Реле, твердотельное каталог, описание, технические, характеристики, datasheet, параметры, маркировка,габариты, фото, даташит,

QR код

Реле, твёрдотельное купить, продажа, в наличии, Минск, Беларусь

Product Guide

www.celduc-relais.com

celduc® relais

MADE IN FRANCE

1964-2014 50 YEARS

REED RELAYS AND SWITCHES

SOLID STATE RELAYS

MAGNETIC SENSORS

Dear customers, dear readers,

At **celduc®** we are very proud to be celebrating our 50th anniversary in 2014!

Thanks to our expertise acquired over many years, **celduc®** is now considered a specialist in its field, and we collaborate with the biggest industrial groups worldwide.

We are constantly improving at **celduc® relais** and would like to take advantage of this special occasion to introduce our new corporate visual identity and new logo.

This new version of our product catalogue also gives us an opportunity to reconfirm our goals:

Manufacturing innovative products of the highest quality, adapted to customer needs worldwide.

We export 70% of our production at **celduc® relais,** and our success is driven by the innovations developed by our R&D teams in our strategic business units – Solid State Relays and Magnetic proximity sensors. Our product ranges **okpac®, dual okpac®** and **celpac® 2G,** which are constantly evolving, are ample proof of that. These product lines have great success with our most demanding customers.

In this new catalogue you will discover our latest technological advances, such as our ECOM temperature controller, current monitor and communication interface in one unit; our micro-processor based products designed for motor control; a high voltage DC Solid State Relay with built-in protection against overload and short-circuiting, as well as built-in protection from overheating; sensors for windows frames with detachable connectors, to name but a few.

If you cannot find the product you need in this catalogue, or on our website - **www.celduc-relais.com** - which is updated monthly, please do not hesitate to contact us! Our team will be pleased to answer any questions you may have.

We hope you enjoy discovering our latest range in this catalogue, which we know is always highly anticipated and appreciated.

A bientôt !

Charles PERROT
Chief Executive Officer

groupe celduc®

→ 50 years of experience

celduc® group specializes in electrical engineering and electronics.
With many years of experience **celduc®** is fully focused on serving its market and customers all over the world. The company was founded in 1964 by Michel Guichard. Today it is split into two separate companies, **celduc® transfo & celduc® relais,** to channel and focus its expertise into two distinct market sectors.
Set up near Saint-Etienne, the **celduc® group** has played a great part in rising in prosperity of the Rhône-Alpes area and is the only French company producing and selling solid state relays.
Today celduc® group has:
- 200 employees
- Two production centers totaling 10 000 square meters
- A worldwide presence

A strong innovation to challenge the future

celduc® relais constant product development and commitment to work with customers to develop bespoke solutions increases our production capacity by around 10 to 15 % per year.
Innovation is the challenge that **celduc® relais** has to take up every day by anticipating the market trends and implementing specific knowledge and skills in partnership with industry and research.

From design to manufacturing

celduc® relais controls the complete chain : design, development, production, testing and marketing. **celduc® relais** manufactures the most comprehensive range of Solid State Relays but has also developed its own production equipment to ensure the most efficient manufacturing methods. Thanks to this high-capacity and unique tooling, **celduc®** products can be found all over the world and have been recognized by the most renowned industrial companies.



High quality products

Quality is of paramount importance and maintained at all times, aided by our own specially developed in house testing equipment.
celduc® relais solid state relays and magnetic sensors are manufactured in accordance with the major international standards (UL, CSA, EN, VDE, CE, ATEX, ...)...



Products

Solid State Relays

Commonly known as SSR, it represents 70% of the production of celduc® relais.

These innovative and highly efficient components are used to control all types of loads in many industries.

The three major application areas are industrial heating and temperature control, lighting control, and motor control.

Every day new applications calling for reliability, silent switching and long life time utilize our highly innovative solid state relays which provide the small but vital «extras» when compared to our competitor's products.

→ **pages 2 to 28.**

Magnetic proximity sensors

Used for monitoring or controlling level, clearance, movement, position and rpm recording, the sky is the limit for these versatile sensors. These sensors are used everywhere in consumer goods or industrial sectors like automotive, aircraft or telecommunications.

They are also extensively used in many automation applications in the manufacturing sector.

→ **pages 29 to 42.**

"Reed" relays & switches

Our Reed switches are used in our own magnetic proximity sensors & reed relays . They have proved to last for more than 50 years. The range meets the demands of an increasing number of new applications thanks to their ease of operation, compact size and reliability.

→ **pages 43 to 44.**

Solid State Relays

The advantages Solid State Relays (SSR) have compared to Electro Mechanical Relays (EMR) are well-known. Fully electronics, there is no moving parts inside SSR ; they have no audible noise, withstand significant vibration without operating problems, have fast response time, but most of all they have higher life-time expectancy.

Used in appropriate operating conditions, SSRs have nearly unlimited life vs 100K cycles for EMRs. Thanks to their unlimited life-time SSRs don't require any maintenance and prevent manufacturers from unforeseen machines/ production stop, which is a great advantage nowadays with 24h/24 industrial activity.

celduc® relay the sole solid state relay technology made in France for more than 40 years !

Main applications

HEATING

Plastic injection molding
Furnaces
Power supply distribution systems
Air conditioning
Textile
Home heating
Infrared heating
Drying
Thermoforming
Etc.

MOTOR STARTING

Pumps
Compressors
Plastic injection molding
Conveyors
Fans
Etc.

LIGHTING

Public lighting
Cinema
Theatre lamps
Airport runway lamps
Road lighting
Etc.

CONTROL

PLC interface
Heating element control
Solenoid valves
Contactor Coils
Optocoupling of sensors

MISCELLANEOUS

Transformer starting
Power factor corrector
Uninterrupted power supplies
Energy source switching
Capacitors control





Standards

The solid state relays and contactors made by celduc® relais are manufactured in compliance with major international standards :
- IEC/EN60947-4-2 for motor control
- IEC/EN60947-4-3 for the other loads
- American and Canadian (UL, cUL, CSA)
- IEC/EN 60950 – VDE0805
- IEC60335-1 – VDE0700-1
- IEC 62314

Our products also meet the major European directive regarding the CE marking.

• Some of our products fulfil the requirements according to EN 60601-1 (VDE 0750) for medical applications and also the requirements for KOSHA (S-MARK) or for explosive atmospheres ATEX "EX".

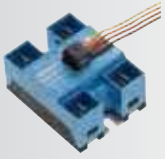
• All of our relays okpac® SO (as well as SC relays), celpac® 2G SU/ SA (including the current sense module ESUC) but also the 2-phase SOB and 3-phase SGT comply with the European standard EN61373 for railways : shocks and vibrations tests on relay.
Regarding the standards about Fire behavior and fumes NF F16-101, NF F16-102 and EN 45545 calling for the EN 60695-2-10/11/12 (Glow Wire tests (GWFI – GWIT), blue and black plastic covers and encapsulating resin of SO and SU/SA relays are classified (for more detailed information – please contact us).

• The manufacturing process of our relays complies with the ISO9001 requirements version 2008. We incorporate highly reliable components with a very high electromagnetic interference level which give to our products the highest life-time one can find one the market.

Contents





Interface relays

100% compatible with electromechanical relays

SLIM → 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/280VAC for SLA and 2.5A/60VDC or 4A/24VDC for SLD relays.

	Product reference	Switching current	Switching voltage	Control voltage	Protec.	Dimensions L x l x h in mm
AC	**SLA01220**	2A	12-280VAC	3-10VDC	RC	28x5x15
AC	**SLA02220**	2A	12-280VAC	7-20VDC	RC	28x5x15
AC	**SLA03220**	2A	12-280VAC	18-32VDC	RC	28x5x15
DC	**SLD01205**	4A	0-32VDC	3-10VDC	Transil	28x5x15
DC	**SLD01210**	2,5A	0-60VDC	3-10VDC	Transil	28x5x15
DC	**SLD02205**	4A	0-32VDC	7-20VDC	Transil	28x5x15
DC	**SLD03205**	4A	0-32VDC	18-32VDC	Transil	28x5x15
DC	**SLD03210**	2,5A	0-60VDC	18-32VDC	Transil	28x5x15

Other miniature solid state relay options are available on request.

accessory

Product reference	Specifications
ESD01000	SLA/SLD base for PCB for one relay

SP-ST → 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).

	Product reference	Switching current	Switching voltage	Control voltage	Protec.	Dimensions L x l x h in mm
AC	**SPA01420**	4A	12-275VAC	4-16VDC	VDR	29x12,7x25,4
AC	**SPA07420**	4A	12-275VAC	12-30VDC / 15-30VAC	VDR	29x12,7x25,4
AC	**STA07220**	2A	12-275VAC	12-30VDC / 15-30VAC	VDR	29x12,7x15,7
DC	**SPD03505**	5A	0-30VDC	12-30VDC	Transil	29x12,7x25,4
DC	**SPD07505**	5A	0-30VDC	12-30VDC / 15-30VAC	Transil	29x12,7x25,4
DC	**STD03205**	2,5A	0-30VDC	12-30VDC	Transil	29x12,7x15,7
DC	**STD03505**	5A	0-30VDC	12-30VDC	Transil	29x12,7x15,7
DC	**STD03510**	5A	0-68VDC	12-30VDC	Transil	29x12,7x15,7
DC	**STD07205**	2,5A	0-30VDC	12-30VDC / 15-30VAC	Transil	29x12,7x15,7

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

accessory

Product reference	Specifications
ESD05000	SP/ST base for DIN rail for one relay

Interface relays

XK

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.

	Product reference	Switching current	Switching voltage	Control voltage	Protec.	Specifications	Dimensions mm
AC	**XKA20420**	5A	12-275VAC	6-30VDC	VDR	1 pole AC zero-cross output	12,2x76,4x53
AC	**XKA20420D**	5A	12-275VAC	6-30VDC	VDR		
AC	**XKA20420R**	5A	12-275VAC	6-30VDC	VDR		
AC	**XKA70420**	5A	12-275VAC	15-30VAC/DC	VDR		17,2x76,4x53
AC	**XKA70440**	5A	12-440VAC	15-30VAC/DC	VDR		
AC	**XKA90440**	5A	12-440VAC	150-240VAC/DC	VDR		
AC	**XKH20120**	10A	12-280VAC	10-32VDC			25x76,4x65
AC	**XKA20421**	5A	12-275VAC	5-30VDC	VDR	1 pole AC random output	12,2x76,4x53
DC	**XKD10120**	1A	2-220VDC	5-30VDC	diode	1 pole DC output	12,2x76,4x53
DC	**XKD10306**	3A	2-60VDC	5-30VDC	diode		
DC	**XKD11306D**	3A	2-60VDC	5-30VDC	diode		
DC	**XKD70306**	3A	2-60VDC	10-30VAC/DC	diode		12,2x76,4x53
DC	**XKD90306**	3A	2-60VDC	90-240VAC	diode		
DC	**XKLD31006**	10A	12-36VDC	10-30VDC	diode	DC output - MOSFET technology	12,2x76,4x53

Suffix D : removable terminals.
Suffix R : removable spring terminals.
XKH - with integrated heatsink

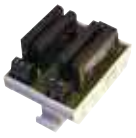
XKLD0020 has all protections included and is designed for inductive loads with high switching frequency

- 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	Protec.	Specifications	Dimensions mm
DC	**XKLD0020**	4A	10-100VDC	18-32VDC	VDR+diode	1 pole DC output	36x78x61

Motor control

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

PCB relays

SKA / SKB

The SK range for PCB mounting is available in different models :
SKA/SKB (AC output) or SKD/SKLD (DC output – see pages 25-26)
→ SKA up to 5A 230 or 400VAC with built-in voltage protection, ideal for solenoid or motor control.
→ SKB up to 5A 230 or 400VAC for resistive loads.

Product reference	Current	Switching voltage	Control voltage	LED	I²t	Protec.	Specifications	Dimensions mm
SK541101	2,5A	24-280VAC	3-30VDC	no	50A²s	–	AC zero-cross output / normaly closed	40x11x21
SKA10420	5A	12-275VAC	2,5-10VDC	no	50A²s	VDR	AC zero-cross output / most types of loads	43,2x10,2x25,4
SKA20420	5A	12-275VAC	4-30VDC	no	50A²s	VDR		
SKA10440	5A	12-460VAC	2,5-10VDC	no	50A²s	VDR		
SKA11440	5A	12-460VAC	3-10VDC	yes	50A²s	VDR		
SKA20440	5A	12-460VAC	4-30VDC	no	50A²s	VDR		
SKA20460	5A	24-600VAC	5-30VDC	no	72A²s	–		
SKA20421	5A	12-275VAC	4-30VDC	no	50A²s	VDR	AC random output / most types of loads	
SKA20441	5A	12-460VAC	4-30VDC	no	50A²s	VDR		
SKA21441	5A	12-460VAC	7-30VDC	yes	50A²s	VDR		
SKB10420	5A	12-280VAC	3-10VDC	no	50A²s	–	AC zero-cross output / resistive loads	
SKB10440	5A	24-600VAC	3,7-10VDC	no	72A²s	–		
SKB20420	5A	12-280VAC	8-30VDC	no	50A²s	–		

SKL

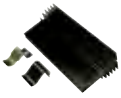
SKL for AC output with a ceramic substrate that can be mounted on a heatsink. The SKL is available with current ratings from 16A to 75A.
For the power element, our SKL use TMS² technology reducing thermal stress and considerably improving life expectancy. Ideal for motor or lamps control (I²t up to 5000 A²s) 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	I²t	Specifications	Dimensions mm
SKL10120	16A	16A	12-280VAC	4-14VDC	128A²s	AC zero-cross output	43,4x6,3x24,5
SKL10220	21A	25A	12-280VAC	4-14VDC	312A²s		
SKL10240	22A	25A	24-600VAC	4-14VDC	450A²s		
SKL10260	22A	25A	24-690VAC	4-14VDC	1150A²s		
SKL10540	27A	50A	24-600VAC	4-14VDC	1800A²s		
SKL10560	27A	50A	24-690VAC	4-14VDC	1800A²s		
SKL20120	16A	16A	12-280VAC	8-32VDC	128A²s		
SKL20220	21A	25A	12-280VAC	8-32VDC	312A²s		
SKL20240	22A	25A	24-600VAC	8-32VDC	450A²s		
SKL20520	27A	50A	12-280VAC	8-32VDC	1800A²s		
SKL20740	30A	75A	24-600VAC	8-32VDC	5000A²s		
SKL10521	27A	50A	12-280VAC	3-14VDC	2450A²s	AC random output	
SKL20241	22A	25A	24-600VAC	8-32VDC	450A²s		

See DC output models pages 25-26.

accessories for SKL

WF032000	Heatsink for SKL L=150mm 2,6-3 K/W
WF042000	Heatsink for SKL L=100mm 3,6-3 K/W
1L941000	Clip for SKL on WF03/04
1L942000	Clip for SKL with screw for other heatsinks



PCB relays

SKH

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

Product reference	Output current	Output current with ventilation	Switching voltage	Control voltage	I²t	Dimensions mm
SKH10120	10A @ 20°C	16A	12-280VAC	4-14VDC	128A²s	43,6 x 22 x 35,7
SKH10240	10A @ 25°C	25A	24-600VAC	4-14VDC	450A²s	
SKH20120	10A @ 20°C	16A	12-280VAC	8-32VDC	128A²s	
SKH20240	10A @ 25°C	25A	24-600VAC	8-32VDC	450A²s	

Other references available – please contact us.

SN8

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	I²t	Dimensions mm
SN842100	25A	24-280VAC	3,5-15VDC	260A²s	35,05 x 12,70 x 28,32

Other references available : please contact us.

SHT

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	I²t	Dimensions mm
SHT842300	3x25A	24-280VAC	10-30VDC	260A²s	81,28 x 8,26 x 27,69

Other references available : please contact us.

applications

Electromagnets , Lamps, Contactors
Starting current Id =1,4xIn

SKA

Heaters

Id =1,4xIn

SKB / SKL

Infrared lamps or lighting lamps
Id =10xIn

SKL / SKH

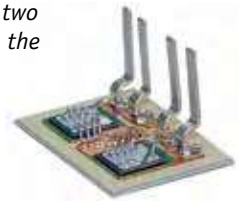
Motors

Id =8xIn

SKL / SKH

Single Phase Solid State Relays

All our solid state relays fitted with back to back thyristors (power products : single phase, two phase, three phase) now use TMS² technology with a very high life expectancy compared to the majority of products on the market (application note on request).



okpac® Innovation Performances and Design !

- Versatile, easy and quick connections
- Removable IP20
- Same screwdriver for outputs and inputs
- Tightening on metal baseplate not on plastic
- Removable control terminals
- SSR, mains and load status.
- 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
- EMC compatible for industrial environment
- UL/cUL, VDE (EN60950), IEC/EN60947-4-3, CE marking
- Itsm up to 2 000A and I²t>20 000A²s
- Protection against circuit breaker.

Versatile, easy and quick connections

POWER WIRING

Direct connection by wire or tip
2 x 6 mm2 (AWG10)
fine strand i.e. 32A
2 x 10 mm2 (AWG8)
solid i.e. 50A

With tips with contained palm
Up to 25mm2 (AWG4) i.e. 85A
Up to 50mm2 (AWG1)
with or without special adaptations i.e. 150A

Screw with brake washers
Better behaviour with shocks and vibrations

CONTROL WIRING

Screws connection
(S07 / S08 / S09 / S0L)

Removable spring terminals
(S0R)

S07

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	Thyristor rating	Switching voltage	Peak voltage	Control voltage	I²t	Dimensions mm
SO745090	50A	12-275VAC	600V	3-32VDC	2 800A²s	45 x 58,5 x 30
SO763090	35A	24-510VAC	1200V	3,5-32VDC	1 250A²s	
SO765090	50A	24-510VAC	1200V	3,5-32VDC	2 800A²s	
SO767090	75A	24-510VAC	1200V	3,5-32VDC	7 200A²s	
SO768090	95A	24-510VAC	1200V	3,5-32VDC	16 200A²s	
SO769090	125A	24-510VAC	1200V	3,5-32VDC	24000A²s	
SO789060	125A	24-690VAC	1600V	3,5-32VDC	22 000A²s	

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

Single Phase Solid State Relays

okpac®

SO8

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	Thyristor rating	Switching voltage	Peak voltage	Control voltage	I²t	Dimensions mm
	SO842074	25A	12-275VAC	600V	3-32VDC	600A²s	45 x 58,5 x 30
	SO842974	25A	12-275VAC	600V	20-265VAC/DC	600A²s	
	SO843070	35A	12-275VAC	600V	3-32VDC	1 250A²s	
	SO843970	35A	12-275VAC	600V	20-265VAC/DC	1 250A²s	
	SO845070	50A	12-275VAC	600V	3-32VDC	2 800A²s	
	SO845970	50A	12-275VAC	600V	20-265VAC/DC	2 800A²s	
	SO848070	95A	12-275VAC	600V	3-32VDC	16 200A²s	
	SO849070	125A	12-275VAC	600V	3-32VDC	22 000A²s	
	SO863070	35A	24-510VAC	1200V	3,5-32VDC	1 250A²s	
	SO863970	35A	24-510VAC	1200V	20-265VAC/DC	1 250A²s	
	SO865070	50A	24-510VAC	1200V	3,5-32VDC	2 800A²s	
	SO865970	50A	24-510VAC	1200V	20-265VAC/DC	2 800A²s	
	SO867070	75A	24-510VAC	1200V	3,5-32VDC	7 200A²s	
	SO867970	75A	24-510VAC	1200V	20-265VAC/DC	7 200A²s	
	SO868070	95A	24-510VAC	1200V	3,5-32VDC	16 200A²s	
	SO868970	95A	24-510VAC	1200V	20-265VAC/DC	16 200A²s	
	SO869070	125A	24-510VAC	1200V	3,5-32VDC	22 000A²s	
	SO869970	125A	24-510VAC	1200V	20-265VAC/DC	22 000A²s	
HIGH VOLTAGE RELAY	**SO885060**	50A	24-690VAC	1600V	3,5-32VDC	2 800A²s	
HIGH VOLTAGE RELAY	**SO885960**	50A	24-690VAC	1600V	20-265VAC/DC	2 800A²s	
HIGH VOLTAGE RELAY	**SO887060**	75A	24-690VAC	1600V	3,5-32VDC	7 200A²s	
HIGH VOLTAGE RELAY	**SO888060**	95A	24-690VAC	1600V	3,5-32VDC	16 200A²s	
HIGH VOLTAGE RELAY	**SO889060**	125A	24-690VAC	1600V	3,5-32VDC	22 000A²s	

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

SO9

Typical applications : Resistive loads (AC-51)
→ Zero cross
→ Control status LED
→ IP20 protection

SO9 range with regulated control current – control current <13mA

Product reference	Thyristor rating	Switching voltage	Peak voltage	Control voltage	I²t	Dimensions mm
SO941460	12A	12-280VAC	600V	3-32VDC	128A²s	45 x 58,5 x 30
SO942460	25A	12-280VAC	600V	3-32VDC	600A²s	
SO943460	40A	12-280VAC	600V	3-32VDC	1 250A²s	
SO945460	50A	12-280VAC	600V	3-32VDC	2 800A²s	
SO963460	40A	24-600VAC	1200V	3,5-32VDC	1 250A²s	
SO965460	60A	24-600VAC	1200V	3,5-32VDC	2 800A²s	
SO967460	90A	24-600VAC	1200V	3,5-32VDC	7 200A²s	
SO96846T	95A	24-600VAC	1200V	3,5-32VDC	11 250A²s	

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

SO9 range with simplified input

Product reference	Thyristor rating	Switching voltage	Peak voltage	Control voltage	I²t	Dimensions mm
SO942860	25A	12-280VAC	600V	15-32VAC/10-30VDC	600A²s	45 x 58,5 x 30
SO942960	25A	12-280VAC	600V	185-265VAC/DC	600A²s	

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

Single Phase Solid State Relays

SOL flatpac®

→ low profile (h=16,3mm)

Flatpac® 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	Thyristor rating	Switching voltage	Peak voltage	Control voltage	I²t	Dimensions mm
SOL942460	25A	12-280VAC	600V	3-32VDC	600A²s	56 x 58,5 x 16,3
SOL942960	25A	12-280VAC	600V	185-265VAC/DC	600A²s	
SOL965460	50A	24-600VAC	1200V	3,5-32VDC	2 800A²s	

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

SOR

With removable input connector - Spring terminals. Designed for most types of loads.

Product reference	Thyristor rating	Switching voltage	Peak voltage	Control voltage	I²t	Dimensions mm
SOR842074	25A	12-275VAC	600V	3-32VDC	600A²s	45 x 58,5 x 30
SOR865070	50A	24-510VAC	1200V	3,5-32VDC	2 800A²s	
SOR867070	75A	24-510VAC	1200V	3,5-32VDC	7 200A²s	

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

SC

Product reference	Thyristor rating	Switching voltage	Peak voltage	Control voltage	I²t	Specifications	Dimensions mm
SC741110	12A	12-280VAC	600V	3-30VDC	72A²s	Random	44,5 x 58,2 x 27
SC744110	40A	12-280VAC	600V	3-30VDC	612A²s		
SC762110	25A	24-520VAC	1200V	4-30VDC	265A²s		
SC764110	50A	24-520VAC	1200V	4-30VDC	1500A²s		
SC764910	50A	24-520VAC	1200V	90-240VAC/DC	1500A²s		
SC769110	125A	24-520VAC	1200V	4-30VDC	20000A²s		
SC841110	12A	12-280VAC	600V	4-30VDC	72A²s	Zero-cross / most types of loads	
SC841910	12A	12-280VAC	600V	90-240VAC/DC	72A²s		
SC842110	25A	12-280VAC	600V	4-30VDC	312A²s		
SC844110	40A	12-280VAC	600V	4-30VDC	612A²s		
SC862110	25A	24-520VAC	1200V	5-30VDC	265A²s		
SC864110	50A	24-520VAC	1200V	5-30VDC	1500A²s		
SC864810	50A	24-520VAC	1200V	17-80VAC/DC	1500A²s		
SC864910	50A	24-520VAC	1200V	90-240VAC/DC	1500A²s		
SC867110	75A	24-520VAC	1200V	5-30VDC	5000A²s		
SC869110	125A	24-520VAC	1200V	5-30VDC	20000A²s		
SC942110	25A	12-280VAC	600V	4-30VDC	312A²s	Zero-cross / resistive loads AC-51	
SC942160	25A	12-280VAC	600V	4-30VDC	312A²s		
SC947160	75A	12-280VAC	600V	4-30VDC	5000A²s		
SC965160	50A	24-600VAC	1200V	5-30VDC	1500A²s		
SC967100	75A	24-600VAC	1200V	5-30VDC	5000A²s		

• See also our okpac® range (pages 8 and 9)

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

SCQ

→ Four-Leg Solid State Relays

Product reference	Thyristor rating	Switching voltage	Peak voltage	Control voltage	I²t	Dimensions mm	Led
SCQ842060	4x25A	12-280VAC	600V	3-32VDC	288A²s	44,5 x 58,2 x 274	yes

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

Single Phase Solid State Relays

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 TMS² 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.

