

The okpac[®] range

Single phase Solid State Relays
up to 125 A / 690 VAC

TRUST THE MOST ICONIC
SSR WORLDWIDE !



The okpac® range of panel-mount solid state relays is one of **celduc® relais'** most established and widely recognized SSR families. Featuring a **compact 45 mm industrial hockey-puck housing**, it offers **fast and easy installation**. Today, more than 20 million okpac® Solid State Relays are in operation worldwide.

Innovation, Performance & Design !

- ▶ Multiple, simple and fast connections
- ▶ Removable IP20
- ▶ A single screwdriver for both the output and input
- ▶ Attached to a metal baseplate, not plastic
- ▶ Removable control terminals
- ▶ SSR, mains and load status diagnostics.
- ▶ Output voltage from 24 to 690 VAC (600V-1200V-1600V peak)
- ▶ Very low zero-crossing level
- ▶ Large range of regulated AC and DC input voltage
- ▶ LEDs
- ▶ EMC compliant for the industrial environment
- ▶ UL/cUL, VDE, IEC/EN60947-4-3, CE marking
- ▶ I_{tsm} up to 2 000A and $I^2t > 20\,000A^2s$
- ▶ Can be combined with a circuit breaker for additional protection.

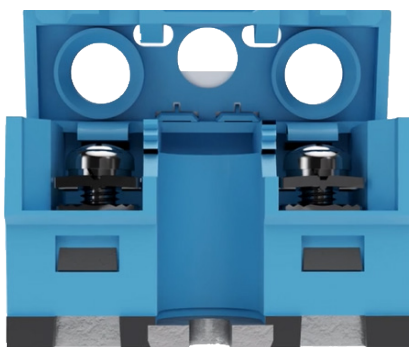


okpac®

TRUST THE MOST ICONIC
SSR WORLDWIDE!

1- Integrated removable covers ensuring IP20 protection

IP20 protection is provided as standard on our okpac® range of panel-mount solid state relays, thanks to their integrated removable covers.



2- Industry-leading life expectancy

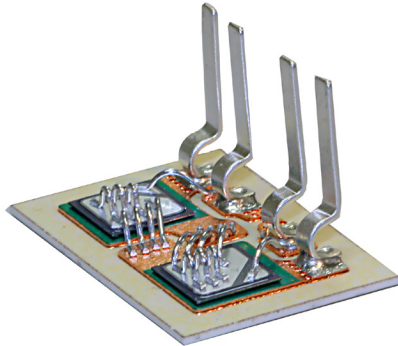
Our okpac® range offers exceptional life expectancy thanks to our TMS² technology. All our solid state relays are equipped with back-to-back thyristors and incorporate fourth-generation TMS² technology, ensuring a significantly longer service life than most products available on the market.

celduc® relais' Solid State Relays are manufactured using advanced Wire Bonding Technology.

Unlike the standard copper clip technology used by most SSR manufacturers, **celduc®** uses bonding wires with multiple anchoring points, enabling the relays to withstand high overload currents more effectively.

Wire Bonding Technology is a fully automated process, ensuring complete control and consistency throughout production. In addition, every wire-to-chip connection is verified through pull testing, with additional pull and shear tests performed on sampled units to further enhance product reliability.

These technological advantages explain the superior lifetime performance of **celduc®** SSRs compared to conventional market solutions (lifetime test results available upon request).



3- Multiple, simple and fast connections

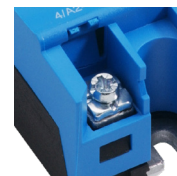
CONNECTION on the power side



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



With tubular cable lugs
Up to 50mm² (AWG1) with or
without adjustment i.e. 150A



Screw with lock washers
Improved shock and vibration
resistance

CONNECTION on the control side



Using screws
(SO7 / SO8 / SO9)



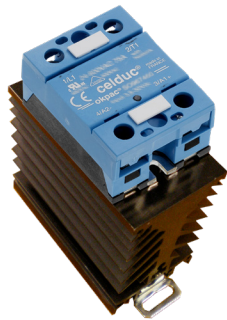
Using pluggable spring
connector technology (SOR)

4- Wide range up to 125 A and 660 V for all applications

Our okpac® range of panel-mount solid state relays is available with current ratings up to 125 A and output voltages ranging from 24 to 690 VAC (600 V, 1200 V and 1600 V peak).

To achieve their nominal performance, Solid State Relays **must be mounted on suitable heatsinks**.

