20000]	
Response Delay	0	ms	0	[0 20000]	
Time-out	5000	ms	5000	[5000 20000]	
Ethernet: Field	Value	Defau	lt	Range	
IP Address	192.168.0.10	192.168.	0.10	XXXX.XXXX.XXXX.XXXX	
Port	502 🖨	502		1 65535	
Unit ID	255 🖨	255		1 255	

**07** - Now, communication between the drive and computer is possible.

Example 02 Configuration Using Peer-to-Peer EtherNet/IP Protocol - CFW500

**01** - Install the CFW500-CETH-IP accessory on the CFW500.



For further information, refer to the installation guide of the corresponding accessory.

**02** - View the parameter below (read only), which allows identifying the Ethernet module type connected to the equipment.

Parameter	Description	Adjustable Range	Value
P0800	Ethernet module identification	0 = Unidentified 1 = Modbus TCP 2 = EtherNet/IP 3 = PROFINET IO	2 = EtherNet/IP

#### **03** - View/set the parameters below.

Parameter	Description	Adjustable Range	Value
P0803	Baud Rate Ethernet	0 = Auto 1 = 10Mbit/s, half duplex 2 = 10Mbit/s, full duplex 3 = 100Mbit/s, half duplex 4 = 100Mbit/s, full duplex	0 = Auto
P0806	Watchdog Modbus TCP	0,0 65,5 s	0,0
P0810	IP Address Configuration	0 = Parameters 1 = DHCP	0 = Parameters
P0811	IP1 Address	0 255	192
P0812	IP2 Address	0 255	168
P0813	IP3 Address	0 255	0
P0814	IP4 Address	0 255	10

**04** - Once the parameters are set, it is necessary to restart the equipment.

**05** - The following steps are the same as those used in Example 01 of the CFW500.

### Example 03 Configuration Using Peer-to-Peer PROFINET IO Protocol - CFW500

**01** - Install the CFW500-CEPN-IO accessory on the CFW500.



For further information, refer to the installation guide of the corresponding accessory.

**02** - View the parameter below (read only), which allows identifying the Ethernet module type connected to the equipment.

Parameter	Description	Adjustable Range	Value
P0800	Ethernet module identification	0 = Unidentified 1 = Modbus TCP 2 = EtherNet/IP 3 = PROFINET IO	3 = PROFINET IO

### **03** - View/set the parameters below.

Parameter	Description	Adjustable Range	Value
P0803	Ethernet Baud Rate	0 = Auto 1 = 10Mbit/s, half duplex 2 = 10Mbit/s, full duplex 3 = 100Mbit/s, half duplex 4 = 100Mbit/s, full duplex	0 = Auto
P0806	Watchdog Modbus TCP	0,0 65,5 s	0,0
P0810	IP Address Configuration	0 = Parameters 1 = DHCP	0 = Parameters
P0811	IP1 Address	0 255	192
P0812	IP2 Address	0 255	168
P0813	IP3 Address	0 255	0
P0814	IP4 Address	0 255	10

**04** - Once the parameters are set, it is necessary to restart the equipment.

**05** - The following steps are the same as those used in Example 01 of the CFW500.

## **SCA-06**

The SCA-06 servo drive has the ECO5, ECO6 and ECO7 communication modules as accessory items.

In order to use the SuperDrive G2 with SCA-06 on Ethernet, an accessory must be connected to the drive according to the protocol used:

Protocol	Accessory	Image	Description
EtherNet/IP	ECO5	XA171 NS XA172	2 Ethernet ports
Modbus TCP	ECO6	XA171 NS XA172	2 Ethernet ports
PROFINET IO	ECO7	XA171 • N5 XA172	2 Ethernet ports

For further details on the specific characteristics and functionalities of the protocols, refer to the Ethernet communication manual of the SCA-06.

### Example 01 Configuration Using Peer-to-Peer Modbus TCP Protocol - SCA-06

**01** - Install the ECO06 accessory on the SCA-06.



For further information, refer to the Installation, Configuration and Operation Guide of the ECO6 accessory of the SCA-06.

**02** - View the parameter below (read only), which allows identifying the Ethernet module type connected to the equipment.

