GENERAL CATALOGUE

Thyristor Power Controllers

CD AUTOMATION

Powered by Innovation

AUTOMATION

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REVO
REVO
REVO
REVEX

CD Automation was founded in 1987 in Legnano (MI) and, thanks to its thirty years of experience in the sector, produces thyristor power units for the automation of industrial temperature control. Thanks to a system of subsidiaries and partners of international standing in the industrial temperature control sector, CD Automation supports and develops any customer requirement.

CD Automation's production is characterised by single-phase, two-phase and three-phase models with a current range between 3A and 2700A. Our thyristors, equipped with powerful microprocessors, are designed to meet every market requirement and are configurable so that they can be used in different applications, thus making it possible to always find the most suitable solution.

Through innovation in cabling, fieldbus connectivity and space management within the control panel, it is possible to reduce the footprint and thus save on the entire project.

Our Mission:

Providing innovative solutions to control heating loads of all kinds.

Technical support in design, pre- and after-sales, remote and on-site technical assistance.

Being a leading company in the thyristor unit market both nationally and internationally.

General features

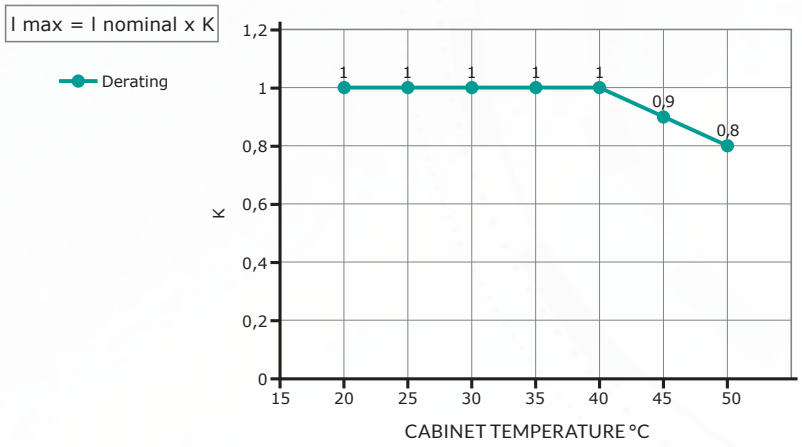
Environmental installation conditions

Ambient temperature	0÷40°C (32÷104°F) at nominal current. Over 40°C/104°F use the derating curve (max 50°C).
Storage temperature	-25°C to 70°C / -13°F to 158°F
Installation place	Avoid installing in areas exposed to direct sunlight, conductive dust, corrosive gases, vibrations, water, or salty environments.
Altitude	Up to 1000 meter over sea level. For higher altitude reduce the nominal current by 2% for each 100mt over 1000mt (*see Derating table*).
Humidity	From 5 to 95% without condensation and ice.
Pollution Level	Up to 2° level ref. IEC 60947-1 6.1.3.2

Derating

Derating curve

The nominal current values specified for the units are based on their operation in continuous service at an ambient temperature of 40°C. To adjust for temperatures above 40°C, multiply the nominal current by the derating coefficient (K) as indicated below.



SCR unit size derating with increasing altitude

When installing our SCR units at altitudes exceeding 1000 metres above sea level, it is advised to adjust the current size using a derating coefficient. This adjustment should take into account the stability of the electrical supply and the operating temperatures within the switch cabinet.

Minimal derating:
The derating of the current size by **-1% per 100m** above 1000m above sea level.

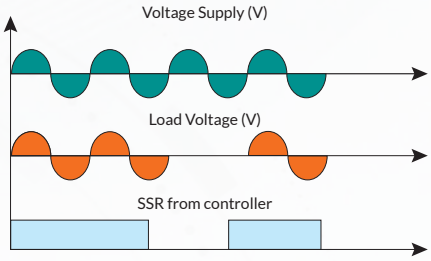
Derating with operating margin (recommended):
The derating of the current size by **-2% per 100m** above 1000m above sea level.

Example: The derating coefficient for an SCR device installed at an altitude of 3500 metres above sea level must be calculated as follows:
[(3500-1000)/100]=25% minimum
[(3500-1000)x2/100]=50% recommended

Firing types

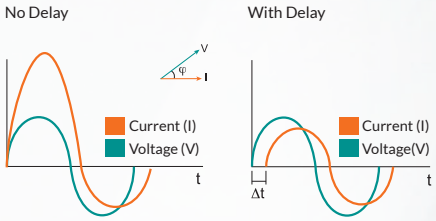
Zero Crossing (ZC)

ZC firing mode is used with the logic output from a temperature controller and so the thyristor operates like a contactor. The cycle time is performed by the temperature controller. Zero Crossing minimizes interferences as the thyristor unit switches ON-OFF at zero voltage.



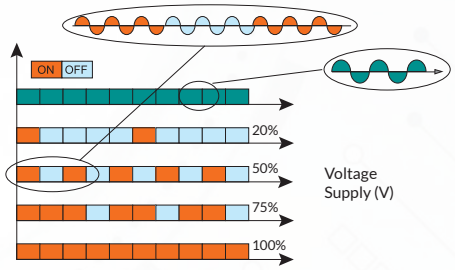
Delayed Triggering (DT)

Used to switch the primary coil of transformers when coupled with normal resistive loads (not cold resistance) on the secondary, DT prevents the inrush current when zero voltage (ON-OFF) is used to switch the primary. The thyristor unit switches OFF when the load voltage is negative and switches ON only when positive with a pre-set delay for the first half cycle.



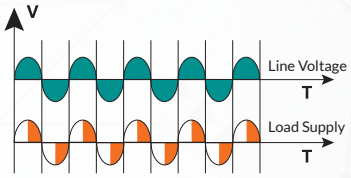
Burst Firing (BF)

This firing is performed digitally within the thyristor unit at zero volts, producing no EMC interference. Analogue input is necessary for BF and the number of complete cycles must be specified for 50% power demand. This value can be between 1 and 255 complete cycles, determining the speed of firing. When 1 is specified, the firing mode becomes Single Cycle (SC).



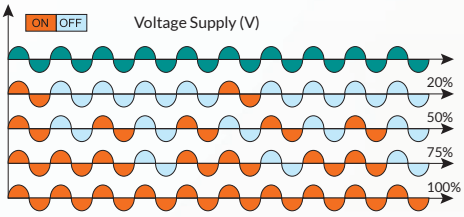
Phase Angle (PA)

PA controls the power to the load by allowing the thyristor to conduct for part of the AC supply cycle only. The more power required, the more the conduction angle is advanced until virtually the whole cycle is conducting for 100% power. The load power can be adjusted from 0 to 100% as a function of the analogue input signal, normally determined by a temperature controller or potentiometer, PA is normally used with inductive loads.



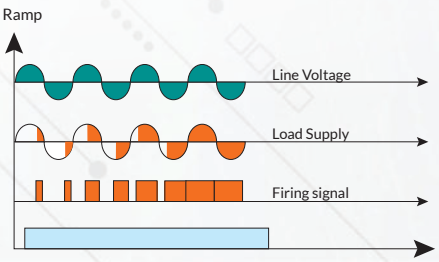
Single Cycle (SC)

SC is the fastest zero crossing switching method. At 50% input signal, one cycle is ON and one cycle is OFF. At 75%, 3 cycles are ON and one cycle is OFF. If power demand is 76% the unit performs the same as for 75% but every time the unit switches ON the microprocessor divides 76/75 and memorises the ratio. When the sum is one the unit delivers one cycle more to the load. With this firing it is necessary to have analogue input.



Soft Start + Burst Firing (S+BF)

This is an additional feature to Burst Firing. Starting in Phase Angle mode, the unit ramps from zero to full voltage at a preset time, finishing at full conduction for remainder of the ON period. Idealy used to switch small inductive loads, S+BF avoids current surge and minimizes electrical interference.



REVO S

Main features

The features of REVO S are suitable for basic applications where communication is not required

- The REVO S family includes 1-2-3 phase units from 30A to 800A
- Nominal voltage 480V, 600V and 690V
- Input: SSR or analog (4÷20mA/0÷10V)
- Firing: Burst Firing (Fast Zero Crossing)
- Heater Break: Alarm to diagnose partial or total break of the load or thyristor short circuit
- Extrarapid fuse with fuse holder up to 40A
- Extrarapid fixed fuses from 60A to 800A
- **100 kA** Short Circuit Current (SCCR) tested
- **CE** and **cUL** approvals

Load type

Resistive / Medium and long-wave infrared lamps

Cannot be used for capacitive loading. For information contact our technical department

Industrial applications

- Petrolchemicals
- Platform for oil extraction
- Conventinal power generator
- Chemicals and pharmaceuticals
- Autoclaves
- Electric furnaces
- Galvanic process
- Glass industry
- Polysilicon
- Chemical
- Plastic machinery
- Packing machinery
- Automobile
- Paint drying
- UV drying
- Car internal fitting

REVO S & SSR - FEATURES

	Description	Revo S 1PH		Revo S 2PH		Revo S 3PH	
	CODE	RS1		RS2		RS3	
Load Type	Max voltage 480V	●		●		●	
	Max voltage 600V	●		●		●	
	Max voltage 690V	● ≥60A		● ≥60A		● ≥60A	
	Single phase	●					
	3 phase load star no neutral or delta			●		●	
	3 phase load star with neutral					●	
	3 phase load open delta					●	
Input	SSR 4:30VDC	●		●		●	
	4:20 mA	O		O		O	
	0:10 Vdc	O		O		O	
	Digital potentiometer	O		O		O	
Firing	Zero crossing	●		●		●	
	Burst firing 4-8-16 (1)	O		O		O	
Options	Heater break + thyristor short circuit	O		O		O	
	Integrated extrarapid fixed fuses	● >40A		● >40A		● >40A	
	Extrarapid fuse & fuse holder	O ≤40A		O ≤40A		O ≤40A	
	REVO PC (2)	O					
Current	CURRENT	SIZE		SIZE		SIZE	
	Voltage	480÷600V	690V	480÷600V	690V	480÷600V	690V
	30	SR3/SR6		SR4/SR7		SR5/SR8	
	35	SR3/SR6		SR4/SR7		SR5/SR8	
	40	SR3/SR6		SR4/SR7		SR5/SR8	
	60	SR12	S11	SR15	S11	SR16	S11
	75			SR15		SR16	
	90	SR15	S11	SR15	S11	SR16	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		S14	S14	S14	S14
	350					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		
	700	S12	S12	S14	S14		
	800	S15*	S15	S16*	S16	S17*	S17

● Standard O Option ■ CE standard + cUL option (*800A UL only) ■ CE only ■ cUL only

Nota 1: 4-8-16 Cycles Simplified Burst Firing available with Analog Input only
Nota 2: REVO PC is an external unit designed to handle multiple zones, able to minimize energy cost, keep power factor close to 1 and add Field Bus.

REVO S 1PH

Technical Specification

- **Load type:** Normal resistance, infrared long and medium waveform
- **Input:** SSR Standard; 0÷10V, 4÷20mA and Heater Break alarm are options
- **Firing:** Zero Crossing, Burst Firing available with analogue input only
- **Operating temperature:** 0°C to 40°C without derating
- **Approvals:** Compliant with CE and cUL (option) up to 700A
- **100 kA:** Short Circuit Current Rating (SCCR) up to 600V, 700A

Options

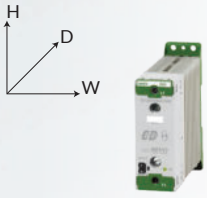
- Analog input: 4÷20mA or 0÷10V
- Heater Break Alarm + Current Transformer
- Integrated extrarapid fuses ≤40A
- Available on some size: Fuse alarm signal (FUMS) and 2° thermal switch

Firing

- ZC: Zero Crossing
- Burst Firing 4 / 8 / 16

ZC Firing available with analogue input ONLY

REVO S 1PH 30÷800A / **480÷600V**



SR3
H 121 x W 36 x D 125 - 0,44 kg
30÷40A

SR6
H 121 x W 36 x D 185 - 0,61 kg
30÷40A IFH

SR12
H 269 x W 93 x D 170 - 3,4kg
60A

SR15
H 273 x W 93 x D 170 - 3,6 kg
90÷210A

S12
H 520 x W 137 x D 270 - 15 kg
300÷700A

S15
H 560 x W 137x D 270 - 10,5 kg
800A

REVO S 1PH 60÷800A / **690V**

S11
H 440 x W 137x D 270 - 10,5 kg
60÷210A

S12
H 520 x W 137 x D 270 - 15 kg
400÷700A

S15
H 560 x W 137x D 270 - 10,5 kg
800A

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

CURRENT			4	5	6	
Description	Size 480/600V	Size 690V	cod			note
30A	SR3 / IFH=SR6	--	0	3	0	
35A	SR3 / IFH=SR6	--	0	3	5	
40A	SR3 / IFH=SR6	--	0	4	0	
60A	SR12	S11	0	6	0	
90A	SR15	S11	0	9	0	
120A	SR15	S11	1	2	0	
150A	SR15	S11	1	5	0	
180A	SR15	S11	1	8	0	
210A	SR15	S11	2	1	0	
300A	S12	S12	3	0	0	
400A	S12	S12	4	0	0	
500A	S12	S12	5	0	0	
600A	S12	S12	6	0	0	
700A	S12	S12	7	0	0	
800A	S15	S15	8	0	0	10

MAX VOLTAGE	7	
Description	cod	note
480V	4	
600V	6	
690V	7	4, 5

AUX VOLTAGE SUPPLY		8	
≤ 210A		cod	note
No Aux Voltage needed if HB option and/or Analog Input option NOT selected		0	8
Aux Volt 24V ac-dc needed with HB option and/or Analog Input option selected		4	8
> 210A			
Main Supply Voltage	Aux Voltage Range		
100/120Vac	90÷135Vac	1	3
200/208/230/240Vac	180÷265Vac	2	3
277Vac	238÷330Vac	3	3
380/415/480Vac	342÷528Vac	5	3
600Vac	540÷759Vac	6	3
690Vac	540÷759Vac	7	3

INPUT	9	
Description	cod	note
SSR	S	A
0:10V dc	V	B
4:20mA	A	B

FIRING	10	
Description	cod	note
Zero Crossing	Z	A
Burst Firing 4 Cycles On at 50% Power Demand	4	2
Burst Firing 8 Cycles On at 50% Power Demand	8	2
Burst Firing 16 Cycles On at 50% Power Demand	6	2
Random (used with REVO-PC)	R	7

CONTROL MODE	11	
Description	cod	note
Open Loop	0	

FUSES & OPTIONS	12	
≤ 40A	cod	note
No Fuse (for units ≤ 40A)	0	
Extrarapid fuse + fuse holder	F	
Extrarapid fuse + fuse holder + CT	Y	
Extrarapid fuse + fuse holder + CT + HB	H	
Extrarapid fuse + fuse holder + CT + HB with Flat Cable Connection	X	5, 6
> 40A		
Extrarapid fixed fuses standard (on all units > 40A)	F	1
Extrarapid fixed fuses standard + CT + HB	H	

FAN VOLTAGE	13	
Description	cod	note
No fan < 90A	0	
Fan 115Vac ≥ 90A	1	
Fan 230Vac ≥ 90A Standard	2	
Fan 24Vdc ≥ 90A	3	

APPROVALS	14	
Description	cod	note
CE for European market	0	
CE + cUL	L	

MANUAL	15	
Description	cod	note
None	0	
Italian	1	
English	2	
German	3	
French	4	

VERSION	16	
Description	cod	note
Standard Version	1	
High Sensitivity HB below 5A	5	9

Note A: Zero Crossing Firing only with SSR input
Note B: With analog input (0:10Vdc, 4:20mA) it is necessary to have the Fuse + Fuse Holder on units ≤40A

Note 1: Fixed fuses over 40A
Note 2: Available with analog input only
Note 3: Load voltage must be included in Selected Auxiliary Voltage Range for units >210A
Note 4: Available on unit ≥60A
Note 5: This unit is not available with optional UL approval
Note 6: Needs RTURS terminal units
Note 7: See REVO PC
Note 8: This option is not available with Max Voltage equal to 690V. In this case please use the other Auxiliary Voltage Supplies
Note 9: This option is available on units from 30A to 40A
Note 10: 800A unit is available with UL approval (not cUL)

REVO S 2PH

Technical Specification

- **Load type:** Normal resistance, infrared long and medium waveform
- **Input:** SSR Standard; 0÷10V, 4÷20mA and Heater Break alarm are options
- **Firing:** Zero Crossing, Burst Firing available with analogue input only
- **Operating temperature:** 0°C to 40°C without derating
- **Approvals:** Compliant with CE and cUL (option) up to 700A
- **100 kA:** Short Circuit Current Rating (SCCR) up to 600V, 700A
- **Integrated pass-through phase:** 480V-600V: all sizes S14 / 690V: all sizes S11, S13, S14

Options

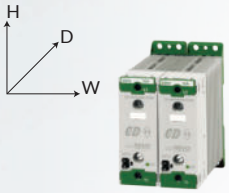
- Analog input: 4÷20mA or 0÷10V
- Heater Break Alarm + Current Transformer
- Integrated extrarapid fuses ≤40A
- Available on some size: Fuse alarm signal (FUMS) and 2° thermal switch

Firing

- ZC: Zero Crossing
- Burst Firing 4 / 8 / 16

ZC Firing available with analogue input ONLY

REVO S 2PH 30÷800A / **480÷600V**



SR4
H 121 x W 72 x D 125 - 0,88 kg
30÷40A

SR7
H 121 x W 72 x D 185 - 1,22 kg
30÷40A IFH

SR15
H 273 x W 93 x D 170 - 3,6 kg
60÷90A

SR16
H 273 x W 186 x D 170 - 7,0 kg
120÷210A

S14
H 520 x W 262 x D 270 - 22 kg
300÷700A

S16
H 560 x W 275 x D 270 - 34,4 kg
800A

REVO S 2PH 60÷800A / **690V**

S11
H 440 x W 137x D 270 - 10,5 kg
60÷90A

S13
H 440 x W 262 x D 270 - 18 kg
120÷210A

S14
H 520 x W 262 x D 270 - 22 kg
300÷700A

S16
H 560 x W 275 x D 270 - 34,4 kg
800A

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

CURRENT			4	5	6	
Description	Size 480/600V	Size 690V	cod			note
30A	SR4 / IFH=SR7	--	0	3	0	
35A	SR4 / IFH=SR7	--	0	3	5	
40A	SR4 / IFH=SR7	--	0	4	0	
60A	SR15	S11	0	6	0	
75A	SR15	--	0	7	5	7
90A	SR15	S11	0	9	0	5
120A	SR16	S13	1	2	0	
150A	SR16	S13	1	5	0	
180A	SR16	S13	1	8	0	
210A	SR16	S13	2	1	0	
300A	S14	S14	3	0	0	
400A	S14	S14	4	0	0	
450A	S14	S14	4	5	0	
500A	S14	S14	5	0	0	
600A	S14	S14	6	0	0	
700A	S14	S14	7	0	0	
800A	S16	S16	8	0	0	7

MAX VOLTAGE	7	
Description	cod	note
480V	4	
600V	6	
690V	7	4, 5

AUX VOLTAGE SUPPLY		8	
≤ 210A		code	note
No Aux Voltage needed if HB option and/or Analog Input option NOT selected		0	8
Aux Volt 24V ac-dc needed with HB option and/or Analog Input option selected		4	8
> 210A			
Main Supply Voltage	Aux Voltage Range		
100/120Vac	90÷135Vac	1	3
200/208/230/240Vac	180÷265Vac	2	3
277Vac	238÷330Vac	3	3
380/415/480Vac	342÷528Vac	5	3
600Vac	540÷759Vac	6	3
690Vac	540÷759Vac	7	3

