

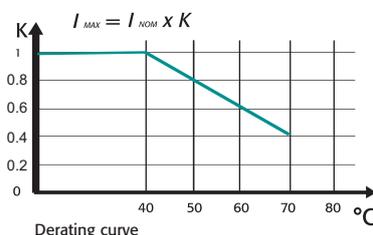


## GENERAL DESCRIPTION

- Revo S has been specifically designed to save space and labour
- These simple units can be connected with REVO PC to manage multizone system this minimize your energy cost by controlling synchronization and power limit on each zone
- Integrated fuse + fuse holder is necessary to have a complete power control zone including current transformer and optional circuit board
- Flat Cable Wiring System (option) to connect in plug in mode many Revo S when HB alarm or analog input are used
- Input signal: SSR, Analog as an option
- Zero Crossing, Burst Firing available at 4, 8 or 16 Cycles at 50% of Power demand
- Electronic fully isolated from power with constant current drain on input.
- Heater Break alarm option to diagnose partial or total load failure and Thyristor Short circuit
- Fuse and Fuse holder available as an option
- Current transformer integrated (with Heater Break option)
- Special design for Heat sink with very high dissipation value
- Comply with EMC, cUL (pending)
- DIN RAIL side by side mounting
- IP20 Protection

## TECHNICAL SPECIFICATION

<b>Voltage power supply</b>	24V minimum up to 480V, 600V On request		
<b>Voltage Frequency</b>	50 or 60 Hz no setting needed from 47 to 70 Hz		
<b>Nominal Current</b>	30A, 35A, 40A		
<b>Input Signal</b>	SSR for REVO S, No Fuse,	5:30Vdc	18mA Max (On ≥ 5Vdc Off ≤ 4Vdc);
	SSR for REVO S, Fuse + Fuse Holder	7:30Vdc	18mA Max (On ≥ 7Vdc Off ≤ 6Vdc);
	SSR for REVO S, Fuse + Fuse Holder,+ HB	4:30Vdc	6mA Max (On ≥ 4Vdc Off ≤ 1Vdc);
	Voltage input	0:10Vdc	impedance 15 K ohm;
	Current input	0:20/4:20mA	impedance 100 Ohm;
<b>Firing</b>	Zero Crossing, Burst Firing with analog input signal only		
<b>Auxiliary Voltage Supply</b>	12:24V dc/ac (max 70 mA) required only with HB Alarm or Analog Input Option		
<b>Heater Break Alarm</b>	Microprocessor based with automatic setting via Digital Input; Relay Output 0,5A at 110V		
<b>Mounting</b>	DIN RAIL or panel mounting		
<b>Operating Temperature</b>	40 °C without derating. Over this temperature see below derating curve		
<b>Storage temperature</b>	-25 °C to 70 °C Max		
<b>Altitude</b>	Over 1000 m of altitude reduce the nominal current of 2% for each 100m		
<b>Humidity</b>	From 5 to 95% without condense and ice		



## OPTION'S FEATURES AND SPECIAL DETAILS

### HEATER BREAK ALARM (HB)

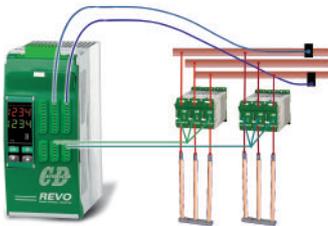
#### ON FRONT CABINET



FEW SECOND TO SET AND CALIBRATE ALL THE UNITS

- Microprocessor based circuit
- Capacity to diagnose the failure of one Resistance over five in parallel
- Load failure alarm with LED indication on front unit
- Thyristor short circuit alarm with LED indication on front unit
- Alarm output with free voltage relay contact
- Alarm reset function and possibility to auto reset if the alarm disappear
- Built in Current transformer when heater Break option has been selected
- Self Setting via external command or push button on front unit
- Common setting command can be given to many units and in a matter of second, the tuning is done, also by a non expert operator