SA

- SA8 : designed for most types of loads / integrated VDR protection
- SA9 : designed for resistive loads AC-51

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

Product reference	Thyristor rating	Switching voltage	Peak voltage	Control voltage	I²t	Dimensions mm
SA842070	25A	12-275VAC	600V	3-32VDC	600A²s	22,5 x 90 x 42
SA941460	12A	12-280VAC	600V	3-32VDC	128A²s	
SA942460	25A	12-280VAC	600V	3-32VDC	450A²s	
SA945460	50A	12-280VAC	600V	3-32VDC	1 680A²s	
SA963460	35A	24-600VAC	1200V	3,5-32VDC	882A²s	
SA965460	50A	24-600VAC	1200V	3,5-32VDC	1 680A²s	

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

SAL/SAM

- SAx9 : designed for resistive loads AC-51.

- Transparent protective cover
- "Ready to use" on 22,5 and 45mm heatsinks

Product reference	Thyristor rating	Max.switching current at 25°C	Switching voltage	Peak voltage	Control voltage	I²t	Dimensions mm
SAL941460	12A	12A	12-280VAC	600V	3-32VDC	128A²s	22,5 x 90 x 112
SAL942460	25A	23A	12-280VAC	600V	3-32VDC	450A²s	
SAL963460	35A	30A	24-600VAC	1200V	3,5-32VDC	882A²s	
SAL965460	50A	32A	24-600VAC	1200V	3,5-32VDC	1 680A²s	
SAM943460	35A	32A	12-280VAC	600V	3-32VDC	882A²s	45 x 90 x 112
SAL/SAM with low input current – control current <10mA							
SAL961360	15A	15A	24-600VAC	1200V	6-32VDC	882A²s	22,5 x 90 x 112
SAL962360	25A	23A	24-600VAC	1200V	6-32VDC	882A²s	
SAM963360	35A	32A	24-600VAC	1200V	6-32VDC	882A²s	45 x 90 x 112
SAM965360	50A	45A	24-600VAC	1200V	6-32VDC	1 680A²s	

Single Phase Solid State Relays

celpac® 2G

The 22,5mm pitch SSR solution !
Smart Solid State Relays with optional modules

SU range
with pluggable connector
on inputs.

SU

→ 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 / integrated VDR protection
→ SU9 : designed for resistive loads AC-51.

Product reference	Thyristor rating	Switching voltage	Peak voltage	Control voltage	I²t	Dimensions mm
SU765070	50A	24-510VAC	1200V	3,5-32VDC	1 680A²s	
SU842070	25A	12-275VAC	600V	3-32VDC	600A²s	
SU842770	25A	12-275VAC	600V	18-30VAC/DC	600A²s	
SU842970	25A	12-275VAC	600V	180-240VAC	600A²s	
SU865070	50A	24-510VAC	1200V	3,5-32VDC	1 680A²s	
SU865970	50A	24-510VAC	1200V	180-240VAC	1 680A²s	22,5 x 90 x 42
SU867070	75A	24-510VAC	1200V	3,5-32VDC	7 200A²s	
SU942460	25A	12-280VAC	600V	3-32VDC	600A²s	
SU963460	35A	24-600VAC	1200V	3,5-32VDC	882A²s	
SU965460	50A	24-600VAC	1200V	3,5-32VDC	1 680A²s	
SU967460	75A	24-600VAC	1200V	3,5-32VDC	7 200A²s	

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

SUL/SUM

→ Removable flaps for protection
→ "Ready to use" on 22,5 and 45mm heatsinks

→ SUx7 : designed for motors AC-53 and inductive loads.
Also use in phase angle control systems.
→ SUx8 : designed for most types of loads / integrated VDR protection
→ SUx9 : designed for resistive loads AC-51

Product reference	Thyristor rating	Max.switching current at 25°C	Switching voltage	Peak voltage	Control voltage	I²t	Dimensions mm
SUL765070	50A	32A	24-510VAC	1200V	3,5-32VDC	1 680A²s	
SUL842070	25A	23A	12-275VAC	600V	3-32VDC	600A²s	
SUL842770	25A	23A	12-275VAC	600V	18-30VAC/DC	600A²s	
SUL842970	25A	23A	12-275VAC	600V	160-240VAC	600A²s	
SUL865070	50A	32A	24-510VAC	1200V	3,5-32VDC	1 680A²s	
SUL865770	50A	32A	24-510VAC	1200V	18-30VAC/DC	1 680A²s	
SUL865970	50A	32A	24-510VAC	1200V	160-240VAC	1 680A²s	22,5 x 90 x 112
SUL867070	75A	35A	24-510VAC	1200V	3,5-32VDC	7 200A²s	
SUL942460	25A	23A	12-280VAC	600V	3-32VDC	600A²s	
SUL963460	35A	30A	24-600VAC	1200V	3,5-32VDC	882A²s	
SUL965460	50A	32A	24-600VAC	1200V	3,5-32VDC	1 680A²s	
SUL967460	75A	35A	24-600VAC	1200V	3,5-32VDC	7 200A²s	
SUM865070	50A	45A	24-510VAC	1200V	3,5-32VDC	1 680A²s	45 x 90 x 112
SUM867070	75A	45A	24-510VAC	1200V	3,5-32VDC	7 200A²s	

Single Phase Solid State Relays

celpac® 2G

The 22,5mm pitch SSR solution !

Two modules are available directly pluggable on our SSR type SU and SUL

Save room / Save costs / Add more functions

Current monitoring module

ESUC

(Combined with our SU/SUL)

ADD to your SSR

Diagnostic information for up to 5 heaters in parallel with :

- Permanent load current monitoring,
- Current teaching function,
- 2 alarm thresholds (+/-16%)
- Partial load break detection,
- Open load detection,
- Detection of short-circuited SSR.

Product reference	Current range	Control
ESUC0450	2-40A	8-30VDC
ESUC0480	2-40A	24-45VDC

Why choosing this function ?

- Quick fault detections (instantaneous alarm).
- Maintenance.
- To detect when a heater is broken which brings problems and is difficult to locate.
- To maintain good quality production for plastic/rubber machines (specially thermosetting machines).
- 22.5mm wide with integrated heatsink and DIN rail adaptor.

Temperature controller PID, current monitor and communication interface in one unit

ECOM0010

(Combined with our SU/SUL)

ADD to your SSR

- Temperature controller with :
  - PID with automatic or manual settings,
  - Insulated inputs for J, K, T, E thermocouples, PT100 to come
  - Auxiliary output for heating, cooling, alarm or to control a 3 phase Solid State Relay,
  - Loop and heater break alarms.
- Current monitoring and alarms up to 50A.
- RS485 communication interface / Modbus RTU (others on request)
- Power supply : 24Vdc +/- 10%

Why choosing this function ?

- The ECOM is the most compact solution available on the market that incorporates the latest measuring and control technology.
- This solution can answer the needs of cost reduction of electrical cabinets (smaller), PLC (less analogue and digital I/O's) and wiring (bus communication).

Single Phase Solid State Relays

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*

celpac®

Product reference	Thyristor rating	Max. switching current at 25°C	Switching voltage	Peak voltage	Control voltage	I²t	Dimensions mm
SILD845160	50A	32A	70-280VAC	600V	3-32VDC	1500A²s	22,5 x 80 x 116
SILD865170	50A	32A	150-510VAC	1200V	3,5-32VDC	1500A²s	
SILD867170	75A	35A	150-510VAC	1200V	3,5-32VDC	5000A²s	

okpac®

Product reference	Thyristor rating	Switching voltage	Peak voltage	Control voltage	I²t	Dimensions mm
SOD843180	35A	50-265VAC	600V	7-30VDC	1 250A²s	45 x 58,5 x 33,6
SOD845180	50A	50-265VAC	600V	7-30VDC	2 800A²s	
SOD865180	50A	150-510VAC	1200V	7-30VDC	2 800A²s	
SOD867180	75A	150-510VAC	1200V	7-30VDC	7 200A²s	

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.

Flashing relays

The ST6 blinking relays are 12A 12-50VAC or 25A 180-280VAC solid state flashing devices with 6,3mm quick release type connectors . As soon as the unit is powered, it switches loads at a frequency of 1hz or 2hz. An external switch selects the required frequency (1 or 2hz).

ST6

Product reference	Switching current	Switching voltage	Peak voltage	Flashing frequency	Dimensions mm
ST600700	12A	12-50VAC	100V	1/2Hz	67 x 38 x 37,5
ST645000	10A	180-280VAC	600V	1/2Hz	
ST647000	25A	180-280VAC	600V	1/2Hz	

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

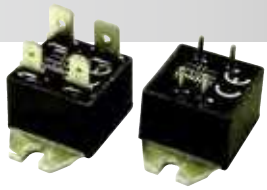
Single Phase Solid State Relays

Solid State Relays with "FASTON" terminals - For a quick connection !

Solid State Relays with "FASTON" terminals are appropriate mainly for the food industry and for switching current < 20A.
celduc® relais offers a wide range of "FASTON" solutions.

SF

Miniature relays available with "FASTON" or PCB terminals.



Product reference	Thyristor rating	Switching voltage	Control voltage	Specifications	Dimensions mm
SF541310	10A	12-280VAC	4-30VDC	Zero-cross, "FASTON" terminals	21 x 35,5 x 15
SF542310	10A	12-280VAC	4-30VDC	Zero-cross, PCB terminals	
SF546310	25A	12-280VAC	4-30VDC	Zero-cross, "FASTON" terminals	

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

SCF

To control resistive loads. "FASTON" terminals.

Product reference	Thyristor rating	Switching voltage	Peak voltage	Control voltage	LED	I²t	Protec.	Dimensions mm
SCF42160	25A	12-280VAC	600V	4-30VDC	yes	312A²s	–	44,5 x 58 x 33
SCF42324	25A	12-280VAC	600V	12-30VDC	no	312A²s	VDR	
SCF62160	25A	24-600VAC	1200V	5-30VDC	yes	265A²s	–	

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/SON

→ **EMC optimised** (low electromagnetic emission – low RFI)

These relays are 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	Thyristor rating	Switching voltage	Peak voltage	Control voltage	I²t	Dimensions mm
SCFL42100	25A	12-280VAC	600V	4-30VDC	312A²s	44,5 x 58,2 x 32
SCFL62100	25A	24-440VAC	1200V	5-30VDC	312A²s	
SON865040	50A	50-500VAC	800V	5-32VDC	2500A²s	45 x 58,5 x 30

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

SP7/SP8

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.

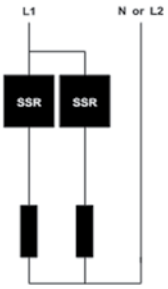
Product reference	Thyristor rating	Switching current AC-51	Switching current AC-51	Peak voltage	Control voltage	I²t	Specifications	Dimensions mm
SP752120	25A	12A	12-280VAC	800V	3-32VDC	340A²s	Random	38 x 66,8 x 22
SP852120	25A	12A	12-280VAC	800V	4-32VDC	340A²s	Zero-cross	

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

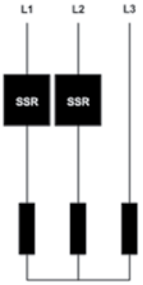
Two-phase Solid State Relays

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.

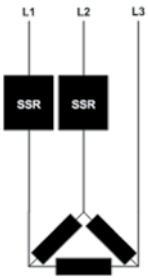
wiring examples



2 load control wiring
Single phase



Two-phase SSR SOB to control heaters connected in star (for balanced low voltage loads without neutral connection)



Two-phase SSR SOB to control heaters connected in delta (for high voltage, balanced or unbalanced loads)

SCB5 / SOB5 → with "FASTON" terminals

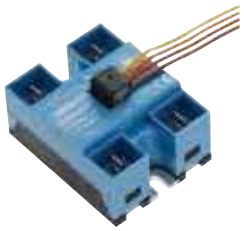
We offer various kinds of two-phase SSRs with Faston terminals.

Product reference	Thyristor rating	Switching voltage	Peak voltage	Control voltage	I²t	Specifications	Dimensions mm	Fig n°
SCB564310	2x40A	24-510VAC	1200V	5-30VDC	610A²s	zero-cross / 2 controls	44,8 x 58,5 x 27	1
SOB542460	2x25A	12-280VAC	600V	3-32VDC	265A²s	zero-cross / 2 controls	45 x 58,5 x 27	2
SOB562460	2x25A	24-600VAC	1200V	3,5-32VDC	265A²s	zero-cross / 2 controls		2
SOB544330	2x40A	12-275VAC	600V	8-30VDC	882A²s	zero-cross / 2 controls	45 x 58,5 x 27	3
SOB564330	2x40A	24-510VAC	1200V	8-30VDC	882A²s	zero-cross / 2 controls		3

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

1 • Power connection by FASTON terminals
• Control connection by connector.

2 • Power and control connections by FASTON terminals



3 • Double input with connector CE100F ITWPANCON type or similar.
• Power connection by FASTON 6,3mm terminals with IP20 protection.

Two-phase Solid State Relays

SOB

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

→ SOB6 : zero-cross - 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

Product reference	Thyristor rating	Switching voltage	Peak voltage	Control voltage	I²t	Specifications	Dimensions mm
SOB665300	2x50A	24-600VAC	1200V	10-30VDC	1680A²s	2 controls	45 x 58,5 x 27
SOB763670	2x35A	24-510VAC	1200V	8-30VDC	1250A²s	2 controls	
SOB765670	2x50A	24-510VAC	1200V	8-30VDC	2500A²s	2 controls	
SOB767670	2x75A	24-510VAC	1200V	8-30VDC	7200A²s	2 controls	
SOB863860	2x35A	24-600VAC	1200V	17-30VAC/DC	882A²s	2 controls	
SOB865660	2x50A	24-600VAC	1200V	8-30VDC	2500A²s	2 controls	
SOB867640	2x75A	24-510VAC	1200V	8-30VDC	7200A²s	2 controls / transil	
SOB942360	2x25A	12-280VAC	600V	10-30VDC	600A²s	1 control	
SOB942660	2x25A	12-280VAC	600V	10-30VDC	600A²s	2 controls	
SOB943360	2x35A	12-280VAC	600V	10-30VDC	1 250A²s	1 control	
SOB945360	2x50A	12-280VAC	600V	10-30VDC	2 800A²s	1 control	
SOB963660	2x35A	24-600VAC	1200V	10-30VDC	1250A²s	2 controls	
SOB965160	2x50A	24-600VAC	1200V	6-16VDC	1 680A²s	1 control	
SOB965660	2x50A	24-600VAC	1200V	10-30VDC	2500A²s	2 controls	
SOB967660	2x75A	24-600VAC	1200V	10-30VDC	7200A²s	2 controls	

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

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

• Connectors to be ordered separately.

SCB

→ SCB6 : zero-cross – control connections with pins
→ SCB8 : zero-cross – designed for most types of loads
→ SCB9 : zero-cross – resistive loads AC-51

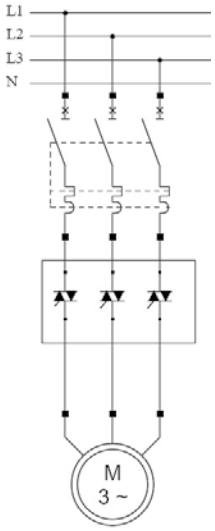
Product reference	Thyristor rating	Switching voltage	Peak voltage	Control voltage	I²t	Specifications	Dimensions mm
SCB865300	2x50A	24-600VAC	1200V	10-30VDC	1500A²s	1 control	44,8 x 58,5 x 27
SCB865600	2x50A	24-600VAC	1200V	10-30VDC	1500A²s	2 controls	
SCB942600	2x25A	12-280VAC	600V	8-30VDC	288A²s	2 controls	
SCB962600	2x25A	24-600VAC	1200V	8-30VDC	265A²s	2 controls	
SCB965600	2x50A	24-600VAC	1200V	8-30VDC	1500A²s	2 controls	

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

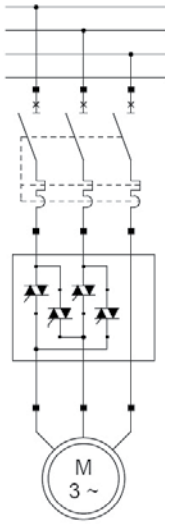
Three-phase Solid State Relays

celduc® relais offers further ranges of solid-state relays for controlling three-phase loads. Various models are available, with ratings up to 125 amps per phase, with either AC or DC input, random or zero-cross output.

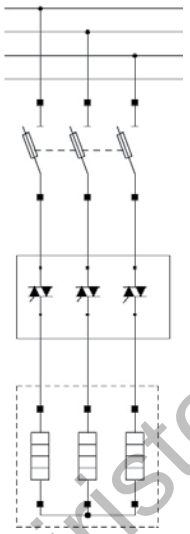
wiring examples



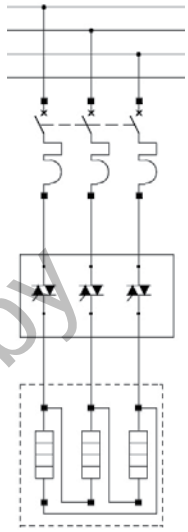
Three-phase SSR SVT8/SGT8 controlling a three-phase motor with a thermal - magnetic protection.



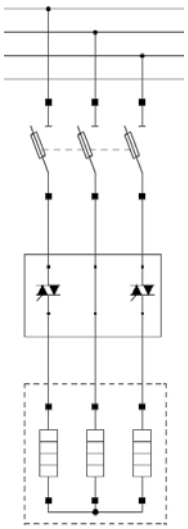
Motor reverser SV9 for three-phase asynchronous motor



Three-phase SSR SCT/SVT/SGT to control heaters connected in star with fuses protection.



Three-phase SSR SCT/SVT/SGT to control heaters connected in delta with circuit-breaker.



2 legs three-phase SSR SGB to control heaters connected in star with fuses protection.

SCT

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

Product reference	Thyristor rating	Switching voltage	Peak voltage	Control voltage	I²t	Specifications	Dimensions mm
SCT32110	3x12A	12-440VAC	800V	4-30VDC	72A²s	random	44,8 x 58 x 27
SCT62110	3x12A	12-440VAC	800V	4-30VDC	72A²s	zero-cross	

These products also come with PCB terminals.
These product should be mounted with heatsink in order to reach nominal current.

SGB

→ 2 legs three-phase solid state relays

Our SGB range is designed for controlling 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	Thyristor rating	Switching voltage	Peak voltage	Control voltage	I²t	Specifications	Dimensions mm
SGB963360E	3x35A	24-600VAC	1200V	10-30VDC	882A²s	zero-cross	100 x 75,15 x 46
SGB965360E	3x50A	24-600VAC	1200V	10-30VDC	1 680A²s		
SGB967360E	3x75A	24-600VAC	1200V	10-30VDC	7 250A²s		

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

Three-phase Solid State Relays

→ SGT7 / SVT7 – Random
SGT8 / SVT8 – Zero-cross for most types of loads
SGT9 / SVT9 – Zero-cross for resistive loads AC-51

SGT

Standard three-phase range available in 40 or 47,6mm housing.

Product reference	Thyristor rating	Switching current AC-51	Switching current AC-53	Switching voltage	Control voltage	I²t	Protec.	Dimensions mm
SGT range with 40mm housing								
SGT867350	75A	3x75A	3x24A	24-600VAC	8-30VDC	7200A²s	RC-VDR	100 x 73,5 x 39,5
SGT962360	25A	3x25A	-	24-600VAC	8,5-30VDC	265A²s	-	
SGT965360	50A	3x50A	-	24-600VAC	8,5-30VDC	2800A²s	-	
SGT965960	50A	3x50A	-	24-600VAC	90-240VAC	2800A²s	-	
SGT967360	75A	3x75A	-	24-600VAC	8,5-30VDC	7200A²s	-	
SGT range with 47,6mm housing and square terminals								
SGT767470E	75A	3x75A	3x24A	24-520VAC	4-32VDC	7200A²s	VDR	100 x 75,15 x 46
SGT769390E	125A	3x125A	3x32A	24-520VAC	8,5-30VDC	22000A²s	RC-VDR	
SGT865470E	50A	3x50A	3x12A	24-520VAC	4-32VDC	1680A²s	VDR	
SGT962360E	25A	3x25A	-	24-600VAC	10-30VDC	882A²s	-	
SGT965360E	50A	3x50A	-	24-600VAC	10-30VDC	2800A²s	-	
SGT967360E	75A	3x75A	-	24-600VAC	10-30VDC	7200A²s	-	
SGT967760E	75A	3x75A	-	24-600VAC	10-24VAC	7200A²s	-	
SGT967960E	75A	3x75A	-	24-600VAC	90-240VAC	7200A²s	-	
SGT968360E	95A	3x95A	-	24-600VAC	10-30VDC	16200A²s	-	

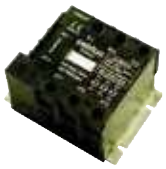
• To be prefered

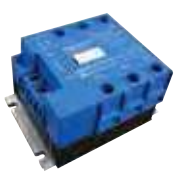
Protection cover : see accessories (1K199000).
These products should be mounted with heatsink in order to reach nominal current.
On request : 230Vac version.

SVT

Three-phase range with IP20 protection housing to control resistive loads (AC-51) or for motor control (AC-53). These relays have LED as well as RC and VDR network protection. Available in 40 or 47,6mm housing.
Max.wire size = 10mm² terminals, which limits the switching current to 50A (see technical data-sheet).

Product reference	Thyristor rating	Switching current AC-51	Switching current AC-53	Switching voltage	Control voltage	I²t	Protec.	Dimensions mm
SVT range with 40mm housing								
SVT764394	50A	3x50A	3x12A	24-520VAC	8,5-30VDC	2800A²s	RC-VDR	100 x 76 x 56,5
SVT864374	50A	3x50A	3x12A	24-520VAC	10-32VDC	2800A²s	VDR	
SVT867394	75A	3x75A	3x24A	24-520VAC	8,5-30VDC	7200A²s	RC-VDR	
SVT867994	75A	3x75A	3x24A	24-520VAC	90-240VAC	7200A²s	RC-VDR	
SVT869394	125A	3x125A	3x32A	24-520VAC	8,5-30VDC	22000A²s	RC-VDR	
SVT869994	125A	3x125A	3x32A	24-520VAC	90-240VAC	22000A²s	RC-VDR	
SVT965360	50A	3x50A	–	24-600VAC	8,5-30VDC	2800A²s	–	
SVT965760	50A	3x50A	–	24-600VAC	10-30VAC/DC	2800A²s	–	
SVT967360	75A	3x75A	–	24-600VAC	8,5-30VDC	7200A²s	–	
SVT967960	75A	3x75A	–	24-600VAC	90-240VAC	7200A²s		
SVT range with 47,6mm housing								
SVT864394E	50A	3x50A	3x12A	24-520VAC	8,5-30VDC	2800A²s	RC-VDR	100 x 76 x 56,5
SVT868394E	95A	3x95A	3x24A	24-520VAC	8,5-30VDC	16200A²s	RC-VDR	
SVT965460E	50A	3x50A	–	24-600VAC	4-32VDC	2800A²s	–	
SVT965960E	50A	3x50A	–	24-600VAC	90-240VAC	2800A²s	–	
SVT967360E	75A	3x75A	–	24-600VAC	8,5-30VDC	7200A²s	–	





• To be prefered

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

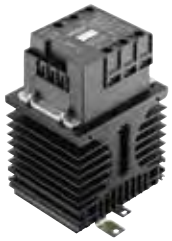
Three-phase Solid State Relays / Motor control

SWT / SIT

→ Three-phase solid state contactors

Three-phase contactors with heatsink and DIN rail mounting. Fitted with a LED indicators, and RC and VDR network protection this range is 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	I²t	Specifications	Dimensions mm
SIT865390	3x22A	3x12A	24-510VAC	1200V	10-30VAC/DC	2500A²s	Zero-cross	90 x 98 x 122
SIT865570	3x22A	–	24-510VAC	1200V	10-30VDC	2500A²s		
SIT865990	3x22A	3x12A	24-510VAC	1200V	90-240VAC	2500A²s		
SIT867570	3x22A	-	24-510VAC	1200V	10-30VDC	7 200A²s		
SWT860330	3x5A	3x5A	24-520VAC	1200V	10-30VAC/DC	265A²s		83 x 76 x 72
SWT861730	3x28A	3x16A	24-520VAC	1200V	10-30VAC/DC	5000A²s	Zero-cross	110 x 100 x 172
SWT861790	3x28A	3x16A	24-520VAC	1200V	90-240VAC	5000A²s		
SWT862030	3x32A	3x24A	24-520VAC	1200V	10-30VAC/DC	11000A²s		
SWT862090	3x32A	3x24A	24-520VAC	1200V	90-240VAC	11000A²s		
SWT865080	3x50A	–	24-520VAC	1200V	10-30VAC/DC	5000A²s		110 x 145 x 172



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.

