

SINGLE PHASE SOLID STATE RELAYS

Innovation, Performance & Design

Innovation :

- 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

Performance :

- 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 690VAC (600V-1200V-1600V peak)
- Very low zero-cross 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 (spiles) : 4KV with no change of state
- EMC compatible for industrial environment
- UL/cUL,VDE (EN60950), IEC/EN60947-4-3, CE marking
- I_{tsm} up to 2000A and I²t up to 24000A²S allowing loads with high inrush current
- Protection against circuit breaker

SO7 Range

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



Product Reference	Switching Current	Switching Voltage	Peak Voltage	Control Voltage	Control Current	I ² t	Dimensions mm
SO745090	50A	12-275VAC	600V	3 - 32VDC	I _c < 13mA	2500A ² S	45 x 58.5 x 30
SO747090	75A	12-275VAC	600V	3 - 32VDC	I _c < 13mA	7200A ² S	
SO763090	35A	24-510VAC	1200V	3.5 - 32VDC	I _c < 13mA	1250A ² S	
SO765090	50A	24-510VAC	1200V	3.5 - 32VDC	I _c < 13mA	2500A ² S	
SO767090	75A	24-510VAC	1200V	3.5 - 32VDC	I _c < 13mA	7200A ² S	
SO768090	95A	24-510VAC	1200V	3.5 - 32VDC	I _c < 13mA	14400A ² S	
SO769090	125A	24-510VAC	1200V	3.5 - 32VDC	I _c < 13mA	24000A ² S	

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

SO8 Range

Designed for most types of loads

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



Product Reference	Switching Current	Switching Voltage	Peak Voltage	Control Voltage	Control Current	I ² t	Dimensions mm
SO842074	25A	12-275VAC	600V	3 - 32VDC	I _c < 13mA	600A ² S	45 x 58.5 x 30
SO842974	25A	12-275VAC	600V	20-265VAC/DC	I _c < 10mA	600A ² S	
SO843070	35A	12-275VAC	600V	3 - 32VDC	I _c < 13mA	1250A ² S	
SO843970	35A	12-275VAC	600V	20-265VAC/DC	I _c < 10mA	1250A ² S	
SO845070	50A	12-275VAC	600V	3 - 32VDC	I _c < 13mA	2500A ² S	
SO847070	75A	12-275VAC	600V	3 - 32VDC	I _c < 13mA	7200A ² S	
SO848070	95A	12-275VAC	600V	3 - 32VDC	I _c < 13mA	14400A ² S	
SO849070	125A	12-275VAC	600V	3 - 32VDC	I _c < 13mA	24000A ² S	
SO863070	35A	24-510VAC	1200V	3.5 - 32VDC	I _c < 13mA	1250A ² S	
SO863970	35A	24-510VAC	1200V	20-265VAC/DC	I _c < 10mA	1250A ² S	
SO865070	50A	24-510VAC	1200V	3.5 - 32VDC	I _c < 13mA	2500A ² S	
SO865970	50A	24-510VAC	1200V	20-265VAC/DC	I _c < 10mA	2500A ² S	
SO867070	75A	24-510VAC	1200V	3.5 - 32VDC	I _c < 13mA	7200A ² S	
SO867970	75A	24-510VAC	1200V	20-265VAC/DC	I _c < 10mA	7200A ² S	
SO868070	95A	24-510VAC	1200V	3.5-32VDC	I _c < 13mA	14400A ² S	
SO868970	95A	24-510VAC	1200V	20-265VAC/DC	I _c < 10mA	14400A ² S	
SO869070	125A	24-510VAC	1200V	3.5-32VDC	I _c < 13mA	24000A ² S	
SO869970	125A	24-510VAC	1200V	20-265VAC/DC	I _c < 10mA	24000A ² S	

Product Reference	Switching Current	Switching Voltage	Peak Voltage	Control Voltage	Control Current	I ² t	Dimensions mm
SO885060	50A	24-690VAC	1600V	3.5 - 32VDC	I _c < 12mA	2500A ² S	45 x 58.5 x 30
SO887060	75A	24-690VAC	1600V	3.5 - 32VDC	I _c < 12mA	7200A ² S	
SO888060	95A	24-690VAC	1600V	3.5 - 32VDC	I _c < 12mA	14400A ² S	
SO889060	125A	24-690VAC	1600V	3.5 - 32VDC	I _c < 12mA	24000A ² S	

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

SINGLE PHASE SOLID STATE RELAYS

SO9 Range with Regulated Input



Typical application : Resistive loads (AC-51)