### HOW TO ADD POWER LOAD MANAGEMENT AND FEATURES TO YOUR SIMPLE UNITS



APPLICATION WITH 8, THREE-PHASE LOADS

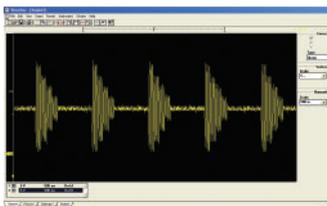
Use REVO-PC and you can add these Features

- Communication with different field bus
- Reading of current Voltage and Power
- Instantaneous power very close to average value, no pick power
- Power factor close to one no harmonics
- Prevents increase in energy supply tariffs imposed by your electricity supplier

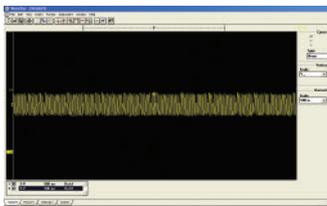
#### Synchronization

On all controlled zones, REVO-PC Synchronization is automatic resulting in superior performance:

- Total current is equal to a sinusoidal wave form.
- Power factor > 0,9.
- Instantaneous current close to average value.
- Cancellation of harmonics.
- Flickering effect removed.



WITHOUT POWER CONTROL OPTIMISATION



WITH POWER CONTROL OPTIMISATION

#### Smart power limitation

- Smart power limitation works together with synchronization. If this function is enabled, REVO-PC makes a live calculation of power at each period and generates the output values for the next period. If the calculated power is below the power limit value, the previous values remain with each channel using full power.
- If the power is above the power limit value, the setpoint of each channel is reduced proportionally to restrict power overshoot. This function significantly reduces disturbances on the main network compared to a full power system, preventing any increase in energy tariffs imposed by the electricity supplier.
- This function can be activated/deactivated and the limit value changed at any time.

### ORDERING CODES REVOS PC

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
<b>REVO-PC</b>	<b>R</b>	<b>P</b>	<b>C</b>	-	-	-	-	-	-	-	-	-	-	-	<b>0</b>	<b>0</b>	<b>0</b>

4,5 Channels		7 Communication		9 Firing		12 Manuals	
Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code
8 Channels (for 8 Off one phase unit)	0 8	Ethernet	1	Half Cycle at 50% power demand	1	None	0
16 Channels (for 16 Off one phase unit)	1 6	ModBus Slave	2	One Cycle at 50% power demandModBus	2	Italian Manual	1
24 Channels (for 24 Off one phase unit)	2 4	ModBus Master	3			English Manual	2
8 Channels for 2-3PH	3 8	Profibus	4			German Manual	3
		Profinet	5			French Manual	4