INPUT	9	
Description	cod	note
SSR	S	A
0:10V dc	V	B
4:20mA	A	B

FIRING	10	
Description	cod	note
Zero Crossing	Z	A
Burst Firing 4 Cycles On at 50% Power Demand	4	2
Burst Firing 8 Cycles On at 50% Power Demand	8	2
Burst Firing 16 Cycles On at 50% Power Demand	6	2

CONTROL MODE	11	
Description	cod	note
Open Loop	0	

FUSES & OPTION	12	
≤ 40A	code	note
No Fuse (for units ≤ 40A)	0	
Extrarapid fuse + fuse holder	F	
Extrarapid fuse + fuse holder + CT	Y	
Extrarapid fuse + fuse holder + CT + HB	H	
Extrarapid fuse + fuse holder + CT + HB with Flat Cable Connection	X	5, 6
> 40A		
Extrarapid fixed fuses standard (on all units > 40A)	F	1
Extrarapid fixed fuses standard + CT + HB	H	

FAN VOLTAGE	13	
Description	cod	note
No fan <60A	0	
Fan 115V ≥60A	1	
Fan 230V ≥60A Standard	2	
Fan 24Vdc ≥60A	3	

APPROVALS	14	
Description	cod	note
CE for European market	0	
CE + cUL	L	7

MANUAL	15	
Description	cod	note
None	0	
Italian	1	
English	2	
German	3	
French	4	

VERSION	16	
Description	cod	note
Standard Version	1	
High Sensitivity HB below 5A	5	9

Note A: Zero Crossing Firing only with SSR input
Note B: With analog input (0:10Vdc, 4:20mA) it is necessary to have the Fuse + Fuse Holder on units ≤40A

Note 1: Fixed Fuses over 40A
Note 2: Available with analog input only
Note 3: Load voltage must be included in Selected Auxiliary Voltage Range for unit >210A
Note 4: Available on unit ≥60A
Note 5: This unit is not available with optional UL approval
Note 6: Needs RTURS terminal units
Note 7: 75A unit is available with cUL approval only, 800A unit is available with UL approval (not cUL)
Note 8: This option is not available with Max Voltage equal to 690V. In this case please use the other Auxiliary Voltage Supplies
Note 9: This option is available on units from 30A to 40A

REVO S 3PH

Technical Specification

- **Load type:** Normal resistance, infrared long and medium waveform
- **Input:** SSR Standard; 0÷10V, 4÷20mA and Heater Break alarm are options
- **Firing:** Zero Crossing, Burst Firing available with analogue input only
- **Operating temperature:** 0°C to 40°C without derating
- **Approvals:** Compliant with CE and cUL (option) up to 700A
- **100 kA:** Short Circuit Current Rating (SCCR) up to 600V, 700A

Options

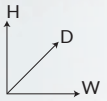
- Analog input: 4÷20mA or 0÷10V
- Heater Break Alarm + Current Transformer
- Integrated extrarapid fuses ≤40A
- Available on some size: Fuse alarm signal (FUMS) and 2° thermal switch

Firing

- ZC: Zero Crossing
- Burst Firing 4 / 8 / 16

ZC Firing available with analogue input ONLY

REVO S 3PH 30÷800A / **480V-600V**



SR5
H 121 x W 108 x D 125 - 1,32 kg
30÷40A

SR8
H 121 x W 108 x D 185 - 1,83 kg
30÷40A IFH

SR16
H 269 x W 186 x D 170 - 6,8kg
60÷90A

SR17
H 273 x W 279 x D 170 - 10,6 kg
120÷210A

S14
H 520 x W 262 x D 270 - 22 kg
300÷500A

S17
H 560 x W 411 x D 270 - 51,6 kg
800A

REVO S 3PH 60÷800A / **690V**

S11
H 440 x W 137x D 270 - 10,5 kg
60÷90A

S13
H 440 x W 262 x D 270 - 18 kg
120÷210A

S14
H 520 x W 262 x D 270 - 22 kg
300÷500A

S17
H 560 x W 411 x D 270 - 51,6 kg
800A

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

CURRENT			4	5	6	
Description	Size 480/600V	Size 690V	cod			note
30A	SR5 / IFH=SR8	--	0	3	0	
35A	SR5 / IFH=SR8	--	0	3	5	
40A	SR5 / IFH=SR8	--	0	4	0	
60A	SR16	S11	0	6	0	
75A	SR16	--	0	7	5	7
90A	SR16	S11	0	9	0	5
120A	SR17	S13	1	2	0	
150A	SR17	S13	1	5	0	
180A	SR17	S13	1	8	0	
210A	SR17	S13	2	1	0	
300A	S14	S14	3	0	0	
350A	S14	S14	3	5	0	
400A	S14	S14	4	0	0	
450A	S14	S14	4	5	0	
500A	S14	S14	5	0	0	
800A	S17	S17	8	0	0	7

MAX VOLTAGE	7	
Description	cod	note
480V	4	
600V	6	
690V	7	4, 5

AUX VOLTAGE SUPPLY		8	
≤ 210A		cod	note
No Aux Voltage needed if HB option and/or Analog Input option NOT selected		0	8
Aux Volt 24V ac-dc needed with HB option and/or Analog Input option selected		4	8
> 210A			
Main Supply Voltage	Aux Voltage Range		
100/120Vac	90÷135Vac	1	3
200/208/230/240Vac	180÷265Vac	2	3
277Vac	238÷330Vac	3	3
380/415/480Vac	342÷528Vac	5	3
600Vac	540÷759Vac	6	3
690Vac	540÷759Vac	7	3

INPUT	9	
Description	cod	note
SSR	S	A
0:10V dc	V	B
4:20mA	A	B

FIRING	10	
Description	cod	note
Zero Crossing	Z	A
Burst Firing 4 Cycles On at 50% Power Demand	4	2
Burst Firing 8 Cycles On at 50% Power Demand	8	2
Burst Firing 16 Cycles On at 50% Power Demand	6	2

CONTROL MODE	11	
Description	cod	note
Open Loop	0	

FUSES & OPTION	12	
≤ 40A	cod	note
No Fuse (for units ≤ 40A)	0	
Extrarapid fuse + fuse holder	F	
Extrarapid fuse + fuse holder + CT	Y	
Extrarapid fuse + fuse holder + CT + HB	H	
Extrarapid fuse + fuse holder + CT + HB with Flat Cable Connection	X	5, 6
> 40A		
Extrarapid fixed fuses standard (on all units > 40A)	F	1
Extrarapid fixed fuses standard + CT + HB	H	

FAN VOLTAGE	13	
Description	cod	note
No fan <60A	0	
Fan 115V ≥60A	1	
Fan 230V ≥60A Standard	2	
Fan 24Vdc ≥60A	3	

APPROVALS	14	
Description	cod	note
CE for European market	0	
CE + cUL	L	7

MANUAL	15	
Description	cod	note
None	0	
Italian	1	
English	2	
German	3	
French	4	

VERSION	16	
Description	cod	note
Standard Version	1	
High Sensitivity HB below 5A	5	9

Note A: Zero Crossing Firing only with SSR input
Note B: With analog input (0:10Vdc, 4:20mA) it is necessary to have the Fuse + Fuse Holder on units ≤40A

Note 1: Fixed Fuses over 40A
Note 2: Available with analog input only
Note 3: Load voltage must be included in Selected Auxiliary Voltage Range for units >210A
Note 4: Available on unit ≥60A
Note 5: This unit is not available with optional UL approval
Note 6: Needs RTURS terminal units
Note 7: 75A unit is available with cUL approval only, 800A unit is available with UL approval (not cUL)
Note 8: This option is not available with Max Voltage equal to 690V. In this case please use the other Auxiliary Voltage Supplies
Note 9: This option is available on units from 30A to 40A

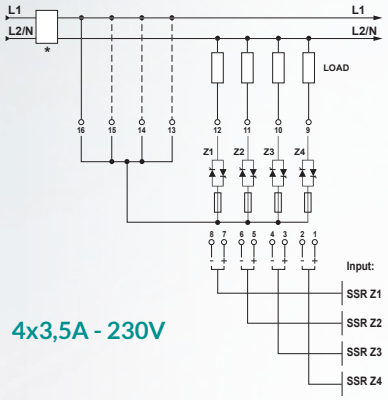
REVO SX

230V	480V
	
SR2-230V	**SR2-480V**
H 121 x W 36 x D 87	H 121 x W 48 x D 87
0,27 kg	**0,27 kg**

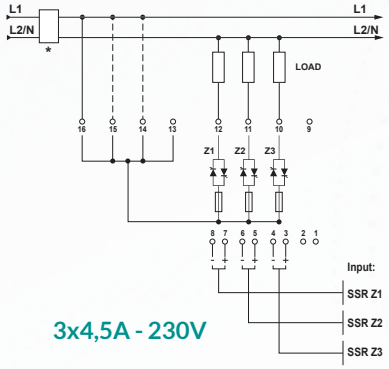
Technical Specification

- Available in three versions
- Each unit includes extrarapid fuse and fuse holder, thyristor and heat sink with its own firing circuit
- Zero Crossing firing
- Isolated SSR input
- LED for On/Off status indication
- LED for fuse failure indication
- Separate screw connection terminals for Power and Inputs
- Din rail mounting or screw mounting
- Can be used in multi-zone applications and low power such as Thermoforming, Blow Moulding and Hot Runners

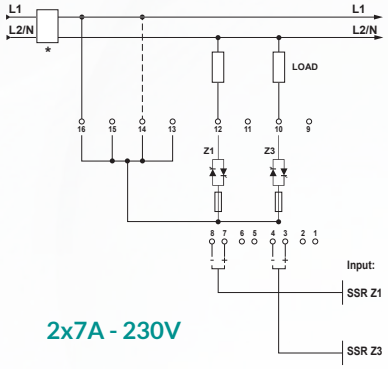
Example control connection diagram



4x3,5A - 230V



3x4,5A - 230V



2x7A - 230V

REVO SX	1	2	3	4	5	6		7	8	9	10	11	12	13	14	15	16
ORDER CODE	R	S	X	_	_	_	-	_	_	_	_	_	_	_	_	_	_

NUMBER OF ZONES X CURRENT RATING	4	5	6	
Description	cod			note
4 zones 3,5A each	4	0	3	
3 zone 4,5A each	3	0	4	
2 zone 7A each	2	0	7	

MAX VOLTAGE	7	
Description	cod	note
230V	2	
480V	4	

VOLTAGE SUPPLY AUX	8	
Description	cod	note
No Auxiliary Voltage with 230V	0	
24 Vdc with 480V	4	

INPUT	9	
Description	cod	note
SSR	S	

FIRING	10	
Description	cod	note
Zero Crossing	Z	
Random (used with REVO-PC)	R	

CONTROL MODE	11	
Description	cod	note
Open Loop	0	

FUSES & OPTION	12	
Description	cod	note
Extrarapid fuse + fuse holder	F	

FAN VOLTAGE	13	
Description	cod	note
No fan	0	

APPROVALS	14	
Description	cod	note
CE for European market	0	

MANUAL	15	
Description	cod	note
None	0	
Italian	1	
English	2	
German	3	
French	4	

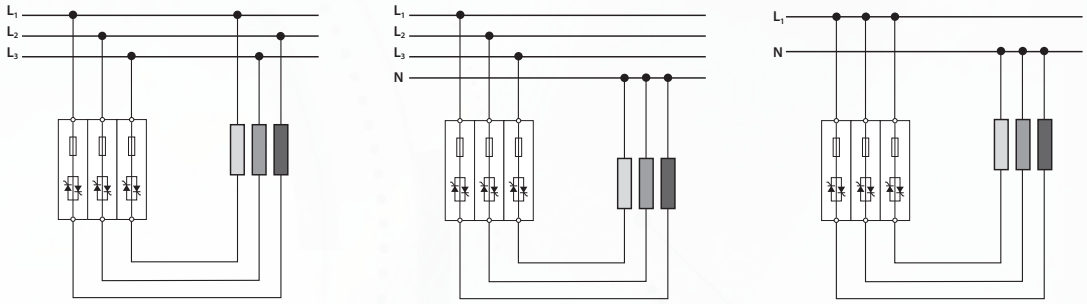
VERSION	16	
Description	cod	note
Version 1	1	

SR25
H 180 x W 116 x D 183
2,35 kg

Technical Specification

- Available in different versions with two or three independent channels
- Currents: 50A, 60A, 75A, 90A
- 480V or 600V max voltage
- Integrated extrarapid fuses and thyristors with its own firing circuit
- Single heat sink
- Zero Crossing firing
- Isolated input
- Screw mounting
- Can be used in multi-zone applications in combination with REVO PC series to get power synchronization, communication, measurement and diagnostic

Example control connection diagram



REVO SX	1	2	3	4	5	6		7	8	9	10	11	12	13	14	15	16
ORDER CODE	R	S	X	_	_	_	-	_	_	_	_	_	_	_	_	_	_

NUMBER OF ZONES X CURRENT RATING	4	5	6	
Description	cod			note
2 zones 50A each	2	5	0	
2 zones 60A each	2	6	0	
2 zones 75A each	2	7	5	
2 zones 90A each	2	9	0	
3 zones 50A each	3	5	0	
3 zones 60A each	3	6	0	
3 zones 75A each	3	7	5	
3 zones 90A each	3	9	0	

MAX VOLTAGE	7	
Description	cod	note
480V	4	
600V	6	

VOLTAGE SUPPLY AUX	8	
Description	cod	note
No Auxiliary Voltage	0	

INPUT	9	
Description	cod	note
SSR	S	

FIRING	10	
Description	cod	note
Zero Crossing	Z	

CONTROL MODE	11	
Description	cod	note
Open Loop	0	

FUSES & OPTION	12	
Description	cod	note
Extrarapid fuse & fuse holder	F	

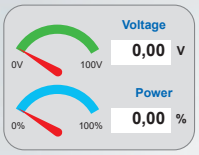
FAN VOLTAGE	13	
Description	cod	note
Standard: 24Vdc fan	3	

APPROVALS	14	
Description	cod	note
CE for European market	0	

MANUAL	15	
Description	cod	note
None	0	
Italian	1	
English	2	
German	3	
French	4	

VERSION	16	
Description	cod	note
Version 1	1	

REVEX



Configurator software

TIA PORTAL V16

SIEMENS

Libraries
(only for RS485)

Main features

Ready-to-use unit configured according to order code, choosing only the options you need to build your own "Customised Unit".

REVEX is a universal unit that allows you to have:

- Input signal in digital mode, no link jumpers inside
- Firing: Single Cycle, Half Cycle, Burst Firing, Phase Angle, Delayed Triggering, different types of adjustable ramp
- Control mode (V, V2, I, I2, VxI)
- Communication RS485 with Modbus® protocol std
- Two Analog input
- Two Digital input
- USB port for programming, configuration and remote management
- **Guided configuration via free software**, available on **www.cdautomation.com**
- Siemens **TIA Portal Libraries** for data exchange with our products (from V16) (only for RS485)

Load type

Resistive / Inductive / Infrared lamp short wave (IRSW) and fast medium wave (IRMW) / Molybdenum Disilicide elements (MoSi2) / Silicon Carbide elements (SiC)

Cannot be used for capacitive loading. For information contact our technical department

Industrial applications

- Petrolchemicals
- Platform for oil extraction
- Conventinal power generator
- Chemicals and pharmaceuticals
- Autoclaves
- Electric furnaces
- Galvanic process
- Glass industry
- Polysilicon
- Chemical
- Plastic machinery
- Packing machinery
- Automobile
- Paint drying
- UV drying
- Car internal fitting

REVEX - FEATURES

	Description	REVEX 1PH	REVEX 2PH	REVEX 3PH	REVEX PA
	CODE	RX1	RX2	RX3	RXP
Load type	Max voltage 480V	●	●	●	●
	Max voltage 600V	●	●	●	●
	Single phase	●			
	3 phase load star no neutral or delta		●	●	●
	3 phase load star with neutral			●	●
	3 phase load open delta	●			
Input	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 (feedback)	Open Loop	●	●	●	●
	V	●	●	●	●
	V^2	●	●	●	●
	I	●	●	●	●
	I^2	●	●	●	●
	V x I	●	●	●	●
Options	Current limit (CL)	O			O
	Heater Break Alarm + SCR Short Circuit	O	O	O	O
	Fuse	O	O	O	O
	Display	O	O	O	O
	Load Analyzer	●	●	●	●
Communication	Modbus® RTU	●	●	●	●
Current	**Current**	**SIZE**	**SIZE**	**SIZE**	**SIZE**
		600V Max	**600V Max**	**600V Max**	**600V Max**
	30	**SR6**	**SR9**	**SR10**	
	35	**SR6**	**SR9**	**SR10**	**SR25**
	40	**SR6**	**SR9**	**SR10**	
	50				**SR25**
	60	**SR24**	**SR25**	**SR25**	
	75				**SR25**
	90	**SR25**	**SR25**	**SR25**	**SR25**
	120	**SR15**	**SR16**	**SR17**	
	150	**SR15**	**SR16**	**SR17**	
	180	**SR15**	**SR16**	**SR17**	
	210	**SR15**	**SR16**	**SR17**	
	280	**S10**	**2xS10**		

● Standard O Option ■ CE standard

REVEX 1PH

Technical Specification

- **Load type:** Normal resistance, infrared short, medium and long, transformer primary, cold resistance and SiC elements
- **Input:** 4:20mA, 0:10V, SSR, with Modbus® RTU standard
- **Firing:** Half Cycle, Single Cycle, Burst Firing, Delayed Triggering, Phase Angle with or without Soft Start
- **Control mode:** Voltage, Current and Power (V-V^2-I-I^2-VxI) or external feedback
- **Communication:** RS485 port RTU Modbus® Protocol
- **USB:** Integrated port for configuration in safety mode (no load and auxiliary voltage needed). Unit powered through USB
- **Approvals:** Compliant with CE
- **Dual Current Limit:** For peak or RMS value

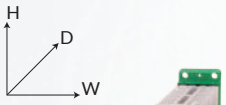
Attention

- Phase Angle available only on 1PH units
- Delayed Triggering available only on 1PH units
- For three-phase solutions (3PH) with Phase Angle use **REVEX PA** (pag 22)

Options

- All options are shown below with the relevant model code
- HB Alarm to diagnose partial or total load failure and thyristor short circuit

REVEX 1PH 30÷280A / **480÷600V**



SR6
H 121 x W 36 x D 185 - 0,61 kg
30÷40A

SR24
H 132 x W 116 x D 183 - 2,10 kg
60÷90A

SR15
H 273 x W 93 x D 170 - 3,6 kg
120÷210A

S10
H 350 x W 120 x D 230 - 6,50 kg
280A

REVEX 1PH	1	2	3	4	5	6		7	8	9	10	11	12	13	14	15	16
ORDER CODE	R	X	1	_	_	_	-	_	_	_	_	_	_	_	_	_	_

CURRENT / FUSES			4	5	6	
Description		Size	cod			note
30A	Extrarapid fixed fuses not included	SR6	0	3	0	
35A	Extrarapid fixed fuses not included	SR6	0	3	5	
40A	Extrarapid fixed fuses not included	SR6	0	4	0	
60A	Extrarapid fixed fuses included	SR24	0	6	0	
90A	Extrarapid fixed fuses included	SR24	0	9	0	
120A	Extrarapid fixed fuses included	SR15	1	2	0	
150A	Extrarapid fixed fuses included	SR15	1	5	0	
180A	Extrarapid fixed fuses included	SR15	1	8	0	
210A	Extrarapid fixed fuses included	SR15	2	1	0	
280A	Extrarapid fixed fuses included	S10	2	8	0	

MAX VOLTAGE	7	
Description	cod	note
480V	4	
600V	6	

MAIN SUPPLY VOLTAGE	8	
Description	cod	note
24Vdc	4	

INPUT	9	
Description	cod	note
SSR	S	
0:20mA	B	
4:20mA	A	
0:10V	V	
10KPot	K	

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

CONTROL MODE	11	
Description	cod	note
Open Loop	0	
Voltage	U	
Voltage Square (V^2)	Q	
Current	I	
Current Square (I^2)	A	
Power VxI	W	
External Feedback	X	

OPTION	12	
Description	cod	note
Option code: see table	...	

