



# REVO

THE THYRISTOR EVOLUTION  
From 3,5A to 2700A



- Intelligent Thyristor Units
  - EMC and CE Marked
  - RS485 Comm. STD
  - cUL Approved
  - Diagnostic





**CD Automation** was founded in 1987 with the clear strategy of becoming a leading supplier of quality industrial automation products to the Italian market. Key to this success was the formation of a sales team educated from a strong technical background. The philosophy was simple; provide product & application experts able to work in partnership with the customer to find the right solution.

In 1990 **CD Automation** began its development of thyristor power controllers and quickly became the world wide market leader in using microprocessor based technology including RS485 communication.



**CD Automation** now boasts the most comprehensive power control device range on the market today. The extensive range is capable of accurately controlling a wide spectrum of electrical loads up to 3000kW, from simple single-phase heaters up to complex high temperature-coefficient three-phase load.



**TECHNICAL SERVICE**

**CD Automation** has invested heavily in computerised testing equipment & state-of-the-art production equipment. All products are individually testing including full functional, to improve quality and product reliability. Our help desk service is available 10 hours per day with ex-stock delivery for spare parts. Remote service via Internet is also available for thyristor units with RS485 communications.

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## Is it now time for innovation?

The industrial world has changed beyond recognition yet the temperature control zone has been left almost un-touched, using the same wiring and mounting methods for the controller, solid state relay, fuse & fuse holder, current transformer etc.

Our idea is bring the temperature control the 21st Century.

The new REVO is THE solution for today's modern industrial sector.



presents

**REVO**  
THE RELAY EVOLUTION

## What REVO offers?

- Modularity of its components.
- Configurability that allows increased product performance.
- REVO's 'value-add' capable of saving 50% of labour and space.
- Innovation based on knowledge of process.
- International assistance from around the world via trained distributors and joint venture multi-national companies.
- Dynamic organization with total customer flexibility at the core of its philosophy.

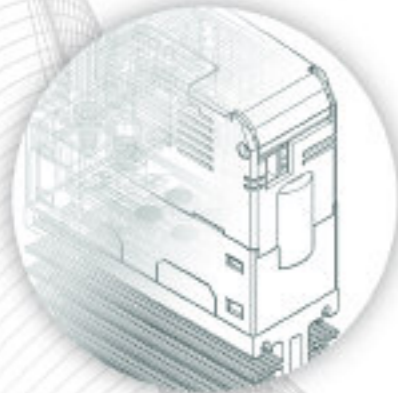
## REVO is a system not a simple product

- Includes all key components of a typical temperature control zone.
- Modular system that is fully configurable satisfying the most complex applications.
- Wiring & mounting accessories included.
- Designed as a total block of automation.
- Touch panel or PC communications capability as standard.
- Multi power management (MPM) to reduce total peak current, optimising power factor & saving costs.





# Why choose REVO?



## A choice to be made!! We designed a superior product

With the market place becoming more competitive we had a choice to make. Design a product a little cheaper but possibly not as good, or design a new innovative product where its added value is clear for all to see. We chose the latter, in line with our long-term philosophy.

## No compromise.

- Heatsink and thyristor junctions generously sized to guarantee a long life for the thyristor unit.
- Units working at low junction thyristor temperature with 20% margin on max temperature
- Strong connection design between the block terminal and thyristor semiconductor connection allows for generous sizing.
- All the copper connections treated against oxidation.
- Rugged construction for electronic and plastic parts.
- Protection against over voltage.



## Have a closer look.

Open a CD Automation thyristor unit and any of our competitors, you will discover the difference and see why we can offer a longer life warranty (see below tab.)

Estimated Powercycles of AL wire bonded dies.

		Estimated Powercycles of AL wire bonded dies.				
		Tj max \°C	110°C	120°C	130°C	140°C
dT		100°C				
Tj start \°C	80°C	248.000				
	70°C	320.200	110.000			
	60°C	464.000	145.500	51.100		
	50°C	782.000	216.000	69.100	24.800	
	40°C	1.600.000	372.000	105.000	34.100	12.500
SSR	30°C	4.800.000	793.000	184.000	52.500	17.500
	Single Cycle	20°C	25.400.000	2.400.000	400.000	94.000
			12.800.000	1.200.000	209.000	50.000
				6.700.000	645.000	112.000
					3.600.000	353.000
						2.000.000

### CD AUTOMATION

CD Automation predicted life working in Single Cycle.

### CD AUTOMATION

CD Automation predicted life working in Single Cycle and ZC Firing.

### COMPETITORS

Predicted life of majority of competitors working at 130°C with SSR Input and ZC firing.



## Save space = Save money

With a reduction of 50% space, it's easy to save hundreds off the cabinet price. The difference between conventional mounting and REVO is shown on page 36.

### Left Side (Traditional)

Mounted on the baseplate are a Fuse & Fuseholder, 40A Solid State Relay and a Current Transformer.

### Right Side (Innovative)

Mounted on the same baseplate are two REVO 40A units, each having the same components as the traditional unit. This simple example demonstrates a 50% saving of panel space.

## An innovative process solution that will dramatically save wiring & labour time.

The new REVO S family can be put together with little technical knowledge.

- SSR Solid State Relay with Zero Crossing.
- SSR Solid State Relay + Fuse & Fuse Holder.
- SSR Solid State Relay + Fuse & Fuse Holder + Current Transformer.
- Different versions with or without heatsink.
- Single and three phase thyristor units.

## The new REVO M = REVO S + Drive M

The addition of Drive M transforms a simple unit into a sophisticated unit capable of the following additional features.

- Universal inputs accepting all standard signals.
- Universal firing including Zero Crossing, Burst Firing Single Cycle, Delayed Triggering and Phase Angle.
- Universal Feed Back (Voltage, Current and Power).
- RS485 Communication.

### OPTIONS

- Heater Break Alarm for partial or total load failure.
- Thyristor short circuit failure.

## INTEGRATED CONTROL ZONE - REVO TC

This Solution is known as Integrated Control Zone and includes:

### Temperature Controller - Fuse+Fuse Holder Current Transformer - Solid State relay

Key benefits include:

- Space reduction of 50%, labour reduction of 2 hours per control zone, single loop integrity and high reliability.
- If one zone fails a non-technical user can substitute a second within minutes.
- If a PLC is used you must have an expert to service your system.

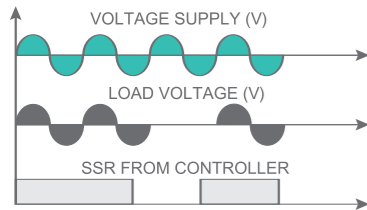




## Glossary

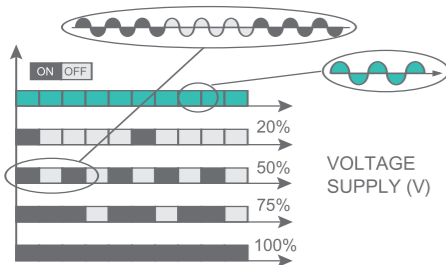
### Zero Crossing ZC

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.



### Burst Firing BF

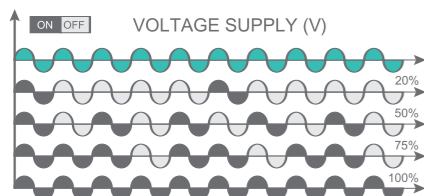
This firing is performed digitally within the thyristor unit at zero volts, producing no EMC interference. Analogue input is necessary for BF and the number of complete cycles must be specified for 50% power demand. This value can be between 1 and 255 complete cycles, determining the speed of firing.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



Soft Start + Burst Firing now available as an option.

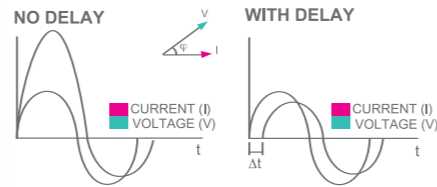
### Single Cycle SC

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.



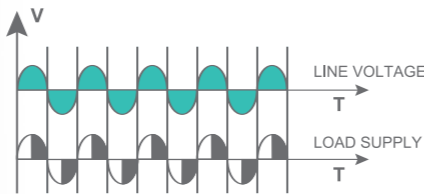
### Delayed Triggering DT

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.



### 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.



### 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 pre-set time, finishing at full conduction for the remainder of the ON period. Ideally used to switch small inductive loads, S+BF avoids current surge and minimizes electrical interference.

### Feedback/Control Mode

Supply voltage fluctuations changes the power to the load. To overcome this effect the voltage supplied to the load is measured and compared with the power demand from the controller. The error signal is used to automatically hold the power at the value requested.

Three types of control more are available:

Voltage Control Mode, where the input signal is proportional to the voltage output (voltage feedback).

Current Control Mode, where the input signal is proportional to the current output (current feedback).

Power Control Mode, where the input signal is proportional to the power output (power feedback).

As an option it is possible to transfer control mode from voltage to power via a simple digital command.

## What our Customers want?

They want a positive experience with our total solution, not just a cheap price!

CD Automation is confident of achieving this with...

### Knowledgeable Sales Team

We have a team of sales engineers focused on core business products only. An expert at no cost, not an engineer with a big catalogue and little product knowledge, will welcome customers. Easy access to engineers when you need a special performance project.



### Fast Service

Excellent pre sales and after sales service including engineering support.

### Easy to do business with us

Fast reaction to your enquiry, short lead times, timely production of order acknowledgement, invoices etc.

Catalogues & manuals of all our products plus configuration software, available free of charge from our web-site.

Our people are always welcoming to our customers.

APPLICATION GUIDE	LOAD TYPE	MODEL	CURRENT RANGE	N. OF UNITS	PHASE CONTROLLED	SUGGESTED FIRING MODE FOR YOUR APPLICATIONS					OTHER FEATURES				SIZING		NOTE
						ZC	SC	BF	BF Basic	S+BF	DT	PA	CL	Control	V	I	
	Normal Resistance Infrared Medium and long waveform	REVO SSR	It depends on heat sink	1	1	■									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).
		REVO S 1PH	30-700A	1	1	■			■								
CUSTOM 1PH		300-800A	1	1	■			■									
	Quartz lamp infrared short waveform	REVO M 1PH	35-700A	1	1		■	■				■		V <sup>2</sup>	V	$\frac{P}{V}$	
		REVO CL	35-700A	1	1							■	■	VxI			
	Molibdenum, Tungsten, Superkanthal, Platinum	REVO CL	35-700A	1	1							■	■	I	V	$\frac{P}{V}$	
	Silicon carbide elements	REVO M 1PH	35-700A	1	1			■						V to VxI	V	$\frac{P}{V}$	These resistances change value with temperature and age. The value at the end of element life can be 4 times the initial value. Constant power regulation is necessary with V to VxI Transfer.
REVO CL		35-700A	1	1								■					
	Transformers coupled with normal resistance	REVO M 1PH	35-700A	1	1						■			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.
	Transformers coupled with cold resistances (kanthal super)	REVO CL	35-700A	1	1							■	■	I	V	$\frac{P}{V\cos\phi}$	Use Phase Angle + Current Limit.
	Normal Resistance	REVO S 2PH	30-700A	1	2	■			■						V	$\frac{P}{1,73V}$	REVO M-2PH is suitable to control resistive loads with delta or star connection without neutral.
		REVO M 2PH	30-700A	1	2			■						V <sup>2</sup>	V	$\frac{P}{1,73V}$	
		CUSTOM 2PH	150 - 800A	1-2	2	■			■								
	Normal Resistance	REVO S 3PH	30-500A	1	3	■			■						$\frac{V}{1,73}$	$\frac{P}{1,73V}$	Three phase load with star plus neutral connection must be controlled on the three phases.
		REVO M 3PH	30-500A	1	3			■					V <sup>2</sup>				
		CUSTOM 3PH	150 - 800A	2-3	3	■			■								
	Silicon carbide elements	CD3000E 3PH MULTIDRIVE 3PH	35-500A 35-2700A	1	3							■		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 M use BF firing and Power Limit.
		REVO M 3PH	30-500A	1	3			■									
	Molibdenum, Tungsten Super Kantal Platinum, Quartz lamp infrared short waveform	CD3000E 3PH	35-500A	1	3							■	■	I			
		MULTIDRIVE 3PH	35-2700A	1	3							■	■	I			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.
	Three phase transformer	CD3000E 3PH	35-500A	1	3							■	■	V	V	$\frac{P}{1,73V\cos\phi}$	Three phase Multidrive and CD3000E are specially designed to drive three phase transformers coupled on secondary with normal or special resistive loads.
		MULTIDRIVE 3PH	35-2700A	1	3							■	■	V			
	Three phase normal load resistance with open delta connection	REVO S 3PH	30-500A	1	3	■			■					V	$\frac{P}{3V}$	Open delta can be driven by three phase unit or three one phase unit.	
		REVO M 3PH	30-500A	1	3			■					VxI				
		CUSTOM 3PH	150-800A	1	3	■			■								
	Cold resistance	REVO CL	30-700A	3	3							■	■	I	V		$\frac{P}{3V}$
		CD3000E	35-500A	1	3												

CONTROL MODE: V = Voltage feedback    V<sup>2</sup> = Square Voltage feedback    VxI = Power feedback    I = Current feedback

