

- Multi Channel Power Control
- Power Distribution management
- Suitable to communicate with PLC & Multiloop
- High precision measurement
- Elimination of power overshoot
- Power factor maintained close to 1
- Most popular Field Bus available
- Easy to use
- CE EMC listed

### **CD AUTOMATION**

**POWERED BY INNOVATION** 





# **Multi-Channel SCR Power Controller**

Suitable to control Electric Heaters and High Power Industrial Heating Systems





# HAVE YOU CONSIDERED HOW POWER PEAKS COULD BE A PROBLEM TO YOUR BUSINESS?

The REVO PC unit is designed to handle applications with multiple zones. This enhanced unit, thanks to a particular algorithm, minimizes your energy costs through the synchronization and the power limit for each zone. Revo PC keeps your instantaneous power within the limits of your electricity supply contract.



### **REVO PC POWER CONTROLLER**

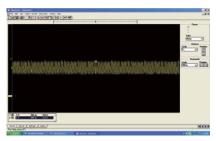
Created specifically for industrial multi-zone applications, REVO PC can be configured to control up to 24 channels/zones. Each zone can be sized from 30A up to 800A (REVO S Family with SSR input and Random Firing).



CURRENT WAVEFORM
WITHOUT POWER CONTROL
OPTIMISATION

# IMPORTANT POWER CONTROL FUNCTIONALITY IS OFFERED BY REVO PC INCLUDING:

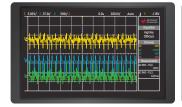
- Power distribution management
- Elimination of power overshoot.
- Power factor maintained close to 1.
- Energy monitoring true RMS measurement
- Stay connected with the most popular Field Bus protocols.
- Eliminate use of PLC output modules by using comms for Power to CPU connections.
- Alarm notification per zone of heater break and thyristor short circuit.
- REVO PC's considered design not only helps you save start-up costs but ensures you keep on saving money throughout the products lifetime.



CURRENT WAVEFORM WITH POWER CONTROL OPTIMISATION







POWER AND ENERGY		
Pun	9 00126	UPEE-G
	L1	Total
kVA	2.57	2.57
	LI	Total
kvar	0.11	0.11
	LI	Total
PF	0.59	0.59
	LI	Total
kVA <sub>harm</sub>	2.0	2.0 🖬
		400V SDHz 10 ENSONO
UP DOWN \$		0 HOLD





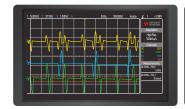
### **Without REVO PC**

### With REVO PC

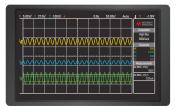
In multi-zone applications, the non-synchronized insertion of the different loads can create a simultaneity of insertions generating peak current that produces disturbances on the power line.

REVO PC distributes the power demand of the individual zones keeping the line current as constant as possible.

## **NETWORK DISTURBANCE**







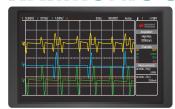


Without REVO PC

With REVO PC

The insertion of loads that are not synchronized on the power line can cause disturbances, such as fluctuations in the mains voltage (Flickering), network holes and losses on the power cables.

# **HARMONIC COMPONENT**









#### Without REVO PC

With REVO PC

The management and insertion of unsynchronized loads can lead to an increase in the harmonic component generated (THD). This effect increases losses, generates noise and can generate overheating of the power cables.

# **OPTIMIZATION OF ENERGY COST**



	ENERG	Y LOS	SS CAL	CULA		
		9	4:10:27			1-0
	Total		Loss		Co	st
Effective						0 . \$/hr
Reactive	0.06	kvar				0 . \$/hr
Unbalance	0.00					0 . \$/hr
Distortion	2.88					0 . \$/hr
Neutral						0 . \$/hr
Total					15.0	5 . \$/hr
Cu LENGHT 100 m	DIAMETER 25 mm2		METER		/kWh	HOLD



