Реле, твёрдотельное, Минск т.80447584780
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Реле, твердотельное каталог, описание, технические, характеристики, datasheet, параметры, маркировка,габариты, фото, даташит,

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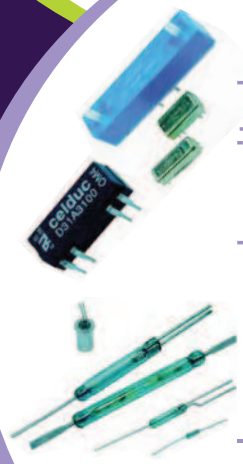
celduc® relais

www.celduc.com

Selection guide catalogue

solid state relays

magnetic sensors



reed relays and switches

PROUD TO SERVE YOU

Dear customers,

New means of communication make paper-catalogues less useful but this short-form catalogue is an eagerly anticipated product selection guide.

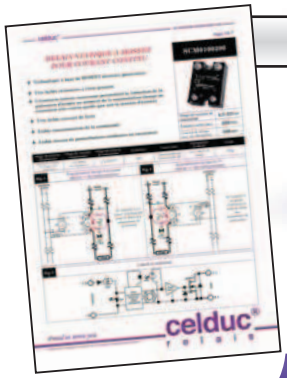
Our strategy has always been to focus on research and innovation whilst remaining flexible enough to adapt products to our customers' applications and requirements. As a result we can offer products engineered to the highest quality for competitive prices. These core values have inspired us to develop several new products which can be found in this selection guide.

This selection guide catalogue is available in 6 languages, Chinese included. This demonstrates our worldwide presence and export dynamism: celduc® relais exports more than 60% of its production across the the main industrial countries, under our brand or through OEM contracts.
celduc® relais is a leader in its three strategic business units which are Solid State Relays (S), Magnetic proximity sensors (P) and reed relays & switches (R).
Discover our new celpac®2G (2nd generation of 22,5mm pitch SSR and contactors), okpac® and flatpac® range with which we have had great success worldwide across many different applications.

Our main focus is achieving the best possible service and most reliable products possible and we invest a lot of time in this process. celduc® team would be pleased to answer any questions you may have to help you find the ideal product for your requirements. Ask us and we will produce it for you.

Marc Combette
General Manager

All our technical data-sheets are available in our website.



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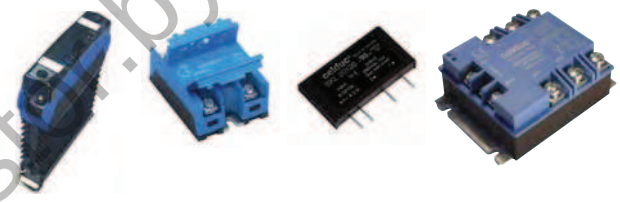
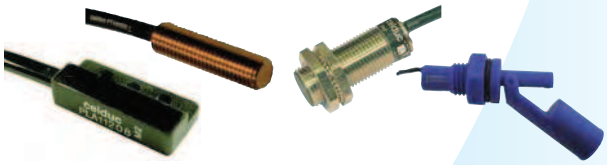
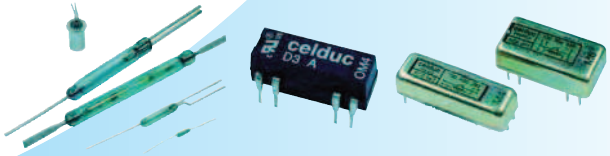
celduc® relais products







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Solid State Relays

SCOPE

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 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
Capacitors control

STANDARDS

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

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

Contents

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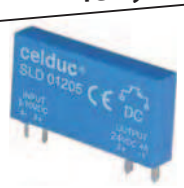
PCB relays

SLIM range (miniature)

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

100% compatible with electromechanical relays



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

Other miniature solid state relay options are available on request.

1

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

2

SP-ST range (standard)

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

100% compatible with electromechanical relays

1

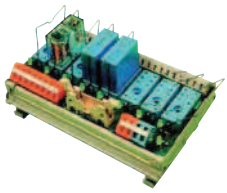
2

3

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

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

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



4

SK range

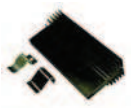
The SK range for PCB mounting is available in different models :
SKA/SKB (AC output) or SKD/SKLD (DC output – see pages 19-20)
→ SKA up to 6A 230 or 400VAC with built-in voltage protection, ideal for solenoid or motor control.
→ SKB up to 4A 230 or 400VAC for resistive loads.

Product reference	Current	Switching voltage	Control voltage	Input R	LED	I²t	Protec.	Specifications	Dimensions mm
SK541101	2,5A	24-280VAC	3-30VDC	1 kΩ	no	50A²s	–	AC zero-cross output / Normaly closed	43,2x10,2x25,4
SKA10420	4A	12-275VAC	2,5-10VDC	330 Ω	no	50A²s	VDR	AC zero-cross output / most types of loads	
SKA20420	4A	12-275VAC	4-30VDC	1 kΩ	no	50A²s	VDR		
SKA10440	4A	12-460VAC	2,5-10VDC	330 Ω	no	50A²s	VDR		
SKA11440	4A	12-460VAC	3-10VDC	220 Ω	yes	50A²s	VDR		
SKA20440	4A	12-460VAC	4-30VDC	1 kΩ	no	50A²s	VDR		
SKA21440	4A	12-460VAC	7-30VDC	750 Ω	yes	50A²s	VDR		
SKA20460	4A	24-600VAC	5-30VDC	1 kΩ	no	72A²s	–		
SKA20421	4A	12-275VAC	4-30VDC	1 kΩ	no	50A²s	VDR	AC random output / most types of loads	
SKA20441	4A	12-460VAC	4-30VDC	1 kΩ	no	50A²s	VDR		
SKA21441	4A	12-460VAC	7-30VDC	750 Ω	yes	50A²s	VDR		
SKB10420	4A	12-280VAC	3-10VDC	330 Ω	no	50A²s	–	AC zero-cross output / resistive loads	
SKB10440	4A	24-600VAC	3,7-10VDC	270 Ω	no	72A²s	–		
SKB20420	4A	12-280VAC	8-30VDC	1200 Ω	no	50A²s	–		
SKB20440	4A	24-600VAC	9-30VDC	1200 Ω	no	72A²s	–		

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 (see the power relay section introduction) 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	Input R	I²t	Specifications	Dimensions mm
SKL10120	16A	16A	12-280VAC	4-14VDC	440 Ω	128A²s	AC zero-cross output	43,4 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		
SKL10540	27A	50A	24-600VAC	4-14VDC	440 Ω	1800A²s		
SKL10560	27A	50A	24-690VAC	4-14VDC	440 Ω	1800A²s		
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		
SKL10421	27A	40A	12-280VAC	3-14VDC	660 Ω	1150A²s	AC random output	
SKL10521	27A	50A	12-280VAC	3-14VDC	660 Ω	2450A²s		
SKL20241	22A	25A	24-600VAC	8-32VDC	1640 Ω	450A²s		

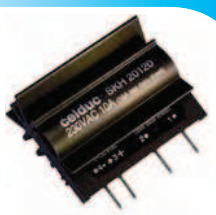
See DC output models – pages 19-20.



	Accessories for SKL
WF032000	Heatsinks for SKL L=150mm 2,6-3 K/W
WF042000	Heatsinks for SKL L=100mm 3,6-3 K/W

	Accessories for SKL
1L941000	Clip for SKL on WF03/04
1L942000	Clip for SKL with screw for other heatsinks

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



Product reference	Output current	Output current with ventilation	Switching voltage	Control voltage	Input R	I²t	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 references available – please contact us.

INTERFACE

XK range

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

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

1

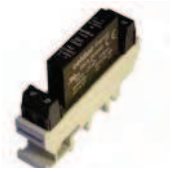
2

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

XKLD0020 has all protections included and is designed for inductive loads with high switching frequency
-Diagnostic status output (potential free)
-Control visualization by green LED
-Output DC visualization by red LED
-Built-in clamping voltage
-Built-in free wheel diode
-This product also includes a fuse on board to protect the installation.

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

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



	Product reference	Switching current	Switching voltage	Control voltage	Input R	Protec.	Specifications	Dimensions mm
DC	**XKLD31006**	10A	12-36VDC	10-30VDC	1 kΩ	diode	Sortie DC - Technologie MOSFET	12,2x76,4x53

3

4

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

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

XKM23 : 3 relays
XKR24 & XKRD : 4 relays

SN8 range

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

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

Other references available : please contact us.

SHT range

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

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

Other references available : please contact us.

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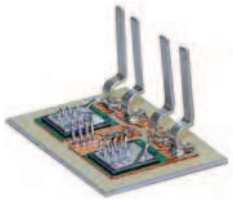
Power Relays



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).

okpac®

Innovation, Performance and Design !

Innovations :

- Screw connection up to 50mm²
- Removable control terminals
- Removable IP20
- Versatile, easy and quick connections
- Same screwdriver for outputs and inputs
- Tightening on metal baseplate not on plastic
- SSR, mains and load status
- Less potting resin : environmentally friendly
- 25 to 30% lighter than the SC range.

Performances :

- Designed for all types of loads Current from 12 to 125A
- TMS² technology 4th generation with very long life time expectancy
- Output voltage from 24 to 690 VAC (600V-1200V-1600V peak)
- Very low zero-crossing level
- Large and regulated AC and DC input voltage
- Control status LED
- Very high immunity according IEC/EN61000-4-4 (bursts) and IEC/EN61000-4-5 (spikes) : 4KV with no change of state
- EMC compatible for industrial environment
- UL/cUL, VDE (EN60950), IEC/EN60947-4-3, CE marking
- Itsm up to 2000A and I²t>20 000A²s
- Protection against circuit breaker.

S07 range

Typical applications : Motors (AC-53), inductive loads and phase angle control applications.
- Random or instant switching
- Voltage protection on input (transil) and output (RC and VDR)

Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Control current	I²t	Dimensions mm
SO745090	50A	12-275VAC	600V	3-32VDC	Ic<13mA	2500A²s	
SO747090	75A	12-275VAC	600V	3-32VDC	Ic<13mA	7200A²s	
SO763090	35A	24-510VAC	1200V	3,5-32VDC	Ic<13mA	1250A²s	
SO765090	50A	24-510VAC	1200V	3,5-32VDC	Ic<13mA	2500A²s	45x58,5x30
SO767090	75A	24-510VAC	1200V	3,5-32VDC	Ic<13mA	7200A²s	
SO768090	95A	24-510VAC	1200V	3,5-32VDC	Ic<13mA	14400A²s	
SO769090	125A	24-510VAC	1200V	3,5-32VDC	Ic<13mA	24000A²s	
SO789060	125A	24-690VAC	1600V	3,5-32VDC	Ic<13mA	24000A²s	

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

S08 range

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

Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Control current	I²t	Dimensions mm
SO842074	25A	12-275VAC	600V	3-32VDC	Ic<13mA	600A²s	
SO842974	25A	12-275VAC	600V	20-265VAC/DC	Ic<10mA	600A²s	
SO843070	35A	12-275VAC	600V	3-32VDC	Ic<13mA	1250A²s	
SO843970	35A	12-275VAC	600V	20-265VAC/DC	Ic<10mA	1250A²s	
SO845070	50A	12-275VAC	600V	3-32VDC	Ic<13mA	2500A²s	
SO847070	75A	12-275VAC	600V	3-32VDC	Ic<13mA	7200A²s	
SO848070	95A	12-275VAC	600V	3-32VDC	Ic<13mA	14400A²s	
SO849070	125A	12-275VAC	600V	3-32VDC	Ic<13mA	24000A²s	
SO863070	35A	24-510VAC	1200V	3,5-32VDC	Ic<13mA	1250A²s	
SO863970	35A	24-510VAC	1200V	20-265VAC/DC	Ic<10mA	1250A²s	
SO865070	50A	24-510VAC	1200V	3,5-32VDC	Ic<13mA	2500A²s	
SO865970	50A	24-510VAC	1200V	20-265VAC/DC	Ic<10mA	2500A²s	
SO867070	75A	24-510VAC	1200V	3,5-32VDC	Ic<13mA	7200A²s	45x58,5x30
SO867970	75A	24-510VAC	1200V	20-265VAC/DC	Ic<10mA	7200A²s	
SO868070	95A	24-510VAC	1200V	3,5-32VDC	Ic<13mA	14400A²s	
SO868970	95A	24-510VAC	1200V	20-265VAC/DC	Ic<10mA	14400A²s	
SO869070	125A	24-510VAC	1200V	3,5-32VDC	Ic<13mA	24000A²s	
SO869970	125A	24-510VAC	1200V	20-265VAC/DC	Ic<10mA	24000A²s	
HIGH VOLTAGE RELAY							
SO885060	50A	24-690VAC	1600V	3,5-32VDC	Ic<12mA	2500A²s	
SO885960	50A	24-690VAC	1600V	20-265VAC/DC	IC<12mA	2500A²s	
SO887060	75A	24-690VAC	1600V	3,5-32VDC	Ic<12mA	7200A²s	
SO888060	95A	24-690VAC	1600V	3,5-32VDC	Ic<12mA	14400A²s	
SO889060	125A	24-690VAC	1600V	3,5-32VDC	Ic<12mA	24000A²s	

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

SINGLE PHASE

SO9 range

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

SO9 range with regulated control current

Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Control current	I^2t	Dimensions mm
SO941460	12A	12-280VAC	600V	3-32VDC	Ic<13mA	128A²s	
SO942460	25A	12-280VAC	600V	3-32VDC	Ic<13mA	600A²s	
SO943460	35A	12-280VAC	600V	3-32VDC	Ic<13mA	1250A²s	
SO945460	50A	12-280VAC	600V	3-32VDC	Ic<13mA	2500A²s	45x58,5x30
SO963460	35A	24-600VAC	1200V	3,5-32VDC	Ic<13mA	1250A²s	
SO965460	50A	24-600VAC	1200V	3,5-32VDC	Ic<13mA	2500A²s	
SO967460	75A	24-600VAC	1200V	3,5-32VDC	Ic<13mA	7200A²s	

SO9 range with simplified input

Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Control current	I^2t	Dimensions mm
SO942560	25A	12-280VAC	600V	7-30VDC	Ic<30mA	600A²s	
SO942860	25A	12-280VAC	600V	15-32VAC/10-30VDC	Ic<33mA	600A²s	
SO942960	25A	12-280VAC	600V	185-265VAC/DC	Ic<10mA	600A²s	45x58,5x30
SO963560	35A	24-600VAC	1200V	8-30VDC	Ic<30mA	1250A²s	
SO965560	50A	24-600VAC	1200V	8-30VDC	Ic < 30mA	2500A²s	
SO967560	75A	24-600VAC	1200V	8-30VDC	Ic < 30mA	7200A²s	

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

SOL flatpac® range

low profile (16,3mm high)

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	Switching current	Switching voltage	Peak voltage	Control voltage	Control current	I^2t	Specifications	Dimensions mm
SOL745060	50A	12-280VAC	600V	3-32VDC	Ic<13mA	1680A²s	Random	
SOL942460	25A	12-280VAC	600V	3-32VDC	Ic<13mA	600A²s	Zero-cross	45x58,5x16,3
SOL942960	25A	12-280VAC	600V	185-265VAC/DC	Ic<10mA	600A²s	Zero-cross	
SOL965460	50A	24-600VAC	1200V	3,5-32VDC	Ic<13mA	1680A²s	Zero-cross	

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

SOR range

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

Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Control current	I^2t	Dimensions mm
SOR842074	25A	12-275VAC	600V	3-32VDC	Ic<13mA	600A²s	
SOR863070	35A	24-510VAC	1200V	3,5-32VDC	Ic<13mA	1250A²s	
SOR865070	50A	24-510VAC	1200V	3,5-32VDC	Ic<13mA	2500A²s	45x58,5x30
SOR867070	75A	24-510VAC	1200V	3,5-32VDC	Ic<13mA	7200A²s	

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

celpac® 2G

The 22,5mm pitch SSR solution !

Performances & reliability :

- Fixing screws compatible with all hockey puck style relays (celduc SO and SC range),
- Maximum voltage up to 1600V (690VRMS), 600VAC and 1200VAC as standard,
- Thyristor rating up to 75A,
- Large input range : 3-32VDC with regulated current models
- AC input control available,
- Input status yellow LED,
- Over-voltage protection on input,
- New generation of 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.

SU range : with pluggable connector on inputs.

SA range

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

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

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

SU range

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

SU7 : designed for motors AC-53 and inductive loads. Also use in phase angle control systems.
SU8 : designed for most types of loads.
SU9 : designed for resistive loads AC-51.

Référence produit	Tension de sortie	Calibre thyristor	V peak (V)	Tension de commande	Specifications	Visualization & protection
SU765070	24-510VAC	50A	1200V	3,5-32VDC	Random	LED
SU842070	12-275VAC	25A	600V	3-32VDC	Zero-cross	LED, VDR
SU842770	12-275VAC	25A	600V	17-30VAC/DC		
SU842970	12-275VAC	25A	600V	180-240VAC		
SU865070	24-510VAC	50A	1200V	3,5-32VDC		
SU865970	24-510VAC	50A	1200V	180-240VAC		
SU867070	24-510VAC	75A	1200V	3,5-32VDC		
SU942460	12-280VAC	25A	600V	3-32VDC		LED
SU963460	24-600VAC	35A	1200V	3,5-32VDC		
SU965460	24-600VAC	50A	1200V	3,5-32VDC		
SU967460	24-600VAC	75A	1200V	3,5-32VDC		

SINGLE PHASE

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celpac® 2G

SAL/SAM range

SAx9 : designed for resistive loads AC-51.

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

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

SUL/SUM range

SUx8 : designed for most types of loads.
SUx9 : designed for resistive loads AC-51.