Parameter	Description	Adjustable Range	Value
P0800	Ethernet Module Identification	0 = Unidentified 1 = Modbus TCP 2 = EtherNet/IP 3 = PROFINET IO	1 = Modbus TCP

**03** - View/set the parameters below.

Parameter	Description	Adjustable Range	Value
P0803	Ethernet Baud Rate	0 = Auto 1 = 10Mbit/s, half duplex 2 = 10Mbit/s, full duplex 3 = 100Mbit/s, half duplex 4 = 100Mbit/s, full duplex	0 = Auto
P0806	Watchdog Modbus TCP	0,0 65,5 s	0,0
P0810	IP Address Configuration	0 = Parameters 1 = DHCP	0 = Parameters
P0811	IP1 Address	0 255	192
P0812	IP2 Address	0 255	168
P0813	IP3 Address	0 255	0
P0814	IP4 Address	0 255	10

**04** - Once the parameters are set, it is necessary to restart the equipment.

**05** - Configure the Ethernet network in Windows operating system; follow the directions of items 05.01 ... 05.08.

#### NOTA! If the computer does not have an Ethernet port, it is necessary to use an Ethernet network adapter. For further details, see the topic Ethernet Network Adapter. **05.01** - Open the control panel. 🖭 Control Panel\All Control Panel Items X ← → ~ ↑ 🖾 > Control Panel > All Control Panel Items > ✓ ひ Search Control Panel Q <u>File Edit View Tools H</u>elp Adjust your computer's settings View by: Large icons 🔻 Backup and Restore 1 <u>)</u> **BitLocker Drive Encryption** Administrative Tools AutoPlay (Windows 7) Color Management Credential Manager Date and Time Default Programs a Devices and Printers Display Ease of Access Center Device Manager 4 30 Flash Player (32-bit) File Explorer Options File History Fonts 10 Gráficos HD Intel® HomeGroup Indexing Options Infrared • S Internet Options 1 Java Keyboard Language Mail (Microsoft Outlook Network and Sharing Mouse Personalization 2013) (32-bit) Center Power Options **Programs and Features** QuickTime (32-bit) Phone and Modem D $\widetilde{\mathbf{O}}$ RemoteApp and Desktop Realtek HD Audio Manager Recovery Region Connections SAP GUI Configuration Security and Maintenance Ð Sound Speech Recognition Storage Spaces Taskbar and Navigation Z Sync Center System $\oplus$ Troubleshooting User Accounts Windows Defender Windows Firewall 🔛 Windows To Go Work Folders

**05.02** - Select Network and Sharing Center.

### Communication

📴 Control Panel\All Control Panel Items				– 🗆 X
$\leftarrow \rightarrow \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	Control Panel Items		~ Ū	Search Control Panel
<u>F</u> ile <u>E</u> dit <u>V</u> iew <u>T</u> ools <u>H</u> elp				
Adjust your computer's settings				View by: Large icons 🔻
Administrative Tools	AutoPlay	Backup and Restore (Windows 7)	R	BitLocker Drive Encryption
🛐 Color Management	Credential Manager	Date and Time		Default Programs
Device Manager	Devices and Printers	Display	٩	Ease of Access Center
File Explorer Options		Flash Player (32-bit)	A	Fonts
Gráficos HD Intel®	• HomeGroup	lndexing Options		Infrared
Internet Options	Java		<b>F</b>	Language
Mail (Microsoft Outlook 2013) (32-bit)	🥏 Mouse	Network and Sharing Center	K	Personalization
Phone and Modem	Power Options	Programs and Features	Q	QuickTime (32-bit)
Realtek HD Audio Manager	Recovery	Region	-	RemoteApp and Desktop Connections
SAP GUI Configuration	Security and Maintenance	Sound	Ų	Speech Recognition
Storage Spaces	Sync Center	System	<b>¥</b>	Taskbar and Navigation
Troubleshooting	🥵 User Accounts	Windows Defender		Windows Firewall
🥪 Windows To Go	Work Folders			

**05.03** - Select the Unidentified network (Public network) by clicking according to the figure. In this case the link is Ethernet 4.