SG9, SV9 AND SW9

→ AC Reversing switches

These relays are used to reverse the rotational direction of a motor.
The SV9 range is with IP20 housing.
The SW9 range is ready to use with heatsink and DIN rail mounting integrated.
They are all supplied with LED indicators and protection against simultaneous controls (interlocking).
Available in 40 or 47,6mm housing.

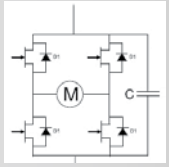
Product reference	Switching current AC-53	Switching voltage	Control voltage	I²t	Protec.	Specifications	Dimensions mm
SG969100	3x6,6A	24-520VAC	10-30VDC	612A²s	reversing + time delay	3 phase switching	100 x 73,5 x 39,5
SG969300E	3x8,5A	24-550VAC	12-30VDC	1500A²s		2 phase switching	
SG969500E	3x16A	24-550VAC	12-30VDC	5000A²s		2 phase switching	
SV969300E	3x8,5A	24-520VAC	12-30VDC	1500A²s		2 phase switching	100 x 76 x 56,5
SV969500E	3x16A	24-550VAC	12-30VDC	5000A²s		2 phase switching	100 x 76 x 56,5
SW960330	3x4,5A	24-550VAC	12-30VDC	1500A²s		2 phase switching	100 x 76 x 72
SW961230	3x8,5A	24-520VAC	12-30VDC	1500A²s		2 phase switching	83 x 90 x 155

XKRD AND SGRD

→ DC Reversing switches

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.

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).



Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Protec.	Dimensions mm
SGRD01006	10A	8-36VDC	60V	8-36VDC	Voltage and current	100 x 73,5 x 50,9
XKRD30506	5A	7-36VDC	60V	7-30VDC	VDR	58,2 x 76,4 x 53

Motor control

SYMC

→ To limit peak energy demand!

This new AC single phase softstarter is engineered to the highest quality and is designed especially for single phase motors 32A/230Vac with starting capacitor (e.g. compressor for heat pumps or refrigerating chambers).
This device is designed in compliance with EN60947-4-2.

- Starting current limited to 45A (NFC15-100)
- Over-load motor protection
- Diagnostic information
- Starting and running capacitor: External and not supplied

Product reference	Pmax motors 230VAC	Max. Current	Specifications	Dimensions mm
SYMC0001	5500W	32A	Internal ByPass Ready to use	100 x 76 x 58,5

SO4

→ Single phase softstarters

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

Product reference	Switching voltage	Switching current	Control voltage	Dimensions mm	Fig n°
SO400200	200-260VAC	35A	Soft-starter	45 x 58,2 x 27	1
SO400300	200-260VAC	40A*			2

**Value given at 25°C ambient*
For the softstart of other loads (transformers, single-phase motors, ...) please consult us.

(1) (2) = (1) with integrated heatsink

SMCV AND SMCW

→ Three-phase AC softstarters

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.

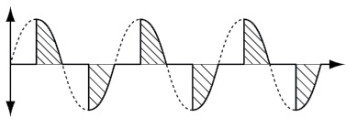
Whatever your application :
- Diagnostic monitoring of line, load & supply as well as normal operational status
- Better balance of and less interference on starters (full control of the 3 phases!)
- Simple use easing implementation and adjustments
- As compact as an electronic contactor.

Product reference	Pmax motor 400VAC		Pmax motor 230VAC		Max. Current AC53a		Specifications	Dimensions mm
	Y*	D*	Y*	D*	Max.	EN60947-4-2		
SMCV6080	7,5kW	13kW	4,3kW	7,5kW	16A	11,5A	Heatsink not provided	100 x 76 x 58,5
SMCV6110	11kW	19kW	6,4kW	11kW	25A	15,5A		
SMCV6150	15kW	26kW	8,6kW	15kW	30A	22,5A		
SMCW6020	2,5kW	4,3kW	1,4kW	2,5kW	5,6A	4A	Supplied with built-in heatsink	83 x 110 x 74
SMCW6080	7,5kW	13kW	4,3kW	7,5kW	16A	11,5A		83 x 110 x 155
SMCW6110	11kW	19kW	6,4kW	11kW	25A	15,5A		110 x 110 x 180
SMCW6150	15kW	26kW	8,6kW	15kW	30A	22,5A		110 x 141 x 180
SMCW6151	15kW	26kW	8,6kW	15kW	30A (AC53b)	22,5A (AC53b)	Ext. Bypass required	83 x 110 x 74

Common characteristics	Range of voltage and network frequency	Control	Diagnostic output	Operating temperature	Insulation
Values given at 40°C ambient	200-480VAC 40-65Hz	10-24VDC or contact	0-24V 1A AC/DC	-40°C +100°C	4kV

**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.*

Analogue control relays



SIx4 /SO4

→ Single phase angle 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).

Product reference	Switching current at 25°C	Switching voltage	Control voltage	External power supply required ?	Dimensions mm
SIL465000	22A	160-450VAC	0-10V	no	22,5x80x116
SIM465000	32A	160-450VAC	0-10V	no	45 x 80 x 116

Product reference	Thyristor rating	Switching voltage	Control voltage	External power supply required ?	Dimensions mm
SO445020	50A	100-280VAC	0-10V	yes	
SO465020	50A	200-480VAC	0-10V	yes	
SO468020	95A	200-480VAC	0-10V	yes	
SO469020	125A	200-480VAC	0-10V	yes	
SO468120	95A	200-480VAC	0-5V	yes	
SO467501	75A	160-450VAC	1-5V	no	
SO445320	50A	100-280VAC	Potentiometer	yes	45 x 58,2 x 27
SO465320	50A	200-480VAC	Potentiometer	yes	
SO445420	50A	90-265VAC	4-20mA	no	
SO465420	50A	200-480VAC	4-20mA	no	
SO467420	75A	200-480VAC	4-20mA	no	
SO468420	95A	200-480VAC	4-20mA	no	
SO469420	125A	200-480VAC	4-20mA	no	
SO465620	50A	200-480VAC	PWM	yes	

- 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.

SG4

→ Single phase angle controllers

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	Thyristor rating	Switching voltage	Control voltage	I^2t	Dimensions mm
SG441020	10A	115-265VAC	0-10VDC	72A²s	
SG444020	40A	115-265VAC	0-10VDC	1500A²s	
SG464020	40A	200-460VAC	0-10VDC	1500A²s	
SG468020	70A	200-460VAC	0-10VDC	5000A²s	
SG469020	110A	200-460VAC	0-10VDC	20000A²s	
SG444120	40A	115-265VAC	Potentiometer	1500A²s	100 x 73,5 x 39,5
SG464120	40A	200-460VAC	Potentiometer	1500A²s	
SG469120	110A	200-460VAC	Potentiometer	20000A²s	
SG444420	40A	115-265VAC	4-20mA	1500A²s	
SG464420	40A	200-460VAC	4-20mA	1500A²s	
SG468420	70A	200-460VAC	4-20mA	5000A²s	
SG469420	110A	200-460VAC	4-20mA	20000A²s	

- No external power supply required.

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

Analogue control relays

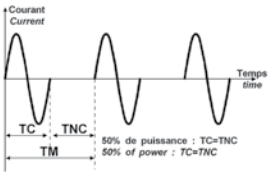
SO3

→ Burst control mode (µP 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 µP constantly computes the number of full sine waves to be switched along the TM period.

Product reference	Thyristor rating	Switching voltage	Control voltage	Dimensions mm
SO367001	75A	400VAC	0-10VDC	45 x 58,2 x 27

Other power rating and / or control on request.



- No external power supply required.

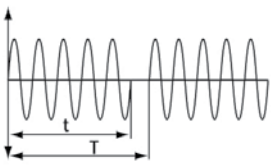
SG5

→ 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.

Product reference	Thyristor rating	Switching voltage	Control voltage	I²t	Dimensions mm
SG541020	10A	230VAC	0-10VDC	72A²s	100 x 73,5 x 39,5
SG544020	40A	230VAC	0-10VDC	610A²s	
SG564020	40A	400VAC	0-10VDC	610A²s	
SG541120	10A	230VAC	Potentiometer	72A²s	
SG564120	40A	400VAC	Potentiometer	610A²s	
SG541420	10A	230VAC	4-20mA	72A²s	
SG564420	40A	400VAC	4-20mA	610A²s	

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.



- No external power supply required.

SWG5

→ 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	Dimensions mm
SWG50210	2kW	230VAC	0-10VDC	100 x 74 x 56
SWG50810	8kW	230VAC	0-10VDC	100 x 110 x 96

Control voltage 0-5V or potentiometer on request.

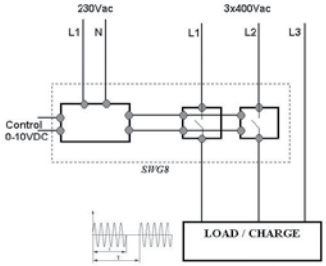
- No external power supply required.

SWG8

→ 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	Dimensions
SWG81510	20kW	400VAC	0-10VDC	(see technical data-sheet)
SWG82710	27kW			
SWG83610	36kW			
SWG84210	42kW			
SWG84810	48kW			
SWG86010	60kW			
SWG88010	80kW			



Three-phase proportional controllers

SVTA

- 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.

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

** Max. wire size = 10mm² : double wires or use special adaptors for current > 50A.*
Please refer to the mounting instructions.

- No external power supply required.

SGTA

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

- Small housing
- Wide mains frequency variation (40-65Hz)
- Built-in overvoltage protection
- High I²t 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	75,15 x 100 x46
SGTA4651	50A	300-510VAC	0-5V	
SGTA4653	50A	300-510VAC	Potentiometer	
SGTA4654	50A	300-510VAC	4-20mA	

Other rating on request.

- 8-32V external power supply required.

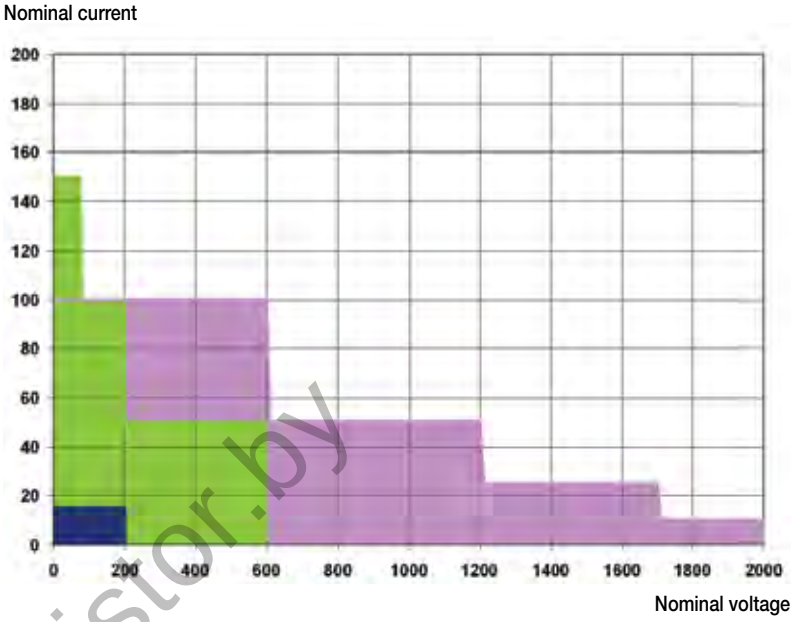
DC Solid State Relays

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.

Bipolaire
for applications where low control current is needed.

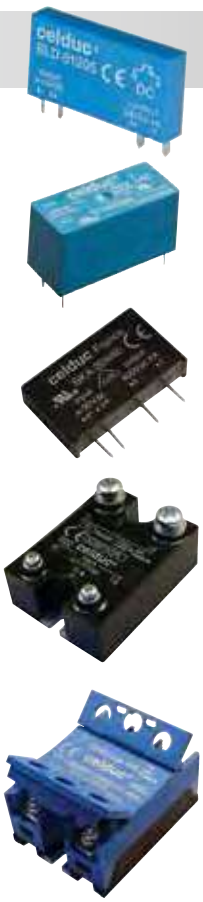
IGBT
for high voltage applications (> 600 VDC)



For each application the corresponding technology !
Standard range up to 1200VDC, 150A.

MOSFET Technology

Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Integrated protection	Dimensions mm
SLD01210	2,5A	0-60VDC	60V	3-10VDC	Transil	28 x 5 x 15
SLD03210	2,5A	0-60VDC	60V	18-32VDC		
SLD01205	4A	0-32VDC	60V	3-10VDC		
SLD02205	4A	0-32VDC	60V	7-20VDC		
SLD03205	4A	0-32VDC	60V	18-32VDC		
STD03205	2,5A	0-30VDC	60V	12-30VDC	Transil	29 x 12,7 x 15,7
STD03505	5A	0-30VDC	60V	12-30VDC		
STD03510	5A	0-68VDC	60V	12-30VDC		
STD07205	2,5A	0-30VDC	60V	12-30VDC 15-30VAC		
SPD03505	5A	0-30VDC	60V	12-30VDC		29 x 12,7 x 25,4
SPD07505	5A	0-30VDC	60V	12-30VDC 15-30VAC		
SKLD11006	12A	7-36VDC	60V	3-10VDC	Transil	43,6 x 6,3 x 24,5
SKLD31006	12A	7-36VDC	60V	7-30VDC		
SCM030200	30A	0-200VDC	200V	4,5-32VDC	–	44,5 x 58,2 x 27
SCM040600	40A	0-600VDC	600V	4,5-32VDC		
SCM0100200	100A	0-200VDC	200V	4,5-32VDC		
SCM0150100	150A	0-100VDC	100V	4,5-32VDC		
SOM02060	20A	5-40VDC	60V	3,5-32VDC	Transil	45x58,5x30
SOM020100	20A	5-60VDC	100V	3,5-32VDC		
SOM020200	20A	5-110VDC	200V	3,5-32VDC		
SOM04060	40A	5-40VDC	50V	3,5-32VDC		
SOM040100	40A	5-60VDC	100V	3,5-32VDC		
SOM040200	40A	5-110VDC	200V	3,5-32VDC		
SOM06075	60A	5-40VDC	75V	3,5-32VDC		
ESO01000	0-80A	0-130VDC	200V	Protection against line inductance (C1, D2) : option for SOM range	Diode + capacitor	45 x 58,5 x 30



DC Solid State Relays

BIPOLAR Technology

Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Integrated protection	Dimensions mm
SKD10306	3A	2-60VDC	60V	3-30VDC	Diode	43,2 x 10,2 x 25,4
XKD10120	1A	2-220VDC	220V	5-30VDC	Diode	12,2 x 76,4 x 53
XKD10306	3A	2-60VDC	60V	5-30VDC		
XKD11306D	3A	2-60VDC	60V	3-30VDC		
XKD70306	3A	2-60VDC	60V	10-30VAC/DC		
XKD90306	3A	2-60VDC	60V	90-240VAC/DC		
SCC10506	5A	2-60VDC	60V	3-16VDC	Diode	44,5 x 58,2 x 27
SCC20506	5A	2-60VDC	60V	10-32VDC		
SCC21506	15A	2-60VDC	60V	10-32VDC		



IGBT Technology

Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Integrated protection	Dimensions mm
SCI0251700	25A	0-1700VDC	1700V	4,5-32VDC	Reverse diode	44,5 x 58,2 x 27
SCI0501200	50A	0-1200VDC	1200V	4,5-32VDC	Reverse diode	
SCI0100600	100A	0-600VDC	600V	4,5-32VDC	Reverse diode	
SDI0501700	50A	24-940VDC	1700V	24-48VDC	→ over-voltage protection → load short circuit protection → over-load temperature protection	157 x 68 x 83
SDI0501710				72-110VDC		


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 relais short circuit this lamp.
Different configurations available.

Softlife range : SVX963350
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.

SPECIAL CUSTOMER PRODUCTS → Please do not hesitate to consult us.

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.

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 for celduc® customers :

- Principle of solid state relays.
- Life expectancy of solid state relays: TMS² 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 & Accessories

HEATSINKS

Product reference	Thermal characteristics	Specifications	Dimensions mm	Relay type	Fig n°
WF031100	0,3K/W	ventiled for DIN rail or screw - fan supply 230Vac	110 x 120 x 145	SO, SC, SG, SGT, SVT	1
WF031200	0,3K/W	ventiled for DIN rail or screw - fan supply 24Vdc	110 x 120 x 145	SO, SC, SG, SGT, SVT	1
WF050000	0,55K/W	DIN rail adaptor as option	110 x 100 x 200	SO, SC, SG, SGT, SVT	2
WF070000	0,75K/W	DIN rail adaptor as option	110 x 100 x 100	SO, SC, SG, SGT, SVT	3
WF115100	0,9K/W	for DIN rail or screw	110 x 100 x 90	SO, SC, SG, SGT, SVT	4
WF112100	1K/W	for DIN rail or screw	49,5 x 117,5 x 120	SA, SU	5
WF108110	1,1K/W	for DIN rail or screw	89,8 x 81 x 98,02	SO, SC	6
WF121000	1,2K/W	for DIN rail or screw	100 x 40 x 100	SO, SC, SG, SGT, SVT	7
WF210000	2,1K/W	DIN rail adaptor as option	96 x 41 x 55	SO, SC	8
WF151200	2,2K/W	for DIN rail or screw	45 x 73 x 80	SO, SC, SA, SU	9
WF311100	3K/W	for DIN rail or screw	22,5 x 73 x 80	SA, SU	10

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	Removable protection flaps for SU-SUL

MARKING LABELS

1MZ09000	marking labels to be mounted on protection flaps or covers for SA SU

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
1LK00700	special kit for high current (okpac range)

DIN RAIL ADAPTERS

1LD00400	DIN rail adapter for WF21/07/05
1LD00500	DIN rail adapter for SG/SVT/SV969300
1LD12020	DIN rail adapter for SC/SV8/SO vertical mounting

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	adhesive thermal pads for SC/SO
5TH24000	adhesive thermal pads for SA/SU

1LWP2300	Assembling costs 5TH23000 on SC/SO + 5TH23000
1LWP2400	Assembling costs 5TH24000 on SA/SU + 5TH24000

MOUNTING + HEATSINK + DIN ADAPTOR OPTION

1LWD1202	mounting of SC/SV/SO sur 1LD12020 + 1LD12020

MOUNTING OPTION (screw kit included) ONLY IF QUANTITY > 10

1LW00000	mounting of relays on heatsink
1LWD0000	mounting of heatsink on DIN rail adaptator

Magnetic sensors

MAGNETIC PROXIMITY SENSORS
We are the experts !!!

If you are looking for position, presence, level or speed detection, then we will be able to offer a solution from our range of magnetic sensors.

We can even design a specific product for your applications !

At **celduc® relais,** *we are eager to offer the best products for your application, thanks to our 45-year experience in the key technologies that we use in our products :*

- *Reed switch, a dry contact in a sealed glass bulb providing insulation at the same time : a simple, reliable and low cost solution.*
- *Electronic cell, based on either magneto-resistance or Hall effect, necessary for higher performance, particularly in high frequency operation.*

Please consult us to have our expertise

Contents

REMINDER : Reed switches and magnetic sensors using reed switches can switch AC or DC current. In our technical data-sheets the values given for current and voltage are the maximum values. It means that in DC applications it corresponds to the max. switching current and voltage. In AC applications these values are the peak values, to obtain the nominal value you should divide by 1,414.

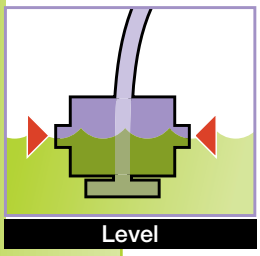
SCOPE

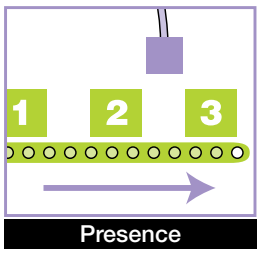
INDUSTRY
Counting
Cylinder positions
Machine safety
Advertising panel
Actuator position
Liquide level
Speed control.

HOME
Burglar alarm
Camera shutter control window position (blinds)
Lifts
Alarms
Big and small household goods
Swimming-pools.

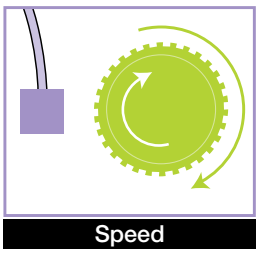
AIRCRAFT, SPACE AND ARMY
Fuel/oil level.
Camera shutter control
Sensors and actuators for Airbus.

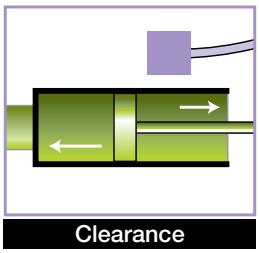
SPECIFIC APPLICATIONS
ATEX (explosive atmospheres).

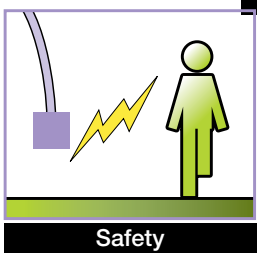

Level



Presence


Speed


Clearance

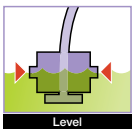

Safety

contact type

- NO / A Form → Normaly Open
- NF / B Form → Normaly Closed
- BISTABLE NO / L Form
- CHANGE-OVER / C Form

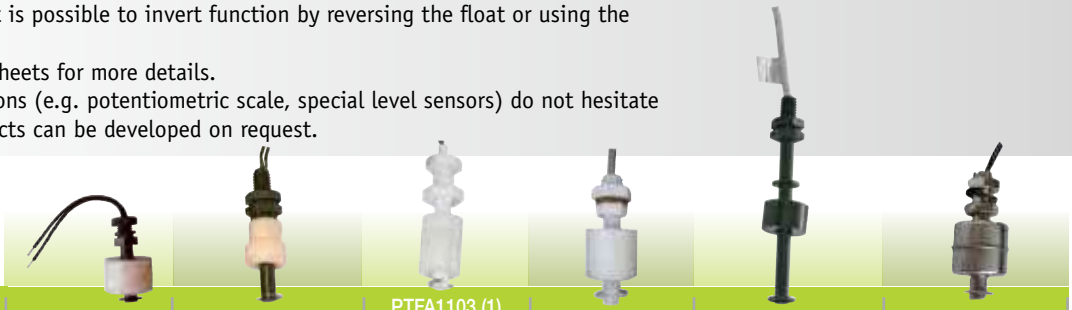
Other lengths of cable or wire possible for signifiant quantities.

Reed magnetic sensors



LEVEL & FLOW SENSORS

celduc relais® offers a large range of standard or specific level and flow sensors using Reed switches. Our sensors are available in plastic, brass or stainless steel housing, making it possible to use them with various chemical substances and/or operating temperatures.
With some sensors, it is possible to invert function by reversing the float or using the sensor upside down.
Please see the data sheets for more details.
For specific applications (e.g. potentiometric scale, special level sensors) do not hesitate to contact us : products can be developed on request.