To simplify integration, **celduc® relais** also offers ready-to-use solutions **with integrated heatsinks**.



REMINDER

- SO7 ▶ Random for inductive and motor loads
- SO8 ▶ Zero-cross for all kinds of loads / heavy duty loads
- SO9 ▶ Zero-cross for standard industrial loads / resistive loads AC-1 (AC-51)

For resistive and capacitive loads, zero-cross relays are recommended, as they help limit di/dt, reduce disturbances on the electrical network, and extend the service life of both the load and the relay.

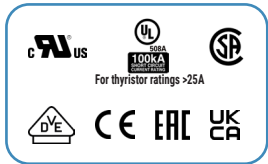
Random switching relays are preferred for inductive loads, where the phase shift between voltage and current may lead to operating issues with zero-cross relays. They are also ideally suited for applications requiring precise power control, such as phase-angle control applications.

SO7

Typical applications: AC-3 motor loads and strong inductive loads.
The SO7 range provides instant switching (immediate/random) with voltage protection on input (Transil) and output (RC and VDR) depending on the specific part.

Product reference	Max. switching current	Switching voltage	Peak voltage	Control voltage	I²t	Protec.
SO745090	50A	12-275VAC	600V	3-32VDC	2 800A²s	RC-VDR
SO763090	35A	24-510VAC	1200V	3.5-32VDC	1 250A²s	RC-VDR
SO765090	50A	24-510VAC	1200V	3.5-32VDC	2 800A²s	RC-VDR
SO765980	50A	24-600VAC	1200V	20-365VAC/DC	2 800A²s	RC
SO767090	75A	24-510VAC	1200V	3.5-32VDC	7 200A²s	RC-VDR
SO768090	95A	24-510VAC	1200V	3.5-32VDC	16 200A²s	RC-VDR
SO769090	130A	24-510VAC	1200V	3.5-32VDC	22 000A²s	RC-VDR
SO789060	130A	24-690VAC	1600V	3.5-32VDC	22 000A²s	-

All these products must be mounted on heatsinks in order to reach nominal performance.

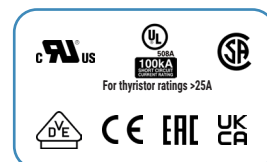


• Dim. 45 x 58.5 x 30 mm

SO8 range is designed for most types of loads

- ▶ Zero cross with low zero-crossing level (<12V)
- ▶ Voltage protection on input (transil) and on output (VDR or TVS depending on the part) with very high immunity according to IEC/ EN61000-4-4
- ▶ Removable IP20 flaps over both input and output terminals
- ▶ Control current < 13mA for all the voltage range at any operating temperature
- ▶ LED input status indicator.

Product reference	Max. switching current	Switching voltage	Peak voltage	Control voltage	I ² t	Protec.
SO842074	25A	12-275VAC	600V	3-32VDC	600A ² s	VDR
SO842974	25A	12-275VAC	600V	20-265VAC/DC	600A ² s	VDR
SO843070	35A	12-275VAC	600V	3-32VDC	1 250A ² s	VDR
SO843970	35A	12-275VAC	600V	20-265VAC/DC	1 250A ² s	VDR
SO845070	50A	12-275VAC	600V	3-32VDC	2 800A ² s	VDR
SO845970	50A	12-275VAC	600V	20-265VAC/DC	2 800A ² s	VDR
SO848070	95A	12-275VAC	600V	3-32VDC	16 200A ² s	VDR
SO849070	130A	12-275VAC	600V	3-32VDC	22 000A ² s	VDR
SO863070	35A	24-510VAC	1200V	3.5-32VDC	1 250A ² s	VDR
SO863970	35A	24-510VAC	1200V	20-265VAC/DC	1 250A ² s	VDR
SO865070	50A	24-510VAC	1200V	3.5-32VDC	2 800A ² s	VDR
SO865970	50A	24-510VAC	1200V	20-265VAC/DC	2 800A ² s	VDR
SO867070	75A	24-510VAC	1200V	3.5-32VDC	7 200A ² s	VDR
SO867970	75A	24-510VAC	1200V	20-265VAC/DC	7 200A ² s	VDR
SO868070	95A	24-510VAC	1200V	3.5-32VDC	16 200A ² s	VDR
SO868970	95A	24-510VAC	1200V	20-265VAC/DC	16 200A ² s	VDR
SO869070	130A	24-510VAC	1200V	3.5-32VDC	22 000A ² s	VDR
SO869970	130A	24-510VAC	1200V	20-265VAC/DC	22 000A ² s	VDR