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

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

ESUC for SU/SUL range

Current monitoring module

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

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

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



Power SSRs with diagnostics

Status of the SSR and the load (resistive load) without external power supply. This range is patented. Status output can be chained.
Fault condition alarms:
- *Line or load open*
- *Short circuit output*

Diagnostic description

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

celpac®

Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Control current	I^2t	Dimensions mm
SILD845160	32A	70-280VAC	600V	3-32VDC	Ic<10mA	1500A²s	
SILD865170	32A	150-510VAC	1200V	3,5-32VDC	Ic<10mA	1500A²s	22,5x80x116
SILD867170	35A	150-510VAC	1200V	3,5-32VDC	Ic<10mA	5000A²s	

okpac®

Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	I^2t	Dimensions mm
SOD843180	35A	50-265VAC	600V	7-30VDC	1 kΩ	1250A²s	
SOD845180	50A	50-265VAC	600V	7-30VDC	1 kΩ	2500A²s	
SOD849180	125A	50-265VAC	600V	7-30VDC	1 kΩ	24000A²s	45x58,5x33,6
SOD865180	50A	150-510VAC	1200V	5-30VDC	1 kΩ	2500A²s	
SOD867180	75A	150-510VAC	1200V	5-30VDC	1 kΩ	7200A²s	

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.

SINGLE PHASE

Softlife range Get rid of your heatsinks!

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

Product reference	Switching current	Switching voltage	Control voltage	I²t	Protec.	Specifications	Dimensions mm
SVX963350	30A	12-420VAC	20-30VDC	265A²s	RC-VDR	Mixed relay	44,5x61,3x45

SF range

Miniature relays available with “FASTON” or PCB terminals.

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

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

SCF range

To control resistive loads. “FASTON” terminals.

Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	LED	I²t	Protec.	Dimensions mm
SCF42160	25A	12-280VAC	600V	4-30VDC	600 Ω	yes	312A²s	–	44,5x58x33
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 current.
E option “large Entraxe” and L option “Faston” 4,8mm on request.

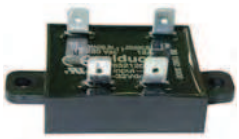
SCFL range EMC optimised
(low electromagnetic emission – low RFI)

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

Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	I²t	Dimensions mm
SCFL42100	25A	12-280VAC	600V	4-30VDC	1 kΩ	312A²s	44,5x58,2x32
SCFL62100	25A	24-440VAC	1200V	5-30VDC	1 kΩ	312A²s	

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

SP7/SP8 range



This new range extends the products available with FASTON terminals.
In a full plastic case, these relays can nevertheless switch up to 12 A AC51.
These relays are appropriate for any type of loads (such as heating or single-phase random motor) thanks to high immunity components and an integrated overvoltage protection combined with 800 Upeak power components. This range is well adapted to the food industry.

Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	I²t	Specifications	Dimensions mm
SP752120	12A	12-280VAC	800V	3-32VDC	1 kΩ	340A²s	Random	38x66,8x22
SP852120	12A	12-280VAC	800V	4-32VDC	1 kΩ	340A²s	Zero-cross	

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

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

SC range

SC7 range with random or instant switching, integrating a snubber (RC) is especially designed for motor and transformer control.
SC8 range with zero-cross switching, integrating a snubber (RC), is recommended for all types of applications.
SC9 range with zero-cross switching is optimized for resistive load control (heating application).

Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	I²t	Dimensions mm	okpac equivalent
SC741110	12A	12-280VAC	600V	3-30VDC	1 kΩ	72A²s		SO745090
SC744110	40A	12-280VAC	600V	3-30VDC	1 kΩ	612A²s		SO745090
SC762110	25A	24-520VAC	1200V	4-30VDC	1 kΩ	265A²s		SO763090
SC764110	50A	24-520VAC	1200V	4-30VDC	1 kΩ	1500A²s		SO765090
SC764910	50A	24-520VAC	1200V	90-240VAC/DC	30 kΩ	1500A²s		–
SC767110	75A	24-520VAC	1200V	4-30VDC	1 kΩ	5000A²s		SO767090
SC768110	95A	24-520VAC	1200V	4-30VDC	1 kΩ	11000A²s		SO768090
SC769110	125A	24-520VAC	1200V	4-30VDC	1 kΩ	20000A²s		SO769090
SC841110	12A	12-280VAC	600V	4-30VDC	1 kΩ	72A²s		SO842074
SC841910	12A	12-280VAC	600V	90-240VAC/DC	30 kΩ	72A²s		SO842974
SC842110	25A	12-280VAC	600V	4-30VDC	1 kΩ	312A²s		SO842074
SC844110	40A	12-280VAC	600V	4-30VDC	1 kΩ	612A²s		SO845070
SC844910	40A	12-280VAC	600V	90-240VAC/DC	30 kΩ	612A²s		SO865970
SC862110	25A	24-520VAC	1200V	5-30VDC	1 kΩ	265A²s		SO863070
SC864110	50A	24-520VAC	1200V	5-30VDC	1 kΩ	1500A²s		SO865070
SC864810	50A	24-520VAC	1200V	17-80VAC/DC	3 kΩ	1500A²s		SO863970
SC864910	50A	24-520VAC	1200V	90-240VAC/DC	30 kΩ	1500A²s	44,5x58,2x27	SO863970
SC867110	75A	24-520VAC	1200V	5-30VDC	1 kΩ	5000A²s		SO867070
SC867910	75A	24-520VAC	1200V	90-240VAC/DC	30 kΩ	5000A²s		SO867970
SC869110	125A	24-520VAC	1200V	5-30VDC	1 kΩ	20000A²s		SO869070
SC869910	125A	24-520VAC	1200V	90-240VAC/DC	30 kΩ	20000A²s		SO869970
SC941160	12A	12-280VAC	600V	4-30VDC	600 Ω	72A²s		SO941460
SC942110	25A	12-280VAC	600V	4-30VDC	1 kΩ	312A²s		SO942460
SC942160	25A	12-280VAC	600V	4-30VDC	600 Ω	312A²s		SO942460
SC942900	25A	12-280VAC	600V	90-240VAC/DC	30 kΩ	312A²s		SO942960
SC944110	40A	12-280VAC	600V	4-30VDC	1 kΩ	612A²s		SO945460
SC945160	50A	12-280VAC	600V	4-30VDC	600 Ω	1500A²s		SO945460
SC947160	75A	12-280VAC	600V	4-30VDC	600 Ω	5000A²s		SO967460
SC962114	25A	24-600VAC	1200V	5-30VDC	1 kΩ	265A²s		SO863070
SC962160	25A	24-600VAC	1200V	5-30VDC	600 Ω	265A²s		SO963460
SC962960	25A	24-600VAC	1200V	90-240VAC/DC	30 kΩ	265A²s		SO863970
SC965160	50A	24-600VAC	1200V	5-30VDC	600 Ω	1500A²s		SO965460
SC967100	75A	24-600VAC	1200V	5-30VDC	1 kΩ	5000A²s		SO967460
SC967160	75A	24-600VAC	1200V	5-30VDC	600 Ω	5000A²s		SO967460

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

... see okpac® range (pages 5 & 6)

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Two phase relays

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

SOB range – Dual okpac®

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

SOB5 : power and control connections by FASTON terminals
SOB6 : double input with connector CE100F ITWPANCON type or similar
SOB7 : random
SOB8 : zero-cross – designed for most types of loads
SOB9 : zero-cross – resistive loads AC-51.

Connectors to be ordered separately


1


2


3

Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	I²t	Specifications	Dimensions mm	Fig n°
SOB542460	2x25A	12-280VAC	600V	3-32VDC	Ic < 13mA	600A²s	zero-cross / 2 controls		1
SOB665300	2x25A	24-600VAC	1200V	10-30VDC	1200 Ω	1680A²s	zero-cross / 2 controls		3
SOB763670	2x35A	24-510VAC	1200V	8-30VDC	1200 Ω	1250A²s	random / 2 controls		2
SOB765670	2x50A	24-510VAC	1200V	8-30VDC	1200 Ω	2500A²s	random / 2 controls		2
SOB767670	2x75A	24-510VAC	1200V	8-30VDC	1200 Ω	7200A²s	random / 2 controls		2
SOB865660	2x50A	24-600VAC	1200V	8-30VDC	1200 Ω	2500A²s	zero-cross / 2 controls	45x58,5x27	2
SOB942360	2x25A	24-280VAC	600V	10-30VDC	1200 Ω	600A²s	zero-cross / 1 control		2
SOB942660	2x25A	24-280VAC	600V	10-30VDC	1200 Ω	600A²s	zero-cross / 2 controls		2
SOB963660	2x35A	24-600VAC	1200V	10-30VDC	1200 Ω	1250A²s	zero-cross / 2 controls		2
SOB965660	2x50A	24-600VAC	1200V	10-30VDC	1200 Ω	2500A²s	zero-cross / 2 controls		2
SOB967660	2x75A	24-600VAC	1200V	10-30VDC	1200 Ω	7200A²s	zero-cross / 2 controls		2

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

SCB range


1


2


3

Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	I²t	Specifications	Dimensions mm	Fig n°
SCB564310	2x40A	24-510VAC	1200V	5-30VDC	1 kΩ	610A²s	zero-cross / 2 controls		1
SCB665300	2x50A	24-600VAC	1200V	8-35VDC	1800 Ω	1500A²s	zero-cross / 1 control		2
SCB865300	2x50A	24-600VAC	1200V	10-30VDC	1400 Ω	1500A²s	zero-cross / 1 control		2
SCB865600	2x50A	24-600VAC	1200V	10-30VDC	1800 Ω	1500A²s	zero-cross / 2 controls	44,8x58,5x27	3
SCB941300	2x12A	12-280VAC	600V	8-30VDC	1 kΩ	72A²s	zero-cross / 1 control		2
SCB942600	2x25A	12-280VAC	600V	8-30VDC	1 kΩ	288A²s	zero-cross / 2 controls		3
SCB962600	2x25A	24-600VAC	1200V	8-30VDC	1 kΩ	265A²s	zero-cross / 2 controls		3
SCB965600	2x50A	24-600VAC	1200V	8-30VDC	1 kΩ	1500A²s	zero-cross / 2 controls		3

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

SCT range

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

Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	I²t	Specifications	Dimensions mm
SCT32110	3x10A	12-440VAC	800V	4-30VDC	330 Ω	72A²s	random	44,8x58x27
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 current.

SGB range 2 legs Three Phase Solid State Relays

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

Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	I²t	Specifications	Dimensions mm
SGB967360	3x75A	24-600VAC	1200V	10-30VDC	550 Ω	7250A²s	synchrone	100x75,15x46

SGT range

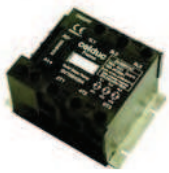
These relays have LED indicators..

Product reference	Switching current AC-51	Switching voltage	Peak voltage	Control voltage	Input R	I²t	Specifications	Dimensions mm
SGT range with 40mm housing								
SGT867350	3x75A	24-600VAC	1200V	8-30VDC	620 Ω	5000A²s	Zero-cross / for most types of loads	
SGT962360	3x25A	24-600VAC	1200V	8,5-30VDC	620 Ω	265A²s	Zero-cross / for resistive loads AC-51	100x73,5x39,5
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		
SGT range with 47,6mm housing and square terminals								
SGT767470E	3x75A	24-520VAC	1200V	4-32VDC	ic<25mA	7250A²s	Random / for most types of loads	
SGT769360E	3x125A	24-520VAC	1200V	8,5-30VDC	21 kΩ	20000A²s		
SGT865470E	3x50A	24-520VAC	1200V	4-32VDC	ic<25mA	2500A²s	Zero-cross / for most types of loads	
SGT965360E	3x50A	24-600VAC	1200V	10-30VDC	550 Ω	2500A²s	Zero-cross / for resistive loads AC-51	100x75,15x46
SGT967360E	3x75A	24-600VAC	1200V	10-30VDC	550 Ω	7250A²s		
SGT967760E	3x75A	24-600VAC	1200V	10-24VAC	400 Ω	7250A²s		
SGT967960E	3x75A	24-600VAC	1200V	90-240VAC	21 kΩ	7250A²s		
SGT968360E	3x95A	24-600VAC	1200V	10-30VDC	21 kΩ	7250A²s		

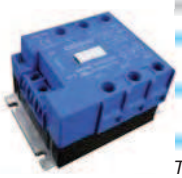
These products should be mounted with heatsink in order to reach nominal current.

SVT range

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



Product reference	Switching current AC-51	Switching current AC-53	Switching voltage	Thy-ristor rating	Control voltage	Input R	I²t	Protec.	Specifications	Dimensions mm
SVT range with 40mm housing										
SVT764394	3x50A	3x12A	24-520VAC	50A	8,5-30VDC	620 Ω	1500A²s	RC-VDR	Random	
SVT864374	3x50A	3x12A	24-520VAC	50A	10-32VDC	580 Ω	1500A²s	VDR	Zero-cross / for most types of loads	
SVT867394	3x75A	3x24A	24-520VAC	75A	8,5-30VDC	620 Ω	5000A²s	RC-VDR		
SVT867994	3x75A	3x24A	24-520VAC	75A	90-240VAC	620 Ω	5000A²s	RC-VDR		
SVT869394	3x125A	3x32A	24-520VAC	125A	8,5-30VDC	620 Ω	20000A²s	RC-VDR		100x76x56,5
SVT869994	3x125A	3x32A	24-520VAC	125A	90-240VAC	21 kΩ	20000A²s	RC-VDR		
SVT965360	3x50A	–	24-600VAC	50A	8,5-30VDC	620 Ω	1500A²s	–	Zero-cross / for resistive loads AC-51	
SVT965760	3x50A	–	24-600VAC	50A	10-30VAC/DC	410 Ω	1500A²s	–		
SVT967360	3x75A	–	24-600VAC	75A	8,5-30VDC	620 Ω	5000A²s	–		
SVT967960	3x75A	–	24-600VAC		90-240VAC	21 kΩ	1500A²s			
SVT range with 47,6mm housing										
SVT864394E	3x50A	3x12A	24-520VAC	50A	8,5-30VDC	620Ω	1500A²s	RC-VDR	Zero-cross / for most types of loads	
SVT868394E	3x95A	3x24A	24-520VAC	95A	8,5-30VDC	620Ω	11000A²s	RC-VDR		
SVT965460E	3x50A	–	24-600VAC	50A	4-32VDC	ic<25mA	1500A²s	–	Zero-cross / for resistive loads AC-51	100x76x56,5
SVT965960E	3x50A	–	24-600VAC	50A	90-240VAC	21 kΩ	1500A²s	–		
SVT967360E	3x75A	–	24-600VAC		8,5-30VDC	21 kΩ	1500A²s	–		



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

THREE PHASE MOTOR CONTROL

SWT / SIT range
solid state contactors

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

Product reference	Switching current AC-51	Switching current AC-53	Switching voltage	Peak voltage	Control voltage	Input R	I²t	Specifications	Dimensions mm	Fig n°
SIT865390	3X22A	3x12A	24-510VAC	1200V	10-30VAC/DC	410 Ω	1500A²s	Zero-cross	90x98x122	1
SIT865570	3X22A	–	24-510VAC	1200V	10-30VDC	560 Ω	1500A²s			1
SIT865990	3X22A	3x12A	24-510VAC	1200V	90-240VAC	21 kΩ	1500A²s			1
SWT860330	3x5A	3x5A	24-520VAC	1200V	10-30VAC/DC	410 Ω	265A²s		83x76x72	2
SWT861730	3x28A	3x16A	24-520VAC	1200V	10-30VAC/DC	410 Ω	5000A²s			3
SWT861790	3x28A	3x16A	24-520VAC	1200V	90-240VAC	21 kΩ	5000A²s	Zero-cross	110x100x172	3
SWT862030	3x32A	3x24A	24-520VAC	1200V	10-30VAC/DC	410 Ω	11000A²s			3
SWT862090	3x32A	3x24A	24-520VAC	1200V	90-240VAC	21 kΩ	11000A²s			3
SWT865080	3x50A	–	24-520VAC	1200V	10-30VAC/DC	410 Ω	5000A²s		110x145x172	3

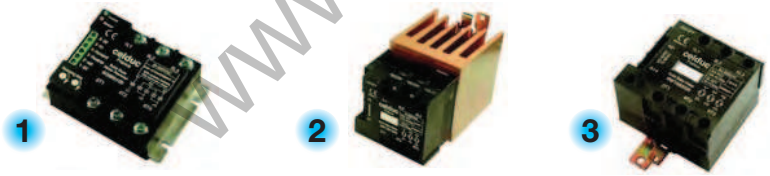
These products are defined with temperature rises of 50°C and permanent operation (operating cycle = 100%)of 8 hours in compliance with the European standards.

AC Reversing switches - SG9, SV9 & SW9

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

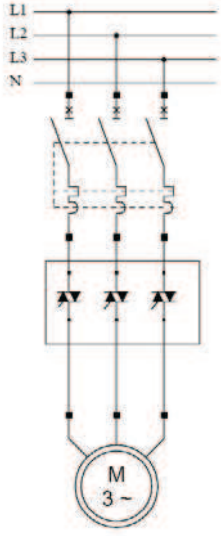
Product reference	Switching current AC-53	Switching voltage	Control voltage	I²t	Protec.	Specifications	Dimensions mm	Fig n°
SG969100	3x6,6A	24-520VAC	10-30VDC	612A²s		3 phase switching	100x73,5x39,5	1
SG969300	3x8,5A	24-520VAC	12-30VDC	1500A²s		2 phase switching	100x73,5x39,5	1
SV969300	3x8,5A	24-520VAC	12-30VDC	1500A²s	reversing + time delay	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	24-550VAC	12-30VDC	1500A²s		2 phase switching	100x76x72	3
SW961230	3x8,5A	24-520VAC	12-30VDC	1500A²s		2 phase switching	83x90x155	2

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

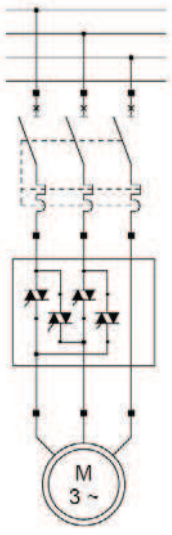


4 = 3 without DIN rail

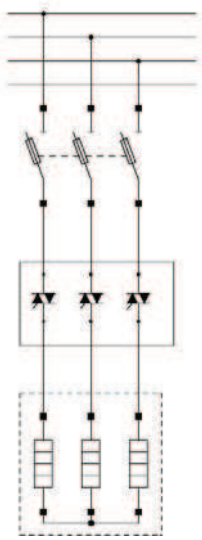
Wiring examples – Three-phase applications



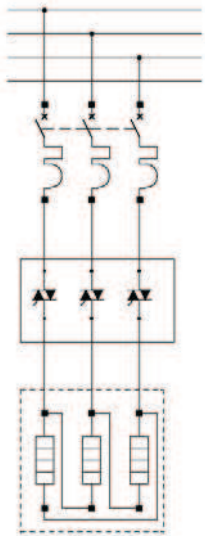
Three-phase SSR SVT8/SGT8 controlling a three-phase motor with a thermal - magnetic protection.