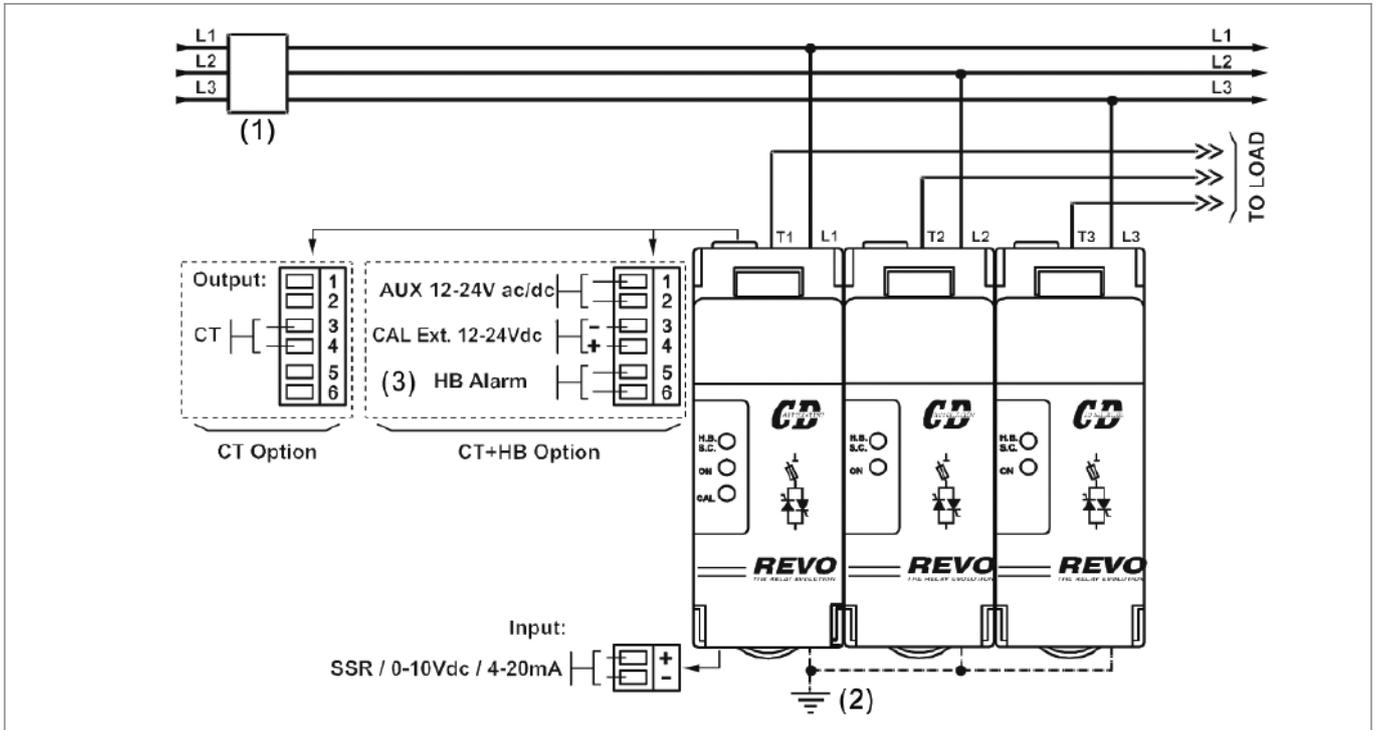
  

6 Current Sensor		8 Primary Voltage Aux. Transformer		10 Feed Back		13 Version	
Description code	Numeric code	Description code	Numeric code	Description code	Numeric code	Description code	Numeric code
50/0,05 A	1	Transformer 24V	1	No feedback	1	Version 1	1
100/0,05 A	2	90:130V	2	Power	2		
150/0,005 A	3	170:265V	3				
200/0,05 A	4	230:345v	4				
250/0,05A	5	300:530V	5				
400/0,05A	6	510:690V	6				
80070,05A	7	600:760V	7				

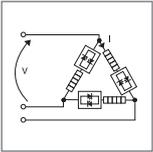
  

11 Approvals	
Description code	Numeric code
CE EMC	1

## WIRING CONNECTION REVO S 3PH from 30A to 40A

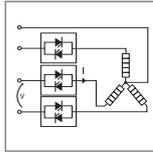


### LOAD TYPE



OPEN DELTA  
Resistive or  
Infrared Lamps  
Long and  
medium waves

### LOAD TYPE

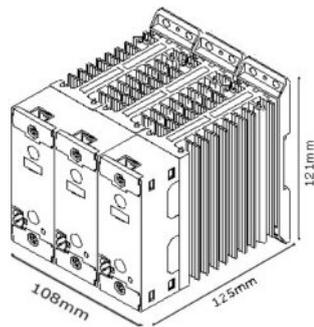


STAR with neutral  
Resistive or  
Infrared Lamps  
Long and  
medium waves

### NOTE

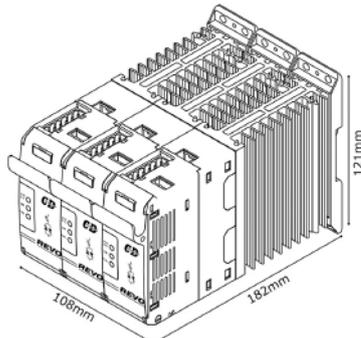
- (1) • A suitable device must ensure that the unit can be electrically isolated from the supply, this allows the qualified people to work in safety.
  - The user installation must be protecting by electromagnetic circuit breaker or by fuse isolator. The semiconductor fuses are classified for UL as supplementary protection for semiconductor.
- (2) • The heat-sink must be connected to the earth.
- (3) • Only for the HB option

