

- Internal Fuses on complete range 30 to 800A
- 100 kA Short Circuit Current (SCCR) up to 600V
- Voltage Supply 480-600-690V
- OLED Display for easy Diagnostic & Configuration
- All Firing & Control Mode available
- Wi Fi and all popular Field Bus available
- APP for communication via Apple or Android™
- Remote Service
- Comply with EMC, cULus® 508 listed and cUL® listed

CD AUTOMATION

POWERED BY INNOVATION



Innovation in Power Control



www.cdautomation.com

Revo C Catalog 2018

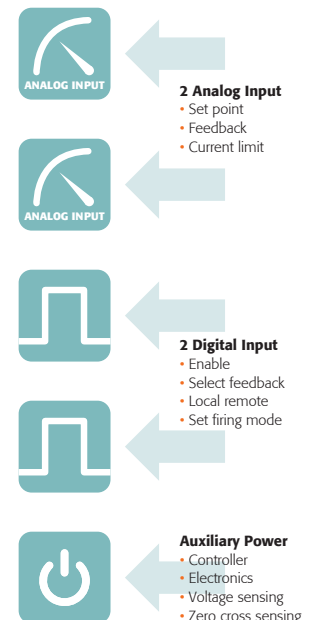
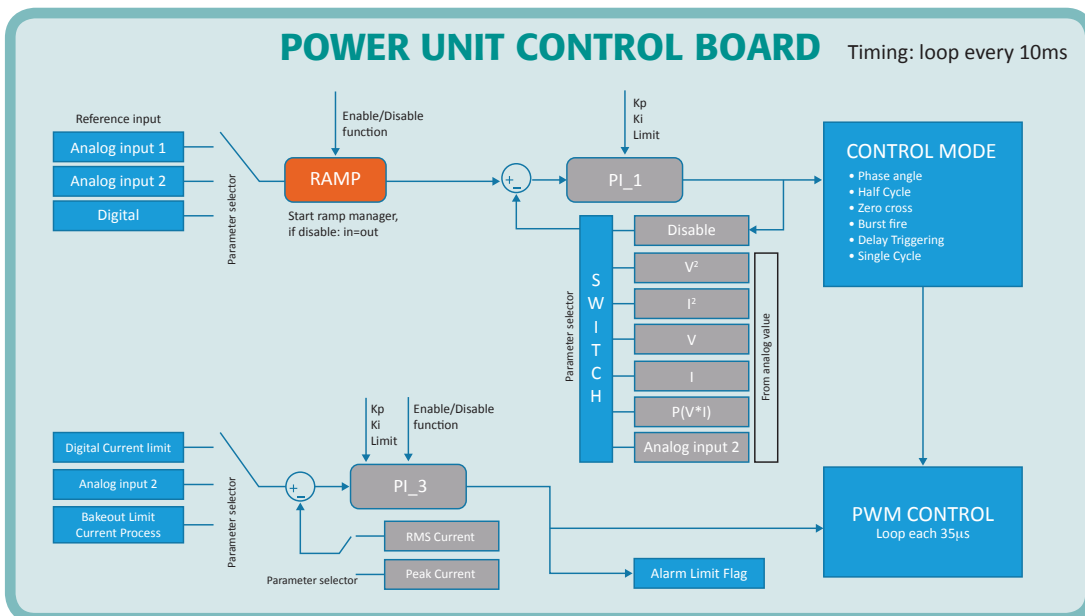
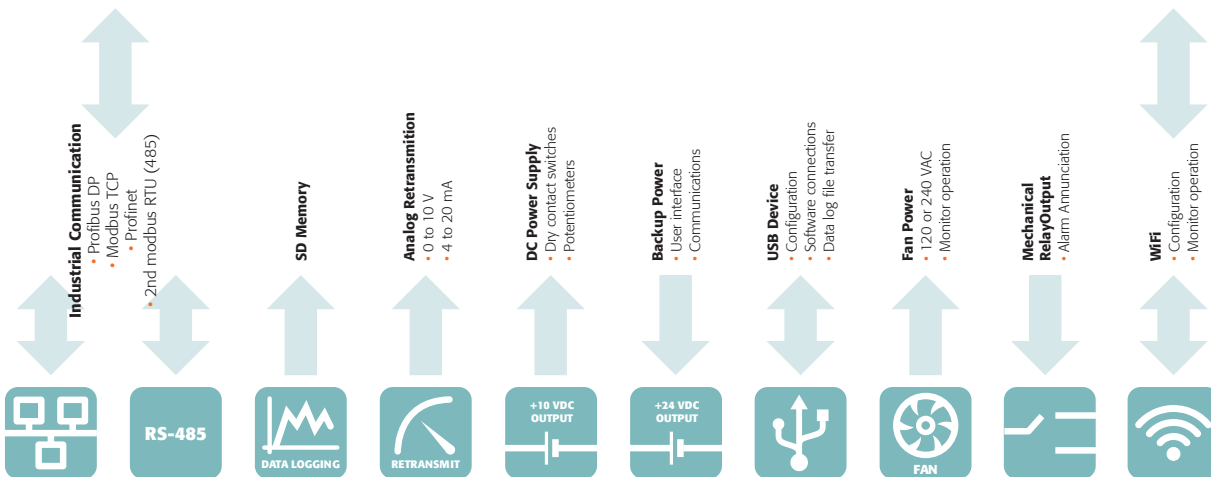
Release n.1

WITH REVO C "YOU WILL NEVER BE ALONE"