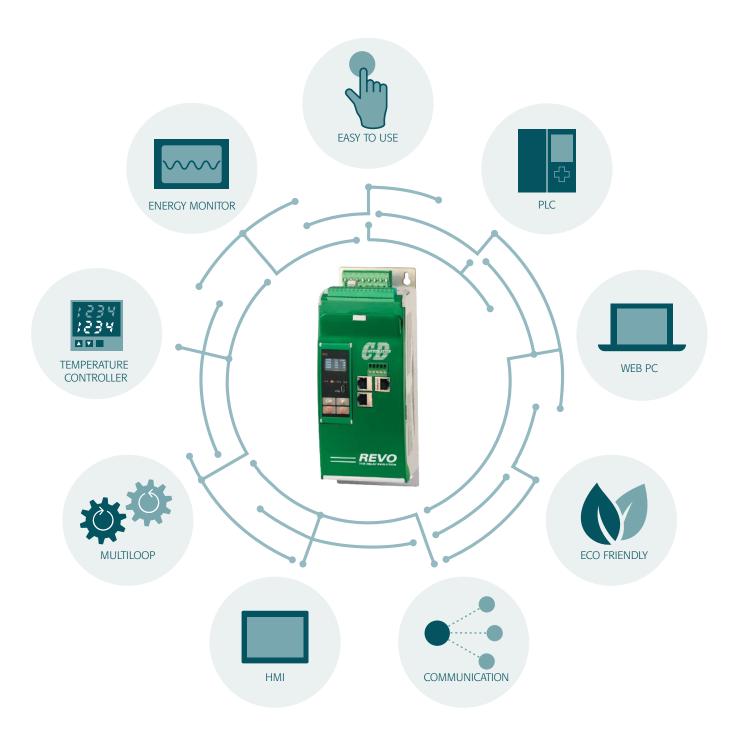
o t
. \$/hr
. \$/hr
. \$/hr
. \$/

### **Without REVO PC**

With REVO PC

Thanks to its control strategy and the distribution of the power required in the management of multizone loads, REVO PC keeps the Power Factor values close to 1.

# **CONNECTIVITY AND CONFIGURATION**



READ for each zone	WRITE for each zone
Set Point	Set Point
Alarm	Load configuration
Voltage	
Power	
Current	
Heater Break Alarm	
SCR Short Circuit Alarm	



# **EFFICIENT ENGINEERING**

A key benefit is the incorporation of REVO PC into the Siemens TIA Portal. By using PROFINET I/O field bus or Modbus RTU and TCP communication with Siemens S1500 PLC, all REVO PC units will fall back on a shared database, a standardized operating concept and centralized services. You will get benefit from faster commissioning and reduced engineering overhead.

On our website www.cdautomation.com you can download libraries developed in the SIMATIC TIA Portal environment.

These libraries, integrated in the automation projects developed in the SIMATIC TIA Portal environment, will make the integration and dialogue of our products with the SIEMENS PLCs of the S7 1500 series simple and immediate for our customers.

The libraries will be compatible with REVO PC/PN products that will make use of Modbus TCP, Modbus RTU and PROFINET I/O communication.

### **CONFIGURATOR SOFTWARE**

CDA Thyristor configurator software is free and available to download from our site www.cdautomation.com.

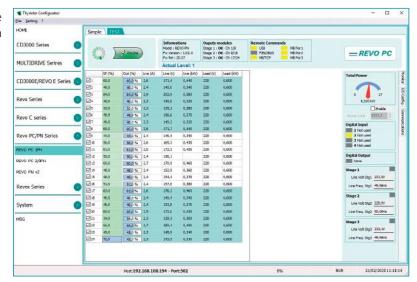
If the Order Code is in line with requirement, then REVO PC has been already configured in Factory and it's ready to use. You need the software only to modify the ordered configuration. Anyway we suggest to check the unit on the machine with the "Test unit" section. To install the software, launch the program and follow the instructions on the screen. Run the software configurator and set the serial port of the PC with baudrate.

### **TEST VIEW**

This page can be used to monitor and adjust the operation of the REVO PC while communicating with it in real time.

Main features available are:

- Set the total number of zones
- Select the source for Power Set Point
- Configure and Monitor the Digital Inputs
- Detect if an alarm is activated
- Set the power of each load
- Set minimum current threshold for each channel
- Main process variable display
- Source power set point display
- Total power limit setting
- Voltage and current calibration



### **MODBUS MASTER**

REVO PC can have Modbus master port as an option. With this feature it's possible to acquire external set point from different temperature controller with Modbus slave port.

Each temperature control set can be associated to one or more channel.

In the example picture on the left the channel 5 is associated with the temperature controller with address 1. The parameter 3 is dedicated in this controller for the set point.

Instead of using the main output of the controller to set the power, we use the value of power set point available for the communication.