	DESCRIPTION	REVO CL	REVO SSR	REVO S - 1PH	REVO S - 2PH	REVO S - 3PH	REVO M - 1PH	REVO M - 2PH	REVO M - 3PH	CD3000E-2PH	CD3000E-3PH	MULTIDRIVE 1PH	MULTIDRIVE 2PH	MULTIDRIVE 3PH	REVO - TC1	REVO - TC2	REVO - TC3	CUSTOM-1PH	CUSTOM-2PH	CUSTOM-3PH			
	CODE	RCL	SSR	RS1	RS2	RS3	RM1	RM2	RM3	RE2	RE3	M1	M2	M3	RT1	RT2	RT3	C1	C2	C3			
VOLT.	MAX VOLTAGE 480V																						
	MAX VOLTAGE 600V																						
	MAX VOLTAGE 690V	> 280A		> 280A	> 280A	>= 225A	>= 400A	>= 400A	>= 250A														
LOAD TYPE	SINGLE PHASE																						
	3 PHASE LOAD STAR OR DELTA																						
	3 PHASE LOAD STAR WITH NEUTRAL																						
	3 PHASE LOAD OPEN DELTA																						
INPUT TYPE	SSR 4:30VDC																						
	4:20 mA		0	0	0	0												0	0	0			
	0:10 Vdc		0	0	0	0												0	0	0			
	10K Potentiometer																		0	0	0		
	COMMUNICATION COMMAND																		0	0	0		
FIRING	ZERO CROSSING																		(3)				
	SINGLE CYCLE																						
	BURST FIRING			0 (4)	0 (4)	0 (4)													0(4)	0(4)	0(4)		
	SOFT START + BURST FIRING																						
	PHASE ANGLE																						
	SOFT START + PHASE ANGLE																						
	DELAYED TRIGGERING + BURST																						
CONTROL MODE	VOLTAGE																						
	SQUARE VOLTAGE																						
	CURRENT																						
	VOLTAGE X CURRENT (POWER)																						
	VOLTAGE TO POWER TRANSFER																						
	EXTERNAL CONTROL MODE																						
	TEMPERATURE CONTROLLER																						
OPTION	INTERNAL CURRENT LIMIT	(1)									(1)	(1)		(1)									
	HEATER BREAK+SCR SHORT CIRCUIT	0	0	0	0	0	0	0	0						0	0	0	0	0	0			
	INTEGRATED FIXED FUSES	> 40A		> 40A	> 40A	> 40A	> 40A	> 40A	> 40A						> 40A	> 40A	> 40A						
	FUSE & FUSE HOLDER	=< 40A	=< 40A	=< 40A	=< 40A	=< 40A	=< 40A	=< 40A	=< 40A						=< 40A	=< 40A	=< 40A						
	FLAT WIRING TERMINAL		0 (2)	0 (2)	0 (2)	0 (2)									0 (2)	0 (2)	0 (2)						
COMM.	RS485 WITH MODBUS PROTOCOL																						
	PROFIBUS DP; CAN OPEN+ETHERNET	0					0	0	0	0	0	0	0	0	0	0	0						
	FRONTAL KEY PAD																						
	PC PROGRAMMABLE+USB\TTL Conv.																						
	REVO EASY																						
I/O	ANALOGUE INPUT/OUTPUT (5)	1/1					0/1	0/1	0/1	0/1	1/1	2/4	2/4	2/4									
	DIGITAL INPUT/OUTPUT	2/1					2/1	2/1	2/1	4/3	4/3	6/4	6/4	6/4									
CURRENT	<b>CURRENT</b>	<b>SIZE</b>	<b>SIZE</b>	<b>SIZE</b>	<b>SIZE</b>	<b>SIZE</b>	<b>SIZE</b>	<b>SIZE</b>	<b>SIZE</b>	<b>SIZE</b>	<b>SIZE</b>	<b>SIZE</b>	<b>SIZE</b>	<b>SIZE</b>	<b>SIZE</b>	<b>SIZE</b>	<b>SIZE</b>	<b>SIZE</b>	<b>SIZE</b>	<b>SIZE</b>			
	30		SR0.SR1	SR3.SR6	SR4.SR7	SR5.SR8		SR10	SR11						SR10	SR11							
	35	SR9		SR3.SR6	SR4.SR7	SR5.SR8	SR9	SR10	SR11	S9	S9		S13	S13	SR9	SR10	SR11						
	40	SR9		SR3.SR6	SR4.SR7	SR5.SR8	SR9	SR10	SR11						SR9	SR10	SR11						
	45									S9	S9		S13	S13									
	60	SR15		SR12	SR12	SR13	SR15	SR16	SR16						SR15	SR16	SR16						
	75									S9	S9		S13	S13									
	90	SR15		SR12	SR12	SR13	SR15	SR16	SR16						SR15	SR16	SR16						
	100									S9	S11		S13	S13									
	120	SR15		SR12	SR13	SR14	SR15	SR16	SR17						SR15	SR16	SR17						
	125									S9	S11		S13	S13									
	150	SR15		SR12	SR13	SR14	SR15	SR16	SR17	S9	S11		S13	S13	SR15	SR16	SR17		S28	S29			
	180	SR15		SR12	SR13	SR14	SR15	SR16	SR17						SR15	SR16	SR17						
	200									S9										S28			
	210	SR15		SR12	SR13	SR14	SR15	SR16	SR17						SR15	SR16	SR17						
	225					S13			S13		S13		S13	S13									
	280	S9		S9	S10		S9	S10		S14			S14										
	300					S14			S14		S14		S14		S14					S28	S28	S30	
	350					S14			S14		S14		S14		S14								
	400	S12		S12	S14	S14	S12	S14	S14	S14	S14		S14	S14	S14								
	450				S14	S14		S14	S14	S14	S14		S14	S14	S14						S29		
	500	S12		S12	S14	S14	S12	S14	S14	S14	S14		S14	S14	S14								
	550																				S28	S29	S30
	600	S12		S12	S14		S12	S14		S14			S14	S14	S14								
	700	S12		S12	S14		S12	S14		S14			S14	S14	S14								
	800																				S28	S29	S30
	850												S14	S14	S15								
	1000												S18	S16	S22								
	1400												S19	S17	S25								
	1500												S19	S17	S25								
1850												S20	S23	S26									
2000												S20	S23	S26									
2400												S21	S24	S27									
2700												S21	S24	S27									

Standard Option (1) Phase Angle only (2) Flat wiring available as option ≤ 40A (3) Random Firing at 690V

(4) 4-8-16 Cycles Simplified Burst Firing available with Analog Input only

(5) Main Analog Input not Included



SIZE AND DIMENSIONS

SIZE AND DIMENSIONS



**SR0** H 97 x W 36 x D 32 - 0,12kg.



**SR1** H 97 x W 36 x D 92 - 0,29kg.



**SR2** H 121 x W 36 x D 87 - 0,27kg.



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



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



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



**SR3** H 121 x W 36 x D 125 - 0,44kg.



**SR4** H 121 x W 72 x D 125 - 0,88kg.



**SR5** H 121 x W 108 x D 125 - 1,32kg.



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



**SR13** H 269 x W 186 x D 170 - 6,8kg.



**SR14** H 269 x W 279 x D 170 - 10,2kg.



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



**SR7** H 121 x W 72 x D 185 - 1,22kg.



**SR8** H 121 x W 108 x D 185 - 1,83kg.



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



**SR16** H 273 x W 186 x D 170 - 7kg.



**SR17** H 273 x W 279 x D 170 - 10,6kg.



**S9** H 350 x W 116 x D 220 - 5,5kg



**S10** H 350 x W 240 x D 230 - 11kg.



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



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



**S13** H 440 x W 262 x D 270 - 18kg.



**S15 3PH** H 520 x W 400 x D 270 - 43kg. (700-850A)

**S14** H 520 x W 262 x D 270 - 22,5kg.



**S16 2PH** H 580 x W 400 x D 435 - 54kg. (1000A)



**S18 1PH** H 580 x W 263 x D 435 - 28kg. (1000A)



**S22 3PH** H 580 x W 525 x D 435 - 56kg. (1000A)



**S26 3PH** H 790 x W 780 x D 533 - 144kg. (1850A-2000A)



**S28** H 478 x W 130 x D 274 - 14kg.



**S29** H 478 x W 260 x D 274 - 27kg.



**S30** H 478 x W 390 x D 274 - 44kg.

**S17 2PH** H 780 x W 400 x D 435 - 65kg. (1400A-1500A)

**S19 1PH** H 780 x W 263 x D 435 - 39kg. (1400A-1500A)

**S23 2PH** H 780 x W 525 x D 533 - 96kg. (1850A-2000A)

**S27 3PH** H 790 x W 890 x D 518 - 174kg. (2400A-2700A)

**S20 1PH** H 780 x W 263 x D 533 - 48kg. (1850-2000A)

**S24 2PH** H 890 x W 525 x D 518 - 116kg. (2400A-2700A)

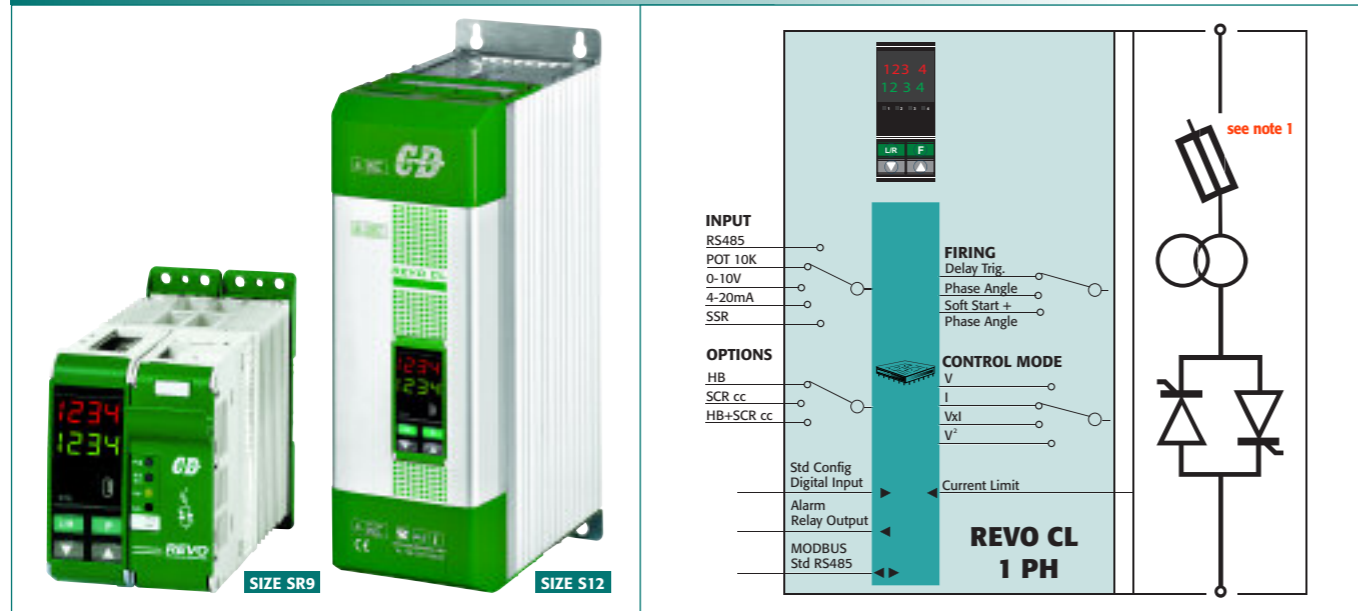
**Note:** H=Height W= Width D= Dept

**S21 1PH** H 890 x W 263 x D 518 - 58kg. (2400-2700A)

**S25 3PH** H 780 x W 525 x D 435 - 77 kg. (1400-1500A)



# REVO CL - 1PH



## Technical Specification

- **Dimensions:** See size at page 10-11 and dimensions at page 12-13
- **Load type:** Normal resistance, infrared long, short and medium waveform, Silicon Carbide, cold resistance coupled with transformer
- **Inputs:** 0-10V dc, 4-20mA, 10kpot, SSR, RS485
- **Firing mode:** Burst Firing, Single Cycle, Soft Start + Phase Angle, Delayed Triggering
- **Operating temperature:** 0 to 40°C without derating
- **Control mode:** V², V Voltage, VxI Power and current I
- **RS485 port. RTU Modbus Protocol**
- **Comply with EMC and cUL (Pending)**
- **Data sheet:** More details on "REVO CL" bulletin

## Option

HEATER BREAK ALARM

REVO CL 1PH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
4, 5, 6		8		9		10		11		12		13		14		15		16	
<b>Current</b>		<b>Aux. Voltage supply</b>		<b>Input</b>		<b>Firing</b>		<b>Control Mode</b>		<b>Fuse &amp; Option</b>		<b>Fan Voltage</b>		<b>Approvals</b>		<b>Manual</b>		<b>Version</b>	
Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code
35A	0 3 5	90:130V	1 (3)	0:10V dc	V	Open Loop	0	For all units <= 40A		CE EMC For European Market	0	None	0	Std with fuse + fuse holder up to 40A	1	Italian Manual	1	Second fuse normally used with phase to phase voltage supply	2 (4)
40A	0 4 0	170:265V	2 (3)	4:20 mA	A	Voltage Feed Back V	U	Fuse + Fuse Holder + CT Standard	Y	cUL For American Market (Pending)	L	English Manual	2	Second fuse with an additional safety electromechanical relay to open in alarm conditions	3 (4)	German Manual	3		
60A	0 6 0	230:345V	3 (3)	10 K Pot.	K	Power Feed Back VxI	W	Fuse + Fuse Holder +CT +HB with screw Terminal	H			French Manual	4						
90A	0 9 0	300:530V	5 (3)	RS 485	R	Voltage Square V²	Q	For all units > 40 A											
120A	1 2 0	510:690V	6 (3)			Current Feed Back I	I	Fixed Fuse + CT	Y										
150A	1 5 0	600:760V	7 (3)					Fixed Fuse + CT + HB	H										
180A	1 8 0																		
210A	2 1 0																		
280A	2 8 0																		
400A	4 0 0																		
500A	5 0 0																		
600A	6 0 0																		
700A	7 0 0																		
<b>7 Max Voltage</b>		<b>10 Firing</b>																	
Description code	Numeric code	Description code	Numeric code																
480V	4	Delayed Triggering + Burst Firing DT+BF (8 cycles at 50% power demand)	D																
600V	6	Phase Angle PA	P																
690V Available on units > 280A	7	Soft Start + Phase Angle S+PA	E																

- LEGEND**  
 IFH = Integrated Fuse + Fuse Holder  
 IF = Internal Fixed Fuse  
 CT = Current Transformer  
 HB = Heater Break Alarm
- Note (1):** Fuse & Fuse Holder are included as std up to 40A. Fixed Fuses for all other rating  
**Note (2):** After 16th digit, write current and voltage of load inside brackets. Ex (190A-400V)  
**Note (3):** Load voltage must be included in Selected Auxiliary Voltage Range  
**Note (4):** This option is possible with unit up to 40A. Dimension equal REVO M-2PH of same rating.