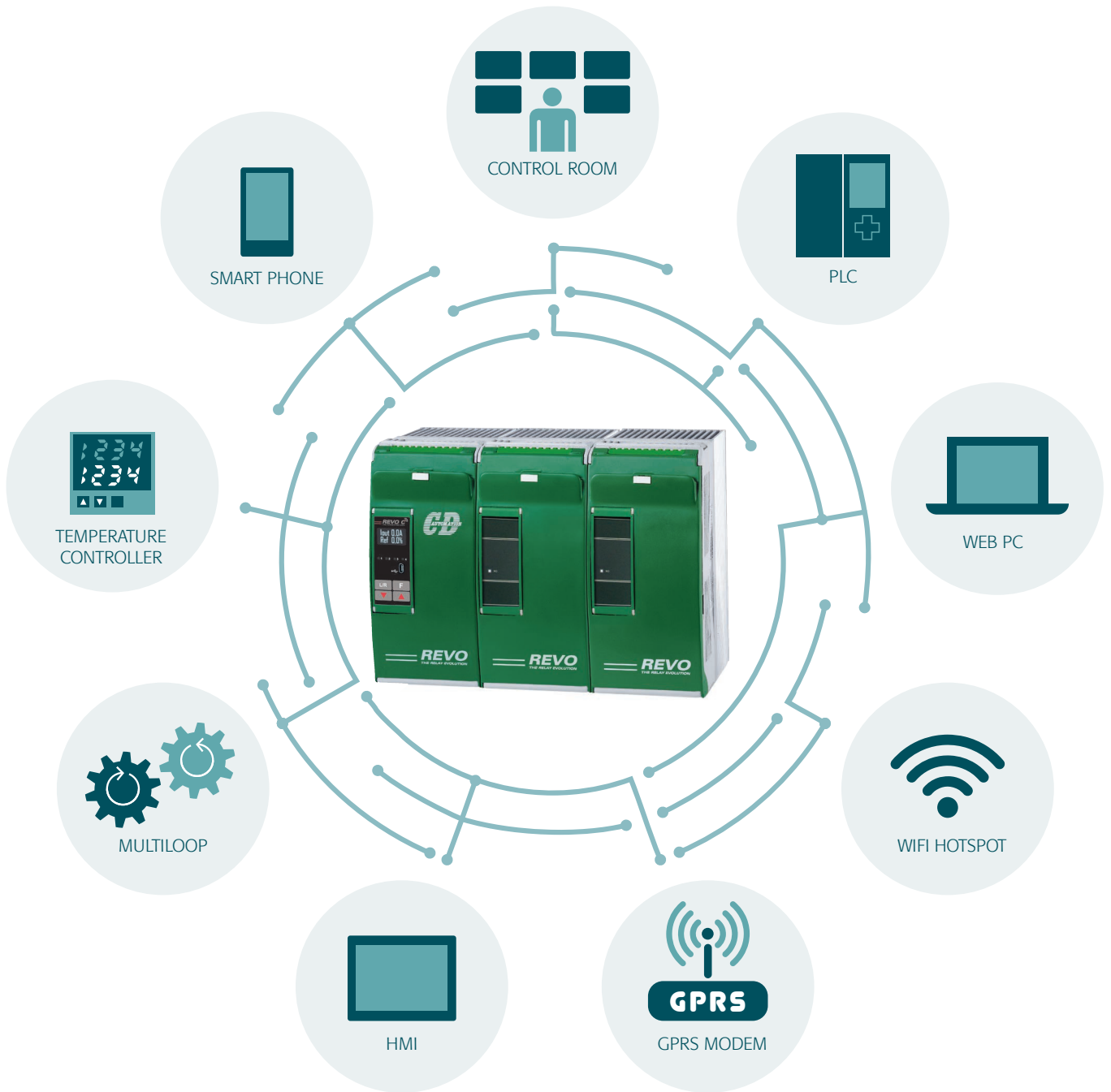
CD AUTOMATION OFFERS REMOTE SERVICE SUPPORT FROM ANYWHERE IN THE WORLD VIA SMARTPHONE APP.

Wide range of communication protocols:

Keep your REVO C connected with the outside world via popular protocols including Modbus® RTU, Ethernet TCP, Profibus®, Profinet® plus WiFi and USB port for local data transfer.



CONNECTIVITY AND CONFIGURATION



READ	WRITE
Set Point	Set Point
Alarm	Configuration Parameters
Voltage	
Power	
Current	
Heater Break Alarm	
SCR Short Circuit Alarm	

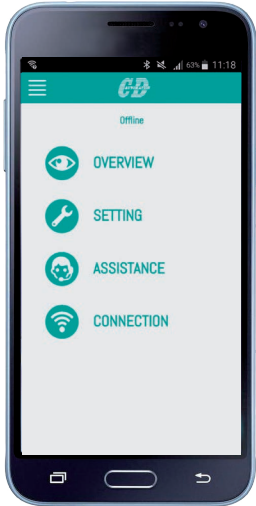
CD AUTOMATION CONNECT APP Download it Free of Charge

YOU WILL NEVER BE ALONE...

..WE GIVE YOU OUR REMOTE APP SERVICE!

THE CD AUTOMATION APP WILL WORK WITH BOTH APPLE AND ANDROID SYSTEMS

Shown are a few of the most important screen shots that provide key process information, easy product setup and product remote control:



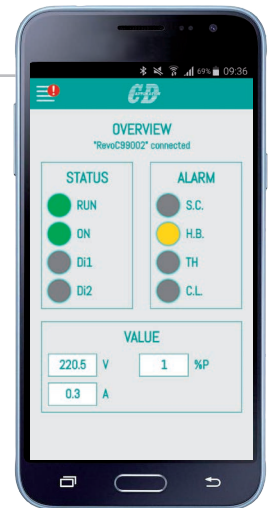
APP Download: Go to Google Play Store or Apple Store and download "CD Automation Connect" app.

Monitor: You can monitor the status of the REVO-C by selecting the Overview screen.

Configuration: Configure your unit by selecting the Setting menu, choose your load connection and simply download.

Remote Service: Need assistance? Download the configuration, add any comments and email automatically. Our engineers will respond with recommendations.

Connection: You can also enable or disable Wi-Fi if required.



Overview: The Overview menu allows you to view key data from outside the cabinet:

Status: RUN, ON, DI.1, DI.2.

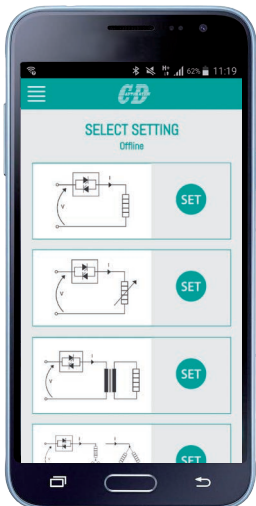
Alarms: SC, short Circuit of one or both Thyristors.

HB, For partial or total Load Failure with capacity to diagnose failure of one element over 5 in parallel.

TH, Thermal temperature of Heat Sink in Alarm conditions.

CL, Current Limit active.

Values: Voltage and Current in Engineering units with % Power indication.



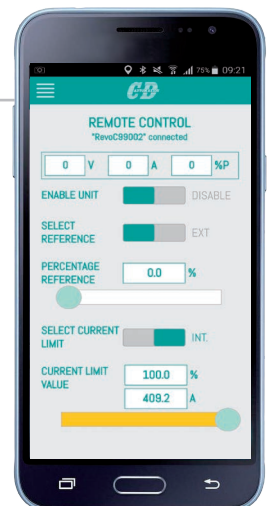
Setting: Easily configure your unit with just two key presses.

Scroll to the icon that represents your load type and press the SET key and the unit will load specific parameter values matched to your process.

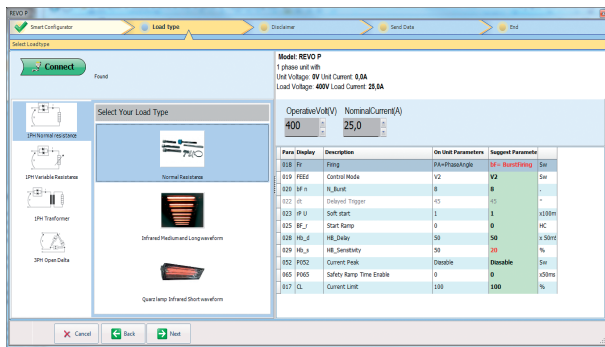
Load types include normal and cold resistance plus primary controlled transformer loads.