Control Panel\All Control Panel Items\Network and Sharing Center							
← → ▼ 💱 > Control Panel > All Control Panel Items > Network and Sharing Center 🗸 🗗 Search Control Panel							
<u>F</u> ile <u>E</u> dit <u>V</u> iew <u>T</u> ools <u>H</u> elp							
Control Panel Home View your basic network information and set up connections							
View your active networks							
Change advanced sharing	weg.net	Access type:	Internet				
settings	Domain network	Connections:	📱 Etherne	t			
	Unidentified network Public network	Access type: Connections:	No netv	vork access t 4			
	Change your networking settings						
See also	🙀 Set up a new connection or ne	etwork					
HomeGroup	Set up a broadband, dial-up, or VPN connection; or set up a router or access point.						
Infrared	Troubleshoot problems	Troubleshoot problems					
Internet Options	Diagnose and repair network p	problems, or get troubleshooting	information	ı.			
Windows Firewall							

🖗 Ethernet 4 Status			$\times$
General			
Connection			
IPv4 Connectivity	<i>/</i> :	No network access	
IPv6 Connectivity	/:	No network access	
Media State:		Enabled	
Duration:		00:13:14	
Speed:		100.0 Mbps	
D <u>e</u> tails			
Activity ———			-
	Sent —	Received	
Bytes:	934.682	793.930	
Properties	<b>D</b> isable	Diagnose	
		Close	

**05.04** - The network status is displayed. Click on the Property button.

**05.05** - The Properties window pops up. Select Internet Protocol Version 4 (TCP/IPv4) and click on the Properties button.



**05.06** - The IPV4 Properties window is shown without any addresses configured.

Internet Protocol	Internet Protocol Version 4 (TCP/IPv4) Properties					×		
General Alterna	te Configuration							
You can get IP s this capability. C for the appropri	You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.							
<u> ◎</u> <u> ○</u> btain an 1	P address automatica	ly						
Use the fol	lowing IP address:							
IP address:					]			
S <u>u</u> bnet mask:					]			
<u>D</u> efault gatev	vay:				]			
Obtain DNS	server address autor	natically						
Us <u>e</u> the fol	lowing DNS server add	resses:						
Preferred DN	5 server:				]			
<u>A</u> lternate DN:	5 server:				]			
Validate se	ettings upon exit			Ad <u>v</u> ar	nced			
			OK		Cancel			

**05.07** - Select the **Use the following IP address** option.

Fill out the fields with the addresses indicated below.

Click the **OK** button to end the task.

Internet Protocol Version 4 (TCP/IPv4) Properties								
General								
You can get IP settings assigned autom this capability. Otherwise, you need to for the appropriate IP settings.	You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.							
O Obtain an IP address automatical	у							
Use the following IP address:								
IP address:	192.168.0.11							
Subnet mask:	255.255.255.0							
Default gateway:	192.168.0.1							
Obtain DNS server address autom	atically							
• Us <u>e</u> the following DNS server addr	resses:							
Preferred DNS server:								
Alternate DNS server:								
Validate settings upon exit Advanced								
	OK Cancel							

**05.08** - At this moment, the Ethernet network is properly configured in Windows operating system.

**06** - In SuperDrive G2, configure the Ethernet connection in the Communication Setup window.

A time-out above 5000 ms is recommended. Lower values may produce faults during communication.

Set the IP Address, Port and Unit ID fields as follows.

Connunication Setup				/
	Serial		th	<ul> <li>Ethernet</li> </ul>
Timing:				
Field	Value	Unit	Default	t Range
Transmission Delay	0	ms	0	[0 20000]
Response Delay	0	ms	0	[0 20000]
Time-out	5000	ms	5000	[5000 20000]
Ethernet: Field	Value	Defau	ılt	Range
IP Address	192.168.0.10	192.168.	0.10	xxxx.xxxx.xxxx
Port	502 ≑	502		1 65535
Unit ID	255 韋	255		1 255
				OK Cancel

**07** - Now, communication between the drive and computer is possible.

### Example 02 Configuration Using Peer-to-Peer EtherNet/IP Protocol - SCA-06

**01** - Install the ECO05 accessory on the SCA-06.

	XA171 • NS XA172
ļ	EtherMatth

For further information, refer to the Installation, Configuration and Operation Guide of the ECO5

accessory of the SCA-06.

