

# Solid State Relays

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- Textile
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- Drying
- Thermoforming
- Etc.

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## STANDARDS

The solid-state relays and contactors made by celduc® are manufactured in compliance with major international standards :

- IEC 947-4-2 for motor control.
  - IEC 947-4-3 for the other loads.
  - American et Canadian (UL, CSA, cUL).
  - IEC / EN 60950 – IEC 62314 - VDE0805
- Our products also meet the major European directive regarding the CE marking.
- Some of our products fulfil the requirements according to DIN EN60601-1 (VDE 0750) for medical applications and also the requirements for explosive atmospheres ATEX "EX".
  - All of our relays okpac® SO (as well as SC relays), celpac® 2G SU/SA including the current sense module ESUC but also the 2-phase SOB and 3-phase SGT comply with the European standard EN61373 for railways : Shocks and vibration tests on relays. Regarding the standards about Fire behaviour and fumes : French standard NF F16-102 calling for the EN60 695-2-10/11/12 (Glow Wire tests), blue covers of SO relays and SU/SA relays are classified I2 or I3 for fire behaviour and F2 for fumes (toxicity and opacity). Encapsulating resin and black housings are being completed.
  - The process of manufacturing of our relays complies with the ISO9001 requirements version 2008. We incorporate highly reliable components with a very high electromagnetic interference level.



# PCB relays

## SLIM range (miniature)

The SLA / SLD solid state relays are 100 % compatible with 5 mm pitch electromechanical relays. They can be soldered direct to PCBs or plugged into all din rail mountable bases. Every type of loads can be switched and those relays can withstand high current peaks that can be produced by loads such as electro valves, engines, coils, indicator, etc. The switching power is 2A/230VAC for SLA and 2.5A/60VDC or 4A/24VDC for SLD relays.

100% compatible with electromechanical relays



	Product reference	Switching current	Switching voltage	Control voltage	Input R	Protec.	Specifications	Dimensions mm
A C	SLA01220	2A	12-280VAC	3-10VDC	320 Ω	RC	AC output	28x5x15
	SLA02220	2A	12-280VAC	7-20VDC	1100 Ω			
	SLA03220	2A	12-280VAC	18-32VDC	3 kΩ			
D C	SLD01205	4A	0-32VDC	3-10VDC	320 Ω	Transil	DC output	28x5x15
	SLD01210	2,5A	0-60VDC	3-10VDC	320 Ω			
	SLD02205	4A	0-32VDC	7-20VDC	1070 Ω			
	SLD03205	4A	0-32VDC	18-32VDC	3 kΩ			
	SLD03210	2,5A	0-60VDC	18-32VDC	3 kΩ			
	SLD04210	2,5A	0-60VDC	38-58VDC	10,8 kΩ			

Other miniature solid state relay options are available on request.



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Product reference	Specifications	Fig n°
ESD01000	SP/ST base for PCB for one relay	1
ESD08100	8 SLIM module base	2



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## SP-ST range (standard)

AC and DC from 1 to 5A, protection by VDR or built in Transil, available in 15,7 mm (ST Series) and 25,4 mm (SP Series).

100% compatible with electromechanical relays



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	Product reference	Switching current	Switching voltage	Control voltage	Input R	Protec.	Specifications	Dimensions mm	Fig n°
A C	SPA07420	4A	12-275VAC	12-30VDC 15-30VAC	2100 Ω	VDR	AC output	29x12,7x25,4	1
	STA07220	2A	12-275VAC	12-30VDC 15-30VAC	2100 Ω	VDR	AC output	29x12,7x15,7	2
D C	SPD03505	5A	0-30VDC	12-30VDC	2100 Ω	Transil	DC output	29x12,7x25,4	1
	STD03205	2,5A	0-30VDC	12-30VDC	2100 Ω	Transil	DC output	29x12,7x15,7	2
AC DC	STN07105	1A	0-30VAC/ DC	12-30VDC 15-30VAC	2100 Ω	Transil	AC/DC output	29x12,7x15,7	2



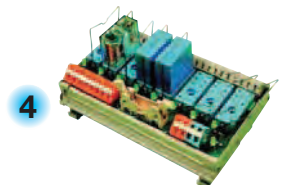
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Product reference	Specifications	Fig n°
ESD05000	SP/ST base for DIN rail for one relay	3
ESD08000	8 SP in line module base	4
ESD16000	16 SP in line module base	4

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Our STD and SPD modules can be modified, on request, with an output voltage of 100VDC.  
Other control voltages are available on request.



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## SK range

The SK range for PCB mounting is available in different models :

SKA/SKB (AC output) or SKD/SKLD (DC output – see pages 19-20)

→ SKA up to 6A 230 or 400VAC with built-in voltage protection, ideal for solenoid or motor control.

→ SKB up to 4A 230 or 400VAC for resistive loads.



Product reference	Current	Switching voltage	Control voltage	Input R	LED	I <sup>2</sup> t	Protec.	Specifications	Dimensions mm
<b>SK541101</b>	2,5A	24-280VAC	3-30VDC	1 kΩ	no	50A <sup>2</sup> s	-	AC zero-cross output / Normally closed	43,2x10,2x25,4
<b>SKA10420</b>	4A	12-275VAC	2,5-10VDC	330 Ω	no	50A <sup>2</sup> s	VDR	AC zero-cross output / most types of loads	
<b>SKA20420</b>	4A	12-275VAC	4-30VDC	1 kΩ	no	50A <sup>2</sup> s	VDR		
<b>SKA10440</b>	4A	12-460VAC	2,5-10VDC	330 Ω	no	50A <sup>2</sup> s	VDR		
<b>SKA11440</b>	4A	12-460VAC	3-10VDC	220 Ω	yes	50A <sup>2</sup> s	VDR		
<b>SKA20440</b>	4A	12-460VAC	4-30VDC	1 kΩ	no	50A <sup>2</sup> s	VDR		
<b>SKA21440</b>	4A	12-460VAC	7-30VDC	750 Ω	yes	50A <sup>2</sup> s	VDR		
<b>SKA20460</b>	4A	24-600VAC	5-30VDC	1 kΩ	no	72A <sup>2</sup> s	-		
<b>SKA20421</b>	4A	12-275VAC	4-30VDC	1 kΩ	no	50A <sup>2</sup> s	VDR		
<b>SKA20441</b>	4A	12-460VAC	4-30VDC	1 kΩ	no	50A <sup>2</sup> s	VDR		
<b>SKA21441</b>	4A	12-460VAC	7-30VDC	750 Ω	yes	50A <sup>2</sup> s	VDR		
<b>SKB10420</b>	4A	12-280VAC	3-10VDC	330 Ω	no	50A <sup>2</sup> s	-	AC zero-cross output / resistive loads	
<b>SKB10440</b>	4A	24-600VAC	3,7-10VDC	270 Ω	no	72A <sup>2</sup> s	-		
<b>SKB20420</b>	4A	12-280VAC	8-30VDC	1200 Ω	no	50A <sup>2</sup> s	-		
<b>SKB20440</b>	4A	24-600VAC	9-30VDC	1200 Ω	no	72A <sup>2</sup> s	-		

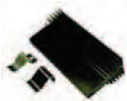
SKL for AC output with a ceramic substrate that can be mounted on a heatsink. The SKL is available with current ratings from 16A to 75A.

For the power element, our SKL use TMS<sup>2</sup> technology (see the power relay section introduction) reducing thermal stress and considerably improving life expectancy. Ideal for motor or lamps control (I<sup>2</sup>t up to 5000 A<sup>2</sup>s) with high inrush current as well as heating applications. Easy to protect against short circuit with micro circuit breakers.



Product reference	Max. current with WF032000	Thyristor rating	Switching voltage	Control voltage	Input R	I <sup>2</sup> t	Specifications	Dimensions mm
<b>SKL10120</b>	16A	16A	12-280VAC	4-14VDC	440 Ω	128A <sup>2</sup> s	AC zero-cross output	43,4 x 6,3 x 24,5
<b>SKL10220</b>	21A	25A	12-280VAC	4-14VDC	440 Ω	312A <sup>2</sup> s		
<b>SKL10240</b>	22A	25A	24-600VAC	4-14VDC	440 Ω	450A <sup>2</sup> s		
<b>SKL10540</b>	27A	50A	24-600VAC	4-14VDC	440 Ω	1800A <sup>2</sup> s		
<b>SKL10560</b>	27A	50A	24-690VAC	4-14VDC	440 Ω	1800A <sup>2</sup> s		
<b>SKL20120</b>	16A	16A	12-280VAC	8-32VDC	1640 Ω	128A <sup>2</sup> s		
<b>SKL20220</b>	21A	25A	12-280VAC	8-32VDC	1640 Ω	312A <sup>2</sup> s		
<b>SKL20240</b>	22A	25A	24-600VAC	8-32VDC	1640 Ω	450A <sup>2</sup> s		
<b>SKL20520</b>	27A	50A	12-280VAC	8-32VDC	1640 Ω	1800A <sup>2</sup> s		
<b>SKL20540</b>	27A	50A	24-600VAC	8-32VDC	1640 Ω	1800A <sup>2</sup> s		
<b>SKL20740</b>	30A	75A	24-600VAC	8-32VDC	1640 Ω	5000A <sup>2</sup> s	AC random output	
<b>SKL10421</b>	27A	40A	12-280VAC	3-14VDC	660 Ω	1150A <sup>2</sup> s		
<b>SKL10521</b>	27A	50A	12-280VAC	3-14VDC	660 Ω	2450A <sup>2</sup> s		
<b>SKL20241</b>	22A	25A	24-600VAC	8-32VDC	1640 Ω	450A <sup>2</sup> s		

See DC output models – pages 19-20.



**WF032000** Accessories for SKL  
Heatsinks for SKL L=150mm 2,6-3 K/W

**WF042000** Accessories for SKL  
Heatsinks for SKL L=100mm 3,6-3 K/W

**1L941000** Accessories for SKL  
Clip for SKL on WF03/04

**1L942000** Accessories for SKL  
Clip for SKL with screw for other heatsinks

The SKH range is a “ready to use” range with integrated heatsink.



Product reference	Output current	Output current with ventilation	Switching voltage	Control voltage	Input R	I <sup>2</sup> t	Dimensions mm
<b>SKH10120</b>	10A @ 20°C	16A	12-280VAC	4-14VDC	440 Ω	128A <sup>2</sup> s	43,6 x 22 x 35,7
<b>SKH10240</b>	10A @ 25°C	25A	24-600VAC	4-14VDC	440 Ω	450A <sup>2</sup> s	
<b>SKH20120</b>	10A @ 20°C	16A	12-280VAC	8-32VDC	1640 Ω	128A <sup>2</sup> s	
<b>SKH20240</b>	10A @ 25°C	25A	24-600VAC	8-32VDC	1640 Ω	450A <sup>2</sup> s	

Other references available – please contact us.

## XK range

Interface relays to control loads such as resistors, indicators, solenoids, transformers, motors, power contactor coils. These DIN-rail mounted products are available with AC and DC output options. They can also be supplied as dedicated motor control variants such as 2 and 3 phase switching and motor rotation reversal. All are fitted with LED indicators.

Suffix D : removable terminals.  
Suffix R : removable spring terminals.