FAN VOLTAGE	13	
Description	cod	note
No fan <90A	0	
Fan 24Vdc ≥90A	3	

APPROVALS	14	
Description	cod	note
CE for European market	0	

LOAD TYPE	15	
Description	cod	note
1PH normal resistance	0	
1PH IRSW infrared short wave	1	
1PH MoSi2 heaters	2	2
1PH SiC heaters	3	
1PH transformer coupled with normal resistance	4	1
1PH transformer coupled with MoSi2 heaters	5	1
1PH transformer coupled with SiC heaters	6	1
1PH transformer coupled with UV heaters	7	1

VERSION	16	
Description	cod	note
Standard Version - N°1 Modbus® RTU	0	

Note 1: This configuration is possible only with Delayed Triggering or Phase Angle Firing
Note 2: This configuration is possible only with Phase Angle Firing

Option Code (digit 12)

	Current Limit	Heater Break	Display	Cod (digit 12)
REVEX 1PH 30A - 40A	Y	Y	Y	0
	Y	Y	N	2
	Y	N	N	3
	N	N	N	4
	Y	N	Y	6
	N	N	Y	7
	N	Y	Y	9
	N	Y	N	D

	Current Limit	Heater Break	Fuse	Display	Cod (digit 12)
REVEX 1PH 60A - 280A	Y	Y	Y	Y	0
	Y	Y	Y	N	1
	Y	Y	N	N	2
	Y	N	N	N	3
	N	N	N	N	4
	Y	Y	N	Y	5
	Y	N	N	Y	6
	N	N	N	Y	7
	N	Y	Y	N	8
	N	Y	N	Y	9
	N	N	Y	Y	A
	N	N	Y	N	B
	N	Y	Y	Y	C
	N	Y	N	N	D
	Y	N	Y	N	E
	Y	N	Y	Y	F

N Option you want remove

Y It serves my project

REVEX 2PH

Technical Specification

- **Load type:** Normal resistance, infrared short, medium and long waveform
- **Input:** 4:20mA, 0:10V, SSR, with Modbus® RTU standard
- **Firing:** Burst Firing, Zero Crossing
- **Control mode:** Voltage, Current and Power (V-V^2-I-I^2-VxI) or external feedback
- **Communication:** RS485 port RTU Modbus® Protocol
- **USB:** Integrated port for configuration in safety mode (no load and auxiliary voltage needed). Unit powered through USB
- **Approvals:** Compliant with CE
- **Dual Current Limit:** For peak or RMS value

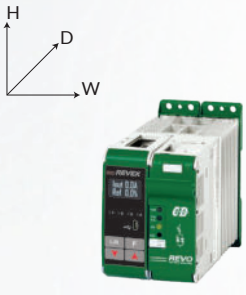
Attention

- Phase Angle available only on 1PH units
- Delayed Triggering available only on 1PH units
- For three-phase solutions (3PH) with Phase Angle use **REVEX PA** (pag 22)

Options

- All options are shown below with the relevant model code
- HB Alarm to diagnose partial or total load failure and thyristor short circuit

REVEX 2PH 30÷280A / **480÷600V**



SR9
H 121 x W 72 x D 185 - 1,15 kg
30÷40A

SR25
H 165 x W 116 x D 183 - 2,35 kg
60÷90A

SR16
H 273 x W 186 x D 170 - 7,0 kg
120÷210A

2xS10
H 350 x W 240 x D 230 - 12,70 kg
280A

REVEX 2PH	1	2	3	4	5	6		7	8	9	10	11	12	13	14	15	16
ORDER CODE	R	X	2	_	_	_	-	_	_	_	_	_	_	_	_	_	_

CURRENT / FUSES			4	5	6	
Description		**Size**	cod			note
30A	Extrarapid fixed fuses not included	**SR9**	0	3	0	
35A	Extrarapid fixed fuses not included	**SR9**	0	3	5	
40A	Extrarapid fixed fuses not included	**SR9**	0	4	0	
60A	Extrarapid fixed fuses included	**SR25**	0	6	0	
90A	Extrarapid fixed fuses included	**SR25**	0	9	0	
120A	Extrarapid fixed fuses included	**SR16**	1	2	0	
150A	Extrarapid fixed fuses included	**SR16**	1	5	0	
180A	Extrarapid fixed fuses included	**SR16**	1	8	0	
210A	Extrarapid fixed fuses included	**SR16**	2	1	0	
280A	Extrarapid fixed fuses included	**2xS10**	2	8	0	

MAX VOLTAGE	7	
Description	cod	note
480V	4	
600V	6	

MAIN SUPPLY VOLTAGE	8	
Description	cod	note
24Vdc	4	

INPUT	9	
Description	cod	note
SSR	S	
0:20mA	B	
4:20mA	A	
0:10V	V	
10KPot	K	

FIRING	**START OPTION**	10	
Description	**Description**	cod	note
Burst Firing	No Soft Start	B	
Zero Crossing	No Soft Start	Z	

CONTROL MODE	11	
Description	cod	note
Open Loop	0	
Voltage	U	
Voltage Square (V^2)	Q	
Current	I	
Current Square (I^2)	A	
Power VxI	W	
External Feedback	X	

OPTION	12	
Description	cod	note
Option code: see table	...	

FAN VOLTAGEE	13	
Description	cod	note
No fan <60A	0	
Fan 24Vdc ≥60A	3	

APPROVALS	14	
Description	cod	note
CE for European market	0	

LOAD TYPE	15	
Description	cod	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	

VERSION	16	
Description	cod	note
Standard Version - N°1 Modbus® RTU std. **30-40A / 120-280A**	0	
60A-90A only: Version from 2021 (compact unit) N°1 Modbus® RTU std.	1	

Option Code (digit 12)

	Heater Break	Display	Cod (digit 12)
REVEX 2PH 30A - 40A	Y	Y	**0**
	Y	N	**2**
	N	N	**3**
	N	Y	**5**

	Heater Break	Fuse	Display	Cod (digit 12)
REVEX 2PH 60A - 280A	Y	Y	Y	**0**
	Y	Y	N	**1**
	Y	N	N	**2**
	N	N	N	**3**
	Y	N	Y	**4**
	N	N	Y	**5**
	N	Y	Y	**6**
	N	Y	N	**7**

N Option you want remove

Y It serves my project

REVEX 3PH

Technical Specification

- **Load type:** Normal resistance, infrared short, medium and long waveform
- **Input:** 4:20mA, 0:10V, SSR, with Modbus® RTU standard
- **Firing:** Burst Firing, Zero Crossing
- **Control mode:** Voltage, Current and Power (V-V^2-I-I^2-VxI) or external feedback
- **Communication:** RS485 port RTU Modbus® Protocol
- **USB:** Integrated port for configuration in safety mode (no load and auxiliary voltage needed). Unit powered through USB
- **Approvals:** Compliant with CE
- **Dual Current Limit:** For peak or RMS value

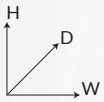
Attention

- Phase Angle available only on 1PH units
- Delayed Triggering available only on 1PH units
- For three-phase solutions (3PH) with Phase Angle use **REVEX PA** (pag 22)

Options

- All options are shown below with the relevant model code
- HB Alarm to diagnose partial or total load failure and thyristor short circuit

REVEX 3PH 30÷210A / **480÷600V**



SR10
H 121 x W 108 x D 185 - 1,76 kg
30÷40A

SR25
H 165 x W 116 x D 183 - 2,35 kg
60÷90A

SR17
H 273 x W 279 x D 170 - 10,6 kg
120÷210A

REVEX 3PH	1	2	3	4	5	6		7	8	9	10	11	12	13	14	15	16
ORDER CODE	R	X	3	_	_	_	-	_	_	_	_	_	_	_	_	_	_

CURRENT / FUSES			4	5	6	
Description		Size	cod			note
30A	Extrarapid fixed fuses not included	SR10	0	3	0	
35A	Extrarapid fixed fuses not included	SR10	0	3	5	
40A	Extrarapid fixed fuses not included	SR10	0	4	0	
60A	Extrarapid fixed fuses included	SR25	0	6	0	
90A	Extrarapid fixed fuses included	SR25	0	9	0	
120A	Extrarapid fixed fuses included	SR17	1	2	0	
150A	Extrarapid fixed fuses included	SR17	1	5	0	
180A	Extrarapid fixed fuses included	SR17	1	8	0	
210A	Extrarapid fixed fuses included	SR17	2	1	0	

MAX VOLTAGE	7	
Description	cod	note
480V	4	
600V	6	

MAIN SUPPLY VOLTAGE	8	
Description	cod	note
24Vdc	4	

INPUT	9	
Description	cod	note
SSR	S	
0:20mA	B	
4:20mA	A	
0:10V	V	
10KPot	K	

FIRING	START OPTION	10	
Description	Description	cod	note
Burst Firing	No Soft Start	B	
Zero Crossing	No Soft Start	Z	

CONTROL MODE	11	
Description	cod	note
Open Loop	0	
Voltage	U	
Voltage Square (V^2)	Q	
Current	I	
Current Square (I^2)	A	
Power VxI	W	
External Feedback	X	

OPTION	12	
Description	cod	note
Option code: see table	...	

FAN VOLTAGE	13	
Description	cod	note
No fan <60A	0	
Fan 24Vdc ≥60A	3	

APPROVALS	14	
Description	cod	note
CE for European market	0	

LOAD TYPE	15	
Description	cod	note
Normal resistive load with 3 phase star connection with neutral	0	
Normal resistive load 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	

VERSION	16	
Description	cod	note
Standard Version - N°1 Modbus® RTU std. **30-40A / 120-210A**	0	
60A-90A only: Version from 2021 (compact unit) N°1 Modbus® RTU std.	1	

Option Code (digit 12)

	Heater Break	Display	Cod (digit 12)
REVEX 3PH 30A - 40A	Y	Y	0
	Y	N	2
	N	N	3
	N	Y	5

	Heater Break	Fuse	Display	Cod (digit 12)
REVEX 3PH 60A - 280A	Y	Y	Y	0
	Y	Y	N	1
	Y	N	N	2
	N	N	N	3
	Y	N	Y	4
	N	N	Y	5
	N	Y	Y	6
	N	Y	N	7

N Option you want remove

Y It serves my project

REVEX PA

Technical Specification

- **Load type:** Normal resistance, infrared short, medium and long waveform
- **Input:** 4:20mA, 0:10V, SSR, with Modbus® RTU standard
- **Firing:** Burst Firing, Phase Angle, Delayed Triggering, Zero Crossing
- **Display:** Oled display always present
- **Control mode:** Voltage, Current and Power (V-V^2-I-I^2-VxI) or external feedback
- **Communication:** RS485 port RTU Modbus® Protocol
- **USB:** Integrated port for configuration in safety mode (no load and auxiliary voltage needed). Unit powered through USB
- **Approvals:** Compliant with CE
- **Dual Current Limit:** For peak or RMS value

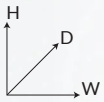
Attention

- For three-phase solutions (3PH) with Phase Angle

Options

- All options are shown below with the relevant model code
- HB Alarm to diagnose partial or total load failure and thyristor short circuit

REVEX PA 35÷90A / **480÷600V**



SR25
H 165 x W 116 x D 183 - 2,35 kg
35÷90A

REVEX PA	1	2	3	4	5	6		7	8	9	10	11	12	13	14	15	16
ORDER CODE	R	X	P	_	_	_	-	_	_	_	_	_	_	_	_	_	_

CURRENT / FUSES			4	5	6	
Description		Size	cod			note
35A	Extrarapid fixed fuses included	SR25	0	3	5	
50A	Extrarapid fixed fuses included	SR25	0	5	0	
75A	Extrarapid fixed fuses included	SR25	0	7	5	
90A	Extrarapid fixed fuses included	SR25	0	9	0	

MAX VOLTAGE	7	
Description	cod	note
480V	4	
600V	6	

MAIN SUPPLY VOLTAGE	8	
Description	cod	note
24Vdc	4	

INPUT	9	
Description	cod	note
SSR	S	
0:20mA	B	
4:20mA	A	
0:10V	V	
10KPot	K	

FIRING	START OPTION	10	
Description	Description	cod	note
Burst Firing	No Soft Start	B	
	Linear Soft Start	J	
Phase Angle	No Soft Start	P	
	Linear Soft Start	E	
Delayed Triggering	No Soft Start	D	
	Linear Soft Start	T	
Zero Crossing	No Soft Start	Z	
	Linear Soft Start	R	

Note 1: This configuration is possible only with Delayed Triggering or Phase Angle Firing.
Note 2: This configuration is possible only with Phase Angle Firing

CONTROL MODE	11	
Description	cod	note
Open Loop	0	
Voltage	U	
Voltage Square (V^2)	Q	
Current	I	
Current Square (I^2)	A	
Power VxI	W	
External Feedback	X	

OPTION	12	
Description	cod	note
Option code: see table	...	

FAN VOLTAGE	13	
Description	cod	note
Fan 24Vdc	3	

APPROVALS	14	
Description	cod	note
CE for European market	0	

LOAD TYPE	15	
Description	cod	note
Normal resistance	0	
IRSW infrared short wave	1	
MoSi2 heaters	2	2
SiC heaters	3	
Transformer coupled with normal resistance	4	1
Transformer coupled with MoSi2 heaters	5	1
Transformer coupled with SiC heaters	6	1
Transformer coupled with UV lamp	7	1

VERSION	16	
Description	cod	note
N°1 Modbus® RTU std.	0	

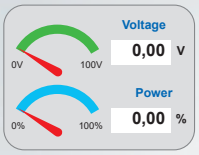
Option Code (digit 12)

REVEX PA 35A - 90A	Current Limit	Heater Break	Cod (digit 12)
	Y	Y	2
	Y	N	3
	N	N	4
	N	Y	D

N Option you want remove
Y It serves my project

REVO C

Integrated Fieldbus



Configurator software

TIA PORTAL V16

SIEMENS

Libraries

Bluetooth™

App

Main features

Universal power controller with advanced microprocessor, configurable via software.

- **Wide range of communication protocols and fieldbuses available: Modbus® RTU, Profibus® DP, Profinet® IO, Modbus® TCP**
- Single-phase or three-phase load control with 1-2-3PH
- Voltage range 480÷600÷690V
- **100 kA** Short Circuit Current (SCCR) up to 600V
- Extrarapid fuse and integrated sectional fuse holder up to 40A
- Extrarapid fixed fuses from 60A to 2100A
- Input signals selectable from PC or OLED display
- Standard firing mode available: Half Cycle, Single Cycle, Burst Firing, Delayed Triggering, Phase Angle and Soft Start
- All types of firing mode and control mode available
- **CE** and **cUL** approvals
- **Guided configuration via free software**, available on **www.cdautomation.com**
- Optional **Bluetooth connection** for communication and control of the unit via APP
- Free CD Automation **APP** for Android and IOS, for unit control with Bluetooth
- Siemens **TIA Portal Libraries** for data exchange with our products (from V16)

Load type

Resistive / Inductive / Infrared lamp short wave (IRSW) and fast medium wave (IRMW) / Molybdenum Disilicide elements (MoSi2) / Silicon Carbide elements (SiC)

Cannot be used for capacitive loading. For information contact our technical department

Industrial applications

- Petrolchemicals
- Platform for oil extraction
- Conventinal power generator
- Chemicals and pharmaceuticals
- Renewable Energies
- Autoclaves
- Electric furnaces
- Galvanic process
- Glass industry
- Polysilicon
- Chemical
- Plastic machinery
- Packing machinery
- Automobile
- Paint drying
- UV drying
- Car internal fitting

REVO C - FEATURES

	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	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	●		●		●	
	V	●		●		●	
	V^2	●		●		●	
	I	●		●		●	
	I^2	●		●		●	
	Power V x I	●		●		●	
Options	Current Limit - CL	O				O	
	Heater Break Alarm + SCR Short Circuit	O		O		O	
	Logging	O		O		O	
	Totalizer	O		O		O	
	Bluetooth	O		O		O	
Communication	Modbus® RTU	●		●		●	
	ProfiBus® DP + 1 Modbus® RTU	O		O		O	
	2 Profinet® IO + 1 Modbus® RTU	O		O		O	
	2 Modbus® TCP + 1 Modbus® RTU	O		O		O	
Current	Current	SIZE		SIZE		SIZE	
		600V Max	690V	600V Max	690V	600V Max	690V
	30	SR9		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		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
	1100	SR18*	SR18	SR19*	SR19	SR20*	SR20
	1400	SR21*	SR21	SR22*	SR22	SR23*	SR23
	1600	SR21*	SR21	SR22*	SR22	SR23*	SR23
	1800	SR21*	SR21	SR22*	SR22	SR23*	SR23
	2100	SR21*	SR21	SR22*	SR22	SR23*	SR23

● Standard O Option ■ CE standard + cUL® option / *UL approval option ■ CE Only - **Note 1:** Use n° 3 Revo-C 1PH

REVO C 1PH

Technical Specification

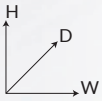
- **Load type:** Normal Resistance, Infrared Short, Medium and Long, Transformer Primary, Cold resistance, SiC and MoSi2 heaters
- **Input:** 4÷20mA, 0÷10V, SSR, with Modbus® RTU standard; and different Field Bus listed in the Order Code
- **Firing:** Half Cycle, Single Cycle, Burst Firing, Delayed Triggering, Phase Angle with or without Soft Start
- **Control mode:** Can be configured with feedback on Current, Voltage, Power or Open Loop mode
- **Communication:** **RS485 port, Modbus® RTU protocol and optional integrated fieldbus: Profibus® DP, Profinet® IO, Modbus® TCP, Ethernet® IP**
- **USB:** Integrated port for configuration in safety mode (no load and auxiliary voltage needed). Unit powered through USB
- **100kA:** Short Circuit Current rating (SCCR) up to 600V
- **Approvals:** Compliant with CE, cUL (option) up to 700A, UL (option) from 800A to 2100A
- **Dual Current Limit:** For peak and RMS value

Options

All options are shown in the table on page 34 with the relevant code

- Energy totalizer
- Data logging
- Bluetooth
- Heater Break (HB) Alarm to diagnose partial or Total Load Failure and Thyristor Short Circuit
- Over-temperature alarm
- Available on some size: Fuse alarm signal (FUMS) and 2° thermal switch

REVO C 1PH 30A-800A / **480V-600V**



SR9
H 121 x W 72 x D 185
1,15 kg
30-40A

SR12
H 269 x W 93 x D 170
3,4kg
60A

SR15
H 273 x W 93 x D 170
3,6 kg
90-210A

S12
H 520 x W 137 x D 270
15 kg
300-700A

S15
H 560 x W 137 x D 270
17,2 kg
800A

REVO C 1PH 60A-800A / **690V**

S11
H 440 x W 137 x D 270
10,5 kg
60-210A

S12
H 520 x W 137 x D 270
15 kg
400-700A

S15
H 560 x W 137 x D 270
17,2 kg
800A

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

CURRENT / FUSES				4	5	6	
Description		Size 480-600V	Size 690V	cod			note
30A	Extrarapid fuse + fuse holder included	SR9	--	0	3	0	
35A	Extrarapid fuse + fuse holder included	SR9	--	0	3	5	
40A	Extrarapid fuse + fuse holder included	SR9	--	0	4	0	
60A	Extrarapid fixed fuses included	SR12	S11	0	6	0	
90A	Extrarapid fixed fuses included	SR15	S11	0	9	0	
120A	Extrarapid fixed fuses included	SR15	S11	1	2	0	
150A	Extrarapid fixed fuses included	SR15	S11	1	5	0	
180A	Extrarapid fixed fuses included	SR15	S11	1	8	0	
210A	Extrarapid fixed fuses included	SR15	S11	2	1	0	
300A	Extrarapid fixed fuses included	S12	--	3	0	0	
400A	Extrarapid fixed fuses included	S12	S12	4	0	0	
500A	Extrarapid fixed fuses included	S12	S12	5	0	0	
600A	Extrarapid fixed fuses included	S12	S12	6	0	0	
700A	Extrarapid fixed fuses included	S12	S12	7	0	0	
800A	Extrarapid fixed fuses included	S15	S15	8	0	0	5

MAX VOLTAGE	7	
Description	cod	note
480V	4	
600V	6	
690V	7	1, 2

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

INPUT	9	
Description	cod	note
SSR	S	
0:20mA	B	
4:20mA	A	
0:10V	V	
10KPot	K	

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

CONTROL MODE	11	
Description	cod	note
Open Loop	0	
Voltage	U	
Voltage Square	Q	
Current	I	
Current Square	A	
Power VxI	W	

OPTION	12	
Description	cod	note
No option	0	
Option Code - See table page 34	...	