Remote Control: From this page you can take control of the process from outside the cabinet:

- Values: Voltage and Current in Engineering units with % Power indication.
- Enable and Disable the REVO C.
- Local / Remote facility.
- % Power (value adjustable).
- Current Limit Set Point.
- Current Limit value in amps and in %.



CONFIGURATOR SOFTWARE



FAST TUNE

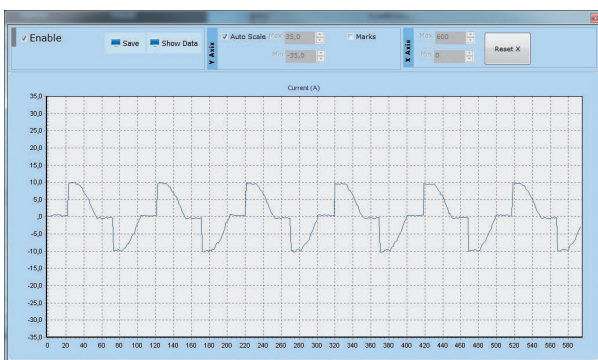
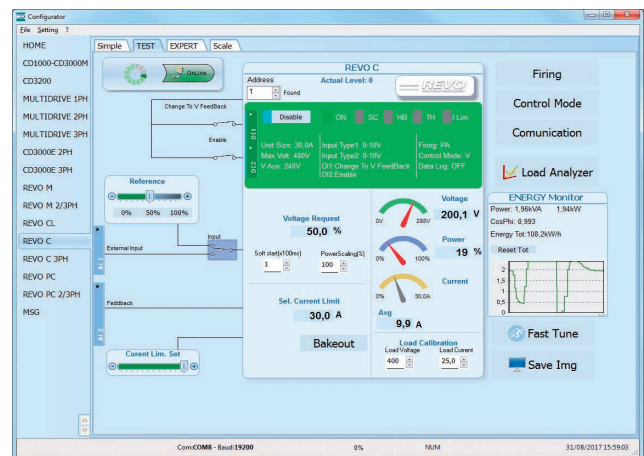
The all new powerful Thyristor Configurator Software allows you to configure all CD Automation products quickly and easily by using the FAST MODE. Simply select your application and the load type picture appears automatically, providing a list of suggested parameter settings. Depending on your application requirements, you can accept or make manual adjustments and when ready, download direct to the thyristor unit.

TEST UNIT

The TEST page is very useful when installing & commissioning CD Automation products as well as finding process issues or fine tuning at a later stage.

You can read, write, enable and disable key values and parameters to test your load. Examples include; reading voltage, current and power values, or current limit status, changing input types between analog or SSR, control (feedback) modes V, I and VxI, or select firing types half cycle, single cycle, burst firing, delayed triggering, phase angle and soft start.

The new 'Load Analyzer' (a small oscilloscope) can be activated from this page, see below.



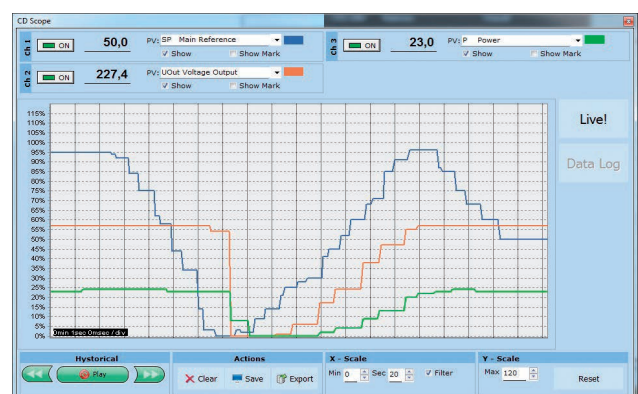
LOAD ANALYZER

Provides real-time information of the output waveform, where you can select up to 10 process variables to help the operator determine if the waveform is in line with process expectations. Also useful for trouble shooting.

PROCESS VARIABLE LOGGING

In REVO C Storage: 16GB SD Memory Card with programmable Logging Intervals. Estimated storing 10 years.

On other CD Automation Products the logging intervals are a fix value.



REVO C FEATURES AND DIMENSIONS

		DESCRIPTION	REVO C 1PH		REVO C 2PH		REVO C 3PH	
		CODE	RC1		RC2		RC3	
LOAD TYPE	Max voltage 480V		●		●		●	
	Max voltage 600V		●		●		●	
	Max voltage 690V		●		●		●	
	Single phase		●					
	3 phase load star no neutral or delta				●		●	
	3 phase load star with neutral						●	
	3 phase load open delta		● (1)					
INPUT TYPE	SSR 4:30VDC		●		●		●	
	4:20 mA		●		●		●	
	0:10 Vdc		●		●		●	
	Potentiometer		●		●		●	
FIRING	Single Cycle		●					
	Half Cycle		●					
	Burst Firing		●		●		●	
	Phase Angle		●				●	
	Delayed Triggering		●				●	
	Zero Crossing		●		●		●	
CONTROL MODE	Open Loop		●		●		●	
	Voltage		●		●		●	
	Voltage square		●		●		●	
	Current		●		●		●	
	Current Square		●		●		●	
	Power V x I		●		●		●	
OPTIONS	Current Limit CL		○				○	
	Heater Break Alarm + SCR Short Circuit		○		○		○	
	WiFi		○		○		○	
	Logging		○		○		○	
	Totalizer		○		○		○	
COMM.	Modbus® RTU		○		○		○	
	ProfiBus® DP + 1 Modbus® RTU		○		○		○	
	2 Profinet® PN + 1 Modbus® RTU		○		○		○	
	2 Modbus® TCP + 1 Modbus® RTU		○		○		○	
CURRENT		CURRENT	SIZE		SIZE		SIZE	
			600V Max	690V	600V Max	690V	600V Max	690V
	30				SR10		SR11	
	35		SR9		SR10		SR11	
	40		SR9		SR10		SR11	
	60		SR12	S11	SR13	S11	SR14	S11
	90		SR15	S11	SR16	S11	SR17	S11
	120		SR15	S11	SR16	S13	SR17	S13
	150		SR15	S11	SR16	S13	SR17	S13
	180		SR15	S11	SR16	S13	SR17	S13
	210		SR15	S11	SR16	S13	SR17	S13
	300		S12	S12	S14	S14	S14	S14
	400		S12	S12	S14	S14	S14	S14
	450				S14	S14	S14	S14
	500		S12	S12	S14	S14	S14	S14
	600		S12	S12	S14	S14	S17	S17
	700		S12	S12	S14	S14	S17	S17
800		S15	S15	S16	S16	S17	S17	

● Standard ○ Option ■ CE standard + cUL® as an option ■ CE Only **Note (1):** Use n° 3 Revo-C 1PH

Agency Approval and Regulatory: cULus 508 Listed File E231578; cUL® Listed to C22.2 No. 14; CE EMC Directive 2014-30-EU, EN 60947-4-3 Class A Emissions; CE Safety Directive 2014-35-EU, EN 60947-4-1, -4-3; RoHS 2011-65-EU; W.E.E.E 2012-19-EU

REVO C FAMILY SIZE AND DIMENSIONS

REVO Connect is a fully universal product range based upon powerful microprocessor technology. Available from 30A to 800A and single phase (1PH) plus 2PH & 3PH to drive 3 phase loads, its key benefit is its connectivity with the outside world, through Wi-Fi and the most popular Field Bus Protocols. Its universality allows inputs, all firing and control modes to be configured via Smart phone using CD Automation's Connect-APP or via your personal computer and CD Automation's Configurator Software.