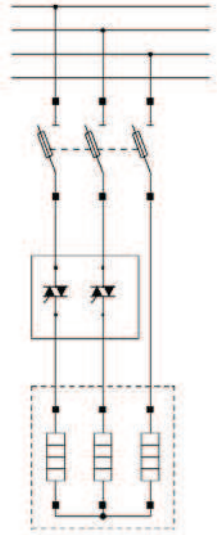
Motor reverser SV9 for three-phase asynchronous motor



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



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



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

SMCV & SMCW range

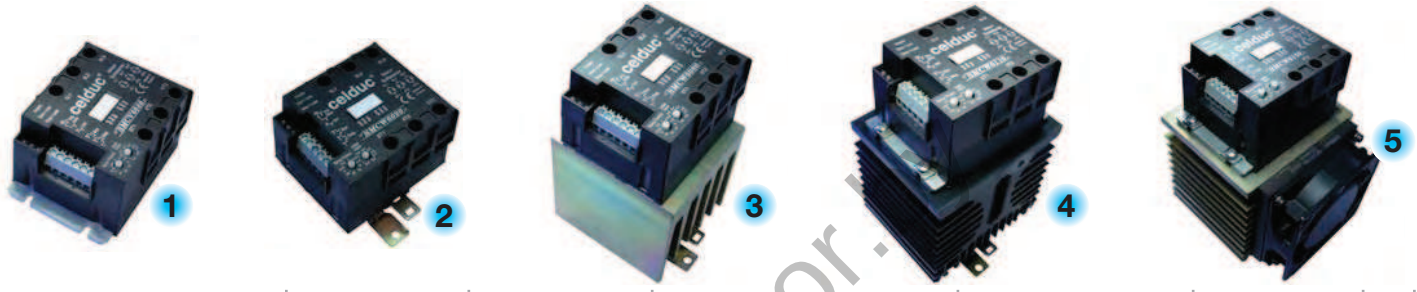
AC Softstarter

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

Incandescent or infrared lamp starting :
- Reduction of in rush current
- Increase in life expectancy.

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

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



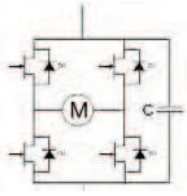
Product reference	Pmax motor 400VAC		Pmax motor 230VAC		Max. Current AC53a		Specifications	Dimensions mm	Fig n°
	Y*	D*	Y*	D*	Max.	EN60947-4-2			
SMCV6080	7,5kW	13kW	4,3kW	7,5kW	16A	11,5A	Heatsink not provided	100x76x58,5	1
SMCV6110	11kW	19kW	6,4kW	11kW	25A	15,5A			
SMCV6150	15kW	26kW	8,6kW	15kW	30A	22,5A			
SMCW6020	2,5kW	4,3kW	1,4kW	2,5kW	5,6A	4A	Supplied with built-in heatsink	83x110x74	2
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	83x110x74	2

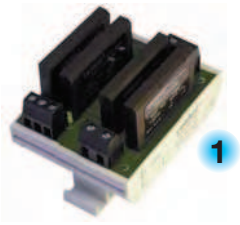
Common characteristics	Range of voltage and network frequency	Control	Diagnostic output	Operating temperature	Insulation	Max. section of wires
Values given at 40°C ambient	200-480VAC 40-65Hz	10-24VDC or contact	0-24V 1A AC/DC	-40°C +100°C	4kV	E=2,5mm² S=10mm²

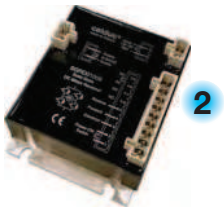
**The star assembly (Y) corresponds to in-line wired starter.*
The delta assembly (D) corresponds to the starter wired in the triangle coupling of the motor.
Each channel is wired in series with a winding of the motor.

XKRD & SGRD range

Reversing switches for DC motor control







The ready to use module XKRD30506 for Din-Rail mounting comprises 4 Solid State relays wired as a reverser to be used to change the direction of a DC motor (100W @ 24Vdc).
Control voltage ranges from 7 to 30VDC and this module can switch up to 5A/60VDC. A voltage clamp device is integrated and offers an input-output isolation of 2500VRMS.

Our SGRD reversing unit for DC motor control offers all the necessary built-in control protections including protection against wiring errors or short circuit on the input. This version includes the interlocking function to avoid control of the two directions at the same time.
Control voltage ranges from 8 to 36VDC and this SSR can switch up to 10A/36VDC.

Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Control current	Protec.	Dimensions mm	Fig n°
XKRD30506	5A	7-36VDC	60V	7-30VDC	12-58mA	VDR	58,2x76,4x53	1
SGRD01006	10A	8-36VDC	60V	8-36VDC	20mA	Voltage and current	100x73,5x50,9	2

DC speed variation possible – please consult us

PHASE ANGLE SINGLE PHASE

SIx4 /SO4 range

New generation of proportional controllers

This range comes in celpac® housing (ready to use) and okpac® housing (to be mounted on a heatsink).
This range is designed for resistive loads.
SO465620 is a SSR based phase angle controller with PWM control input (linear power law response).

SO4 housing with different control connections.

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

Product reference	Switching current	Switching voltage	Control voltage	Dimensions mm	External power supply required ?	Fig n°
SIL465000	22A	160-450VAC	0-10V	22,5x80x11	no	1
SIM465000	32A	160-450VAC	0-10V	45 x 80 x 116	no	2
SO445020	50A	100-280VAC	0-10V	45x58,2x27	yes	3
SO465020	50A	200-480VAC	0-10V		yes	
SO468020	95A	200-480VAC	0-10V		yes	
SO469020	125A	200-480VAC	0-10V		yes	
SO445120	50A	100-280VAC	0-5V		yes	
SO468120	95A	200-480VAC	0-5V		yes	
SO469120	125A	200-480VAC	0-5V		yes	
SO467501	75A	160-450VAC	1-5V		no	
SO445320	50A	100-280VAC	Potentiometer		yes	
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 range - Single phase softstarters

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.

2 = 1 with integrated heatsink

Product reference	Switching voltage	Switching current	Control voltage	Dimensions mm	Fig n°
SO400200	200-260VAC	35A	Soft-starter	45x58,2x27	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.

SG4 range - Phase angle controller

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

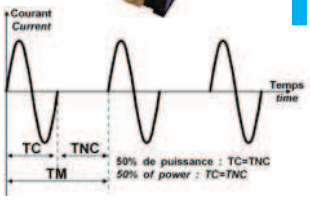
Product reference	Switching current	Switching voltage	Control voltage	Input R	I^2t	Dimensions mm
SG441020	10A	115-265VAC	0-10VDC	400 kΩ	72A²s	100x73,5x39,5
SG444020	40A	115-265VAC	0-10VDC	400 kΩ	1500A²s	
SG464020	40A	200-460VAC	0-10VDC	400 kΩ	1500A²s	
SG468020	70A	200-460VAC	0-10VDC	400 kΩ	5000A²s	
SG469020	110A	200-460VAC	0-10VDC	400 kΩ	20000A²s	
SG444120	40A	115-265VAC	Potentiometer	200 kΩ	1500A²s	
SG464120	40A	200-460VAC	Potentiometer	200 kΩ	1500A²s	
SG469120	110A	200-460VAC	Potentiometer	200 kΩ	20000A²s	
SG444420	40A	115-265VAC	4-20mA	250 Ω	1500A²s	
SG464420	40A	200-460VAC	4-20mA	250 Ω	1500A²s	
SG468420	70A	200-460VAC	4-20mA	250 Ω	5000A²s	
SG469420	110A	200-460VAC	4-20mA	250 Ω	20000A²s	

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

PHASE ANGLE CONTROLLERS

NEW

SO3 range Burst control mode (µP based unit)



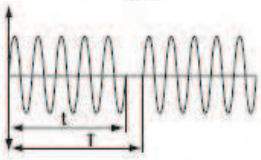
This control mode is particularly suitable for resistive loads having a low thermal inertia like short wave Infra Red sources (IR lamps). It allows a very fine control of power according to the analogue input signal while reducing noise emission level (EMC conducted emissions).
This control mode consists 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	Switching current	Switching voltage	Control voltage	Dimensions mm
SO367001	75A	400VAC	0-10VDC	45x58,2x27

Other power rating and / or control on request.

SG5 range Full wave pulse controllers

Application :
Heating control



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	Switching current	Switching voltage	Control voltage	Input R	I²t	Dimensions mm
SG541020	10A	230VAC	0-10VDC	250 Ω	72A²s	100x73,5x39,5
SG544020	40A	230VAC	0-10VDC	350 Ω	610A²s	
SG564020	40A	400VAC	0-10VDC	250 kΩ	610A²s	
SG541120	10A	230VAC	Potentiometer	1 MΩ	72A²s	
SG564120	40A	400VAC	Potentiometer	1 MΩ	610A²s	
SG541420	10A	230VAC	4-20mA	350 Ω	72A²s	
SG564420	40A	400VAC	4-20mA	350 Ω	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.

SWG5 range Single phase power controllers

Application :
single phase heaters

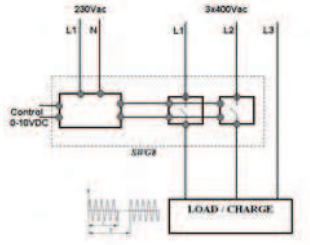
This range is based on the SG5 controllers. The SWG5 are fitted with heatsinks and DIN rail adapters

Product reference	Switching power	Switching voltage	Control voltage	Input R	Dimensions mm
SWG50210	2kW	230VAC	0-10VDC	250 kΩ	100x74x56
SWG50810	8kW	230VAC	0-10VDC	250 kΩ	100x110x96

Control voltage 0-5V or potentiometer on requets.

SWG8 range Three phase power controllers

Application :
three-phase heaters



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.

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

THREE PHASE PROPORTIONAL CONTROLLERS

SVTA-SWTA range

Three phase universal digital proportional controllers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No external power supply required

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

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

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

→ Diagnostic functions.

→ Compact housing

Ready to use – values given at 25°c ambient

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

** Fan 24 VDC*

Products to be mounted on a heatsink

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

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

SGTA range

8-32V external power supply required

Our SGTA range is a complementary range to the three-phase proportional controllers SVTA-SWTA.
- Price-effective range
- Adapted to three phase star connected resistive loads (or delta connected loads on request)
- Small housing
- Wide mains frequency variation (40-65Hz)
- Built-in overvoltage protection
- High 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	75,15x100x46
SGTA4651	50A	300-510VAC	Potentiometer	
SGTA4654	50A	300-510VAC	4-20mA	

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

SCQ range

Four-Leg Solid State Relays

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

Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Input R	I²t	Dimensions mm	Led
SCQ842000	4x25A	12-280VAC	600V	3-32VDC	I<10mA	288A²s	44,5x58,2x274	no
SCQ842060	4x25A	12-280VAC	600V	3-32VDC	I<10mA	288A²s		yes

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

DC Solid State Relays

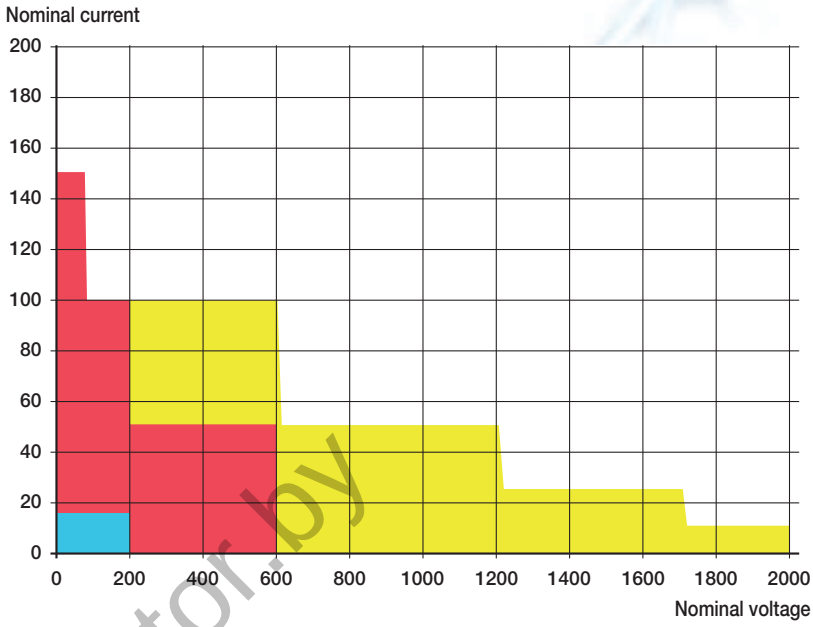
These relays are designed to switch DC loads e.g solenoid valves, brakes, indicators, motors (possibly on AC mains under specific conditions). All possible technologies can be available :

MOSFET
for applications where overcurrent capability and low dissipated power are needed.

BIPOLAR
for applications where low control current is needed.

IGBT
for high voltage applications (> 600 VDC).

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



MOSFET Technology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Product reference	Switching current	Switching voltage	Peak voltage	Control voltage	Control current	Integrated protection	Dimensions mm	Fig n°
SLD01210	2,5A	0-60VDC		3-10VDC	5,5-27mA			
SLD03210	2,5A	0-60VDC		18-32VDC	5,5-10,2mA			
SLD01205	4A	0-32VDC	60V	3-10VDC	5,5-27mA	Transil	28 x 5 x 15	1
SLD02205	4A	0-32VDC		7-20VDC	5,5-18mA			
SLD03205	4A	0-32VDC		18-32VDC	5,5-10,2mA			
STD03505	2,5A	0-30VDC	60V	12-30VDC	4,1-12mA	Transil	29x12,7x15,7	2
SPD03505	5A	0-30VDC		12-30VDC	4,1-12mA		29x12,7x25,4	
SKLD10510	8A	7-60VDC	100V	3-10VDC	6-30mA	Transil	43,6x6,3x24,5	3
SKLD30510	8A	7-60VDC	100V	7-30VDC				
SKLD11006	12A	7-36VDC	60V	3-10VDC				
SKLD31006	12A	7-36VDC	60V	7-30VDC				
SCM030200	30A	0-200VDC	200V	4,5-32VDC	25-42mA	–	44,5x58,2x27	4
SCM040600	40A	0-600VDC	600V					
SCM0100200	100A	0-200VDC	200V					
SCM0150100	150A	0-100VDC	100V					
SOM02060	20A	5-40VDC	60V	3,5-32VDC	30-35mA	Transil	45x58,5x30	5
SOM020100	20A	5-60VDC	100V					
SOM020200	20A	5-110VDC	200V					
SOM04060	40A	5-40VDC	50V					
SOM040100	40A	5-60VDC	100V					
SOM040200	40A	5-110VDC	200V					
SOM06075	60A	5-40VDC	75V					
ESO01000	0-80A	0-130VDC	200V	Protection against line inductance (C1, D2) : option for SOM range		Diode + capacitor	45x58,5x30	5

DC RELAYS

BIPOLAR Technology


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9


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

IGBT Technology

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

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

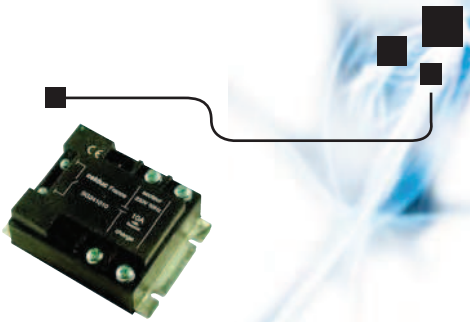
Applications

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

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

Special Relays

Shunting relays : SAS Relays
Airport beacon relay.
If a lamp fails, the relais short circuit this lamp.
Different configurations available.



Dry contact relays : SG241010 relay
230VAC mains.
12A output voltage.
Control by PLA type insulated contact
Typical applications : heating breaking, etc

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

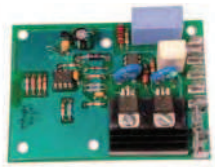
Special customer products

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

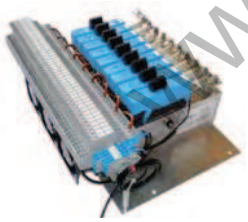
4 SKL SSRs on PCB

This device using SSRs controls AC motors in hazardous area.
Control by pushbutton with embedded magnet actuating Reed switches.

Solid state contactor for 3 phase motor.
Dry contact control
Spring terminals.



PCB for single-phase motor softstart



Special development composed of SU SSRs and ESUC modules to control 9 heating elements with partial load break detection. This system includes all protections.

Motor reverser with 2 electronic cards included 5 SSRs.