FAN VOLTAGE	13	
Description	cod	note
No fan <90A 480V/600V	0	
Fan 115Vac ≥90A 480V/600V - ≥60A 690V	1	
Fan 230Vac ≥90A 480V/600V - ≥60A 690V Standard	2	
Fan 24Vdc ≥90A 480V/600V - ≥60A 690V	3	

APPROVALS	14	
Description	cod	note
CE for European market	0	
CE + cUL	L	

LOAD TYPE	15	
Description	cod	note
1 PH Normal resistance	0	
1 PH IRSW infrared short wave	1	
1 PH MoSi2 heaters	2	7
1 PH SiC Heaters	3	
1 PH Transformer coupled with normal resistance	4	6
1 PH Transformer coupled with MoSi2 heaters	5	6
1 PH Transformer coupled with SiC heaters	6	6
1 PH Transformer coupled with UV lamp	7	6

COMMUNICATION AND RETRANSMISSION		16	
Description	Description	cod	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	No Retransmission	6	4
	Retransmission 4:20mA	7	4
	Retransmission 0:10V	8	4
N°1 Profinet® IO	No Retransmission	9	4
	Retransmission 4:20mA	A	4
	Retransmission 0:10V	B	4
N°1 Modbus® TCP	No Retransmission	C	4
	Retransmission 4:20mA	D	4
	Retransmission 0:10V	E	4
N°1 Ethernet IP + N°1 Modbus® RTU	No Retransmission	F	2
	Retransmission 4:20mA	G	2
	Retransmission 0:10V	H	2

Note 1: No cUL/UL 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
Note 5: Only CE and UL approved, not cUL
Note 6: This configuration is possible only with Delayed Triggering or Phase Angle Firing
Note 7: This configuration is possible only with Phase Angle Firing

REVO C 2PH

Technical Specification

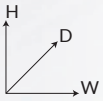
- **Load type:** Normal Resistance, Infrared Short, Medium and Long waveform
- **Input:** 4÷20mA, 0÷10V, SSR, with Modbus® RTU standard; and different Field Bus listed in the Order Code
- **Firing:** Burst Firing, Zero Crossing
- **Control mode:** Can be configured with feedback on Current, Voltage, Power or Open Loop mode
- **Communication:** **RS485 port, Modbus® RTU protocol and optional integrated fieldbus: Profibus® DP, Profinet® IO, Modbus® TCP, Ethernet® IP**
- **USB:** Integrated port for configuration in safety mode (no load and auxiliary voltage needed). Unit powered through USB
- **100kA:** Short Circuit Current rating (SCCR) up to 600V
- **Approvals:** Compliant with CE, cUL (option) up to 700A, UL (option) from 800A to 2100A
- **Integrated pass-through phase:** 480V-600V: all sizes S14 / 690V: all sizes S11, S13, S14

Options

All options are shown in the table on page 34 with the relevant code

- Energy totalizer
- Data logging
- Bluetooth
- Heater Break (HB) Alarm to diagnose partial or Total Load Failure and Thyristor Short Circuit
- Over-temperature alarm
- Available on some size: Fuse alarm signal (FUMS) and 2° thermal switch

REVO C 2PH 30÷800A / **480÷600V**



SR10
H 121 x W 108 x D 185
1,76 kg
30÷40A

SR13
H 269 x W 186 x D 170
6,8kg
60A

SR16
H 273 x W 186 x D 170
7,0 kg
90÷210A

S14
H 520 x W 262 x D 270
22 kg
300÷700A

S16
H 560 x W 275 x D 270
34,4 kg
800A

REVO C 2PH 60÷800A / **690V**

S11
H 440 x W 137x D 270
10,5 kg
60÷90A

S13
H 440 x W 262 x D 270
18 kg
120÷210A

S14
H 520 x W 262 x D 270
22 kg
300÷700A

S16
H 560 x W 275 x D 270
34,4 kg
800A

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

CURRENT / FUSES				4	5	6	
Description		Size 480-600V	Size 690V	cod			note
30A	Extrarapid fuse + fuse holder included	SR10	--	0	3	0	
35A	Extrarapid fuse + fuse holder included	SR10	--	0	3	5	
40A	Extrarapid fuse + fuse holder included	SR10	--	0	4	0	
60A	Extrarapid fixed fuses included	SR13	S11	0	6	0	
90A	Extrarapid fixed fuses included	SR16	S11	0	9	0	
120A	Extrarapid fixed fuses included	SR16	S13	1	2	0	
150A	Extrarapid fixed fuses included	SR16	S13	1	5	0	
180A	Extrarapid fixed fuses included	SR16	S13	1	8	0	
210A	Extrarapid fixed fuses included	SR16	S13	2	1	0	
300A	Extrarapid fixed fuses included	S14	S14	3	0	0	
400A	Extrarapid fixed fuses included	S14	S14	4	0	0	
450A	Extrarapid fixed fuses included	S14	S14	4	5	0	
500A	Extrarapid fixed fuses included	S14	S14	5	0	0	
600A	Extrarapid fixed fuses included	S14	S14	6	0	0	
700A	Extrarapid fixed fuses included	S14	S14	7	0	0	
800A	Extrarapid fixed fuses included	S16	S16	8	0	0	5

MAX VOLTAGE	7	
Description	cod	note
480V	4	
600V	6	
690V	7	1,2

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

INPUT	9	
Description	cod	note
SSR	S	
0:20mA	B	
4:20mA	A	
0:10V	V	
10KPot	K	

FIRING	START OPTION	10	
Description	Description	cod	note
Burst Firing	No Soft Start	B	
Zero Crossing	No Soft Start	Z	

CONTROL MODE	11	
Description	cod	note
Open Loop	0	
Voltage	U	
Voltage Square	Q	
Current	I	
Current Square	A	
Power VxI	W	

OPTION	12	
Description	cod	note
No option	0	
Option Code - See table page 34	...	

FAN VOLTAGE	13	
Description	cod	note
No fan <90A 480V/600V	0	
Fan 115Vac ≥90A 480V/600V - ≥60A 690V	1	
Fan 230Vac ≥90A 480V/600V - ≥60A 690V Standard	2	
Fan 24Vdc ≥90A 480V/600V - ≥60A 690V	3	

APPROVALS	14	
Description	cod	note
CE for European market	0	
CE + cUL	L	

LOAD TYPE	15	
Description	cod	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	cod	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	No Retransmission	6	4
	Retransmission 4:20mA	7	4
	Retransmission 0:10V	8	4
N°1 Profinet® IO	No Retransmission	9	4
	Retransmission 4:20mA	A	4
	Retransmission 0:10V	B	4
N°1 Modbus® TCP	No Retransmission	C	4
	Retransmission 4:20mA	D	4
	Retransmission 0:10V	E	4
N°1 Ethernet IP + N°1 Modbus® RTU	No Retransmission	F	2
	Retransmission 4:20mA	G	2
	Retransmission 0:10V	H	2

Note 1: No cUL/UL 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
Note 5: Only CE and UL approved, not cUL

REVO C 3PH

Technical Specification

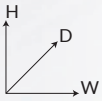
- **Load type:** Normal Resistance, Infrared Short, Medium and Long, Transformer Primary, Cold resistance, SiC and MoSi2 heaters
- **Input:** 4÷20mA, 0÷10V, SSR, with Modbus® RTU standard; and different Field Bus listed in the Order Code
- **Firing:** Half Cycle, Single Cycle, Burst Firing, Delayed Triggering, Phase Angle with or without Soft Start
- **Control mode:** Can be configured with feedback on Current, Voltage, Power or Open Loop mode
- **Communication:** **RS485 port, Modbus® RTU protocol and optional integrated fieldbus: Profibus® DP, Profinet® IO, Modbus® TCP, Ethernet® IP**
- **USB:** Integrated port for configuration in safety mode (no load and auxiliary voltage needed). Unit powered through USB
- **100kA:** Short Circuit Current rating (SCCR) up to 600V
- **Approvals:** Compliant with CE, cUL (option) up to 500A, UL (option) from 600A to 2100A
- **Dual Current Limit:** For peak and RMS value

Options

All options are shown in the table on page 34 with the relevant code

- Energy totalizer
- Data logging
- Bluetooth
- Heater Break (HB) Alarm to diagnose partial or Total Load Failure and Thyristor Short Circuit
- Over-temperature alarm
- Available on some size: Fuse alarm signal (FUMS) and 2° thermal switch

REVO C 3PH 30÷800A / **480÷600V**



SR11
H 121 x W 144 x D 185
2,4 kg
30÷40A

SR14
H 269 x W 279 x D 170
10,2kg
60A

SR17
H 273 x W 279 x D 170
10,6 kg
90÷210A

S14
H 520 x W 262 x D 270
22 kg
300÷500A

S17
H 560 x W 411 x D 270
51,6 kg
600÷800A

REVO C 3PH 60÷800A / **690V**

S11
H 440 x W 137 x D 270
10,5 kg
60÷90A

S13
H 440 x W 262 x D 270
18 kg
120÷210A

S14
H 520 x W 262 x D 270
22 kg
300÷500A

S17
H 560 x W 411 x D 270
51,6 kg
600÷800A

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

CURRENT / FUSES				4	5	6	
Description		Size 480-600V	Size 690V	cod			note
30A	Extrarapid fuse + fuse holder included	SR11	--	0	3	0	2
35A	Extrarapid fuse + fuse holder included	SR11	--	0	3	5	2
40A	Extrarapid fuse + fuse holder included	SR11	--	0	4	0	2
60A	Extrarapid fixed fuses included	SR14	S11	0	6	0	
90A	Extrarapid fixed fuses included	SR17	S11	0	9	0	
120A	Extrarapid fixed fuses included	SR17	S13	1	2	0	
150A	Extrarapid fixed fuses included	SR17	S13	1	5	0	
180A	Extrarapid fixed fuses included	SR17	S13	1	8	0	
210A	Extrarapid fixed fuses included	SR17	S13	2	1	0	
300A	Extrarapid fixed fuses included	S14	S14	3	0	0	
400A	Extrarapid fixed fuses included	S14	S14	4	0	0	
450A	Extrarapid fixed fuses included	S14	S14	4	5	0	
500A	Extrarapid fixed fuses included	S14	S14	5	0	0	
600A	Extrarapid fixed fuses included	S17	S17	6	0	0	5
700A	Extrarapid fixed fuses included	S17	S17	7	0	0	5
800A	Extrarapid fixed fuses included	S17	S17	8	0	0	5

MAX VOLTAGE	7	
Description	cod	note
480V	4	
600V	6	
690V	7	1

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

INPUT	9	
Description	cod	note
SSR	S	
0:20mA	B	
4:20mA	A	
0:10V	V	
10KPot	K	

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

CONTROL MODE	11	
Description	cod	note
Open Loop	0	
Voltage	U	
Voltage Square	Q	
Current	I	
Current Square	A	
Power VxI	W	

OPTIONS	12	
Description	cod	note
No option	0	
Option Code - See table page 34	...	

FAN VOLTAGE	13	
Description	cod	note
No fan <90A 480V/600V	0	
Fan 115Vac ≥90A 480V/600V - ≥60A 690V	1	
Fan 230Vac ≥90A 480V/600V - ≥60A 690V Standard	2	
Fan 24Vdc ≥90A 480V/600V - ≥60A 690V	3	

APPROVALS	14	
Description	cod	note
CE for European market	0	
CE + cUL	L	

LOAD TYPE	15	
Description	cod	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	7
3 phase transformer coupled with cold resistance	5	7

COMMUNICATION AND RETRANSMISSION		16	
Description	Description	cod	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	No Retransmission	6	4
	Retransmission 4:20mA	7	4
	Retransmission 0:10V	8	4
N°1 Profinet® IO	No Retransmission	9	4
	Retransmission 4:20mA	A	4
	Retransmission 0:10V	B	4
N°1 Modbus® TCP	No Retransmission	C	4
	Retransmission 4:20mA	D	4
	Retransmission 0:10V	E	4
N°1 Ethernet IP + N°1 Modbus® RTU	No Retransmission	F	6
	Retransmission 4:20mA	G	6
	Retransmission 0:10V	H	6

Note 1: No cUL/UL approved **Note 2:** Phase Angle and Delayed Triggering not available for 30A, 35A, 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 **Note 5:** Only CE and UL approved, not cUL
Note 6: Available on unit ≥60A **Note 7:** This configuration is possible only with Phase Angle firing

REVO C Extended Version

Technical Specification

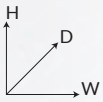
- **Load type:** Normal Resistance, Infrared Short, Medium and Long, Transformer Primary, Cold resistance, SiC and MoSi2 heaters
- **Input:** 4÷20mA, 0÷10V, SSR, with Modbus® RTU standard; and different Field Bus listed in the Order Code
- **Firing:** Half Cycle, Single Cycle, Burst Firing, Delayed Triggering, Phase Angle with or without Soft Start
- **Control mode:** Can be configured with feedback on Current, Voltage, Power or Open Loop mode
- **Communication:** **RS485 port, Modbus® RTU protocol and optional integrated fieldbus: Profibus® DP, Profinet® IO, Modbus® TCP, Ethernet® IP**
- **USB:** Integrated port for configuration in safety mode (no load and auxiliary voltage needed). Unit powered through USB
- **100kA:** Short Circuit Current rating (SCCR) up to 600V
- **Approvals:** Compliant with CE, UL (option)
- **Dual Current Limit:** For peak and RMS value

Options

All options are shown in the table on page 34 with the relevant code

- Energy totalizer
- Data logging
- Bluetooth
- Heater Break (HB) Alarm to diagnose partial or Total Load Failure and Thyristor Short Circuit
- Over-temperature alarm
- Available on some size: Fuse alarm signal (FUMS) and 2° thermal switch
- IP20 protection

REVO C 1-2-3PH 1100÷2100A / **480V-600V-690V**



SR18
H 550 x W 329 x D 347 - 27 kg
1100A

SR19
H 550 x W 523 x D 347 - 49 kg
1100A

SR20
H 550 x W 717 x D 347 - 72 kg
1100A

with IP20 protection

SR21
H 730 x W 329 x D 347 - 34 kg
1400-2100A

SR22
H 730 x W 523 x D 347 - 65 kg
1400-2100A

SR23
H 730 x W 717 x D 347 - 98 kg
1400-2100A

without IP20 protection

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

CURRENT / FUSES					4	5	6	
Description		Size 480-600-690V			cod			note
		1PH	2PH	3PH				
1100A	Extrarapid fixed fuses included	SR18	SR19	SR20	1	1	H	
1400A	Extrarapid fixed fuses included	SR21	SR22	SR23	1	4	H	
1600A	Extrarapid fixed fuses included	SR21	SR22	SR23	1	6	H	
1800A	Extrarapid fixed fuses included	SR21	SR22	SR23	1	8	H	
2100A	Extrarapid fixed fuses included	SR21	SR22	SR23	2	1	H	

MAX VOLTAGE	7	
Description	cod	note
480V	4	
600V	6	
690V	7	1

AUX SUPPLY VOLTAGE	AUX VOLTAGE RANGE	8	
Description	Description	cod	note
100/120Vac	90÷135Vac	1	
200/208/230/240Vac	180÷265Vac	2	

INPUT	9	
Description	cod	note
SSR	S	
0:20mA	B	
4:20mA	A	
0:10V	V	
10KPot	K	

FIRING	START OPTION	10	
Description	Description	cod	note
Burst Firing	No Soft Start	B	
	Linear Soft Start	J	4
Phase Angle	No Soft Start	P	4
	Linear Soft Start	E	4
Delayed Triggering	No Soft Start	D	4
	Linear Soft Start	T	3
Zero Crossing	No Soft Start	Z	
	Linear Soft Start	R	4

CONTROL MODE	11	
Description	cod	note
Open Loop	0	
Voltage	U	
Voltage Square	Q	
Current	I	
Current Square	A	
Power VxI	W	

OPTION	12	
Description	cod	note
No option	0	
Option Code - See tables pages 34-35	...	

FAN VOLTAGE	13	
Description	cod	note
Fan 115Vac	1	
Fan 230Vac Standard	2	

APPROVALS	14	
Description	cod	note
CE for European market - IP00 protection	0	
CE for European market - IP20 protection	1	
UL + CE - IP00 protection	2	
UL + CE - IP20 protection	L	

LOAD TYPE	15	
Description	cod	note
Normal resistance	0	
IRSW infrared short wave	1	
MoSi2 heaters	2	3, 5
SiC heaters	3	3
Transformer coupled with normal resistance	4	3, 4
Transformer coupled with MoSi2 heaters	5	3, 4
Transformer coupled with SiC heaters	6	3, 4
Transformer coupled with UV lamp	7	3, 4

COMMUNICATION AND RETRANSMISSION		16	
Description	Description	cod	note
N°1 Modbus® RTU	No Retransmission	0	
	Retransmission 4:20mA	1	
	Retransmission 0:10V	2	
N°2 Modbus® RTU	No Retransmission	3	2
	Retransmission 4:20mA	4	2
	Retransmission 0:10V	5	2
N°1 Profibus® DP + N°1 Modbus® RTU	No Retransmission	6	2
	Retransmission 4:20mA	7	2
	Retransmission 0:10V	8	2
N°1 Profinet® IO + N°1 Modbus® RTU	No Retransmission	9	2
	Retransmission 4:20mA	A	2
	Retransmission 0:10V	B	2
N°1 Modbus® TCP + N°1 Modbus® RTU	No Retransmission	C	2
	Retransmission 4:20mA	D	2
	Retransmission 0:10V	E	2
N°1 Ethernet IP + N°1 Modbus® RTU	No Retransmission	F	2
	Retransmission 4:20mA	G	2
	Retransmission 0:10V	H	2

Note 1: No cUL/UL approved
Note 2: 24Vdc Backup Power for User Interface and Communications included
Note 3: Available on 1PH and 3PH only
Note 4: This configuration is possible only with Delayed Triggering or Phase Angle Firing
Note 5: This configuration is possible only with Phase Angle Firing

REVO C Options

Option codes REVO C 1PH (Digit 12)

No option

Option selected (es cod 3: Logging + Totalizer)

I LIMIT	HB	BLUETOOTH	LOGGING	TOTALIZER	Cod. OPTION	NOTES
					Ø	
				■	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 not available

Bluetooth Communication and control of the unit via **APP**

APP "RevoBLE" free download from Google Play or Apple Store

Data Logger Reading and data logging of Current (I), Voltage (V) and Power (%) for diagnostics

Energy Totalizer Power reading: totals the energy consumption of the load by providing the kW consumed

Option codes REVO C 2PH (Digit 12)

No option

Option selected (es cod 3: Logging + Totalizer)

HB	BLUETOOTH	LOGGING	TOTALIZER	Cod. OPTION	NOTES
				Ø	
			■	1	
		■		2	
		■	■	3	
	■			4	
	■		■	5	
	■	■		6	
	■	■	■	7	
■				8	
■			■	9	
■		■		A	
■		■	■	B	
■	■			C	
■	■		■	D	
■	■	■		E	
■	■	■	■	F	

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

WiFi not available

Bluetooth Communication and control of the unit via **APP**

APP "RevoBLE" free download from Google Play or Apple Store

Data Logger Reading and data logging of Current (I), Voltage (V) and Power (%) for diagnostics

Energy Totalizer Power reading: totals the energy consumption of the load by providing the kW consumed

Option codes REVO C 3PH (Digit 12)

No option

Option selected (es cod 3: Logging + Totalizer)

I LIMIT	HB	BLUETOOTH	LOGGING	TOTALIZER	Cod. OPTION	NOTES
					Ø	
				■	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. This option is not available on 30-35-40A units.