VERTICAL LEVEL SENSORS

Product reference		PTF01070	PTFA1015	PTFA1103 (1) PTFA1104 (1)	PTFA5001 (1)	PTFA1210	PTFA2115 (1)(2)
Mounting		Vertically	Vertically	Vertically	Vertically	Vertically High and low level	Vertically
Contact status (float down)		1NO	1NO	1NC (PTFA1103) 1NO (PTFA1104)	1NC	1NO+NC	1NO
Connection type		2 wires 70mm	2 wires 1,5m	2 wires 300mm	Cable 2m	Cable (3 wires) 300mm	2 wires 1,5m
Material	Housing	Polyamide 6/6 resin with glass fiber content	Polyamide 6/6 resin with glass fiber content	Polypropylene	Polypropylene	Polyamide	Stainless steel
	Float	Polypropylene	Polypropylene			Polyurethane	
Liquid compatibility		Water	Water	1	1	2	3
Float travel		10mm	17mm	9mm	10mm	48,5mm	8mm
Max. switching power		10VA	10VA	10VA	50VA	Top : 10VA Bottom : 3VA	50VA
Max. switching voltage		100Vdc	100Vdc	230Vac	230Vac 350Vdc	Top : 200Vdc Bottom : 100Vdc	230Vac 350Vdc
Max. switching current		0,5A	0,5A	0,5A	0,5A	Top : 0,5A Bottom : 0,25A	0,5A
Density mini		0,8	0,75	0,7	0,9	0,6	0,75
Working temperature		0 / 70°C	0 / 70°C	-10 / 80°C	-10 / 80°C	-10 / 85°C	0 / 100°C
Thread		M8 x 1,25	3/8" threading UNC 1,588mm (16 per inch)	1/8" GAS (28 per inch)	M8 x 1,25	3/8" threading UNC 1,588mm (16 per inch	M10 x 1

(1) Possible to invert the functions by reversing the float
(2) Available in ATEX version (see page 39)

liquids compatibility

1 → Compatible with acid : acetic, citric, formic, lactic, nitric diluted, phosphoric, sulphuric diluted ; soda ; alcohols : ethanol, methanol, propanol ; glycol ; mineral oil ; water
→ Not compatible with the following solvents : chloroforme, methylene chloride, trichloroethylene, toluene ; hard acids

2 → Compatible with fuels, engine oil, kerosene, lubricaring oil, mineral oil, vegetal oil,
→ Not compatible with almost all acids, methylene chloride
→ Acceptable resistance to water

3 → Compatible with almost all the liquids except hard acids

Reed magnetic sensors

working principle

A float fitted with one or more magnets moves with the liquid and actuates, due to its magnetic field, a hermetically sealed reed contact located in the body of the float.

advantages

- One moving part.
- The Reed contact is actuated by a magnetic field only : no contact so no wear.
- The Reed contact is completely isolated from the liquid so perfectly waterproof.

The above advantages allow a safety use, repetitiveness, precision and minimum maintenance.



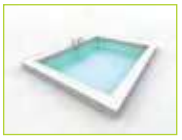
	Product reference	PTFA0100	PTFA3115	PTFA3315 (2)	PTFA3415	PTA10534 PTA10535	PTA10595
HORIZONTAL LEVEL SENSORS	Mounting	Horizontally External mounting	Horizontally	Horizontally	Horizontally External mounting	Horizontally Short paddle (Lg2= 57mm)	Horizontally Long paddle (Lg2= 77mm)
	Contact status	1NO	1NO	1NO	1NO	1NO	1NO
	Connection type	2 wires 175mm + Molex connector	2 wires 1,5m	2 wires 1,5m	Cable 1,5m	Cable 0,5m or 2m	Cable 2m
	Material	Polyamide 30% glass fiber	Polyamide 30% glass fiber	Polypropylene	Polypropylene	PPO (NORYL)	PPO (NORYL)
	Liquid compatibility	(2)	(2)	(1)	(1)	Water	Water
	Float travel	50°	50°	50°	50°	-	
	Max. switching power	10VA	50VA	50VA	50VA	100VA	100VA
	Max. switching voltage	200Vdc	230Vac 350Vdc	230Vac 350Vdc	230Vac 350Vdc	230Vac 350Vdc	230Vac 350Vdc
	Max. switching current	0,5A	0,5A	0,5A	0,5A	1A	1A
	Density mini	0,6	0,6	0,6	0,6	-	-
	Working temperature	0 / 85°C	0 / 85°C	-10 / 100°C (wires/85°C)	-10 / 100°C (wires/85°C)	0 / 80°C	0 / 80°C
	Thread	Specific	Specific	M16 x 2	M16 x 2	Specific	Specific

FLOW SENSORS

(2) Available in ATEX version (see page 39).

applications




HEATING (air-conditioning, heaters, humidifiers)
→ To detect the water level in the tank.

DOMESTIC EQUIPMENT (electronic flush, solar systems)
→ To detect the water level.

FOOD INDUSTRY (coffee machines, vending machines)
→ Check the level of water left in the tank.

MEDICAL EQUIPMENT (sterilising equipment for medical instruments)
→ Check level of water for steam or liquid detergent level.

WATER TREATMENT (water purifying, desalinating)
→ The sensors enable the reserve water level to be established.

SWIMMING POOLS (water treatment, water heating)
→ Water level and flow.

AUTOMOBILE (radiator liquids level, windscreen washer, engine oil level, brake oil level)
→ Detection of liquids levels.

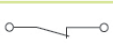
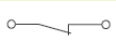
VARIOUS INDUSTRIES (photo lab equipment, scrubber machines, fuel dispensing systems).

Reed magnetic sensors

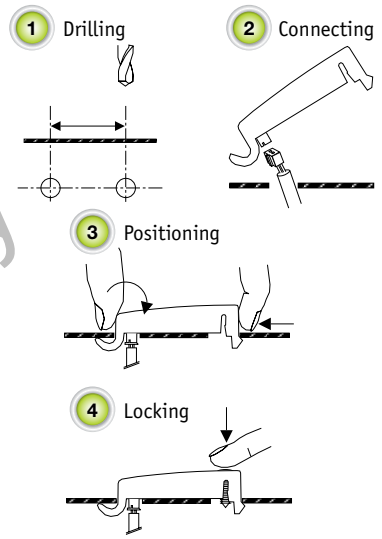
Sensors for window frames

This new range has been developed to detect position of the window : open or closed (supervising of openings).
Typical applications are alarm, heating, air-conditioning systems

Main advantages are :
→ Save time for mounting and wiring : pluggable connector, product to be clipped (no fixing screws)
→ Normally open (NO), normally closed (NC), change-over contact, safety current loop
→ Water-proof contact.

Product reference		PWA01500	PWB01500	PWA11500	PWB11500	PWC01500
Type of contact		NO	NC	NO + safety loop	NC + safety loop	Change-over
Contact status	Window open					
	Window closed					
Connection type		Cable + PHR2 connector (not included)		Cable + PHR4 connector (not included)		
Cable length		Ref. 2YB20030 : 3m Ref. 2YB20050 : 5m Ref. 2YB20100 : 10m Ref. 2YB20130 : 13m		Ref. 2YB40080 : 8m		
Max. switching power		10VA				
Max. switching voltage		100VDC				
Max. switching current		0,4A				
Activation distance		Depend on the magnet - see technical data-sheet				
Working temperature		-40 to +70°C				
Dimensions		47,7 x 9,7 x 9,1				

Mounting & wiring times much shorter !



Magnet PW520000
to be clipped

Magnet UR124540
to be screwed

Magnet UZ189538
to be glued

Magnetic sensor for windows and doors alarms

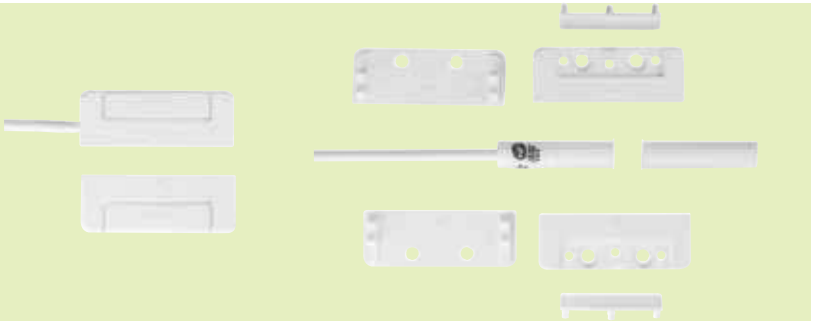
→ in compliance with NF324-H58 and EN 50131 (security level : shield 3)

This anti intrusion magnetic sensor is used in doors and windows access control systems for buildings.
PNA2P020 is built in two parts : "contact" and "magnet". Contact is open if no magnet (window or door open).

This sensor is built in plastic housing with 2 mounting options:
- Direct mounting – embedded version
- Mounting in additional housing : "contact" and "magnet" are fitted into another plastic housing for screw mount – top version.

The cable is made with 4 wires : 2 for the switch and 2 for auto-protection circuit.

Product reference	PNA2P020
Max. switching power	10W
Max. switching voltage	48Vac 67Vdc
Max. switching current	1A



Reed magnetic sensors

SAFETY SENSORS

The PXS or PSS type products are designed to control the opening of protective devices, machine casings and access doors.

These products, in their basic design and construction, are conform to the applicable European Directive for machinery safety 2006/42/CEE.
Correctly installed with their associated coded magnets and connected to adapted safety modules, they can reach the following safety level : **PLd and PLe according to EN 13849-1**
SIL3 according to EN 62061



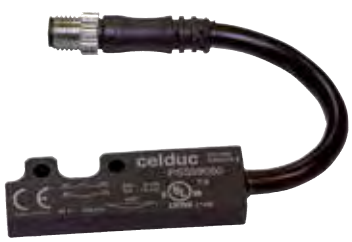
Product reference	PXS79150	PXS59150	PXS10350	PXS70150	PSS79050	PSS79150	PSS59050	PSS59150	PSA60010	PSA60020
Contact status	2O	O+C	2O + 1C	2O + 1C	2O	2O	O+C	O+C	1O solid state	1O solid state
Current limiting resistor	10Ω	10Ω	-	10Ω	10Ω	10Ω	10Ω	10Ω	-	-
Max. switching power	3VA	3VA	3VA	3VA	3VA	3VA	3VA	3VA	500VA	500VA
Max. switching voltage	100VDC	100VDC	100VDC	100VDC	100VDC	100VDC	100VDC	100VDC	24-440VAC	6-440VAC
Max. switching current	100mA	100mA	100mA	100mA	100mA	100mA	100mA	100mA	3A	3A
Cable length	Cable 5m	Cable 5m	Cable 5m	Cable 5m	Cable 5m	Cable 5m	Cable 5m	Cable 5m	2 wires 350mm	2 wires 3m
Activation distance	8mm	8mm	8mm	8mm	5mm	5mm	5mm	5mm	12mm	12mm
Associated coded magnet	P2000100	P2000100	P2000100	P2000100	P3000100	P3000100	P3000100	P3000100	P6250000	P6250000
LED option	yes	yes	no	yes	no	yes	no	yes	no	no
Working temperature	-25 to +85°C	-25 to +85°C	-25 to +85°C	-25 to +85°C	-25 to +85°C	-25 to +85°C	-25 to +85°C	-25 to +85°C	-40 to +85°C	-40 to +85°C

associated coded magnets


P2000100


P3000100


P6250000




Terminals version on request
M8 or M12 depends on the model : see data sheet

Reed magnetic sensors

Screw position sensors

General use screw sensors for industry and household use :

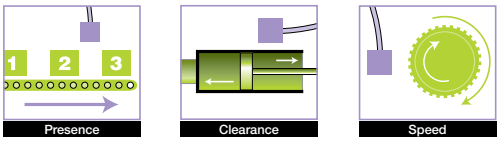
- → Rabbet sensors
- → Doors opening
- → Protection cover presence
- → Household applicances



Product reference	PAA10060	PAA11202	PAB10020	PLA10100	PLA10160	PLA11208	PLA12430	PSL40010
Contact status	NO	NO	NC	NO	NO	NO	NO	NO
Connection type	2 wires / FASTON	2 wires	2 wires + HE14 connector	cable	2 wires	cable	cable	2 wires
Cable length	680mm	275mm	160mm	10m	360mm	800mm	3m	550mm
Max. switching power	12VA	12VA	3VA	12VA	12VA	12VA	12VA	10VA
Max. switching voltage	100VDC	100VDC	100VDC	100VDC	100VDC	250VDC	250VDC	350VDC
Max. switching current	0,4A	0,4A	0,25A	0,5A	0,4A	0,4A	0,4A	0,5A
Activation distance	16mm with P6250000	15mm with P6250000	18mm with P6250000	10mm with P6250000	19mm with P6250000	16mm with P6250000	12mm with P6250000	12mm with P6250000
Working temperature	-40 to +85°C	-40 to +100°C	-40 to +100°C	-40 to +85°C	-40 to +100°C	-40 to +100°C	-40 to +100°C	-40 to +85°C
Dimensions in mm	23x14x6	23x14x6	23x14x6	32x15x6,8	32x15x6,8	32x15x6,8	32x15x6,8	51 x16 x 7
Fixing screws distance	14mm	14mm	14mm	17,5mm	17,5mm	17,5mm	17,5mm	16mm


Product reference	PLA13701	PLA13730	PLA13750	PLA43403	PLB10060	PLB16701	PLC10040	PLC13701	PSC41000
Contact status	NO	NO	NO	NO	NC	NC	Change-over	Change-over	Change-over
Connection type	cable	cable	cable	cable	cable	cable	cable	3 wires	cable
Cable length	100mm	3m	5m	300mm	3m	100mm	1,5m	100mm	400mm
Max. switching power	12VA	12VA	12VA	100VA	12VA	12VA	NC : 3VA NO : 8VA	NC : 3VA NO : 8VA	100VA
Max. switching voltage	250VDC	250VDC	250VDC	350VDC	250VDC	250VDC	100VDC	100VDC	230VAC 350VDC
Max. switching current	0,4A	0,4A	0,4A	1A	0,4A	0,4A	0,25A	0,25A	3A
Activation distance	10mm with P6250000	10mm with P6250000	10mm with P6250000	12mm with P6250000	4<d<12mm (magnet provided)	4mm (magnet provided)	14mm with P6250000	10mm with P6250000	8mm with UR608000
Working temperature	-40 to +100°C	-40 to +100°C	-40 to +100°C	-40 to +100°C	-40 to +100°C	-40 to +100°C	-40 to +100°C	-40 to +100°C	-25 to +85°C
Dimensions in mm	32x15x6,8	32x15x6,8	32x15x6,8	32x15x6,8	32x15x6,8	32x15x6,8	32x15x6,8	32x15x6,8	51 x 16 x 7
Fixing screws distance	17,5mm	17,5mm	17,5mm	17,5mm	17,5mm	17,5mm	17,5mm	17,5mm	16mm

Reed magnetic sensors



Product reference	PB195T00	PB285T00	PB367G00	PB390G00	PBA13725	PBA13780
Contact status	NO	NC	NC	NO	NO	NO
Connection type	2 wires	2 wires	2 wires	2 wires	cable	cable
Cable length	80mm	80mm	80mm	80mm	2,5m	8m
Max. switching power	50VA	50VA	16VA	16VA	12VA	12VA
Max. switching voltage	250VAC	250VAC	250VDC	250VDC	250VDC	250VDC
Max. switching current	1A	1A	0,5A	0,5A	0,4A	0,4A
Activation distance	7mm with P4160000	6mm with P4160000	6mm with P4159000	13mm with P4160000	13mm with P4160000	13mm with P4160000
Working temperature	-40 to +100°C	-40 to +100°C	-40 to +100°C	-40 to +100°C	-40 to +100°C	-40 to +100°C
Dimensions in mm	86x8,5x12,5	86x8,5x12,5	51x8,5x11,5	51x8,5x11,5	51x8,5x11,5	51x8,5x11,5
Fixing screws distance	75mm	75mm	40mm	40mm	40mm	40mm

Sensor with metal housing

Product reference	PLMA0100
Contact status	NO
Connection type	1 shielded cable
Cable length	2m
Max. switching power	10W
Max. switching voltage	200VDC
Max. switching current	0,5A
Activation distance	25mm (provided magnet)
Working temperature	-40 to +85°C
Dimensions in mm	88x38x12
Fixing screws distance	69mm

Screw sensors with safety loop (Alarms)

Product reference	PBA10010	PMG12482
Contact status	NO	NO
Connection type	cable + safety loop	cable + safety loop
Cable length	8m	8m
Max. switching power	12VA	12VA
Max. switching voltage	250VDC	250VDC
Max. switching current	0,4A	0,5A
Activation distance	16mm with P4160000	14mm with P6250000
Working temperature	-40 to +100°C	-25 to +85°C
Dimensions in mm	51x8,5x11,5	33x15x6,8
Fixing screws distance	40mm	17,5mm

See also our new anti intrusion magnetic sensor with safety loop and designed in compliance with NF324-H58 & EN 50131.
Security level : shield 3 (page 32).

High power switching sensors

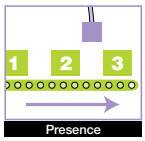
These sensors allow controlling loads up to 3A.

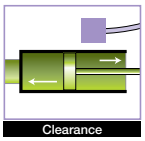
Product reference	PSA60010	PSA60020
Contact status	NO	NO
Max. switching power	500VA	500VA
Max. switching voltage	24-440VAC	6-440VAC
Max. switching current	3A	3A
Cable length	2 wires 350mm	2 wires 3m
Activation distance	12mm with P6250000	12mm with P6250000
Working temperature	-40 to +85°C	-40 to +85°C
Dimensions in mm	51x16x7	
Fixing screws distance	16mm	

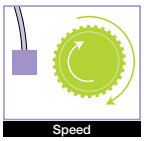
Safety sensors manufactured in compliance with the European Directive 2006/42/CE :
PLc according to ISO13849-1
SIL1 according to IEC62061
Category 1
High MTTFd

For other safety applications see page 33.

Reed magnetic sensors







TUBULAR POSITION SENSORS

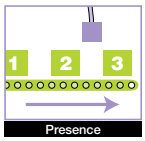
General use tubular sensors for industry and household use :
→ Rabbet sensors
→ Doors opening
→ Protection cover presence
→ Household appliances.

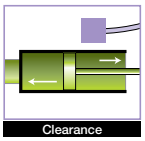
Product reference	PTA10440	PTA11235	PTA12401	PTA13730	PTA50010	PTB13702	PTC13730
Contact status	NO	NO	NO	NO	NO	NC	Change-over
Max. switching power	12VA	12VA	12VA	12VA	12VA	3VA	NC : 3VA NO : 8VA
Max. switching voltage	100VDC	100VDC	100VDC	100VDC	100VDC	100VDC	100VDC
Max. switching current	0,4A	0,4A	0,4A	0,4A	0,4A	0,25A	0,25A
Connection type	2 wires 500mm	Cable 3,5m	2 wires 100mm	2 wires 3m	2 wires 100mm	2 wires 200mm	Cable 3m
Activation distance with P6250000	7mm	15mm	14mm	10mm	18mm	14mm	7mm
Working temperature	-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C
Dimensions in mm	Ø6x30 Plastic	Ø6x30 Plastic	Ø6x30 Plastic	Ø6x30 Plastic	Ø6x25,2 Plastic	Ø6x30 Plastic	Ø6x30 Plastic

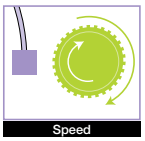
Product reference	PTA10490	PTPA0030	PTPA0100	PTPA0110	PTPA0230	PTPB0010
Contact status	NO	1NO	1NO	1NO	1NO	1NC
Max. switching power	10VA	12VA	12VA	12VA	12VA	12VA
Max. switching voltage	100VDC	100VDC	100VDC	100VDC	100VDC	100VDC
Max. switching current	0,4A	0,5A	0,5A	0,5A	0,5A	0,5A
Connection type	2 wires 800mm	2 wires 3m	Connectors	Connectors	2 wires 3m	2 wires 80mm + FASTON
Activation distance	16mm with P6250000	12mm (magnet provided)	12mm (magnet provided)	consult us	30mm (magnet provided)	10mm (magnet provided
Working temperature	-40 to +120°C	-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C
Dimensions (mm)	Ø6x41 Raw brass	Ø11x28 Plastic	Ø11x28 Plastic	Ø11x28 Plastic	Ø23x27 Plastic	Ø23x28 Plastic

Reed magnetic sensors

Typical applications :
→ Speed sensors,
→ Presence, position, clearance sensors.







PTI range - M8 housing

Product reference	PTI40003	PTI40020	PTI50003	PTI50020	PTI60020	PTI70020
Contact status	1NO / A form	1NO / A form	1NC / B form	1NC / B form	1NO / A form	1NC / B form
Max. switching power	12VA	12VA	5W	5W	12VA	5W
Max. switching voltage	200VDC	200VDC	175VDC	175VDC	200VDC	175VDC
Max. switching current	0,5A	0,5A	0,25A	0,25A	0,5A	0,25A
Connection type	Cable 30cm	Cable 2m	Cable 30cm	Cable 2m	Cable 2m	Cable 30cm
Activation distance	12mm with magnet PT505000	12mm with magnet PT505000	7mm with magnet PT505000	7mm with magnet PT505000	12mm with magnet PT505100	7mm with magnet PT505100
Working temperature	-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C
Dimensions in mm	M8x1 - Lg 31 Plastic	M8x1 - Lg 31 Plastic	M8x1 - Lg 31 Plastic	M8x1 - Lg 31 Plastic	M8x1 - Lg 40 Stainless Steel	M8x1 - Lg 40 Stainless Steel

PTA/PDC ranges - M10 housing

→ Sensors with M12 housing on request

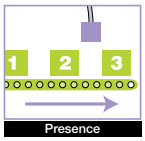
Product reference	PTA80020	PTA90160	PDC20030	New PTC10091
Contact status	1NO / A form	1NO	Change-over / C form	Change-over / C form
Max. switching power	12VA	12VA	60VA	NC : 3W, NO : 8W
Max. switching voltage	200VDC	100VDC	250VAC	100VDC
Max. switching current	0,5A	0,4A	1A	0,25A
Connection type	Cable 2m	Cable 1,5m	Cable 3m	Cable 100mm
Activation distance	25mm with magnet PT810000	12mm with magnet P6250000	20mm with magnet UR144360	20mm with magnet UR124540
Working temperature	-25 to +70°C	-40 to +125°C	-40 to +75°C	-25 to +85°C
Dimensions in mm	M10x1,5 – Lg 44,5 Stainless Steel	M10x1 - Lg 40 Raw brass	M10x1,5 - Lg 85,5 Plastic	M8x1,25 - Lg 41

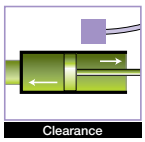
Reed magnetic sensors / Hall effect

Sensors for layout on PCB

Reed switch proximity sensors in plastic housing, for PCB mounting with no risk of damage.


Product reference	PHA01200	PHA11200	PHC13700
Contact status	NO	NO	Change-over
Max. switching power	12VA	12VA	NC : 3VA / NO : 8VA
Max. switching voltage	100VDC	100VDC	100VDC
Max. switching current	0,4A	0,4A	0,4A
Activation distance with U6250000	18mm	17mm	11mm
Working temperature	-40 to +100°C	-40 to +100°C	-40 to +100°C
Dimensions in mm	23x4,2x3,6	23x4,2x3,6	23x4,2x3,6





Hall effect sensors

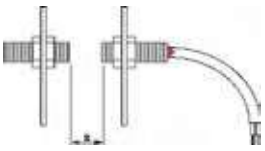
celduc® relais offers two ranges of electronical sensors :
→ Hall effect sensors
→ Gear tooth sensors.


Product reference	PTE11320	PTE11321	PTE21320	PTE21321	PTE31320	PTE31321	PTE41320	PTE41321
Contact status	Hall effect PNP	Hall effect NPN	Gear tooth PNP	Gear tooth NPN	Hall effect PNP	Hall effect NPN	Gear tooth PNP	Gear tooth NPN
Cable length	cable 2m	cable 2m	cable 2m	cable 2m	cable 2m	cable 2m	cable 2m	cable 2m
Activation distance	19mm	19mm	1,5mm	1,5mm	17mm	17mm	1,5mm	1,5mm
Max. switching voltage	6-48VAC	6-48VAC	6-48VAC	6-48VAC	6-48VAC	6-48VAC	6-48VAC	6-48VAC
Max. switching current	0,4A	0,4A	0,4A	0,4A	0,4A	0,4A	0,4A	0,4A
Working temperature	-25°C to +70°C	-25°C to +70°C	-25°C to +70°C	-25°C to +70°C	-25°C to +70°C	-25°C to +70°C	-25°C to +70°C	-25°C to +70°C
Dimensions in mm	Plastic housing M12x33				Raw brass housing M12x33			
Associated coded magnet	PT810000	PT810000			PT810000	PT810000		

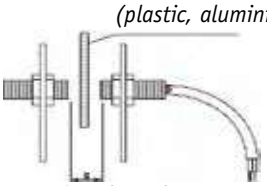
applications

- → **Counting**
- → **Industry**
- → **Lift**
- → **Speed sensors**
- → **Household electronical appliances**
- → **Tractors ...**

Direct detection

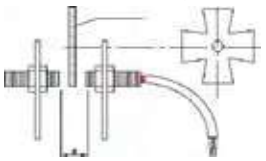


non-magnétic matérial (plastic, aluminium...)