CD Automation's APP and Configurator Software are available free of charge.

When you buy REVO-C, you also buy CD Automation's experience and know-how to drive your application.



SR9 H 121 x W 72 x D 185 - 1,15kg.



SR10 H 121 x W 108 x D 185 - 1,76kg.



SR11 H 121 x W 144 x D 185 - 2,4kg.



SR12 H 269 x W 93 x D 170 - 3,4kg.
SR15 H 273 x W 93 x D 170 - 3,6kg.



SR13 H 269 x W 186 x D 170 - 6,8kg.
SR16 H 273 x W 186 x D 170 - 7,0kg.



SR14 H 269 x W 279 x D 170 - 10,2kg.
SR17 H 273 x W 279 x D 170 - 10,6kg.



S11 H 440 x W 137x D 270 - 10,5kg.



S12 H 520 x W 137 x D 270 - 15kg.



S13/S14 H 440/520 x W 262 x D 270 - 18/22kg.



S15 H 560 x W 137x D 270 - 17,2kg.



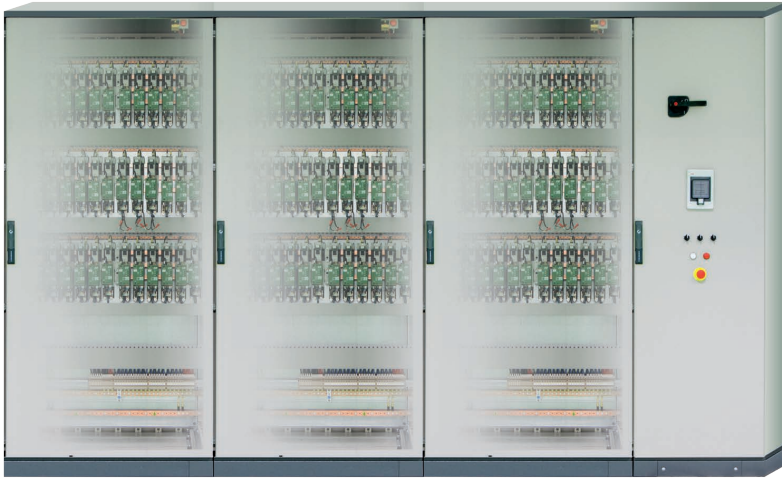
S16 H 560 x W 275 x D 270 - 34,4kg.



S17 H 560 x W 411 x D 270 - 51,6kg.

FEATURES AND BENEFITS

TRADITIONAL SYSTEM



REVO C SYSTEM



REVO C POWER CONTROLLER RANGE

Current Range from 35 to 800A

Controlled Phases 1-2 or 3 Phases suitable to drive Normal Resistance, Cold Resistance and transformers

Voltage 480V, 600V and 690V

FEATURES AND BENEFITS

Integrated with every REVO-C is the semiconductor fuses, thyristors and current transformers. Designed and built as a single unit not only helps reduce the overall space and labour time to mount and connect separate fuses but also ensures that all testing is carried out correctly and guaranteed to the figures stated. The 100 KA short circuit current rating (SCCR) is very important and complies fully with NEC 110.10 regulation. Full documentation available upon request.

- Robust SCR designed to meet rugged industrial environments
- Easy access to fuses and thyristors by simply opening front panel door
- Circuit boards are mounted directly to the front panel door for easy access
- cUL 508 Listed up to 700A included

OUR PRODUCT DIMENSIONS ARE SMALL BECAUSE WE HAVE:

- Fuses are mounted inside the thyristor unit
- Our heat sinks have a very high efficiency thermal resistance (low value °C/W)
- Internal fuses results in longer heat sinks and increased heat sink efficiency
- Improved air ventilation aids fuse cooling

THE CHOICE IS INTERNAL OR EXTERNAL FUSES?

POWER CONTROL UNIT WITH INTERNAL FUSES

- Up to 60% space saving
- Fuse I2t value selected by CD Automation
- SCCR Approved - 100 KA short circuit current rating valid and tested
- Save time for wiring between fuse holder and thyristor power control unit
- Your cabinet become 60% less in dimension and price

POWER CONTROL UNITS WITH EXTERNAL FUSE AND FUSE HOLDER

- More cabinet space required
- Bigger cabinet, more space required in the factory
- Do you know how much the extra space will cost you?
- If the product dimensions are twice as big, you will need twice the factory space

FUSEBLOCK DIMENSION			
<p>UP TO 40A COMPETITOR 1 PHASE</p> <p>COMPETITOR TOTAL AREA 616 cm²</p>	<p>UP TO 40A CD AUTOMATION 1 PHASE</p> <p>CD AUTOMATION TOTAL AREA 100 cm²</p>	<p>UP TO 40A COMPETITOR 1 PHASE</p> <p>COMPETITOR TOTAL AREA 616 cm²</p>	<p>UP TO 40A CD AUTOMATION 1 PHASE</p> <p>CD AUTOMATION TOTAL AREA 175 cm²</p>
EXTERNAL FUSES	INTERNAL FUSES	EXTERNAL FUSES	INTERNAL FUSES
UP TO 160A	UP TO 210A	UP TO 200A	UP TO 210A
<p>COMPETITOR TOTAL AREA 616 cm²</p>	<p>CD AUTOMATION TOTAL AREA 250 cm²</p>	<p>COMPETITOR TOTAL AREA 899 cm²</p>	<p>CD AUTOMATION TOTAL AREA 762 cm²</p>
EXTERNAL FUSES	INTERNAL FUSES	EXTERNAL FUSES	INTERNAL FUSES

REVO C 1PH



SIZE SR9



SIZE SR15



SIZE S12

Technical Specification

- **Dimensions:** See size and dimensions page 6-7
- **Load type:** Normal Resistance, Infrared Short, Medium and Long, Transformer Primary, Cold resistance and SiC elements
- **Inputs:** 4:20mA, 0:10V, SSR and ModBus as std and different Field Bus Listed in the Product Coding
- **Firing mode:** Half Cycle, Single Cycle, Burst Firing, Delayed Triggering, Phase Angle with or without Soft Start
- **Control Mode:** Voltage, Current and Power or V2 and I2 with additional Transfer to VxI
- **Communication:** RS485 port. RTU Modbus® Protocol and other Field Bus available
- **USB:** port integrated for configuration in safety mode (No Load and Auxiliary Voltage needed) Unit Powered Through USB
- **100 KA:** Short Circuit Current rating (SCCR) up to 600V
- **Approvals:** Comply with EMC, cULus® 508 listed and cUL® listed
- **Dual Current Limit:** for peak and RMS value