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

WiFi not available

Bluetooth Communication and control of the unit via **APP**

APP "RevoBLE" free download from Google Play or Apple Store

Data Logger Reading and data logging of Current (I), Voltage (V) and Power (%) for diagnostics

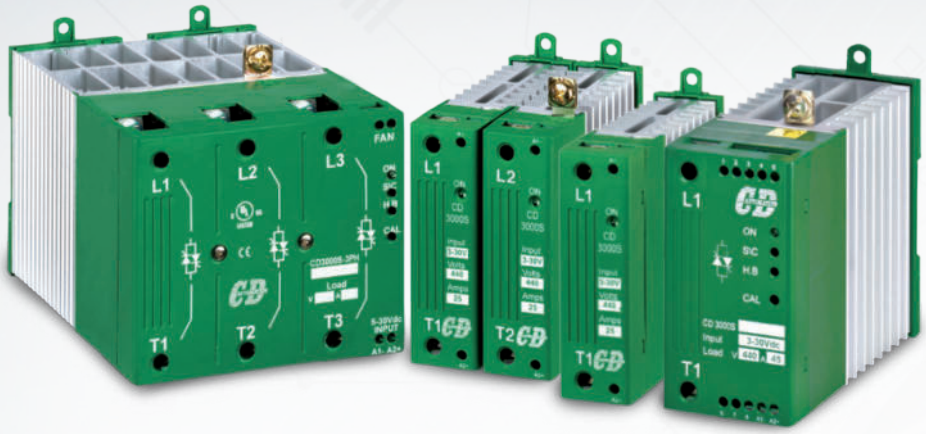
Energy Totalizer Power reading: totals the energy consumption of the load by providing the kW consumed

Bluetooth option for communication and control via app

APP "RevoBLE" free download from Google Play or Apple Store.
Connecting to the unit via Bluetooth

WiFi not available

CD3000S



Main features

CD3000S is our low cost family of solid state relays

- Thyristor units from 10A to 90A 1PH, 2PH and 3PH
- Can be used with resistive loads
- Zero crossing firing available with logic input signal (SSR)
- Analog input 4÷20mA or 0÷10V with Burst Firing 4, 8 or 16 cycle at 50% power demand, is available as an option on these models: 1PH from 35A to 90A; 2PH from 45A to 90A.
- Heater break alarm (HB) to diagnose partial or total load failure and short circuit on thyristor, available as an option on these models: 1PH from 35A to 90A; 2PH from 45A to 90A.
- Side-by-side mounting
- Approvals **CE** and **cUL**

Load type

Resistive

Cannot be used for capacitive loading. For information contact our technical department

Industrial applications

- Petrolchemicals
- Platform for oil extraction
- Conventinal power generator
- Chemicals and pharmaceuticals
- Autoclaves
- Electric furnaces
- Galvanic process
- Glass industry
- Polysilicon
- Chemical
- Plastic machinery
- Packing machinery
- Automobile
- Paint drying
- UV drying
- Car internal fitting

CD 3000S - FEATURES

	Description	CD3000S 1PH			CD3000S 2PH		CD3000S 3PH	
	CODE	DS1			DS2		DS3	
Load type	Max voltage 480V	•			•		•	
	Max voltage 600V (on request)	•			•		•	
	Resistive load	•					•	
	Resistive load with connection 3PH star/delta				•			
	Infrared lamp up to 90A	•			•			
Input	SSR from 4 to 30Vdc	•			•		•	
	Analog input 0÷10V	O			O			
	Analog input 4÷20mA	O			O			
Firing	Zero crossing	•			•		•	
	Burst firing 4-8-16 (1)	O			O			
Current	Current	SIZE			SIZE		SIZE	
		240V	480V	600V	480V	600V	480V	600V
	10A				S0			
	2x10A	S0						
	15A		S0		S1		S2	
	25A		S0		S1			
	30A						S4	
	35A			S3		S4		
	45A			S3		S7		S6
	60A			S7				S8
	75A					S8		S8
	90A			S7		S8		S8

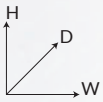
Note 1: Burst Firing 4/8/16 with 4÷20mA or 0÷10V with 12÷24V aux. power supply

CD3000S 1PH

Technical Specification

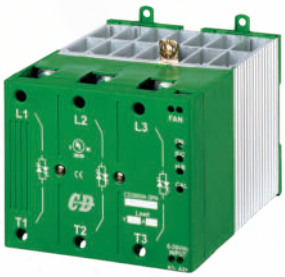
- **Voltage power supply:** 24V min, 240V, 480V, 600V 50/60Hz
- **Input Signal:** SSR standard up to 90A
  Analog input 4÷20mA and 0÷10V available as an option on units from 35A to 90A
- **Firing:** Zero Crossing; Burst Firing 4/8/16 with 4÷20mA or 0÷10V with 12÷24Vac/dc aux. power supply
- **Heater Break Alarm:** Discrimination better than 20%
  Circuit microprocessor to diagnose partial or total load failure and short circuit on Thyristor
  Automatic calibration of one or more unit at the same time using a dedicated digital input, or for each unit, using the calibration button
  Relay output 1A at 230V
- **Approvals:** Compliant with CE and cUL (option in standard units)
- **Mounting:** Din rail
- **Operating temperature:** 0÷40°C up to 90A (for higher temperature see the derating curve)

CD3000S 1PH 10÷90A / **240÷480÷600V**



S0
H 120 x W 30 x D 120 - 0,33 kg
2x10A / 15÷25A

S3
H120 x W 52 x D 120 - 0,55 kg
35÷45A



S7
H 120 x W 117 x D 159 - 1,65 kg
60÷90A

CD3000S 1PH	1	2	3	4	5	6		7	8	9	10	11	12	13	14	15	16
ORDER CODE	D	S	1	_	_	_	-	_	_	_	_	_	_	_	_	_	_

CURRENT		4	5	6	
Description	**Size**	cod			note
2x10A	**S0**	2	X	X	
15A	**S0**	0	1	5	
25A	**S0**	0	2	5	
35A	**S3**	0	3	5	
45A	**S3**	0	4	5	
60A	**S7**	0	6	0	
90A	**S7**	0	9	0	

MAX LOAD VOLTAGE	7	
Description	cod	note
240V	2	
480V	4	1
600V	6	1

AUXILIARY VOLTAGE	8	
Description	cod	note
No Auxiliary Voltage supply	0	
12÷24Vac/dc with analog input / HB Alarm	4	2,3

INPUT	9	
Description	cod	note
SSR 4÷30Vdc	S	
Analog input 4÷20mA	A	3,5
Analog Input 0÷10V	V	3,5

FIRING	10	
Description	cod	note
Zero Crossing with SSR input	Z	
4 cycles on + 4 off with analog input	4	
8 cycles on + 8 off with analog input	8	
16 cycles on + 16 off with analog input	6	

CONTROL MODE	11	
Description	cod	note
Open loop	0	

FUSES & OPTION	12	
Description	cod	note
No fuse / No option	0	
No fuse / HB option	1	3,5
External fuse & fuse holder / No option	F	
External fuse & fuse holder / HB option	2	3,5

FAN VOLTAGE	13	
Description	cod	note
No fan	0	

APPROVALS	14	
Description	cod	note
CE for European market	0	
CE + cUL	L	

MANUAL	15	
Description	cod	note
None	0	
Italian	1	
English	2	
German	3	
French	4	

IP PROTECTION	16	
Description	code	note
Standard IP20 (all unit excluded 60A and 90A)	0	
External IP20 protection for size S7 (60-90A)	P	4

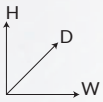
Note 1: 480V and 600V not available for 2x10A
Note 2: Necessary with 0÷10V - 4÷20mA and HB alarm
Note 3: Option available 35÷90A
Note 4: IP20 is standard on all units with exception of S7 size (60-90A). To comply with IP20 use "P" option at digit 16
Note 5: HB not available with UL approval

CD3000S 2PH

Technical Specification

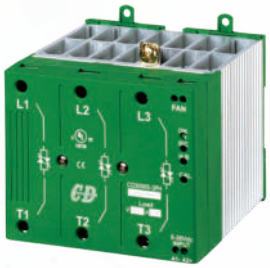
- **Voltage power supply:** 24V min, 480V, 600V 50/60Hz
- **Input Signal:** SSR
  Analog input 4÷20mA and 0÷10V available from 45A to 90A
- **Firing:** Zero Crossing; Burst Firing 4/8/16 with 4÷20mA or 0÷10V with 12÷24Vac/dc aux. power supply
- **Fan Voltage Supply:** for unit ≥75A; 230V standard (115V option)
- **Heater Break Alarm:** Discrimination better than 20%
  Circuit microprocessor to diagnose partial or total load failure and short circuit on Thyristor
  Relay output 1A at 230V
  Automation calibration of one or more unit at the same time using a dedicated digital input, or for each unit, by using the calibration button
- **Approvals:** Compliant with CE and cUL (option in standard units)
- **Mounting:** Din rail
- **Operating temperature:** 0÷40° up to 90A (for higher temperature see the derating curve)

CD3000S 2PH 10÷90A / **480÷600V**

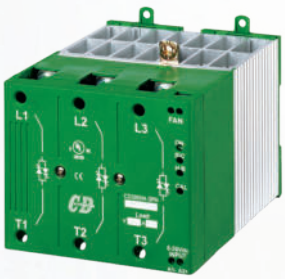


S0
H 120 x W 30 x D 120 - 0,33 kg
10A

S1
H 120 x W 60 x D 120 - 0,70 kg
15-25A



S4
H 120 x W 117 x D 123 - 1,15 kg
35A



S7
H 120 x W 117 x D 159 - 1,65 kg
45A

S8
H 138 x W 117 x D 159 - 2,10 kg
75÷90A

CD3000S 2PH	1	2	3	4	5	6		7	8	9	10	11	12	13	14	15	16
ORDER CODE	D	S	2	_	_	_	-	_	_	_	_	_	_	_	_	_	_

CURRENT		4	5	6	
Description	Size	cod			note
10A	S0	0	1	0	1
15A	S1	0	1	5	
25A	S1	0	2	5	
35A	S4	0	3	5	
45A	S7	0	4	5	
75A	S8	0	7	5	
90A	S8	0	9	0	

MAX LOAD VOLTAGE	7	
Description	cod	note
480V	4	
600V	6	

AUXILIARY VOLTAGE	8	
Description	cod	note
No Auxiliary Voltage supply	0	
12÷24Vac/dc with analog input / HB Alarm	4	2,3

INPUT	9	
Description	cod	note
SSR 4÷30Vdc	S	
Analog input 4÷20mA	A	3,5
Analog Input 0÷10V	V	3,5

FIRING	10	
Description	cod	note
Zero Crossing with SSR input	Z	
4 cycles on + 4 off with analog input	4	
8 cycles on + 8 off with analog input	8	
16 cycles on + 16 off with analog input	6	

CONTROL MODE	11	
Description	cod	note
Open loop	0	

FUSES & OPTION	12	
Description	cod	note
No fuse / No option	0	
No fuse / HB option for SSR input	1	3,5
No fuse / HB option for analog input	1	3,5
External fuse + fuse holder / No option	F	
External fuse + fuse holder / HB option for SSR input	2	3,5
External fuse + fuse holder / HB option for analog input	2	3,5

FAN VOLTAGE	13	
Description	cod	note
No Fan for unit <75A	0	
Fan 115V option - for 75A and 90A units	1	
Fan 230V standard - for 75A and 90A units	2	

APPROVALS	14	
Description	cod	note
CE for European market	0	
CE + cUL	L	

MANUAL	15	
Description	cod	note
None	0	
Italian	1	
English	2	
German	3	
French	4	

IP PROTECTION	16	
Description	cod	note
Standard IP20 (all unit excluded 45A, 75A, 90A)	0	
External IP20 protection for size S7/S8 (45A, 75A, 90A)	P	

Note 1: For 10A 600V cUL us not available
Note 2: Necessary with 0÷10V - 4÷20mA or HB alarm
Note 3: Option available from 45÷90A
Note 4: IP20 is standard on all units with exception of S7 and S8 size (45-75-90A). To comply with IP20 use "P" option at digit 16
Note 5: HB not available with cUL us approval

CD3000S 3PH

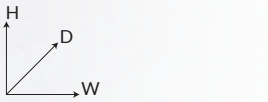
Technical Specification

- **Voltage power supply:** 24V min, 480V Max, 600V on request
- **Input Signal:** SSR
- **Firing:** Zero Crossing
- **Fan Voltage Supply:** 230V
- **Approvals:** Compliant with CE and cUL (option)
- **Mounting:** Din rail
- **Operating Temperature:** 0÷40° up to 90A included (for higher temperature see the derating curve)

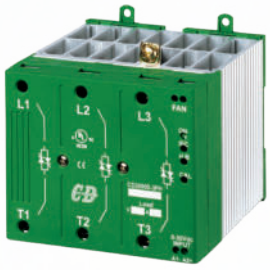
Not available on this unit

- Heater Break Alarm
- Analog input 4÷20mA and 0÷10V

CD3000S 3PH 15÷90A / **480÷600V**



S2
H 120 x W 92 x D 120 - 1,05 kg
15A



S4
H 120 x W 117 x D 123 - 1,15 kg
30A

S6
H 138 x W 117 x D 123 - 1,80 kg
45A

S8
H 138 x W 117 x D 159 - 2,10 kg
60÷90A

CD3000S 3PH	1	2	3	4	5	6		7	8	9	10	11	12	13	14	15	16
ORDER CODE	D	S	3	_	_	_	-	_	_	_	_	_	_	_	_	_	_

CURRENT		4	5	6	
Description	**Size**	cod			note
15A	**S2**	0	1	5	
30A	**S4**	0	3	0	
45A	**S6**	0	4	5	
60A	**S8**	0	6	0	
75A	**S8**	0	7	5	
90A	**S8**	0	9	0	

MAX LOAD VOLTAGE	7	
Description	cod	note
480V	4	
600V	6	

AUXILIARY VOLTAGE	8	
Description	cod	note
No Auxiliary Voltage supply	0	

INPUT	9	
Description	cod	note
SSR	S	

FIRING	10	
Description	cod	note
Zero Crossing	Z	

CONTROL MODE	11	
Description	cod	note
Open loop	0	

FUSES & OPTION	12	
Description	cod	note
No fuse	0	
External fuse + fuse holder	F	

FAN VOLTAGE	13	
Description	cod	note
No Fan for unit <45A	0	
Fan 115V option - for 45A to 90A units	1	
Fan 230V Standard - for 45A to 90A units	2	

APPROVALS	14	
Description	cod	note
CE for European market	0	
CE + cUL	L	

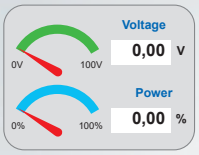
MANUAL	15	
Description	cod	note
None	0	
Italian	1	
English	2	
German	3	
French	4	

IP PROTECTION	16	
Description	cod	note
IP20 standard (all unit excluded size S8, from 60A to 90A)	0	
External IP20 protection for size S8 (from 60A to 90A)	P	1

Note 1: IP20 is standard on all units with exception of S8 size (60÷90A). To comply with IP20 use "P" option at digit 16

REVO PN

Integrated fieldbus



Configurator software

TIA PORTAL V16

SIEMENS

Libraries

4 - 8
One Phase Channels

12 - 16
One Phase Channels

12 - 24 One Phase Channels
shared on the three phases

20 - 24 One Phase Channels

Main features

Multi-zone control system with energy efficiency (Power Management)

- **Fieldbus: range of communication protocols available**
  Modbus® RTU, Profibus® DP, Profinet® IO, Modbus® TCP, Ethernet IP
- From 12 to 24 single phase independent channels balanced on the three different phases
- From 4 to 24 single phase independent channels sharing the same phase connection Phase-Neutral or Phase-Phase
- Nominal current in continuous service Max 25A for each load
- Max peak current (10ms) 700A
- Nominal Voltage range 24÷600V, 3 phase
- Current reading with integrated CT for each channel
- Load and short circuit thyristor diagnostics for each channel
- "Enable" command for each channel
- **CE** approval
- **UL** approval max 300V
- **Guided configuration via free software**, available on **www.cdautomation.com**
- Siemens **TIA Portal Libraries** for data exchange with our products (from V16)

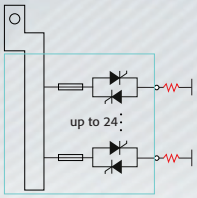
Load type

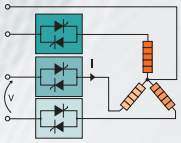
Resistive / Short wave (IRSW) and fast medium wave (IRMW) infraded lamp
Cannot be used for capacitive loading. For information contact our technical department

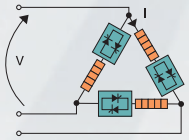
Industrial applications

- Plastic industry
- Furnaces with IR lamps
- Paint drying
- Multizone furnaces
- PET moulding
- Renewable energies
- Extrusion/Co-extrusion
- Bio Packaging

REVO PN - FEATURES







	CODE	RPN 104	RPN 108	RPN 112 RPN 120	RPN 116 RPN 124	RPN 412	RPN 424	RPN 612	RPN 624	REVO PB (PN Basic)
	Connection	**Phase-Phase**		**Phase-Neutral**		**Ph-N connect. Shared on the three phases**		**Ph-Ph connect. Shared on the three phases**		
	Channel	4	8	12 20	16 24	12	24	12	24	3
	N° of Control Legs for each Channel	2PH	2PH	3PH	3PH	1PH	1PH	1PH	1PH	1PH
General features	Cover and socket material	Polymeric V2								
	IP code	20								
	Aux voltage	24Vdc								
Input	Number of sensors used	4	8	12 20	16 24	12	24	12	24	3
	Configurable Digital Input calibration	max. 50mA								
Output		25A for each channel, Fuse 1260 A^2S								Up to 90A
Firing	Half Cycle at 50% power demand	Not available				Standard				Standard
	Single Cycle at 50% power demand	Standard				Standard				Standard
Control	Open Loop	Standard								
	Power Feedback	Standard								
Features	Heater Break + Thyristor short circuit	Standard								
	Current Measurement on communication	Standard								
	Voltage measurement	Standard								
	Power measurement	Standard								
	Three Phase balanced load	Standard								No
Communication	N°1 Modbus TCP and N°3 Modbus RTU Slave	Standard								1
	Modbus Master	Yes								No
	Profibus DP and Modbus TCP	Option								External module
	Profinet and Modbus TCP	Option								
	Ethernet IP and Modbus TCP	Option								
Digital Input	N° digital input	4								3
	Enable/Disable Function	OK								
Relay Output	Relay Output	Option								
Options	Operator panel KPPC	Option								
Temperature Control	Can be added externally	Option								No