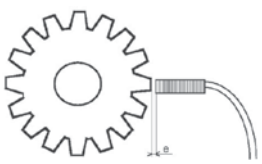


Detection through non-magnetic material

Ferro-magnetic material



Detection of ferro-magnetic (counting,...)



Gear tooth sensor

ATEX Sensors

celduc® relais is notified as manufacturer of ATEX products : INERIS 04ATEXQ406 and offers a wide range of ATEX sensors.
celduc® relais has EC-type examination certificate Nr. INERIS 04ATEX0105.
Groupe II : Open-air industry (other than mines) with possible inflammable dust.

Marking example : for part number PL.1...Ex (for other part numbers, please refer to our technical data-sheet)

CE0080 **II 2 GD** **Ex mb IIC T6 Gb**
Ex tb IIIC IP67 T85°C Db

II 1 GD **Ex ia IIB T6 Ga**
Ex ia IIIB T85°C Da

Type of devices : 1 for zone 0 (continuous risk)
2 for zone 1 (intermittent risk)
Gaz : G or Dust : D
Protection "m" for zone 1 and "i" for zone 0
Temperature class : T6 (85°C) T4 (135°C) or T3 (200°C)
Cables length 5m or 10m.


Product reference	PLA1125Ex	PLB1179Ex	PLC1125Ex	PTA1125Ex	PTC1125Ex
Contact status	1NO	1NC	Change-over	1NO	Change-over
Temperature group	T6	T6	T6	T6	T6
Max. switching power	10W 12VA	10W 12VA	3VA	10W 12VA	3VA
Max. switching voltage	60VDC	60VDC	60VDC	60VDC	60VDC
Max. switching current	0,4A	0,4A	0,25A	0,4A	0,25A
Cable length	cable 5m	cable 10m	cable 5m	cable 5m	cable 5m
Working temperature	-40 to +80°C	-40 to +80°C	-40 to +80°C	-40 to +80°C	-40 to +80°C
Housing material	Plastic	Plastic	Plastic	Plastic	Plastic
Dimensions in mm	32x15x6,8	32x15x6,8	32x15x6,8	Ø6x30	Ø6x30

Coded magnet P3000100 to be ordered separately

Product reference	PFA2125Ex	PFA3125Ex	PSS5905Ex	PSS7905Ex	PTA6125Ex	PTA9125Ex
Contact status	1NO	1NO	1NO + 1NC	2NO	1NO	1NO
Temperature group	T6	T6	T4	T4	T4/T6 or T3/T6*	T4/T6 or T3/T6*
Max. switching power	10W 12VA	10W 12VA	3VA	3VA	10W 12VA	10W 12VA
Max. switching voltage	60VDC	60VDC	60VDC	60VDC	60VDC	60VDC
Max. switching current	0,4A	0,4A	0,1A	0,1A	0,4A	0,4A
Cable length	cable 5m	cable 5m	cable 5m	cable 5m	cable 5m	cable 5m
Working temperature	-40 to +80°C	-40 to +80°C	-25 to +85°C	-25 to +85°C	-40 to +200°C	-20 to +200°C
Housing material	Stainless steel	Polypropylene	Plastic	Plastic	Brass	Brass
Dimensions in mm	Ø28x60	Ø28x90	51x16	51x16	Ø6x41	M10

**See technical data-sheets*

Sensors for lifts

(and other industrial applications)

Sensors for : - Detection of the lift position
- Doors opening control

celduc® relais offers a wide range of magnetic sensors for elevators with reed switches or "Electronic" magnetic sensors using an Hall effect cell or magneto resistance.

The magnetic field created by the permanent magnet, activates the sensitive part (the reed switch or the Hall effect cell or the magneto resistance). It is important to combine the magnet and sensor with consideration to the correct operating conditions (switching distance, presence of ferro-magnetic parts or non ferro-magnetic parts...).

celduc® relais is at your disposal to help you define the right products.

Advantages : - insensitive to the ambient working conditions (heat or cold air, humidity, dust...)
- high reliability
- large detection distance
- good reliability to shocks and vibrations
- IP67





Product reference	PMG12802	PMG12924	PMG12930	PMG13051	PMG13110
Contact status	NO bistable	NO	NO bistable	NC	NO
Max. switching power	60VA	100VA	60VA	30VA	30VA
Max. switching voltage	230VDC	230VDC	230VDC	230VDC	230VDC
Max. switching current	0,3A	3A	1A	0,5A	1A
Cable length	2m	7m	7,3m	6,5m	7m
Activation distance	7<D<25mm with UF252060	17<D<27mm with UP302010	7<D<40mm with UP302010	17<D<27mm with UP302010	9,5mm with UF221105
Working temperature	-25 to +85°C	-25 to +85°C	-25 to +85°C	-25 to +85°C	-25 to +85°C
Dimensions in mm	65x15x16	M14x75	80x30x30	M14x75	80x20x15

PC range – M12 housing

Typical applications :
→ Lifts : sensors with 2 or 3 normally open contacts are used to detect the position of the cabin as well as automatic level reset according to the weight.
→ Position / clearance sensors.

Product reference	PCA22330	PCA36720	PCC12320	PCC26720	PCLA3030	PC2A2330	PC3A2330
Contact status	1xNO / A form	1xNO / A form	Change-over / C form	Change-over / C form	Bistable / L form	2xNO / A form	3xNO / A form
Max. switching power	70VA	100VA	3VA	60VA	100VA	70VA	70VA
Max. switching power	300VAC	250VAC	100VAC	400VAC	250VAC	300VAC	300VAC
Max. switching current	0,5A	3A	0,25A	1A	3A	0,5A	0,5A
Cable length	Cable 3m	Cable 2m	Cable 2m	Cable 2m	Cable 3m	Cable 3m	Cable 3m
Activation distance	20mm with UR144361	15mm with UR144361	25mm with UR144361	18mm with UR144361	30mm with UP081508	20mm with UR144361	20mm with UR144361
Working temperature	-25 to +75°C	-25 to +75°C	-25 to +75°C	-25 to +75°C	-25 to +75°C	-40 to +75°C	-40 to +75°C
Dimensions in mm	M12x1 L 80 Plastic housing						

Sensors with M12x1 L50 housing on request

Control magnets

Range of standard permanent magnets used as actuators for our magnetic sensors.
Our range of magnetic sensors with reed switches or "Electronic" magnetic sensors using a Hall effect cell should be actuated with the correct magnet.
celduc ® relais offers 3 families of magnets to be chosen according to the application (working temperature, geometry, resistance to corrosion).

Material		Max. operating temperature	Derating according to temperature (recoverable)	Resistance to corrosion	
Alnico		500°C	very low (-0,025% per °C)	Good resistance	generally supplied in bars which should have a length of minimum x4 the diameter
Ferrite		250°C	high (-0,20% per °C)	Very good resistance	generally supplied in parallelepiped block, disc or ring
Rare earth	Samarium Cobalt (SmCo)	250°C	low (– 0,04% per °C)	Very good resistance	generally supplied in blocks or granulates
	Neodymium Iron Bore (NdFeBo)	80 to 160°C (see data-sheets)	low (– 0.10% per °C)	Bad resistance (must have tin or nickel coating)	generally supplied in blocks or granulates

celduc® relais is at your disposal to help you define the correct magnet/sensor arrangement according to your needs / operating conditions.

coated magnets

Product reference	For sensors ...	Bare magnet dimensions in mm	Dimensions in mm	Fig n°
PA320000	PA	Ø 3x20	23x15x6	1
P3150000	PA, PH, PL, PT	Ø 3x15	32x15x6,8	2
P4200000	PA, PH, PL, PT	Ø 4x20	32x15x6,8	2
P6250000	PA, PH, PL, PT	Ø 6x25	32x15x6,8	2
P4159000	PB or PLA	Ø 3x15	51,8x8,5x11,5	3
P4160000	PB or PLA	Ø 5x25	51,8x8,5x11,5	3
PT505000	PTI5 plastic	D5x5	M8x1 Lg 31	4
PT508000	PTI5 plastic	D5x8	M8x1 Lg 31,2	4
PT810000	PTE	D8x10	M12x1 Lg 31,2	6
PW520000	PWA, PWB, PWC	D5x20	47,7x9,7x9,1	7

bare magnets

Product reference	Material	Dimensions in mm	Fig n°
U315P003	Alnico5	Ø 3x15	1
U4200000	Alnico5	Ø 4x20	1
U6250000	Alnico5	Ø 6x25	1
U8300000	Alnico5	Ø 8x30	1
UB105000	Alnico5	Ø 10x50	1
UF207760	Ferrite	20,5x7,7x6	2
UF221105	Ferrite	Ø 22x11x5	3
UF341605	Ferrite	Ø 34x16x5	3
UZ189538	Ferrite	18x9.5x3.8	2
UP051508	Plastoferrite	50x15x8	4
UP071508	Plastoferrite	70x15x8	4
UP081508	Plastoferrite	80x15x8	4
UP102008	Plastoferrite	100x20x8	4
UP301508	Plastoferrite	300x15x8	4
UP302008	Plastoferrite	300x20x8	4
UR101000	NdFeBo	Ø 10x10	6
UR102540	NdFeBo	Ø 10x4x2,5	5
UR124540	NdFeBo	Ø 12x4x4,5	5
UR144361	NdFeBo	Ø 14x6x4,3	5
UR120500	NdFeBo	Ø 12x5	6
UR122000	NdFeBo	Ø 12x20	6
UR304000	NdFeBo	Ø 3x4	6
UR315000	NdFeBo	Ø 3x15	6
UR502000	NdFeBo	Ø 5x2	6
UR508000	NdFeBo	Ø 5x8	6
UR801000	NdFeBo	Ø 8x10	6

Special customers products

celduc® relais : the expert in specific sensors

There are numerous special customer applications in all sectors of activity.
Please consult us to have our expertise.

automobile

In the automotive industry there are numerous applications for our magnetic proximity sensors : detection of liquid levels (radiator liquid, windscreen washer, engine oil level, brake oil level, ...) but also closing/locking detection of the fuel tank knob , detection of water in the oil filter, potentiometric scales to be used in lorry tank for level measurement, ...

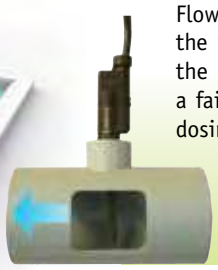
aircraft industry

Serving this industry is a proof of reliability. celduc ® relais has developed special sensors to detect the opening/closing of the doors as for example push-buttons used to detect open/closed doors in Airbus A380 ; sensors to detect tank refueling in Mirage Rafale and Saab Jas 39 fighters ; level sensors for AIRBUS humidifiers, ...

medical

In the medical field magnetic proximity sensors can be used in automatic analysis systems to control liquids level, presence of a tank, right-working of the arms, open /closed doors of sterilizers ...

swimming pools / water treatment



Flow sensors are used to supervise the flow rate and the function of the dosing pump and to indicate a failure or loss of capacity of the dosing pump.

Reed relays & switches

Detection : Clearance, position, level, presence
Switching : Telecom, tester, measurement

Reed Switches and Mercury Tilt Switches

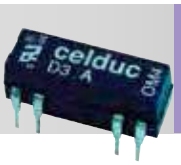
Detecting a clearance, a position, a level in extrem environnements without mechanical link between the moving parts and without maintenance, such is the daily challenge of the Reed contact submitted to a magnetic field in industrial sectors as various as money, space, control, telecom...

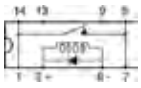
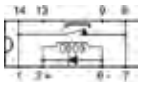
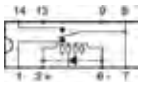
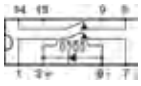
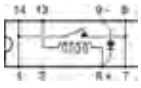
Product reference	Contact status	Max. switching voltage	Max. switching current	Max. switching power	Standard sensivity range	Glass length
AB21	1NO	350VDC	1A	100VA	20-35ATf	21mm
AC01		30VDC	0,01A	0,25VA	5-20ATf	6mm
AC03		100VDC	0,5A	12VA	10-35ATf	10mm
AC05		100VDC	0,5A	12VA	10-35ATf	14mm
AJ21		100VDC	0,4A	10VA	10-35ATf	14mm
AV10		7500VDC	0,2A	50VA	80-130ATf	53,4mm
AD22		250VAC	1,3A	80VA	40-105ATf	52mm
AD28		250VAC	3A	120W	70-100ATf	50mm
AI02		200VDC	0,5A	10W	15-30ATf	10mm
AI43		200VDC	0,5A	10W	15-30ATf	15mm
AI44		200VDC	0,75A	30W	15-35ATf	20,5mm
CD30	Change-over switch	500VAC	3A	100VA	60-100ATf	34,3mm
CG21		100VDC	0,25A	NC 3W / NO 8W	15-35ATf	14,5mm
CG21V		100VDC	0,25A	NC 3W / NO 8W	15-35ATf	14,5mm "bent"
CS26		400VAC	1A	60W	55-100ATf	34,3mm

- Sensitivity to be specified in the order.

Reed Relays in DIP enclosure

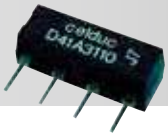
The most popular and the most industrial of the range. It offers all contact combinations. It is designed to switch inputs of telephony levels or PLC,signals from sensors or safety components.



Internal scheme (top view)	Product reference	Contact status	Characteristics of the switch: Max. switching voltage	Max. switching current	Max. switching power	Characteristics of the coil: Nominal voltage	R. coil at 20°C	Specifications	Dimensions in mm
	**D31A3100**	1NO	100VDC	0,5A	10VA	5VDC	500 Ω	–	19,1x6,6x6,4
	D31A3110		100VDC	0,5A	10VA	5VDC	500 Ω	diode	
	D31A5100		100VDC	0,5A	10VA	12VDC	1 kΩ	–	
	D31A5110		100VDC	0,5A	10VA	12VDC	1 kΩ	diode	
	**D31A7100**		100VDC	0,5A	10VA	24VDC	2150 Ω	–	
	D31A7110		100VDC	0,5A	10VA	24VDC	2150 Ω	diode	
	D31B3110	1NC	100VDC	0,5A	10VA	5VDC	500 Ω	diode	19,1x6,6x6,4
	**D31C2100**	Change-over	100VDC	0,25A	3VA	5VDC	200 Ω	–	19,1x6,6x6,4
	D31C2110		100VDC	0,25A	3VA	5VDC	200 Ω	diode	
	D31C5100		100VDC	0,25A	3VA	12VDC	500 Ω	–	
	D31C5110		100VDC	0,25A	3VA	12VDC	500 Ω	diode	
	D31C7100		100VDC	0,25A	3VA	24VDC	2150 Ω	–	
	D31C7110		100VDC	0,25A	3VA	24VDC	2150 Ω	diode	
	**D32A3100**	2NO	100VDC	0,5A	10VA	5VDC	200 Ω	–	19,1x6,6x6,4
	D32A3110		100VDC	0,5A	10VA	5VDC	200 Ω	diode	
	D32A5100		100VDC	0,5A	10VA	12VDC	500 Ω	–	
	D32A7100A		100VDC	0,5A	10VA	24VDC	2150 Ω	-	
	**D71A2100**	1NO	100VDC	0,5A	10VA	5VDC	380 Ω	–	19,1x6,6x5,5
	D71A2110		100VDC	0,5A	10VA	5VDC	380 Ω	diode	
	D71A5100		100VDC	0,5A	10VA	12VDC	530 Ω	–	
	D71A7100		100VDC	0,5A	10VA	24VDC	2000 Ω	-	

Reed Relays in SIP enclosure

Relays for high density component circuits : alarms, testers, industrial control.



Internal scheme (top view)	Product reference	Contact status	Characteristics of the switch: Max. switching voltage	Max. switching current	Max. switching power	Characteristics of the coil: Nominal voltage	R. coil at 20°C	Specifications	Dimensions in mm
	**D41A3100L**	1NO	100VDC	0,5A	10VA	5VDC	500 Ω	–	19x(5 ou 6)x7,5
	D41A3110L		100VDC	0,5A	10VA	5VDC	500 Ω	diode	

Reed relays & switches

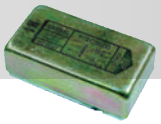
High voltage relay

Dielectric strength between contacts > 10KVDC and 14VDC between coil and contact.

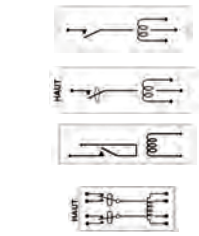
Product reference	Contact status	Max. swit-ching voltage	Max. swit-ching current	Max. switching power	Nominal voltage	R. coil at 20°C	Specifications	Dimensions in mm
R1380L00	1NO	7500VDC	0,2A	50VA	6VDC	75 Ω		65x15,2x16,9
R1329L00		7500VDC	0,2A	50VA	12VDC	300 Ω		
R1329L87		7500VDC	0,2A	50VA	12VDC	300 Ω	without fixing screw	
R1343L00		7500VDC	0,2A	50VA	24VDC	1200 Ω		
R1343L13		5000VDC	0,2A	50VA	24VDC	1200 Ω		
R1343L85		5000VDC	0,2A	50VA	24VDC	1200 Ω	without fixing screw	
R1402L13	1NC	5000VDC	0,2A	50VA	12VDC	300 Ω		
R1446L13		5000VDC	0,2A	50VA	24VDC	1200 Ω		

Reed D and R Relay range

Relays with ferro-magnetic shield in for telecom type applications.



Internal scheme (top view)



	Product reference	Contact status	Characteristics of the switch: Max. swit-ching voltage	Max. swit-ching current	Max. swit-ching power	Characteristics of the coil: Nominal voltage	R. coil at 20°C	Specifications	Dimensions in mm
	F51A5100	1NO	250VDC	0,4A	14VA	5VDC	2145 Ω	comes in coa-ted version réf. F81Ax100	30x9,5x10
	F81A5500	1NO mercury	500VDC	1A	50VA	12VDC	1000 kΩ	Position vertically	30x9,5x10
	F81A7500		500VDC	1A	50VA	24VDC	2300 Ω		
	F61A2100	1NO	250VDC	0,4A	14VA	5VDC	345 Ω	Coil/contact insulation 4KV	30x9,5x11
	F61A7100		250VDC	0,4A	14VA	24VDC	7845 Ω		
	F72C2500	2 mercury wetted change-over switch	500VDC	1A	50VA	5VDC	75 Ω	Position vertically	30x16,5x11
	F72C5500		500VDC	1A	50VA	12VDC	350 Ω		
	F72C7500		500VDC	1A	50VA	24VDC	1350 Ω		

	Product reference	Contact status	Characteristics of the switch: Max. swit-ching voltage	Max. swit-ching current	Max. swit-ching power	Characteristics of the coil: Nominal voltage	R. coil at 20°C	Specifications	Dimensions in mm
	R0292B00	1NO	100VDC	0,4A	12VA	4VDC	250 Ω	–	23x7,5x6,7
	R0293B08		100VDC	0,4A	12VA	5VDC	450 Ω		
	R0294B08		100VDC	0,4A	12VA	12VDC	1600 Ω		
	R0550B08	1NO	100VDC	0,4A	12VA	4VDC	500 Ω	DIL layout	20,2x10,1x7,2
	R0251W00	change-over	100VDC	0,25A	3VA	6VDC	150 Ω		23x7,5x6,7
	R0252W00		100VDC	0,25A	3VA	12VDC	500 Ω		
	R0253W00		100VDC	0,25A	3VA	24VDC	1800 Ω		
	R0115S06	1NO	250Veff	3A	100VA	6VDC	250 Ω	step 5,08	65x15,5x16
	R0116S06		250Veff	3A	100VA	12VDC	1000 kΩ		
	R0117S06		250Veff	3A	100VA	24VDC	4 kΩ		
	R0542B08	1NC	100VDC	0,4A	12VA	4VDC	200 Ω	DIL layout	20,2x10,1x7,2
	R0543B08		100VDC	0,4A	12VA	5VDC	200 Ω		
	R0861P12	mercury wetted change-over switch	500VDC	2A	100VA	5VDC	335 Ω	position vertically	40,8x14,2x10,4
	R0761P00		500VDC	2A	100VA	24VDC	2650 Ω		
	R0866P00	2 mercury wetted change-over switch	500VDC	2A	100VA	5VDC	125 Ω	position vertically possible C.O.T	40,8x19,8x10,4

Facing the competition

For many years, **celduc® relais** hasn't stop evolving while the team has remained the same. A dedicated team close to its customers and partners, ready to take on any challenge, in the midst of a severe global competition. At **celduc® relais,** we have succeeded in achieving and maintaining efficiency and high quality level of production in France.

MADE IN FRANCE

Catalogues and leaflets available on request

ESUC
current monitoring module

ECOM
temperature controller

SYMC
single phase softstarter

Sensors for window frames

All our technical data-sheets are available in our website : www.celduc-relais.com

celduc® is also a manufacturer of immersed power transformers from 50kVA to 17MVA.

→ celduc® transfo

For more information : www.celduc-transfo.com

Solid state relays

Scope

Heating

Plasturgy
Furnaces
Power supply distribution systems
Air conditioning
Textile
Home heating
Infrared heating
Drying
Thermoforming
Etc...

Motor starting

Pumps
Compressors
Plasturgy (see above)
Conveyors
Fans
Etc...

Lighting

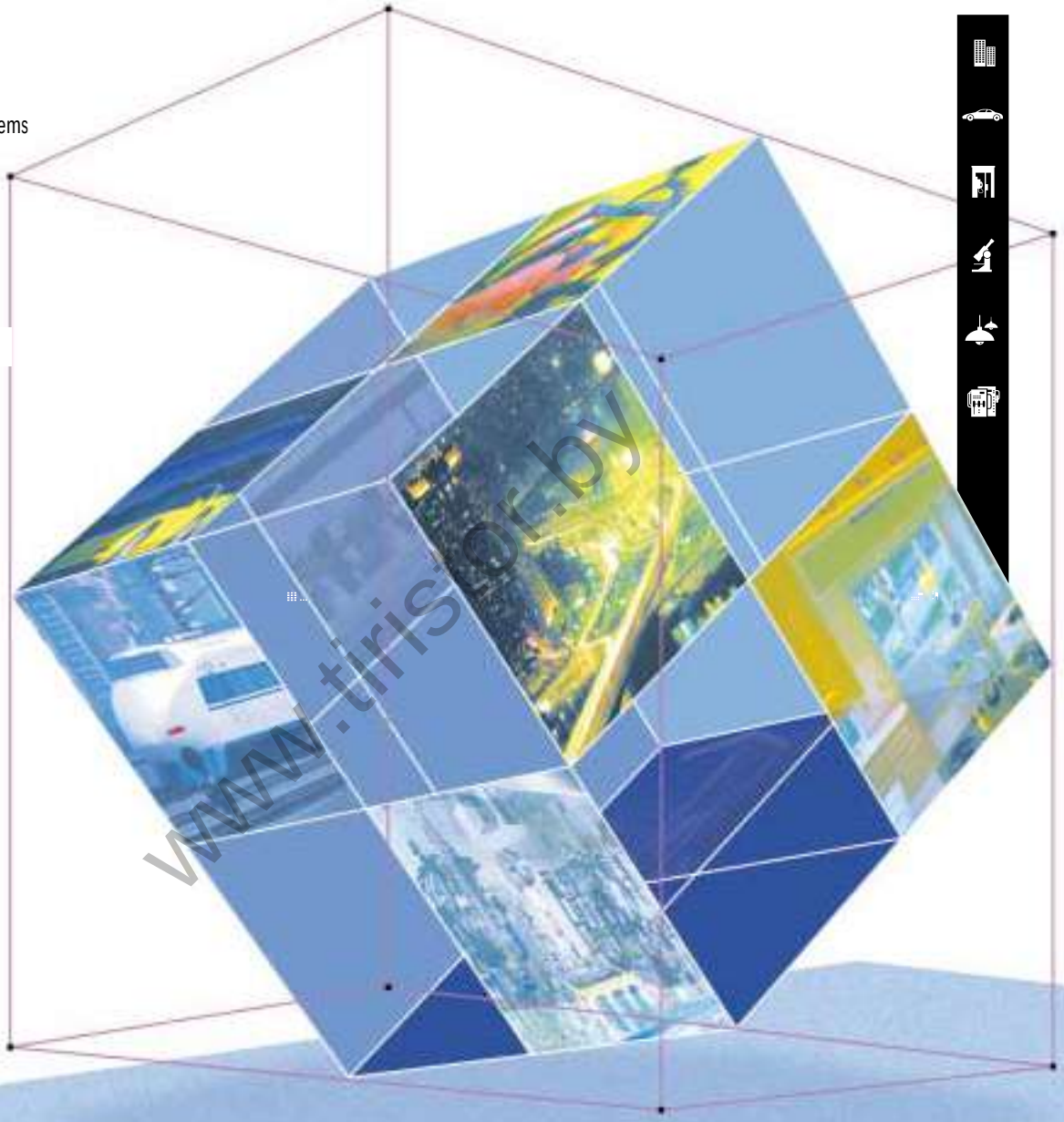
Public Lighting
Cinema
theatre lamps
Airport runaway lamps
Road lighting
Etc...