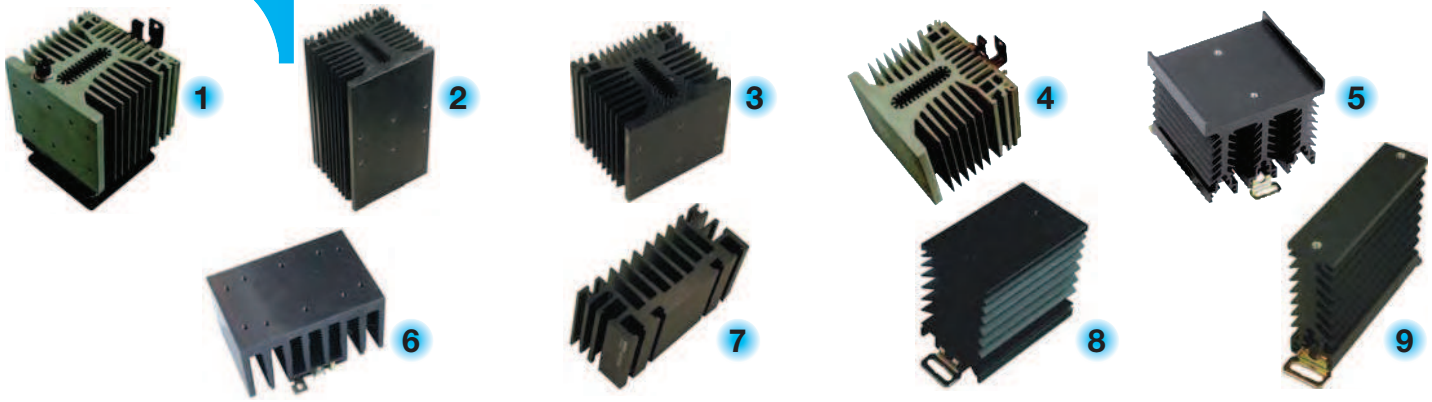
Applications notes

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

- → Principle of solid state relays.
- → Life expectancy of solid state relays: 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	110x120x145	SO, SC, SG, SGT, SVT	1
WF050000	0,55K/W	DIN rail adaptor as option	110x100x200	SO, SC, SG, SGT, SVT	2
WF070000	0,75K/W	DIN rail adaptor as option	110x100x100	SO, SC, SG, SGT, SVT	3
WF115100	0,9K/W	for DIN rail or screw	110x100x90	SO, SC, SG, SGT, SVT	4
WF108110	1,1K/W	for DIN rail or screw	89,8x81x98,02	SO, SC	5
WF121000	1,2K/W	for DIN rail or screw	100x40x100	SO, SC, SG, SGT, SVT	6
WF210000	2,1K/W	DIN rail adaptor as option	96x41x55	SO, SC	7
WF151200	2,2K/W	for DIN rail or screw	45x73x80	SO, SC, SA, SU	8
WF311100	3K/W	for DIN rail or screw	22,5x73x80	SA, SU	9

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

Accessories

PROTECTION COVERS / FLAPS

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

MARKING LABELS

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

DIN RAIL ADAPTORS

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

MOUNTING KITS

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

MOUNTING + HEATSINK + DIN ADAPTOR OPTION

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

THERMAL SEALS RELAY/HEATSINK

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

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

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

www.celduc.com

Magnetic Proximity 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 !

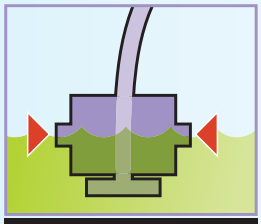
At celduc® relais, we are eager to offer the best products for your application, thanks to our 30-year experience in the key technologies that we use in our products :

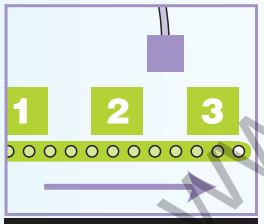
- Reed switch, a dry contact in a sealed glass bulb providing insulation at the same time : a simple, reliable and low cost solution.
- Electronic cell, based on either magneto-resistance or Hall effect, necessary for higher performance, particularly in high frequency operation.

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.

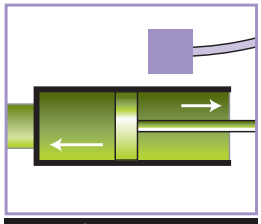
SCOPE

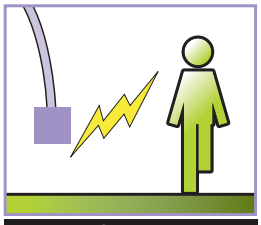

Level



Presence


Speed


Clearance


Safety

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)

CONTACT TYPE

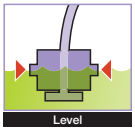
- *NO / A Form → Normaly Open*
- *NC / B Form → Normaly Closed*
- *BISTABLE NO / L Form*
- *CHANGE-OVER / C Form*

Other lengths of cable or wire possible for signifiant quantities.

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

REED MAGNETIC SENSORS

Level 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.

Product reference		PTF01060	PTFA1015	PTFA1103(1)	PTFA1104(1)	PTFA1210	PTFA2115(1)(2)
Mounting		Vertically	Vertically High and low level	Vertically High level	Vertically Low level	Vertically High and low level	Vertically High and low level
Contact status (float down)		1NO	1NO	1NC	1NO	1NO+NC	1NO
Connection type		2 wires 600mm	2 wires 1,5m	2 wires 300mm	2 wires 300mm	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	9mm	48,5mm	8mm
Max. switching power		10VA	10VA	10VA	10VA	Top : 10VA Bottom : 3VA	50VA
Max. switching voltage		100Vdc	100Vdc	100Vdc	100Vdc	Top : 200Vdc Bottom : 100Vdc	300Vac/dc
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	0,7	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)	1/8" GAS (28 per inch)	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 31).

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, vegetable 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

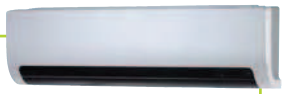
-One moving part
-The Reed contact is actuated by a magnetic field only : no contact so no wear
-The Reed contact is completely isolated from the liquid so perfectly waterproof
The above advantages allow a safety use, repetitiveness, precision and minimum maintenance.

Product reference	PTFA0100	PTFA0115	PTFA3115	PTFA3315(2)	PTFA3415	PTFA3002
Mounting	Horizontally External mounting	Horizontally External mounting	Horizontally	Horizontally	Horizontally External mounting	Horizontally External mounting
Contact status	1NO	1NO	1NO	1NO	1NO	1NO
Connection type	2 wires 175mm + Molex connector	2 wires 1,5m	2 wires 1,5m	2 wires 1,5m	Cable 1,5m	Cable 20m R in serie
Material	Polyamide 30% glass fiber	Polyamide 30% glass fiber	Polyamide 30% glass fiber	Polypropylene	Polypropylene	Polypropylene
Liquid compatibility	2	2	2	1	1	1
Float travel	50°	50°	50°	50°	50°	50°
Max. switching power	10VA	10VA	50VA	50VA	50VA	50VA
Max. switching voltage	200Vdc	200Vdc	300Vac/dc	300Vac/dc	300Vac/dc	300Vac/dc
Max. switching current	0,5A	0,5A	0,5A	0,5A	0,5A	0,1A
Density mini	0,6	0,6	0,6	0,6	0,6	0,6
Working temperature	0 / 85°C	0 / 85°C	0 / 85°C	-10 / 100°C (wires/85°C)	-10 / 100°C (wires/85°C)	-10 / 100°C (wires/85°C)
Thread	Specific	Specific	Specific	M16 x 2	M16 x 2	M16 x 2

(2) Available in ATEX version (see page 31).

For Stainless steel version please consult us

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

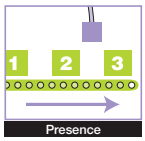
Screw position sensors

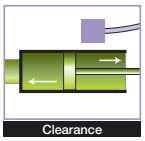
General use screw sensors for industry and household use :
-Rabbet sensors
-Doors opening
-Protection cover presence
-House hold applicances

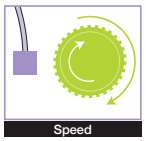
Product reference	PAA10060	PAA11202	PAB10020	PAC10010	PLA10100	PLA10160	PLA11208	PLA12430	PLA10290 PLA10292
Contact status	NO	NO	NC	Change-over	NO	NO	NO	NO	NO
Connection type	2 wires / FASTON	2 wires	2 wires + HE14 connector	3 wires + HE14 connector	2 wires	2 wires	cable	cable	2 wires
Cable length	680mm	275mm	160mm	70mm	10m	360mm	800mm	3m	220mm
Max. switching power	12VA	12VA	3VA	NC : 3VA NO : 8VA	12VA	12VA	12VA	12VA	12VA
Max. switching voltage	100VDC				100VDC	100VDC	250VDC	250VDC	200VDC
Max. switching current	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	12mm with U4200000	10mm with P6250000	19mm with P6250000	16mm with P6250000	12mm with P6250000	15mm with P4060200
Working temperature	-40 to +85°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 (mm)	23x14x6				32x15x6,8				28,57x19x6,34
Fixing screws distance	14mm				17,5mm				15,88mm

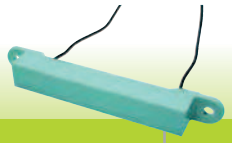
Product reference	PLA13701	PLA13715	PLA13725	PLA13750	PLA13780	PLB10060	PLB16701	PLC10040	PLC13701	PLC13780
Contact status	NO	NO	NO	NO	NO	NC		Change-over		
Connection type	cable	cable	cable	cable	cable	cable	cable	cable	3 wires	cable
Cable length	100mm	1,5m	2,5m	5m	8m	3m	100mm	1,5m	100mm	8m
Max. switching power	12VA							NC : 3VA NO : 8VA		
Max. switching voltage	250VDC							100VDC		
Max. switching current	0,4A							0,25A		
Activation distance	10mm with P6250000	10mm with P6250000	10mm with P6250000	10mm with P6250000	10mm with P6250000	4<d<12mm (magnet provided)	4mm (magnet provided)	14mm with P6250000	10mm with P6250000	10mm with P6250000
Working temperature	-40 to +100°C									
Dimensions (mm)	32x15x6,8									
Fixing screws distance	17,5mm									

REED MAGNETIC SENSORS









Product reference	PB158S00	PB195T00	PB285T00	PB367G00	PB390G00	PBA13725	PBA13740	PBA13780
Contact status	NO		NC		NO	NO		
Connection type	2 wires	2 wires	2 wires	2 wires	2 wires	cable	cable	cable
Cable length	80mm	80mm	80mm	80mm	80mm	2,5m	4m	8m
Max. switching power	100VA	50VA	50VA	16VA	16VA	12VA	12VA	12VA
Max. switching voltage	250VAC	250VAC	250VAC	250VAC	250VAC	250VAC	250VAC	250VAC
Max. switching current	3A	1A	1A	0,5A	0,5A	0,4A	0,4A	0,4A
Activation distance	4mm with P4160000	7mm with P4160000	6mm with P4160000	6mm with P4159000	13mm with P4160000	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 (mm)	86x8,5x12,5	86x8,5x12,5	86x8,5x12,5	51x8,5x11,5	51x8,5x11,5	51x8,5x11,5	51x8,5x11,5	51x8,5x11,5
Fixing screws distance	75mm				40mm			

Sensor with metal housing

Product reference	PLMA0220
Contact status	NO
Connection type	1 shielded cable
Cable length	2m
Max. switching power	100VA
Max. switching voltage	300VAC
Max. switching current	1A
Activation distance	25mm (provided magnet)
Working temperature	-40 to +85°C
Dimensions (mm)	88x38x12
Fixing screws distance	69mm

Screw sensors with safety loop (Alarms)

Product reference	PBA10010	PMG12482
Contact status	NO	NO
Connection type	cable + loop	cable + 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 (mm)	51x8,5x11,5	33x15x6,8
Fixing screws distance	40mm	17,5mm

High power switching sensors

These sensors allow controlling loads up to 3A.

Product reference	PSA60010	PSA60015
Contact status	NO	NO
Max. switching power	500VA	500VA
Max. switching voltage	24-440VAC	24-440VAC
Max. switching current	3A	3A
Cable length	2 wires 350mm	Cable 1,5m
Activation distance	12mm with P6250000	13mm with P6250000
Working temperature	-40 to +85°C	-40 to +85°C
Dimensions (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

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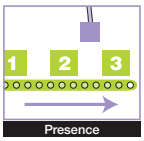
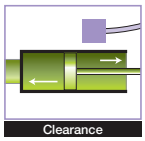
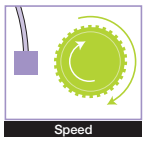
General use tubular sensors for industry and household use :
-Rabbet sensors
-Doors opening
-Protection cover presence
-Household appliances

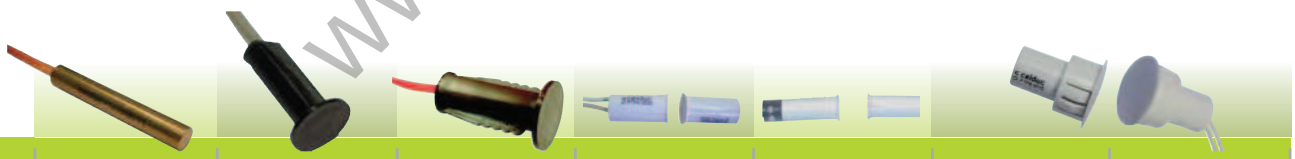






Tubular position sensors

Product reference	PTA10440	PTA10540	PTA11235	PTA12401	PTA13715	PTA13730	PTA50010	PTB13702	PTC12301	PTC13730
Contact status	NO							NC	Change-over	
Max. switching power	12VA	12VA	12VA	12VA	12VA	12VA	12VA	3VA	NC : 3VA NO : 8VA	NC : 3VA NO : 8VA
Max. switching voltage	100VDC	100VDC	100VDC	100VDC	100VDC	100VDC	100VDC	100VDC	250VDC	100VDC
Max. switching current	0,4A	0,4A	0,4A	0,4A	0,4A	0,4A	0,4A	0,25A	0,25A	0,25A
Connection type	2 wires 500mm	3 wires + connector 395mm	Cable 3,5m	2 wires 100mm	2 wires 1,5m	2 wires 3m	2 wires 100mm	2 wires 200mm	3 wires 100mm	Cable 3m
Activation distance with P6250000	7mm	13mm	15mm	14mm	10mm	10mm	18mm	14mm	8mm	7mm
Working temperature	-40 to +85°C									
Dimensions (mm)	Ø6x30						Ø6x25,2	Ø6x30		



Product reference	PTA10490	PMG90010	PMG92291	PTPA0030	PTPA0100	PTPA0230	PTPB0010
Contact status	NO	1NO	1NO	1NO	1NO	1NO	1NC
Max. switching power	10VA	10VA	12VA	12VA	12VA	12VA	12VA
Max. switching voltage	100VDC						
Max. switching current	0,4A	0,4A	0,4A	0,5A	0,5A	0,5A	0,5A
Connection type	2 wires 800mm	Cable 10m	2 wires 200mm	2 wires 3m	Connectors	2 wires 3m	2 wires 80mm + FASTON
Activation distance	16mm with P6250000	12mm with PMG92280	8mm with P6250000	12mm (magnet provided)	12mm (magnet provided)	30mm (magnet provided)	10mm (magnet provided)
Working temperature	-40 to +120°C	-40 to +85°C	-40 to +100°C	-40 to +85°C	-40 to +85°C	-40 to +85°C	-40 to +85°C
Dimensions (mm)	Ø6x41	Ø12x32	Ø18,5x32,5	Ø11x28	Ø11x28	Ø23x27	Ø23x28

REED MAGNETIC SENSORS

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

PTI range – M8 plastic and stainless-steel housing

Product reference	PTI40003	PTI40003	PTI50003	PTI50020	PTI60003	PTI60020	PTI70003
Contact status	1NO / A form	1NO / A form	1NC / B form	1NC / B form	1NO / A form	1NO / A form	1NC / B form
Max. switching power	12VA	12VA	5W	5W	12VA	12VA	5W
Max. switching voltage	200VDC	200VDC	175VDC	175VDC	200VDC	200VDC	175VDC
Max. switching current	0,5A	0,5A	0,25A	0,25A	0,5A	0,5A	0,25A
Connection type	Cable 30cm	Cable 2m	Cable 30cm	Cable 2m	Cable 30cm	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	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	-40 to +85°C
Dimensions (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	M8x1 - Lg 40 Stainless Steel

PTA range – M10 housing

Product reference	PTA80020	PTA90050	PTA90160
Contact status	1NO / A form	1NO	1NO
Max. switching power	12VA	12VA	5W
Max. switching voltage	200VDC	100VDC	100VDC
Max. switching current	0,5A	0,4A	0,4A
Connection type	Cable 2m	Cable 5m	Cable 1,5m
Activation distance	25mm with magnet PT810000	10mm with magnet P6250000	12mm with magnet P6250000
Working temperature	-25 to +70°C	-40 to +125°C	-40 to +125°C
Dimensions (mm)	M10x1 - Lg 44,5 Stainless Steel	M10x1 - Lg 40 Raw brass	M10x1 - Lg 40 Raw brass

Sensors with M12 housing on request

REED MAGNETIC / HALL EFFECT SENSORS

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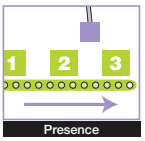
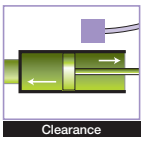
Sensors for layout on PCB

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

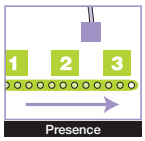


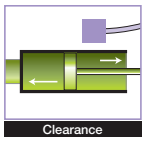


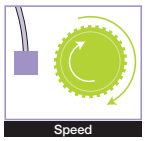
Product reference	PHA01200	PHA11200	PHC10010	PHC13700
Contact status	NO		Change-over	
Max. switching power	12VA		NC : 3VA / NO : 8VA	
Max. switching voltage	100VDC			
Max. switching current	0,4A		0,4A	
Activation distance with U6250000	18mm	17mm	17mm	11mm
Working temperature	-40 to +100°C			
Dimensions (mm)	23x4,2x3,6			

Hall effect sensors

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



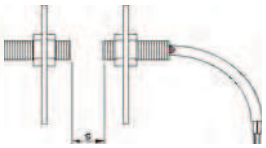




Product reference	PLE13220	PLE14320	PTE11320	PTE11321	PTE21320	PTE21321	PTE31320	PTE31321	PTE41320	PTE41321
Contact status	Hall effect NPN	Hall effect NPN	Hall effect PNP	Hall effect NPN	Gear tooth PNP	Gear tooth NPN	Hall effect PNP	Hall effect NPN	Gear tooth PNP	Gear tooth NPN
Longueur de câble	cable 2m									
Distance max. d'utilisation	top 8mm	side 8mm	19mm	19mm	1,5mm	1,5mm	17mm	17mm	1,5mm	1,5mm
Tension max. commutable	5-24VAC	6-48VAC								
Courant max. commutable	25mA	0,4A								
Température de fonctionnement	-25°C to +70°C									
Dimensions (mm)	Plastic housing 32x15x6,8		Plastic housing M12x33				Stainless stell housing M12x33			
Aimant associé	P6250000	P6250000	PT810000	PT810000			PT810000	PT810000		

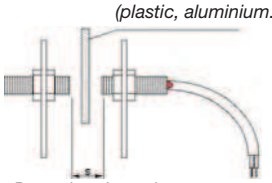
Applications

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



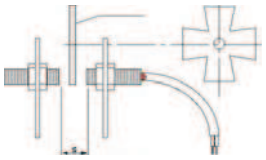
Direct detection

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

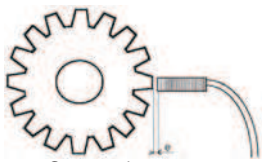


Detection through non-magnetic material

Ferro-magnetic material



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



Gear tooth sensor

SENSORS FOR SPECIFIC APPLICATIONS

ATEX sensors

celduc® relais is notified as manufacturer of ATEX products : INERIS 04ATEXQ406 and offers a wide range of ATEX sensors.