Product reference	Switching current	Switching voltage	Control voltage	Input R	Protec.	Specifications	Dimensions mm	Fig n°
<b>XKA20420</b>	4A	12-275VAC	6-30VDC	1 kΩ	VDR	1 pole AC zero-cross output	12,2x76,4x53	1
<b>XKA20420D</b>	4A	12-275VAC	6-30VDC	1 kΩ	VDR			1
<b>XKA20420R</b>	4A	12-275VAC	6-30VDC	1 kΩ	VDR			1
<b>XKA70420</b>	4A	12-275VAC	15-30VAC/DC	1800 Ω	VDR			1
<b>XKA70440</b>	4A	12-440VAC	15-30VAC/DC	1800 Ω	VDR			1
<b>XKA90440</b>	4A	12-440VAC	150-240VAC/DC	41 kΩ	VDR			1
<b>XKH20120</b>	10A	12-280VAC	10-32VDC	1640 Ω		1 pole AC random output	25x76,4x65	2
<b>XKA20421</b>	4A	12-275VAC	5-30VDC	1 kΩ	VDR			1
<b>XKD10306</b>	3A	2-60VDC	5-30VDC	1 kΩ	diode			1 pole DC output
<b>XKD11306D</b>	3A	2-60VDC	3-30VDC	600 Ω	diode	1		
<b>XKD70306</b>	3A	2-60VDC	10-30VAC/DC	1800 Ω	diode	1		
<b>XKD90306</b>	3A	2-60VDC	90-240VAC	41 kΩ	diode	1		

XKLD0020 has all protections included and is designed for inductive loads with high switching frequency

- Diagnostic status output (potential free)
- Control visualization by green LED
- Output DC visualization by red LED
- Built-in clamping voltage
- Built-in free wheel diode
- This product also includes a fuse on board to protect the installation.



Product reference	Switching current	Switching voltage	Control voltage	Input R	Protec.	Specifications	Dimensions mm
<b>DC XKLD0020</b>	4A	1-32VDC	18-32VDC	1 kΩ	VDR+diode	1 pole DC output	36x78x61

XKLD31006 is a DC SSR suitable for inductive loads and high current applications such as high switching frequency electro-valves.



Product reference	Switching current	Switching voltage	Control voltage	Input R	Protec.	Specifications	Dimensions mm
<b>DC XKLD31006</b>	10A	12-36VDC	10-30VDC	1 kΩ	diode	DC output - MOSFET technology	12,2x76,4x53



Product reference	Switching current	Switching voltage	Control voltage	Input R	Protec.	Specifications	Dimensions mm
<b>XKM22440</b>	4AC-51/2,5AC-53	24-460VAC	15-40VDC	2 kΩ	VDR	2 poles motor switching control	25,2x76,4x53
<b>XKM23440</b>	4AC-51/2,5AC-53	24-460VAC	12-35VDC	1 kΩ	VDR	3 poles motor switching control	47,5x76,4x53
<b>XKR24440</b>	4AC-51/2,5AC-53	24-460VAC	15-40VDC	2 kΩ	VDR	AC motor change-over control	58,2x76,4x53
<b>XKRD30506</b>	5A-DC	12-24VDC	7-30VDC	1 kΩ	diode	DC motor change-over control	4

The ready to use module XKRD30506 for Din-Rail mounting comprises 4 Solid State relays wired as a reverser to be used to change the direction of a DC motor (100W @ 24Vdc).



XKM23 : 3 relays  
XKR24 & XKRD : 4 relays

## SN8 range

This relay is designed for PCB applications and when fitted with suitable heatsink, can control heavy loads in an ultra-miniature, physically compact package.



Product reference	Current	Switching voltage	Control voltage	Input R	I <sup>2</sup> t	Dimensions mm
<b>SN842500</b>	25A	24-280VAC	15-32VDC	2200 Ω	260A <sup>2</sup> s	35,05x12,70x28,32

Other references available : please contact us.

## SHT range

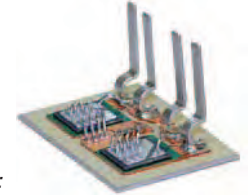
Three phase solid state relay in a single low profile package. This relay is designed for PCB applications in order to provide control of medium power in three phase environments.



Product reference	Current	Switching voltage	Control voltage	Input R	I <sup>2</sup> t	Dimensions mm
<b>SHT842300</b>	3x25A	24-280VAC	10-30VDC	950 Ω	260A <sup>2</sup> s	81,28x8,26x27,69

Other references available : please contact us.

## Power Relays



All our solid state relays fitted with back to back thyristors (power products : single phase, two phase, three phase) now use TMS<sup>2</sup> technology with a very high life expectancy compared to the majority of products on the market (application note on request).

### okpac<sup>®</sup>

**Innovation, Performance and Design !**

**Innovations :**

- Screw connection up to 50mm<sup>2</sup>
- Removable control terminals
- Removable IP20
- Versatile, easy and quick connections
- Same screwdriver for outputs and inputs
- Tightening on metal baseplate not on plastic
- SSR, mains and load status
- Less potting resin : environmentally friendly
- 25 to 30% lighter than the SC range.

**Performances :**

- Designed for all types of loads Current from 12 to 125A
- TMS<sup>2</sup> technology 4th generation with very long life time expectancy
- Output voltage from 24 to 690 VAC (600V-1200V-1600V peak)
- Very low zero-crossing level
- Large and regulated AC and DC input voltage
- Control status LED
- Very high immunity according IEC/EN61000-4-4 (bursts) and IEC/EN61000-4-5 (spikes) : 4KV with no change of state
- EMC compatible for industrial environment
- UL/cUL, VDE (EN60950), IEC/EN60947-4-3, CE marking
- I<sub>tsm</sub> up to 2000A and I<sup>2</sup>t > 20 000A<sup>2</sup>s
- Protection against circuit breaker.

## S07 range

Typical applications : Motors (AC-53), inductive loads and phase angle control applications.

- Random or instant switching
- Voltage protection on input (transil) and output (RC and VDR)



Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Control current	I <sup>2</sup> t	Dimensions mm
SO745090	50A	12-275VAC	600V	3-32VDC	Ic<13mA	2500A <sup>2</sup> s	45x58,5x30
SO747090	75A	12-275VAC	600V	3-32VDC	Ic<13mA	7200A <sup>2</sup> s	
SO763090	35A	24-510VAC	1200V	3,5-32VDC	Ic<13mA	1250A <sup>2</sup> s	
SO765090	50A	24-510VAC	1200V	3,5-32VDC	Ic<13mA	2500A <sup>2</sup> s	
SO767090	75A	24-510VAC	1200V	3,5-32VDC	Ic<13mA	7200A <sup>2</sup> s	
SO768090	95A	24-510VAC	1200V	3,5-32VDC	Ic<13mA	14400A <sup>2</sup> s	
SO769090	125A	24-510VAC	1200V	3,5-32VDC	Ic<13mA	24000A <sup>2</sup> s	
SO789060	125A	24-690VAC	1600V	3,5-32VDC	Ic<13mA	24000A <sup>2</sup> s	

These products should be mounted on heatsinks in order to reach nominal current.

## S08 range

Designed for most types of loads

- Zero cross with low zero-crossing level (<12V)
- Voltage protection on input (transil) with very high immunity according to IEC/EN61000-4-4
- IP20 protection
- Control current < 13mA for all the voltage range at any operating temperature
- Control status LED



Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Control current	I <sup>2</sup> t	Dimensions mm
SO842074	25A	12-275VAC	600V	3-32VDC	Ic<13mA	600A <sup>2</sup> s	45x58,5x30
SO842974	25A	12-275VAC	600V	20-265VAC/DC	Ic<10mA	600A <sup>2</sup> s	
SO843070	35A	12-275VAC	600V	3-32VDC	Ic<13mA	1250A <sup>2</sup> s	
SO843970	35A	12-275VAC	600V	20-265VAC/DC	Ic<10mA	1250A <sup>2</sup> s	
SO845070	50A	12-275VAC	600V	3-32VDC	Ic<13mA	2500A <sup>2</sup> s	
SO847070	75A	12-275VAC	600V	3-32VDC	Ic<13mA	7200A <sup>2</sup> s	
SO848070	95A	12-275VAC	600V	3-32VDC	Ic<13mA	14400A <sup>2</sup> s	
SO849070	125A	12-275VAC	600V	3-32VDC	Ic<13mA	24000A <sup>2</sup> s	
SO863070	35A	24-510VAC	1200V	3,5-32VDC	Ic<13mA	1250A <sup>2</sup> s	
SO863970	35A	24-510VAC	1200V	20-265VAC/DC	Ic<10mA	1250A <sup>2</sup> s	
SO865070	50A	24-510VAC	1200V	3,5-32VDC	Ic<13mA	2500A <sup>2</sup> s	
SO865970	50A	24-510VAC	1200V	20-265VAC/DC	Ic<10mA	2500A <sup>2</sup> s	
SO867070	75A	24-510VAC	1200V	3,5-32VDC	Ic<13mA	7200A <sup>2</sup> s	
SO867970	75A	24-510VAC	1200V	20-265VAC/DC	Ic<10mA	7200A <sup>2</sup> s	
SO868070	95A	24-510VAC	1200V	3,5-32VDC	Ic<13mA	14400A <sup>2</sup> s	
SO868970	95A	24-510VAC	1200V	20-265VAC/DC	Ic<10mA	14400A <sup>2</sup> s	
SO869070	125A	24-510VAC	1200V	3,5-32VDC	Ic<13mA	24000A <sup>2</sup> s	
SO869970	125A	24-510VAC	1200V	20-265VAC/DC	Ic<10mA	24000A <sup>2</sup> s	
SO885060	50A	24-690VAC	1600V	3,5-32VDC	Ic<12mA	2500A <sup>2</sup> s	
SO885960	50A	24-690VAC	1600V	20-265VAC/DC	Ic<12mA	2500A <sup>2</sup> s	
SO887060	75A	24-690VAC	1600V	3,5-32VDC	Ic<12mA	7200A <sup>2</sup> s	
SO888060	95A	24-690VAC	1600V	3,5-32VDC	Ic<12mA	14400A <sup>2</sup> s	
SO889060	125A	24-690VAC	1600V	3,5-32VDC	Ic<12mA	24000A <sup>2</sup> s	

HIGH VOLTAGE RELAY

These products should be mounted on heatsinks in order to reach nominal current.

## SO9 range

Typical applications : Resistive loads (AC-51)

- Zero cross
- Control status LED
- IP20 protection



### SO9 range with regulated control current

Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Control current	I <sup>2</sup> t	Dimensions mm
SO941460	12A	12-280VAC	600V	3-32VDC	I <sub>c</sub> <13mA	128A <sup>2</sup> s	45x58,5x30
SO942460	25A	12-280VAC	600V	3-32VDC	I <sub>c</sub> <13mA	600A <sup>2</sup> s	
SO943460	35A	12-280VAC	600V	3-32VDC	I <sub>c</sub> <13mA	1250A <sup>2</sup> s	
SO945460	50A	12-280VAC	600V	3-32VDC	I <sub>c</sub> <13mA	2500A <sup>2</sup> s	
SO963460	35A	24-600VAC	1200V	3,5-32VDC	I <sub>c</sub> <13mA	1250A <sup>2</sup> s	
SO965460	50A	24-600VAC	1200V	3,5-32VDC	I <sub>c</sub> <13mA	2500A <sup>2</sup> s	
SO967460	75A	24-600VAC	1200V	3,5-32VDC	I <sub>c</sub> <13mA	7200A <sup>2</sup> s	

### SO9 range with simplified input

Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Control current	I <sup>2</sup> t	Dimensions mm
SO942560	25A	12-280VAC	600V	7-30VDC	I <sub>c</sub> <30mA	600A <sup>2</sup> s	45x58,5x30
SO942860	25A	12-280VAC	600V	15-32VAC/10-30VDC	I <sub>c</sub> <33mA	600A <sup>2</sup> s	
SO942960	25A	12-280VAC	600V	185-265VAC/DC	I <sub>c</sub> <10mA	600A <sup>2</sup> s	
SO963560	35A	24-600VAC	1200V	8-30VDC	I <sub>c</sub> <30mA	1250A <sup>2</sup> s	
SO965560	50A	24-600VAC	1200V	8-30VDC	I <sub>c</sub> <30mA	2500A <sup>2</sup> s	
SO967560	75A	24-600VAC	1200V	8-30VDC	I <sub>c</sub> <30mA	7200A <sup>2</sup> s	

These products should be mounted on heatsinks in order to reach nominal current.