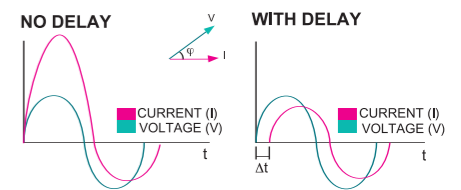
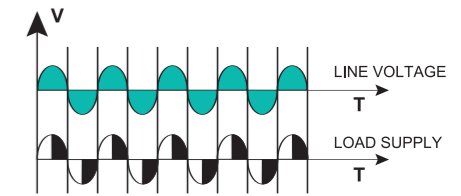
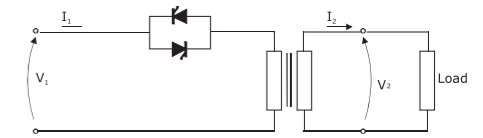
## Thyristor Unit connected with Transformers

REVO CL has been specifically designed to drive transformers and has all the drive capability & techniques required, configurable from the front panel display.

Close examination of the transformer application needs to be made as the typical inrush current, when switched on. This over-current will have the result to damage Fuses or Thyristor.

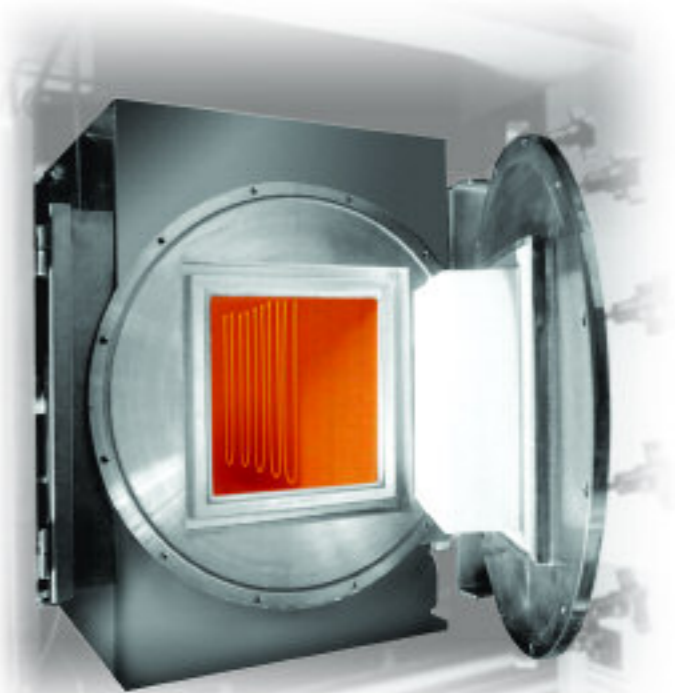
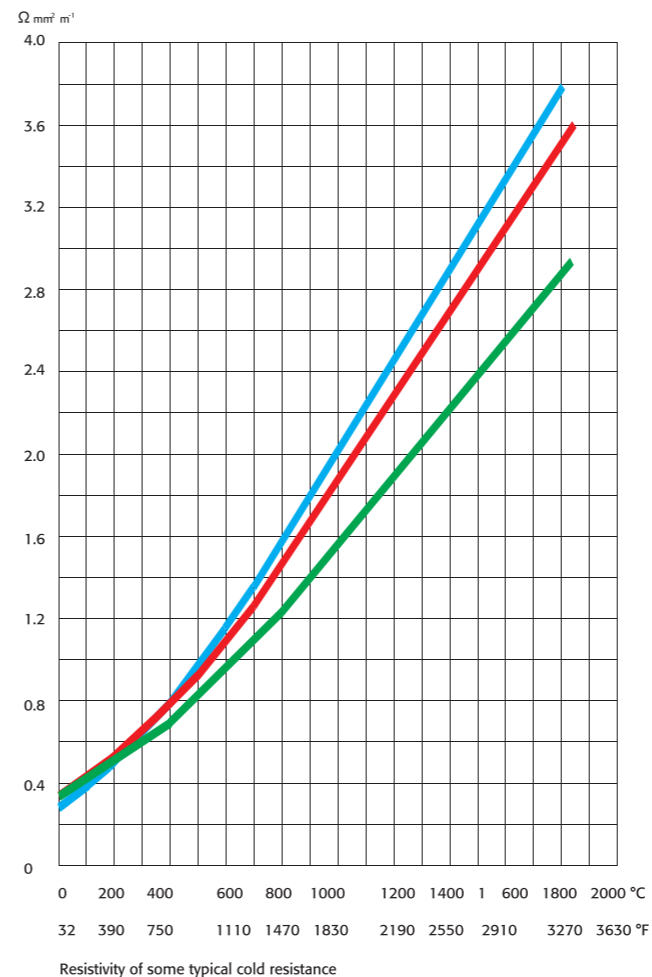
To avoid this peak current two techniques can be used:

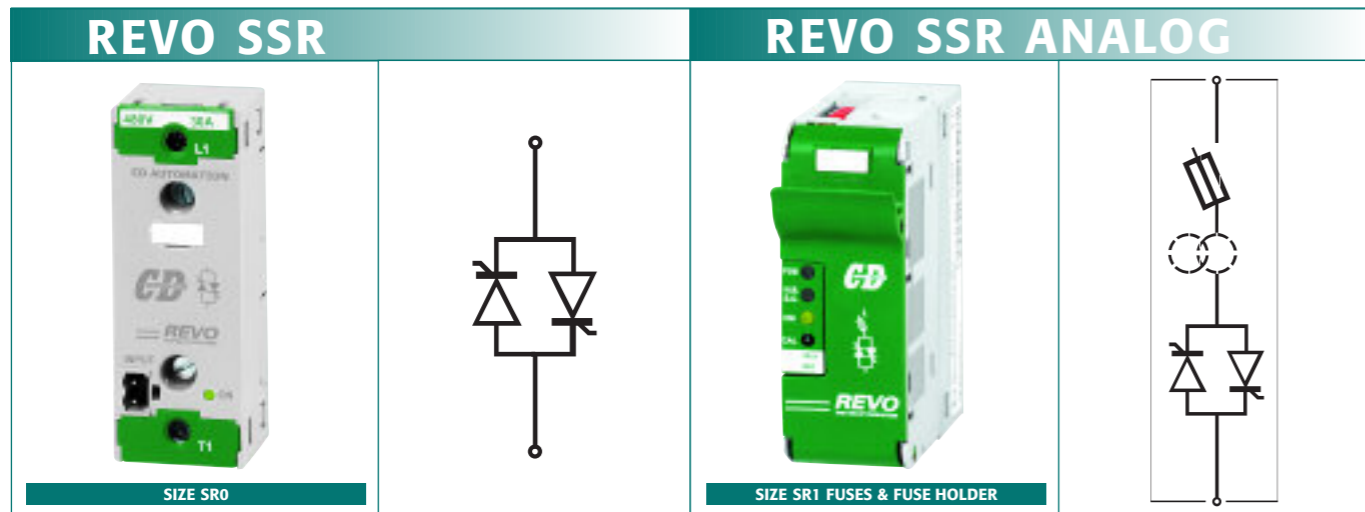
- Phase angle firing with soft start and current limit. This type of firing can be used with all types of loads.
  - Normal resistance.
  - Cold resistance (Example: Kanthal Super elements)
  - Transformer coupled with normal or cold resistance.
  - With cold resistance use I feed-back.
- Burst firing using the Delay Triggering (DT) technique. To avoid magnetic circuit saturation, the thyristor unit will switch OFF when the load voltage is negative and switch ON again when positive. The unit also has an adjustable delay on voltage zero crossing. In this way it is possible to switch ON when current is zero. This Firing technique can only be used with normal resistance, where its resistive value remains constant with temperature variations.



## The BIG advantage with REVO CL

Buy one unit and you remove all application risks, selecting Phase Angle or Delayed Triggering as required via frontal Key Pad.





**Specifications REVO SSR**

- Dimensions: SR0, SR1, (See page 12)
- Load type: Normal resistance, infrared medium and long waveform
- Inputs: SSR
- Firing mode: Zero Crossing
- Operating temperature: See graph on right page
- Comply with EMC and cUL (Pending)
- Data sheet: More details on "REVO SSR" Bulletin

**Option**

Total load failure without latching  
 All options below are available with Fuse + Fuse Holder only  
 Current Transformer  
 Current Transformer+ HB (Heater Break)  
 Current Transformer+ HB (Heater Break) + flat wiring system

**Specifications REVO ANALOG**

- Dimensions: SR1, (See page 12)
- Load type: Normal resistance, infrared medium and long waveform
- Inputs: 0:10V; 4-20mA
- Firing mode: Zero Crossing
- Operating temperature: See graph on right page
- Comply with EMC and cUL (Pending)
- Data sheet: More details on "REVO SSR ANALOG" Bulletin

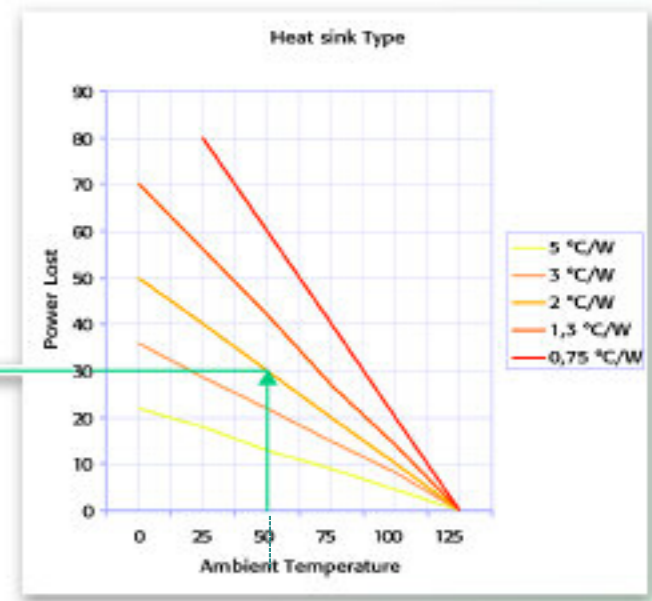
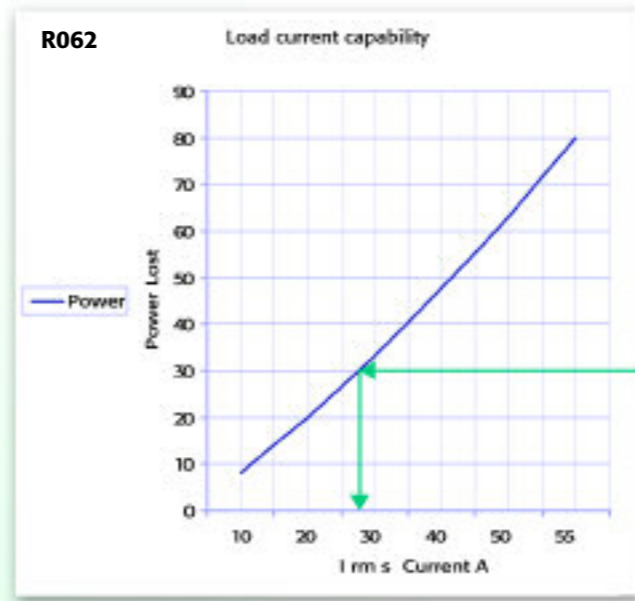
**Option**

All below option are available with Fuse + Fuse Holder only  
 Current Transformer  
 Current Transformer+ HB (Heater Break)  
 Current Transformer+ HB (Heater Break) + flat wiring system