Groupe II : Open-air industry (other than mines) with possible inflammable dust.

CE0080 Ex

II 2GD	Ex mb II T6 Ex tD A21 IP67 T85°C
II 1GD	Ex ia IIB T6 Ex iaD 20 T85°C

Types of devices : 1 for zone 0 (continuous risk)
2 for zone 1 (intermittent risk)

Gas : 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).


Product reference	PLA1125Ex	PLB1179Ex	PLC1125Ex	PTA1125Ex	PTB1125Ex	PTC1125Ex
Contact status	1NO	1NC	Change-over	1NO	1NC	Change-over
Temperature group	T6	T6	T6	T6	T6	T6
Max. switching power	10W 12VA	10W 12VA	3VA	10W 12VA	3VA	3VA
Max. switching voltage	60VDC					
Max. switching current	0,4A	0,4A	0,25A	0,4A	0,25A	0,25A
Cable length	cable 5m	cable 10m	cable 5m	cable 5m	cable 5m	cable 5m
Working temperature	-40 to +80°C					
Housing material	Plastic					
Dimensions (mm)	32x15x6,8			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					
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		-25 to +85°C		-40 to +200°C	-20 to +200°C
Housing material	Stainless steel	Polypropylene	Plastic		Brass	
Dimensions (mm)	Ø28x60	Ø28x90	51x16		Ø6x41	M10

**See data-sheets.*

SENSORS FOR SPECIFIC APPLICATIONS

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	PMG12921	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				
Dimensions (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	PCLA3020	PCLA3030	PC2A2330	PC3A2330
Contact status	1xNO / A form	1xNO / A form	Change-over / C form	Bistable / L form	Bistable / L form	2xNO / A form	3xNO / A form
Max. switching power	70VA	100VA	3VA	100VA	100VA	70VA	70VA
Max. switching voltage	300VAC	250VAC	100VAC	250VAC	250VAC	300VAC	300VAC
Max. switching current	0,5A	3A	0,25A	3A	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 UR144061	20mm with UR144061	25mm with UR144061	30mm with UP082006	30mm with UP082006	20mm with UR144061	20mm with UR144061
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 (mm)	M12x1 L 80 Plastic housing						

Sensors with M12x1 L50 housing on request

SENSORS FOR SPECIFIC APPLICATIONS

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

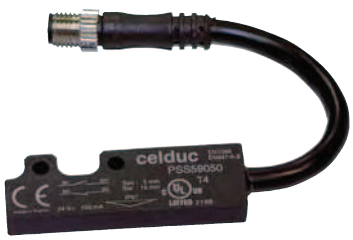
Product reference	PXS79150	PXS59150	PXS10350	PXS70150	PSS79050	PSS79150	PSS59050	PSS59150	PSA60010	PSA60020
Contact status	2O	O+C	2O + 1C	2O + 1C	2O	2O	O+C	O+C	1O solid state	1O solid state
Current limiting resistor	10Ω	10Ω	-	10Ω	10Ω	10Ω	10Ω	10Ω	-	-
Max. switching power	3VA	3VA	3VA	3VA	3VA	3VA	3VA	3VA	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				5mm				12mm	
Associated coded magnet	P2000100				P3000100				P6250000	
LED option	yes	yes	no	yes	no	yes	no	yes	no	no
Working temperature	-25 to +85°C								-40 to +85°C	

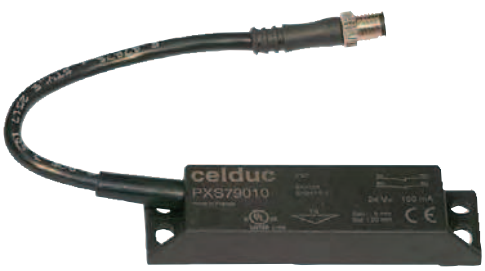
Associated coded magnets

P2000100

P3000100

P6250000





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

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)	160°C	low (-0.10% per °C)	Bad resistance (must have tin or nickel coating)	generally supplied in blocks or granulates

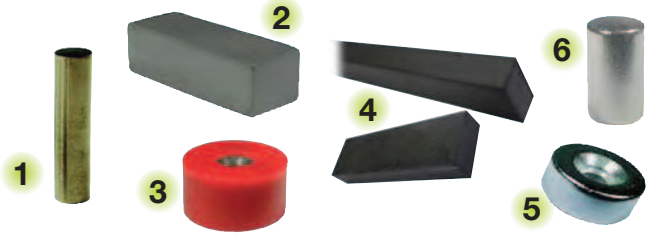
celduc® relais is at your disposal to help you define the correct magnet/sensor arrangement according to your needs / operating conditions.

Coated magnets

Product reference	For sensors ...	Bare magnet dimensions (mm)	Dimensions (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
P4060200	PLA10290x	Ø 4.7 x 25.4	28,57x19x6,34	3
P4159000	PB or PLA	Ø 3x15	51,8x8,5x11,5	4
P4160000	PB or PLA	Ø 5x25	51,8x8,5x11,5	4
PMG92280	PMG92291	Ø 6x25	Ø 18,5x28	5
PT505000	PTI5 plastic	D5x5	M8x1 Lg 31	6
PT508000	PTI5 plastic	D5x8	M8x1 Lg 31,2	6
PT505100	PTI6 stainless steel	D5x5	M8x1 Lg 40	7

Bare magnets

Product reference	Material	Dimensions (mm)	Fig n°
U315P003	Alnico5	Ø 3x15	1
U4200000	Alnico5	Ø 4x20	1
U6250000	Alnico5	Ø 6x25	1
U8300000	Alnico5	Ø 8x30	1
U8350000	Alnico5	Ø 8x35	1
UB104000	Alnico5	Ø 10x40	1
UF181538	Ferrite	18x15x3,8	2
UF127738	Ferrite	12x7,7x3,8	2
UF777760	Ferrite	7,7x7,7x6	2
UF207760	Ferrite	20,5x7,7x6	2
UF221105	Ferrite	Ø 22x11x5	3
UF341605	Ferrite	Ø 34x16x5	3
UP051508	Plastoferrite	50x15x8	4
UP301508	Plastoferrite	300x15x8	4
UR102540	NdFeBo	Ø 10x4x2,5	5
UR124540	NdFeBo	Ø 12x4x4,5	5
UR144361	NdFeBo	Ø 14x6x4,3	5
UR304000	NdFeBo	Ø 3x4	6
UR502000	NdFeBo	Ø 5x2	6
UR508000	NdFeBo	Ø 5x8	6
UR604010	NdFeBo	Ø 6x4	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

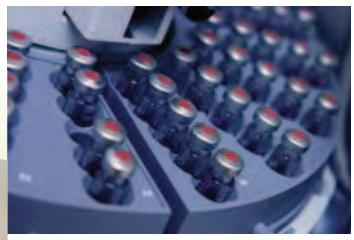
In the automotive industry there are numerous applications for our magnetic proximity sensors : detection of liquid levels (radiator liquid, windscreen washer, engine oil level, brake oil level, ...) but also closing/locking detection of the fuel tank knob , detection of water in the oil filter, potentiometric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

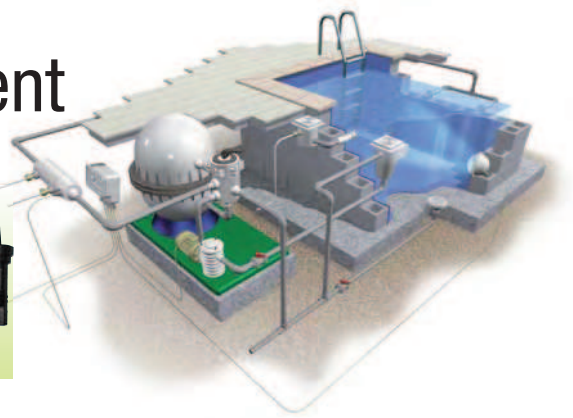
Medical

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.



SWITCHES AND REED RELAYS

www.celduc.com

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

Reed Switches and Mercury Tilt Switches

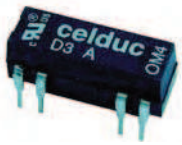
Detecting a clearance, a position, a level in extrem environnements without mechanical link between the moving parts and without maintenance, such is the daily challenge of the Reed contact submitted to a magnetic field in industrial sectors as various as money, space, control, telecom...

Sensitiviy to be specified in the order

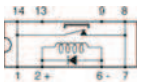
Product reference	Contact status	Max. switching voltage	Max. switching current	Max. switching power	Standard sensivity range	Glass length
AB21	1NO	350VDC	1A	100VA	20-35ATf	21mm
AC01		30VDC	0,01A	0,25VA	5-20ATf	6mm
AC03		100VDC	0,5A	12VA	10-35ATf	10mm
AC05		100VDC	0,5A	12VA	10-35ATf	14mm
AJ21		100VDC	0,4A	10VA	10-35ATf	14mm
AV10		7500VDC	0,2A	50VA	80-130ATf	53,4mm
AD22		250VDC	1,3A	80VA	40-105ATf	52mm
AD27/28		250VDC	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
CD29	Change-over switch	250VAC	1A	25W	50-90ATf	34,3mm
CD30		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»

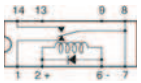
Reed Relays in DIP enclosure

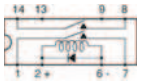
The most popular and the most industrial of the range. It offers all contact combinations. It is designed to switch inputs of telephony levels or PLC,signals from sensors or safety components.

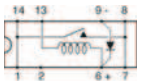


Internal scheme (top view)





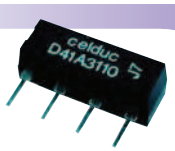




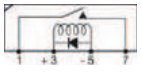
		Characteristics of the switch			Characteristics of the coil			
Product reference	Contact status	Max. switching voltage	Max. switching current	Max. switching power	Nominal voltage	R. coil at 20°C	Specifications	Dimensions in mm
D31A3100	1NO	100VDC	0,5A	10VA	5VDC	500 Ω	–	19,1x6,6x6,4
D31A3110		100VDC	0,5A	10VA	5VDC	500 Ω	diode	
D31A5100		100VDC	0,5A	10VA	12VDC	1 kΩ	–	
D31A5110		100VDC	0,5A	10VA	12VDC	1 kΩ	diode	
D31A6110		100VDC	0,5A	10VA	15VDC	2150 Ω	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
D31B5110		100VDC	0,5A	10VA	12VDC	1 kΩ	diode	
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	–	
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	–	

Reed Relays in SIP enclosure

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



Internal scheme (top view)



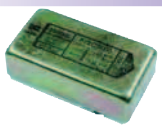
		Characteristics of the switch			Characteristics of the coil			
Product reference	Contact status	Max. switching voltage	Max. switching current	Max. switching power	Nominal voltage	R. coil at 20°C	Specifications	Dimensions in mm
D41A3100L	1NO	100VDC	0,5A	10VA	5VDC	500 Ω	–	19x(5 or 6)x7,5
D41A3110L		100VDC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

High voltage relay

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

Product reference	Contact status	Max. switching 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	High voltage relays	65x15,2x16,9
R1329L00		7500VDC	0,2A	50VA	12VDC	300 Ω		
R1343L00		7500VDC	0,2A	50VA	24VDC	1200 Ω		
R1402L13	1NC	5000VDC	0,2A	50VA	12VDC	300 Ω		
R1446L13		5000VDC	0,2A	50VA	24VDC	1200 Ω		

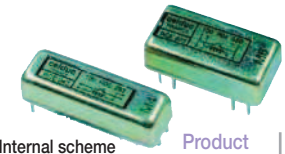
Reed D and R Relay Range



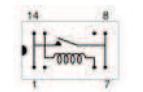
Relays with ferro-magnetic shield in for telecom type applications

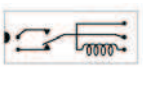
Internal scheme (top view)

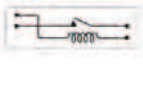
Product reference	Contact status	Characteristics of the switch: Max. switching voltage	Max. swit-ching current	Max. switching power	Characteristics of the coil: Nominal voltage	R. coil at 20°C	Specifications	Dimensions in mm
F51A2100	1NO	250VDC	0,4A	14VA	5VDC	345 Ω	comes in coated version réf. F81Ax100	30x9,5x10
F51A5100		250VDC	0,4A	14VA	12VDC	2145 Ω		
F51A7100		250VDC	0,4A	14VA	24VDC	7845 Ω		
F81A2500	1NO mercury	500VDC	1A	50VA	5VDC	140 Ω	Position vertically	30x9,5x10
F81A5500		500VDC	1A	50VA	12VDC	1000 kΩ		
F81A7500		500VDC	1A	50VA	24VDC	2300 Ω		
F61A2100	1NO	250VDC	0,4A	14VA	5VDC	345 Ω	Coil/contact insulation 4KV	30x9,5x11
F61A5100		250VDC	0,4A	14VA	12VDC	2145 Ω		
F61A7100		250VDC	0,4A	14VA	24VDC	7845 Ω		
F72C2500	2 mercury wetted chan-ge-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		

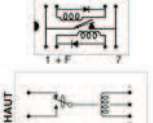


Internal scheme (top view)









Product reference	Contact status	Characteristics of the switch: Max. switching voltage	Max. swit-ching current	Max. switching 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		
R0295B08		100VDC	0,4A	12VA	24VDC	2800 Ω		
R0550B08	1NO	100VDC	0,4A	12VA	4VDC	500 Ω	DIL layout	20,2x10,1x7,2
R0551B08		100VDC	0,4A	12VA	5VDC	500 Ω		
R0552B08		100VDC	0,4A	12VA	12VDC	1000 kΩ		
R0553B08		100VDC	0,4A	12VA	24VDC	2150 Ω		
R0250W00	change-over	100VDC	0,25A	3VA	4VDC	75 Ω	–	23x7,5x6,7
R0251W00		100VDC	0,25A	3VA	6VDC	150 Ω		
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		
R0544B00		100VDC	0,4A	12VA	12VDC	500 Ω		
R0546B00		100VDC	0,4A	12VA	24VDC	2150 Ω		
R0585B01	1NO bistable 2 coils	100VDC	0,2A	5VA	5VDC	2x500 Ω	DIL layout / diode	20,2x10,1x10
R0582B01		100VDC	0,2A	5VA	12VDC	2x1500 Ω		
R0861P12	mercury wetted change-over switch	500VDC	2A	100VA	5VDC	335 Ω	position vertically	40,8x14,2x10,4
R0760P00		500VDC	2A	100VA	12VDC	680 Ω		
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
R0720P00		500VDC	2A	100VA	12VDC	355 Ω		
R0721P00		500VDC	2A	100VA	24VDC	800 Ω		

celduc® relais' worldwide presence in more than 60 countries

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Sales department France : Tel. +33 (0)4 77 53 90 20
Sales department for Asia : Tel. +33 (0)4 77 53 90 19
Sales department for Europe : Tel. +33 (0)4 77 53 90 21
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5 rue Ampère - BP 30004 - 42290 Sorbiers - France
Fax : +33 (0)4 77 53 85 51 • celduc-relais@celduc.com
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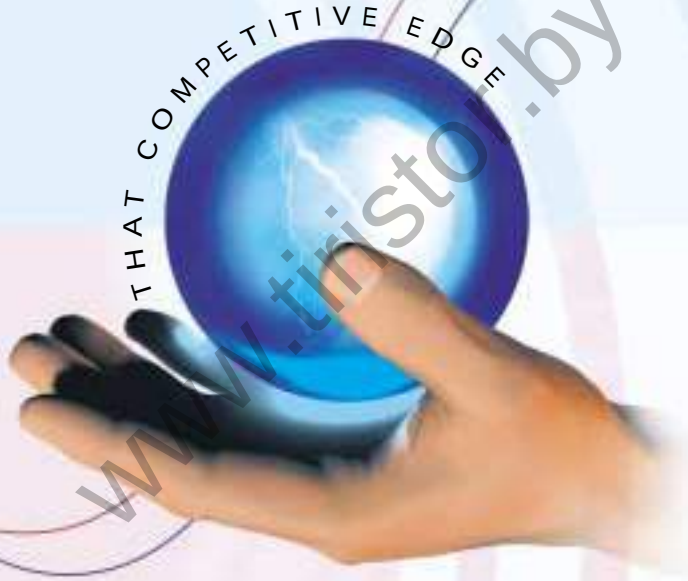
Selection Guide

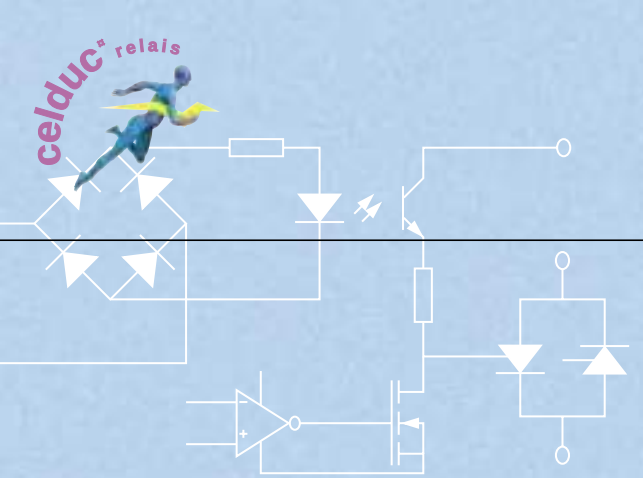


PROUD TO SERVE YOU.