## DIMENSION AND FIXING HOLES



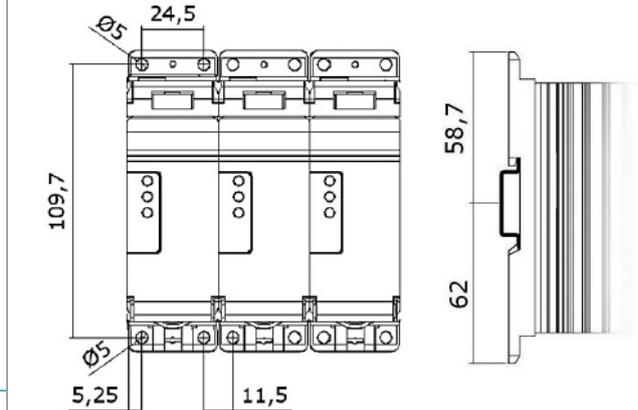
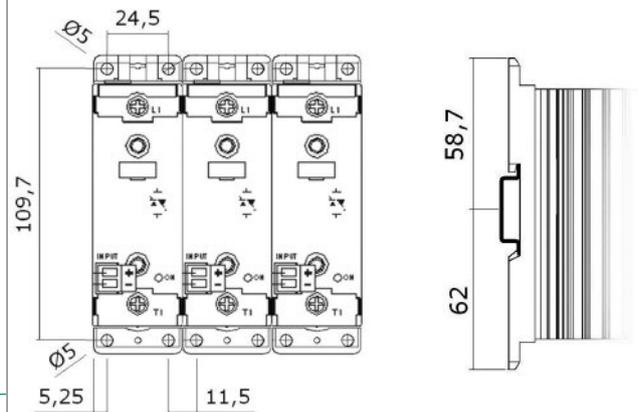
W 108 mm. - H 121 mm. - D 125 mm. - kg. 1,32

**30A - 40A**



W 108 mm. - H 121 mm. - D 185 mm. - kg. 1,83

**30A - 40A**



## OUTPUT FEATURES (POWER DEVICE)

<b>Nominal current in continuous service:</b>	See order code
<b>Max peak current (10ms)</b>	400A for unit type 030 600A for unit type 035 800A for unit type 040
<b>Voltage range:</b>	24÷600V
<b>Repetitive peak reverse voltage:</b>	1200V (480V), 1600V (600V)
<b>Latching current:</b>	250mA
<b>Leakage current:</b>	15mA eff
<b>I<sup>2</sup>t value tp=10msec:</b>	780A <sup>2</sup> /S for unit type 030 1750A <sup>2</sup> /S for unit type 035 3110A <sup>2</sup> /S for unit type 040
<b>Frequency range:</b>	47÷70Hz
<b>Power loss (I=Inom):</b>	144W for unit type 030 132W for unit type 035 150W for unit type 040
<b>Isolation Voltage:</b>	2500Vac

## ORDERING CODES REVOS 3PH

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

4, 5, 6 Current	
Description code	Numeric code
30A	0 3 0
35A	0 3 5
40A	0 4 0

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

8 Aux. Voltage supply	
Description code	Numeric code
No Aux. Voltage, without HB and/or without Analog Input	0
12:24V ac-dc 70mA, with HB and/or Analog Input	4

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

10 Firing	
Description code	Numeric code
Zero Crossing ZC	Z
Burst Firing 4 Cycles On at 50% Power Demand	4 (1)
Burst Firing 8 Cycles On at 50% Power Demand	8 (1)
Burst Firing 16 Cycles On at 50% Power Demand	6 (1)

11 Control Mode	
Description code	Numeric code
Open Loop	0

12 Fuse & Option	
Description code	Numeric code
No Fuse	0
Fuse + Fuse Holder	F
Fuse + Fuse Holder +CT	Y
Fuse + Fuse Holder +CT +HB	H
Fuse + Fuse Holder +CT +HB +Flat Wiring System	X

13 Fan Voltage	
Description code	Numeric code
No Fan	0

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

**Note (1):** Available only with Analog input

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

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

16 Version	
Description code	Numeric code
Std. Version	1



**CD Automation**

Tel: +44 (0)1323 811-100

Email: info@cdautomation.co.uk

Web: www.cdautomation.co.uk/revo-s-3ph