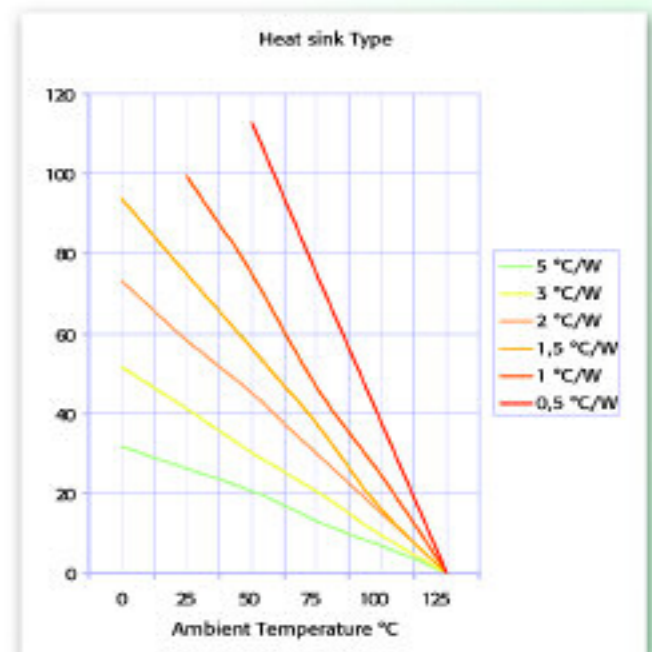
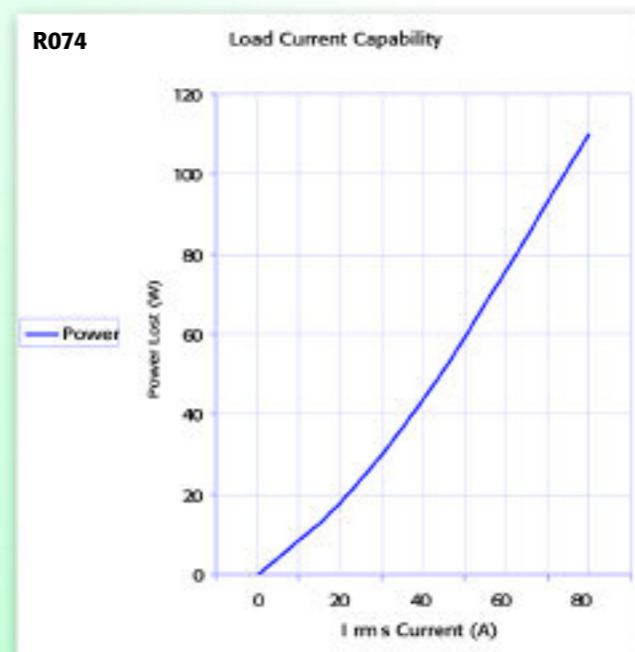
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<b>REVO SSR</b>	S	S	R	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>4,5,6 Current</b>	Description code		Numeric code		8 Aux. Voltage supply		11 Control Mode		12 Fuse & Option (2)		14 Approvals		15 Manual		16 Version	
	62A		0 6 2		Without HB No Auxiliary Voltage Supply		Open Loop		No Fuse		CE EMC For European Market		None		Standard version	
	74A		0 7 4		With HB 12:24V ac-dc opt. Available only with Fuse+Fuse Holder		0		Fuse + Fuse Holder		cUL For American Market, Pending		1		1	
	90A		0 9 0				4 (1)		Fuse + Fuse Holder +CT				2		2	
<b>7 Max Voltage</b>	Description code		Numeric code		9 Input		H (2)		Fuse + Fuse Holder +CT +HB				3		3	
	480V		4		Description code		Y		Fuse + Fuse Holder +CT +HB				4		4	
	600V		6		SSR		S		Total load failure				4		4	
					10 Firing		N									
					Description code											
					Zero Crossing ZC											
					Random											
					R											

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<b>REVO ANALOG (3)</b>	S	S	R	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>4,5,6 Current</b>	Description code		Numeric code		9 Input		11 Control Mode		12 Fuse & Option		14 Approvals		15 Manual		16 Version	
	62A		0 6 2		0:10V Analog Input		Open Loop		Fuse + Fuse Holder		CE EMC For European Market		None		Standard version	
	74A		0 7 4		4:20 mA Analog Input		0		Fuse + Fuse Holder +CT		cUL For American Market, Pending		1		1	
	90A		0 9 0						Fuse + Fuse Holder +CT +HB				2		2	
<b>7 Max Voltage</b>	Description code		Numeric code		10 Firing		H (2)		Fuse + Fuse Holder +CT +HB				3		3	
	480V		4		Burst Firing		Y		Fuse + Fuse Holder +CT +HB				4		4	
	600V		6		4 Cycles On at 50% Power Demand				+Flat Wiring System				4		4	
					8 Cycles On at 50% Power Demand											
					16 Cycles On at 50% Power Demand											
					6											

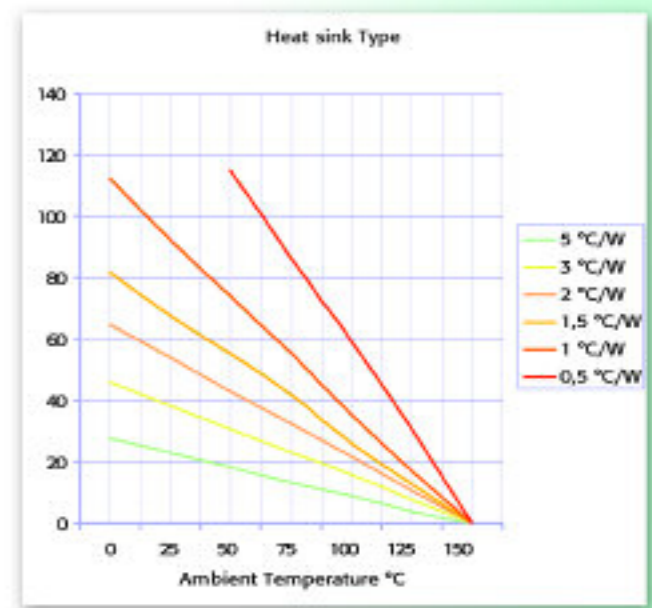
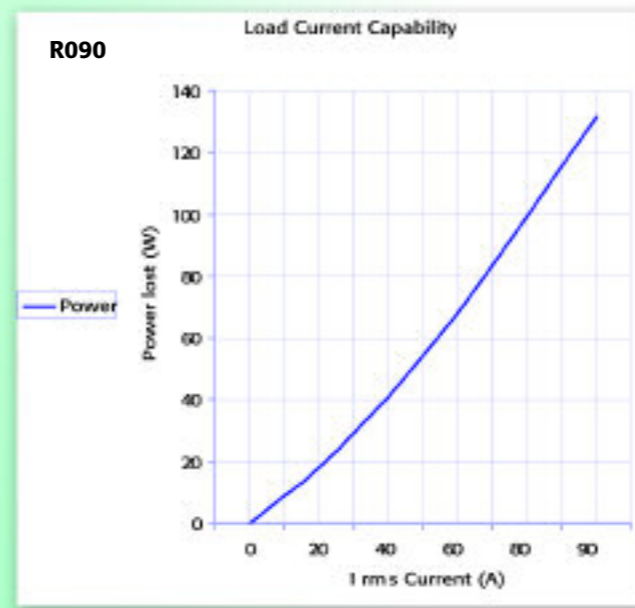
Note (2): Options available only with Fuse + Fuse Holder  
 Note (3): All the REVO Analog version have Fuse + Fuse Holder



R062 MODULE Power Dissipation versus on state Current and ambient Temperature



R074 MODULE Power Dissipation versus on state Current and ambient Temperature



R090 MODULE Power Dissipation versus on state Current and ambient Temperature



# REVO - SX



- This unit is available in three version as is drawing below
- Each unit includes Fuse and Fuse Holder, thyristor and heat sink with its own Firing circuit
- Zero Crossing Firing
- Insulated input
- LED for On Off Status indication
- LED for fuse failure indication
- Plug in connection for auxiliary and power terminations
- Small dimensions Width: 36 Depth: 86 Height:121
- Din rail mounting or screw mounting
- Can be used in applications with many zones and low power as thermoforming, blow Moulding and Hot Runners

Diagram of control connection 4x3,5A

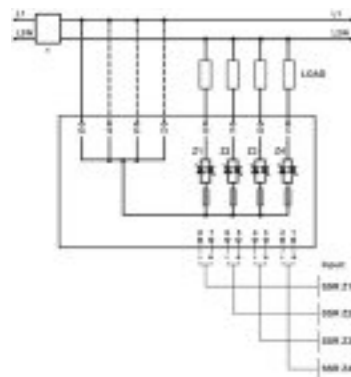


Diagram of control connection 3x4,5A

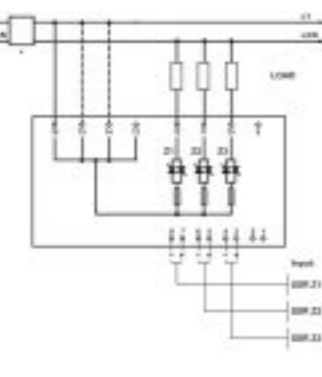
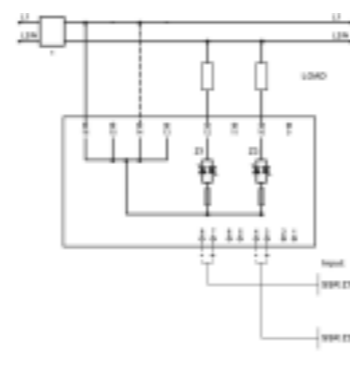
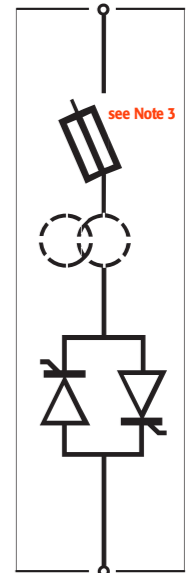


Diagram of control connection 2x7A



# REVO S - 1PH



## Technical Specification

- **Dimensions:** See size at page 10-11 and dimensions at page 12-13
- **Load type:** Normal resistance, infrared long and medium waveform
- **Inputs:** SSR Standard, 0:10V, 4:20mA and Heater Break alarm are options
- **Firing mode:** Zero Crossing, Burst Firing available with analogue input only
- **Operating temperature:** 0 to 40°C without derating
- **Comply with EMC and cUL (Pending)**
- **Data sheet:** More details on "REVOS-1PH" Bulletin

## Option

Analog input: 4/20 mA or 0/10V

Current Transformer only mounted inside

Heater Break Alarm + Current Transformer

REVO - SX	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	R	S	X	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>4,5,6</b> Number of Zones x Current Rating	<b>9</b> Input		<b>12</b> Fuse and Options		<b>15</b> Manuals											
Description code	Description code		Description code		Description code											
Numeric code	Numeric code		Numeric code		Numeric code											
4 Zones 3,5A each	SSR		Fuse and Fuse Holder		None											
3 Zones 4,5A each	Zero Crossing		Total Load Failure with latching		Italian Manual											
2 Zones 7A each	Random (used with REVO-PC)		No fan Voltage		English Manual											
	Open Loop				German Manual											
<b>7</b> Main Supply Voltage					French Manual											
Description code																
Numeric code																
230V																
480V																
<b>8</b> Auxiliary Voltage																
Description code																
Numeric code																
No Auxiliary Voltage with 230V																
12-24V ac-dc with 480V																

Note (1): This option is available only on 480V version

Note (2): The 480V version have the dimensions: Width: 48 Height: 121 Depth: 86 mm

REVO S 1PH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	R	S	1	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>4, 5, 6</b> Current	<b>8</b> Aux. Voltage supply		<b>10</b> Firing		<b>13</b> Fan Voltage											
Description code	Description code		Description code		Description code											
Numeric code	Numeric code		Numeric code		Numeric code											
30A	No auxiliary voltage without HB and/or Analog input up to 210 A included		Zero Crossing ZC		No Fan < 120A											
35A	With HB and/or Analog input on all unit = < 210A Aux. Volt 12:24V ac-dc		Burst Firing		Fan 110V > 90A											
40A	For all units > 210A with whichever options and inputs 90:130V		4 Cycles On at 50% Power Demand		Fan 220V > 90A Std Version											
60A	170:265V		8 Cycles On at 50% Power Demand													
90A	230:345V		Burst Firing													
120A	300:530V		16 Cycles On at 50% Power Demand													
150A	510:690V															
180A	600:760V															
210A																
280A																
400A																
500A																
600A																
700A																
<b>7</b> Max Voltage	<b>9</b> Input		<b>11</b> Control Mode		<b>15</b> Manual											
Description code	Description code		Description code		Description code											
Numeric code	Numeric code		Numeric code		Numeric code											
480V	SSR		Open Loop		None											
600V	0:10V dc				Italian Manual											
690V	4:20mA				English Manual											
					German Manual											
					French Manual											

### LEGEND

CT = Current Transformer  
HB = Heater Break Alarm

Note (1): If you need one REVOS-1PH with 2 Fuse&Fuse Holder For dimensions see REVOS-2PH. This solution can be used up to 40A max

Note (2): If you need one REVOS-1PH with 2 Fuse&Fuse Holder + safety relay For dimensions see REVOS-2PH. This solution can be used up to 40A max

Note (3): Fixed Fuses over 40A

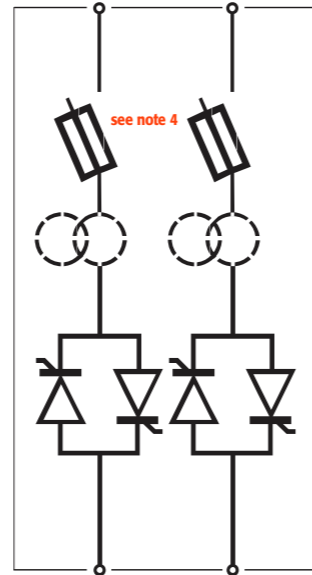
Note (4): Available only with Analog input

Note (5): Load voltage must be included in Selected Auxiliary Voltage Range for units >210A

Note (6): With 690V the firing is random

Note (7): Available on unit >280A

# REVO S - 2PH



## Technical Specification

- **Dimensions:** See size at page 10-11 and dimensions at page 12-13
- **Load type:** Normal resistance, infrared long and medium waveform
- **Inputs:** SSR Standard, 0:10V, 4:20mA and Heater Break alarm are options
- **Firing mode:** Zero Crossing, Burst Firing available with analogue input only
- **Operating temperature:** 0 to 40°C without derating
- **Comply with EMC and cUL (Pending)**
- **Data sheet:** More details on "REVOS-2PH" Bulletin