SOLID STATE RELAYS

MAGNETIC SENSORS

REED RELAYS AND SWITCHES



Word of Introduction

Dear Customers, dear Readers,

Here is the new issue of our "Selection guide" catalogue that we believe will be clearer, easier and more complete. This is also the opportunity to confirm again our goals, our will and our passion :

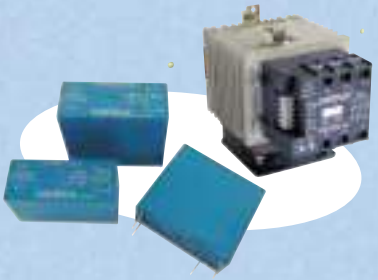
Keep our customers satisfied !!

This "selection guide" catalogue is a picture of the products that are available to date. As a matter of fact, we are convinced that innovation only will help us to remain your favourite supplier, and this is why more than 10 new products complete each month our 3 product lines : Solid State Relays, magnetic sensors and Reed products.

Therefore it may happen that some products can not be found in this catalogue. In this case we invite you to visit our website at www.celduc.com updated every month.

If you haven't been successful, feel free to contact **celduc**® relais, our team will try to fully answers your question.

Marc Combette
Managing Director



1 Solid State Relays

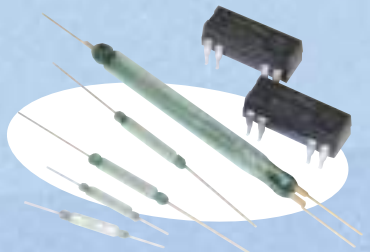
P.1 -> P.18

- Scope
- Selection Criteria
- Product Range

2 Proximity Sensors

P.19 -> P.24

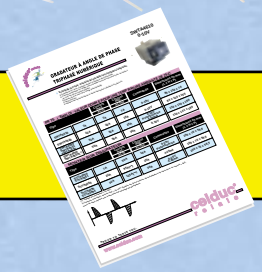
- Scope
- Product Range



3 Reed Relays and Switches

P.25 -> P.26

- Scope
- Product Range



All our technical data-sheets are available in our website :

www.celduc.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

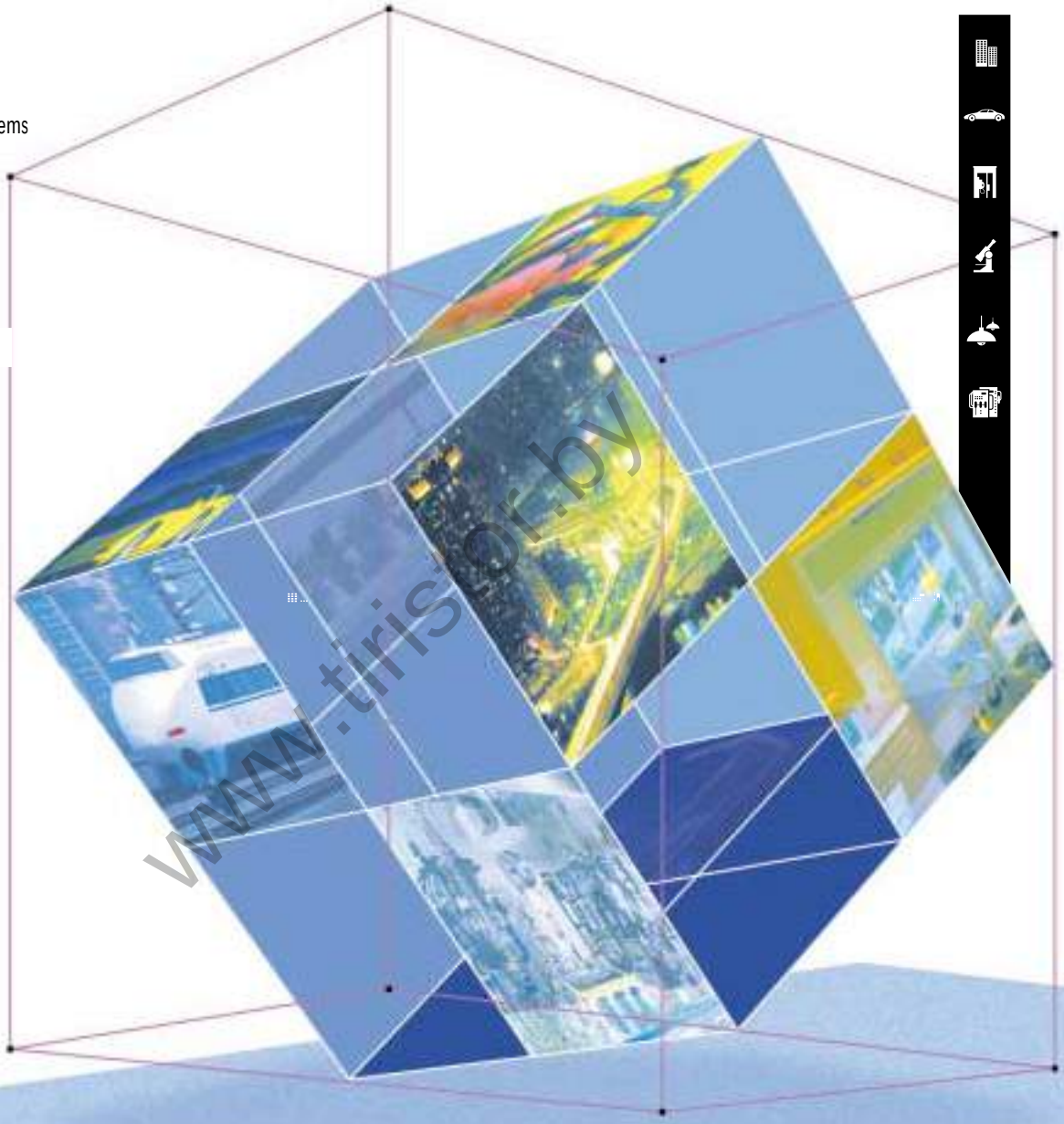
Public Lighting
Cinema
theatre lamps
Airport runaway lamps
Road lighting
Etc...

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

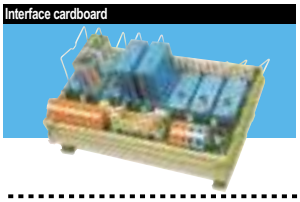
	PRODUCT REFERENCE	Switching Current	Switching Voltage	Control Voltage	Input R	Protec.	Specifications	Dimensions
AC	SLA01220	2A	12-280VAC	3-10VDC	320 Ω	RC	AC output module	28x5x15
	SLA02220	2A	12-280VAC	7-20VDC	1100 Ω	RC	AC output module	28x5x15
	SLA03220	2A	12-280VAC	18-32VDC	3 kΩ	RC	AC output module	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

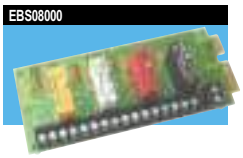
Optocoupled input and output modules for control interface. Plug-in relay solution.

	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

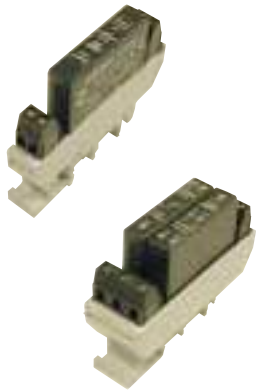


SUPPORT	EBS01000	DIN RAIL BASE for input/output Module
	EBS08000	I/O board for 8 input/output Module
	EBS16000	I/O board for 16 input/output Module
	EBS24000	I/O board for 24 input/output Module

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.

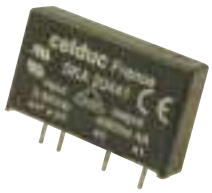
Our XKA & XKD ranges with pluggable connectors are also available on request.

SK RANGE

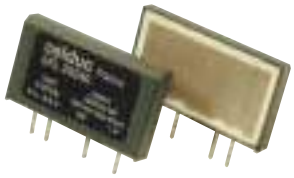
The SK range for PCB mount is available in 2 cases :

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.

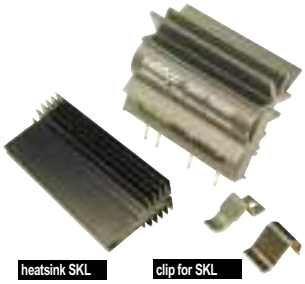


PRODUCT REFERENCE	Current	Switching voltage	Control voltage	Input R	LED	I^2t	Protec	Specifications	Dimensions mm
SK541100	2,5A	12-280VAC	3-30VDC	1 kΩ	no	50A²s	RC	AC zero-cross output	43,2 x 10,2 x 25,4
SK541101	2,5A	24-280VAC	3-30VDC	1 kΩ	no	50A²s	-	AC zero-cross output NC	
SKA10420	4A	12-275VAC	2.5-10VDC	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

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

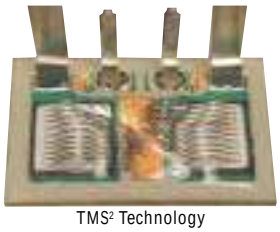
Three phase solid state relay in a single low profile package.
- -> This relay is designed for PCB board to provide control of medium power in three phase applications.

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.

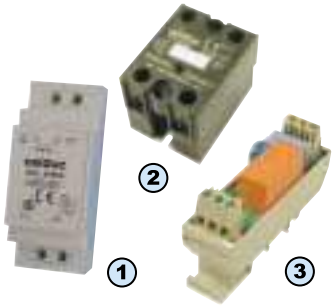
Power Relays

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

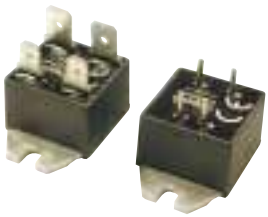
SOFTLIFE RANGE - "Get rid of your heatsinks!"



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	I^2t	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

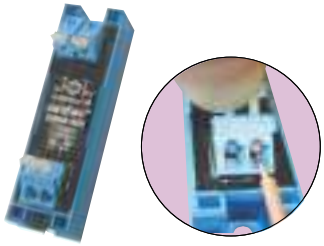
New Solid State Relay compact size pitch 22,5mm.
SIR model with spring terminals.

-> 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	I^2t	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.

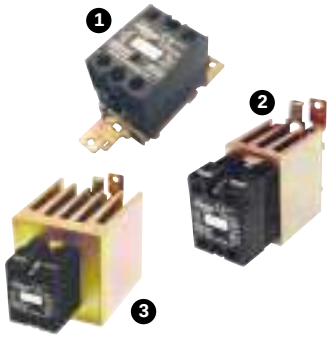
SV8 RANGE

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



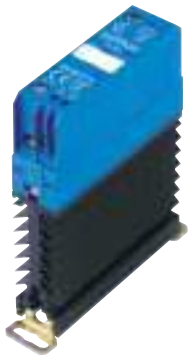
Single phase ready-to-use contactor integrating heatsink, DIN-rail mounting, IP20 terminal protection, LED, VDR, cage terminals... these products are defined with temperature rises of 50°C and permanent 8-hour operation (operating cycles = 100%) in compliance with the European standards

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-cU.
  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.

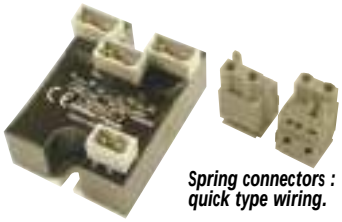
NEW

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.

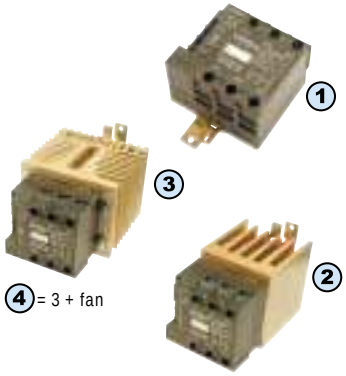
SVT RANGE

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	I²t	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

1 2 3 4 5

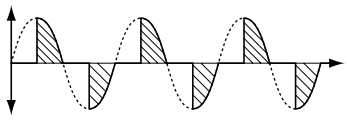
PRODUCT REFERENCE	Pmax motor 400VAC Y	Pmax motor 400VAC D	Pmax motor 230VAC Y	Pmax motor 230VAC D	Max. Current AC53a Max.	Max. Current AC53a EN60947-4-2	Specifications	Dimensions mm	Fig n°
SMCV6080	7,5kW	13kW	4,3kW	7,5kw	16A	11,5A	Heatsink not provided	100x76x58,5	2
SMCV6110	11kW	19kW	6,4kW	11kW	25A	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

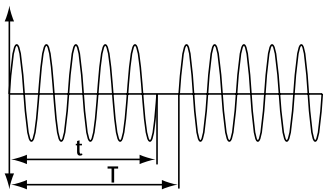


PRODUCT REFERENCE	Switching current	Switching voltage	Control voltage	Input R	I²t	Dimensions mm
SG441020	10A	115-265VAC	0-10VDC	400 kΩ	72A²s	100 x 73,5 x 39,5
SG444020	40A	115-265VAC	0-10VDC	400 kΩ	1500A²s	
SG444120	40A	115-265VAC	Potentiometer	200 kΩ	1500A²s	
SG444420	40A	115-265VAC	4-20mA	250 Ω	1500A²s	
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	

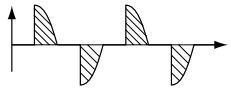
For higher power ratings and three phases, ask for our application notes.
These products should be mounted on heatsink in order to reach nominal value.

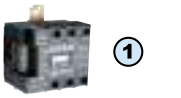
THREE PHASE UNIVERSAL DIGITAL PROPORTIONAL CONTROLLER

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

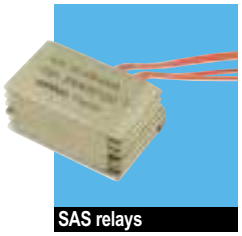
4 single phase SSRs in a SC case - save place in control panels (width 45 mm).

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

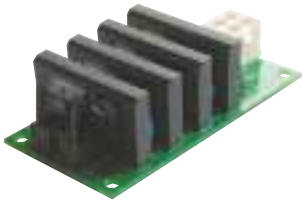
ST645000: flashing 1/2Hz 230VAC 10A.
ST647000: flashing 1/2Hz 230VAC 25A.
ST323000: flashing 1/2Hz 30-60VDC 10A.

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.



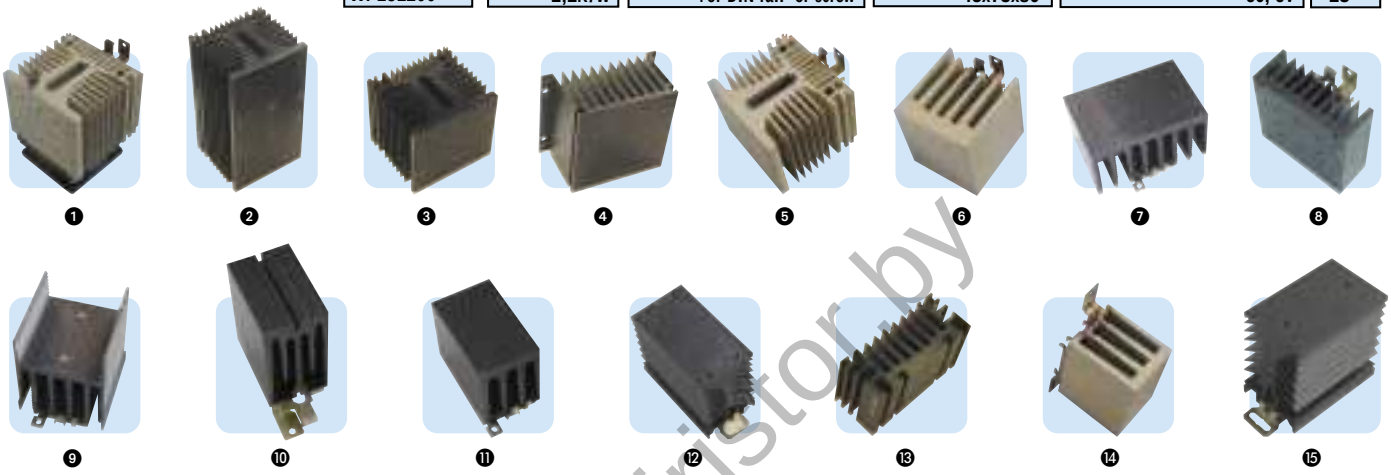
4 SKL
on compact card.