Option

- See below the types of options and their combination for Code generation
- Energy Totalizer
- Data Logging
- WiFi
- HB Alarm to diagnose partial or Total Load Failure and Thyristor Short Circuit

Tools

- A very easy and Powerful Configurator Software is available Free of Charge on www.cdautomation.com
- CD Automation APP is also available free of charge to communicate via Wi-Fi

DUAL LIMIT	HB	WIFI	LOGGING	TOTALIZER	CODE	NOTES
					0	
					1	
					2	
					3	
					4	
					5	
					6	
					7	
					8	
					9	
					A	
					B	
					C	
					D	
					E	
					F	
					G	
					H	
					I	
					J	
					K	
					L	
					M	
					N	
					O	
					P	
					Q	
					R	
					S	
					T	
					U	
					V	

I LIMIT (CURRENT LIMIT) This option is used to keep the overcurrent inside set limit. It's necessary to drive primary transformers and cold resistance. It's dual limit for peak and RMS value.

HB Alarm for partial or total load failure and Short Circuit on SCR (relay output).

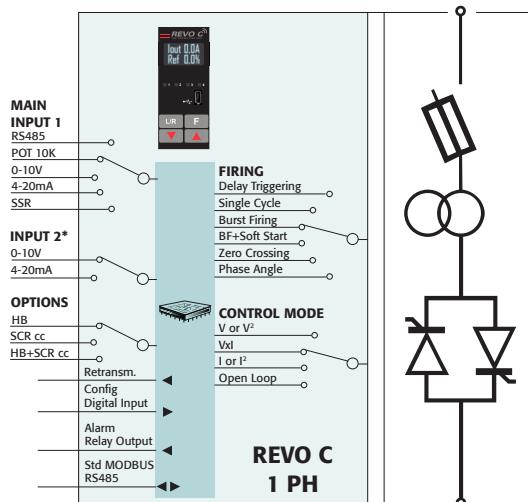
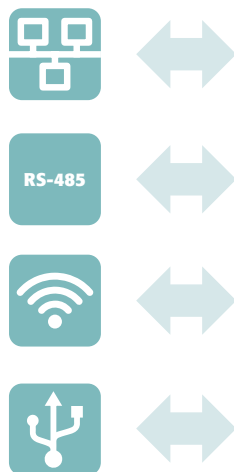
WiFi Option that allows communication with a smart phone. From your smart phone via the CD Automation App, direct to your thyristor unit in the cabinet to read current, voltage, power and energy totalization as well as the ability to change parameters to improve process and product quality without opening the cabinet door.

APP Free of charge download it from Google Play or Apple Store.

DATA LOGGER This feature is important to see the historical data of parameter like Current, Voltage and Power and can be useful to diagnose a fault.

ENERGY TOTALIZER This function totalize the energy consumption of the load allowing the calculation of heat treatment.

CONNECTIVITY



ORDER CODE:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
REVO C 1PH	R	C	1	-	-	-	-	-	-	-	-	-	-	-	-	-

CURRENT	FUSES	4	5	6	
description	description	code		note	
35A	Fuse + Fuse Holder Included	0	3	5	
40A	Fuse + Fuse Holder Included	0	4	0	
60A	Fixed Fuses Included	0	6	0	
90A	Fixed Fuses Included	0	9	0	
120A	Fixed Fuses Included	1	2	0	
150A	Fixed Fuses Included	1	5	0	
180A	Fixed Fuses Included	1	8	0	
210A	Fixed Fuses Included	2	1	0	
300A	Fixed Fuses Included	3	0	0	
400A	Fixed Fuses Included	4	0	0	
500A	Fixed Fuses Included	5	0	0	
600A	Fixed Fuses Included	6	0	0	
700A	Fixed Fuses Included	7	0	0	
800A	Fixed Fuses Included	8	0	0	1

MAX VOLTAGE		7	
description		code	note
480V		4	
600V		6	
690V		7	1, 2

MAIN SUPPLY VOLTAGE	AUX VOLTAGE RANGE	8	
description	description	code	note
100/120Vac	90 to 135V Vac	1	3
200/208/230/240Vac	180 to 265V Vac	2	3
277Vac	238 to 330V Vac	3	3
380/415/480Vac	342 to 528V Vac	5	3
600Vac	540 to 759V Vac	6	3
690Vac	540 to 759V Vac	7	3

MAIN INPUT		9	
description		code	note
SSR		S	
0:20mA		B	
4:20mA		A	
0:10V		V	
10KPot		K	

FIRING	START OPTION	10	
description	description	code	note
Single Cycle	No Soft Start	C	
	Linear Soft Starter	S	
Half Cycle	No Soft Start	H	
	Linear Soft Starter	L	
	Soft Start for short Infr. Lamp	I	
Burst Firing	No Soft Start	B	
	Linear Soft Starter	J	
Phase Angle	No Soft Start	P	
	Linear Soft Starter	E	
Delayed Triggering	No Soft Start	D	
	Linear Soft Starter	T	
Zero Crossing	No Soft Start	Z	
	Linear Soft Starter	R	

CONTROL MODE		11	
description		code	note
Open Loop		0	
Voltage		U	
Voltage Square		Q	
Current		I	
Current Square		A	
Power Vxl		W	

OPTION		12	
description		code	note
No Option		0	
Option code see previous page table		...	

FAN VOLTAGE		13	
description		code	note
No Fan < 90A		0	
Fan 110V ≥ 90A		1	
Fan 220V ≥ 90A Std Version		2	
Fan 24Vdc ≥ 90A Std Version		3	

APPROVALS		14	
description		code	note
CE EMC For European Market		0	
CUL us* + CE EMC For American & European Market		L	

LOAD TYPE		15	
description		code	note
1 PH Normal Resistance		0	
1 PH IRSW Infrared Short Wave		1	
1 PH MoSi2 Heaters		2	
1 PH SiC Heaters		3	
1 PH Transformer Coupled with Normal Resistance		4	
1 PH Transformer Coupled with MoSi2 Heaters		5	
1 PH Transformer Coupled with SiC Resistance		6	
1 PH Transformer Coupled with UV Lamp		7	

COMMUNICATION AND RETRANSMISSION		16	
description	description	code	note
N°1 Modbus* RTU	No Retransmission	0	
	Retransmission 4:20mA	1	
	Retransmission 0:10V	2	
N°2 Modbus* RTU	No Retransmission	3	4
	Retransmission 4:20mA	4	4
	Retransmission 0:10V	5	4
N°1 Profibus* DP + N°1 Modbus* RTU	No Retransmission	6	4
	Retransmission 4:20mA	7	4
	Retransmission 0:10V	8	4
N°1 Profinet* PN + N°1 Modbus* RTU	No Retransmission	9	4
	Retransmission 4:20mA	A	4
	Retransmission 0:10V	B	4
N°1 Modbus* TCP + N°1 Modbus* RTU	No Retransmission	C	4
	Retransmission 4:20mA	D	4
	Retransmission 0:10V	E	4

*Secondary Input can be configured for external current limit reference, external feedback or secondary input reference. See the manual for more informations.