## Option

Analog input: 4/20 mA or 0/10V

Current Transformer+ HB Alarm

Current Transformer only mounted inside

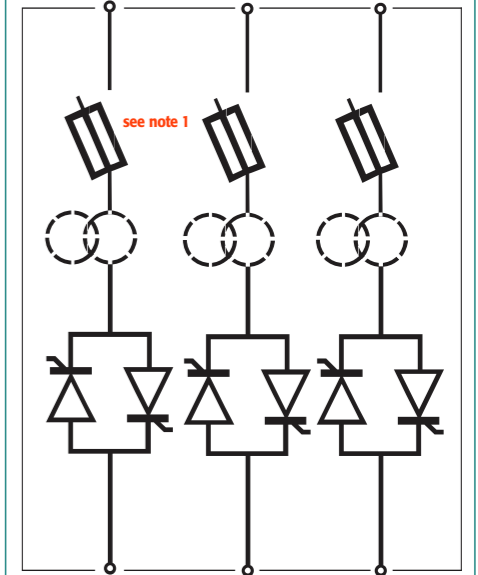
REVO S - 2PH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
R		S	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
<b>4,5,6</b>	<b>Current</b>	<b>8</b> Aux. Voltage Supply		<b>10</b> Firing		<b>13</b> Fan Voltage		<b>14</b> Approvals		<b>15</b> Manual		<b>16</b> Version									
Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code				
30A	0 3 0	No auxiliary voltage without HB and/or Analog input up to 210 A included	0	Zero Crossing ZC	Z	Fan < 90A	0	CE EMC For European Market	0	None	0	Std Version with two Fuses + Fuses Holder =< 40A	1	Italian Manual	1	None	0				
35A	0 3 5	With HB and/or Analog input on all units =< 210A Aux. Volt. 12:24V ac-dc	4	Burst Firing		Fan 110V => 90A	1	cUL For American Market (pending)	L	Italian Manual	1	For All Units =< 40A No Fuse	O	English Manual	2	English Manual	2				
40A	0 4 0			4 Cycles On at 50% Power Demand	4 (2)	Fan 220V => 90A Std Version	2			German Manual	3	French Manual	4	Fuse & Fuse Holder	F	German Manual	3	German Manual	3		
60A	0 6 0	For all units > 210 A with whichever options and inputs 90:130V	1 (3)	Burst Firing		<b>11</b> Control Mode		<b>15</b> Manual		<b>16</b> Version		<b>11</b> Control Mode		<b>12</b> Fuse & Options		<b>15</b> Manual		<b>16</b> Version			
90A	0 9 0			8 Cycles On at 50% Power Demand	8 (2)	Burst Firing		Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code
120A	1 2 0	170:265V	2 (3)	16 Cycles On at 50% Power Demand	6 (2)	Open Loop	0	None	0	Open Loop	0	For all units =< 40 A No fuse	0	Fuse & Fuse Holder + CT	Y	Italian Manual	1	Italian Manual	1		
150A	1 5 0	230:345V	3 (3)	<b>11</b> Control Mode		<b>15</b> Manual		<b>16</b> Version		<b>11</b> Control Mode		<b>12</b> Fuse & Options		<b>15</b> Manual		<b>16</b> Version		<b>16</b> Version			
180A	1 8 0	300:530V	5 (3)	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code
210A	2 1 0	510:690V	6 (3)	Open Loop	0	None	0	Std Version with two Fuses + Fuses Holder =< 40A	1	Open Loop	0	Fuse & Fuse Holder	F	English Manual	2	English Manual	2	English Manual	2	English Manual	2
280A	2 8 0	600:760V	7 (3)	<b>12</b> Fuse & Option		<b>15</b> Manual		<b>16</b> Version		<b>11</b> Control Mode		<b>12</b> Fuse & Options		<b>15</b> Manual		<b>16</b> Version		<b>16</b> Version			
400A	4 0 0			Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code
450A	4 5 0			For All Units =< 40A	O	None	0	Std Version with two fixed fuses > 40A	1	Open Loop	0	For all units =< 40 A	0	German Manual	3	German Manual	3	German Manual	3	German Manual	3
500A	5 0 0			Fuse & Fuse Holder	F	Italian Manual	1	Standard unit with two fixed fuses > 40A	1	Open Loop	0	Fuse & Fuse Holder + CT	Y	French Manual	4	French Manual	4	French Manual	4	French Manual	4
600A	6 0 0			Fuse & Fuse Holder + CT	Y	English Manual	2	Units with 3 fuses + Fuses Holder =< 40A	2 (1)	Open Loop	0	Fuse & Fuse Holder + CT + HB with terminals	H								
700A	7 0 0			Fuse & Fuse Holder + CT + HB with terminals	H	French Manual	4			Open Loop	0	Fuse & Fuse Holder + CT + HB with flat cable connection	X (3)								
				Fuse & Fuse Holder + CT + HB with flat cable connection	X					Open Loop	0	For all units > 40A	F (1)								
				For All Units > 40A	F (4)					Open Loop	0	Fixed Fuse Standard	F (1)								
				Fixed Fuse Standard	Y					Open Loop	0	Fixed Fuse Standard + CT	Y								
				Fixed Fuse Standard + CT + HB	H					Open Loop	0	Fixed Fuse Standard + CT + CT + HB	H								

### LEGEND

CT = Current Transformer  
HB = Heater Break Alarm

- Note (1): If you need one REVO S - 2PH with 3 Fuse & Fuse Holder For dimensions see REVO S - 3PH. This solution can be used up to 40A max
- Note (2): Available with Analog input only
- Note (3): Load voltage must be included in Selected Auxiliary Voltage Range for unit > 210A
- Note (4): Fixed Fuses over 40A
- Note (5): Available on unit > 280A

# REVO S - 3PH



## Technical Specification

- **Dimensions:** See size at page 10-11 and dimensions at page 12-13
- **Load type:** Normal resistance, infrared long and medium waveform
- **Inputs:** SSR Standard, 0:10V, 4:20mA and Heater Break alarm are options
- **Firing mode:** Zero Crossing, Burst Firing available with analogue input only
- **Operating temperature:** 0 to 40°C without derating
- **Comply with EMC and cUL (Pending)**
- **Data sheet:** More details on "REVOS-3PH" Bulletin

## Option

Analog input: 4/20 mA or 0/10V

Current Transformer + HB alarm

Current Transformer only mounted inside

REVO S - 3PH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
R		S	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
<b>4,5,6</b>	<b>Current</b>	<b>8</b> Aux. Voltage Supply		<b>10</b> Firing		<b>13</b> Fan Voltage		<b>14</b> Approvals		<b>15</b> Manual		<b>16</b> Version									
Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code				
30A	0 3 0	No auxiliary voltage without HB and/or Analog input up to 210 A included	0	Zero Crossing ZC	Z	Fan < 90A	0	CE EMC For European Market	0	None	0	Std Version with two Fuses + Fuses Holder =< 40A	1	Italian Manual	1	None	0				
35A	0 3 5	With HB and/or Analog input on all units =< 210A Aux. Volt. 12:24V ac-dc	0	Burst Firing		Fan 110V => 90A	1	cUL For American Market (pending)	L	Italian Manual	1	For All Units =< 40A No Fuse	O	English Manual	2	English Manual	2				
40A	0 4 0			4 Cycles On at 50% Power Demand	4 (2)	Fan 220V => 90A Std Version	2			German Manual	3	French Manual	4	Fuse & Fuse Holder	F	German Manual	3	German Manual	3		
60A	0 6 0	For all units > 210 A with whichever options and inputs 90:130V	4	Burst Firing		<b>11</b> Control Mode		<b>15</b> Manual		<b>16</b> Version		<b>11</b> Control Mode		<b>12</b> Fuse & Options		<b>15</b> Manual		<b>16</b> Version			
90A	0 9 0			8 Cycles On at 50% Power Demand	8 (2)	Burst Firing		Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code
120A	1 2 0	170:265V	2 (4)	16 Cycles On at 50% Power Demand	6 (2)	Open Loop	0	None	0	Open Loop	0	For all units =< 40 A	0	Fuse & Fuse Holder + CT	Y	Italian Manual	1	Italian Manual	1		
150A	1 5 0	230:345V	3 (4)	<b>11</b> Control Mode		<b>15</b> Manual		<b>16</b> Version		<b>11</b> Control Mode		<b>12</b> Fuse & Options		<b>15</b> Manual		<b>16</b> Version		<b>16</b> Version			
180A	1 8 0	300:530V	5 (4)	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code
210A	2 1 0	510:690V	6 (4)	Open Loop	0	None	0	Std Version with two Fuses + Fuses Holder =< 40A	1	Open Loop	0	Fuse & Fuse Holder	F	English Manual	2	English Manual	2	English Manual	2	English Manual	2
225A	2 2 5			<b>12</b> Fuse & Option		<b>15</b> Manual		<b>16</b> Version		<b>11</b> Control Mode		<b>12</b> Fuse & Options		<b>15</b> Manual		<b>16</b> Version		<b>16</b> Version			
300A	3 0 0			Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code
350A	3 5 0			For All Units =< 40A	O	None	0	Std Version with two fixed fuses > 40A	1	Open Loop	0	For all units =< 40 A	0	German Manual	3	German Manual	3	German Manual	3	German Manual	3
400A	4 0 0			Fuse & Fuse Holder	F	Italian Manual	1	Standard unit with two fixed fuses > 40A	1	Open Loop	0	Fuse & Fuse Holder + CT	Y	French Manual	4	French Manual	4	French Manual	4	French Manual	4
450A	4 5 0			Fuse & Fuse Holder + CT	Y	English Manual	2	Units with 3 fuses + Fuses Holder =< 40A	2 (1)	Open Loop	0	Fuse & Fuse Holder + CT + HB with terminals	H								
500A	5 0 0			Fuse & Fuse Holder + CT + HB with terminals	H	French Manual	4			Open Loop	0	Fuse & Fuse Holder + CT + HB with flat cable connection	X (3)								
				Fuse & Fuse Holder + CT + HB with flat cable connection	X					Open Loop	0	For all units > 40A	F (1)								
				For All Units > 40A	F (4)					Open Loop	0	Fixed Fuse Standard	F (1)								
				Fixed Fuse Standard	Y					Open Loop	0	Fixed Fuse Standard + CT	Y								
				Fixed Fuse Standard + CT + HB	H					Open Loop	0	Fixed Fuse Standard + CT + CT + HB	H								

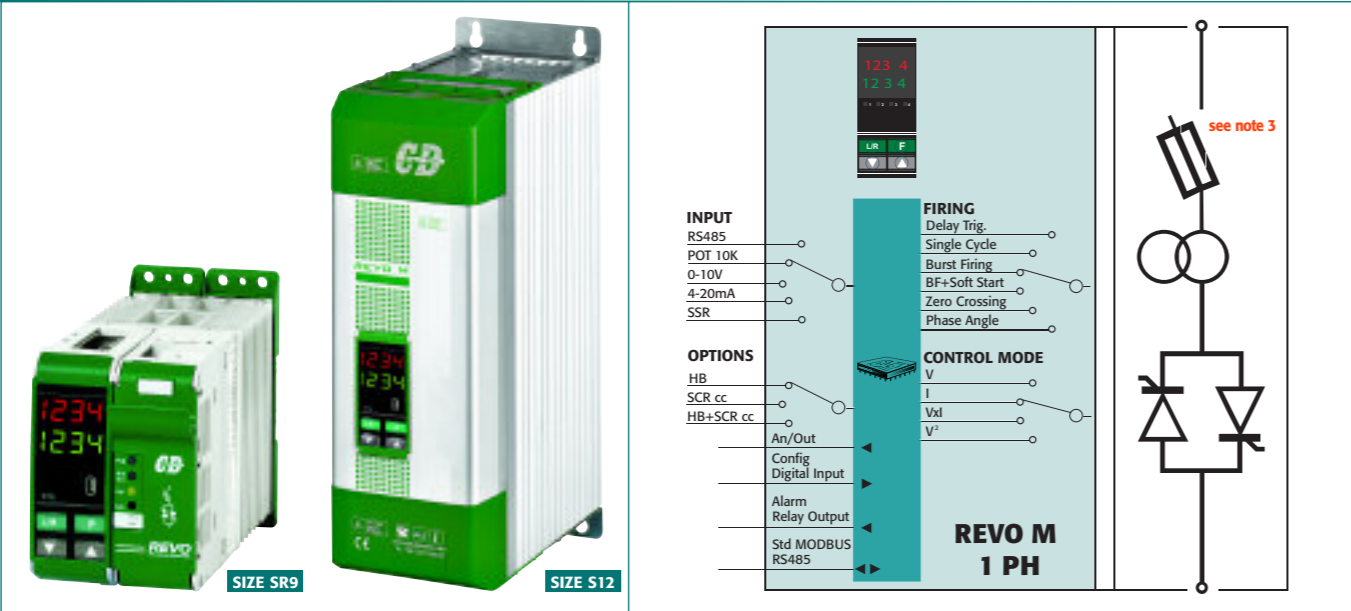
### LEGEND

IFH = Integrated Fuse + Fuse Holder  
IF = Internal Fixed Fuse  
CT = Current Transformer  
HB = Heater Break Alarm

- Note (1): Fixed Fuses over 40A
- Note (2): Available with Analog input only
- Note (3): Available up to 40A only flat cable connection
- Note (4): Load voltage must be included in Selected Auxiliary Voltage Range for units > 210A
- Note (5): Available on unit => 225A



# REVO M - 1PH



## Technical Specification

- Dimensions:** See size at page 10-11 and dimensions at page 12-13
- Load type:** Normal resistance, infrared short long and medium waveform, Silicon Carbide
- Inputs:** 0:10V dc, 4:20mA, 10kpot, SSR, RS485
- Firing mode:** Zero Crossing, Burst Firing, Single Cycle, Soft Start + Phase Angle, Delayed Triggering
- Operating temperature:** 0 to 40°C without derating
- Control mode:** V Voltage, VxI Power, I and V<sup>2</sup>
- RS485 port. RTU Modbus Protocol**
- Comply with EMC and cUL (Pending)**
- Data sheet:** More details on "REVO M - 1PH" bulletin