From 4 up to 24 single phase independent channels sharing the same phase connection

Diagram 104

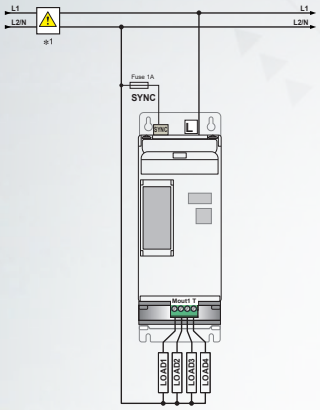


Diagram 108

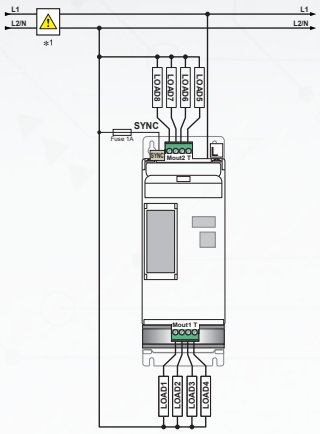


Diagram 112

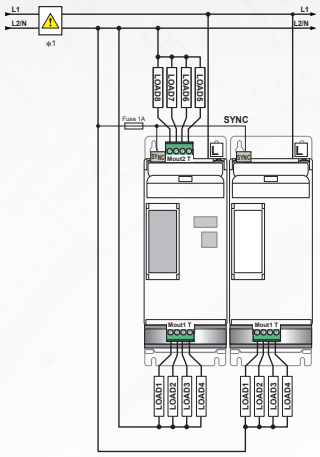


Diagram 116

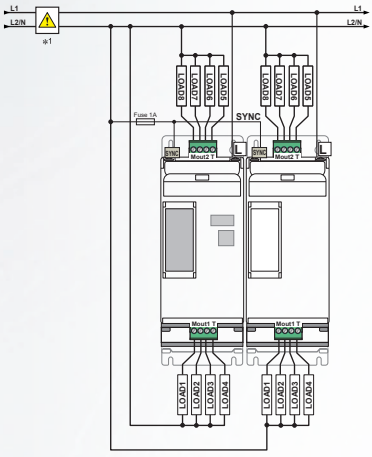


Diagram 120

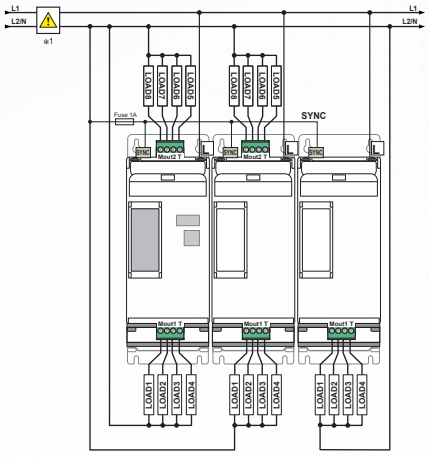
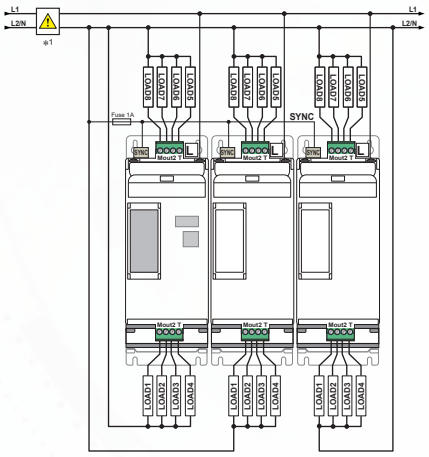
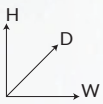


Diagram 124





SR15
H 273 x W 93 x D 170
3,6 kg

SR15 x2
H 273 x W 186 x D 170
7,0 kg

SR15 x3
H 273 x W 281 x D 170
10,6 kg

REVO PN	1	2	3	4	5		6	7	8	9	10	11	12	13	14	15	16
ORDER CODE	P	N	_	_	_	-	_	_	_	_	_	_	_	_	_	_	_

CURRENT	3	4	5	
Description	cod			note
1 PH 4 zones, all F1-N or F1-F2 (See diagram 104)	1	0	4	
1 PH 8 zones, all F1-N or F1-F2 (See diagram 108)	1	0	8	
1 PH 12 zones, all F1-N or F1-F2 (See diagram 112)	1	1	2	
1 PH 16 zones, all F1-N or F1-F2 (See diagram 116)	1	1	6	
1 PH 20 zones, all F1-N or F1-F2 (See diagram 120)	1	2	0	
1 PH 24 zones, all F1-N or F1-F2 (See diagram 124)	1	2	4	

MAX VOLTAGE	6	
Description	cod	note
300V max	2	
480V	4	

COMMUNICATION	7	
Description	cod	note
N° 1 Ethernet Port, Modbus® TCP and n°3 Modbus® RTU	1	
~~N°1 Profibus-DP® Port (with external communication module)~~	~~4~~	
N° 1 Ethernet port ProfiNet®	5	
N° 1 Ethernet IP port	7	

AUXILIARY VOLTAGE	8	
Description	cod	note
24Vdc	4	

INPUT	9	
Description	cod	note
None, use only communication	0	

FIRING	10	
Description	cod	note
Half Cycle	1	
Single Cycle	2	

CONTROL MODE	11	
Description	cod	note
Open Loop	1	
Power Feed Back	2	

FUSES + FUSE HOLDER	12	
Description	cod	note
Low Speed Fuse & Fuse Holder for each channel (see option table)	...	1
Extra Rapid Fuse & Fuse Holder for each channel	F	

FAN VOLTAGE	13	
Description	cod	note
24Vdc fan	3	

APPROVALS	14	
Description	cod	note
CE for European market	0	
UL max 300V	L	

MANUAL	15	
Description	cod	note
None	0	
Italian	1	
English	2	
German	3	
French	4	

VERSION	16	
Description	cod	note
Each channel has a dedicated current sensor integrated in the units	4	

Note 1: These fuses do not protect the Thyristors. You need external fuses. This solution is recommended for current IRSW Lamp.

Option table

Fuse type	Max current	COD
Extrarapid fuse (Standard)	32A	F
Low speed fuse	2A	A
Low speed fuse	4A	B
Low speed fuse	6A	C
Low speed fuse	8A	D
Low speed fuse	10A	E
Low speed fuse	12A	G
Low speed fuse	16A	H
Low speed fuse	20A	I
Low speed fuse	25A	L
Low speed fuse	32A	N
Low speed fuse	Various	V

All low speed fuses do not protect thyristor module

From 12 up to 24 single phase independent channels balanced on the three different phases

Diagram 412

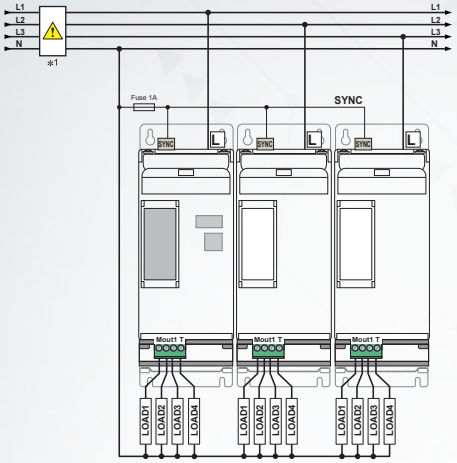


Diagram 612

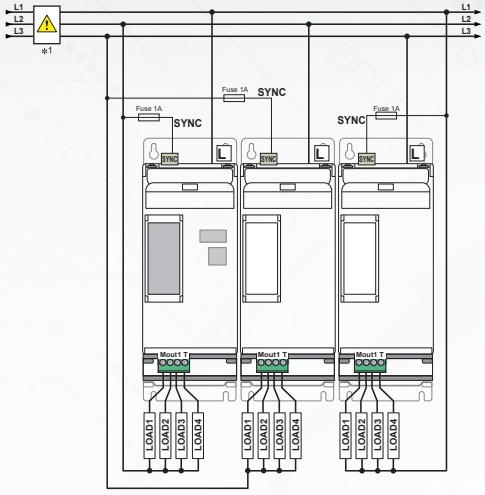


Diagram 424

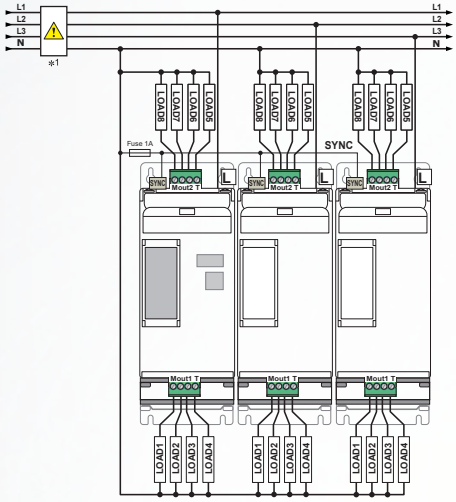
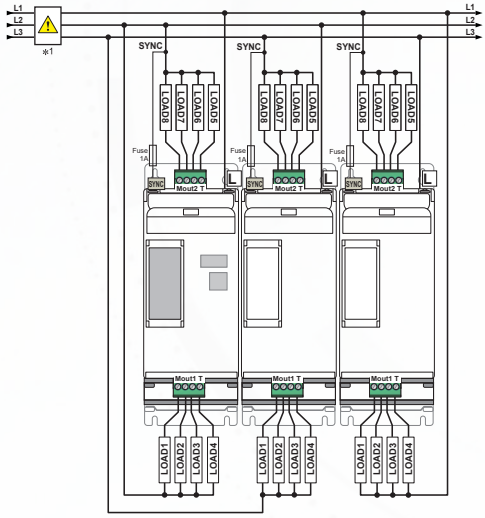
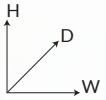


Diagram 624





SR15 x3
H 273 x W 281 x D 170
10,6 kg

REVO PN	1	2	3	4	5		6	7	8	9	10	11	12	13	14	15	16
ORDER CODE	P	N	_	_	_	-	_	_	_	_	_	_	_	_	_	_	_

CURRENT	3	4	5	
Description	cod			note
1PH 12 zones (n°4 zones F1-N; n°4 zones F2-N; n°4 zones F3-N) (See diagram 412)	4	1	2	
1PH 24 zones (n°8 zones F1-N; n°8 zones F2-N; n°8 zones F3-N) (See diagram 424)	4	2	4	
1PH 12 zones (n°4 zones F1-F2; n°4 zones F2-F3; n°4 zones F1-F3) (See diagram 612)	6	1	2	
1PH 24 zones (n°8 zones F1-F2; n°8 zones F2-F3; n°8 zones F1-F3) (See diagram 624)	6	2	4	

MAX VOLTAGE	6	
Description	cod	note
300V max	2	
480V	4	

COMMUNICATION	7	
Description	cod	note
N° 1 Ethernet Port, Modbus® TCP and n°3 Modbus® RTU	1	
~~N°1 Profibus-DP® Port (with external communication module)~~	~~4~~	
N° 1 Ethernet Port ProfiNet®	5	
N° 1 Ethernet IP port	7	

AUXILIARY VOLTAGE	8	
Description	cod	note
24Vdc	4	

INPUT	9	
Description	cod	note
None, use only communication	0	

FIRING	10	
Description	cod	note
Half cycle	1	
Single cycle	2	

CONTROL MODE	11	
Description	cod	note
Open Loop	1	
Power Feed Back	2	

FUSES + FUSE HOLDER	12	
Description	cod	note
Low Speed Fuse & Fuse Holder for each channel (see option table)	...	1
Extra Rapid Fuse & Fuse Holder for each channel	F	

FAN VOLTAGE	13	
Description	cod	note
24Vdc fan	3	

APPROVALS	14	
Description	cod	note
CE for European market	0	
UL max 300V	L	

MANUAL	15	
Description	cod	note
None	0	
Italian	1	
English	2	
German	3	
French	4	

VERSION	16	
Description	code	note
Each channel has a dedicated current sensor integrated in the units	4	

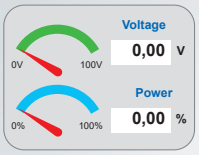
Note 1: fuses do not protect the Thyristors. You need external fuses. This solution is recommended for current IRSW Lamp.

Option table

Fuse type	Max current	COD
Extrarapid fuse (Standard)	32A	F
Low speed fuse	2A	A
Low speed fuse	4A	B
Low speed fuse	6A	C
Low speed fuse	8A	D
Low speed fuse	10A	E
Low speed fuse	12A	G
Low speed fuse	16A	H
Low speed fuse	20A	I
Low speed fuse	25A	L
Low speed fuse	32A	N
Low speed fuse	Various	V

All low speed fuses do not protect thyristor module

REVO PB

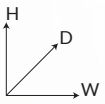


Configurator software

REVO PB: REVO PN power extension up to 90A

Created specifically for industrial multi-zone applications, REVO PB can be configured to control between 3 and 9 channels/zones.

- Available sizes: 35A, 50A, 75A, 90A
- Three zones thyristor controller with power optimization algorithm (power management)
- Modbus® RTU communication protocol on RS485
- Extrarapid fixed fuses
- Current reading with integrated CT for each channel
- Firing: Single cycle, Half cycle
- Load and SCR diagnostics for each channel
- Outputs for alarms
- "Enable" command for each channel
- **CE** approval
- **Guided configuration via free software**, available on **www.cdautomation.com**



SR25
H 165 x W 116 x D 183 - 2,35 kg
35÷90A

REVO PB	1	2	3	4	5	6		7	8	9	10	11	12	13	14	15	16
ORDER CODE	P	B	3	_	_	_	-	_	_	_	_	_	_	_	_	_	_

CURRENT	4	5	6	
Description	cod			note
35A	0	3	5	
50A	0	5	0	
75A	0	7	5	
90A	0	9	0	

MAX VOLTAGE	7	
Description	cod	note
480V	4	
600V	6	

AUXILIARY VOLTAGE	8	
Description	cod	note
24Vdc	4	

INPUT	9	
Description	cod	note
RS485 Modbus RTU Communication and DI	0	

FIRING	10	
Description	cod	note
Half Cycle	0	
Single Cycle	1	

CONTROL MODE	11	
Description	cod	note
No Feed-back	1	
Power VxI	2	

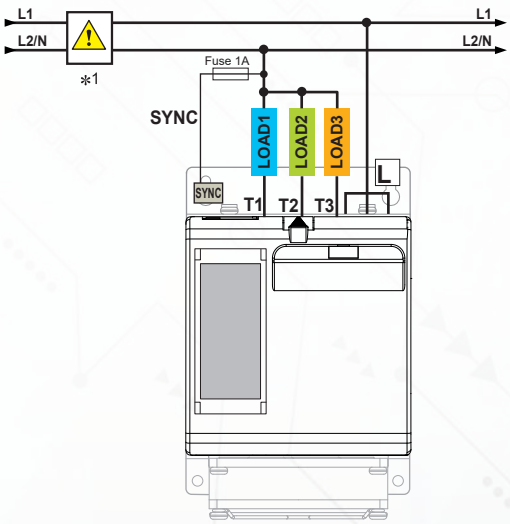
OPTION	12	
Description	cod	note
Display, Heater Break ALARM	0	

FAN VOLTAGE	13	
Description	cod	note
24Vdc FAN	3	

APPROVALS	14	
Description	cod	note
CE for European market	0	

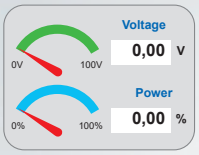
LOAD TYPE	15	
Description	cod	note
1PH Normal resistance	0	
1PH IRSW Infrared Short Wave	1	

VERSION	16	
Description	cod	note
Standard Version	0	



REVO PC

Integrated Fieldbus



Configurator software

TIA PORTAL V16

SIEMENS

Libraries

Main features

REVO PC system is based on an intelligent unit that manages one or more basic SCR power controller. All currents are measured with an external current transformer. REVO PC acquires the power setpoint from different sources including: single or multi zone temperature controller, PLC or HMI.

- **Fieldbus: range of communication protocols available**
  Modbus® RTU, Profibus® DP, Profinet® IO, Modbus® TCP, Ethernet IP
- For standard resistors and IR lamps
- To use with REVO S and REVO Sx in "Y" configuration
- Firing: Single Cycle, Half Cycle and Dynamic Burst Firing
- Reduces power peaks and increases energy savings (power management)
- Heater Break alarm and "Enable" command for each channel
- **Guided configuration via free software**, available on **www.cdautomation.com**
- Siemens **TIA Portal Libraries** for data exchange with our products (from V16)

A 269 x L 93 x P 95
0,6 kg

Control unit

REVO PC up to 24 channels

- SSR output "Y" to control up to 24 REVO S 1PH
- High precision voltage transducer
- RS485 and Modbus TCP available as standard

Power Unit

REVO S 1PH "Y"

- SCR power switches from 30A to 800A
- Extrarapid internal fuses
- Max voltage 480V - 600V - 690V
- High precision integrated current transducer

REVO Sx "Y"

- SCR power controllers from 50A to 90A
- External CT
- Multichannel unit

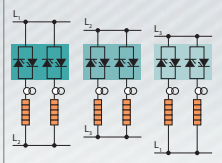
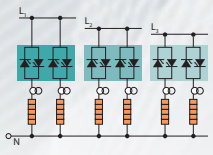
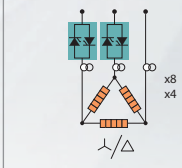
Load type

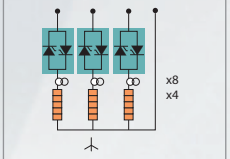
Resistive / Short wave (IRSW) and fast medium wave (IRMW) infraded lamp
Cannot be used for capacitive loading. For information contact our technical department

Industrial applications

- Plastic industry
- Furnaces with IR lamps
- Paint drying
- Multizone furnaces
- PET moulding
- Renewable energies
- Extrusion/Co-extrusion
- Bio Packaging

REVO PC - FEATURES



	CODE	RPC612	RPC624	RPC412	RPC424	RPC204	RPC208	RPC304	RPC308
	Connection	**Phase-Phase shared on three phases**		**Phase-Neutral**		**2 Legs**		**3 legs**	
	Channels	12	24	12	24	4	8	4	8
	N° of Control Legs for each Channel	1PH	1PH	1PH	1PH	2PH	2PH	3PH	3PH
General features	Cover and socket material	Polymeric V2							
	IP code	20							
	Aux Voltage	24Vdc							
Input	Number of sensor used	12	24	12	24	12	24	12	24
	Configurable Digital Input calibration	max. 50mA							
Output		25A for each channel, Fuse I^2t 1260 A^2S							
Firing	Half Cycle at 50% power demand	Standard				Not available		Standard	
	Single Cycle at 50% power demand	Standard				Standard			
Control	Open Loop	Standard							
	Power Feedback	Standard							
Features	Heater Break + Thyristor short circuit	Standard							
	Current Measurement on communication	Standard							
	Voltage measurement	Standard							
	Power measurement	Standard							
	Three Phase balanced load	Standard							
Communication	N°1 Modbus TCP and N°3 Modbus RTU Slave	Standard							
	Profibus DP and Modbus TCP	Option							
	Profinet andModbus TCP	Option							
	Ethernet IP and Modbus TCP	Option							
Digital Input	N° digital input	4							
	Enable Disable Function	Standard							
Relay Output	Relay Output	Option							
Option	Operator panel KPPC	Option							
Temperature control	Can be added externally	Option							

RPC612 / RPC624
up to 24 1PH channel shared on three phases
CONNECTION PHASE TO PHASE

REVO PC	1	2	3	4	5	6		7	8	9	10	11	12	13	14	15	16
ORDER CODE	R	P	C	_	_	_	-	_	_	_	_	_	_	_	_	_	_

CONNECTION	4	
Description	cod	note
F1-F2; F2-F3; F1-F3 All the 1PH channel can be balanced on the three phases Phase to Phase	6	