• Dim. 45 x 58.5 x 30 mm

HIGH VOLTAGE RELAYS	SO885060	50A	24-690VAC	1600V	3.5-32VDC	2 800A ² s	-
	SO885960 ✓	50A	24-690VAC	1600V	20-265VAC/DC	2 800A ² s	-
	SO887040	75A	24-690VAC	1600V	3.5-32VDC	7 200A ² s	TVS
	SO887060 ✓	75A	24-690VAC	1600V	3.5-32VDC	7 200A ² s	-
	SO887940	75A	24-690VAC	1600V	20-265VAC/DC	7 200A ² s	TVS
	SO888060	95A	24-690VAC	1600V	3.5-32VDC	16 200A ² s	-
	SO889060	130A	24-690VAC	1600V	3.5-32VDC	22 000A ² s	-



For standard industrial loads / Resistive loads AC-1

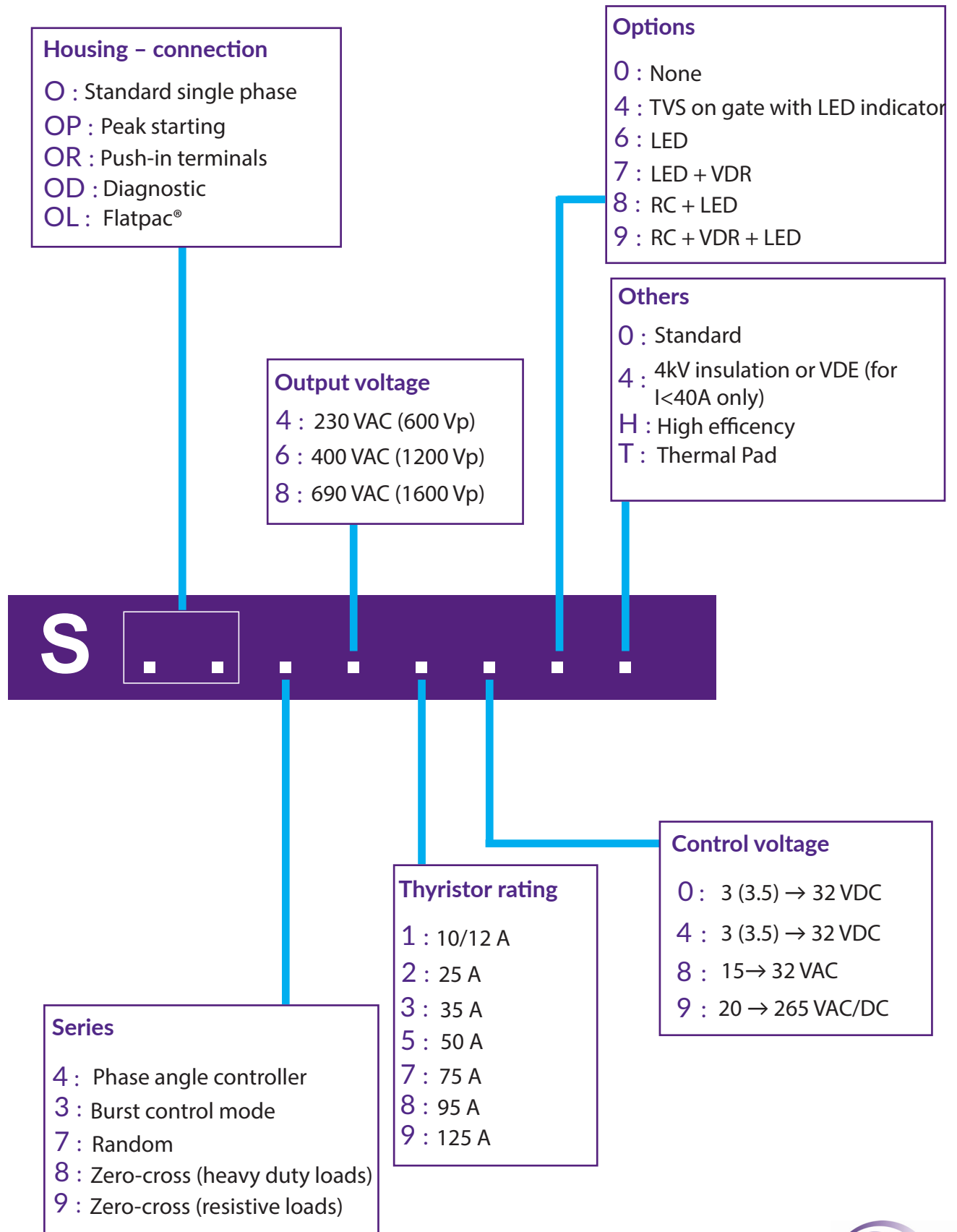
- ▶ LED input status indicator
- ▶ IP20 flaps