Control

PLC interface
Heating element control
Solenoid valves
Contactor Coils
Optocoupling of sensors

Miscellaneous

Transformer starting
Power factor corrector
Uninterrupted power supplies
Energy source switching



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)**
- **European :** EN 60950/VDE0805
  pr EN 61810xx
  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”.
- Our extensive range of relays ranging from 1 to 125A complies with the ISO9001 requirements and quality requirements and incorporates highly reliable components with a very high electromagnetic interference level.

Selection

by

Applications

Function	ON/OFF RELAY										
Number de poles	1 Pole Single phse			1 Pole EMC Optimised (low electromagnetic emission-low RFI)		2 Poles two phase		3 Poles three phase		
Type of mounting	PCB	Rail DIN	Screw	Rail DIN	Screw	Rail DIN	Screw	PCB	Rail DIN	Screw
HEATING ELEMENTS										
AC-51	SKA/SKB SN8 SKL/SKH	XKA/XKH SIL/SIM SWM	SC8/SC9 SIC/SIR SV8	SOL XKX	SVX SCFL	SWB SIB XKM	SCB	SCT SHT	SWT	SCT/SGT SVT
INCANDESCENT LAMPS AND INFRARED LAMPS										
AC-55b	SKA/SKB SN8 SKL/SKH	XKA/XKH SIL/SIM SWM	SC8/SC9 SIC/SIR SV8	SOL XKX	SVX SCFL	SWB SIB	SCB		SWT	SGT SVT
DISCHARGE LAMPS										
AC-55a	SKA/SKL SN8 SKH	XKA/XKH SIL/SIM SWM	SC8 SV8			SIB	SCB			
MOTORS										
AC-53	SKA/SKL SN8 SKH	SWM SIL/SIM XKH	SC7	SOL XKX	SVX SCFL	SIB	SCB	SCT SHT	SWT	SCT/SGT SVT
SOLENOIDS										
AC-14 / AC-15	STN/STA/SPA SN8/SLA SKA/SKB/SSA	STN/STA/SPA XKA/XKH/SSA	SC7/SC8 SF							
DC-13	STN/STD/SPD SLD SLD/SKD/SSC	STN/STD/SPD XKD/SSC	SCC SGC							
INDICATORS										
AC-55b	STN/STA/SPA SN8/SLA SKA/SKB/SSA	STN/STA/SPA XKA/XKH/SSA	SC7/SC8 SF							
DC-6	STN/STD/SPD SLD SLD/SKD/SSC	STN/STD/SPD XKD/SSC	SCC/SGC							
CONTACTORS										
AC-14<72VA	STN/STA/SPA SN8/SLA SKA/SKB/SSA	STN/STA/SPA XKA/XKH/SSA	SC7/SC8 SF							
AC-15>72VA	STA/SPA/SKA/SKB SN8/SLA SSA/SKL/SKH	STA/SPA XKA/XKH/SSA	SC7/SC8 SF							
DC-13	STN/STD/SPD SLD SLD/SKD/SSC	STN/STD/SPD XKD/SSC	SCC/SGC SGD							
DC-14	STN/STD/SPD SLD SLD/SKD/SSC	STN/STD/SPD XKD/SSC	SCC/SGC SGD							
PLC INPUTS/OUTPUTS										
AC input	SEA	SEA								
DC input	SEC	SEC	SF							
AC output	STN/STA/SPA SLA SKA/SKB/SSA	STN/STA/SPA XKA/XKH/SSA				XKM			XKM	
DC output	STN/STD/SPD SLD SLD/SKD/SSC	STN/STD/SPD XKD/SSC								
TRANSFORMERS										
AC-56a	SKA/SKL SKH		SC7 SCP			SIB7	SCB			SVT
CAPACITORS										
AC-56b	SKL SKH	SIL-SIM SWM	SC8 SV8			SIB	SCB			SVT
OTHERS										
->UPS			SC7			SIB7	SCB			SVT
->AIRPORTS			SAS							
->Alarms			SG2							
->Signaling lights		FLASHING	ST3 ST6							

criteria

PCB
DIN Rail
Screw

	DIAGNOSTIC			CONTROLLER			REVERSING SWITCH				SOFT START	
4 Poles	1 Pole single phase			1 Pole	3 Poles three phase		2 Poles two phase			3 Poles three phase	3 Poles Three phase	
Screw	Rail DIN	Screw		Screw	Rail DIN	Screw	PCB	Rail DIN	Screw	Screw	Rail DIN	Screw
SCQ	SILD	SCD		SG4 SG5	SWTA	SVTA						
SCQ	SILD	SCD		SG4	SWTA	SVTA					SMCW	SMCV
SCQ	SILD	SCD										
SCQ	SILD	SCD		SG4	SWTA	SVTA	SG9	XKR SW9	SG9 SV9	SG9	SMCW	SMCV
								XKR				
				SG4	SWTA	SVTA					SMCW	SMCV

Contents

Modules

100 % compatible with electromechanical relays

- -> PCB or socket mount
- -> Pin to pin compatible with electromechanical relays
- -> No maintenance
- -> AC and DC output
- -> Withstand high inrush current
- -> Integrated VDR
- -> Can drive all type of loads
- -> High insulation between input to output
- -> Low input current
- -> Low leakage current

SLIM RANGE (miniature)

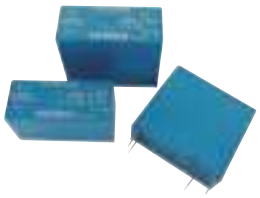
NEW

	PRODUCT REFERENCE	Switching Current	Switching Voltage	Control Voltage	Input R	Protec.	Specifications	Dimensions
AC	SLA01220	2A	12-280VAC	3-10VDC	320 Ω	RC	AC output module	28x5x15
	SLA02220	2A	12-280VAC	7-20VDC	1100 Ω	RC	AC output module	28x5x15
	SLA03220	2A	12-280VAC	18-32VDC	3 kΩ	RC	AC output module	28x5x15
DC	SLD01205	4A	0-32VDC	3-10VDC	320 Ω	Transil	DC output module	28x5x15
	SLD01210	2,5A	0-60VDC	3-10VDC	320 Ω	Transil	DC output module	28x5x15
	SLD02205	4A	0-32VDC	7-20VDC	1070 Ω	Transil	DC output module	28x5x15
	SLD02210	2,5A	0-60VDC	7-20VDC	1070 Ω	Transil	DC output module	28x5x15
	SLD03205	4A	0-32VDC	18-32VDC	3 kΩ	Transil	DC output module	28x5x15
	SLD03210	2,5A	0-60VDC	18-32VDC	3 kΩ	Transil	DC output module	28x5x15
	SLD04205	4A	0-32VDC	38-58VDC	10800 Ω	Transil	DC output module	28x5x15
	SLD04210	2,5A	0-60VDC	38-58VDC	10800 Ω	Transil	DC output module	28x5x15

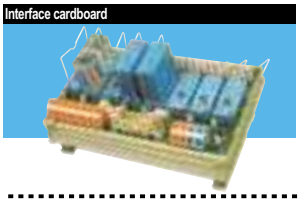
Other miniature solid state relays can be procured (SKM, SKN) : please contact us

SP-ST-SL RANGE (standard)

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



	PRODUCT REFERENCE	Switching Current	Switching Voltage	Control Voltage	Input R	Protec.	Specifications	Dimensions
AC	SPA07420	4A	12-275VAC	12-30VDC 15-30VAC	2100 Ω	VDR	AC output module	29x12,7x25,4
	STA07220	2A	12-275VAC	12-30VDC 15-30VAC	2100 Ω	VDR	AC output module	29x12,7x15,7
DC	SPD03505	5A	0-30VDC	12-30VDC	2100 Ω	transil	DC output module	29x12,7x25,4
	STD03205	2,5A	0-30VDC	12-30VDC	2100 Ω	transil	DC output module	29x12,7x15,7
	STD03505	5A	0-30VDC	12-30VDC	2100 Ω	transil	DC output module	29x12,7x15,7
AC/DC	STN07105	1A	0-30VAC/DC	12-30VDC 15-30VAC	2100 Ω	transil	AC/DC output module	29x12,7x15,7



ESD08000	8 SP in line module base
ESD16000	16 SP in line module base
ESD16100	16 SP compact module base

ESC05000	SP/ST base for PCB for one relay
ESD05000	SP/ST base for DIN rail for one relay

Our STD03 and SPD03 modules are also available with AC input (12-30VAC/DC): STD07 and SPD07.
Our STD and SPD modules can be developped, on request, with an output voltage of 100VDC.
Other control voltage on request.

SE-SS RANGE - Input/output modules

Optocoupled input and output modules for control interface. Plug-in relay solution.

	PRODUCT REFERENCE	Input voltage	Input R	Logic voltage	Output	Specifications	Dimensions mm
INPUT MODULE	SEA05004	36-60VAC/DC	5 kΩ	5VDC (3-8V)	NPN 25mA	AC/DC Input	ENCLOSURE COLOR: YELLOW / WHITE — 44 x 15 x 33
	SEA05010	90-140VAC/DC	20 kΩ	5VDC (3-8V)	NPN 25mA	AC/DC Input	
	SEA05020	180-280VAC/DC	54 kΩ	5VDC (3-8V)	NPN 25mA	AC/DC Input	
	SEA24010	90-140VAC/DC	20 kΩ	24VDC (15-30V)	NPN 25mA	AC/DC Input	
	SEA24020	180-280VAC/DC	54 kΩ	24VDC (15-30V)	NPN 25mA	AC/DC Input	
	SEC05003	10-32VDC	1 kΩ	5VDC (3-8V)	NPN 25mA	DC/ time delay input	
	SEC05101	3-10VDC	200 Ω	5VDC (3-8V)	NPN 25mA	DC quick input	
	SEC05103	10-32VDC	1 kΩ	5VDC (3-8V)	NPN 25mA	DC quick input	
	SEC15003	10-32VDC	1 kΩ	15VDC (8-20V)	NPN 25mA	DC/ time delay input	
	SEC15103	10-32VDC	1 kΩ	15VDC (8-20V)	NPN 25mA	DC quick input	
	SEC24001	3-10VDC	200 Ω	24VDC (15-30V)	NPN 25mA	DC/ time delay input	
	SEC24003	10-32VDC	1 kΩ	24VDC (15-30V)	NPN 25mA	DC/ time delay input	

EBS01000

	PRODUCT REFERENCE	Switching current	Switching voltage	Control voltage	Input R	Specifications	Dimensions mm
OUTPUT MODULE	SSA05320	3A	12-280VAC	5VDC (3-8V)	220 Ω	AC output	ENCLOSURE COLOR: BLACK / RED — 44 x 15 x 33
	SSA15320	3A	12-280VAC	15VDC (8-20V)	1 kΩ	AC output	
	SSA24320	3A	24-280VAC	24VDC (15-30V)	2200 Ω	AC output	
	SSC05120	1A	12-200VDC	5VDC (3-8V)	220 Ω	DC output	
	SSC05306	3A	3-60VDC	5VDC (3-8V)	220 Ω	DC output	
	SSC15306	3A	3-60VDC	15VDC (8-20V)	1 kΩ	DC output	
	SSC24306	3A	3-60VDC	24VDC (15-30V)	2200 Ω	DC output	

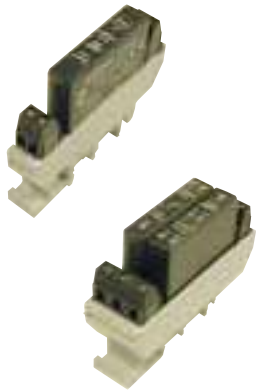
EBS08000

SUPPORT	EBS01000	DIN RAIL BASE for input/output Module
	EBS08000	I/O board for 8 input/output Module
	EBS16000	I/O board for 16 input/output Module
	EBS24000	I/O board for 24 input/output Module

Only the most common references are given in these tables. Other products with different voltages are 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 come in AC, DC outputs and three phase motor control : 2 and 3 phase switching and rotation reverser. Fitted with LED.



PRODUCT REFERENCE	Switching current	Switching voltage	Control voltage	Input R	Protec.	Specifications	Dimensions mm
XKA20420	4A	12-275VAC	6-30VDC	1 kΩ	VDR	1 pole AC synchronous output	12,2x76,4x53
XKA70420	4A	12-275VAC	15-30VAC/DC	1800 Ω	VDR	1 pole AC synchronous output	17,2x76,4x53
XKA70440	4A	12-440VAC	15-30VAC/DC	1800 Ω	VDR	1 pole AC synchronous output	17,2x76,4x53
XKA90440	4A	12-440VAC	150-240VAC/DC	41 kΩ	VDR	1 pole AC synchronous output	17,2x76,4x53
XKD10120	1A	2-220VDC	5-30VDC	1 kΩ	diode	1 pole DC output	12,2x76,4x53
XKD10306	3A	2-60VDC	5-30VDC	1 kΩ	diode	1 pole DC output	12,2x76,4x53
XKD11306	3A	2-60VDC	3-30VDC	600 Ω	diode	1 pole DC output	12,2x76,4x53
XKD70306	3A	2-60VDC	10-30VAC/DC	1800 Ω	diode	1 pole DC output	12,2x76,4x53
XKD90306	3A	2-60VDC	90-240VAC	41 kΩ	diode	1 pole DC output	17,2x76,4x53
XKH20120	10A	12-280VAC	10-32VDC	1640 Ω		1 pole AC synchronous output	25x76,4x65
XKM22440	4AC-51/2.5AC-53	24-460VAC	15-40VDC	2 kΩ	VDR	2 pole motor switching control	25,2x76,4x53
XKM23440	4AC-51/2.5AC-53	24-460VAC	12-35VDC	1 kΩ	VDR	3 pole motor switching control	47,5x76,4x53
XKR24440	4AC-51/2.5AC-53	24-460VAC	15-40VDC	2 kΩ	VDR	Motor change-over control	58,2x76,4x53
XKX21640	16AC-51/4AC-53	12-460VAC	20-30VDC	1140 Ω	RC-VDR	AC output + bypass	22,5x76,4x45

Other references available : please consult us.

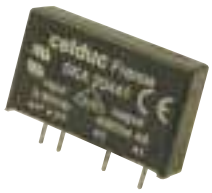
Our XKA & XKD ranges with pluggable connectors are also available on request.

SK RANGE

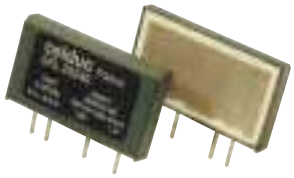
The SK range for PCB mount is available in 2 cases :

SKA / SKB (AC output) or SKD (DC output).
- -> 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
- -> SKD rated 3A / 60VDC or 1A / 200VDC

SKL for AC output with a ceramic substrate that can be mounted on a heatsink (see picture). The SKL range is ranging from 16A to 75A.
- -> For the power element, our SKL use TMS^2 technology (see the Power relay section introduction) reducing thermal stress and considerably improving life expectancy. Ideal for motor control (I^2t up to 5000 A^2s) with high inrush current as well as heating application. Easy to protect against short circuit with micro circuit breakers.



PRODUCT REFERENCE	Current	Switching voltage	Control voltage	Input R	LED	I^2t	Protec	Specifications	Dimensions mm
SK541100	2,5A	12-280VAC	3-30VDC	1 kΩ	no	50A²s	RC	AC zero-cross output	43,2 x 10,2 x 25,4
SK541101	2,5A	24-280VAC	3-30VDC	1 kΩ	no	50A²s	-	AC zero-cross output NC	
SKA10420	4A	12-275VAC	2.5-10VDC	330 Ω	no	50A²s	VDR	AC zero-cross output	
SKA10440	4A	12-460VAC	2,5-10VDC	330 Ω	no	50A²s	VDR	AC zero-cross output	
SKA10620	6A	12-280VAC	4-14VDC	440 Ω	no	1800A²s	-	TMS²,DCB Technology	
SKA10640	6A	24-600VAC	4-14VDC	440 Ω	no	1800A²s	-	TMS²,DCB Technology	
SKA11440	4A	12-460VAC	3-10VDC	220 Ω	yes	50A²s	VDR	AC zero-cross output	
SKA20420	4A	12-275VAC	4-30VDC	1 kΩ	no	50A²s	VDR	AC zero-cross output	
SKA20421	4A	12-275VAC	4-30VDC	1 kΩ	no	50A²s	VDR	AC random output	
SKA20440	4A	12-460VAC	4-30VDC	1 kΩ	no	50A²s	VDR	AC zero-cross output	
SKA20441	4A	12-460VAC	4-30VDC	1 kΩ	no	50A²s	VDR	AC random output	
SKA20460	4A	24-600VAC	5-30VDC	1 kΩ	no	72A²s	-	AC zero-cross output	
SKA20620	6A	12-280VAC	8-32VDC	1640 Ω	no	1800A²s	-	TMS²,DCB Technology	
SKA20640	6A	24-600VAC	8-32VDC	1640 Ω	no	1800A²s	-	TMS²,DCB Technology	
SKA21420	4A	12-275VAC	7-30VDC	750 Ω	yes	50A²s	VDR	AC zero-cross output	
SKA21421	4A	12-275VAC	7-30VDC	750 Ω	yes	50A²s	VDR	AC random output	
SKA21440	4A	12-460VAC	7-30VDC	750 Ω	yes	50A²s	VDR	AC zero-cross output	
SKA21441	4A	12-460VAC	7-30VDC	750 Ω	yes	50A²s	VDR	AC random output	
SKB10420	4A	12-280VAC	3-10VDC	330 Ω	no	50A²s	-	AC zero-cross output	
SKB10440	4A	24-600VAC	3.7-10VDC	270 Ω	no	72A₂ s	-	AC zero-cross output	
SKB20420	4A	12-280VAC	8-30VDC	1200 Ω	no	50A²s	-	AC zero-cross output	
SKB20440	4A	24-600VAC	9-30VDC	1200 Ω	no	72A²s	-	AC zero-cross output	
SKD10306	3A	2-60VDC	3-30VDC	1 kΩ	no	-	diode	DC output	
SKD10120	1A	2-220VDC	3-30VDC	1 kΩ	no	-	diode	DC output	



PRODUCT REFERENCE	max current with WF032000	Thyristor rating	Switching voltage	Control voltage	Input R	I^2t	Dimensions mm
SKL10120	16A	16A	12-280VAC	4-14VDC	440 Ω	128A²s	43,6 x 6,3 x 24,5
SKL10220	21A	25A	12-280VAC	4-14VDC	440 Ω	312A²s	
SKL10240	22A	25A	24-600VAC	4-14VDC	440 Ω	450A²s	
SKL10520	27A	50A	12-280VAC	4-14VDC	440 Ω	1800A²s	
SKL10540	27A	50A	24-600VAC	4-14VDC	440 Ω	1800A²s	
SKL10740	30A	75A	24-600VAC	4-14VDC	440 Ω	5000A²s	
SKL20120	16A	16A	12-280VAC	8-32VDC	1640 Ω	128A²s	
SKL20220	21A	25A	12-280VAC	8-32VDC	1640 Ω	312A²s	
SKL20240	22A	25A	24-600VAC	8-32VDC	1640 Ω	450A²s	
SKL20520	27A	50A	12-280VAC	8-32VDC	1640 Ω	1800A²s	
SKL20540	27A	50A	24-600VAC	8-32VDC	1640 Ω	1800A²s	
SKL20740	30A	75A	24-600VAC	8-32VDC	1640 Ω	5000A²s	

Random models on request.

heatsink SKL clip for SKL

PRODUCT REFERENCE	Output current	Output current with ventilation	Switching voltage	Control voltage	Input R	I^2t	Dimensions mm
SKH10120	10A@20°C	16A	12-280VAC	4-14VDC	440 Ω	128A²s	43,6 x 22 x 35,7
SKH10240	10A@25°C	25A	24-600VAC	4-14VDC	440 Ω	450A²s	
SKH20120	10A@20°C	16A	12-280VAC	8-32VDC	1640 Ω	128A²s	
SKH20240	10A@25°C	25A	24-600VAC	8-32VDC	1640 Ω	450A²s	

Other reference available : please contact us.

WF032000	Heatsink for SKL L=150mm 2,6-3 K/W	1L941000	Clips for SKL on WF03/04 (clips Max 23 Aavid Thermalloy)
WF042000	Heatsink for SKL L=100mm 3,6-4 K/W	1L942000	Clips for SKL with screw for other heatsinks

SN8 RANGE

NEW

Ultra miniature package for achieving optimum size / performance goal

-> This relay is designed for PCB board and heatsink to control heavy loads in an ultra-miniature, physically compact package.

PRODUCT REFERENCE	Current	Switching voltage	Control voltage	Input R	I^2t	Dimensions mm
SN842500	25A	24-280VAC	15-32VDC	2200 Ω	260A²s	35,05x12,70x28,32

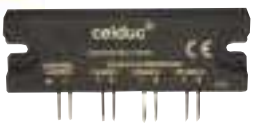
Other reference available : please contact us.

SHT RANGE

NEW

Three phase solid state relay in a single low profile package.

-> This relay is designed for PCB board to provide control of medium power in three phase applications.

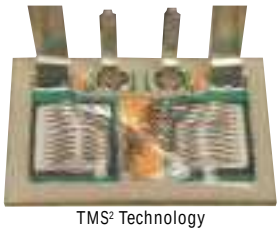


PRODUCT REFERENCE	Current	Switching voltage	Control voltage	Input R	I^2t	Dimensions mm
SHT842100	3x25A	24-280VAC	3,5-10VDC	250 Ω	260A²s	81,28x8,26x27,69
SHT842300	3x25A	24-280VAC	10-30VDC	950 Ω	260A²s	81,28x8,26x27,69

Other reference available : please contact us.

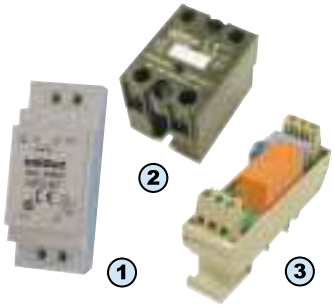
Power Relays

All our solid state relays fitted with back to back thyristors (power products : single phase, two phase, three phase) now use TMS² technology with a very high life expectancy compared to the majority of products on the market (application note on request)



TMS² Technology

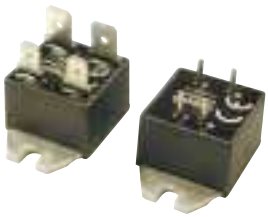
SOFTLIFE RANGE - "Get rid of your heatsinks!"



Relays combining the assets of dual technology : solid state and electromechanical.
These relays are designed to switch current up to 30A without heatsink and in a very compact sizes.
Relays with LED and RC and VDR protection.