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

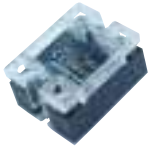
HEATSINKS

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....

Magnetic proximity sensors

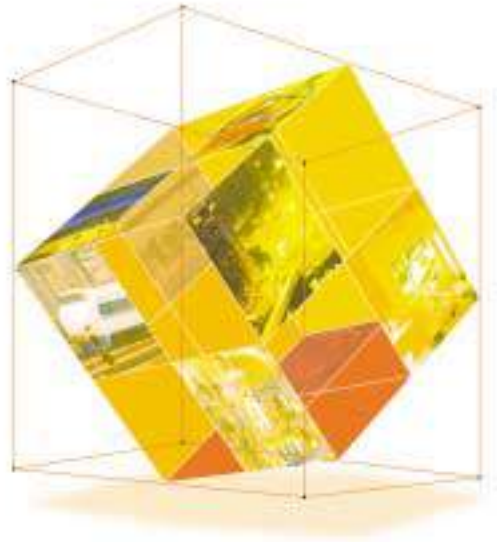
We are the experts ! !!!

If you look for a sensor for position, passage, presence, level or speed, we must have it in our range of magnetic sensors.

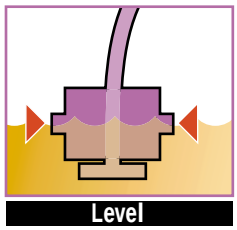
We can even design the ideal product for your applications !

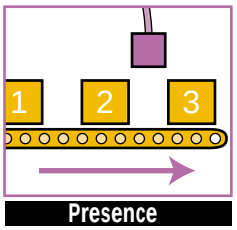
At celduc® relais, we are eager to offer the best products for your application, thanks to our 30-year experience in the key technologies that we use in our products :

- 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 frequency .

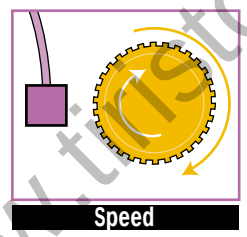


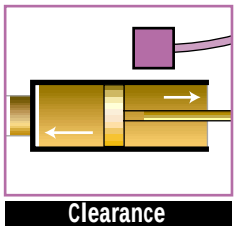
Scope


Level



Presence


Speed


Clearance


Safety

Industry

Counting
Cylinder positions
Machine safety
Advertising panel

Home

Burglar alarm
Camera shutter control window position (blinds)
Lifts
Alarms
Big and small household goods

Aircraft, space and army

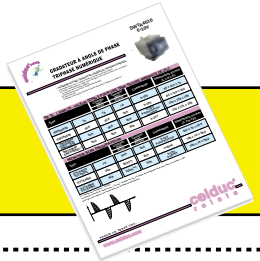
Fuel/oil level.
camera shutter control

Specific applications

ATEX (explosive atmospheres)

Contact type :
NO -> Normaly Open
NC -> Normaly Closed
Other lengths of cable or wire possible for significant quantities

Contents



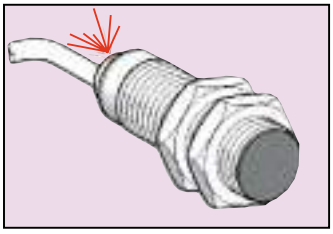
All our technical data-sheets are available in our website :
www.celduc.com

ELECTRONICAL SENSORS

celduc relais offers two ranges of electronical sensors :

-> **HALL effect sensors.**

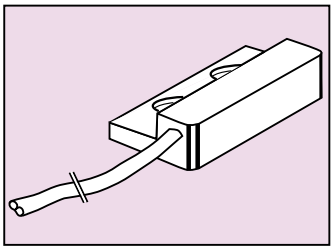
-> **Gear Tooth Sensor.**



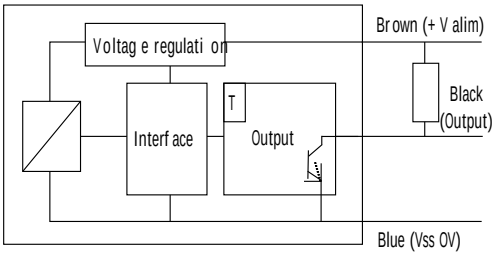
PTE
(for front detection)

Technical characteristics :

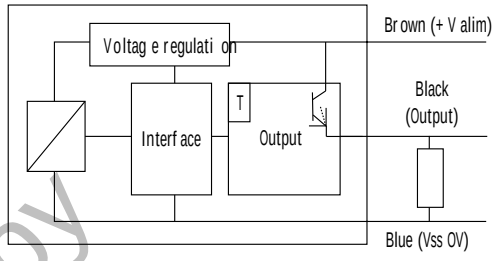
- 5-24VDC or 6-48VDC power supply with internal voltage clamping and reverse voltage protection.
- Low side or High side output.
- 25mA or 0.4A output current with overload short-circuit protection and thermal shutdown.
- Adjustable Internal delay (option on request).
- High Speed Operation > 10khz.
- Insensible to shocks and vibrations.
- Designed in conformity with IEC/EN60947-5-2



PLE
(for side detection)



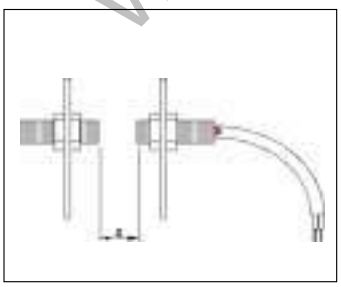
NPN



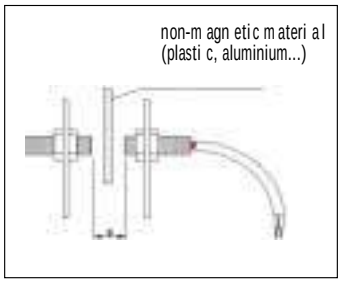
PNP

PRODUCT REFERENCE	Contact type	Connection type	Cable lenght	Closing distance	Max switching voltage	Max switching current	Dimensions L x l x h	Associated coded magnet
PLE13320*	Hall effect NPN	Cable	2 m	8 mm	5-24VDC	25mA	32x15x6,8	P6250000
PLE14320**	Hall effect NPN	Cable	2 m	8 mm	5-24VDC	25mA	32x15x6,8	
PTE11320	Hall effect PNP	Cable	2 m	19 mm	6-48VDC	0,4A	M12x33	PT810000
PTE11321	Hall effect NPN	Cable	2 m	19 mm	6-48VDC	0,4A	M12x33	
PTE21320	Gear tooth PNP	Cable	2 m	1,5 mm	6-48VDC	0,4A	M12x33	
PTE21321	Gear tooth NPN	Cable	2 m	1,5 mm	6-48VDC	0,4A	M12x33	

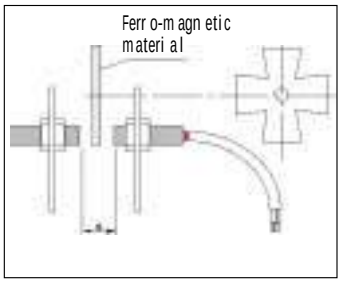
* *Front detection*
** *Side detection*



Direct detection



Detection through non-magnetic material

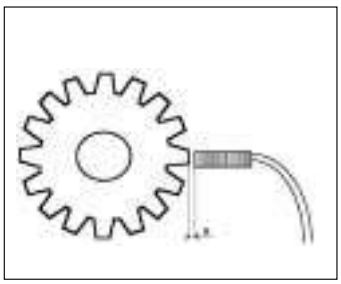


Detection of ferro-magnetic (counting,...)

Applications :

- Industry
- Lift
- Speed sensors
- Household electronical appliances
- Tractors

...



Gear tooth sensor

LEVEL SENSORS - PTF RANGE

Closed : float at the top - Open : float at the bottom
Closed : float at the bottom - Open : float at the top

PRODUCT REFERENCE	Contact type	Connection type	Cable lengh	Material Housing	Material Float	Max. switching power	Max. switching voltage	Max. switching current	Dimensions mm	Fig n°
PTF01070	1NO	2 wires	70 mm	PA66 Plastic	Polypro stainless steel	10VA	100VDC	0,5A	ø25 x 42	1
PTFA2015	1NO	2 wires	1,5 m	Plastic	stainless steel	10VA	200VDC	0,4A	ø28 x 60	2
PTFA3015	1NO	2 wires	1,5 m	PE Plastic	PE Plastic	10VA	200VDC	0,4A	ø28 x 90	3

SCREW SENSORS

PA

PRODUCT REFERENCE	Contact type	Connection type	Cable lengh	Closing distance*	Max. switching power	Max. switching voltage	Max.switching current	Dimensions mm
PAA10060**	1NO	2 wires	680 mm	16 mm	12VA	100VDC	0,4A	23x14x6
PAA11202	1NO	2 wires	275 mm	16 mm	12VA	100VDC	0,4A	
PAA11205	1NO	2 wires	500 mm	16 mm	12VA	100VDC	0,4A	
PAC10010	reversing switch	3 wires + HE14 connector	70 mm	12 mm ***	NF 3VA NO 8VA	100VDC	0,25A	

* *With P6250000 magnet.* ** *Faston terminals.*
*** *With U4200000 magnet.*

PL

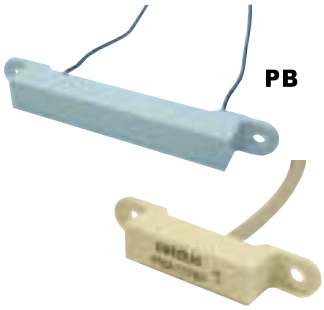
PRODUCT REFERENCE	Contact type	Connection type	Cable lengh	Closing distance**	Max. switching power	Max. switching voltage	Max.switching current	Dimensions mm
PLA10130	1NO	cable	13 mm	12 mm	12VA	250VDC	0,25A	32x15x6,8
PLA11208	1NO	cable	800 mm	16 mm	12VA	250VDC	0,4A	
PLA12430	1NO	cable	3 m	12 mm	12VA	250VDC	0,4A	
PLA13701	1NO	cable	100 mm	10 mm	12VA	250VDC	0,4A	
PLA13715	1NO	cable	1,5 m	10 mm	12VA	250VDC	0,4A	
PLA13725	1NO	cable	2,5 m	10 mm	12VA	250VDC	0,4A	
PLA13750	1NO	cable	5 m	10 mm	12VA	250VDC	0,4A	
PLA13780	1NO	cable	8 m	10 mm	12VA	250VDC	0,4A	

PLM

PRODUCT REFERENCE	Contact type	Connection type	Cable lengh	Closing distance**	Max. switching power	Max. switching voltage	Max.switching current	Dimensions mm
PLB10060	1NC	cable	3 m	12 mm	12VA	250VDC	0,4A	32x15x6,8
PLB13730	1NC	cable	3 m	10 mm	12VA	250VDC	0,4A	
PLB16701	1NC	cable	100 mm	10 mm	12VA	250VDC	0,4A	
PLC10030	reversing	cable	3 m	12 mm	NC 3VA/NO 8VA	100VDC	0,25A	32x15x6,8
PLC10040	reversing	cable	1,5 m	14 mm	NC 3VA/NO 8VA	100VDC	0,25A	
PLC13701	reversing	3 cables	100 mm	10 mm	NC 3VA/NO 8VA	100VDC	0,25A	
PLMA0130**	1NO	1 shielded cable	3 m	50 mm	50W	250VAC	0,5A	Aluminium 88x38x12

* *With P6250000 magnet.* ** *sensor + magnet .*

PB



PRODUCT REFERENCE	Contact type	Connection type	Cable lengh	Closing distance**	Max. switching power	Max. switching voltage	Max.switching current	Dimensions mm
PB158S00	1NO	2 wires	80 mm	4 mm	100VA	250VAC	3A	86x8,5x12,5
PB195T00	1NO	2 wires	80 mm	7 mm	50VA	250VAC	1A	
PB285T00	1NC	2 wires	80 mm	6 mm	50VA	250VAC	1A	
PB367G00	1NC	2 wires	180 mm	6 mm	16VA	250VDC	0,5A	51x8,5x11,5
PB390G00	1NO	2 wires	80 mm	13 mm	16VA	250VDC	0,5A	
PBA10010	1NO+loop	cable	8 m	13 mm	12VA	250VDC	0,4A	
PBA13725	1NO	cable	2,5 m	13 mm	12VA	250VDC	0,4A	
PBA13740	1NO	cable	4 m	13 mm	12VA	250VDC	0,4A	
PBA13780	1NO	cable	8 m	13 mm	12VA	250VDC	0,4A	

* *With associated magnet: P4160000 except for PB367G00 sensor P4159000 magnet.*

SENSORS for layout on PCB

PH

PRODUCT REFERENCE	Contact type	Closing distance**	Max. switching power	Max. switching voltage	Max.switching current	Dimensions mm
PHA01200	1NO	18 mm	12VA	100VDC	0,4A	23x4,2x3,6
PHA11200	1NO	17 mm	12VA	100VDC	0,4A	
PHC10010	reversing switch	17 mm	NC 3VA/NO 8VA	100VDC	0,25A	
PHC13700	reversing switch	11 mm	NC 3VA/NO 8VA	100VDC	0,25A	

* *With P6250000 magnet.*

PMG RANGE

PRODUCT REFERENCE	Contact type	Connection type	Cable lengh	Closing distance	Max. switching power	Max. switching voltage	Max. switching current	Specifications	Dimensions mm
PMG90010	1NO	cable	10m	(1)10 mm	10VA	250VDC	0,4A	plastic tube	Ø 12x32
PMG92291	1NO	2 wires	200 mm	(2)12 mm	12VA	100Vcc	0,4A	plastic tube	Ø 18,5x32,5
PMG92334	2NO	cable + RJ11	4,5 mm	11 mm	10VA	250VDC	0,4A	clips	33x21x9,5
PMG12830	2NO	cable	3 m	(3)16 mm	12VA	100Vcc	0,4A	PSA enclosure	51x16x7

(1) With UR102540 magnet. (2) With PMG92280 magnet. (3) With P6250000 magnet.

Sensors with high level of switching

PRODUCT REFERENCE	Contact type	Connection type	Cable lengh	Closing distance*	Max. switching power	Max. switching voltage	Max.switching current	Dimensions mm
PSA60010	1NO	2 wires	300 mm	12 mm	800W	24-440VAC	3A	51x16x7
PSA60015	1NO	cable	1,5 m	12 mm	800W	24-440VAC	3A	
PSA60020	1NO	2 wires	3 m	12 mm	800W	6-440VAC	3A	

** With P6250000 magnet.*

Tubular SENSOR

PRODUCT REFERENCE	Contact type	Connection type	Cable lengh	Closing distance	Max. switching power	Max. switching voltage	Max. switching current	Dimensions mm
PTA10440	1NO	2 wires + cosses	500 mm		12VA	100VDC	0,4A	plastic tube Ø 6x30
PTA11235	1NO	cable	3,5 m	15 mm	12VA	100VDC	0,4A	
PTA12401	1NO	2 wires	100 mm	14 mm	12VA	100VDC	0,4A	
PTA13701	1NO	2 wires	100 mm	10 mm	12VA	100VDC	0,4A	
PTA13715	1NO	2 wires	1,5 m	10 mm	12VA	100VDC	0,4A	
PTA13730	1NO	cable	3 m	10 mm	12VA	100VDC	0,4A	
PTB13702	1NC	2 wires	200 mm	10 mm	3VA	100VDC	0,25A	
PTC12301	reversing switch	3 wires	100 mm	14 mm	NC 3VA/NO 8VA	100VDC	0,25A	
PTC13730	reversing switch	cable	3 m	10 mm	NC 3VA/NO 8VA	100VDC	0,25A	
PTA50010	1NO	2 wires	100 mm	14 mm	10VA	100VDC	0,4A	plastic tube Ø 6x25,4
PTI11220	1NO	cable	2 m	8 mm	10VA	100VDC	0,4A	threaded plastic tube M8 X 31
PTI21220	1 NO + Led	Cable	2 m	17 mm	10VA	100VDC	0,3A	threaded plastic tube M12 X 33
PTPA0100*	1NO	connector	_	12 mm	10VA	200VDC	0,5A	plastic tube Ø 11 X 28
PTPA0230*	1NO	2 wires	3 m	30 mm	10VA	200VDC	-	plastic tube Ø 23 X 27
PTA90010	1NO	cable	10 m	16 mm	12VA	100VDC	0,4A	Threaded brass tube M10
PTA90020	1NO+LED	cable	10m	15 mm	0,3VA	24VDC	0,01A	
PTA90130	1NO	cable	3 m	16 mm	12VA	100VDC	0,4A	

** Sensor + magnet.*

All the closing distances are given with the magnet associated and in non-magnetic environment.

CONTROL MAGNETS

-> Coated magnets.

PRODUCT REFERENCE	Adapted to sensor	Bare magnet dimension	Dimensions mm
P3150000	PA,PH,PL,PT	Ø 3x15mm	32x15x6,8
P6250000		Ø 6x25mm	32x15x6,8
P4200000		Ø 4x20mm	32x15x6,8
P4159000	PB	Ø 3x15mm	51x8,5x11,5
P4160000		Ø 5x25mm	51x8,5x11,5
PA320000	PA	Ø 3x20mm	23x14x6
PMG92290	PMG92291	Ø 6x25mm	Ø 18,5x28

-> Bare magnets

PRODUCT REFERENCE	Mati re	Dimensions mm
U2710000	Alnico	Ø 2,7x10
U3150000		Ø 3x15
U4200000		Ø 4x20
U6250000		Ø 6x25
U8300000		Ø 8x30
U8350000		Ø 8x35
UF181538	Ferrite	18x15x3,8
UF127738		12x7,7x3,8
UF777760		7,7x7,7x6
UF207760		20,5x7,7x6
UR102540	NdFeBo	Ø 10x4
UR304000		Ø 3x4
UR502000		Ø 5x2
UR508000		Ø 5x8
UR604010	rare earth	Ø 6x4
UR801000	NdFeBo	Ø 8x10

SAFETY SENSORS

-> The **PXS** or **PSS** type products are sensors designed to control the opening of protective devices, machine casings and access doors. Associated with their respective coded magnet and a controller module, they are capable of monitoring 1 or more "O" contacts (break, closed with a magnet) and/or 1 or more "C" contacts (make, closed with a magnet). They meet the "CE" directives and European regulations relating to machine conformity as per the standards EN60204 - EN1088 - En 954 and be covered by the categories 1 to 4 of these standards according to the associated module (CETIM certificate).