## SOL flatpac<sup>®</sup> range

### low profile (16,3mm high)

Flatpac<sup>®</sup> SSRs are mainly designed for applications where a PCB is used on the input, possibly on the output side. In fact the small size of this relay makes it easy to use when room is restricted. Wiring will be facilitated as this relay also allows input or output cables to go any direction.



Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Control current	I <sup>2</sup> t	Specifications	Dimensions mm
SOL745060	50A	12-280VAC	600V	3-32VDC	I <sub>c</sub> <13mA	1680A <sup>2</sup> s	Random	45x58,5x16,3
SOL942460	25A	12-280VAC	600V	3-32VDC	I <sub>c</sub> <13mA	600A <sup>2</sup> s	Zero-cross	
SOL942960	25A	12-280VAC	600V	185-265VAC/DC	I <sub>c</sub> <10mA	600A <sup>2</sup> s	Zero-cross	
SOL965460	50A	24-600VAC	1200V	3,5-32VDC	I <sub>c</sub> <13mA	1680A <sup>2</sup> s	Zero-cross	

These products should be mounted on heatsinks in order to reach nominal current.

## SOR range

With removable input connector - Spring terminals :

- Designed for most types of loads.
- Zero cross with low zero-crossing level (<12V)
- Voltage protection on input (transil) and output (VDR) with very high immunity according to IEC/EN61000-4-4 and IEC/EN61000-4-5
- IP20 protection
- Control current <13mA for all the voltage range at any operating temperature
- Control status LED
- Double inputs



Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Control current	I <sup>2</sup> t	Dimensions mm
SOR842074	25A	12-275VAC	600V	3-32VDC	I <sub>c</sub> <13mA	600A <sup>2</sup> s	45x58,5x30
SOR863070	35A	24-510VAC	1200V	3,5-32VDC	I <sub>c</sub> <13mA	1250A <sup>2</sup> s	
SOR865070	50A	24-510VAC	1200V	3,5-32VDC	I <sub>c</sub> <13mA	2500A <sup>2</sup> s	
SOR867070	75A	24-510VAC	1200V	3,5-32VDC	I <sub>c</sub> <13mA	7200A <sup>2</sup> s	

These products should be mounted on heatsinks in order to reach nominal current.



## celpac® 2G

The 22,5mm pitch SSR solution !

### Performances & reliability :

- Fixing screws compatible with all hockey puck style relays (celduc SO and SC range),
- Maximum voltage up to 1600V (690VRMS), 600VAC and 1200VAC as standard,
- Thyristor rating up to 75A,
- Large input range : 3-32VDC with regulated current models
- AC input control available,
- Input status yellow LED,
- Over-voltage protection on input,
- New generation of TMS<sup>2</sup> technology for thyristors for a longer life expectancy,
- Quick and easy connections,
- Designed according to European standards EN60947-4-3 (IEC947-4-3) and EN60950 (VDE0805 reinforced insulation) -IEC62314-UL-cUL,
- IP20 protection with removable flaps (SU range) or cover (SA range),
- Other protection devices available as an option : RC snubber, VDR, self turn-on.

### Price-effective and compact solution :

- The 22,5 mm pitch of our Solid State contactors reduces space to the minimum,
- Reduced assembling time, easy cabling,
- Reduced maintenance thanks to a very long life expectancy,
- One single screw driver for input and output.

**SA range :**  
with screw connection  
on inputs.



**SU range :**  
with pluggable connector on  
inputs.



## SA range

- Screw connection
- Transparent protective cover
- For mounting on your heatsink or panel mount.

**SA8 :** designed for most types of loads.  
**SA9 :** designed for resistive loads AC-51.



Product reference	Output voltage	Thyristor rating	V peak (V)	Control voltage	Specifications	Visualization & protection
<b>SA842070</b>	12-275VAC	25A	600V	3-32VDC	Zero-cross	LED, VDR
<b>SA941460</b>	12-280VAC	12A	600V	3-32VDC		LED
<b>SA942460</b>	12-280VAC	25A	600V	3-32VDC		
<b>SA943460</b>	12-280VAC	35A	600V	3-32VDC		
<b>SA945460</b>	12-280VAC	50A	600V	3-32VDC		
<b>SA963460</b>	24-600VAC	35A	1200V	3,5-32VDC		
<b>SA965460</b>	24-600VAC	50A	1200V	3,5-32VDC		

## SU range

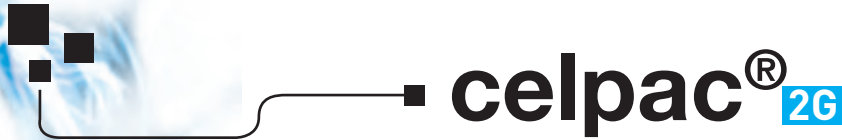
- With pluggable connector on inputs
- Removable flaps for protection
- For mounting on your heatsink or panel mount.

**SU7 :** designed for motors AC-53 and inductive loads. Also use in phase angle control systems.

**SU8 :** designed for most types of loads.  
**SU9 :** designed for resistive loads AC-51.



Product reference	Output voltage	Thyristor rating	V peak (V)	Control voltage	Specifications	Visualization & protection
<b>SU765070</b>	24-510VAC	50A	1200V	3,5-32VDC	Random	LED
<b>SU842070</b>	12-275VAC	25A	600V	3-32VDC	Zero-cross	LED, VDR
<b>SU842770</b>	12-275VAC	25A	600V	17-30VAC/DC		
<b>SU842970</b>	12-275VAC	25A	600V	180-240VAC		
<b>SU865070</b>	24-510VAC	50A	1200V	3,5-32VDC		
<b>SU865970</b>	24-510VAC	50A	1200V	180-240VAC		
<b>SU867070</b>	24-510VAC	75A	1200V	3,5-32VDC		
<b>SU942460</b>	12-280VAC	25A	600V	3-32VDC		LED
<b>SU963460</b>	24-600VAC	35A	1200V	3,5-32VDC		
<b>SU965460</b>	24-600VAC	50A	1200V	3,5-32VDC		
<b>SU967460</b>	24-600VAC	75A	1200V	3,5-32VDC		



## SAL/SAM range

**SAx9** : designed for resistive loads AC-51.

- Screw connection
- Transparent protective cover
- « Ready to use » on 22,5 and 45mm heatsinks.



Product reference	Output voltage	Thyristor rating	Max. switching current at 25°C	V peak (V)	Control voltage	Specifications	Visualization & protection
<b>SAL941460</b>	12-280VAC	12A	12A	600V	3-32VDC	Zero-cross	LED
<b>SAL942460</b>	12-280VAC	25A	23A	600V	3-32VDC		
<b>SAL963460</b>	12-280VAC	35A	30A	1200V	3,5-32VDC		
<b>SAL965460</b>	24-600VAC	50A	32A	1200V	3,5-32VDC		
<b>SAM943460</b>	12-280VAC	35A	35A	600V	3-32VDC		

## SUL/SUM range

**SUx8** : designed for most types of loads.

**SUx9** : designed for resistive loads AC-51.

- With pluggable connector on inputs
- Removable flaps for protection
- « Ready to use » on 22,5 and 45mm heatsinks



Product reference	Output voltage	Thyristor rating	Max. switching current at 25°C	V peak (V)	Control voltage	Specifications	Visualization & protection	
<b>SUL842070</b>	12-275VAC	25A	23A	600V	3-32VDC	Zero-cross	LED, VDR	
<b>SUL842970</b>	12-275VAC	25A	23A	600V	180-240VAC			
<b>SUL865070</b>	24-510VAC	50A	32A	1200V	3,5-32VDC			
<b>SUL865770</b>	24-510VAC	50A	32A	1200V	18-30VAC/DC			
<b>SUL865970</b>	24-510VAC	50A	32A	1200V	180-240VAC			
<b>SUL867070</b>	24-510VAC	75A	35A	1200V	3,5-32VDC			
<b>SUM865070</b>	24-510VAC	50A	45A	1200V	3,5-32VDC			
<b>SUL942460</b>	12-280VAC	25A	23A	600V	3-32VDC			LED
<b>SUL963460</b>	24-600VAC	35A	30A	1200V	3,5-32VDC			
<b>SUL965460</b>	24-600VAC	50A	32A	1200V	3,5-32VDC			
<b>SUL967460</b>	24-600VAC	75A	35A	1200V	3,5-32VDC			

## ESUC for SU/SUL range

### Current monitoring module

ESUC module is an option available for the celpac 2G range. Mounted on SU or SUL, this module provides users with diagnostic information for up to 5 heating elements in parallel.

- Permanent load current monitoring
- Current teaching function by push button or external logic input
- One alarm threshold : - 16% of Iteach
- Partial load break detection
- Open mains detection
- Open load detection
- Detection of short-circuited SSR



Product reference	Current range	Control
<b>ESUC0450</b>	2-40A	8-30VDC





## Power SSRs with diagnostics

Status of the SSR and the load (resistive load) without external power supply. This range is patented. Status output can be chained.

Fault condition alarms:

- Line or load open
- Short circuit output

## Diagnostic description

Control	Control LED	Mains	Load	SSR	Status LED	Etat du contact
0	○	Yes	OK	OK	●	closed
1	●	Yes	OK	OK	●	closed
0	○	No	OK	OK	○	open
1	●	No	OK	OK	○	open
0	○	Yes	-	OK	○	open
0	○	Yes	OK	short-circuit	○	open
1	●	Yes	-	OK	○	open
1	●	Yes	OK	short-circuit	○	open

## celpac®



Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Control current	I <sup>2</sup> t	Dimensions mm
<b>SILD845160</b>	32A	70-280VAC	600V	3-32VDC	I <sub>c</sub> <10mA	1500A <sup>2</sup> s	22,5x80x116
<b>SILD865170</b>	32A	150-510VAC	1200V	3,5-32VDC	I <sub>c</sub> <10mA	1500A <sup>2</sup> s	
<b>SILD867170</b>	35A	150-510VAC	1200V	3,5-32VDC	I <sub>c</sub> <10mA	5000A <sup>2</sup> s	

## okpac®



Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	I <sup>2</sup> t	Dimensions mm
<b>SOD843180</b>	35A	50-265VAC	600V	7-30VDC	1 kΩ	1250A <sup>2</sup> s	45x58,5x33,6
<b>SOD845180</b>	50A	50-265VAC	600V	7-30VDC	1 kΩ	2500A <sup>2</sup> s	
<b>SOD849180</b>	125A	50-265VAC	600V	7-30VDC	1 kΩ	24000A <sup>2</sup> s	
<b>SOD865180</b>	50A	150-510VAC	1200V	5-30VDC	1 kΩ	2500A <sup>2</sup> s	
<b>SOD867180</b>	75A	150-510VAC	1200V	5-30VDC	1 kΩ	7200A <sup>2</sup> s	

The SOD products should be mounted on heatsinks in order to reach nominal current.  
The SOD range is now available with a thermal switch for over-temperature protection. Please consult us.

## Softlife range Get rid of your heatsinks!

Relays combining the assets of dual technology : solid state and electromechanical. These relays are designed to switch current up to 30A without the need of heatsink. These relays have LED indicators, RC and VDR protection.