## Option

HB + CT : Current transformer plus HB Alarm  
Control Mode Retransmission

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
<b>REVO M 1PH</b>	R	M	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>4, 5, 6 Current</b>	Description code		Numeric code		9 Input		11 Control Mode		13 Fan Voltage		14 Approvals		15 Manual		16 Version		
Description code		Numeric code		Description code		Description code		Description code		Description code		Description code		Description code		Description code	
35A		0 3 5		SSR		Open Loop		No Fan < 120A		CE EMC For European Market		None		Standard unit with 1 Fuse			
40A		0 4 0		0:10V dc		Voltage Feed Back		Fan 110V > 90A		cUL For American Market (Pending)		Italian Manual		Unit with 2 Fuse + Fuse Holders = < 40A			
60A		0 6 0		4:20mA		Power Feed Back		Fan 220V > 90A				English Manual		Units with 2 Fuses + Fuse Holder + Safety Relay = < 40A			
90A		0 9 0		10KPot		Current Feed Back		Std Version				German Manual					
120A		1 2 0		RS485		Voltage Square Feed Back						French Manual					
150A		1 5 0				Voltage to Power Feed Back transfer											
180A		1 8 0															
210A		2 1 0															
280A		2 8 0															
400A		4 0 0															
500A		5 0 0															
600A		6 0 0															
700A		7 0 0															
7 Max Voltage		Description code		Numeric code													
480V		4															
600V		6															
690V		7 (4)															
8 Aux. Voltage supply		Description code		Numeric code													
90:130V		1 (6)															
170:265V		2 (6)															
230:345V		3 (6)															
300:530V		5 (6)															
510:690V		6 (6)															
600:760V		7 (6)															

**LEGEND**  
CT = Current Transformer  
HB = Heater Break Alarm

**Note (1):** If you need one REVO M 1PH with 2 Fuse & Fuse Holder For dimensions see REVO M 2PH. This solution can be used up to 40A max

**Note (2):** If you need one REVO M 1PH with 2 Fuse & Fuse Holder + safety relay For dimensions see REVO M 2PH. This solution can be used up to 40A max

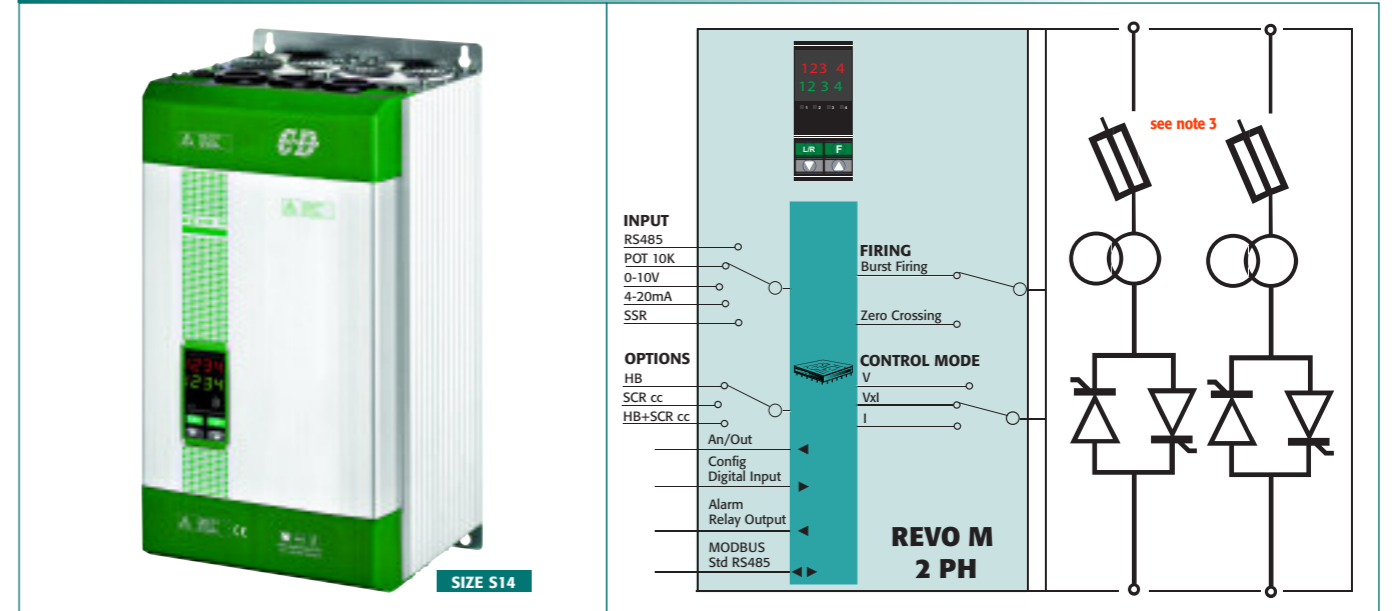
**Note (3):** Fixed Fuse over 40A

**Note (4):** Available on units ≥ 400A

**Note (5):** After 16th digit write current and voltage of load inside brackets Ex. (190A-400V)

**Note (6):** Load voltage must be included in Selected Auxiliary Voltage Range

# REVO M - 2PH



## Technical Specification

- Dimensions:** See size at page 10-11 and dimensions at page 12-13
- Load type:** Normal resistance, infrared long and medium waveform, Silicon Carbide
- Inputs:** 0-10V dc, 4-20mA, 10kpot, SSR, RS485
- Firing mode:** Zero Crossing, Burst Firing
- Operating temperature:** 0 to 40°C without derating
- Control mode:** V Voltage, VxI Power
- RS485 port. RTU Modbus Protocol**
- Comply with EMC and cUL (Pending)**
- Data sheet:** More details on "REVO M - 2PH" bulletin

## Option

HB + CT : Current transformer plus HB Alarm  
Control Mode Retransmission

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
<b>REVO M - 2PH</b>	R	M	2	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>4,5,6 Current</b>	Description code		Numeric code		8 Aux. Voltage supply		11 Control Mode		14 Approvals		15 Manual		16 Version				
Description code		Numeric code		Description code		Description code		Description code		Description code		Description code		Description code		Description code	
30A		0 3 0		90:130V		Open Loop		CE EMC For European Market		None		Standard unit with 1 Fuse					
35A		0 3 5		170:265V		Voltage Feed Back V		cUL For American Market (Pending)		Italian Manual		Unit with 2 Fuse + Fuse Holders = < 40A					
40A		0 4 0		230:345V		Power Feed Back VxI				English Manual		Units with 2 Fuses + Fuse Holder + Safety Relay = < 40A					
60A		0 6 0		300:530V		Current Feed Back I				German Manual							
90A		0 9 0		510:690V		Voltage Square Feed Back				French Manual							
120A		1 2 0		600:760V		Voltage to Power Feed Back transfer											
150A		1 5 0															
180A		1 8 0															
210A		2 1 0															
280A		2 8 0															
400A		4 0 0															
500A		5 0 0															
600A		6 0 0															
700A		7 0 0															
7 Max Voltage		Description code		Numeric code		9 Input		12 Fuse & Option		13 Fan Voltage							
480V		4				Description code		Description code		Description code							
600V		6				For All Units = < 40A		For All Units > 40A		No Fan < 120A							
690V		7 (4)				Fuse & Fuse Holder + CT		Fixed Fuse Standard + CT		Fan 110V > 90A							
						Fuse & Fuse Holder + CT + HB with terminals		Fixed Fuse Standard + CT + HB		Fan 220V > 90A Std Version							
						+CT +HB with terminals											
						Control Mode Retransmission 4:20mA											
						Control Mode Retransmission 0:10V											

**LEGEND**  
HB = Heater Break Alarm  
CT = Current Transformer

**Note (1):** If you need one REVO M 2PH with 3 Fuse & Fuse Holder For dimensions see REVO M - 3PH. This solution can be used up to 40A max

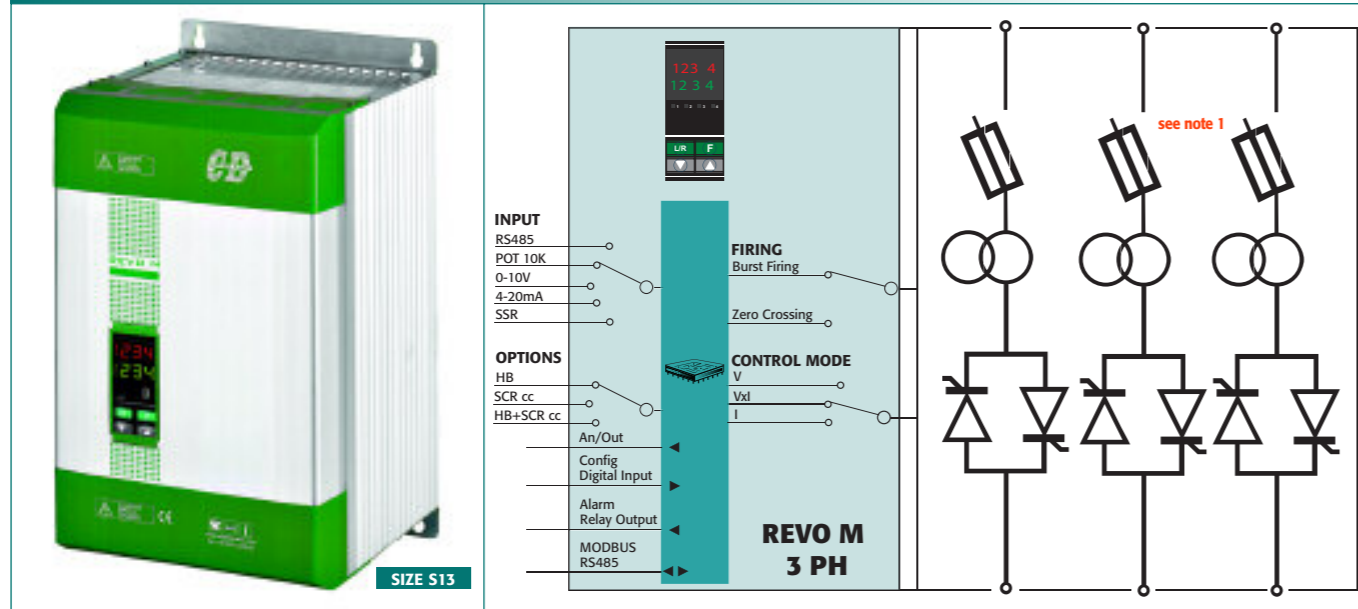
**Note (2):** Available on units ≥ 400A

**Note (3):** Fixed Fuses over 40A

**Note (4):** After 16th digit write current and voltage of load inside brackets Ex. (190A-400V)

**Note (5):** Load voltage must be included in Selected Auxiliary Voltage Range

# REVO M - 3PH



## Technical Specification

- **Dimensions:** See size at page 10-11 and dimensions at page 12-13
- **Load type:** Normal resistive, infrared long and medium waveform, Silicon Carbide
- **Inputs:** 0-10V dc, 4-20mA, 10kpot, SSR, RS485
- **Firing mode:** Zero Crossing, Burst Firing
- **Operating temperature:** 0 to 40°C without derating
- **Control mode:** V Voltage, Vxl Power
- **RS485 port. RTU Modbus Protocol**
- **Comply with EMC and cUL (Pending)**
- **Data sheet:** More details on "REVO M - 3PH" bulletin

## Option

HB + CT : Current transformer plus HB Alarm  
Control Mode Retransmission

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<b>REVO M - 3 PH</b>	R	M	3	-	-	-	-	-	-	-	-	-	-	-	-	-

4,5,6 Current	
Description code	Numeric code
30A	0 3 0
35A	0 3 5
40A	0 4 0
60A	0 6 0
90A	0 9 0
120A	1 2 0
150A	1 5 0
180A	1 8 0
210A	2 1 0
225A	2 2 5
300A	3 0 0
350A	3 5 0
400A	4 0 0
450A	4 5 0
500A	5 0 0

8 Aux. Voltage supply	
Description code	Numeric code
90:130V	1 (3)
170:265V	2 (3)
230:345V	3 (3)
300:530V	5 (3)
510:690V	6 (3)
600:760V	7 (3)

12 Fuse & Option	
Description code	Numeric code
For all units = < 40A Fuse & Fuse Holder + CT	Y
Fuse & Fuse Holder + CT + HB with terminals	H
Fuse & Fuse Holder + CT + HB with flat cable	X
For all units = > 40A Fixed Fuse Standard + CT	Y (1)
Fixed Fuse Standard + CT + HB	H
Control Mode Retransmission 4:20mA	A
Control Mode Retransmission 0:10V	V