• Dim. 45 x 58.5 x 30 mm

Product reference	Max. switching current	Switching voltage	Peak voltage	Control voltage	I ² t	Regulated control current	Specifications / Protec.
SO941440	12A	12-280VAC	600V	3-32VDC	128A ² s	yes	Control current <13mA / TVS
SO941460	12A	12-280VAC	600V	3-32VDC	128A ² s	yes	Control current <13mA
SO941940	12A	12-280VAC	600V	18-280VAC/DC	128A ² s	yes	Control current <13mA / TVS
SO942440	25A	12-280VAC	600V	3-32VDC	600A ² s	yes	TVS
SO942460	25A	12-280VAC	600V	3-32VDC	600A ² s	yes	Control current <13mA
SO942470	25A	12-275VAC	600V	3-32VDC	600A ² s	yes	VDR
SO942860	25A	12-280VAC	600V	15-32VAC/10-30VDC	600A ² s	no	With simplified input
SO942940	25A	12-280VAC	600V	18-280VAC/DC	600A ² s	yes	Control current <13mA / TVS
SO942960	25A	12-280VAC	600V	185-265VAC/DC	600A ² s	no	With simplified input
SO943460	40A	12-280VAC	600V	3-32VDC	1 250A ² s	yes	Control current <13mA
SO945460	60A	12-280VAC	600V	3-32VDC	2 800A ² s	yes	Control current <13mA
SO963440	40A	24-600VAC	1200V	3.5-32VDC	1 250A ² s	yes	Control current <13mA / TVS
SO963460	40A	24-600VAC	1200V	3.5-32VDC	1 250A ² s	yes	Control current <13mA
SO96346H	35A	24-600VAC	1200V	3.5-32VDC	882A ² s	yes	Control current <13mA
SO96386H	35A	24-600VAC	1200V	15-32VAC	882A ² s	yes	Control current <13mA
SO963940	40A	24-600VAC	1200V	18-280VAC/DC	882A ² s	yes	Control current <13mA / TVS
SO965030-HE	50A	24-600VAC	1200V	3.5-32VDC	1 680A ² s	yes	Control current <13mA
SO965440	60A	24-600VAC	1200V	3.5-32VDC	2 800A ² s	yes	Control current <13mA / TVS
SO965460	60A	24-600VAC	1200V	3.5-32VDC	2 800A ² s	yes	Control current <13mA
SO96546H	50A	24-600VAC	1200V	3.5-32VDC	1 680A ² s	yes	Control current <13mA
SO96546T	60A	24-600VAC	1200V	3.5-32VDC	2 800A ² s	yes	Thermal Pad mounted
SO965940	60A	24-600VAC	1200V	18-280VAC/DC	2 800A ² s	yes	Control current <13mA / TVS
SO967440	90A	24-600VAC	1200V	3.5-32VDC	7 200A ² s	yes	Control current <13mA / TVS
SO967460	90A	24-600VAC	1200V	3.5-32VDC	7 200A ² s	yes	Control current <13mA
SO967860	90A	24-600VAC	1200V	15-32VAC	7 200A ² s	no	With simplified input
SO967940	90A	24-600VAC	1200V	18-280VAC/DC	7 200A ² s	yes	Control current <13mA / TVS
SO967960	90A	24-600VAC	1200V	20-265VAC/DC	7 200A ² s	yes	Consommation <13mA
SO96846T	95A	24-600VAC	1200V	3.5-32VDC	11 250A ² s	yes	Thermal Pad mounted
SO968470	95A	24-510VAC	950V	3.5-32VDC	11 250A ² s	yes	Control current <13mA / VDR
SO969440	130A	24-600VAC	1200V	3.5-32VDC	22 000A ² s	yes	Control current <13mA / TVS
SO969940	130A	24-600VAC	1200V	18-280VAC/DC	22 000A ² s	yes	Control current <13mA / TVS

5- Part numbering system



Thanks for reading



www.celduc-relais.com