**02** - View the parameter below (read only), which allows identifying the Ethernet module type connected to the equipment.

Parameter	Description	Adjustable Range	Value
P0800	Ethernet Module Identification	0 = Unidentified 1 = Modbus TCP 2 = EtherNet/IP 3 = PROFINET IO	2 = EtherNet/IP

**03** - View/set the parameters below.

Parameter	Description	Adjustable Range	Value
P0803	Ethernet Baud Rate	0 = Auto 1 = 10Mbit/s, half duplex 2 = 10Mbit/s, full duplex 3 = 100Mbit/s, half duplex 4 = 100Mbit/s, full duplex	0 = Auto
P0806	Watchdog Modbus TCP	0,0 65,5 s	0,0
P0810	IP Address Configuration	0 = Parameters 1 = DHCP	0 = Parameters
P0811	IP1 Address	0 255	192
P0812	IP2 Address	0 255	168
P0813	IP3 Address	0 255	0
P0814	IP4 Address	0 255	10

**04** - Once the parameters are set, it is necessary to restart the equipment.

**05** - The following steps are the same as those used in Example 01 of the SCA-06.

#### Example 03 Configuration Using Peer-to-Peer PROFINET IO Protocol - SCA-06

**01** - Install the ECO07 accessory on the SCA-06.



For further information, refer to the Installation, Configuration and Operation Guide of the ECO7 accessory of the SCA-06.

**02** - View the parameter below (read only), which allows identifying the Ethernet module type connected to the equipment.

Parameter	Description	Adjustable Range	Value
P0800	Ethernet Module Identification	0 = Unidentified 1 = Modbus TCP 2 = EtherNet/IP 3 = PROFINET IO	3 = PROFINET IO

**03** - View/set the parameters below.

Parameter	Description	Adjustable Range	Value
P0803	Ethernet Baud Rate	0 = Auto 1 = 10Mbit/s, half duplex 2 = 10Mbit/s, full duplex 3 = 100Mbit/s, half duplex 4 = 100Mbit/s, full duplex	0 = Auto
P0806	Watchdog Modbus TCP	0,0 65,5 s	0,0
P0810	IP Address Configuration	0 = Parameters 1 = DHCP	0 = Parameters
P0811	IP1 Address	0 255	192
P0812	IP2 Address	0 255	168
P0813	IP3 Address	0 255	0
P0814	IP4 Address	0 255	10

**04** - Once the parameters are set, it is necessary to restart the equipment.

**05** - The following steps are the same as those used in Example 01 of the SCA-06.

## 8.8 RS232 Cable

## **RS232 PC/DRIVE SERIAL CABLE**

Drive: CFW-09 PM, SSW-06

Figure below shows the cable parts for point-to-point RS232 connection. Only pins 2, 3 and 5 of the DB9 female connector are used.



Maximum cable length: 10 meters.

### **RS232 CONNECTION CABLE**

Drive: SSW-07, SSW-08

Figure below shows the cable parts for point-to-point RS232 connection. Only pins 2, 3 and 5 of the DB9 female connector are used.



Maximum cable length: 10 meters.

## 8.9 USB Cable

### **USB CABLE**

Drive: CFW-11, SCA-06, SSW7000, CTW900

Figure below shows the cable parts for point-to-point USB connection.



Figure below shows the connectors.



A = Type A connector B = Type B connector

Maximum cable length: 3 meters.

Always use a standard host/device shielded USB cable. Unshielded cables may lead to communication errors.

The USB connection is galvanically isolated from the mains power supply and from other high voltages internal to the inverter. However, the USB connection is not isolated from the Protective Ground (PE). Use an isolated computer for the USB connection or a desktop connected to the same Protective Ground (PE) of the inverter.

#### **Purchase Suggestions**

Manufacturer:

• Samtec, Inc: http://www.samtec.com/

If you want to buy USB cable directly from Samtec, please see below.