14 Approvals	
Description code	Numeric code
CE EMC For European Market	0
cUL For American Market	L

9 Input	
Description code	Numeric code
SSR	S
0:10V dc	V
4:20mA	A
10KPot	K
RS485	R

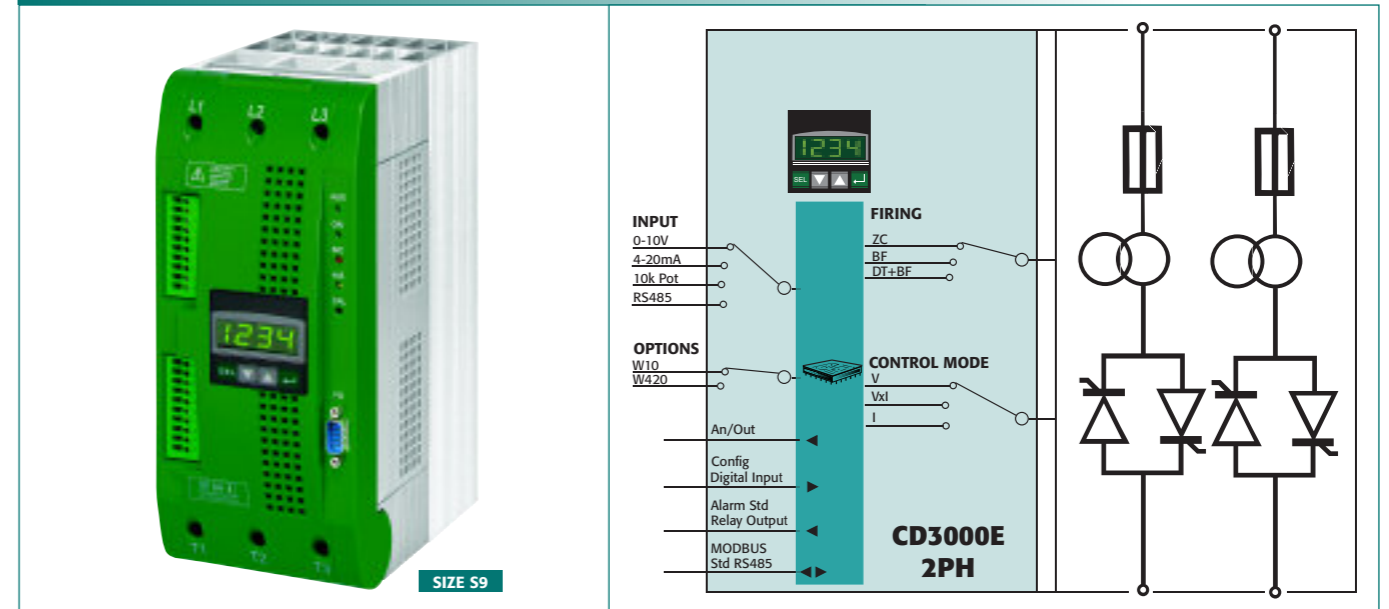
13 Fan Voltage	
Description code	Numeric code
No Fan < 90A	0
Fan 110V => 90A	1
Fan 220V => 90A Std Version	2

15 Manual	
Description code	Numeric code
None	0
Italian Manual	1
English Manual	2
German Manual	3
French Manual	4

LEGEND  
CT = Current Transformer  
HB = Heater Break Alarm

Note (1): Fixed Fuses over 40A.  
Note (2): After 16th digit write current and voltage of load inside brackets Ex. (190A-400V).  
Note (3): Load voltage must be included in Selected Auxiliary Voltage Range

# CD 3000E - 2PH



## Technical Specification

- **Dimensions:** See size at page 10-11 and dimensions at page 12-13
- **Load type:** Normal resistance, three phase transformer, coupled with normal resistance
- **Inputs:** 0-10V dc, 4-20mA, 10k Pot, SR485
- **Firing mode:** Zero Crossing, Burst Firing, DT+BF (not with cold resistance)
- **Operating temperature:** 0° to 40°C without derating
- **Control mode:** V Voltage, Vxl Power, Open Loop
- **RS485 port. RTU Modbus Protocol**
- **Comply with EMC and cUL**
- **Data sheet:** More details on "CD3000E - 2PH" bulletin

## Option

No options, all included

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<b>CD3000E - 2PH</b>	R	E	2	-	-	-	-	-	-	-	-	-	-	-	-	-

4,5,6 Current	
Description code	Numeric code
35A	0 3 5
45A	0 4 5
75A	0 7 5
100A	1 0 0
125A	1 2 5
150A	1 5 0
200A	2 0 0
280A	2 8 0
400A	4 0 0
450A	4 5 0
500A	5 0 0
600A	6 0 0
700A	7 0 0

8 Aux. Voltage supply	
Description code	Numeric code
110V	1
230V	2

11 Control Mode	
Description code	Numeric code
Open Loop	0
Voltage Feed Back V	U
Power Feed Back Vxl	W
Current Feed-back I	I

14 Approvals	
Description code	Numeric code
CE EMC For European Market	0
cUL For American Market	L

7 Max Voltage	
Description code	Numeric code
480V	4
600V	6

9 Input	
Description code	Numeric code
SSR 3:30V dc	S
0:10V	V
4:20 mA	A
10 K Pot	K
RS485	R

12 Option	
Description code	Numeric code
Control Mode Retransmission 4:20mA	A
Control Mode Retransmission 0:10V	V

15 Manual	
Description code	Numeric code
None	0
Italian Manual	1
English Manual	2
German Manual	3
French Manual	4

LEGEND  
IF = Internal Fixed Fuse  
CT = Current Transformer  
HB = Heater Break Alarm

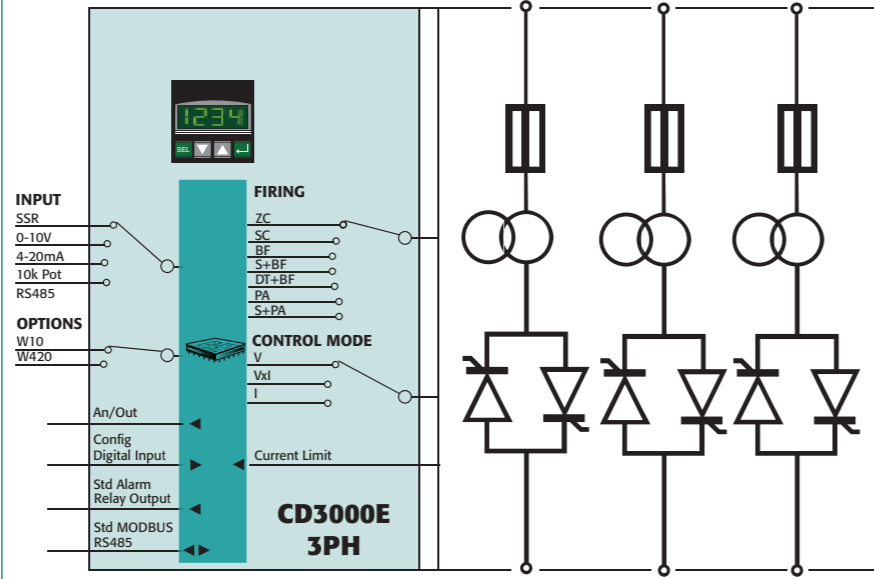
Note (1): DT + BF can be used to drive transformers coupled with normal resistance  
Note (2): After 16th digit write current and voltage of load inside brackets Ex. (190A-400V). Required if units are to be tuned to load.



# CD 3000E 3PH



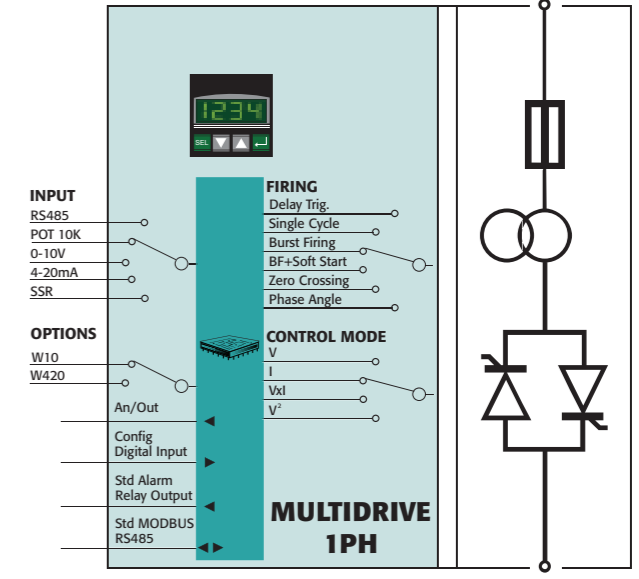
SIZE S13



# MULTIDRIVE 1PH



SIZE S18



## Technical Specification

- **Dimensions:** See size at page 10-11 and dimensions at page 12-13
- **Load type:** Normal resistance, three phase transformer coupled with normal or cold resistance.
- **Inputs:** None, SSR, 0-10V, 4-20mA, 10kpot, RS485 communication
- **Firing mode:** Zero Crossing, Single Cycle, Burst Firing, Soft Start + Burst Firing, Delayed Triggering + Burst Firing, Phase Angle, Soft Start + Phase Angle
- **Operating temperature:** 0° to 40°C without derating
- **Control mode:** V, Vxl, I
- **RS485 RTU port. Modbus Protocol**
- **Comply with EMC and cUL**
- **Data sheet:** More details on "CD3000E - 3PH" bulletin

## Option

No options, all included

CD3000E 3PH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
CD3000E 3PH		R	E	3	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>4, 5, 6</b>	<b>Current</b>	<b>9</b> Input		<b>12</b> Option		<b>16</b> Load type/Connection											
Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code										
35A	0 3 5	SSR 3:30V dc	S	Control Mode		Resistive Load/ Delta Connection	1										
45A	0 4 5	0:10V	V	Retransmission 4:20mA	A	Resistive Load/ Star Connection	2										
75A	0 7 5	4:20mA	A	Control Mode		Resistive Load/ Star Connection + Neutral	7										
100A	1 0 0	10KPot	K	Retransmission 0:10V	V	Transformer Load/ Delta Connection	3										
125A	1 2 5	RS485	R			Transformer Load/ Star Connection	4										
150A	1 5 0	<b>10</b> Firing		<b>13</b> Fan Voltage		Transformer Load/ Star Connection + Neutral	7										
225A	2 2 5	Description code	Numeric code	Description code	Numeric code	Transformer Load/ Star Connection + Neutral	7										
300A	3 0 0	Zero Crossing ZC	Z	Fan Voltage equal to Aux. Voltage	3	Transformer Load/ Star Connection + Neutral	7										
350A	3 5 0	Single Cycle SC	C			Transformer Load/ Star Connection + Neutral	7										
400A	4 0 0	Burst Firing BF	B	<b>14</b> Approvals		Transformer Load/ Star Connection + Neutral	7										
450A	4 5 0	Soft Start + Burst Firing S+BF	J	Description code	Numeric code	Transformer Load/ Star Connection + Neutral	7										
500A	5 0 0	Delayed Triggering + Burst Firing DT+BF	D (2)	CE EMC For European Market	0	Transformer Load/ Star Connection + Neutral	7										
<b>7</b> Max Voltage		Burst Firing BF	B	cUL For American Market (Pending)	L	Transformer Load/ Star Connection + Neutral	7										
Description code	Numeric code	Soft Start + Burst Firing S+BF	J	<b>15</b> Manual		Resistive Load/ Open delta	6	Description code	Numeric code								
480V	4	Delayed Triggering + Burst Firing DT+BF	D (2)	None	0						Italian Manual	1					
600V	6	Phase Angle PA	P	Italian Manual	1						English Manual	2					
<b>8</b> Aux. Voltage supply		Phase Angle PA	P	English Manual	2						German Manual	3					
Description code	Numeric code	Soft Start + Phase Angle S+PA	E	German Manual	3						French Manual	4					
110V	1	<b>11</b> Control Mode		French Manual	4												
230V	2	Description code	Numeric code														
		Open Loop	0														
		Voltage Feed Back V	U														
		Power Feed Back Vxl	W														
		Current Feed-back I	I														

LEGEND  
IF = Internal Fixed Fuse  
CT = Current Transformer  
HB = Heater Break Alarm

Note (1): After 16th digit write current and voltage of load inside brackets Ex. (190A-400V). Required if units are to be tuned to load.  
Note (2): DT+BF can be used to drive transformers coupled with normal resistance

## Technical Specification

- **Dimensions:** See size at page 10-11 and dimensions at page 12-13
- **Load type:** Normal resistance, one phase transformer coupled with normal or cold resistance.
- **Inputs:** 0-10V, 4-20mA, 10kpot, RS485 communication, SSR
- **Firing mode:** Burst Firing, Soft Start + Burst Firing, Delayed Triggering + Burst Firing, Phase Angle, Soft Start + Phase Angle
- **Operating temperature:** 0° to 40°C without derating
- **Control mode:** Voltage, Current Power, External signal
- **RS485 port. RTU Modbus Protocol**
- **Comply with EMC**
- **Data sheet:** More details on "Multidrive 1 PH" bulletin

## Option

No options, all included

MULTIDRIVE 1PH		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MULTIDRIVE 1PH		M	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>4, 5, 6</b>	<b>Current</b>	<b>9</b> Input		<b>11</b> Control Mode		<b>15</b> Manual											
Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code								
850A	0 8 5 0	SSR 3:30V dc	S	Open Loop	0	None	0										
1000A	1 0 0 0 (2)	0:10V	V	Voltage Feed Back V	U	Italian Manual	1										
1400A	1 4 0 0	4:20 mA	A	Power Feed Back Vxl	W	English Manual	2										
1500A	1 5 0 0 (2)	10 K Pot	K	Current Feed Back I	I	German Manual	3										
1850A	1 8 5 0	RS485	R	External Feed Back	E	French Manual	4										
2000A	2 0 0 0 (2)	<b>10</b> Firing		<b>12</b> Option		<b>16</b> Load type											
2400A	2 4 0 0	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code										
2700A	2 7 0 0 (2)	Burst Firing BF	B	4:20mA Retransmission	A (3)	Resistive Load	8										
<b>7</b> Max Voltage		Soft Start + Burst Firing S+BF	J	0:10V Retransmission	V (3)	Transformer	9										
Description code	Numeric code	Delayed Triggering + Burst Firing DT+BF	D	<b>13</b> Fan Voltage													
480V	4	Phase Angle PA	P	Description code	Numeric code												
600V	6	Soft Start + Phase Angle S+PA	E	Fan Voltage equal to Aux. Voltage	3												
690V	7	<b>8</b> Aux. Voltage supply		<b>14</b> Approvals													
Description code	Numeric code	Description code	Numeric code	Description code	Numeric code												
110V	1	CE EMC For European Market	E														
230V	2																