CHANNELS	5	6	
Description	cod		note
12 channel REVO PC to drive 12 REVOS-1PH Max with Random Firing	1	2	
24 channel REVO PC to drive 24 REVOS-1PH Max with Random Firing	2	4	

One Current Sensor Input for each channel	7	8	9	
Description	cod			note
Current Sensor is included and integrated with REVO S 1PH units with "Y" Option	0	0	0	

COMMUNICATION	10	
Description	cod	note
Ethernet Port, Modbus TCP, Modbus RTU and CD Bus	1	
Profibus-DP® Port, Modbus TCP, Modbus RTU and CD Bus (with external module) ***on request only***	4	
Ethernet Port ProfiNet, Modbus TCP, Modbus RTU and CD Bus	5	
Ethernet Port Ethernet IP, Modbus TCP, Modbus RTU and CD Bus	7	

Aux Voltage to be coupled with an external transformer	11	
Description	cod	note
24Vdc	4	

FIRING	12	
Description	cod	note
Half Cycle at 50% power demand	1	
One Cycle at 50% power demand	2	

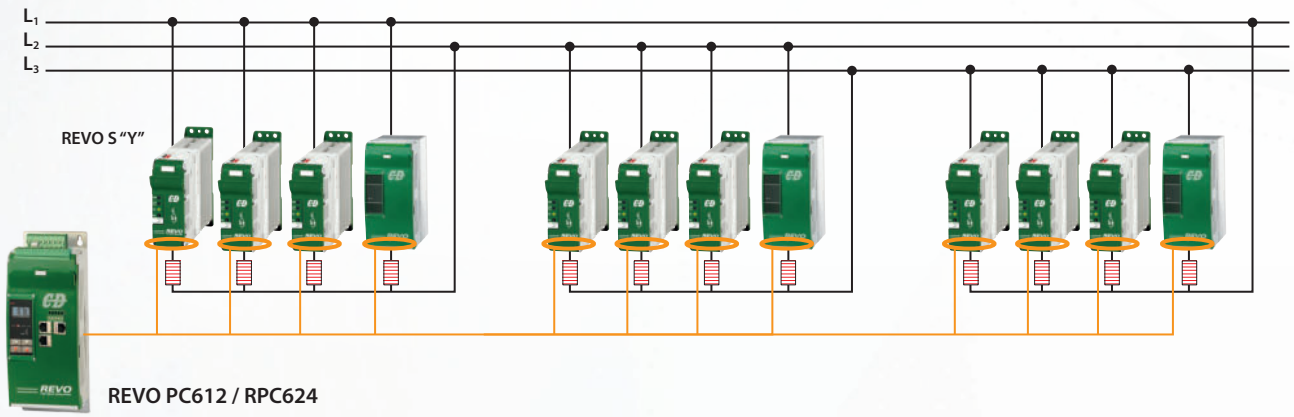
FEEDBACK (Control Mode)	13	
Description	cod	note
No Feedback	1	
Power	2	

APPROVALS	14	
Description	cod	note
CE for European market	1	
CE + cUL (pending)	L	

MANUAL	15	
Description	cod	note
None	0	
Italian	1	
English	2	
German	3	
French	4	

VERSION	16	
Description	cod	note
Version 2	2	

Connection example



RPC412 / RPC424
up to 24 1PH channel balanced on three phases
CONNECTION PHASE TO NEUTRAL

REVO PC	1	2	3	4	5	6		7	8	9	10	11	12	13	14	15	16
ORDER CODE	R	P	C	_	_	_	-	_	_	_	_	_	_	_	_	_	_

CONNECTION	4	
Description	cod	note
F1-N; F2-N; F3-N All the 1PH channel can be balanced on the three phases Phase to Neutral	4	

CHANNELS	5	6	
Description	cod		note
12 channel REVO PC to drive 12 REVOS-1PH Max with Random Firing	1	2	
24 channel REVO PC to drive 24 REVOS-1PH Max with Random Firing	2	4	

One Current Sensor Input for each channel	7	8	9	
Description	cod			note
Current Sensor is included and integrated with REVO S 1PH units with "Y" Option	0	0	0	

COMMUNICATION	10	
Description	cod	note
Ethernet Port, Modbus TCP, Modbus RTU and CD Bus	1	
Profibus-DP® Port, Modbus TCP, Modbus RTU and CD Bus (with external module) ***on request only***	4	
Ethernet Port ProfiNet, Modbus TCP, Modbus RTU and CD Bus	5	
Ethernet Port Ethernet IP, Modbus TCP, Modbus RTU and CD Bus	7	

Aux Voltage to be coupled with an external transformer	11	
Description	cod	note
24Vdc	4	

FIRING	12	
Description	cod	note
Half Cycle at 50% power demand	1	
One Cycle at 50% power demand	2	

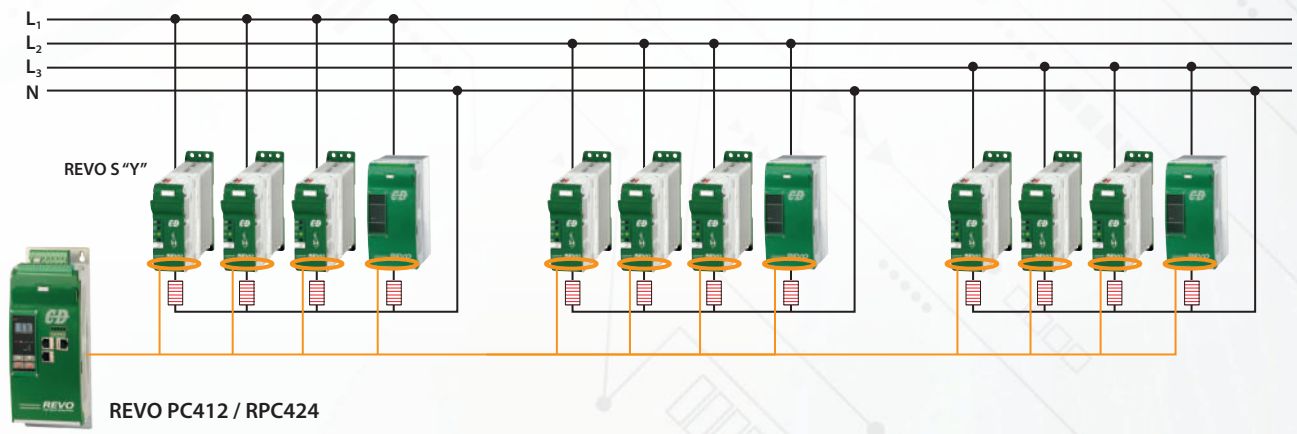
FEEDBACK (Control Mode)	13	
Description	cod	note
No Feedback	1	
Power	2	

APPROVALS	14	
Description	cod	note
CE for European market	1	
CE + cUL (pending)	L	

MANUAL	15	
Description	cod	note
None	0	
Italian	1	
English	2	
German	3	
French	4	

VERSION	16	
Description	cod	note
Version 2	2	

Connection example



RPC 2
Three-phase system regulated on two legs
STAR WITHOUT NEUTRAL OR CLOSE DELTA CONNECTION

REVO PC	1	2	3	4	5	6		7	8	9	10	11	12	13	14	15	16
ORDER CODE	R	P	C	_	_	_	-	_	_	_	_	_	_	_	_	_	_

CHANNELS	4	5	6	
Description	cod			note
REVO-PC to drive N°4 of 3 Phase Loads with two legs (2PH) N°8 SSR output to drive N°8 REVO S 1PH	2	0	4	
REVO-PC to drive N°8 of 3 Phase Loads with two legs (2PH) N°16 SSR output to drive N°16 REVO S 1PH	2	0	8	

CURRENT SENSOR INPUT	7	8	9	
Description N°3 Current Sensor Input for each three phase channel are required. Current Sensor is included and integrated with REVO S 1PH units with "Y" Option.	cod			note
For 2PH control N°2 REVO S 1PH units with "Y" option are required + an additional Current Transformer	See CT Table			

COMMUNICATION	10	
Description	cod	note
Ethernet Port, Modbus TCP, Modbus RTU and CD Bus	1	
Profibus-DP® Port, Modbus TCP, Modbus RTU and CD Bus (with external module) ***on request only***	4	
Ethernet Port ProfiNet, Modbus TCP, Modbus RTU and CD Bus	5	
Ethernet Port Ethernet IP, Modbus TCP, Modbus RTU and CD Bus	7	

Aux Voltage to be coupled with an external transformer	11	
Description	cod	note
24Vdc	4	

FIRING	12	
Description	cod	note
One Cycle at 50% power demand	2	

FEED BACK (Control Mode)	13	
Description	cod	note
No Feedback	1	
Power	2	

APPROVALS	14	
Description	cod	note
CE for European market	1	
CE + cUL (pending)	L	

MANUAL	15	
Description	cod	note
None	0	
Italian	1	
English	2	
German	3	
French	4	

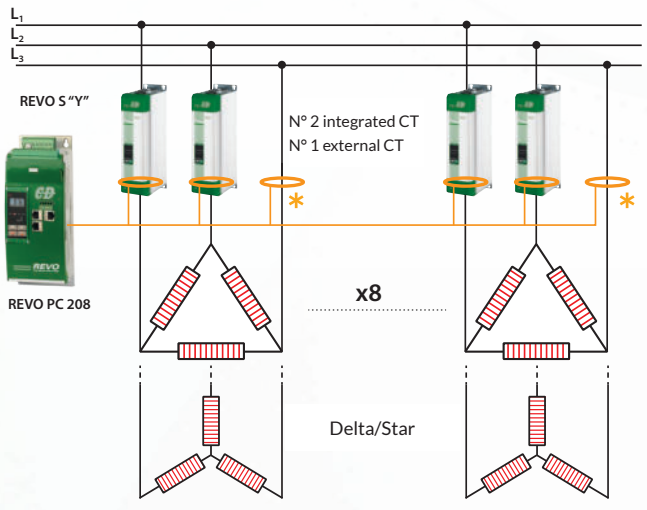
VERSION	16	
Description	cod	note
Version 2	2	

CT for the third uncontrolled phase

MANDATORY *

External current sensor					
Description	**REVO S size**	cod	**Description**	**REVO S size**	cod
50/0,05	30-40A	000	200/0,05	150-200A	004
75/0,05	60A	001	250/0,05	210A	005
100/0,05	90A	002	400/0,05	300-400A	006
150/0,05	120A	003	800/0,2	500-800A	007

Connection example



RPC 3
Three-phase system regulated on three legs
STAR + NEUTRAL CONNECTION

REVO PC	1	2	3	4	5	6		7	8	9	10	11	12	13	14	15	16
ORDER CODE	R	P	C	_	_	_	-	_	_	_	_	_	_	_	_	_	_

CHANNELS	4	5	6	
Description	cod			note
REVO-PC to drive N°4 of 3 Phase Loads with three legs (3PH) N°12 SSR output to drive N°12 REVO S 1PH	3	0	4	
REVO-PC to drive N°8 of 3 Phase Loads with three legs (3PH) N°24 SSR output to drive N°24 REVO S 1PH	3	0	8	

CURRENT SENSOR INPUT	7	8	9	
Description	cod			note
N°3 Current Sensor Input for each three phase channel are required.	0	0	0	
Current Sensor is included and integrated with REVO S 1PH units with "Y" Option.				

COMMUNICATION	10	
Description	cod	note
Ethernet Port, Modbus TCP, Modbus RTU and CD Bus	1	
Profibus-DP® Port, Modbus TCP, Modbus RTU and CD Bus (with external module) ***on request only***	4	
Ethernet Port ProfiNet, Modbus TCP, Modbus RTU and CD Bus	5	
Ethernet Port Ethernet IP, Modbus TCP, Modbus RTU and CD Bus	7	

Aux Voltage to be coupled with an external transformer	11	
Description	cod	note
24Vdc	4	

FIRING	12	
Description	cod	note
Half Cycle (only with neutral)	1	
One Cycle at 50% power demand	2	

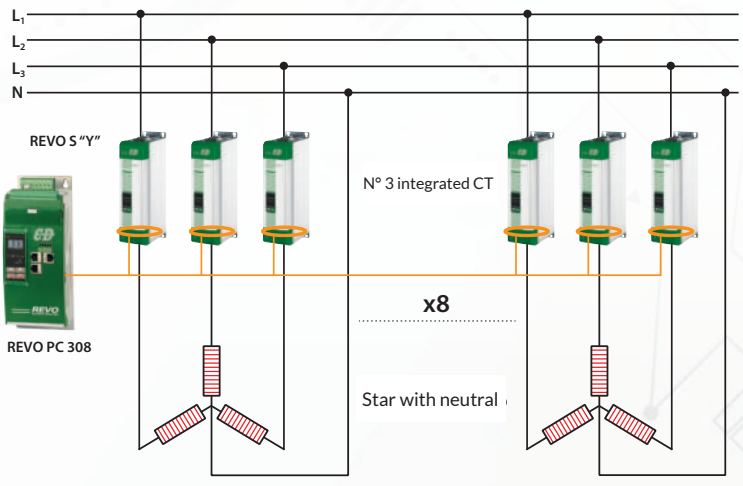
FEED BACK (Control Mode)	13	
Description	cod	note
No Feedback	1	
Power	2	

APPROVALS	14	
Description	cod	note
CE for European market	1	
CE + cUL (pending)	L	

MANUAL	15	
Description	cod	note
None	0	
Italian	1	
English	2	
German	3	
French	4	

VERSION	16	
Description	cod	note
Version 2	2	

Connection example

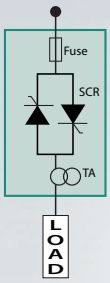


Codice TA

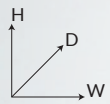
External current sensor

Description	REVO S size	cod	Description	REVO S size	cod
50/0,05	30-40A	000	200/0,05	150-200A	004
75/0,05	60A	001	250/0,05	210A	005
100/0,05	90A	002	400/0,05	300-400A	006
150/0,05	120A	003	800/0,2	500-800A	007

REVO S selection for REVO PC



"Y" version with integrated CT



SR6
H 121 x W 36 x D 185
0,61 kg

SR12
H 269 x W 93 x D 170
3,4kg

SR15
H 273 x W 93 x D 170
3,6 kg

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

S12
H 520 x W 137 x D 270
15 kg

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

REVO S 1PH	1	2	3	4	5	6		7	8	9	10	11	12	13	14	15	16
ORDER CODE	R	S	1	_	_	_	-	_	_	_	_	_	Y	_	_	_	_

CURRENT			4	5	6	
Description	Size 480/600V	Size 690V	cod			note
30A	SR3 / IFH=SR6	--	0	3	0	
35A	SR3 / IFH=SR6	--	0	3	5	
40A	SR3 / IFH=SR6	--	0	4	0	
60A	SR12	S11	0	6	0	
90A	SR15	S11	0	9	0	
120A	SR15	S11	1	2	0	
150A	SR15	S11	1	5	0	
180A	SR15	S11	1	8	0	
210A	SR15	S11	2	1	0	
300A	S12	S12	3	0	0	
400A	S12	S12	4	0	0	
500A	S12	S12	5	0	0	
600A	S12	S12	6	0	0	
700A	S12	S12	7	0	0	
800A	S15	S15	8	0	0	1

MAX VOLTAGE	7	
Description	cod	note
480V	4	
600V	6	
690V	7	2

VOLTAGE SUPPLY AUX		8	
≤ 210A		cod	note
No Aux		0	
≥ 300A			
Main Supply Voltage	Aux Voltage Range		
100/120Vac	90÷135Vac	1	3
200/208/230/240Vac	180÷265Vac	2	3
277Vac	238÷330Vac	3	3
380/415/480Vac	342÷528Vac	5	3
600Vac	540÷759Vac	6	3
690Vac	540÷759Vac	7	3

INPUT	9	
Description	cod	note
SSR "Y" to connect with REVO PC	S	

FIRING	10	
Description	cod	note
Zero Crossing	Z	
Random Firing	R	4

CONTROL MODE	11	
Description	cod	note
Open Loop	0	

FUSES & OPTION	12	
30-40A	cod	note
Extrarapid fuse + fuse holder + integrated CT	Y	
60-800A		
Extrarapid fixed fuses + integrated CT	Y	

FAN VOLTAGE	13	
Description	cod	note
No fan < 90A	0	
Fan 115Vac ≥ 90A	1	
Fan 230Vac ≥ 90A Standard	2	
Fan 24Vdc ≥ 90A	3	

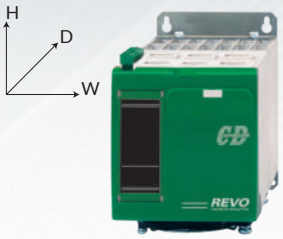
APPROVALS	14	
Description	cod	note
CE for European market	0	
CE + cUL	L	1

MANUAL	15	
Description	cod	note
None	0	
Italian	1	
English	2	
German	3	
French	4	

VERSION	16	
Description	cod	note
Standard version with CT output	1	

Note 1: UL option (not cUL) for 800A units **Note 2:** Available in units ≥60A, 690V units are available with CE only
Note 3: Load voltage must be included in Selected Auxiliary Voltage Range for units ≥300A
Note 4: With 690V the firing is random

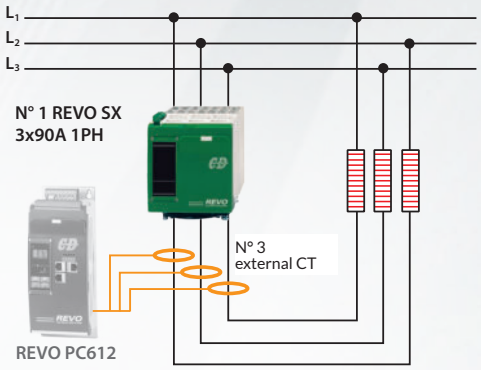
REVO SX 1PH Multichannel Unit for REVO PC



SR25

H 180 x W 116 x D 183 - 2,35 kg

"Y" version
with Current
transformer (CT)



REVO SX	1	2	3	4	5	6		7	8	9	10	11	12	13	14	15	16
ORDER CODE	R	S	X	_	_	_	-	_	_	_	_	_	_	_	_	_	_

NUMBER OF ZONES X CURRENT RATING	4	5	6	
Description	cod			note
2 zones 50A each	2	5	0	
2 zones 60A each	2	6	0	
2 zones 75A each	2	7	5	
2 zones 90A each	2	9	0	
3 zones 50A each	3	5	0	
3 zones 60A each	3	6	0	
3 zones 75A each	3	7	5	
3 zones 90A each	3	9	0	

MAX VOLTAGE	7	
Description	cod	note
480V	4	
600V	6	

VOLTAGE SUPPLY AUX	8	
Description	cod	note
No Auxiliary Voltage	0	

INPUT	9	
Description	cod	note
SSR "Y"to connect with REVO PC	S	

FIRING	10	
Description	cod	note
Zero Crossing	Z	

CONTROL MODE	11	
Description	cod	note
Open Loop	0	

FUSES & OPTION	12	
Description	cod	note
Extrarapid fixed fuses + CT	Y	

FAN VOLTAGE	13	
Description	cod	note
Standard: fan 24Vdc	3	

APPROVALS	14	
Description	cod	note
CE for European market	0	

MANUAL	15	
Description	cod	note
None	0	
Italian	1	
English	2	
German	3	
French	4	

VERSION	16	
Description	cod	note
Version 1	1	

Operator panels

KP - User interface

The KP user interface is designed to be connected to a single unit via RS485. It can be connected to most units including REVO C, REVEX, REVO RT, REVO PN.
Parameters like power, current and alarms, and other operator functions can be read on the display.
Local/Remote, Up and Down and Function commands are also available.