		ID	Par Num	Err sts
	1	1	3	
	2	1	3	
	3	1	3	
7	4	1	3	
П	5	1	3	
П	6	1	3	
ш	7	1	3	
	8	2	3	
	9	2	3	

### **CONFIGURATION CABLE**

To connect the Revo PC to computer is necessary use a standard micro USB cable (our code CCX).

The windows driver for USB connection is installed by thyristor configurator software installer.





# **REVO PC POWER CONTROLLER**

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.



### **Control Unit**

REVO PC up to 24 channels

- SSR outputs to control up to n° 24 REVO S 1PH
- High precision voltage transducer RS485 and Modbus TCP available as standard
- This Unit transform a simple SCR Power Switch into an Intelligent Unit able to communicate and to have HB Alarm

### **Power Unit**

**REVOS 1PH** 

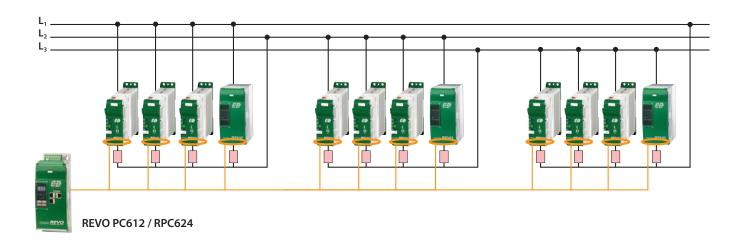
- SCR power switches from 30 to 800A
- Internal Fuse
- Max Voltage 480-600-690V
- Up to 24 REVO S connectable
- High precision current transducer



# **REVO PC FEATURES**

							x8 x4	<b>1</b> 8 8 4 4	x8 x4					
Trum O	CODE	RPC612	RPC624	RPC412	RPC424	RPC204	RPC208	RPC304	RPC308					
€Ð	CONNECTION/CONTROL	Phase-Phas three	e shared on phases	Phase-	Neutral	Two	Legs	Thre	e legs					
	CHANNELS	12	24	12	24	4	8	4	8					
REVO	N° of Control Legs for each Channel	1PH	1PH	1PH	1PH	2PH	2PH	3PH	3PH					
	Cover and socket material				Polymo	eric V2		<b>'</b>	'					
General Features	IP code		20											
	Aux Voltage				24	Vdc								
Input	Number of sensor used	12	24	12	24	12	24	12	24					
Features	Configurable Digital Input calibration				max.	50mA								
Output Features				25A fo	or each channe	el, Fuse I <sup>2</sup> T 12	60 A <sup>2</sup> S							
	Half Cycle at 50% power demand		Stan	dard		Not A	vailable	Standard						
Firing	Single Cycle at 50% power demand		Stan	dard			Star	ndard						
	Open Loop				Stan	dard								
Control	Power Feedback	Standard												
	Heater Break + Thyristor short circuit				Stan	dard								
	Current Measurement on communication	Standard												
Features	Voltage measurement	Standard												
	Power measurement	Standard												
	Three Phase balancement				Stan	dard								
	N°1 Modbus TCP and N°3 Modbus RTU Slave				Stan	dard								
C	Profibus DP and Modbus TCP				Opt	tion								
Communication	Profinet and Modbus TCP				Opt	tion								
	Ethernet IP and Modbus TCP				Opt	tion								
District to a co	N° of Digital Input				4	1								
Digital Input	Enable Disable Function				Stan	dard								
Relay Output	Relay Output				Opt	tion								
Option	REVO KP PC				Opt	tion								
Temperature Control	Can be added externally				Ор	tion								
Approval	CE EMC				Stan	dard								