Product reference	Switching current	Switching voltage	Control voltage	I <sup>2</sup> t	Protec.	Specifications	Dimensions mm
SVX963350	30A	12-420VAC	20-30VDC	265A <sup>2</sup> s	RC-VDR	Mixed relay	44,5x61,3x45

## SF range

Miniature relays available with "FASTON" or PCB terminals.



Product reference	Switching current	Switching voltage	Control voltage	Input R	Specifications	Dimensions mm
SF541310	10A	12-280VAC	4-30VDC	1 k $\Omega$	Zero-cross, "FASTON" terminals	21 x 35,5 x 15
SF542310	10A	12-280VAC	4-30VDC	1 k $\Omega$	Zero-cross, PCB terminals	
SF546310	20A	12-280VAC	4-30VDC	1 k $\Omega$	Zero-cross, "FASTON" terminals	

These products should be mounted on heatsinks in order to reach nominal current.

## SCF range

To control resistive loads. "FASTON" terminals.



Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	LED	I <sup>2</sup> t	Protec.	Dimensions mm
SCF42160	25A	12-280VAC	600V	4-30VDC	600 $\Omega$	yes	312A <sup>2</sup> s	-	44,5x58x33
SCF42324	25A	12-280VAC	600V	12-30VDC	1 k $\Omega$	no	312A <sup>2</sup> s	VDR	
SCF62160	25A	24-600VAC	1200V	5-30VDC	600 $\Omega$	yes	265A <sup>2</sup> s	-	

Other references (corresponding to the SC9 range) are available : please contact us. These products should be mounted on heatsinks in order to reach nominal current. E option "large Entraxe" and L option "Faston" 4,8mm on request.

## SCFL range EMC optimised (low electromagnetic emission – low RFI)

This relay is designed for use in applications where low electromagnetic emission is essential : household and electrical appliances, information technology and medical equipments. In compliance with EN 50081-1 Generic Emission Standards for Residential and meets CISPR 22 requirements.



Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	I <sup>2</sup> t	Dimensions mm
SCFL42100	25A	12-280VAC	600V	4-30VDC	1 k $\Omega$	312A <sup>2</sup> s	44,5x58,2x32
SCFL62100	25A	24-440VAC	1200V	5-30VDC	1 k $\Omega$	312A <sup>2</sup> s	

These products should be mounted on heatsinks in order to reach nominal current.

## SP7/SP8 range

This new range extends the products available with FASTON terminals.

In a full plastic case, these relays can nevertheless switch up to 12 A AC51.

These relays are appropriate for any type of loads (such as heating or single-phase random motor) thanks to high immunity components and an integrated overvoltage protection combined with 800 Upeak power components. This range is well adapted to the food industry.



Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	I <sup>2</sup> t	Specifications	Dimensions mm
SP752120	12A	12-280VAC	800V	3-32VDC	1 k $\Omega$	340A <sup>2</sup> s	Random	38x66,8x22
SP852120	12A	12-280VAC	800V	4-32VDC	1 k $\Omega$	340A <sup>2</sup> s	Zero-cross	

These products should be mounted on heatsinks in order to reach nominal current.

See also our okpac® range (pages 5 & 6)

## SC range

**SC7 range** with random or instant switching, integrating a snubber (RC) is especially designed for motor and transformer control.

**SC8 range** with zero-cross switching, integrating a snubber (RC), is recommended for all types of applications.

**SC9 range** with zero-cross switching is optimized for resistive load control (heating application).



Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	I <sup>2</sup> t	Dimensions mm	okpac equivalent
SC741110	12A	12-280VAC	600V	3-30VDC	1 kΩ	72A <sup>2</sup> s	44,5x58,2x27	SO745090
SC744110	40A	12-280VAC	600V	3-30VDC	1 kΩ	612A <sup>2</sup> s		SO745090
SC762110	25A	24-520VAC	1200V	4-30VDC	1 kΩ	265A <sup>2</sup> s		SO763090
SC764110	50A	24-520VAC	1200V	4-30VDC	1 kΩ	1500A <sup>2</sup> s		SO765090
SC764910	50A	24-520VAC	1200V	90-240VAC/DC	30 kΩ	1500A <sup>2</sup> s		-
SC767110	75A	24-520VAC	1200V	4-30VDC	1 kΩ	5000A <sup>2</sup> s		SO767090
SC768110	95A	24-520VAC	1200V	4-30VDC	1 kΩ	11000A <sup>2</sup> s		SO768090
SC769110	125A	24-520VAC	1200V	4-30VDC	1 kΩ	20000A <sup>2</sup> s		SO769090
SC841110	12A	12-280VAC	600V	4-30VDC	1 kΩ	72A <sup>2</sup> s		SO842074
SC841910	12A	12-280VAC	600V	90-240VAC/DC	30 kΩ	72A <sup>2</sup> s		SO842974
SC842110	25A	12-280VAC	600V	4-30VDC	1 kΩ	312A <sup>2</sup> s		SO842074
SC844110	40A	12-280VAC	600V	4-30VDC	1 kΩ	612A <sup>2</sup> s		SO845070
SC844910	40A	12-280VAC	600V	90-240VAC/DC	30 kΩ	612A <sup>2</sup> s		SO865970
SC862110	25A	24-520VAC	1200V	5-30VDC	1 kΩ	265A <sup>2</sup> s		SO863070
SC864110	50A	24-520VAC	1200V	5-30VDC	1 kΩ	1500A <sup>2</sup> s		SO865070
SC864810	50A	24-520VAC	1200V	17-80VAC/DC	3 kΩ	1500A <sup>2</sup> s		SO863970
SC864910	50A	24-520VAC	1200V	90-240VAC/DC	30 kΩ	1500A <sup>2</sup> s		SO863970
SC867110	75A	24-520VAC	1200V	5-30VDC	1 kΩ	5000A <sup>2</sup> s		SO867070
SC867910	75A	24-520VAC	1200V	90-240VAC/DC	30 kΩ	5000A <sup>2</sup> s		SO867970
SC869110	125A	24-520VAC	1200V	5-30VDC	1 kΩ	20000A <sup>2</sup> s		SO869070
SC869910	125A	24-520VAC	1200V	90-240VAC/DC	30 kΩ	20000A <sup>2</sup> s		SO869970
SC941160	12A	12-280VAC	600V	4-30VDC	600 Ω	72A <sup>2</sup> s		SO941460
SC942110	25A	12-280VAC	600V	4-30VDC	1 kΩ	312A <sup>2</sup> s		SO942460
SC942160	25A	12-280VAC	600V	4-30VDC	600 Ω	312A <sup>2</sup> s		SO942460
SC942900	25A	12-280VAC	600V	90-240VAC/DC	30 kΩ	312A <sup>2</sup> s		SO942960
SC944110	40A	12-280VAC	600V	4-30VDC	1 kΩ	612A <sup>2</sup> s		SO945460
SC945160	50A	12-280VAC	600V	4-30VDC	600 Ω	1500A <sup>2</sup> s		SO945460
SC947160	75A	12-280VAC	600V	4-30VDC	600 Ω	5000A <sup>2</sup> s		SO967460
SC962114	25A	24-600VAC	1200V	5-30VDC	1 kΩ	265A <sup>2</sup> s		SO863070
SC962160	25A	24-600VAC	1200V	5-30VDC	600 Ω	265A <sup>2</sup> s		SO963460
SC962960	25A	24-600VAC	1200V	90-240VAC/DC	30 kΩ	265A <sup>2</sup> s		SO863970
SC965160	50A	24-600VAC	1200V	5-30VDC	600 Ω	1500A <sup>2</sup> s		SO965460
SC967100	75A	24-600VAC	1200V	5-30VDC	1 kΩ	5000A <sup>2</sup> s		SO967460
SC967160	75A	24-600VAC	1200V	5-30VDC	600 Ω	5000A <sup>2</sup> s	SO967460	

These products should be mounted on heatsinks in order to reach nominal current.  
Protective cover and heatsinks available : see accessories.

... see okpac® range (pages 5 & 6)



## Two phase relays

Our two phase range provides two solid state relays in a compact standard 45 mm enclosure. They are perfectly adapted to three phase applications with breaking of two phases only.

### SOB range – Dual okpac®

New 2 phase relays in okpac® IP20 housing. Removable connector for control allowing many wiring possibilities eg. FASTONS, springs, screw and so on (please consult us).

**SOB5** : power and control connections by FASTON terminals

**SOB6** : double input with connector CE100F ITWPANCON type or similar

**SOB7** : random

**SOB8** : zero-cross – designed for most types of loads

**SOB9** : zero-cross – resistive loads AC-51.

Connectors to be ordered separately



Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	I <sup>2</sup> t	Specifications	Dimensions mm	Fig n°
SOB542460	2x25A	12-280VAC	600V	3-32VDC	I <sub>c</sub> < 13mA	600A <sup>2</sup> s	zero-cross / 2 controls	45x58,5x27	1
SOB665300	2x50A	24-600VAC	1200V	10-30VDC	1200 Ω	1680A <sup>2</sup> s	zero-cross / 2 controls		3
SOB763670	2x35A	24-510VAC	1200V	8-30VDC	1200 Ω	1250A <sup>2</sup> s	random / 2 controls		2
SOB765670	2x50A	24-510VAC	1200V	8-30VDC	1200 Ω	2500A <sup>2</sup> s	random / 2 controls		2
SOB767670	2x75A	24-510VAC	1200V	8-30VDC	1200 Ω	7200A <sup>2</sup> s	random / 2 controls		2
SOB865660	2x50A	24-600VAC	1200V	8-30VDC	1200 Ω	2500A <sup>2</sup> s	zero-cross / 2 controls		2
SOB942360	2x25A	24-280VAC	600V	10-30VDC	1200 Ω	600A <sup>2</sup> s	zero-cross / 1 control		2
SOB942660	2x25A	24-280VAC	600V	10-30VDC	1200 Ω	600A <sup>2</sup> s	zero-cross / 2 controls		2
SOB963660	2x35A	24-600VAC	1200V	10-30VDC	1200 Ω	1250A <sup>2</sup> s	zero-cross / 2 controls		2
SOB965660	2x50A	24-600VAC	1200V	10-30VDC	1200 Ω	2500A <sup>2</sup> s	zero-cross / 2 controls		2
SOB967660	2x75A	24-600VAC	1200V	10-30VDC	1200 Ω	7200A <sup>2</sup> s	zero-cross / 2 controls		2

On request : 1600V peak version, 75A version, overvoltage protection option available.  
For SOB6 range : other rating on request, TVS (Transient Voltage Suppression) protection possible.

### SCB range



Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	I <sup>2</sup> t	Specifications	Dimensions mm	Fig n°
SCB564310	2x40A	24-510VAC	1200V	5-30VDC	1 kΩ	610A <sup>2</sup> s	zero-cross / 2 controls	44,8x58,5x27	1
SCB665300	2x50A	24-600VAC	1200V	8-35VDC	1800 Ω	1500A <sup>2</sup> s	zero-cross / 1 control		2
SCB865300	2x50A	24-600VAC	1200V	10-30VDC	1400 Ω	1500A <sup>2</sup> s	zero-cross / 1 control		2
SCB865600	2x50A	24-600VAC	1200V	10-30VDC	1800 Ω	1500A <sup>2</sup> s	zero-cross / 2 controls		3
SCB941300	2x12A	12-280VAC	600V	8-30VDC	1 kΩ	72A <sup>2</sup> s	zero-cross / 1 control		2
SCB942600	2x25A	12-280VAC	600V	8-30VDC	1 kΩ	288A <sup>2</sup> s	zero-cross / 2 controls		3
SCB962600	2x25A	24-600VAC	1200V	8-30VDC	1 kΩ	265A <sup>2</sup> s	zero-cross / 2 controls		3
SCB965600	2x50A	24-600VAC	1200V	8-30VDC	1 kΩ	1500A <sup>2</sup> s	zero-cross / 2 controls		3

Protection cover : see accessories (1K470000).  
These products should be mounted on heatsinks in order to reach nominal current.