Note (1): No cUL approved **Note (2):** Available on unit ≥60A
Note (3): Main Supply Voltage has to be included in Auxiliary Voltage range
Note (4): 24Vdc Backup Power for User Interface and Communications included

REVO C 2PH



SIZE SR10



SIZE SR16



SIZE S14

Technical Specification

- **Dimensions:** See size and dimensions page 6-7
- **Load type:** Normal Resistance, Infrared Short, Medium and Long waveform
- **Inputs:** 4:20mA, 0:10V, SSR and Modbus® as std and different Field Bus Listed in the Product Coding
- **Firing mode:** Burst Firing, Zero Crossing.
- **Control Mode:** Voltage, Current and Power or V2 and I2 with additional Transfer to VxI
- **Communication:** RS485 port. RTU Modbus® Protocol and other Field Bus available
- **USB:** port integrated for configuration in safety mode (No Load and Auxiliary Voltage needed) Unit Powered Through USB
- **Approvals:** Comply with EMC, cULus® 508 listed and cUL® listed
- **100 KA:** Short Circuit Current rating (SCCR) up to 600V

Option

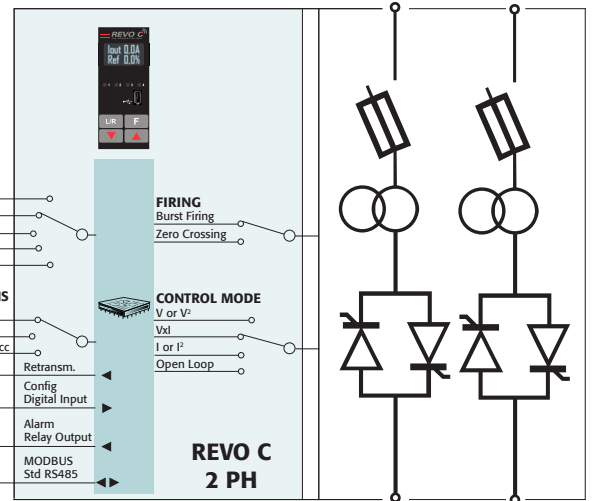
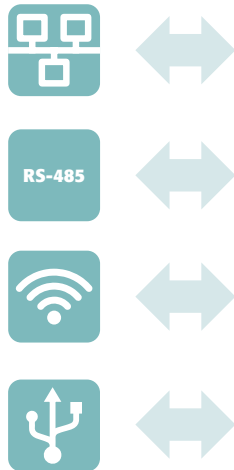
- See below the types of options and their combination for Code generation
- Energy Totalizer
- Data Logging
- WiFi
- HB Alarm to diagnose partial or Total Load Failure and Thyristor Short Circuit

Tools

- A very easy and Powerful Configurator Software is available Free of Charge on www.cdautomation.com
- CD Automation APP is also available free of charge to communicate via Wi-Fi

HB	WIFI	LOGGING	TOTALIZER	CODE	NOTES
				0	
				1	
				2	HB Alarm for partial or total load failure and Short Circuit on SCR (relay output).
				3	WiFi Option that allows communication with a smart phone. From your smart phone via the CD Automation App, direct to your thyristor unit in the cabinet to read current, voltage, power and energy totalization as well as the ability to change parameters to improve process and product quality without opening the cabinet door.
				4	
				5	
				6	
				7	
				8	APP Free of charge download it from Google Play or Apple Store.
				9	DATA LOGGER This feature is important to see the historical data of parameter like Current, Voltage and Power and can be useful to diagnose a fault.
				A	
				B	ENERGY TOTALIZER This function totalize the energy consumption of the load allowing the calculation cost of heat treatment.
				C	
				D	
				E	
				F	

CONNECTIVITY



ORDER CODE:

	1	2	3	4	5	6		7	8	9	10	11	12	13	14	15	16
REVO C 2PH	R	C	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CURRENT	FUSES	4	5	6	
description	description	code			note
30A	Fuse + Fuse Holder Included	0	3	0	
35A	Fuse + Fuse Holder Included	0	3	5	
40A	Fuse + Fuse Holder Included	0	4	0	
60A	Fixed Fuses Included	0	6	0	
90A	Fixed Fuses Included	0	9	0	
120A	Fixed Fuses Included	1	2	0	
150A	Fixed Fuses Included	1	5	0	
180A	Fixed Fuses Included	1	8	0	
210A	Fixed Fuses Included	2	1	0	
300A	Fixed Fuses Included	3	0	0	
400A	Fixed Fuses Included	4	0	0	
450A	Fixed Fuses Included	4	5	0	
500A	Fixed Fuses Included	5	0	0	
600A	Fixed Fuses Included	6	0	0	
700A	Fixed Fuses Included	7	0	0	
800A	Fixed Fuses Included	8	0	0	1

MAX VOLTAGE		7	
description		code	note
480V		4	
600V		6	
690V		7	1,2

MAIN SUPPLY VOLTAGE	AUX VOLTAGE RANGE	8	
description	description	code	note
100/120Vac	90 to 135V Vac	1	3
200/208/230/240Vac	180 to 265V Vac	2	3
277Vac	238 to 330V Vac	3	3
380/415/480Vac	342 to 528V Vac	5	3
600Vac	540 to 759V Vac	6	3
690Vac	540 to 759V Vac	7	3

MAIN INPUT		9	
description		code	note
SSR		S	
0:20mA		B	
4:20mA		A	
0:10V		V	
10KPot		K	

FIRING	START OPTION	10	
description	description	code	note
Burst Firing	No Soft Start	B	
Zero Crossing	No Soft Start	Z	

CONTROL MODE		11	
description		code	note
Open Loop		O	
Voltage		U	
Voltage Square		Q	
Current		I	
Current Square		A	
Power VxI		W	

OPTION		12	
description		code	note
No Option		0	
Option code see previous page table		...	