# **RPC612 / RPC624 -** up to 24 1PH channel shared on the three phases Connection Phase to Phase



### **Example:**

N° 1 RPC612-0001411122		REVO PC 612
N° 3 RS1040-40SZ0Y0021	<b>]</b>	REVO S 1PH 40A, max main voltage 480V, No AUX voltage required, Logic input SSR, Fuse & Fuse Holder + integratedCT
N° 1 RS1090-40SZ0Y2021		REVO S 1PH 90A, max main voltage 480V, No AUX voltage without Logic input SSR, Integrated Fuses & CT, Fan 230V std
N° 3 RS1040-40SZ0Y0021	<b>)</b>	REVO S 1PH 40A, max main voltage 480V, No AUX voltage required, Logic input SSR, Fuse & Fuse Holder + integratedCT
N° 1 RS1090-40SZ0Y2021	$L_2$ - $L_3$	REVO S 1PH 90A, max main voltage 480V, No AUX voltage without Logic input SSR, Integrated Fuses & CT, Fan 230V std
N° 3 RS1040-40SZ0Y0021	<b>)</b> , ,	REVO S 1PH 40A, max main voltage 480V, No AUX voltage required, Logic input SSR, Fuse & Fuse Holder + integratedCT
N° 1 RS1090-40SZ0Y2021	J L3-L1	REVO S 1PH 90A, max main voltage 480V, No AUX voltage without Logic input SSR, Integrated Fuses & CT, Fan 230V std

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

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

	code	note	description	code	note	
-F3 All the 1PH channel can be balanced on the three	6		Half Cycle at 50% power demand	1		
to Phase			One Cycle at 50% power demand	2		
	E 6					

Firing

CHANNELS	5	6	
description	co	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	

FEED BACK (Control Mode)	13	
description	code	note
No Feed Back	1	
Power	2	

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

Approvals	14	
description	code	note
CE EMC	1	
CE + cUL (pending)	L	

Communication	10	
description	code	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	

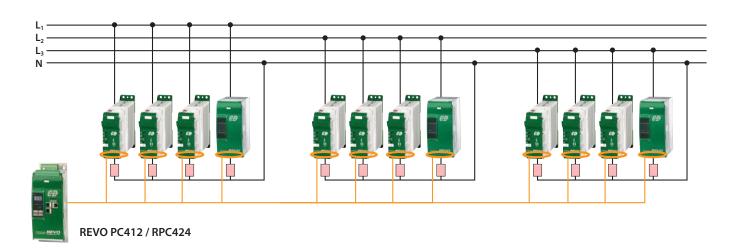
Manual	15	
description	code	note
None	0	
Italian	1	
English	2	
German	3	
French	4	

Aux Voltage to be coupled with an external transformer	11	
description	code	note
24Vdc	4	

Version	16	
description	code	note
Version 2	2	



# **RPC412** / **RPC424** - up to 24 1PH channel balanced on the three phases Connection Phase to Neutral



## **Example:**

N° 1	RPC412-0001411122		REVO PC 412
N° 3		)	REVO S 1PH 40A, max main voltage 480V, No AUX voltage required, Logic input SSR, Fuse & Fuse Holder + integratedCT
N° 1	RS1090-40SZ0Y2021	$L_1$ -N	REVO S 1PH 90A, max main voltage 480V, No AUX voltage without Logic input SSR, Integrated Fuses & CT, Fan 230V std
	RS1040-40SZ0Y0021	)	REVO S 1PH 40A, max main voltage 480V, No AUX voltage required, Logic input SSR, Fuse & Fuse Holder + integratedCT
N° 1	RS1090-40SZ0Y2021	$\int_{2^{-1}N}$	REVO S 1PH 90A, max main voltage 480V, No AUX voltage without Logic input SSR, Integrated Fuses & CT, Fan 230V std
N° 3	RS1040-40SZ0Y0021	)	REVO S 1PH 40A, max main voltage 480V, No AUX voltage required, Logic input SSR, Fuse & Fuse Holder + integratedCT
N° 1	RS1090-40SZ0Y2021	$\int_{3}^{L_3-IN}$	REVO S 1PH 90A, max main voltage 480V, No AUX voltage without Logic input SSR, Integrated Fuses & CT, Fan 230V std

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

CONNECTION	4	
description	code	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	co	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		code	•	note
Current Sensor is included and integrated with REVO S 1PH units with "Y" Option	0	0	0	

Communication	10	
description	code	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	

Aux Voltage to be coupled with an external transformer	11	
description	code	note
24Vdc	4	

Firing	12	
description	code	note
Half Cycle at 50% power demand	1	
One Cycle at 50% power demand	2	