## SCT range

Three phase solid state relays in a single phase relay enclosure (width 45mm).



Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	I <sup>ft</sup>	Specifications	Dimensions mm
<b>SCT32110</b>	3x10A	12-440VAC	800V	4-30VDC	330 Ω	72A <sup>2</sup> s	random	44,8x58x27
<b>SCT62110</b>	3x10A	12-440VAC	800V	4-30VDC	330 Ω	72A <sup>2</sup> s	zero-cross	

These products also come with PCB terminals.

This product should be mounted with heatsink in order to reach nominal current.

## SGB range 2 legs Three Phase Solid State Relays

Our SGB range is designed for controlling three wire three phase loads connected in delta or, if balanced, connected in star without the neutral connection. Two of the three phases are switched by the SSR, the third being directly connected. This reliable solution can be easily integrated into a control system because of simplicity of wiring.



Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	I <sup>ft</sup>	Specifications	Dimensions mm
<b>SGB967360E</b>	3x75A	24-600VAC	1200V	10-30VDC	550 Ω	7250A <sup>2</sup> s	zero-cross	100x75,15x46

## SGT range

These relays have LED indicators..



Product reference	Switching current AC-51	Switching voltage	Peak voltage	Control voltage	Input R	I <sup>ft</sup>	Specifications	Dimensions mm
SGT range with 40mm housing								
<b>SGT867350</b>	3x75A	24-600VAC	1200V	8-30VDC	620 Ω	5000A <sup>2</sup> s	Zero-cross / for most types of loads	100x73,5x39,5
<b>SGT962360</b>	3x25A	24-600VAC	1200V	8,5-30VDC	620 Ω	265A <sup>2</sup> s		
<b>SGT965360</b>	3x50A	24-600VAC	1200V	8,5-30VDC	620 Ω	1500A <sup>2</sup> s	Zero-cross / for resistive loads AC-51	
<b>SGT965960</b>	3x50A	24-600VAC	1200V	90-240VAC	21 kΩ	1500A <sup>2</sup> s		
<b>SGT967360</b>	3x75A	24-600VAC	1200V	8,5-30VDC	620 Ω	5000A <sup>2</sup> s		



Product reference	Switching current AC-51	Switching voltage	Peak voltage	Control voltage	Input R	I <sup>ft</sup>	Specifications	Dimensions mm
SGT range with 47,6mm housing and square terminals								
<b>SGT767470E</b>	3x75A	24-520VAC	1200V	4-32VDC	ic<25mA	7250A <sup>2</sup> s	Random / for most types of loads	100x75,15x46
<b>SGT769360E</b>	3x125A	24-520VAC	1200V	8,5-30VDC	21 kΩ	20000A <sup>2</sup> s		
<b>SGT865470E</b>	3x50A	24-520VAC	1200V	4-32VDC	ic<25mA	2500A <sup>2</sup> s	Zero-cross / for most types of loads	
<b>SGT965360E</b>	3x50A	24-600VAC	1200V	10-30VDC	550 Ω	2500A <sup>2</sup> s		
<b>SGT967360E</b>	3x75A	24-600VAC	1200V	10-30VDC	550 Ω	7250A <sup>2</sup> s	Zero-cross / for resistive loads AC-51	
<b>SGT967760E</b>	3x75A	24-600VAC	1200V	10-24VAC	400 Ω	7250A <sup>2</sup> s		
<b>SGT967960E</b>	3x75A	24-600VAC	1200V	90-240VAC	21 kΩ	7250A <sup>2</sup> s		
<b>SGT968360E</b>	3x95A	24-600VAC	1200V	10-30VDC	21 kΩ	7250A <sup>2</sup> s		

These products should be mounted with heatsink in order to reach nominal current.

## SVT range

Three phase IP20 protection range to control resistive loads (AC-51) or for motor control (AC-53). These relays have LED. Please consult us for other loads.



Product reference	Switching current AC-51	Switching current AC-53	Switching voltage	Thyristor rating	Control voltage	Input R	I <sup>ft</sup>	Protoc.	Specifications	Dimensions mm
SVT range with 40mm housing										
<b>SVT764394</b>	3x50A	3x12A	24-520VAC	50A	8,5-30VDC	620 Ω	1500A <sup>2</sup> s	RC-VDR	Random	100x76x56,5
<b>SVT864374</b>	3x50A	3x12A	24-520VAC	50A	10-32VDC	580 Ω	1500A <sup>2</sup> s	VDR		
<b>SVT867394</b>	3x75A	3x24A	24-520VAC	75A	8,5-30VDC	620 Ω	5000A <sup>2</sup> s	RC-VDR	Zero-cross / for most types of loads	
<b>SVT867994</b>	3x75A	3x24A	24-520VAC	75A	90-240VAC	620 Ω	5000A <sup>2</sup> s	RC-VDR		
<b>SVT869394</b>	3x125A	3x32A	24-520VAC	125A	8,5-30VDC	620 Ω	20000A <sup>2</sup> s	RC-VDR		
<b>SVT869994</b>	3x125A	3x32A	24-520VAC	125A	90-240VAC	21 kΩ	20000A <sup>2</sup> s	RC-VDR		
<b>SVT965360</b>	3x50A	-	24-600VAC	50A	8,5-30VDC	620 Ω	1500A <sup>2</sup> s	-	Zero-cross / for resistive loads AC-51	
<b>SVT965760</b>	3x50A	-	24-600VAC	50A	10-30VAC/DC	410 Ω	1500A <sup>2</sup> s	-		
<b>SVT967360</b>	3x75A	-	24-600VAC	75A	8,5-30VDC	620 Ω	5000A <sup>2</sup> s	-		
<b>SVT967960</b>	3x75A	-	24-600VAC	75A	90-240VAC	21 kΩ	1500A <sup>2</sup> s	-		



Product reference	Switching current AC-51	Switching current AC-53	Switching voltage	Thyristor rating	Control voltage	Input R	I <sup>ft</sup>	Protoc.	Specifications	Dimensions mm
SVT range with 47,6mm housing										
<b>SVT864394E</b>	3x50A	3x12A	24-520VAC	50A	8,5-30VDC	620Ω	1500A <sup>2</sup> s	RC-VDR	Zero-cross / for most types of loads	100x76x56,5
<b>SVT868394E</b>	3x95A	3x24A	24-520VAC	95A	8,5-30VDC	620Ω	11000A <sup>2</sup> s	RC-VDR		
<b>SVT965460E</b>	3x50A	-	24-600VAC	50A	4-32VDC	ic<25mA	1500A <sup>2</sup> s	-	Zero-cross / for resistive loads AC-51	
<b>SVT965960E</b>	3x50A	-	24-600VAC	50A	90-240VAC	21 kΩ	1500A <sup>2</sup> s	-		
<b>SVT967360E</b>	3x75A	-	24-600VAC	75A	8,5-30VDC	21 kΩ	1500A <sup>2</sup> s	-		

These products should be mounted with heatsink in order to reach nominal current.

# THREE PHASE MOTOR CONTROL



## SWT / SIT range solid state contactors

Three phase contactor with heatsink and DIN rail mounting. Fitted with a LED indicators, and RC and VDR network protection designed to control resistive loads (AC-51) or for motor control (AC-53).



Product reference	Switching current AC-51	Switching current AC-53	Switching voltage	Peak voltage	Control voltage	Input R	I <sup>2</sup> t	Specifications	Dimensions mm	Fig n°
SIT865390	3X22A	3x12A	24-510VAC	1200V	10-30VAC/DC	410 Ω	1500A <sup>2</sup> s	Zero-cross	90x98x122	1
SIT865570	3X22A	-	24-510VAC	1200V	10-30VDC	560 Ω	1500A <sup>2</sup> s			1
SIT865990	3X22A	3x12A	24-510VAC	1200V	90-240VAC	21 kΩ	1500A <sup>2</sup> s			1
SWT860330	3x5A	3x5A	24-520VAC	1200V	10-30VAC/DC	410 Ω	265A <sup>2</sup> s	Zero-cross	83x76x72	2
SWT861730	3x28A	3x16A	24-520VAC	1200V	10-30VAC/DC	410 Ω	5000A <sup>2</sup> s			3
SWT861790	3x28A	3x16A	24-520VAC	1200V	90-240VAC	21 kΩ	5000A <sup>2</sup> s		3	
SWT862030	3x32A	3x24A	24-520VAC	1200V	10-30VAC/DC	410 Ω	11000A <sup>2</sup> s		3	
SWT862090	3x32A	3x24A	24-520VAC	1200V	90-240VAC	21 kΩ	11000A <sup>2</sup> s		3	
SWT865080	3x50A	-	24-520VAC	1200V	10-30VAC/DC	410 Ω	5000A <sup>2</sup> s		3	
									110x145x172	3

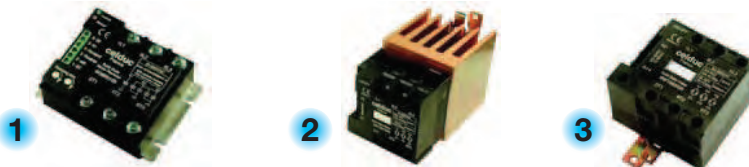
These products are defined with temperature rises of 50°C and permanent operation (operating cycle = 100%) of 8 hours in compliance with the European standards.

## AC Reversing switches - SG9, SV9 & SW9

This relay is used to reverse the rotational direction of a motor. The SW9 series is ready to use with heatsink and DIN rail mounting integrated. They all supplied with LED indicators and protection against simultaneous controls.

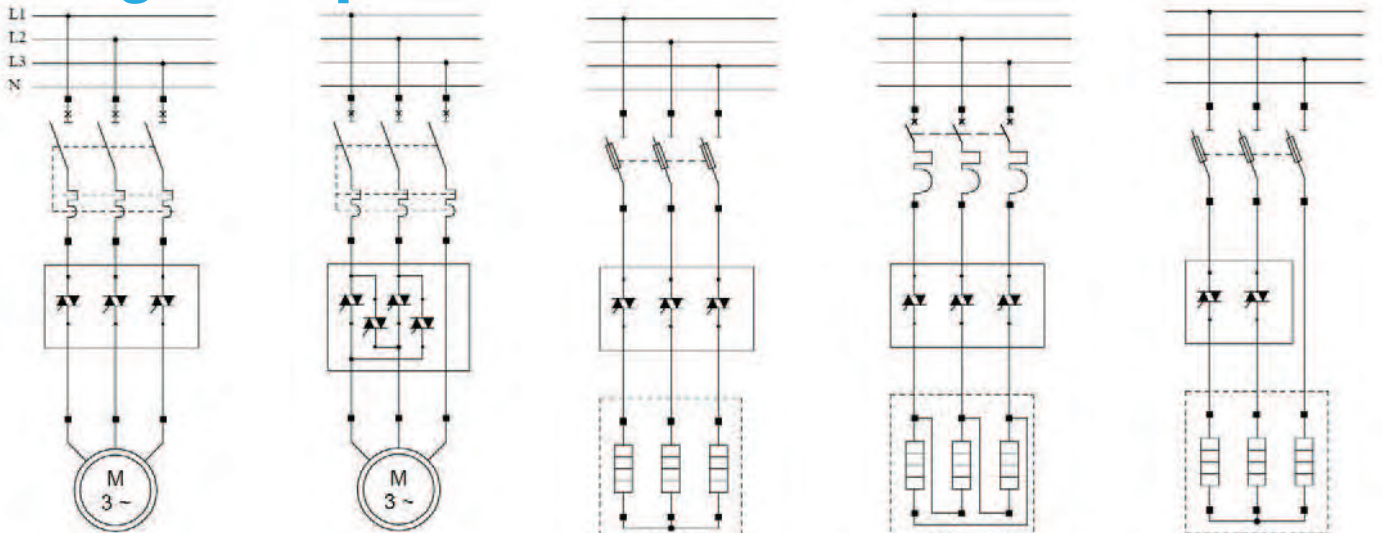
Product reference	Switching current AC-53	Switching voltage	Control voltage	I <sup>2</sup> t	Protec.	Specifications	Dimensions mm	Fig n°
SG969100	3x6,6A	24-520VAC	10-30VDC	612A <sup>2</sup> s	reversing + time delay	3 phase switching	100x73,5x39,5	1
SG969300	3x8,5A	24-520VAC	12-30VDC	1500A <sup>2</sup> s		2 phase switching	100x73,5x39,5	1
SV969300	3x8,5A	24-520VAC	12-30VDC	1500A <sup>2</sup> s		2 phase switching IP20 enclosure	100x76x56,5	4
SV969500	3x16A	24-550VAC	12-30VDC	5000A <sup>2</sup> s		2 phase switching IP20 enclosure	100x76x56,5	4
SW960330	3x4,5A	24-550VAC	12-30VDC	1500A <sup>2</sup> s		2 phase switching	100x76x72	3
SW961230	3x8,5A	24-520VAC	12-30VDC	1500A <sup>2</sup> s		2 phase switching	83x90x155	2