FAN VOLTAGE		13	
description		code	note
No Fan < 90A		0	
Fan 110V ≥ 90A		1	
Fan 220V ≥ 90A Std Version		2	
Fan 24Vdc ≥ 90A Std Version		3	

APPROVALS		14	
description		code	note
CE EMC For European Market		O	
CUL us* + CE EMC For American & European Market		L	1

LOAD TYPE		15	
description		code	note
Normal Resistive Load with 3 Phase Star without neutral Connection		0	
Normal Resistive Load with 3 Phase Delta Connection		1	
IRSW Infrared Short wave with 3 Phase Star Connection		2	
IRSW Infrared Short wave with 3 Phase Delta Connection		3	

COMMUNICATION AND RETRANSMISSION		16	
description	description	code	note
N°1 Modbus® RTU	No Retransmission	0	
	Retransmission 4:20mA	1	
	Retransmission 0:10V	2	
N°2 Modbus® RTU	No Retransmission	3	4
	Retransmission 4:20mA	4	4
	Retransmission 0:10V	5	4
N°1 Profibus® DP + N°1 Modbus® RTU	No Retransmission	6	4
	Retransmission 4:20mA	7	4
	Retransmission 0:10V	8	4
N°1 Profinet® PN + N°1 Modbus® RTU	No Retransmission	9	4
	Retransmission 4:20mA	A	4
	Retransmission 0:10V	B	4
N°1 Modbus® TCP + N°1 Modbus® RTU	No Retransmission	C	4
	Retransmission 4:20mA	D	4
	Retransmission 0:10V	E	4

Note (1): No cUL approved
Note (2): Available on unit ≥60A
Note (3): Main Supply Voltage has to be included in Auxiliary Voltage range
Note (4): 24Vdc Backup Power for User Interface and Communications included

REVO C 3PH



SIZE SR11



SIZE SR17



SIZE S14

Technical Specification

- **Dimensions:** See size and dimensions page 6-7
- **Load type:** Normal Resistance, Infrared Short, Medium and Long, Transformer Primary using Phase Angle, Cold resistance and SiC elements
- **Inputs:** 4:20mA, 0:10V, SSR and Modbus® as std and different Field Bus Listed in the Product Coding
- **Firing mode:** Burst Firing, Delayed Triggering and Phase Angle with or without Soft Start
- **Control Mode:** Voltage, Current and Power or V2 and I2 with additional Transfer to Vxl
- **Communication:** RS485 port. RTU Modbus® Protocol and other Field Bus available port integrated for configuration in safety mode
- **USB:** (No Load and Auxiliary Voltage needed) Unit Powered Through USB
- **Approvals:** Comply with EMC, cULus® 508 listed and cUL® listed
- **100 KA:** Short Circuit Current rating (SCCR) up to 600V
- **Dual Current Limit:** for peak and RMS value

Option

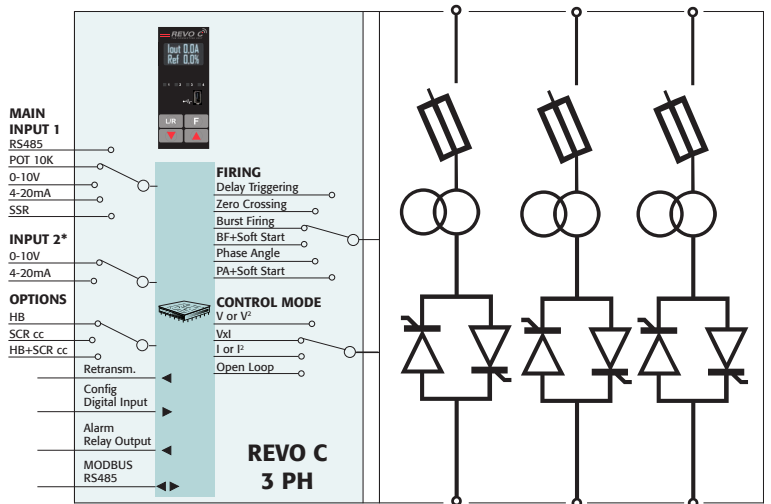
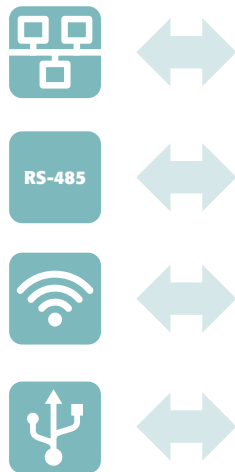
- See below the types of options and their combination for Code generation
- Energy Totalizer
- Data Logging
- WiFi
- HB Alarm to diagnose partial or Total Load Failure and Thyristor Short Circuit

Tools

- A very easy and Powerful Configurator Software is available Free of Charge on www.cdautomation.com
- CD Automation APP is also available free of charge to communicate via Wi-Fi

I LIMIT	HB	WIFI	LOGGING	TOTALIZER	CODE	NOTES
					0	
					1	
					2	
					3	
					4	I LIMIT (CURRENT LIMIT) This option is used to keep the overcurrent inside setted limit. It's necessary to drive primary transformers and cold resistance. This option is not available on 30-35-40A units.
					5	
					6	
					7	
					8	HB Alarm for partial or total load failure and Short Circuit on SCR (relay output).
					9	
					A	
					B	
					C	WiFi Option that allows communication with a smart phone. From your smart phone via the CD Automation App, direct to your thyristor unit in the cabinet to read current, voltage, power and energy totalization as well as the ability to change parameters to improve process and product quality without opening the cabinet door.
					D	
					E	
					F	
					G	
					H	
					I	
					J	APP Free of charge download it from Google Play or Apple Store.
					K	
					L	
					M	DATA LOGGER This feature is important to see the historical data of parameter like Current, Voltage and Power and can be useful to diagnose a fault.
					N	
					O	
					P	
					Q	ENERGY TOTALIZER This function totalize the energy consumption of the load allowing the calculation cost of heat treatment.
					R	
					S	
					T	
					U	
					V	

CONNECTIVITY



ORDER CODE:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
REVO C 3PH	R	C	3	-	-	-	-	-	-	-	-	-	-	-	-	-

CURRENT	FUSES	4	5	6	
description	description	code	code	note	
30A	Fuse + Fuse Holder Included	0	3	0	2
35A	Fuse + Fuse Holder Included	0	3	5	2
40A	Fuse + Fuse Holder Included	0	4	0	2
60A	Fixed Fuses Included	0	6	0	
90A	Fixed Fuses Included	0	9	0	
120A	Fixed Fuses Included	1	2	0	
150A	Fixed Fuses Included	1	5	0	
180A	Fixed Fuses Included	1	8	0	
210A	Fixed Fuses Included	2	1	0	
300A	Fixed Fuses Included	3	0	0	
400A	Fixed Fuses Included	4	0	0	
450A	Fixed Fuses Included	4	5	0	
500A	Fixed Fuses Included	5	0	0	
600A	Fixed Fuses Included	6	0	0	1
700A	Fixed Fuses Included	7	0	0	1
800A	Fixed Fuses Included	8	0	0	1

MAX VOLTAGE	7	
description	code	note
480V	4	
600V	6	
690V	7	1

MAIN SUPPLY VOLTAGE	AUX VOLTAGE RANGE	8	
description	description	code	note
100/120Vac	90 to 135V Vac	1	3
200/208/230/240Vac	180 to 265V Vac	2	3
277Vac	238 to 330V Vac	3	3
380/415/480Vac	342 to 528V Vac	5	3
600Vac	540 to 759V Vac	6	3
690Vac	540 to 759V Vac	7	3

MAIN INPUT	9	
description	code	note
SSR	S	
0:20mA	B	
4:20mA	A	
0:10V	V	
10KPot	K	

FIRING	START OPTION	10	
description	description	code	note
Burst Firing	No Soft Start	B	
	Linear Soft Starter	J	
Phase Angle	No Soft Start	P	2
	Linear Soft Starter	E	2
Delayed Triggering	No Soft Start	D	2
Zero Crossing	No Soft Start	Z	
	Linear Soft Starter	R	

CONTROL MODE	11	
description	code	note
Open Loop	O	
Voltage	U	
Voltage Square	Q	
Current	I	
Current Square	A	
Power VxI	W	

OPTION	12	
description	code	note
No Option	0	
Option code see previous page table	...	