FEED BACK (Control Mode)	13	
description	code	note
No Feed Back	1	
Power	2	

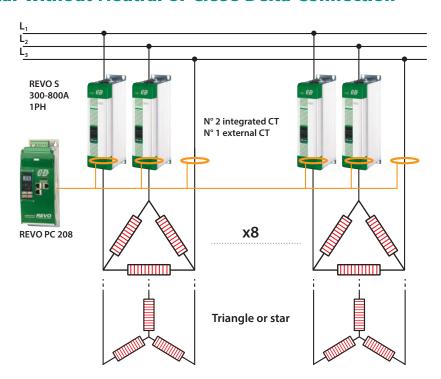
Approvals		
description	code	note
CE EMC	1	
CE + cUL (pending)	L	

Manual	15	
description	code	note
None	0	
Italian	1	
English	2	
German	3	
French	4	

Version	16	
description	code	note
Version 2	2	



# **RPC 2 - Star without Neutral or Close Delta Connection**



Up to n° 8 Three Phase Loads for each REVO PC 208

## **Example:**

N° 1 RPC208-0001421122 REVO PC 208

 $N^{\circ}$  16 RS1600-77SZ0Y2021 REVO S 1PH 600A, max main voltage 690V, AUX voltage supply range: 540 to 759Vac, Logic input SSR, Fixed Fuse + CT, Fan 230V std

N° 8 TA006 TA 800/0,5

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

CHANNELS	4	5	6	
description	code		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		code	9	note
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.				
For 2PH control N°2 REVO S 1PH units with "Y" option are required + an additional Current Transformer	0	0	0	
For 3PH control N°3 REVO S 1PH units with "Y" option are required				

Communication	10	
description	code	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	

Aux Voltage to be coupled with an external transformer	11	
description	code	note
24Vdc	4	

Firing	12	
description	code	note
One Cycle at 50% power demand	2	

FEED BACK (Control Mode)	13	
description	code	note
No Feed Back	1	
Power	2	

Approvals	14	
description	code	note
CE EMC	1	
CE + cUL (pending)	L	

Manual	15	
description	code	note
None	0	
Italian	1	
English	2	
German	3	
French	4	

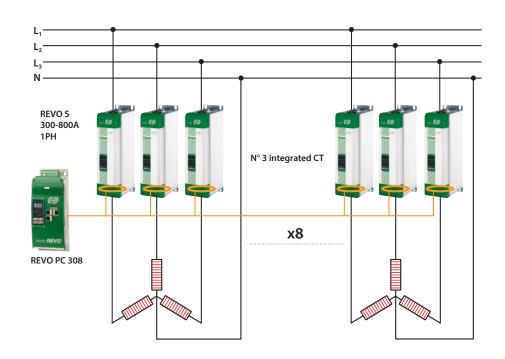
Version	16	
description	code	note
Version 2	2	

External Current Sensor	
description	code
50/0,05	000
100/0,5	001
150/0,5	002
200/0,5	003
250/0,5	004

description	code
400/0,5	005
800/0,5	006
1000/0,5	007
1500/0,5	008
2000/0,5	009



# **RPC 3 - Star + Neutral Connection**



Up to n° 8 Three Phase Loads for each REVO PC 308

### **Example:**

N° 1 RPC308--0001411122 REVO PC 612

 $N^{\circ}$  24 RS1800-45SZ0Y2021 REVO S 1PH 800A, max main voltage 480V, AUX voltage supply range: 342 to 528Vac, Logic input SSR, Fixed Fuse + CT, Fan 230V std

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

CHANNELS	4	5	6	
description		code	2	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	code		note	
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.	0	0	0	

Communication	10	
description	code	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	

Aux Voltage to be coupled with an external transformer	11	
description	code	note
24Vdc	4	

Firing	12	
description	code	note
Half Cycle (only with Neutral)	1	
One Cycle at 50% power demand	2	

FEED BACK (Control Mode)	13	
description	code	note
No Feed Back	1	
Power	2	

Approvals	14	
description	code	note
CE EMC	1	
CE + cUL (pending)	L	

Manual	15	
description	code	note
None	0	
Italian	1	
English	2	
German	3	
French	4	