Standard housing 40mm. Available in 47,6mm (E suffix) : please contact us



4 = 3 without DIN rail

## Wiring examples – Three-phase applications



Three-phase SSR SVT8/SGT8 controlling a three-phase motor with a thermal - magnetic protection.

Motor reverser SV9 for three-phase asynchronous motor

Three-phase SSR SVT9/SGT9 to control heaters connected in star with fuses protection.

Three-phase SSR SVT9/SGT9 to control heaters connected in delta with circuit-breaker.

Two-phase SSR SOB9 to control heaters connected in star with fuses protection.

## SMCV & SMCW range AC Softstarter

### Motor control :

- Efficient reduction of torque and starting current.

### Incandescent or infrared lamp starting :

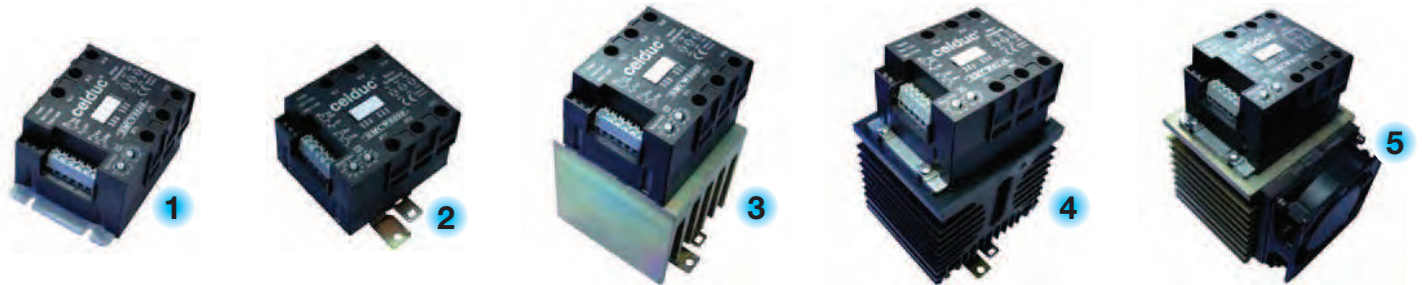
- Reduction of in rush current
- Increase in life expectancy.

### Transformer control (loaded) :

- Elimination of saturation current
- Improved control and protection.

### Whatever your application :

- Diagnostic monitoring of line, load & supply as well as normal operational status
- Better balance of and less interference on starters (full control of the 3 phases!)
- Simple use easing implementation and adjustments
- As compact as an electronic contactor.

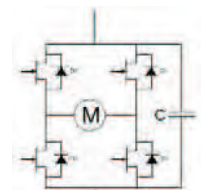


Product reference	Pmax motor 400VAC		Pmax motor 230VAC		Max. Current AC53a		Specifications	Dimensions mm	Fig n°
	Y*	D*	Y*	D*	Max.	EN60947-4-2			
<b>SMCV6080</b>	7,5kW	13kW	4,3kW	7,5kW	16A	11,5A	Heatsink not provided	100x76x58,5	1
<b>SMCV6110</b>	11kW	19kW	6,4kW	11kW	25A	15,5A			
<b>SMCV6150</b>	15kW	26kW	8,6kW	15kW	30A	22,5A			
<b>SMCW6020</b>	2,5kW	4,3kW	1,4kW	2,5kW	5,6A	4A	Supplied with built-in heatsink	83x110x74	2
<b>SMCW6080</b>	7,5kW	13kW	4,3kW	7,5kW	16A	11,5A		83x110x155	3
<b>SMCW6110</b>	11kW	19kW	6,4kW	11kW	25A	15,5A		110x110x180	4
<b>SMCW6150</b>	15kW	26kW	8,6kW	15kW	30A	22,5A		110x141x180	5
<b>SMCW6151</b>	15kW	26kW	8,6kW	15kW	30A (AC53b)	22,5A (AC53b)		Ext. Bypass required	83x110x74

Common characteristics	Range of voltage and network frequency	Control	Diagnostic output	Operating temperature	Insulation	Max. section of wires
Values given at 40°C ambient	200-480VAC 40-65Hz	10-24VDC or contact	0-24V 1A AC/DC	-40°C +100°C	4kV	E=2,5mm <sup>2</sup> S=10mm <sup>2</sup>

\*The star assembly (Y) corresponds to in-line wired starter.  
The delta assembly (D) corresponds to the starter wired in the triangle coupling of the motor.  
Each channel is wired in series with a winding of the motor.

## XKRD & SGRD range Reversing switches for DC motor control



The ready to use module XKRD30506 for Din-Rail mounting comprises 4 Solid State relays wired as a reverser to be used to change the direction of a DC motor (100W @ 24Vdc).

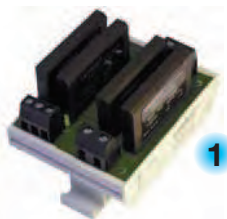
Control voltage ranges from 7 to 30VDC and this module can switch up to 5A/60VDC. A voltage clamp device is integrated and offers an input-output isolation of 2500VRMS.

Our SGRD reversing unit for DC motor control offers all the necessary built-in control protections including protection against wiring errors or short circuit on the input. This version includes the interlocking function to avoid control of the two directions at the same time.

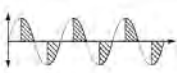
Control voltage ranges from 8 to 36VDC and this SSR can switch up to 10A/36VDC.

Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Control current	Protec.	Dimensions mm	Fig n°
<b>XKRD30506</b>	5A	7-36VDC	60V	7-30VDC	12-58mA	VDR	58,2x76,4x53	1
<b>SGRD1006</b>	10A	8-36VDC	60V	8-36VDC	20mA	Voltage and current	100x73,5x50,9	2

DC speed variation possible – please consult us



# PHASE ANGLE SINGLE PHASE



## Slx4 /SO4 range

### New generation of proportional controllers

This range comes in celpac® housing (ready to use) and okpac® housing (to be mounted on a heatsink). This range is designed for resistive loads.

SO465620 is a SSR based phase angle controller with PWM control input (linear power law response).



1



2



3

SO4 housing with different control connections.

Other functions possible : phase angle control, full wave pulse control, fast burst control Soft-Starter, timers and flashing relay, ... - please consult us.

Product reference	Switching current	Switching voltage	Control voltage	Dimensions mm	External power supply required ?	Fig n°
<b>SIL465000</b>	22A	160-450VAC	0-10V	22,5x80x11	no	1
<b>SIM465000</b>	32A	160-450VAC	0-10V	45 x 80 x 116	no	2
<b>SO445020</b>	50A	100-280VAC	0-10V	45x58,2x27	yes	3
<b>SO465020</b>	50A	200-480VAC	0-10V		yes	
<b>SO468020</b>	95A	200-480VAC	0-10V		yes	
<b>SO469020</b>	125A	200-480VAC	0-10V		yes	
<b>SO445120</b>	50A	100-280VAC	0-5V		yes	
<b>SO468120</b>	95A	200-480VAC	0-5V		yes	
<b>SO469120</b>	125A	200-480VAC	0-5V		yes	
<b>SO467501</b>	75A	160-450VAC	1-5V		no	
<b>SO445320</b>	50A	100-280VAC	Potentiometer		yes	
<b>SO465320</b>	50A	200-480VAC	Potentiometer		yes	
<b>SO445420</b>	50A	90-265VAC	4-20mA		no	
<b>SO465420</b>	50A	200-480VAC	4-20mA		no	
<b>SO467420</b>	75A	200-480VAC	4-20mA	no		
<b>SO468420</b>	95A	200-480VAC	4-20mA	no		
<b>SO469420</b>	125A	200-480VAC	4-20mA	no		
<b>SO465620</b>	50A	200-480VAC	PWM	yes		

## SO4 range - Single phase softstarters

This range of single-phase softstarters is designed for universal motors or lamps.



1

2 = 1 with integrated heatsink

Product reference	Switching voltage	Switching current	Control voltage	Dimensions mm	Fig n°
<b>SO400200</b>	200-260VAC	35A	Soft-starter	45x58,2x27	1
<b>SO400300</b>	200-260VAC	40A*			2

\*Value given at 25°C ambient

For the softstart of other loads (transformers, single-phase motors, ...) please consult us.

## SG4 range - Phase angle controller

This relay is designed to proportionally vary the switching point on a sinusoidal mains supply via an isolated analogue control signal thereby varying the RMS voltage at the terminals of the load. Applications : light dimmer, heating regulation, single phase variable speed control (vibrating feeders,etc).

Model with LED and RC and VDR network.



Product reference	Switching current	Switching voltage	Control voltage	Input R	I <sub>t</sub>	Dimensions mm
<b>SG441020</b>	10A	115-265VAC	0-10VDC	400 kΩ	72A <sup>2</sup> s	100x73,5x39,5
<b>SG444020</b>	40A	115-265VAC	0-10VDC	400 kΩ	1500A <sup>2</sup> s	
<b>SG464020</b>	40A	200-460VAC	0-10VDC	400 kΩ	1500A <sup>2</sup> s	
<b>SG468020</b>	70A	200-460VAC	0-10VDC	400 kΩ	5000A <sup>2</sup> s	
<b>SG469020</b>	110A	200-460VAC	0-10VDC	400 kΩ	20000A <sup>2</sup> s	
<b>SG444120</b>	40A	115-265VAC	Potentiometer	200 kΩ	1500A <sup>2</sup> s	
<b>SG464120</b>	40A	200-460VAC	Potentiometer	200 kΩ	1500A <sup>2</sup> s	
<b>SG469120</b>	110A	200-460VAC	Potentiometer	200 kΩ	20000A <sup>2</sup> s	
<b>SG444420</b>	40A	115-265VAC	4-20mA	250 Ω	1500A <sup>2</sup> s	
<b>SG464420</b>	40A	200-460VAC	4-20mA	250 Ω	1500A <sup>2</sup> s	
<b>SG468420</b>	70A	200-460VAC	4-20mA	250 Ω	5000A <sup>2</sup> s	
<b>SG469420</b>	110A	200-460VAC	4-20mA	250 Ω	20000A <sup>2</sup> s	

These products should be mounted on heatsink in order to reach nominal current.