PRODUCT REFERENCE	Switching current	Switching voltage	Control voltage	I²t	Protec.	Specifications	Fig n°	Dimensions mm
SOL42950	25A	24-275VAC	195-253VAC	312A²s	RC-VDR	domestic	1	35x58x90
SVX963350	30A	12-420VAC	20-30VDC	265A²s	RC-VDR	mixed relays	2	44,5x61,3x45
XKX21640	16AC1/4AC3	12-460VAC	20-30VAC	72A²s	RC-VDR	mixed, DIN rail mounted relay	3	22,5x77x45

SF RANGE



Miniature relays with "FASTON" terminals or PCB terminals.

PRODUCT REFERENCE	Switching current	Switching voltage	Control voltage	Input R	Specifications	Dimensions mm
SF441310	10A	12-280VAC	3-30VDC	1 kΩ	Random, "FASTON" terminals	21 x 35,5 x 15
SF541310	10A	12-280VAC	4-30VDC	1 kΩ	zero-crossed, "FASTON" terminals	
SF542310	10A	12-280VAC	4-30VDC	1 kΩ	zero-crossed, PCB terminals	
SF546310	20A	12-280VAC	4-30VDC	1 kΩ	zero-crossed, "FASTON" terminals	

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

SCF RANGE

To control resistive loads. "FASTON" terminals.

PRODUCT REFERENCE	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	LED	I²t	Protec.	Dimensions mm
SCF42160	25A	12-280VAC	600V	4-30VDC	600 Ω	yes	312A²s	-	44,5 x 58,2 x 27
SCF42324	25A	12-280VAC	600V	12-30VDC	1 kΩ	no	312A²s	VDR	
SCF62160	25A	24-600VAC	1200V	5-30VDC	600 Ω	yes	265A²s	-	

Other references (corresponding to the SC9 range) are available : please contact us.
These products should be mounted on heatsinks in order to reach nominal value.

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	I²t	Dimensions mm
SCFL42100	25A	12-280VAC	600V	4-30VDC	1 k.	312A²s	44,5x58,2x32

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

SC7 RANGE

The SC7 range with random or instant switching, integrating a snubber (RC) is especially designed for motor and transformer control. This range is also suitable (with closing times < 50 microseconds) for quick switching for uninterrupted power supplies (UPS, etc).

PRODUCT REFERENCE	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	I^2t	Dimensions mm
SC741110	12A	12-280VAC	600V	3-30VDC	1 kΩ	72A²s	44,5 x 58,2 x 27
SC742110	25A	12-280VAC	600V	3-30VDC	1 kΩ	312A²s	
SC744110	40A	12-280VAC	600V	3-30VDC	1 kΩ	612A²s	
SC745100	50A	12-280VAC	600V	3-30VDC	1 kΩ	1500A²s	
SC747100	75A	12-280VAC	600V	3-30VDC	1 kΩ	5000A²s	
SC762110	25A	24-520VAC	1200V	4-30VDC	1 kΩ	265A²s	
SC764110	50A	24-520VAC	1200V	4-30VDC	1 kΩ	1500A²s	
SC764910	50A	24-520VAC	1200V	90-240VAC/DC	30 kΩ	1500A²s	
SC767110	75A	24-520VAC	1200V	4-30VDC	1 kΩ	5000A²s	
SC768110	95A	24-520VAC	1200V	4-30VDC	1 kΩ	11000A²s	
SC769110	125A	24-520VAC	1200V	4-30VDC	1 kΩ	20000A²s	

Other reference (AC control...) are available. All our products can be made with 1600V peak : please contact us.
These products should be mounted on heatsink in order to reach nominal value.

SC8 RANGE

Protective cover and heatsinks : see accessories

The SC8 range with zero-cross switching, integrating a snubber (RC), is recommended for all types of applications.
The sc8xxxx products with 1600V peak are especially designed for capacity control : power factor corrector.

	PRODUCT REFERENCE	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	I^2t	Dimensions mm
*	SC800010	25A	24-520VAC	1200V	5-30VDC	1 kΩ	265A²s	44,5 x 58,2 x 27
	SC841110	12A	12-280VAC	600V	4-30VDC	1 kΩ	72A²s	
	SC841114	12A	12-280VAC	600V	4-30VDC	1 kΩ	72A²s	
	SC841810	12A	12-280VAC	600V	17-80VAC/DC	3 kΩ	72A²s	
	SC841910	12A	12-280VAC	600V	90-240VAC/DC	30 kΩ	72A²s	
	SC842110	25A	12-280VAC	600V	4-30VDC	1 kΩ	312A²s	
	SC842114	25A	12-280VAC	600V	4-30VDC	1 kΩ	312A²s	
	SC842810	25A	12-280VAC	600V	17-80VAC/DC	3 kΩ	312A²s	
	SC842910	25A	12-280VAC	600V	90-240VAC/DC	30 kΩ	312A²s	
	SC844110	40A	12-280VAC	600V	4-30VDC	1 kΩ	612A²s	
	SC844810	40A	12-280VAC	600V	17-80VAC/DC	3 kΩ	612A²s	
	SC844910	40A	12-280VAC	600V	90-240VAC/DC	30 kΩ	612A²s	
	SC861110	12A	24-520VAC	1200V	5-30VDC	1 kΩ	72A²s	
	SC862110	25A	24-520VAC	1200V	5-30VDC	1 kΩ	265A²s	
	SC862810	25A	24-520VAC	1200V	17-80VAC/DC	3 kΩ	265A²s	
	SC862910	25A	24-520VAC	1200V	90-240VAC/DC	30 kΩ	265A²s	
	SC864110	50A	24-520VAC	1200V	5-30VDC	1 kΩ	1500A²s	
	SC864810	50A	24-520VAC	1200V	17-80VAC/DC	3 kΩ	1500A²s	
	SC864910	50A	24-520VAC	1200V	90-240VAC/DC	30 kΩ	1500A²s	
	SC867110	75A	24-520VAC	1200V	5-30VDC	1 kΩ	5000A²s	
	SC867910	75A	24-520VAC	1200V	90-240VAC/DC	30 kΩ	5000A²s	
	SC868110	95A	24-520VAC	1200V	5-30VDC	1 kΩ	11000A²s	
	SC868910	95A	24-520VAC	1200V	90-240VAC/DC	30 kΩ	11000A²s	
	SC869110	125A	24-520VAC	1200V	5-30VDC	1 kΩ	20000A²s	
	SC869810	125A	24-520VAC	1200V	17-80VAC/DC	3 kΩ	20000A²s	
	SC869910	125A	24-520VAC	1200V	90-240VAC/DC	30 kΩ	20000A²s	
HIGH VOLTAGE RELAYS	SC885100	50A	24-690VAC	1600V	7-30VDC	1 kΩ	1500A²s	WITHOUT RC NETWORK
	SC887100	75A	24-690VAC	1600V	7-30VDC	1 kΩ	5000A²s	
	SC888100	95A	24-690VAC	1600V	7-30VDC	1 kΩ	11000A²s	
	SC889100	125A	24-690VAC	1600V	7-30VDC	1 kΩ	20000A²s	

* *For PCB mounting.*
other references (built-in VDR, LED...) can be made to minimum quantity.
These products should be mounted on heatsink in order to reach nominal value.
Some of our references fulfil the requirements according to DIN EN60601-1 (VDE 0750) for medical applications.

SC9 RANGE

The SC9 series with zero-cross switching is optimized for resistive load control (heating application)

Protective cover and heatsinks : see accessories

PRODUCT REFERENCE	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	LED	I²t	Protec.	Dimensions mm
SC941110	12A	12-280VAC	600V	4-30VDC	1 kΩ	no	72A²s		44,5 x 58,2 x 27
SC941160	12A	12-280VAC	600V	4-30VDC	600 Ω	yes	72A²s		
SC942110	25A	12-280VAC	600V	4-30VDC	1 kΩ	no	312A²s		
SC942120	25A	12-275VAC	600V	4-30VDC	1 kΩ	no	312A²s	VDR	
SC942160	25A	12-280VAC	600V	4-30VDC	600 Ω	yes	312A²s		
SC942900	25A	12-280VAC	600V	90-240VAC/DC	30 kΩ	no	312A²s		
SC942920	25A	12-275VAC	600V	90-240VAC/DC	30 kΩ	no	312A²s	VDR	
SC944110	40A	12-280VAC	600V	4-30VDC	1 kΩ	no	612A²s		
SC944160	40A	12-280VAC	600V	4-30VDC	600 Ω	yes	612A²s		
SC945060	50A	12-280VAC	600V	3-32VDC	600 Ω	Led	1500A²s		
SC945100	50A	12-280VAC	600V	4-30VDC	1 kΩ	no	1500A²s		
SC945160	50A	12-280VAC	600V	4-30VDC	600 Ω	yes	1500A²s		
SC945900	50A	12-280VAC	600V	90-240VAC/DC	30 kΩ	no	1500A²s		
SC947100	75A	12-280VAC	600V	4-30VDC	1 kΩ	no	5000A²s		
SC947160	75A	12-280VAC	600V	4-30VDC	600 Ω	yes	5000A²s		
SC947900	75A	12-280VAC	600V	90-240VAC/DC	30 kΩ	no	5000A²s		
SC948100	95A	12-280VAC	600V	4-30VDC	1 kΩ	no	11000A²s		
SC949100	125A	12-280VAC	600V	4-30VDC	1 kΩ	no	20000A²s		
SC961110	12A	24-600VAC	1200V	5-30VDC	1 kΩ	no	72A²s		
SC961160	12A	24-600VAC	1200V	5-30VDC	600 Ω	yes	72A²s		
SC962110	25A	24-600VAC	1200V	5-30VDC	1 kΩ	no	265A²s		
SC962114	25A	24-600VAC	1200V	5-30VAC	1 kΩ	no	265A²s		
SC962160	25A	24-600VAC	1200V	5-30VDC	600 Ω	yes	265A²s		
SC962800	25A	24-600VAC	1200V	17-80VAC/DC	3 kΩ	no	265A²s		
SC962960	25A	24-600VAC	1200V	90-240VAC/DC	30 kΩ	yes	265A²s		
SC965100	50A	24-600VAC	1200V	5-30VDC	1 kΩ	no	1500A²s		
SC965160	50A	24-600VAC	1200V	5-30VDC	600 Ω	yes	1500A²s		
SC967100	75A	24-600VAC	1200V	5-30VDC	1 kΩ	no	5000A²s		
SC967160	75A	24-600VAC	1200V	5-30VDC	600 Ω	yes	5000A²s		

All the products come in 800V peak (SC95xxxx).

This SC9 range can be made with a self-protection device in the event of high energy overvoltage : please contact us.

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

SIC/SIR RANGE

New Solid State Relay compact size pitch 22,5mm.
SIR model with spring terminals.

-> These relays are designed for power application where we want to save space and time with modern terminals.

PRODUCT REFERENCE	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	LED	I²t	Protec.	Dimensions mm
SIC841500	12A	12-280VAC	600V	7-30VDC	1 kΩ	no	72A²s		22,5x80x31
SIC864520	32A	24-600VAC	1200V	7-30VDC	1 kΩ	no	610A²s	VDR	22,5x80x37
SIC865560	32A	24-600VAC	1200V	7-30VDC	1 kΩ	yes	1500A²s		22,5x80x37
SIR841500	12A	12-280VAC	600V	7-30VDC	1 kΩ	no	72A²s		22,5x80x33
SIR842500	(16A)25A	12-280VAC	600V	7-30VDC	1 kΩ	no	312A²s		22,5x80x33

Other references available : please contact us.

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

Spring terminals : easy to connect !

POWER SSRs with diagnostic

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

Fault condition alarms:
- Line or load open
- Short circuit output

FAULT PROTEC	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	I²t	Dimensions mm
SCD845110	50A	70-280VAC	600V	7-32VDC	1 kΩ	1500A²s	45,5x58,2x35
SCD847110	75A	70-280VAC	600V	7-32VDC	1 kΩ	5000A²s	45,5x58,2x35
SCD865110	50A	150-510VAC	1200V	8-32VDC	1 kΩ	1500A²s	45,5x58,2x35
SCD867110	75A	150-510VAC	1200V	8-32VDC	1 kΩ	5000A²s	45,5x58,2x35
SILD845160	25A	70-280VAC	600V	3-32VDC	Ic<10mA	1500A²s	22,5x80x116
SILD865170	25A	150-510VAC	1200V	3,5-32VDC	Ic<10mA	1500A²s	22,5x80x116
SILD867170	35A	150-510VAC	1200V	3,5-32VDC	Ic<10mA	5000A²s	22,5x80x116

The SCD products should be mounted on heatsink in order to reach nominal value.

SCP RANGE - Transformer starting

The SCP relays are designed for the start-up of transformer primary circuits and all satured inductance coil loads preventing magnetising current peaks (application note on request)

PRODUCT REFERENCE	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	I²t	Sp cifications	Dimensions mm
SCP49110	40A*	180-280VAC	600V	4-30VDC	1 kΩ	610A²s	peak starting	44,5x58,2x27
SCP69110	40A*	300-480VAC	1200V	4-30VDC	1 kΩ	610A²s		

**See application note on data sheet.*
These products can be procured with high rating current on request.
For the start-up of three phase transformers, use our new range of SOFTSTARTERS SMCW or our SVTA / SWTA range : please consult us.

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

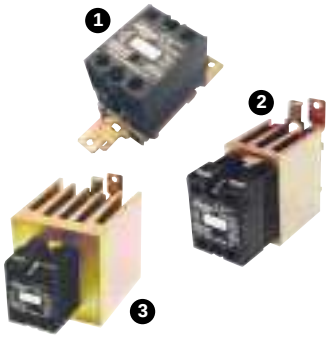
SV8 RANGE

Synchronous single phase relays, all options : LED,IP20,RC, VDR terminal protection, identification tag, cage terminals.

PRODUCT REFERENCE	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	LED	I²t	Protec.	Dimensions mm
SV841394	12A	12-275VAC	600V	10-32VDC	1250 Ω	yes	72A²s	RC-VDR	44,5 x 61,3 x 45
SV841994	12A	12-275VAC	600V	150-240VAC	21 kΩ	yes	72A²s	RC-VDR	
SV842170	25A	12-275VAC	600V	4-30VDC	600 Ω	yes	288A²s	VDR	
SV844394	45A	12-275VAC	600V	10-32VDC	1250 Ω	yes	1500A²s	RC-VDR	
SV844994	45A	12-275VAC	600V	150-240VAC	21 kΩ	yes	1500A²s	RC-VDR	
SV845170	50A	12-275VAC	600V	4-30VDC	600 Ω	yes	1500A²s	VDR	
SV861394	12A	24-500VAC	1200V	10-32VDC	1250 Ω	yes	72A²s	RC-VDR	
SV861994	12A	24-500VAC	1200V	150-240VAC	21 kΩ	yes	72A²s	RC-VDR	
SV865160	50A	24-600VAC	1200V	5-30VAC	600 Ω	yes	1500A²s	no	
SV865394	50A	24-500VAC	1200V	10-32VDC	1250 Ω	yes	1500A²s	RC-VDR	
SV865994	50A	24-500VAC	1200V	150-240VAC	21 kΩ	yes	1500A²s	RC-VDR	
SV867130	75A	24-500VAC	1200V	5-30VDC	1 kΩ	no	5000A²s	Transil	
SV867170	50A	24-500VAC	1200V	5-30VDC	600 Ω	yes	5000A²s	VDR	
SV867160	75A	24-600VAC	1200V	5-30VDC	600 Ω	yes	5000A²s	Led	
SV867470	75A	24-510VAC	1200V	3,5-32VDC		no	5000A²s	Led + VDR	

The whole SC range can be made in SV size (other controls, currents, random, etc) : please contact us.
These products should be mounted on heatsink in order to reach nominal voltage.

SWM RANGE - Solid state contactor



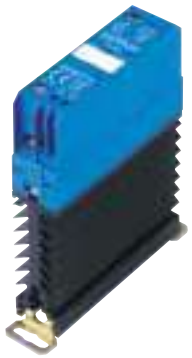
Single phase ready-to-use contactor integrating heatsink, DIN-rail mounting, IP20 terminal protection, LED, VDR, cage terminals... these products are defined with temperature rises of 50°C and permanent 8-hour operation (operating cycles = 100%) in compliance with the European standards

PRODUCT REFERENCE	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	I²t	Dimensions mm	Fig n°
SWM841080	9A	12-280VAC	600V	17-60VAC/DC	1700 .	610A²s	45x65x60	1
SWM841830	30A	12-280VAC	600V	10-30VDC	1250 Ω	1500A²s	48x72x120	2
SWM862080	30A	24-510VAC	1200V	17-60VAC/DC	1700 Ω	1500A²s	48x72x120	2
SWM864530	50A	24-500VAC	1200V	10-30VDC	1250 Ω	11000A²s	83x90x143	3
SWM865080	50A	24-510VAC	1200V	17-60VAC/DC	1700 Ω	5000A²s	83x90x143	3

celpac® RANGE

INSTALL IT FORGET IT

- 22,5 and 45mm Pitch.
- Large control range : 3-32VDC with an input current <10mA whatever the rating voltage and temperature range.
  AC control models available.
- Green LED visualization on the input.
- Very high immunity : Voltage protection on output and input : 4kV according to IEC61000-4-4 & 5.
- Models SILD845, SIL855 and SIM855 switch ON in case of overvoltage : autoprotection on AC-51 loads only.
- TMS^2 Technology with very long lifetime.
- I^2t value between 312 and 5000A^2 s hence protection against short-circuit on the load possible by Miniature Circuit Breakers (MCB).
  Low leakage current (<1mA) and low zero cross voltage (<10V) for zero cross SSR. Turn on time for random models.
- IP20 housing.
- Use screw clamp terminals.
- No tools needed for mounting and dismounting on DIN rail or direct mounting on panel.
- Designed in conformity with EN60947-4-3 (IEC947-4-3) and EN60950 -UL-cUL.
  CE mark : made in France with high quality level.



Single Phase SIL 22,5 mm

PRODUCT REFERENCE	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	I^2t	Protec.	Dimensions mm
SIL765170	35A (22A)	24-510VAC	1200V	3,5-32VDC	Ic<10mA	1500A^{2}s	Random	22,5x80x116
SIL841170	12A (12A)	12-275VAC	600V	3-32VDC	Ic<10mA	72A^{2}s	Zero-cross	22,5x80x116
SIL842170	25A (20A)	12-275VAC	600V	3-32VDC	Ic<10mA	312A^{2}s	Zero-cross	22,5x80x116
SIL842770	25A (20A)	12-275VAC	600V	17-60VAC/DC	Ic<10mA	312A^{2}s	Zero-cross	22,5x80x116
SIL842970	25A (20A)	12-275VAC	600V	150-240VAC/DC	Ic<10mA	312A^{2}s	Zero-cross	22,5x80x116
SIL855160	35A (22A)	12-480VAC	1200V	3-32VDC	Ic<10mA	1500A^{2}s	Zero-cross	22,5x80x116
SIL865170	35A (22A)	24-510VAC	1200V	3,5-32VDC	Ic<10mA	1500A^{2}s	Zero-cross	22,5x80x116
SIL865770	35A (22A)	24-510VAC	1200V	17-60VAC/DC	Ic<10mA	1500A^{2}s	Zero-cross	22,5x80x116
SIL865970	35A (22A)	24-510VAC	1200V	150-240VAC/DC	Ic<10mA	1500A^{2}s	Zero-cross	22,5x80x116
SIL867170	35A (28A)	24-510VAC	1200V	3,5-32VDC	Ic<10mA	5000A^{2}s	Zero-cross	22,5x80x116

** ( ) UL and AC-51*

Single Phase SIM 45 mm

SIM765170	40A (32A)	24-510VAC	1200V	3,5-32VDC	Ic<10mA	1500A^{2}s	Random	45X80X116
SIM855160	40A (32A)	24-510VAC	1200V	3,5-32VDC	Ic<10mA	1500A^{2}s	Zero-cross	45X80X116
SIM865170	40A (32A)	24-510VAC	1200V	3,5-32VDC	Ic<10mA	1500A^{2}s	Zero-cross	45X80X116
SIM865770	40A (32A)	24-510VAC	1200V	17-60VAC/DC	Ic<10mA	1500A^{2}s	Zero-cross	45X80X116
SIM865970	40A (32A)	24-510VAC	1200V	150-240VAC/DC	Ic<10mA	1500A^{2}s	Zero-cross	45X80X116
SIM867170	45A (35A)	24-510VAC	1200V	3,5-32VDC	Ic<10mA	5000A^{2}s	Zero-cross	45X80X116

Products also available in this range :

- ***SILD model with diagnostic*** *(see page 10) : status of the SSR and the load.*
  Without external power supply. Normally closed status output. Status visualization by LED. Status output can be chained. This range is patented.
- ***SIB two phase relays*** *(see page 12) : can be used in three phase applications by switching two phases only.*

Two phase relays

SCB RANGE

This 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.

All our SCB products are now available with LED

PRODUCT REFERENCE	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	I²t	Specifications	Dimensions mm	Fig n°
SCB345100	2X50A	12-280VAC	600V	4-30VDC	1 kΩ	1500A²s	random / 2 controls	44,8 x 58 x 27	1
SCB445100	2X50A	12-280VAC	600V	4-30VDC	1 kΩ	1500A²s	random / 2 controls		2
SCB564310	2X40A	24-510VAC	1200V	5-30VDC	1 kΩ	610A²s	zero-cross / 2 controls		3
SCB865300	2X50A	24-600VAC	1200V	10-30VDC	1400 Ω	1500A²s	zero-cross /1 control		4
SCB865600	2X50A	24-600VAC	1200V	10-30VDC	1800 Ω	1500A²s	zero-cross /2 controls		5
SCB665300	2X50A	24-600VAC	1200V	8-35VDC	1800 Ω	1500A²s	zero-cross /2 controls		2
SCB745300	2X50A	12-280VAC	600V	10-30VDC	1400 Ω	1500A²s	random /1 control		4
SCB765200	2X50A	24-600VAC	1200V	5-30VDC	1 kΩ	1500A²s	random / 2 controls		5
SCB867300	2X75A	24-600VAC	1200V	10-30VDC	1400 Ω	1500A²s	zero-cross /1 control		4
SCB867600	2X75A	24-600VAC	1200V	10-30VDC	1800 Ω	5000A²s	zero-cross /2 controls		5
SCB941300	2X12A	12-280VAC	600V	8-30VDC	1000 Ω	72A²s	zero-cross /1 control		4
SCB941600	2X12A	12-280VAC	600V	8-30VDC	1 K Ω	72A²s	zero-cross /2 controls		5
SCB942300	2X25A	12-280VAC	600V	8-30VDC	1000 Ω	288A²s	zero-cross /1 control		4
SCB942600	2X25A	12-280VAC	600V	8-30VDC	1 K Ω	288A²s	zero-cross /2 controls		5
SCB944300	2X40A	12-280VAC	600V	8-30VDC	1000 Ω	612A²s	zero-cross /1 control		4
SCB944600	2X40A	12-280VAC	600V	8-30VDC	1 K Ω	612A²s	zero-cross /2 controls		5
SCB945600	2X50A	12-280VAC	600V	8-30VDC	1 K Ω	1500A²s	zero-cross /2 controls		5
SCB962600	2X25A	24-600VAC	1200V	8-30VDC	1 K Ω	265A²s	zero-cross /2 controls		5
SCB965600	2X50A	24-600VAC	1200V	8-30VDC	1 K Ω	1500A²s	zero-cross /2 controls		5

Protection Cover : see accessories (1K470000).
These products should be mounted on heatsink in order to reach nominal value.

celpac® RANGE

They are perfectly adapted to three phase applications with breaking of two phases only.

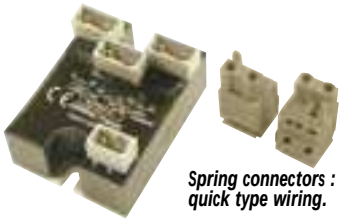
NEW

Two phase SIB 45 mm

PRODUCT REFERENCE	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	I²t	Specifications	Dimensions mm
SIB765170	2x25A	24-510VAC	1200V	3,5-32VDC	Ic<10mA	1500A²s	random	45 x 80 x 116
SIB865170	2x25A	24-510VAC	1200V	3,5-32VDC	Ic<10mA	1500A²s	zero-cross	
SIB865970	2x25A	24-510VAC	1200V	150-240VAC/DC	Ic<10mA	1500A²s	zero-cross	
SIB867170	2x25A	24-510VAC	1200V	3,5-32VDC	Ic<10mA	5000A²s	zero-cross	

Three phase relays

SCT RANGE



Spring connectors : quick type wiring.