Version	16	
description	code	note
Version 2	2	



# **REVO S SELECTION FOR REVO PC**

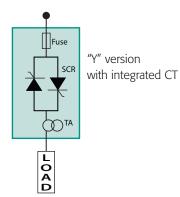
### **REVO S 1PH SIZE AND DIMENSION**



**SR6** H 121 X W 36 X D 185 - 0,61KG.



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





**\$11** H 440 x W 137x D 270 - 10,5KG.



**\$12** H 520 X W 137 X D 270 - 15KG.



**\$15** H 560 x W 137x D 270 - 10,5KG.

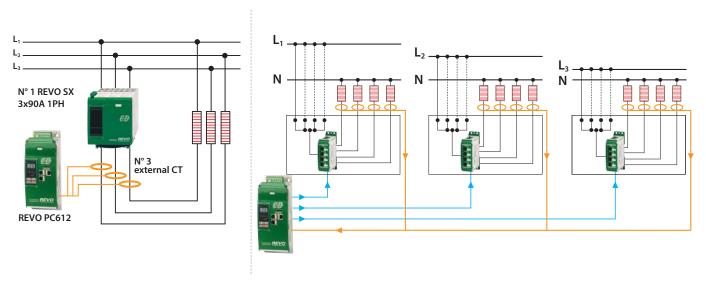
### **Technical Specification: REVO S 1PH to be coupled with REVO PC**

- Load type: Normal resistance, infrared short and medium waveform
- Inputs: SSR Standard
- Firing mode: Zero Crossing
- Operating temperature: 0 to 40°C without derating
- Comply with EMC and cUL® up to 800A as an option
- 100 KA: Short Circuit Current rating (SCCR) up to 600V
- Data sheet: More details on "REVO S 1PH" Manual

		1	ı	2	3	4	5	6		7	8	9	10	11	12	13	14	15	16
ORDER CODE		- 1	R	S	1	-	-	_	-	_	-	-	_	_	_	_	-	_	_
CURRENT	4	5	6						FIRING					10					
description		cod		Size 4	30-600V	Size	690V	note	descrip	tion				code					note
30A	0	3	0	SR3	S-SR6	Not av	railable		Zero Cro					Z	Tos	get single	cvcle		2
35A	0	3	5	SR3	S-SR6	Not av	ailable									,	.,		
40A	0	4	0	SR3	S-SR6	Not av	ailable		CONTR	DL MOD	E			11					
60A	0	6	0	SI	R12	S	11		descrip	tion				code					note
90A	0	9	0	SI	R15	S	11		Open Lo	ор				0					
120A	1	2	0	SI	R15	S	11												
150A	1	5	0	SI	R15	S	11		FUSES 8	e OPTIO	N			12					
180A	1	8	0	SI	R15	S	11		≤ 40A					code					note
210A	2	1	0	SI	R15	S	11		Fuse + F	use Holo	der + CT			Y					
300A	3	0	0	S	12	not av	ailable		>40A										
400A	4	0	0	S	512	S	12		Fixed Fu	ses Std +	- CT			Y					
500A	5	0	0	9	512	S	12												
600A	6	0	0	9	512	S	12		FAN VO	LTAGE				13					
700A	7	0	0	5	512	S	12		descrip	tion				code					note
800A	8	0	0	9	515	S	15	5	No Fan <					0					
									Fan 115\	/≥90A				1					
MAX VOLTAGE		7							Fan 230	V ≥ 90A	Std Versi	on		2					
description		cod	е					note	Fan 24Vo					3					
480V		4																	
600V		6							APPRO	VALS				14					
690V		7						2,3,4	descrip	tion				code					note
									CE EMC		pean Ma	rket		0					
VOLTAGE SUPPLY AUX		8							CE EMC				508®	L					5
≤ 210A		cod	е					note	listed					L					
No Aux.		0																	
> 210A									MANUA					15					
90:130V		1						1	descrip	tion				code					note
170:265V		2						1	None					0					
230:345V		3						1	Italian					1					
300:530V		5						1	English					2					
510:690V		6						1	German					3					
600:760V		7						1	French					4					
INPUT		9							VERSIO					16					
description		cod	е					note	descrip	tion				code					note
CCD		C							Std unit					1					



## **REVO SX MULTICHANNEL 1PH UNITS**



### **Example:**

N° 1 RPC612-0001421122 REVO PC 308

N° 1 RSX390-... REVO SX 3 zones 90A each ...