FAN VOLTAGE	13	
description	code	note
No Fan < 90A	0	
Fan 110V ≥ 90A	1	
Fan 220V ≥ 90A Std Version	2	
Fan 24Vdc ≥ 90A Std Version	3	

APPROVALS	14	
description	code	note
CE EMC For European Market	O	
CUL us* + CE EMC For American & European Market	L	

LOAD TYPE	15	
description	code	note
Normal Resistive with 3 Phase Star Connection with neutral	0	
Normal Resistive with 3 Phase Delta or Star Connection	1	
IRSW Infrared Short wave with 3 Phase Star Connection with neutral	2	
IRSW Infrared Short wave with 3 Phase Delta or Star Connection	3	
3 Phase Transformer coupled with normal resistance	4	
3 Phase Transformer coupled with cold resistance	5	

COMMUNICATION AND RETRANSMISSION	16		
description	description	code	note
N°1 Modbus® RTU	No Retransmission	0	
	Retransmission 4:20mA	1	
	Retransmission 0:10V	2	
N°2 Modbus® RTU	No Retransmission	3	4
	Retransmission 4:20mA	4	4
	Retransmission 0:10V	5	4
N°1 Profibus® DP + N°1 Modbus® RTU	No Retransmission	6	4
	Retransmission 4:20mA	7	4
	Retransmission 0:10V	8	4
N°1 Profinet® PN + N°1 Modbus® RTU	No Retransmission	9	4
	Retransmission 4:20mA	A	4
	Retransmission 0:10V	B	4
N°1 Modbus® TCP + N°1 Modbus® RTU	No Retransmission	C	4
	Retransmission 4:20mA	D	4
	Retransmission 0:10V	E	4

*Secondary Input can be configured for external current limit reference, external feedback or secondary input reference. See the manual for more informations.

Note (1): No cUL approved **Note (2):** Phase Angle and Delayed Triggering not available on 30-35-40A
Note (3): Main Supply Voltage has to be included in Auxiliary Voltage range
Note (4): 24Vdc Backup Power for User Interface and Communications included

GENERAL FEATURES

Display Software

0.1	OLED display on front Unit	This display improves the operator interface and delivers use-friendly intuitive messages
0.2	Diagnostic	Powerful diagnostics provides clear alarm notification in plain English on the OLED display
0.3	Fully Software Configurable	REVO C is fully Software configurable
0.4	Layer based Firmware	Layered software design means that new application or customer software can be written without a complete software debug, resulting in faster upgrades and a stable platform

Electrical Features

1.1	Current rating	30 to 800A for 1-2-3 Phase unit
1.2	Voltage	480-600-690V 690V only available for unit ≥ 60 A
1.3	Integrated Fuse	This reduce labor and space and gives the possibility to use a part of fan cooling air to reduce the temperature of semiconductor fuses and reduce the mounting space inside the cabinet (see the comparison at page 9)
1.4	Quick and easy access to Fuses	Fuses and thyristors are mounted directly behind the front panel door
1.5	100 KA Short Circuit Current rating (SCCR) up to 600V	Enable greater protection in case of Short Circuit

Firing & Control Mode

2.1	Universal firing mode	Half Cycle, Single Cycle, Burst Firing, Delayed Triggering Phase Angle and Soft Start
2.2	Current Control	This feature is always available for both RMS and peak Control
2.3	Voltage Control	Normally used when Voltage Control Mode is selected
2.4	Power Control	Normally used when Power Control Mode is selected
2.5	Universal Input	The std analog inputs 4:20mA and 0:10V and SSR Configurable via Software
2.6	Universal Control Mode	REVO C can be configured for Current, Voltage Power feed back or open loop
2.7	External Feed Back	External selection of the Control Mode (Feedback) via 0-10V signal

Communication

3.1	Wide range of communication protocols	Optional plug-in Field Bus boards to suit application requirements
3.2	Wi Fi	Low cost option that utilizes the Smart Phone App to access Alarm Overview, Configuration and Remote Service & Global Support Service
3.3	Modbus® RTU	Standard

GENERAL FEATURES

3.4	Modbus® TCP	Option
3.5	Profibus®	Option
3.6	Profinet®	Option
3.7	USB device on front unit for configuration	Standard easily and safely normally used to configure the REVO C. Eliminate the user having to work in a high voltage environment because the unit is powered through USB connection

Extra Features

4.1	Integrated Data Logging	Storage: 16GB SD Memory Card with programmable Logging Intervals Optional 40GB SD memory card available
4.2	Energy Counter Totalizer	Available as an option to define the cost per hour of the heating system
4.3	Special Algorithm for Short Wave form IR Lamp	Using half cycle firing and soft start curve to minimize lamp flickering
4.4	Remote service	Available when Wi-Fi and Smart Phone selected Use it and "You will never be alone,"
4.5	Automatic Selection of the configuration as a function of wiring and load type	Automatically select the correct parameters for your application by using the wiring and load type icons via your smart phone or PC configuration software
4.6	HB and Sc Alarm	Alarm for Partial or Total Load Failure and Short Circuit on SCR with Electromechanical Relay output 1A at 30 Vdc or 0,5A at 125 Vac
4.7	Heater Bakeout	Protects heater elements on start-up by eliminating problems caused by moisture ingress
4.8	High precision measurement (True RMS Value for V _I and V _L)	≤1%
4.9	Integrate Load Analyzer	Helps the operator to see possible load problems with live Wave Form monitoring
4.10	Free configuration Software	Easy to use and powerful Configurator Software, available free of charge from www.cdautomation.com

General Features and Approvals

5.1	Industry-leading and Serviceability	Generous sizing of Thyristors and Thermal Parts using high efficiency Heatsink
5.2	Enable troubleshooting with helpful thermal system diagnostics	Internal temperature sensor detects over-current or high cabinet temperature and raises alarm. If high temperature continues a second high limit alarm powers down the thyristor unit
5.3	Fully compatible with REVO M and REVO CL series	Fully upgrade & substitute existing REVO M and REVO CL units using the same terminal blocks and wiring
5.4	Approvals	CE-EMC and cUL us® 508 Listed for 1-2 Phase up to 700A and 500A for 3 Phase 480-600V versions is available on request CE-EMC only for 800A 1-2-3 Phase Unit and all 690V Units. See the tab at page 6 for more details

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INTEGRATED FIELDBUS



SYSTEM ARCHITECTURE WITH DIFFERENT FIELDBUS

CHAIN CONNECTION



STAR CONNECTION





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