Safety functions performed thanks to :

- **Tamper-proof:** the sensor, associated with its coded magnet, reduces the possibility of tampering ; a standard magnet cannot actuate the sensor .
- **Redundancy:** the components are redundant. If part of the sensor fails, the redundant circuit continues to operate.
- **Unbalance:** associated with a controller module which checks the unbalance of the signals from the sensor, the first fault is signaled if the switches are not actuated in the right order

Magnetic safety sensors represent an alternative to mechanical position switches in the following cases :

- Mechanical clearance required to overcome alignment or vibration problems,
- Compulsory complete sealing: industrial, food and mechanical environments,
- Longer lifetime and reliability.

-> Different switch combinations (with or without display) mean that all the recommendations of the EN 954-1 standard can be achieved. All our switches include fusible resistor type protection and the use of flame retardant materials in the event of short-circuit.

Please, contact us for all specific cases. We can advise users and examine the most suitable solution.

Reference	Contacts	Led option	Cable lenght (m)	Current limiting resistor	Switching power
PXS10350	2 O + 1 C	no	5	-	3VA - 100VDC - 100mA
PXS59010	O + C	no	10	10 Ω	3VA - 100VDC - 100mA
PXS59150	O + C	yes	5	10 Ω	3VA - 100VDC - 100mA
PXS70150	2 O + 1 C	yes	5	10 Ω	3VA - 100VDC - 100mA
PXS79010*	2 O	no	10	10 Ω	3VA - 100VDC - 100mA
PXS79020*	2 O	no	2	10 Ω	3VA - 100VDC - 100mA
PXS79110*	2 O	yes	10	10 Ω	3VA - 100VDC - 100mA
PXS79120*	2 O	yes	2	10 Ω	3VA - 100VDC - 100mA
PXS79150*	2 O	yes	5	10 Ω	3VA - 100VDC - 100mA
PSS59050	0 + C	no	5	10 Ω	3VA - 100VDC - 100mA
PSS59150	0 + C	yes	5	10 Ω	3VA - 100VDC - 100mA
PSS79050	2 O	no	5	10 Ω	3VA - 100VDC - 100mA
PSS79150	2 O	yes	5	10 Ω	3VA - 100VDC - 100mA
PSA60010	1 O solid state	no	0,35	-	500 VA - 24 to 440VAC - 0,01 à 3A
PSA60020	1 O solid state	no	3	-	500 VA - 6 to 440VAC - 0,01 à 3A

Magnet reference	Contact type
P2000100	Magnet for PXS
P3000100	Magnet for PSS
P6250000	Magnet for PSA

** In the PXS range, the 2C + O sensors are also available.*

Contact type

O -> Normally open and closed with magnet

C -> Normally closed and open with magnet

DOOR SENSORS FOR LIFTS

NEW

PRODUCT REFERENCE	Contact type	Connection type	Cable lengh	Closing distance	Max. switching power	Max. switching voltage	Max. switching current	Dimensions mm
PMG12802	Bistable	Cable	2 m	7<D<25*	60VA	230VDC	0,3A	80x20x20
PMG12921	1NO	Cable	7 m	27mm**	100VA	230VDC	3A	M14x75
PMG12930	Bistable	Cable	7,3 m	7<D<40**	60VA	230VDC	0,3A	80x30x30
PMG13051	1 NC	Cable	6,5 m	27mm**	30VA	230VDC	0,5A	M14x75
PMG13110	1 NO	Cable	7 m	9,5mm***	30VA	230VDC	1A	80x20x15

** With UF252060 magnet*
*** With UP302010 magnet*
****With ø 22x11 magnet*

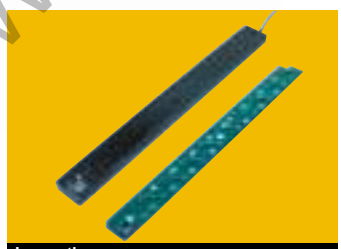
SPECIAL CUSTOMER PRODUCTS

There are numerous special customer applications in all sectors of activity. Consult us.

Expertise in specific sensors

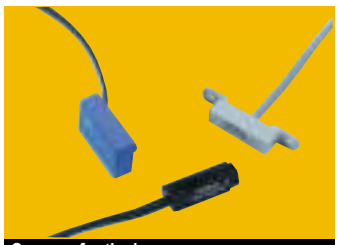
Electronic sensors

Speed sensor integrated into ball bearing : speed counter, kilometers, etc.



Innovation

- Potentiometric scale (levels)
- Postal sorting (filling racks)



Sensors for the home

Position sensors with dry or impedent sheet contacts :
washing machine, iron...
Opening and closing sensor for doors and windows (alarm, energy saving, lighting...)

Various sensors

- Reed Technology
- 2 and 3-wire magnetoresistance
- Short-circuit self protection
- Electronic sensors
- Hall effect sensors
- Temperature
- White products

Automotive

- Level sensors :
  water, brake fluid for ABS system, presence of water in diesel
- Position sensors :
  control, closing of doors, sun roof...
- Safety sensors :
  burglars, Airbag...
  For various engines.

ATEX (Atmosph res Explosives)

Reed relays and switches

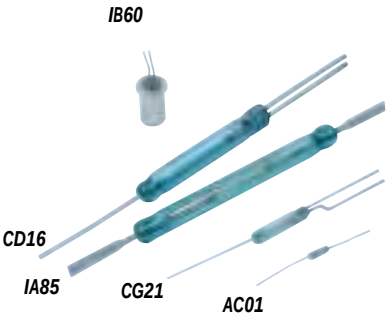
SCOPE

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 varied as money, space, control, telecom...

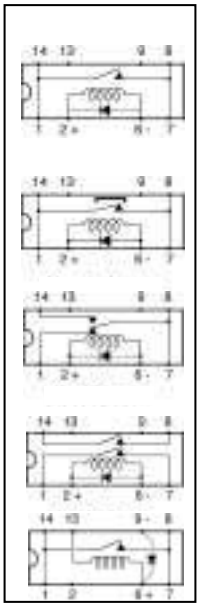


Sensitivity to be specified at the order

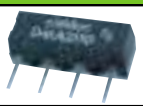
PRODUCT REFERENCE	Contact type	Max. switching voltage	Max. switching current	Max. switching power	standard sensitivity range	Glass length
AC01	1NO	30VDC	0,01A	0,25VA	5-20ATf	6mm
AC03		100VDC	0,5A	12VA	10-35ATf	10mm
AC05		100VDC	0,5A	12VA	10-35ATf	14mm
AC11		24VDC	0,1A	1VA	15-30ATf	10mm
AD22		250VDC	1,3A	80VA	40-105ATf	52mm
AI01		200VDC	0,5A	10VA	15-35ATf	14mm
AJ21		100VDC	0,5A	10VA	10-35ATf	14mm
IA21		100VDC	0,4A	12VA	10-30ATf	15mm
IA23		250VDC	0,5A	20VA	15-35ATf	21mm
IA83		250VDC	1A	50VA	35-72ATf	53,4mm
IA85		250Veff	3A	100VA	72-110ATf	53,4mm
CD16	Change-over switch	500VDC	1,5A	50VA	50-80ATf	39,7mm
CD20		220VDC	1A	60VA	70-90ATf	52mm
CG21		100VDC	0,25A	NF 3W/NO 8W	10-30ATf	14,5mm
CG21V		100VDC	0,25A	NF 3W/NO 8W	10-30ATf	14,5mm,"with bending"
IB600099	Tilt switch	240VDC	0,4A	60VA	-	mercury switch

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 type	Characteristics of the bulb: Max. switching voltage	Max. switching current	Max. switching power	Characteristics of the coil: Voltage rating	R. coil at 20¡C	Specifications	Dimensions mm
	D31A3100	1NO	100VDC	0,5A	10VA	5VDC	500 Ω	-	19,1 x 6,6 x 6,4
	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	
	D31A6110		100VDC	0,5A	10VA	15VDC	2150 Ω	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	19,1 x 6,6 x 6,4
	D31B5110		100VDC	0,5A	10VA	12VDC	1 kΩ	diode	
	D31C2100	Change-over switch	100VDC	0,25A	3VA	5VDC	200 Ω	-	19,1 x 6,6 x 6,4
	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	
	D32A2100	2NO	100VDC	0,5A	10VA	5VDC	125 Ω	-	19,1 x 6,6 x 6,4
	D32A2110		100VDC	0,5A	10VA	5VDC	125 Ω	diode	
	D32A5100		100VDC	0,5A	10VA	12VDC	500 Ω	-	
	D71A2100	1NO	100VDC	0,5A	10VA	5VDC	380 Ω	-	19,1 x 6,6 x 5,5
	D71A2110		100VDC	0,5A	10VA	5VDC	380 Ω	diode	
	D71A5100		100VDC	0,5A	10VA	12VDC	530 Ω	-	

Reed RELAYS in SIP enclosure

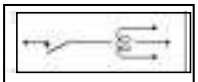
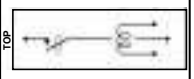
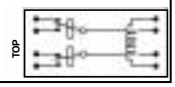


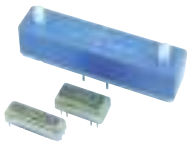
Relays for high density component circuits : alarms, testers, industrial control.

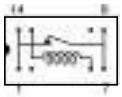
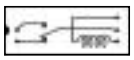
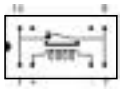
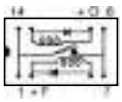
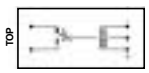
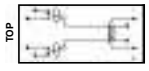
Internal scheme top view	PRODUCT REFERENCE	Contact type	Characteristics of the bulb: Max. switching voltage	Max. switching current	Max. switching power	Characteristics of the coil: Voltage rating	Coil Resistance	Specifications	Dimensions mm
	D41A3100L	1NO	100VDC	0,5A	10VA	5VDC	500 Ω	-	19 x (5 or 6) x 7,5
	D41A3110L		100VDC	0,5A	10VA	5VDC	500 Ω	diode	

Reed F and R RELAY RANGE

Relays with ferro-magnetic shielding for telecom type applications

Internal scheme top view	PRODUCT REFERENCE	Contact type	Characteristics of the bulb: Max. switching voltage	Max. switching current	Max. switching power	Characteristics of the coil: Voltage rating	R. coil at 20¡C	Specifications	Dimensions mm
	F51A2100	1NO	250VDC	0,4A	14VA	5VDC	345 Ω	comes in coated version réf. F81	30 x 9,5 x 10
	F51A5100		250VDC	0,4A	14VA	12VDC	2145 Ω		
	F51A7100		250VDC	0,4A	14VA	24VDC	7845 Ω		
	F81A2500	1NO mercury	500VDC	1A	50VA	5VDC	140 Ω	Position vertically	30 x 9,5 x 10
	F81A5500		500VDC	1A	50VA	12VDC	1000 kΩ		
	F81A7500		500VDC	1A	50VA	24VDC	2300 Ω		
	F61A2100	1NO	250VDC	0,4A	14VA	5VDC	345 Ω	Coil/contact insulation 4KV	31 x 9,5 x 11
	F61A5100		250VDC	0,4A	14VA	12VDC	2145 Ω		
	F61A7100		250VDC	0,4A	14VA	24VDC	7845 Ω		
	F72C2500	mercury wetted Change-over switch	500VDC	1A	50VA	5VDC	75 Ω	Position vertically	30 x 16,5 x 11
	F72C5500		500VDC	1A	50VA	12VDC	350 Ω		
	F72C7500		500VDC	1A	50VA	24VDC	1350 Ω		



Internal scheme top view	PRODUCT REFERENCE	Contact type	Characteristics of the bulb: Max. switching voltage	Max. switching current	Max. switching power	Characteristics of the coil: Voltage rating	R. coil at 20¡C	Specifications	Dimensions mm
	R0292B00	1NO	100VDC	0,4A	12VA	4VDC	250 Ω	-	23 x 7,5 x 6,7
	R0293B08		100VDC	0,4A	12VA	5VDC	450 Ω		
	R0294B08		100VDC	0,4A	12VA	12VDC	1600 Ω		
	R0295B08		100VDC	0,4A	12VA	24VDC	2800 Ω		
	R0550B08	1NO	100VDC	0,4A	12VA	4VDC	500 Ω	DIL layout	20,2 x 10,1 x 7,2
	R0551B08		100VDC	0,4A	12VA	5VDC	500 Ω		
	R0552B08		100VDC	0,4A	12VA	12VDC	1000 kΩ		
	R0553B08		100VDC	0,4A	12VA	24VDC	2150 Ω		
	R0250W00	Change-over switch	100VDC	0,25A	3VA	4VDC	75 Ω	-	23 x 7,5 x 6,7
	R0251W00		100VDC	0,25A	3VA	6VDC	150 Ω		
	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	65 x 15,5 x 16
	R0116S06		250Veff	3A	100VA	12VDC	1000 kΩ		
	R0117S06		250Veff	3A	100VA	24VDC	4 kΩ		
	R0542B08	1NF	100VDC	0,4A	12VA	4VDC	200 Ω	DIL layout	20,2 x 10,1 x 7,2
	R0543B08		100VDC	0,4A	12VA	5VDC	200 Ω		
	R0544B08		100VDC	0,4A	12VA	12VDC	500 Ω		
	R0546B00		100VDC	0,4A	12VA	24VDC	2150 Ω		
	R0585B01	1NO bistable 2 coils	100VDC	0,2A	5VA	5VDC	2x500 Ω	diode	20,2 x 10,1 x 10
	R0582B01		100VDC	0,2A	5VA	12VDC	2x1500 Ω		
	R0861P12	mercury wetted Change-over switch	500VDC	2A	100VA	5VDC	335 Ω	position vertically	40,8 x 14,2 x 10,4
	R0760P00		500VDC	2A	100VA	12VDC	680 Ω		
	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.	40,8 x 19,8 x 10,4
	R0720P00		500VDC	2A	100VA	12VDC	355 Ω		
	R0721P00		500VDC	2A	100VA	24VDC	800Ω		

HIGH VOLTAGE RELAYS

	R1380L00	1NO	7500VDC	0,2A	50VA	6VDC	75 Ω	High voltage relays	65 x 15,2 x 16,9
	R1329L00		7500VDC	0,2A	50VA	12VDC	300 Ω		
	R1343L00		7500VDC	0,2A	50VA	24VDC	1200 Ω		

Distribution channels

celduc® relais

MANUFACTURER

1 2 3

DIRECT SALES | **AGENTS OR DISTRIBUTORS** | **OEM**

PROUD TO SERVE YOU.

Groupe celduc

40 years of innovation :

celduc, a specialist in power techniques and electronics, can call upon many years of pratical experience and is fully focused on serving its market and customers the world over. **celduc** dates back to 1960 when the company was founded by Michel GUICHARD. Today it is split into two separate trading companies, **celduc transfo** & **celduc** relais to channel and focus its expertise into two separate market sectors.

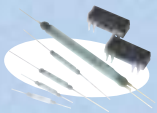
celduc relais is now structured into three strategic business units each with its own dedicaced R&D and marketing teams. The three market sectors are solid state relays, magnetic proximity sensors and reed switches. By focusing on these separate areas, the company has pursued innovations that have enabled it to gain an unrivalled and long-standing reputation.

The Saint-Etienne-based **celduc** group in a key factor in the prosperity of the Rhône-Alpes region and with over 50 % of its turn over exported, it is established as a truly international company .
Well established in Europe, the company has an increasing stature in the USA and in ASIA.

celduc relais products :

-> **Solid state relays** (commonly known as SSR) represent 50% of the turn over of **celduc relais.** These innovative and highly efficient components are used to control all types of loads used in many industries. The three major application areas are industrial heating and temperature control, motor control and/or public lighting control. Every day new applications calling for reliability, no noise and long life expectancies make use of our highly innovative solid state relays that provide the small but vital "extra" when compared to our competitor's products.

-> **Magnetic proximity sensors :** Used for monitoring or controlling levels, clearances, movement, position and as a tachometer to record speed of rotation, the sky is the limit for these versatile sensors. These sensors are used by both the general public and the major industrial organisations such as the automative, aircraft and telecommunication industries. They are also used extensively in all automation applications of the manufacturing sector.



-> **"Reed" switches :** our Reed switches are used in combination with magnetic proximity sensors and reed relays and have proved to be an out-and-out winner over the past 50 years. The range meets the demands of an increasing number of new applications thanks to their ease of operation, price, compact size and reliability.

Know-How :

Being a specialist in this field, **celduc relais** not only manufactures one of the most comprehensive ranges of solid state relays available from any manufacturer but the company has also developed the very latest in terms of production equipment ensuring efficient manufacture to the highest standards. These products and ressources keep the name of **celduc relais** at the forefront as one of the biggest name in the industry. We have provided the solution to countless applications in homes, planes, satellites, plastic injection presses, motors, modems and many other applications.

Quality ISO9001 :

ISO9002 ratified since 1993, **celduc relais** also boasts the year 2002 version of ISO 9001 accreditation. It is by stringent application of and adherence to the rules of this standard that ensures total control of our production and research programmes. Being tuned to and building products that meet the specific requirements of our customers is the "raison d'être" of **celduc relais.**

celduc relais also boats the year 2002 version of the ISO9001 accreditation

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email minsk17@tut.by tel.+375 29 758 47 80 мтс

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

QR код

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