Description	Item
USB shielded High Speed Cable, 1 m, Samtec	USBC-AM-MB-B-B-S-1
USB shielded High Speed Cable, 2 m, Samtec	USBC-AM-MB-B-B-S-2
USB shielded High Speed Cable, 3 m, Samtec	USBC-AM-MB-B-B-S-3

At the time this help was being written, the specification was found at <a href="http://www.samtec.com/ftppub/cpdf/USBC-AM-BM-B-B-S-X-MKT.pdf">http://www.samtec.com/ftppub/cpdf/USBC-AM-BM-B-B-S-X-MKT.pdf</a>

### USB CABLE (mini-B)

Drive: CFW100, CFW700, CFW701

Figure below shows the cable parts for point-to-point USB connection.



Figure below shows the connectors.



A = Type A connectorB = Type mini-B connector

Maximum cable length: 3 meters.

Always use a standard host/device shielded USB cable. Unshielded cables may lead to communication errors.

The USB connection is galvanically isolated from the mains power supply and from other high voltages internal to the inverter. However, the USB connection is not isolated from the Protective Ground (PE). Use an isolated computer for the USB connection or a desktop connected to the same Protective Ground (PE) of the inverter.

#### Purchase Suggestions

Manufacturer:

• Samtec, Inc: <a href="http://www.samtec.com/">http://www.samtec.com/</a>

If you want to buy USB cable directly from Samtec, please see below.

Description	Item
USB shielded High Speed Cable, 1 m, Samtec	USBC-AM-BM-B-B-S-1
USB shielded High Speed Cable, 2 m, Samtec	USBC-AM-BM-B-B-S-2
USB shielded High Speed Cable, 3 m, Samtec	USBC-AM-BM-B-B-S-3

At the time this help was being written, the specification was found at <a href="http://www.samtec.com/ftppub/cpdf/USBC-AM-MB-B-B-S-X-X-MKT.pdf">http://www.samtec.com/ftppub/cpdf/USBC-AM-MB-B-S-X-X-MKT.pdf</a>

## 8.10 Ethernet Cable

This cable is used to connect the SuperDrive G2 to the Ethernet drive.

This cable has RJ45 connectors at both ends.

The figure below shows an example of this cable.



## 8.11 USB to Serial Adapter

The USB to serial adapter is the best solution for the connection of serial equipment (RS232) to USB ports, i. e., for connecting computer USB output to a RS232 serial equipment.

This is a low cost solution and meets the install requirements of new computer serial ports that have busy bus bars or equipments that are not fitted with RS232 ports.

The USB to serial adapter allows the plug & play connection with your computer, thus maintaining free the existing serial port.

Figures below show a sample of this adapter.

### **PURCHASE SUGGESTIONS**

#### Manufacturer: Comm5 Tecnologia

Product	Conversor de USB para 1 saída serial RS232
Model	1S-USB - conversor USB para 1 serial
Web Site	https://www.comm5.com.br/produtos/conversor-usb/1s-usb/

For further information about product installation, please refer to user's manual.



### **Manufacturer: Tripp Lite**

Product	High-Speed USB-to-Serial Adapter
Model	USA-19HS
Web Site	http://www.tripplite.com/keyspan-high-speed-usb-to-serial-adapter~USA19HS/

For further information about product installation, please refer to user's manual.



## 8.12 Bluetooth USB Adapter

Drive: CFW100

The image below shows an USB Bluetooth adapter (a.k.a. dongle) which should be connected to the USB port of computer. There are several models with different features.



## 8.13 Ethernet Network Adapter

The Ethernet network adapter is an adapter that allows connecting a computer with a USB port to a device using the Ethernet.

This adapter is usually light, easy to use and very practical.

The adapter features a USB port type A at one end and a RJ-45 port at the other, being a standard fitting for a variety of compatible devices.

This adapter eliminates the use of other cables or adapters.

Also, no external power supplies are necessary.

The figure below shows an example of and Ethernet network adapter.



### **Example of Connection Using an Ethernet Network Adapter**

**01** - Connect the Ethernet network adapter (USB connector to RJ45 connector) to the computer.

The adapter USB port (type A connector) is connected to the computer USB port.

Then, connect the drive (equipment) Ethernet cable to the network adapter.

The simplified figure below shows the connection of the drive to the computer using an Ethernet cable and Ethernet network adapter.