Three phase solid state relays in a single phase relay enclosure.

PRODUCT REFERENCE	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	I²t	Specifications	Dimensions mm
SCT32110	3X10A	12-440VAC	800V	4-30VDC	330 Ω	72A²s	random	44,8 x 58 x 27
SCT62110	3X10A	12-440VAC	800V	4-30VDC	330 Ω	72A²s	zero-cross	

These products also come with PCB terminals.
These product should be mounted with heatsink in order to reach nominal value.

SGT RANGE

Standard three phase range to control resistive loads (AC-51) or for motor control (AC-53). These relays have LED

PRODUCT REFERENCE	Switching current AC-51	Current AC-53	Switching voltage	Peak voltage	Control voltage	Input R	I²t	Specifications	Dimensions mm
SGT369350A	3X40A	3X7,5A	24-520VAC	1200V	5-30VDC	270 Ω	610A²s	random	100 x 73,5 x 39,5
SGT669350A	3X40A	3X7,5A	24-520VAC	1200V	5-30VDC	270 Ω	612A²s		
SGT765370	3X50A	3X12A	24-520VAC	1200V	8.5-30VDC	620 Ω	1500A²s		
SGT767370	3X75A	3X16A	24-520VAC	1200V	8.5-30VDC	620 Ω	5000A²s		
SGT865350	3X50A	3X12A	24-520VAC	1200V	8.5-30VDC	620 Ω	1500A²s	zero-cross	
SGT867350	3X75A	3X16A	24-520VAC	1200V	8.5-30VDC	620 Ω	5000A²s		
SGT961360	3X12A	-	24-600VAC	1200V	8.5-30VDC	620 Ω	72A²s	zero-cross optimised for resistive loads	
SGT962360	3X25A	-	24-600VAC	1200V	8.5-30VDC	620 Ω	265A²s		
SGT965360	3X50A	-	24-600VAC	1200V	8.5-30VDC	620 Ω	1500A²s		
SGT965960	3X50A	-	24-600VAC	1200V	90-240VAC	21 kΩ	1500A²s		
SGT967360	3X75A	-	24-600VAC	1200V	8.5-30VDC	620 Ω	5000A²s		

These product should be mounted with heatsink in order to reach nominal value.

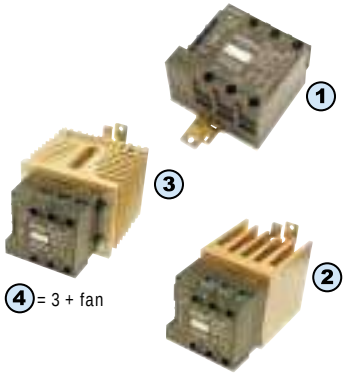
SVT RANGE

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

PRODUCT REFERENCE	Switching current AC-51	Current AC-53	Switching voltage	Calibre Thyristor	Control voltage	Input R	I²t	Protec.	Specifications	Dimensions mm
SVT764394	3X50A	3X12A	24-520VAC	50A	8.5-30VDC	620 Ω	1500A²S	RC-VDR	random	100 x 76 x 56,5
SVT861394	3X12A	3X2,5A	24-520VAC	12A	8.5-30VDC	620 Ω	72A²S	RC-VDR	zero-cross	
SVT861994	3X12A	3X2,5A	24-520VAC	12A	90-240VAC	21 kΩ	72A²S	RC-VDR		
SVT864374	3X50A	3X12A	24-520VAC	50A	10-32VDC	580 Ω	1500A²S	VDR		
SVT864394	3X50A	3X12A	24-520VAC	50A	8.5-30VDC	620 Ω	1500A²S	RC-VDR		
SVT864994	3X50A	3X12A	24-520VAC	50A	90-240VAC	21 kΩ	1500A²S	RC-VDR		
SVT867394	3X50A	3X16A	24-520VAC	75A(90A)	8.5-30VDC	620 Ω	5000A²S	RC-VDR		
SVT867994	3X50A	3X16A	24-520VAC	75A(90A)	90-240VAC	21 kΩ	5000A²S	RC-VDR		
SVT868394	3X50A	3X24A	24-520VAC	95A	8.5-30VDC	620 Ω	11000A²S	RC-VDR		
SVT868994	3X50A	3X24A	24-520VAC	95A	90-240VAC	21 kΩ	11000A²S	RC-VDR		
SVT869394	3X50A	3X32A	24-520VAC	125A	8.5-30VDC	620 Ω	20000A²S	RC-VDR		
SVT869994	3X50A	3X32A	24-520VAC	125A	90-240VAC	21 kΩ	20000A²S	RC-VDR		
SVT961360	3X12A	-	24-600VAC	12A	8.5-30VDC	620 Ω	72A²S	-	zero-cross optimised for resistive loads	
SVT965360	3X50A	-	24-600VAC	50A	8.5-30VDC	620 Ω	1500A²S	-		
SVT965760	3X50A	-	24-600VAC	50A	10-30VAC/DC	410 Ω	1500A²S	-		
SVT965960	3X50A	-	24-600VAC	50A	90-240VAC	21 kΩ	1500A²S	-		
SVT967360	3X75A	-	24-600VAC	75A	8.5-30VDC	620 Ω	5000A²S	-		

These product should be mounted with heatsink in order to reach nominal value.

SWT RANGE - Solid state contactors



Three phase contactor with heatsink and DIN rail mounting. Fitted with a LED 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	Current AC-53	Switching voltage	Peak voltage	Control voltage	Input R	I²t	Specifications	Dimensions mm	Fig n°
SWT860330	3X5A	3X5A	24-520VAC	1200V	10-30VAC/DC	410 Ω	265A²S	zero-cross	83x76x72	1
SWT860390	3X5A	3X5A	24-520VAC	1200V	90-240VAC	21 kΩ	265A²S		83x76x72	1
SWT861230	3X22A	3X12A	24-520VAC	1200V	10-30VAC/DC	410 Ω	1500A²S		83x90x155	2
SWT861290	3X22A	3X12A	24-520VAC	1200V	90-240VAC	21 kΩ	1500A²S		83x90x155	2
SWT861730	3X28A	3X16A	24-520VAC	1200V	10-30VAC/DC	410 Ω	5000A²S		110x90x172	3
SWT861790	3X28A	3X16A	24-520VAC	1200V	90-240VAC	21 kΩ	5000A²S		110x90x172	3
SWT862030	3X32A	3X24A	24-520VAC	1200V	10-30VAC/DC	410 Ω	11000A²S		110x90x172	3
SWT862090	3X32A	3X24A	24-520VAC	1200V	90-240VAC	21 kΩ	11000A²S		110x145x172	3
SWT865080	3X50A	-	24-520VAC	1200V	10-30VAC/DC	410 Ω	5000A²S		83x90x155	4

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.

Motor control

SG9 - SW9 - Reversing switches

1 To be mounted on heatsink

3 ready to use

2

4 = SG969300 in SV IP20 enclosure

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 come with LED and protection against simultaneous controls.

PRODUCT REFERENCE	Switching current AC-53	Switching voltage	Control voltage	I^2t	Protec.	Specifications	Dimensions mm	Fig n°
SG969100	3X6,6A	24-520VAC	10-30VDC	612A²s	reversing + time delay	3 phase switching	100x73,5x39,5	1
SG969300	3X8,5A	24-520VAC	12-30VDC	1500A²s		2 phase switching	100x73,5x39,5	1
SV969300	3X8,5A	24-520VAC	12-30VDC	1500A²s		2 phase switching IP20 enclosure	100x76x56,5	4
SV969500	3X16A	24-550VAC	12-30VDC	5000A²s		2 phase switching IP20 enclosure	100x76x56,5	4
SW960330	3X4,5A	24-520VAC	12-30VDC	1500A²s		2 phase switching	100x76x72	2
SW961230	3X8,5A	24-520VAC	12-30VDC	1500A²s		2 phase switching	83x90x155	3

SOFT STARTER SMCV - SMCW

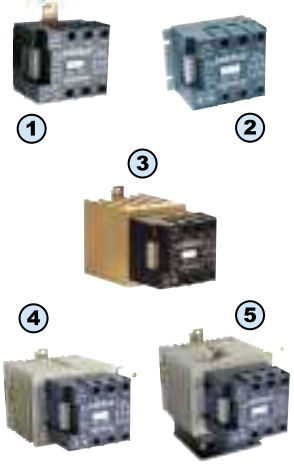
Make the most of all its advantages !

Motor control :
- -> Efficient reduction of torque and starting current

Incandescent or infrared lamp starting :
- -> Reduction of inrush current
- -> Increase in life expectancy

Transformer control (loaded) :
- -> Elimination of saturation current
- -> Improved control and protection

Whatever your application :
- -> Diagnosis of network, load and state of product
- -> Better balance of and less interference on starters (full control of the 3 phases!)
- -> Simple use faciliting implementation and adjustements
- -> As compact as an electronic contactor



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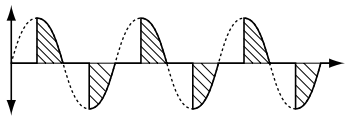
PRODUCT REFERENCE	Pmax motor 400VAC Y	Pmax motor 400VAC D	Pmax motor 230VAC Y	Pmax motor 230VAC D	Max. Current AC53a Max.	Max. Current AC53a EN60947-4-2	Specifications	Dimensions mm	Fig n°
SMCV6080	7,5kW	13kW	4,3kW	7,5kw	16A	11,5A	Heatsink not provided	100x76x58,5	2
SMCV6110	11kW	19kW	6,4kW	11kW	25A	15,5A			
SMCV6150	15kW	26kW	8,6kW	15kW	30A	22,5A			
SMCW6020	2,5kW	4,3kW	1,4kW	2,5kW	5,6A	4A	Supplied with built-in heatsink	83x100x74	1
SMCW6080	7,5kW	13kW	4,3kW	7,5kW	16A	11,5A		83x110x155	3
SMCW6110	11kW	19kW	6,4kW	11kW	25A	15,5A		110x110x180	4
SMCW6150	15kW	26kW	8,6kW	15kW	30A	22,5A		110x141x180	5
SMCW6151	15kW	26kW	8,6kW	15kW	30A(AC53b)	22,5A(AC53b)	Ext. bypass required	83x100x74	1

Common characteristics	Range of voltage and network frequency	Control	Diagnostic output	Operating Temp rature	Insulation	Max section of wires
Values given at 40°C ambient	200-480VAC 40-65Hz	10-24VDC ou contact	0-24V 1A AC/DC	-40 - +100°C	4kV	E=2,5mm² S=10mm²

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.

SG4 RANGE - Phase angle controller

This relay is designed to proportionally vary the switching moment on a sinusoidal mains at an analog output 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

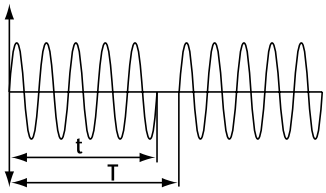


PRODUCT REFERENCE	Switching current	Switching voltage	Control voltage	Input R	I²t	Dimensions mm
SG441020	10A	115-265VAC	0-10VDC	400 kΩ	72A²s	100 x 73,5 x 39,5
SG444020	40A	115-265VAC	0-10VDC	400 kΩ	1500A²s	
SG444120	40A	115-265VAC	Potentiometer	200 kΩ	1500A²s	
SG444420	40A	115-265VAC	4-20mA	250 Ω	1500A²s	
SG464020	40A	200-460VAC	0-10VDC	400 kΩ	1500A²s	
SG464120	40A	200-460VAC	Potentiometer	200 kΩ	1500A²s	
SG464420	40A	200-460VAC	4-20mA	250 Ω	1500A²s	
SG468020	70A	200-460VAC	0-10VDC	400 kΩ	5000A²s	
SG468120	70A	200-460VAC	Potentiometer	200 kΩ	5000A²s	
SG468420	70A	200-460VAC	4-20mA	250 Ω	5000A²s	
SG469020	110A	200-460VAC	0-10VDC	400 kΩ	20000A²s	
SG469120	110A	200-460VAC	Potentiometer	200 kΩ	20000A²s	
SG469420	110A	200-460VAC	4-20mA	250 Ω	20000A²s	

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

SG5 RANGE - Full wave pulse controller

This relay has an analog input isolated from the mains to proportionnally vary the cyclic operating ratio of a load (t/T). Control and mains are synchronous and output only has full periods. Models with LED and RC and VDR network protection.
These series of relays is suitable for many characteristics:
- Main voltage: 230VAC or 400VAC (50 ou 60Hz)
- Load current 10A, 40A
- Analog input 0 à 10V, 4 à 20mA, 0 à 5V or potentiometric (3rd terminal available).



PRODUCT REFERENCE	Switching current	Switching voltage	Control voltage	Input R	I²t	Dimensions mm
SG541020	10A	230VAC	0-10VDC	250 kΩ	72A²s	100 x 73,5 x 39,5
SG541120	10A	230VAC	Potentiometer	1 MΩ	72A²s	
SG541420	10A	230VAC	4-20mA	350 Ω	72A²s	
SG544020	40A	230VAC	0-10VDC	350 Ω	610A²s	
SG544120	40A	230VAC	Potentiometer	1 MΩ	610A²s	
SG564020	40A	400VAC	0-10V	250 kΩ	610A²s	
SG564120	40A	400VAC	Potentiometer	1 MΩ	610A²s	
SG564420	40A	400VAC	4-20mA	350 Ω	610A²s	

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

THREE PHASE UNIVERSAL DIGITAL PROPORTIONAL CONTROLLER

Power under control!

-> Allows controlling any kind of loads (except capacitive) 3 or 4 wires (neutral), delta or star connection :

- -Resistive loads for temperature control (infrared lamps, kilns, resistors, ...)
- -Resistive loads for lighting 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, ...)

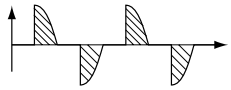
-> Six thyristor proportional phase angle controller (Three phase positive and negative cycle control) : Balanced currents, less harmonics, ...

-> Softstart and softstop ramps (Increases the lifetime expectancy of the assembly)

-> Diagnostic functions

-> Compact housing

SVTA - SWTA RANGE



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READY TO USE - VALUES GIVEN AT 25¡C AMBIENT

PRODUCT REFERENCE	Max. current AC51	Max. current AC53a	Control	Dimensions mm	Fig n¡
SWTA4610	7A	7A	0-10V	83x110x74	1
SWTA4620	22A	16A	0-10V	83x110x155	2
SWTA4630 SWTA4631 SWTA4634	32A	25A	0-10V Potentiometer 4-20mA	110x110x180	3
SWTA4650 SWTA46501 (*)	50A	30A	0-10V	110x141x180	4

** Fan 24 VDC.*

PRODUCTS TO BE MOUNTED ON A HEATSINK

PRODUCT REFERENCE	Max. current AC511	Max. current AC53a	Control	Dimensions mm
SVTA4650 SVTA4651	50A	16A	0-10V Potentiometer	100x76x58,5
SVTA4684	95A(**)	25A	4-20mA	100x76x58,5
SVTA4690 SVTA4694	125A(**)	30A	0-10V 4-20mA	100x76x58,5

*** Max. wire size = 10mm² : double wires or use special adaptors for current > 50A.*
Please refer to the mounting instructions.

SCC, SGC, SGD RANGE... DC Relays

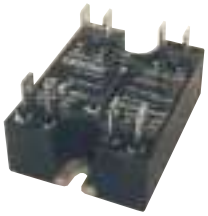
This range of relays is designed to switch loads on DC networks such as solenoids, brakes, indicators... under voltages from 2 to 200 VDC with currents from 6 to 60A. 2 types of connections : screw on "FASTON" terminals.

PRODUCT REFERENCE	Switching current	Switching voltage	Control voltage	Input R	Specifications	Dimensions mm	Fig nj
SCC10506	5A	2-60VDC	3-16VDC	470 Ω	bipolar transistor DC output	44,5x58,2x27	1
SCC11506	15A	2-60VDC	3-16VDC	470 Ω			
SCC20506	5A	2-60VDC	10-32VDC	2200 Ω			
SCC21506	15A	2-60VDC	10-32VDC	2200 Ω			
SCC21520	15A	2-200VDC	10-32VDC	2200 Ω			
SGC12006	20A	2-60VDC	3-16VDC	470 Ω		67x38x37,5	2
SGC20420	20A	2-200VDC	3-30VDC	1 kΩ			
SGC22006	20A	2-60VDC	10-32VDC	2200 Ω			
SGD15100	30A	10-32VDC	3-32VDC	1500 Ω	MOS transistor output	73x100x27	3
SGD17100	60A	10-32VDC	3-32VDC	1500 Ω			
SGD25100	30A	18-60VDC	3-32VDC	1500 Ω			
SGD27100	60A	18-60VDC	3-32VDC	1500 Ω			

NEW *Other DC relays under development : with MOSFET and IGBT 's technologies :*

Output: 50 VDC –> 150 A
100 VDC –> 100 A
200 VDC –> 100 A
600 VDC –> 20 A
–> *Please contact us*

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	I²t	Dimensions mm	Led
SCQ842000	4x25A	12-280VAC	600V	3-32VDC	I≤10mA	288A²s	44,5x58,2x27	no
SCQ842060	4x25A	12-280VAC	600V	3-32VDC	I≤10mA	288A²s	44,5x58,2x27	yes

NEW

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

SPECIAL RELAYS

SAS relays

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

SG241010 relay

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

ST relay

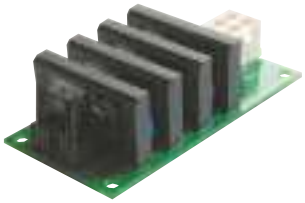
ST645000: flashing 1/2Hz 230VAC 10A.
ST647000: flashing 1/2Hz 230VAC 25A.
ST323000: flashing 1/2Hz 30-60VDC 10A.

ECD05000 module

Current detection module 0,5A. to 16A, 50-60Hz.
Alarm output 30VDC 10ma.

celduc¤ relais is the specialist of typical customers applications.

4 SKLS
5000 A² S on DIN Rail adaptators.



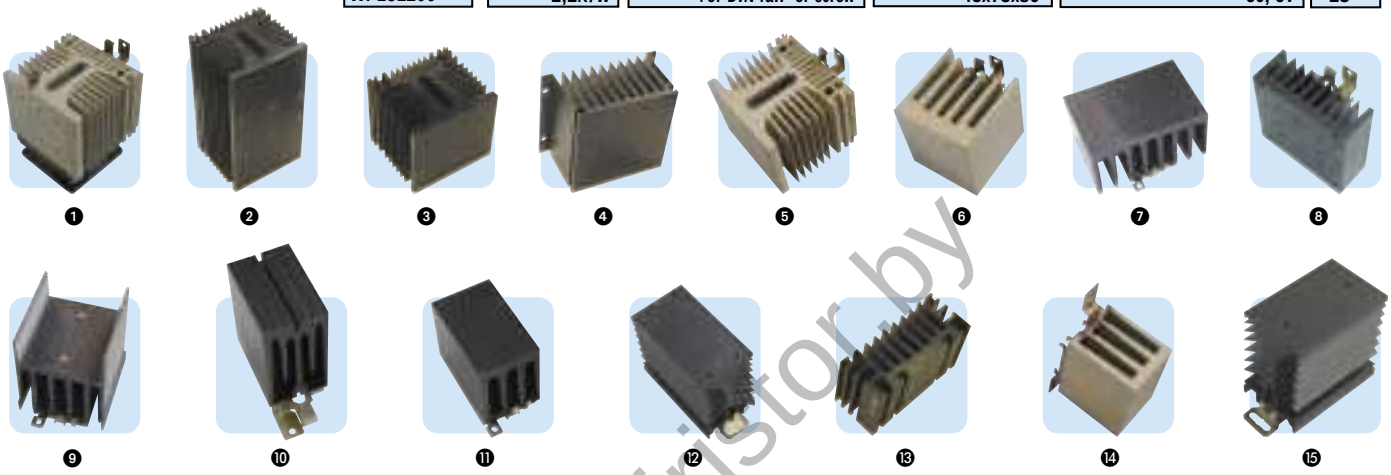
4 SKL
on compact card.

This device using SSRs controls AC motors in hazardous area. Control by push-buttoms with embedded magnet actuating Reed swicthes.

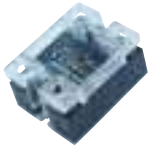
HEATSINKS

WF 23/27 ▻ see 1LWD.
** The Rth value are given for a temperature of 50°C in calm air*
*** Other dimensions available on request*

PRODUCT REFERENCE	Thermal characteristics	Specifications	Dimensions mm	Relay type	Fig nj
WF031100 *	0,3K/W	ventiled for DIN rail or screw	110x120x145	SC,SV, SG, SGT, SVT	1
WF050000	0,55K/W	DIN rail adaptator as option	110x100x200	SC,SV, SG, SGT, SVT	2
WF070000	0,75K/W	DIN rail adaptator as option	110x100x100	SC,SV, SG, SGT, SVT	3
WF092000	0,9K/W	to be screwed	120x75x120	SC,SV, SG, SGT, SVT	4
WF115100	0,9K/W	For DIN rail or screw	110x100x90	SC,SV, SG, SGT, SVT	5
WF131100	1,1K/W	For DIN rail or screw	83x90x90	SC, SV	6
WF120100	1,2K/W	For DIN rail or screw	112x60x80	SC,SV, SG, SGT, SVT	7
WF121000	1,2K/W	For DIN rail or screw	100x40x100	SC,SV, SG, SGT, SVT	8
WF129100	1,3K/W	For DIN rail or screw	74x91x77	SC, SV	9
WF141100	1,5K/W	For DIN rail or screw	45x84x65	SC, SV	10
WF191100	1,95K/W	For DIN rail or screw	48x65x80	SC, SV	11
WF152100	2,4K/W	For DIN rail or screw	45x73x70	SC, SV	12
WF210000**	2,1K/W	DIN rail adaptator as option	96x41x55	SC, SV	13
WF262100	2,2K/W	For DIN rail or screw	48x60x72	SC, SV	14
WF151200	2,2K/W	For DIN rail or screw	45x73x80	SC, SV	15



Accessories



PROTECTION COVERS

1K199000	ON SGT/SG9/SMC relays
1K460000	on SC relays (except SCB et SC 125A)
1K470000	assembling on all SC/SCB relays

SYMMETRICAL DIN RAIL ADAPTATORS

1LD00000	DIN rail adaptator for SC/SV8 horizontal mounting
1LD00400	DIN rail adaptator for WF21/16/13/07/05
1LD00500	DIN rail adaptator for SG/SVT/SV969300
1LD12020	DIN rail adaptator for SC/SV8 montage vertical

SCREW KIT

1LK00100	mounting on SC-SF-SV8/heatsink or SC-SV8/1LD12020
1LK00200	mounting on SG-SVT-SV9/heatsink or 1LD00500
1LK00300	mounting on heatsink/1LD00400 or SC-SV8/1LD00000

MOUNTING + HEATSINK + DIN ADAPTATOR OPTION

1LW23100	SC/SV mounting on WF23 + WF23100 + 1LD12020
1LW27100	SC/SV mounting on WF27 + WF27100 + 1LD12020
1LWD1202	SC/SV mounting on 1LD12020

RELAY/HEATSINK THERMAL SEALS

5TH15000	Thermal grease for 30 relays SG/SVT ou 60 relays SC/SV8
5TH21000	Thermal precut film for SC/SV

MOUNTING OPTION ONLY IF QUANTITY>10 (SCREW KIT INCLUDED)

1LW00000	mounting of relay on heatsink
1LWD0000	mounting of heatsink on DIN rail adaptator

APPLICATION 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^2 technology.
- Short circuit protection of solid state relays : fuses and circuit breakers.
- Application of solid state relays.
- Solid state relays on resistive loads (heating application).
- Three phase motor.
- Transformer control.
- Incandescent lamp control.
- Discharge lamp control.
- Refrigerated unit control.
- Categories of use of solid state relays.
- Solid state relays in emergency power supplies (UPS).
- Solid state relays on capacitive loads : power factor corrector (PFC) application.
- SCB relays in injection presses.
- Application of SKL et SKH relays.
- Softstart and reversing relays.
- Softstart relays in transformer control.
- Softstart relays in incandescent and infrared lamp control.
- Etc....

Реле, твердотельное каталог, описание, технические, характеристики, datasheet, параметры, маркировка,габариты, фото, даташит,

QR код

Реле, твёрдотельное купить, продажа, в наличии, Минск, Беларусь