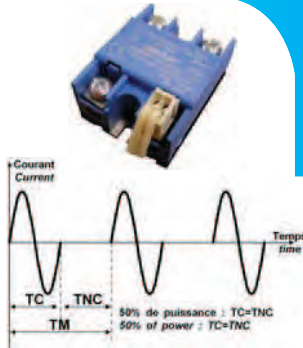


**NEW**

## S03 range Burst control mode ( $\mu P$ based unit)

This control mode is particularly suitable for resistive loads having a low thermal inertia like short wave Infra Red sources (IR lamps). It allows a very fine control of power according to the analogue input signal while reducing noise emission level (EMC conducted emissions).

This control mode consists in switching streams of full sine waves equally distributed along a fixed modulation period (TM) function of the analogue input signal. The  $\mu P$  constantly computes the number of full sine waves to be switched along the TM period.



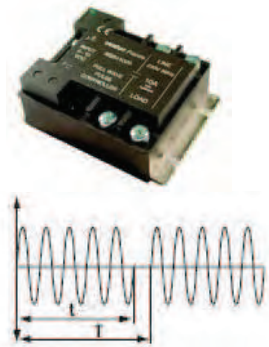
Product reference	Switching current	Switching voltage	Control voltage	Dimensions mm
<b>SO367001</b>	75A	400VAC	0-10VDC	45x58,2x27

Other power rating and / or control on request.

## SG5 range Full wave pulse controllers

This relay has an analog input isolated from the mains to proportionally vary the cyclic operating ratio of a load (t/T). Control and mains are synchronous and output only has full periods. Models supplied with LED indicators together with RC & VDR network protection.

Application :  
Heating control



Product reference	Switching current	Switching voltage	Control voltage	Input R	$I^2t$	Dimensions mm
<b>SG541020</b>	10A	230VAC	0-10VDC	250 $\Omega$	72A <sup>2</sup> s	100x73,5x39,5
<b>SG544020</b>	40A	230VAC	0-10VDC	350 $\Omega$	610A <sup>2</sup> s	
<b>SG564020</b>	40A	400VAC	0-10VDC	250 k $\Omega$	610A <sup>2</sup> s	
<b>SG541120</b>	10A	230VAC	Potentiometer	1 M $\Omega$	72A <sup>2</sup> s	
<b>SG564120</b>	40A	400VAC	Potentiometer	1 M $\Omega$	610A <sup>2</sup> s	
<b>SG541420</b>	10A	230VAC	4-20mA	350 $\Omega$	72A <sup>2</sup> s	
<b>SG564420</b>	40A	400VAC	4-20mA	350 $\Omega$	610A <sup>2</sup> s	

For higher power ratings and three phase applications, ask for our application notes.  
These products should be mounted on heatsink in order to reach nominal current.

## SWG5 range Single phase power controllers

This range is based on the SG5 controllers. The SWG5 are fitted with heatsinks and DIN rail adapters

Application :  
single phase heaters



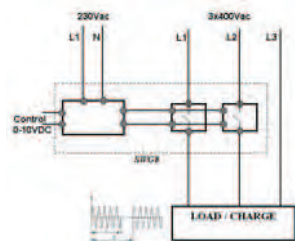
Product reference	Switching power	Switching voltage	Control voltage	Input R	Dimensions mm
<b>SWG50210</b>	2kW	230VAC	0-10VDC	250 k $\Omega$	100x74x56
<b>SWG50810</b>	8kW	230VAC	0-10VDC	250 k $\Omega$	100x110x96

Control voltage 0-5V or potentiometer on requests.

## SWG8 range Three phase power controllers

The SWG8 controllers consist of a control unit (0 to 10 VDC input) and a power unit adapted to three phase load. The control unit has got an analogue input, isolated from the mains, that can proportionally alter the power to the load.

Application :  
three-phase heaters



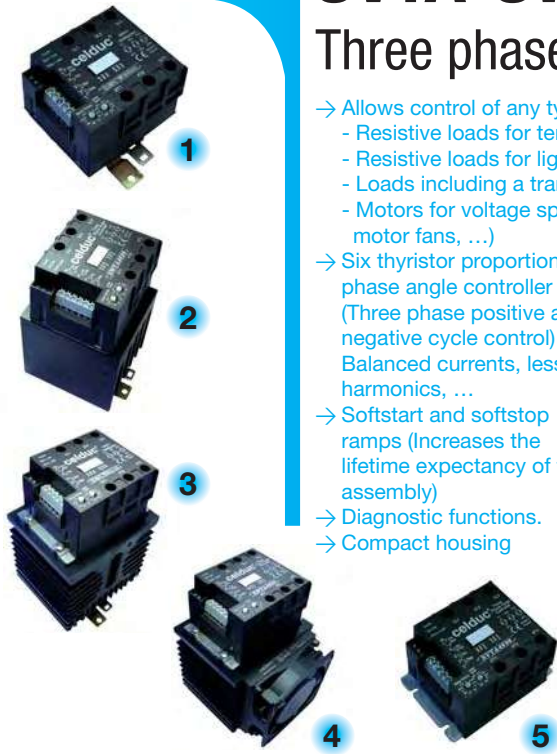
Product reference	Switching power	Switching voltage	Control voltage	Input R	Control unit dimensions mm	Power unit dimensions mm
<b>SWG81510</b>	20kW	400VAC	0-10VDC	250 k $\Omega$	100 x 74 x 56	45x80x120
<b>SWG82710</b>	27kW					2x(83x110x130)
<b>SWG83610</b>	36kW					2x(110x110x154)
<b>SWG84210</b>	42kW					2x(110x110x154)
<b>SWG84810</b>	48kW					2x(110x110x154)
<b>SWG86010</b>	60kW					2x(110x110x154)
<b>SWG88010</b>	80kW	2x(110x145x154)				

# THREE PHASE PROPORTIONAL CONTROLLERS



## SVTA-SWTA range

### Three phase universal digital proportional controllers



- Allows control of any type of loads (except capacitive) 3 or 4 wires (neutral), delta or star wiring :
  - Resistive loads for temperature control (infrared lamps, kilns, resistors, ...)
  - Resistive loads for light control (bulbs, halogen, UV, scenes, ...)
  - Loads including a transformer, a coil or a rectifier for voltage control (power supplies, high voltage generators, ...)
  - Motors for voltage speed control (Possibility to reduce the speed depending on the type of motor and machine, motor fans, ...)

- Six thyristor proportional phase angle controller (Three phase positive and negative cycle control) :
  - Balanced currents, less harmonics, ...
- Softstart and softstop ramps (Increases the lifetime expectancy of the assembly)
- Diagnostic functions.
- Compact housing

Ready to use – values given at 25°C ambient

Product reference	Max. current AC-51	Max. current AC-53a	Control	Dimensions mm	Fig n°
SWTA4610	7A	7A	0-10V	83x110x74	1
SWTA4620	22A	16A	0-10V	83x110x155	2
SWTA4630	32A	25A	0-10V	110x110x180	3
SWTA4650	50A	30A	0-10V	110x141x180	4
SWTA46501 (*)	50A	30A	0-10V	110 x141x180	4
SWTA4631	32A	25A	Potentiometer	110x110x180	3
SWTA4634	32A	25A	4-20mA	110x110x180	3

\* Fan 24 VDC

Products to be mounted on a heatsink

Product reference	Max. current AC-51	Max. current AC-53a	Control	Dimensions mm	Fig n°
SVTA4650	50A	16A	0-10V	100x76x58,5	5
SVTA4690	125A (**)	30A	0-10V		
SVTA4651	50A	16A	Potentiometer		
SVTA4691	125A (**)	30A	Potentiometer		
SVTA4684	95A (**)	25A	4-20mA		
SVTA4694	125A (**)	30A	4-20mA		

\*\* Max. wire size = 10mm<sup>2</sup> : double wires or use special adaptors for current > 50A. Please refer to the mounting instructions.

No external power supply required

## SGTA range

Our SGTA range is a complementary range to the three-phase proportional controllers SVTA-SWTA.

- Price-effective range
- Adapted to three phase star connected resistive loads (or delta connected loads on request)
- Small housing
- Wide mains frequency variation (40-65Hz)
- Built-in overvoltage protection
- High I<sup>2</sup>t power elements
- Fully optoisolated full cycle three phase phase angle controller (balanced currents, less harmonics, ...)
- The minimum voltage applied on the load is the lowest in the market (3% RMS on the nominal voltage against 40% RMS offered by our competitors !)
- Lots of possible options on request
- Manufactured in compliance with major international standards EMC, LVD, UL, VDE.

Typical applications :

- Resistive loads for temperature control (infrared lamps, kilns, resistors, ...)
- Resistive loads for light control (bulbs, halogen, scenes, ...)

Product reference	Max. current AC-51	Switching voltage	Control	Dimensions mm
SGTA4650	50A	300-510VAC	0-10V	75,15x100x46
SGTA4651	50A	300-510VAC	0-5V	
SGTA4653	50A	300-510VAC	Potentiometer	
SGTA4654	50A	300-510VAC	4-20mA	

These products should be mounted on heatsink in order to reach nominal current. Other rating on request – consult us.



8-32V external power supply required

## SCQ range

### Four-Leg Solid State Relays

4 single phase SSRs in a SC case - save place in control panels (width 45 mm).



Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	I <sup>2</sup> t	Dimensions mm	Led
SCQ842000	4x25A	12-280VAC	600V	3-32VDC	I<10mA	288A <sup>2</sup> s	44,5x58,2x274	no
SCQ842060	4x25A	12-280VAC	600V	3-32VDC	I<10mA	288A <sup>2</sup> s		yes

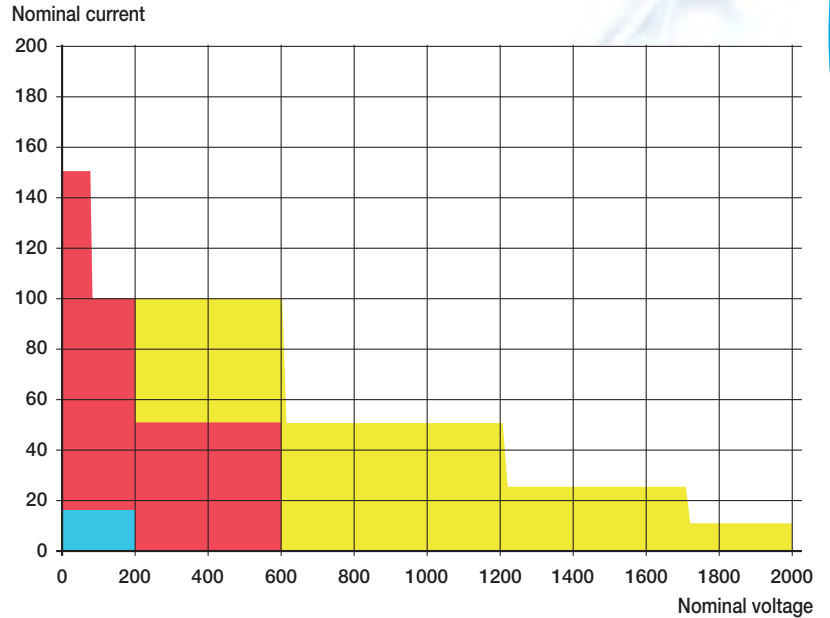
These products should be mounted on heatsink in order to reach nominal current.

## DC Solid State Relays

These relays are designed to switch DC loads e.g solenoid valves, brakes, indicators, motors (possibly on AC mains under specific conditions). All possible technologies can be available :

- **MOSFET**  
for applications where overcurrent capability and low dissipated power are needed.
- **BIPOLAR**  
for applications where low control current is needed.
- **IGBT**  
for high voltage applications (> 600 VDC).