**02** - Check the Windows device manager.

Notice that Windows operating system recognized the hardware.

In this example, the adapter is shown as Realtek USB FE Family Controller



**03** - Device Not Recognized.

In case Windows operating system does not recognize the device (Ethernet network adapter), the adapter drive, supplied by the manufacturer, must be installed.

After the driver installation, Windows recognizes the device.

## 8.14 Before Trying to Establish Communication

Before trying to establish communication make sure the following has been done:

- Communication cable connected to the drive;
- Communication cable connected to computer;
- Drive is powered up;
- Communication parameters on the drive correspond to SuperDrive G2 communication settings.

## 8.15 Exception During Monitoring

### **SOFT-STARTER**

#### SSW-06 V1.3X

• P014 to P017 = 13107 = this means there is no fault.

#### SSW-07 and SSW-08

- P219 defines parametrization mode for the following parameters: P101, P102, P104, P110, P202, P206, P401, P520, P521, P611, P613, P617, P620 and P640;
- On Trimpot and Dip Switch Mode, the parametrization of the above parameters is done through the Trimpots and Dip Switches. These parameters act like read only parameters, showing the Trimpots and Dip Switches programmed values. The values which where programmed through RS232 serial communication are not used;
- On Keypad Mode, the parametrization of parameters previously cited is made with RS232 serial communication or Keypad. The value adjusted with Trimpots and Dip Switch are not used.

# 9 Context menus

Contents of this chapter:

<u>Rename</u>

Save As

<u>Close</u>

## 9.1 Project

## ACCESS

Toolbar: none Context Menu Shortcut Key: none

## FUNCTION

Allows the user to select options related to current project.

## DESCRIPTION

The options are available throws a context menu. To access them, select the current project name and then right mouse click over it:

Rename project Save As Close	v 105A / 86A	
	Rename project Save As Close	Rename project Save As Close

SuperDrive G2 offers three options via context menu:

- <u>Rename</u>
- Save As
- <u>Close</u>

### 9.1.1 Rename

### ACCESS

Toolbar: none Context Menu > Rename project Shortcut Key: none

## FUNCTION

Allows the user to rename current project.

## DESCRIPTION

This option is available throws a context menu. To access it, right mouse click over the current project name:

Project			
Project1	Rename project Save As Close	v 105A / 86A	

A dialog box is shown, asking for a new project name.

Case the new name already exists, system adds automatically an unique code to the end of name was typed.

### 9.1.2 Save As

### ACCESS

Toolbar: Context Menu > Save As Shortcut Key: Ctrl+D

### **FUNCTION**

Saves a project with different name.

### DESCRIPTION

Enabled when a project is created or opened.

When Save As function runs, a dialog is shown with the following information:

- Name type a name for the new project. If the specified name is invalid or already exists, a warning message will be prompted.
- Location a default location is shown, but can be changed.
- Folder view only.
- Description type the project description. It can be changed later in the Project Information.
#### 9.1.3 Close

#### ACCESS

Toolbar: Context Menu > Close Shortcut Key: none

#### FUNCTION

Closes the project.

#### DESCRIPTION

If the project contains unsaved data, a save request dialog will be shown.

#### 10 Libraries

Contents of this chapter:

<u>JFreeChart</u>

<u>jSSC</u>

#### 10.1 JFreeChart

This software incorporates JFreeChart, © 2005-2012 Object Refinery Limited.

The JFreeChart home page can be found at: <u>http://www.jfree.org/jfreechart/</u>.

To read GNU Lesser General Public Licence, Version 3, access <u>http://www.gnu.org/licenses/</u><u>lgpl.html</u>.

To get the complete source code of JFreeChart for the version of the library that it is used in this software please contact the manufacturer (see <u>Contact</u>).

#### 10.2 jSSC

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This software incorporates jSSC, © 2010-2012 Sokolov Alexey.

The jSSC home page can be found at: <u>http://code.google.com/p/java-simple-serial-connector/</u>

To read GNU Lesser General Public Licence, Version 3, access <u>http://www.gnu.org/licenses/</u><u>lgpl.html</u>.

To get the complete source code of jSSC for the version of the library that it is used in this software please contact the manufacturer (see  $\underline{Contact}$ ).

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