LEGEND  
IF = Internal Fixed Fuse  
CT = Current Transformer  
HB = Heater Break Alarm

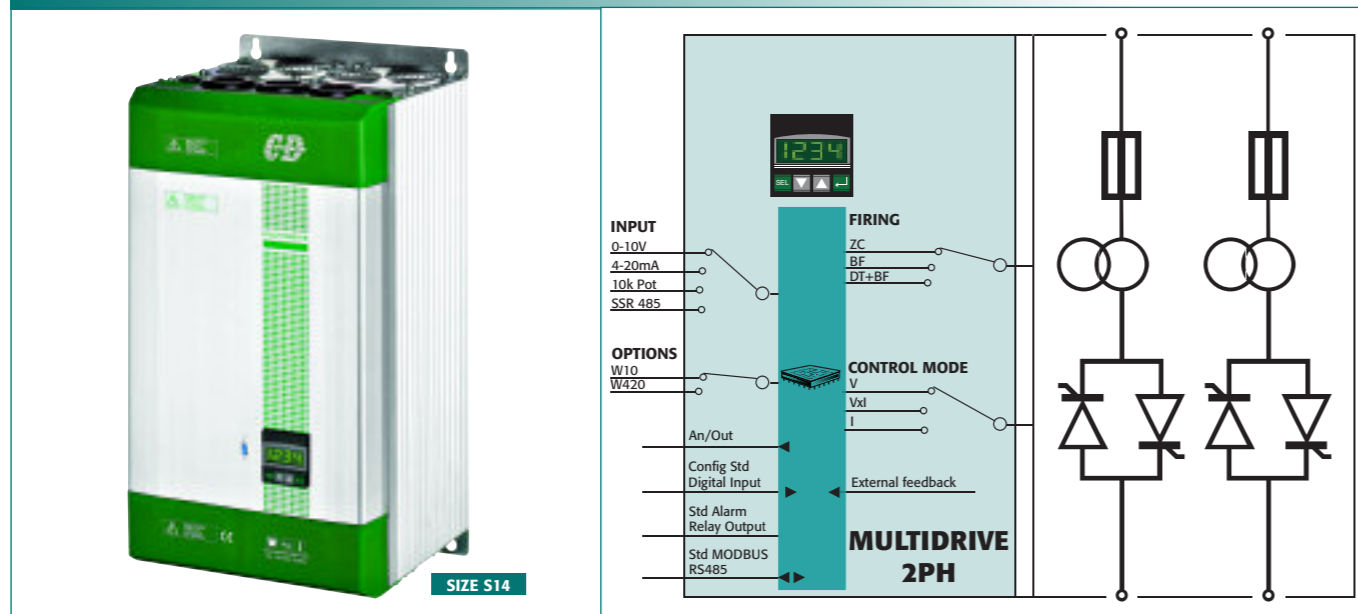
Note (1): After 16th digit write current and voltage of load inside brackets Ex. (190A-400V). this is to receive the Thyristor unit already tuned from CD Automation

Note (2): Rating not available at 690V

Note (3): In total are available 4 Analog Output.

One dedicated to Control Mode and the other 3 dedicated to Current, Voltage etc.

# MULTIDRIVE 2PH



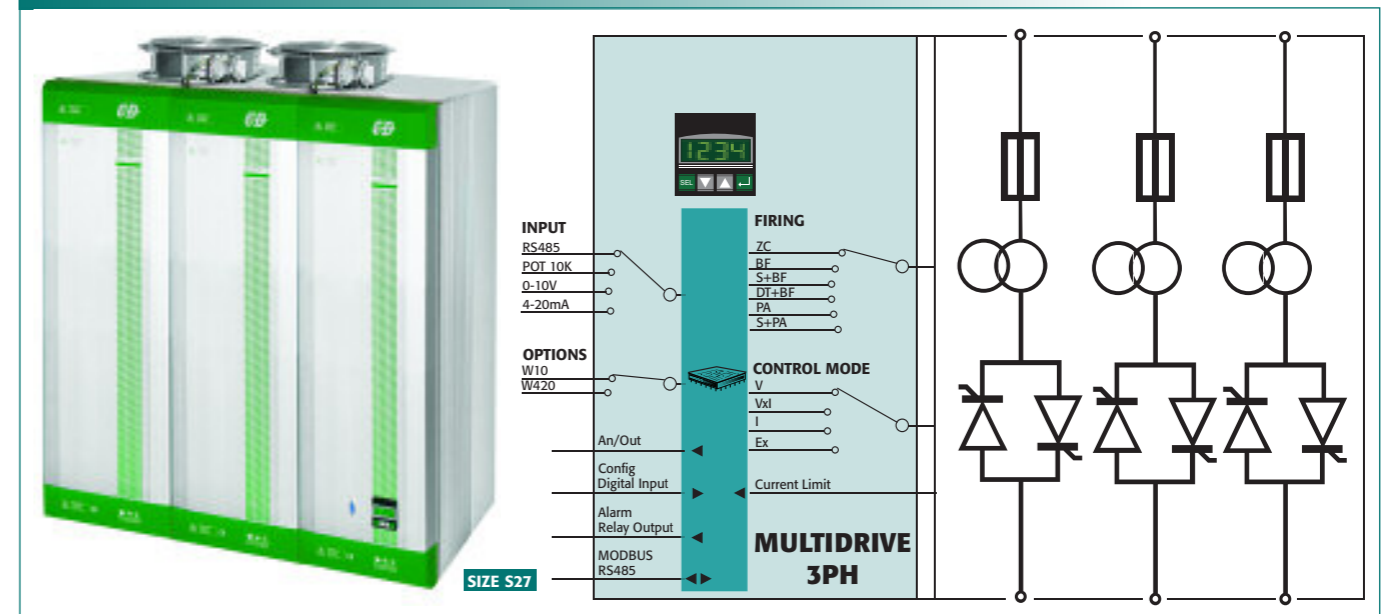
## Technical Specification

- Dimensions:** See size at page 10-11 and dimensions at page 12-13
- Load type:** Normal resistance, three phase transformer coupled with normal resistance.
- Inputs:** 0-10V, 4-20mA, 10kpot, RS485 communication, SSR
- Firing mode:** Zero Crossing, Burst Firing, Delayed Triggering + Burst Firing (not with cold resistance)
- Operating temperature:** 0° to 40°C without derating
- Control mode:** V Voltage, Vxl Power and open loop
- RS485 port. RTU Modbus Protocol**
- Comply with EMC and cUL**
- Data sheet:** More details on "Multidrive 2 PH" bulletin

## Option

No options, all included

# MULTIDRIVE 3PH



## Technical Specification

- Dimensions:** See size at page 10-11 and dimensions at page 12-13
- Load type:** Normal resistance, Three phase transformer coupled with normal or cold resistance
- Inputs:** 0-10V, 4-20mA, 10kpot, RS485 communication, SSR
- Firing mode:** Zero Crossing, Burst Firing, Soft Start + Burst Firing, Phase Angle, Soft Start + Phase Angle and Delayed Triggering
- Operating temperature:** 0° to 40°C without derating
- Control mode:** Voltage, Power, Current, External Profiling 0:10V, Open Loop
- RS485 port. RTU Modbus Protocol**
- Comply with EMC and cUL**
- Data sheet:** More details on "Multidrive 3 PH" bulletin

## Option

No options, all included

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<b>MULTIDRIVE 2PH</b>		M	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>4, 5, 6</b>	<b>Current</b>	<b>Description code</b>		<b>Numeric code</b>		<b>7</b>		<b>Max Voltage</b>		<b>11</b>		<b>Control Mode</b>		<b>14</b>		<b>Approvals</b>	
35A 0 0 3 5		480V 4		Open Loop 0		CE EMC For European Market 0		600V 6		Voltage Feed Back V U		cUL For American Market up to 700A L (4)		None 0		Italian Manual 1	
45A 0 0 4 5		690V 7		Power Feed Back Vxl W		4:20mA Retransmission Load Current and Control Mode A (3)		110V 1		0:10V Retransmission Load Current and Control Mode V (3)		English Manual 2		German Manual 3		French Manual 4	
75A 0 0 7 5		230V 2		8		12		8		15		16		16		16	
100A 0 1 0 0		Aux. Voltage supply		Option		Manual		Aux. Voltage supply		Manual		Load type/Connection		Manual		Load type/Connection	
125A 0 1 2 5		Description code Numeric code		Description code Numeric code		Description code Numeric code		Description code Numeric code		Description code Numeric code		Description code Numeric code		Description code Numeric code		Description code Numeric code	
150A 0 1 5 0		110V 1		4:20mA A		None 0		110V 1		Italian Manual 1		Resistive Load/Delta Connection 1		None 0		Italian Manual 1	
225A 0 2 2 5		230V 2		10KPot K		Italian Manual 2		230V 2		English Manual 2		Resistive Load/Star Connection 2		English Manual 2		English Manual 2	
280A 0 2 8 0		SSR 3:30V dc S		RS485 R		German Manual 3		SSR 3:30V dc S		French Manual 4		Transformer Load/Delta Connection 3		German Manual 3		German Manual 3	
400A 0 4 0 0		0:10V V				French Manual 4		0:10V V				Transformer Load/Star Connection 4		French Manual 4		French Manual 4	
450A 0 4 5 0		4:20mA A						4:20mA A				Resistive Load/Star Connection + Neutral 7					
500A 0 5 0 0		10KPot K						10KPot K				Transformer Load/Star Connection 3					
600A 0 6 0 0		RS485 R						RS485 R				Transformer Load/Star Connection 4					
700A 0 7 0 0												Transformer Load/Star Connection 5					
850A 0 8 5 0												Resistive Load/Open delta 6					
1000A 1 0 0 0 (2)																	
1400A 1 4 0 0																	
1500A 1 5 0 0 (2)																	
1850A 1 8 5 0																	
2000A 2 0 0 0 (2)																	
2400A 2 4 0 0																	
2700A 2 7 0 0 (2)																	

- Note (1):** After 16th digit write current and voltage of load inside brackets Ex. (190A-400V), this is to receive the Thyristor unit already tuned from CD Automation
- Note (2):** Rating not available at 690V
- Note (3):** In total are available 4 Analog output. One dedicated to control mode and the other 3 for current on phases 1-2-3
- Note (4):** cUL Approval up to 700A included

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<b>MULTIDRIVE 3PH</b>		M	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>4, 5, 6</b>	<b>Current</b>	<b>Description code</b>		<b>Numeric code</b>		<b>7</b>		<b>Max Voltage</b>		<b>10</b>		<b>Firing</b>		<b>14</b>		<b>Approvals</b>	
35A 0 0 3 5		480V 4		Zero Crossing ZC Z		CE EMC For European Market 0		600V 6		Single Cycle SC C		cUL For American Market up to 500A included L (4)		None 0		Italian Manual 1	
45A 0 0 4 5		690V 7		Burst Firing BF B		cUL For American Market up to 500A included L (4)		75A 0 0 7 5		Soft Start + Burst Firing S+BF J		English Manual 2		German Manual 3		French Manual 4	
75A 0 0 7 5		230V 2		Delayed Triggering + Burst Firing DT+BF D				100A 0 1 0 0		Phase Angle PA P		Resistive Load/Delta Connection 1		None 0		Italian Manual 1	
100A 0 1 0 0		Aux. Voltage supply		Phase Angle PA P				125A 0 1 2 5		Soft Start + Phase Angle S+PA E		Resistive Load/Star Connection 2		English Manual 2		English Manual 2	
125A 0 1 2 5		Description code Numeric code		Soft Start + Phase Angle S+PA E				150A 0 1 5 0				Transformer Load/Delta Connection 3		German Manual 3		German Manual 3	
225A 0 2 2 5		110V 1						225A 0 2 2 5				Transformer Load/Star Connection 4		French Manual 4		French Manual 4	
300A 0 3 0 0		230V 2						350A 0 3 5 0				Transformer Load/Star Connection + Neutral 7					
350A 0 3 5 0		SSR 3:30V dc S						400A 0 4 0 0				Transformer Load/Star Connection 3					
400A 0 4 0 0		0:10V V						450A 0 4 5 0				Transformer Load/Star Connection 4					
450A 0 4 5 0		4:20mA A						500A 0 5 0 0				Resistive Load/Open delta 6					
500A 0 5 0 0		10KPot K						600A 0 6 0 0									
600A 0 6 0 0		RS485 R						850A 0 8 5 0									
850A 0 8 5 0								1000A 1 0 0 0 (2)									
1000A 1 0 0 0 (2)								1400A 1 4 0 0									
1400A 1 4 0 0								1500A 1 5 0 0 (2)									
1500A 1 5 0 0 (2)								1850A 1 8 5 0									
1850A 1 8 5 0								2000A 2 0 0 0 (2)									
2000A 2 0 0 0 (2)								2400A 2 4 0 0									
2400A 2 4 0 0								2700A 2 7 0 0 (2)									
2700A 2 7 0 0 (2)																	

- LEGEND**  
 IF = Internal Fixed Fuse  
 CT = Current Transformer  
 HB = Heater Break Alarm
- Note (1):** After 16th digit write current and voltage of load inside brackets Ex. (190A-400V), this is to receive the Thyristor unit already tuned from CD Automation
- Note (2):** Rating not available at 690V
- Note (3):** In total are available 4 Analog output. One dedicated to control mode and the other 3 for current on phases 1-2-3
- Note (4):** cUL approval up to 500A included