For each application the corresponding technology - up to 1200VDC, 150A.  
In development: DC SSR for high current (400A) - for others, please contact us.

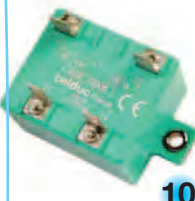


## MOSFET Technology



	Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Control current	Integrated protection	Dimensions mm	Fig n°			
1	SLD01210	2,5A	0-60VDC	60V	3-10VDC	5,5-27mA	Transil	28 x 5 x 15	1			
	SLD03210	2,5A	0-60VDC		18-32VDC	5,5-10,2mA						
	SLD01205	4A	0-32VDC		3-10VDC	5,5-27mA						
2	SLD02205	4A	0-32VDC	60V	7-20VDC	5,5-18mA	Transil	29x12,7x15,7 29x12,7x25,4	2			
	SLD03205	4A	0-32VDC		18-32VDC	5,5-10,2mA						
	STD03505	5A	0-30VDC		12-30VDC	4,1-12mA						
3	SPD03505	5A	0-30VDC	60V	12-30VDC	4,1-12mA	Transil	29x12,7x15,7 29x12,7x25,4	2			
	SKLD10510	8A	7-60VDC		100V	3-10VDC				6-30mA	43,6x6,3x24,5	3
	SKLD30510	8A	7-60VDC		100V	7-30VDC						
SKLD11006	12A	7-36VDC	60V	3-10VDC								
4	SKLD31006	12A	7-36VDC	60V	7-30VDC	25-42mA	-	44,5x58,2x27	4			
	SCM030200	30A	0-200VDC	200V	4,5-32VDC							
	SCM040600	40A	0-600VDC	600V								
5	SCM0100200	100A	0-200VDC	200V		3,5-32VDC	30-35mA	Transil	45x58,5x30	5		
	SCM0150100	150A	0-100VDC	100V								
	SOM02060	20A	5-40VDC	60V								
6	SOM020100	20A	5-60VDC	100V	Protection against line inductance (C1, D2) : option for SOM range	Diode + capacitor	45x58,5x30	5				
	SOM020200	20A	5-110VDC	200V								
	SOM04060	40A	5-40VDC	50V								
7	SOM040100	40A	5-60VDC	100V	18-32VDC	15-30mA	VDR+diode	36x78x61	6			
	SOM040200	40A	5-110VDC	200V								
	SOM06075	60A	5-40VDC	75V								
7	ES001000	0-80A	0-130VDC	200V	10-30VDC	9-20mA	VDR+diode	12,2x76,4x53	7			
	XKLD0020	4A	1-32VDC	200V								
	XKLD31006	10A	12-36VDC	60V								

## BIPOLAR Technology



Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Control current	Integrated protection	Dimensions mm	Fig n°
SKD10306	3A	2-60VDC	60V	3-30VDC	1-30mA	Diode	43,2x10,2x25,4	7
XKD10120	1A	2-220VDC	220V	5-30VDC	1-30mA	Diode	12,2x76,4x53	8
XKD10306	3A	2-60VDC	60V	5-30VDC	1-30mA			
XKD11306D	3A	2-60VDC	60V	3-30VDC	5-30mA			
XKD70306	3A	2-60VDC	60V	10-30VAC/DC	2-14mA			
XKD90306	3A	2-60VDC	60V	90-240VAC/DC	2-5,7mA			
SCC10506	5A	2-60VDC	60V	3-16VDC	1-30mA	Diode	44,5x58,2x27	9
SCC20506	5A	2-60VDC		10-32VDC				
SCC11506	15A	2-60VDC	3-16VDC					
SCC21506	15A	2-60VDC	10-32VDC					
SCC21520	15A	2-200VDC	300V	10-32VDC		Transil		
SGC20420	20A	2-200VDC	300V	3-30VDC	1-30mA	Transil	67 x 38 x 37,5	10

## IGBT Technology



Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Control current	Integrated protection	Dimensions mm
SCI0251700	25A	0-1700VDC	1700V	4,5-32VDC	25-42mA	Reverse diode	44,5x58,2x27
SCI0501200	50A	0-1200VDC	1200V	4,5-32VDC	25-42mA	Reverse diode	
SCI0100600	100A	0-600VDC	600V	4,5-32VDC	25-42mA	Reverse diode	

Products without integrated over-voltage protection (transil or VDR) or having only a Freewheel diode, must be fitted with an external overvoltage protection. The maximum operating voltage is then often reduced to the half of the specified maximum operating voltage.

## Applications

- DC power supplies (converters like choppers, inverters, ...)
- Signal switching (testing equipment, ...)
- Electro-magnets (induction motor braking, ...)
- Heaters (air conditioning in trains, tramways, ...)
- Batteries (ships, solar systems, ...)
- DC Motors (travelling cranes, cranes, vehicles, ...)



On request : « ready to use » products i.e. products including integrated voltage protection, proportional controllers, DC motor reversers ...  
Please consult us !

## Special Relays



### Shunting relays : SAS Relays

Airport beacon relay.  
If a lamp fails, the relays short circuit this lamp.  
Different configurations available.



### Dry contact relays : SG241010 relay

230VAC mains.  
12A output voltage.  
Control by PLA type insulated contact  
Typical applications : heating breaking, etc



### Flashing relays : ST relays

ST645000: flashing 1/2Hz 230VAC 15A.  
ST647000: flashing 1/2Hz 230VAC 25A.

## Special customer products

celduc® relais is a specialist in adapting designs to specific customer applications.

In addition to the very large range of solid state relays, celduc® design specific products according to the customers specifications or adapt products to the customers needs if prices and volumes can justify such developments. Please do not hesitate to consult us.



4 SKL SSRs on PCB



### This device using SSRs controls AC motors in hazardous area.

Control by pushbutton with embedded magnet actuating Reed switches.



### Solid state contactor for 3 phase motor.

Dry contact control  
Spring terminals.



PCB for single-phase motor softstart



### Special development composed of SU SSRs and ESUC modules

to control 9 heating elements with partial load break detection. This system includes all protections.



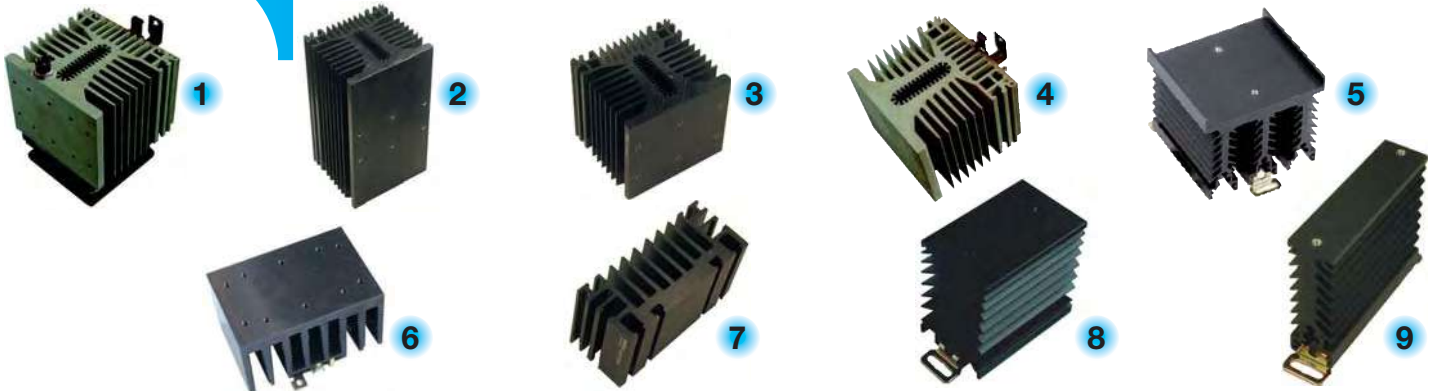
Motor reverser with 2 electronic cards included 5 SSRs.

## Applications notes

Application notes on request : a certain number of application notes are available to celduc® customers :

- Principle of solid state relays.
- Life expectancy of solid state relays: TMS<sup>2</sup> technology.
- Short circuit protection of solid state relays : fuses and circuit breakers.
- Solid state relays on resistive loads (heating application).
- Three phase motor.
- Transformer control.
- Incandescent lamp control.
- Discharge lamp control / Application of three phase diagnostic.
- Our products in equipment for the food industry.
- Our products in equipment for the packing industry.
- Our products in equipment for the textile industry.
- Solid state relays in emergency power supplies (UPS).
- Solid state relays on capacitive loads : power factor corrector (PFC) application.
- Application of SKL et SKH relays.
- Softstart and reversing relays.
- Softstart relays in transformer control.
- Softstart relays in incandescent and infrared lamp control.
- Our products in equipment for the electronic industry.
- Our products in equipment for the train industry.
- Our products in equipment for the renewable energy.

## Heatsinks



Product reference	Thermal characteristics	Specifications	Dimensions mm	Relay type	Fig n°
WF031100	0,3K/W	vented for DIN rail or screw	110x120x145	SO, SC, SG, SGT, SVT	1
WF050000	0,55K/W	DIN rail adaptor as option	110x100x200	SO, SC, SG, SGT, SVT	2
WF070000	0,75K/W	DIN rail adaptor as option	110x100x100	SO, SC, SG, SGT, SVT	3
WF115100	0,9K/W	for DIN rail or screw	110x100x90	SO, SC, SG, SGT, SVT	4
WF108110	1,1K/W	for DIN rail or screw	89,8x81x98,02	SO, SC	5
WF121000	1,2K/W	for DIN rail or screw	100x40x100	SO, SC, SG, SGT, SVT	6
WF210000	2,1K/W	DIN rail adaptor as option	96x41x55	SO, SC	7
WF151200	2,2K/W	for DIN rail or screw	45x73x80	SO, SC, SA, SU	8
WF311100	3K/W	for DIN rail or screw	22,5x73x80	SA, SU	9

The Rth values are given for a temperature of 50°C in calm air. Other dimensions available on request.

## Accessories



### PROTECTION COVERS / FLAPS

1K199000	protection cover for SGT/SG9
1K460000	protection cover for SC range (except SCB and 125A rating SC)
1K470000	protection cover for all SC/SCB range
1K522000	protection cover for SA-SAL
1K523000	protection flaps for SU-SUL

### MARKING LABELS

1MZ09000	marking labels to be mounted on protection flaps or covers for SA SU
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### DIN RAIL ADAPTORS

1LD00400	DIN rail adaptor for WF110700
1LD00500	DIN rail adaptor for SG/SVT/SV969300
1LD12020	DIN rail adaptor for SC/SV8/SO montage vertical

### MOUNTING KITS

1LK00100	mounting SC-SO-SF on heatsink or SC-SO on 1LD12020
1LK00200	mounting SG-SVT-SV9 on heatsink or 1LD00500
1LK00300	mounting heatsinks on 1LD00400 or SC-SO on 1LD00000
1LK00700	special kit for high current (okpac range)

### MOUNTING + HEATSINK + DIN ADAPTOR OPTION

1LWD1202	mounting of SC/SV/SO sur 1LD12020 + 1LD12020
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### THERMAL SEALS RELAY/HEATSINK

5TH15000	thermal grease for 30 relays SG/SVT ou 60 relays SC/SO
5TH21000	thermal precut film for SC/SO
5TH23000	thermal pads for SC/SO
5TH24000	thermal pads for SA/SU



### MOUNTING OPTION (screw kit included)

#### ONLY IF QUANTITY > 10

1LW00000	mounting of relays on heatsink
1LWD00000	mounting of heatsink on DIN rail adaptor

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datasheet, параметрн, маркнровка, габарнтн, фотн, даташнт SU942460

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