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

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

NUMBER OF ZONES X CURRENT RATING	4	5	6	
description		code	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	code	note
480V	4	
600V	6	

VOLTAGE SUPPLY AUX	8	
description	code	note
No Auxiliary Voltage	0	

INPUT	9	
description	code	note
SSR	S	

FIRING	10	
description	code	note
Zero Crossing	Z	

CONTROL MODE	11	
description	code	note
Open Loop	0	

FUSES & OPTION	12	
description	code	note
Integrated fuses	F	

FAN VOLTAGE	13	
description	code	note
No Fan Voltage (only RSX250)	0	
Standard: 24Vdc Fan (All unit with exception of RSX250)	3	

APPROVALS	14	
description	code	note
CE EMC For European Market	0	

MANUAL	15	
description	code	note
None	0	
Italian	1	
English	2	
German	3	
French	4	

VERSION	16	
description	code	note
Version 1	1	



# **INFRARED OVEN AND THERMOFORMING**

### INFRARED LAMPS WITH MEDIUM AND SHORT WAVE FORM

REVO PC is the best solution to control all types of infrared lamps.

The robust junction with high I<sup>2</sup>T allows it to drive short-wave IR lamps.

There are several types of soft start, which reduce much of the flickering phenomenon.

The synchronization makes the power factor close to one.

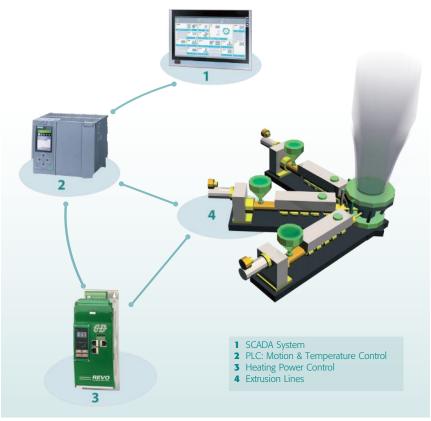
Power Network voltage fluctuations are compensated instantly via the feedback in the unit.



# **PLASTIC EXTRUSION MACHINE**

### **AUTOMATION SOLUTION FOR EXTRUSION LINES**

- Scalable power management, single extruder or full line.
- Cyclic reading and writing of process variables.
- Short circuit SCR and load brake diagnostics.
- Reduced power consumption due to power grid fluctuations through live control.
- Maintains instantaneous power in the contractual limits with a power factor close to one.
- Strong bulk reduction and cabling for co-extrusion systems that can pass 100 zones.
- Distributed solutions with cable and labour cost reduction.





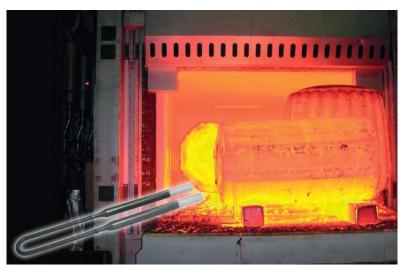
# **SPECIAL LOADS**

## **MOSI, HEATING ELEMENTS** (KANTHAL SUPER® ELEMENTS)

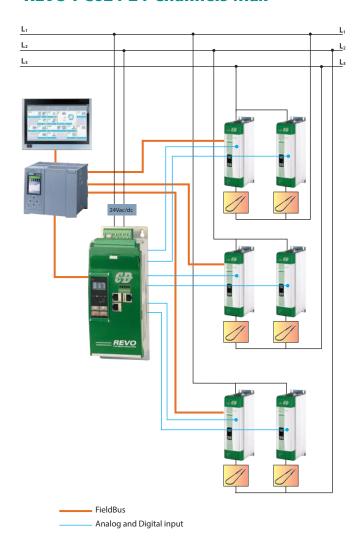
This kind of heaters increase resistivity sharply with temperature but do not change with age.

The initial current at cold elements can be 16 times the rated current.

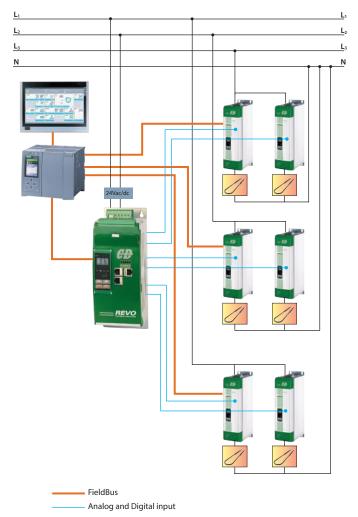
For this type of application, it is necessary to use units that allow a phase angle firing with soft start (3 sec.) and current limit.



# PHASE TO PHASE CONNECTION REVO PC624 24 Channels Max



# PHASE TO NEUTRAL CONNECTION REVO PC424 24 Channels Max





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