	1	2	3	4		5	6		7	8	9	10	11	12	13	14	15	16
ORDER CODE	K	P	_	_	-	_	_	-	_	_	_	_	_	_	0	0	0	0

VERSION	3	4
Description	cod	
Operative Display for REVO C and REVEX Series	R	C
Operative Display for REVO PN	P	N
Operative Display for REVO RT	R	T

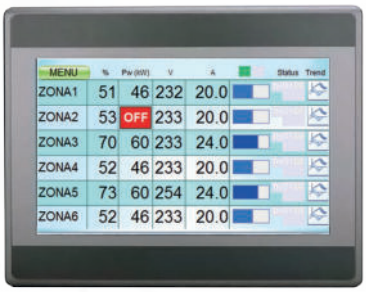
Screen size	5	6
Description	cod	
4.3” horizontal	H	4
4.3” vertical	V	4

COMMUNICATION	7	8	9	10
Description	cod			
MODBUS RTU	M	0	0	0

APPROVALS	11	12
Description	cod	
CE for European market	0	0

REVO KP3

The REVO KP3 touch panel is configured to communicate with the REVO C and REVEX series SSRs.
It can be connected to up to 6 zones and all the main parameters of the six zones can be displayed on one page. Each parameter can be recorded and it is possible to see the trend and history of the recorded variables in real time.



	1	2	3	4		5	6		7		8		9	10
ORDER CODE	R	K	P	_	-	_	_	-	_	-	_	-	_	_

VERSION	4
Description	cod
Version 3 for REVO C and REVEX	3

Screen size	5	6
Description	cod	
4.3”	0	4
7.0”	0	7
10.0”	1	0

COMMUNICATION	7	8
Description	cod	
MODBUS RTU + Ethernet	M	ETH

APPROVALS	9	10
Description	cod	
CE for European market	0	0
CE + UL	U	L

Customised panels are possible. Please contact our technical department for more information.

Communication modules

TU-RS485-TCP-3580MB
Modbus/TCP – Modbus RTU converter

TU-RS485-ETH-000000
Serial Ethernet – Datalogger converter

TU-RS485-PNT-067602
Profinet terminal unit

TU-RS485-EIP-067591
Ethernet/IP / Modbus Master converter

RS485 | TU-RS485-232-00Z107
RS232 converter

	1	2		3	4	5	6	7		8	9	10		11	12	13	14	15	16
ORDER CODE	T	U	-	R	S	4	8	5	-	_	_	_	-	_	_	_	_	_	_

COMMUNICATION				3	4	5	6	7
Modbus RTU				R	S	4	8	5

FIELDBUS, COMMUNICATION OR OTHER FUNCTIONS		8	9	10		11	12	13	14	15	16
Modbus TCP Protocol Converter	-	T	C	P	-	3	5	8	0	M	B
Modbus TCP, Modbus Slave, IO, Data Logger, Logic	-	E	T	H	-	0	0	0	0	0	0
Profinet	-	P	N	T	-	0	6	7	6	0	2
Ethernet IP	-	E	I	P	-	0	6	7	5	9	1
RS232	-	2	3	2	-	0	0	Z	1	0	7

Features comparison

		BASIC PRODUCTS WITHOUT COMMUNICATION			UNIVERSAL
	DESCRIPTION	REVO S 1PH	REVO S 2PH	REVO S 3PH	REVEX 1PH
	CODE	RS1	RS2	RS3	RX1
MAIN VOLTAGE	Max voltage 480V	●	●	●	●
	Max voltage 600V	●	●	●	●
	Max voltage 690V (1)	●	●	●	
LOAD TYPE	Single phase	●			●
	3 phase load star no neutral or delta		●	●	
	3 phase load star with neutral			●	
	3 phase load open delta			●	
INPUT	SSR 4:30VDC	●	●	●	●
	4:20 mA	O	O	O	●
	0:10 Vdc	O	O	O	●
	Potentiometer	O	O	O	●
FIRING	Zero Crossing	●	●	●	●
	Half Cycle				●
	Single Cycle				●
	Burst Firing				●
	Burst Firing simplified 4-8-16 Cycles at 50% (2)	●	●	●	●
	Delayed triggering				●
	Phase Angle				●
	Soft Start				●
CONTROL MODE	No Feed Back	●	●	●	●
	Voltage				●
	Voltage Square				●
	Current				●
	Current Square				●
	Power Vxl				●
	Transfer from V to Vxl or I to Vxl				O
OPTION	Current Limit				●
	Heater Break - HB Alarm	O	O	O	●
	Logging (Data Logger)				
	Totalizer (Energy)				
TOOLS	Smartphone App (free)				
	Software PC Configurator (Line analizer free)				●
COMMUNIC.	Bluetooth				
	N°1 Modbus® RTU				●
	N°2 Modbus® RTU				O
	N°1 Profibus DP + N°1 Modbus® RTU				O
	N°1 Profinet® + N°1 Modbus® RTU				O
	N°1 Modbus® TCP + N°1 Modbus® RTU				O

	DESCRIPTION	REVO S 1PH	REVO S 2PH	REVO S 3PH	REVEX 1PH
CURRENT	Size/Approvals	Size/Approvals	Size/Approvals	Size/Approvals	Size/Approvals
	30	SR3-SR6/CE-cUL	SR4-SR7/CE-cUL	SR5-SR8/CE-cUL	SR6/CE
	35	SR3-SR6/CE-cUL	SR4-SR7/CE-cUL	SR5-SR8/CE-cUL	SR6/CE
	40	SR3-SR6/CE-cUL	SR4-SR7/CE-cUL	SR5-SR8/CE-cUL	SR6/CE
	60	SR12/CE-cUL (3)	F/SR15/CE-cUL (3)	F/SR16/CE-cUL (3)	SR24/CE
	75		F/SR15/cUL	F/SR16/cUL	
	90	F/SR15/CE-cUL (3)	F/SR15/CE (3)	F/SR16/CE (3)	F/SR24/CE
	120	F/SR15/CE-cUL (3)	F/SR16/CE-cUL (4)	F/SR17/CE-cUL (4)	F/SR15/CE
	150	F/SR15/CE-cUL (3)	F/SR16/CE-cUL (4)	F/SR17/CE-cUL (4)	F/SR15/CE
	180	F/SR15/CE-cUL (3)	F/SR16/CE-cUL (4)	F/SR17/CE-cUL (4)	F/SR15/CE
	210	F/SR15/CE-cUL (3)	F/SR16/CE-cUL (4)	F/SR17/CE-cUL (4)	F/SR15/CE
	280	F/S10/CE	F/2xS10/CE		F/S10/CE
	300	F/S12/CE-cUL	F/S14/CE-cUL	F/S14/CE-cUL	
	350			F/S14/CE-cUL	
	400	F/S12/CE-cUL	F/S14/CE-cUL	F/S14/CE-cUL	
	450		F/S14/CE-cUL	F/S14/CE-cUL	
	500	F/S12/CE-cUL	F/S14/CE-cUL	F/S14/CE-cUL	
	600	F/S12/CE-cUL	F/S14/CE-cUL		
	700	F/S12/CE-cUL	F/S14/CE-cUL		
	800	F/S15/CE	F/S16/CE	F/S17/CE	
	1100				
	1400				
	1600				
	1800				
	2100				

● STANDARD ○ OPTION F: Fan Air Cooling; any letter before SIZE: Natural Air Cooling (1) cUL® Approval is for Voltage ≤ 600V

thyristor unit SINGLE LOOP

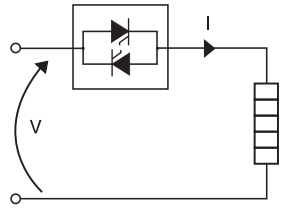
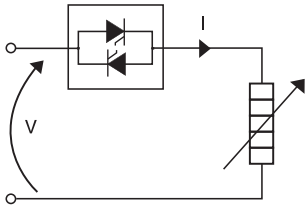
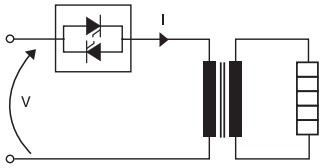
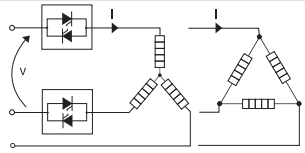
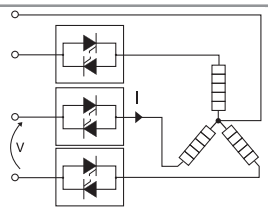
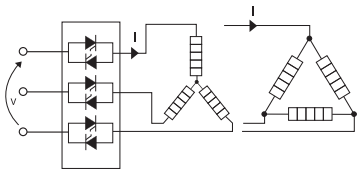
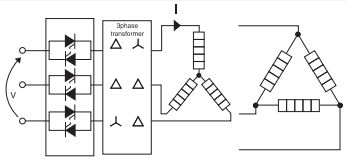
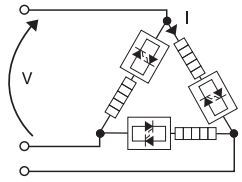
THYRISTOR UNITS FULLY CONFIGURATION WITH COMMUNICATION						
REVEX 2PH	REVEX 3PH	REVO C 1PH	REVO C 2PH	REVO C 3PH	DESCRIPTION	
RX2	RX3	RC1	RC2	RC3	CODE	
●	●	●	●	●	Max voltage 480V	MAIN VOLTAGE
●	●	●	●	●	Max voltage 600V	
		●	●	●	Max voltage 690V (1)	
		●			Single phase	LOAD TYPE
●	●		●	●	3 phase load star no neutral or delta	
	●			●	3 phase load star with neutral	
	●	● (5)			3 phase load open delta	
●	●	●	●	●	SSR 4:30VDC	INPUT
●	●	●	●	●	4:20 mA	
●	●	●	●	●	0:10 Vdc	
●	●	●	●	●	Potentiometer	
●	●	●	●	●	Zero Crossing	FIRING
		●			Half Cycle	
		●			Single Cycle	
●	●	●	●	●	Burst Firing	
●					Burst Firing simplified 4-8-16 Cycles at 50% (2)	
		●		●	Delayed Triggering	
		●		●	Phase Angle	
		●		●	Soft Start	
●	●	●	●	●	No Feed Back	CONTROL MODE
●	●	●	●	●	Voltage	
●	●	●	●	●	Voltage Square	
●	●	●	●	●	Current	
●	●	●	●	●	Current Square	
●	●	●	●	●	Power Vxl	
O	O	●	●	●	Transfer from V to Vxl or I to Vxl	
		O		O	Current Limit	OPTION
●	●	O	O	O	Heater Break - HB Alarm	
		O	O	O	Logging (Data Logger)	
		O	O	O	Totalizer (Energy)	
		●	●	●	Smartphone App (free)	TOOLS
●	●	●	●	●	Software PC Configurator (Line analizer free)	
		O	O	O	Bluetooth	COMMUNIC.
●	●	●	●	●	N°1 Modbus® RTU	
O	O	O	O	O	N°2 Modbus® RTU	
O	O	O	O	O	N°1 Profibus DP + N°1 Modbus® RTU	
O	O	O	O	O	N°1 Profinet® + N°1 Modbus® RTU	
O	O	O	O	O	N°1 Modbus® TCP + N°1 Modbus® RTU	

REVEX 2PH	REVEX 3PH	REVO C 1PH	REVO C 2PH	REVO C 3PH	DESCRIPTION
Size/Approvals	Size/Approvals	Size/Approvals	Size/Approvals	Size/Approvals	Size/Approvals
SR9/CE	SR10/CE	SR9/CE	SR10/CE-cUL	SR11/CE-cUL	30
SR9/CE	SR10/CE	SR9/CE-cUL	SR10/CE-cUL	SR11/CE-cUL	35
SR9/CE	SR10/CE	SR9/CE-cUL	SR10/CE-cUL	SR11/CE-cUL	40
SR25/CE	F/SR25/CE (6)	SR12/CE-cUL (3)	SR13/CE-cUL (3)	SR14/CE-cUL (3)	60
					75
F/SR25/CE	F/SR25/CE (6)	F/SR15/CE-cUL (3)	F/SR16/CE-cUL (3)	F/SR17/CE-cUL (3)	90
F/SR16/CE	F/RS17/CE	F/SR15/CE-cUL (3)	F/SR16/CE-cUL (4)	F/SR17/CE-cUL (4)	120
F/SR16/CE	F/RS17/CE	F/SR15/CE-cUL (3)	F/SR16/CE-cUL (4)	F/SR17/CE-cUL (4)	150
F/SR16/CE	F/RS17/CE	F/SR15/CE-cUL (3)	F/SR16/CE-cUL (4)	F/SR17/CE-cUL (4)	180
F/SR16/CE	F/RS17/CE	F/SR15/CE-cUL (3)	F/SR16/CE-cUL (4)	F/SR17/CE-cUL (4)	210
F/2xS10/CE					280
		F/S12/CE-cUL	F/S14/CE-cUL	F/S14/CE-cUL	300
					350
		F/S12/CE-cUL	F/S14/CE-cUL	F/S14/CE-cUL	400
			F/S14/CE-cUL	F/S14/CE-cUL	450
		F/S12/CE-cUL	F/S14/CE-cUL	F/S14/CE-cUL	500
		F/S12/CE-cUL	F/S14/CE-cUL	F/S17/CE-UL	600
		F/S12/CE-cUL	F/S14/CE-cUL	F/S17/CE-UL	700
		F/S15/CE-UL	F/S16/CE-UL	F/S17/CE-UL	800
		F/SR18/CE-UL	F/SR19/CE-UL	F/SR20/CE-UL	1100
		F/SR21/CE-UL	F/SR22/CE-UL	F/SR23/CE-UL	1400
		F/SR21/CE-UL	F/SR22/CE-UL	F/SR23/CE-UL	1600
		F/SR21/CE-UL	F/SR22/CE-UL	F/SR23/CE-UL	1800
		F/SR21/CE-UL	F/SR22/CE-UL	F/SR23/CE-UL	2100

CURRENT

(2) It's possible just using Analog Input Ex. 4:20mA (3) Size S11 at 690V (no cUL) (4) Size S13 at 690V (no cUL) (5) Use n° 3 1PH units (6) from 2021 version

Application guide

APPLICATION GUIDE	LOAD TYPE	MODEL	CURRENT RANGE	N. OF UNITS	PHASE CTRL
	Normal resistance infrared medium and long waveform	REVO SSR	It depends on heat sink	1	1
		REVO S 1PH	30-800A	1	1
		REVO C 1PH	30-2100A	1	1
	Quartz lamp infrared short waveform	REVEX 1PH	30-280A	1	1
		REVO C 1PH	30-2100A	1	1
	Molibdenum, Tungstenum, Kanthal® super, Platinum	REVEX 1PH	30-280A	1	1
		REVO C 1PH	30-2100A	1	1
	Silicon carbide elements	REVO S 1PH	30-800A	1	1
		REVEX 1PH	30-280A	1	1
		REVO C 1PH	30-2100A	1	1
	Transformers coupled with normal resistance	REVEX 1PH	30-280A	1	1
		REVO C 1PH	30-2100A	1	1
	Transformers coupled with cold resistances (Kanthal® super)	REVEX 1PH	30-280A	1	1
		REVO C 1PH	30-2100A	1	1
	Normal Resistance	REVO S 2PH	30-800A	1	2
		REVEX 2PH	30-280A	1	2
		REVO C 2PH	30-2100A	1	2
	Normal Resistance	REVO S 3PH	30-500A	1	3
		REVEX 3PH	30-210A	1	3
		REVO C 3PH	30-2100A	1	3
	Silicon carbide elements	REVO C 3PH	60-2100A	1	3
		REVEX PA	35-90A		
	Molibdenum, Tungstenum, Kantal® Super, Platinum, Quartz lamp infrared short waveform	REVO C 3PH	60-2100A	1	3
	Three phase transformer	REVO C 3PH	60-2100A	1	3
		REVEX PA	35-90A		
	Three phase normal load resistance with open delta connection	REVO S 3PH	30-800A	1	3
		REVO C 1PH	30-2100A	3	3
	Cold resistance	REVO C 1PH	30-2100A	3	3

CONTROL MODE: V = Voltage feedback V^2 = Square voltage feedback VxI = Power feedback I = Current feedback

for thyristor unit SINGLE LOOP

SUGGESTED FIRING MODE FOR YOUR APPLICATIONS						OTHER FEATURES				SIZING		NOTE
ZC	HC	SC	BF	BF Simplified	S+BF	DT	PA	CL	Control	V	I	
•										V	$\frac{P}{V}$	For general resistance applications with low variations in temperature and age. For low inertia loads use Single Cycle (SC) or Phase Angle (PA). For Infrared Short it's suggested to use Half Cycle that is a very Fast Firing
•				•								
•				•								
	•	•							V^2			
	•	•					•					
							•	•	I^2	V	$\frac{P}{V}$	These resistances change with temperature but have low variations with age. Starting current with cold elements can be 16 times nominal current (Kanthal® super). Infrared lamp short waveform can reach 8 time nominal current.
							•	•				
			•						V to VxI	V	$\frac{P}{V}$	These resistances change value with temperature and age and value at the end of element life is 4 times the initial value. Constant power regulation is necessary with V to VxI Transfer.
			•				•					
			•				•					
						•			VxI	V	$\frac{P}{V\cos\phi}$	Transformers and inductors have inrush current on start up. Phase Angle plus Soft Start and current limit are required. To switch the transformer ON-OFF, use DT firing that will automatically switch ON-OFF when current value is at zero.
						•						
							•	•	I^2	V	$\frac{P}{V\cos\phi}$	Use Phase Angle + Current Limit
							•	•				
•				•						V	$\frac{P}{1.73V}$	REVO S, REVEX and REVO C-2PH are suitable to control resistive loads with delta or star connection without neutral.
			•						VxI	V	$\frac{P}{1.73V}$	
			•									
•				•						$\frac{V}{1.73}$	$\frac{P}{1.73V}$	Three phase load with star plus neutral connection must be controlled on the three phases.
			•						VxI			
			•									
							•		V to VxI	V	$\frac{P}{1.73V}$	On three phase silicon carbide elements VxI feedback is suggested to have a constant power control. This is necessary to compensate resistance change with temperature and age. Resistance value at the end of element life is 4 times the original value. With REVO C use BF firing and Power Limit.
							•	•	I^2			These resistances change with temperature but have low variations with age. Start up current with cold elements can be many times the nominal current value. In this case it is necessary to use Phase Angle + Current Limit.
							•	•	I^2	V	$\frac{P}{1.73V\cos\phi}$	Three phase REVO C units are specially designed to drive three phase transformers coupled on secondary with normal or special resistive loads.
•				•						V	$\frac{P}{3V}$	Open delta can be driven by three phase unit.
							•	•	I^2			
							•	•	I^2	V	$\frac{P}{3V}$	

Firing = BF Simplified 4-8-16 Cycles at 50% Power Demand with Analog Input only HC: Half Cycle SC: Single Cycle

At your service worldwide

Our sales and service network ensures worldwide distribution and support of our products.

Our locations

Headquarter and Production
Legnano (MI), Italy

CD Automation UK Ltd.
East Sussex, United Kingdom

M/s Toshcon CD Automation Pvt. Ltd.
Ajmer, India

AUTOMATION

Controllers, Drives & Automation

Products made in Italy

Worldwide distribution and service

CD Automation Country Locations

CD Automation, a leader in the control of heating elements, has been offering top quality solutions in the field of industrial temperature control for over thirty years. The company supplies thyristor power units and SCR power controllers, making it the leading partner in the industry.

CD Automation offers a support service for the development, optimisation, sustainability and energy efficiency of thermal processes, improving plant power quality.

Our team will be at your disposal to deepen, analyse and optimise your applications.

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