- Zero cross
- Control status LED
- IP20 protection flaps only on request

Product Reference	Switching Current	Switching Voltage	Peak Voltage	Control Voltage	Control Current	I ^{ft}	Dimensions mm
SO941460	12A	12-280VAC	600V	3 - 32VDC	I _c < 13mA	128A ² S	45 x 58.5 x 30
SO942460	25A	12-280VAC	600V	3 - 32VDC	I _c < 13mA	600A ² S	
SO943460	35A	12-280VAC	600V	3 - 32VDC	I _c < 13mA	1250A ² S	
SO945460	50A	12-280VAC	600V	3 - 32VDC	I _c < 13mA	2500A ² S	
SO963460	35A	24-600VAC	1200V	3.5 - 32VDC	I _c < 13mA	1250A ² S	
SO965460	50A	24-600VAC	1200V	3.5 - 32VDC	I _c < 13mA	2500A ² S	
SO967460	75A	24-600VAC	1200V	3.5 - 32VDC	I _c < 13mA	7200A ² S	

SO9 range with regulated control current.

Product Reference	Switching Current	Switching Voltage	Peak Voltage	Control Voltage	Control Current	I ^{ft}	Dimensions mm
SO942560	25A	12-280VAC	600V	7 - 30VDC	I _c < 30mA	600A ² S	45 x 58.5 x 30
SO963560	35A	24-600VAC	1200V	8 - 30VDC	I _c < 30mA	1250A ² S	
SO965560	50A	24-600VAC	1200V	8 - 30VDC	I _c < 30mA	2500A ² S	
SO967560	75A	24-600VAC	1200V	8 - 30VDC	I _c < 30mA	7200A ² S	

SO9 range with simplified input.

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-cross level (<12V)
- Voltage protection on input (transil) and output (VDR) 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
- Double inputs

Product Reference	Switching Current	Switching Voltage	Peak Voltage	Control Voltage	Control Current	I ^{ft}	Dimensions mm
SOR842074	25A	12-275VAC	600V	3 - 32VDC	I _c < 13mA	600A ² S	45 x 58.5 x 30
SOR863070	35A	24-510VAC	1200V	3.5-32VDC	I _c < 13mA	1250A ² S	
SOR865070	50A	24-510VAC	1200V	3.5-32VDC	I _c < 13mA	2500A ² S	
SOR867070	75A	24-510VAC	1200V	3.5-32VDC	I _c < 13mA	7200A ² S	

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



SINGLE PHASE SOLID STATE RELAYS

SC Range

SC7-SC8-SC9



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

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

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

Product Reference	Switching Current	Switching Voltage	Peak Voltage	Control Voltage	Input R	I ² t	Dimensions mm
SC741110	12A	12-280VAC	600V	3 - 30VDC	1 kΩ	72A ² S	44.5 x 58.2 x 27
SC742110	25A	12-280VAC	600V	3 - 30VDC	1 kΩ	312A ² S	
SC744110	40A	12-280VAC	600V	3 - 30VDC	1 kΩ	612A ² S	
SC762110	25A	24-520VAC	1200V	4 - 30VDC	1 kΩ	265A ² S	
SC764110	50A	24-520VAC	1200V	4 - 30VDC	1 kΩ	1500A ² S	
SC764910	50A	24-520VAC	1200V	90 - 240VAC/DC	30 kΩ	1500A ² S	
SC767110	75A	24-520VAC	1200V	4 - 30VDC	1 kΩ	5000A ² S	
SC768110	95A	24-520VAC	1200V	4 - 30VDC	1 kΩ	11000A ² S	
SC769110	125A	24-520VAC	1200V	4 - 30VDC	1 kΩ	20000A ² S	

SC841110	12A	12-280VAC	600V	4 - 30VDC	1 kΩ	72A ² S	44.5 x 58.2 x 27
SC841810	12A	12-280VAC	600V	17 - 80VAC/DC	3 kΩ	72A ² S	
SC841910	12A	12-280VAC	600V	90 - 240VAC/DC	30 kΩ	72A ² S	
SC842110	25A	12-280VAC	600V	4 - 30VDC	1 kΩ	312A ² S	
SC842810	25A	12-280VAC	600V	17 - 80VAC/DC	3 kΩ	312A ² S	
SC844110	40A	12-280VAC	600V	4 - 30VDC	1 kΩ	612A ² S	
SC844910	40A	12-280VAC	600V	90 - 240VAC/DC	30 kΩ	612A ² S	
SC862110	25A	24-520VAC	1200V	5 - 30VDC	1 kΩ	265A ² S	
SC862910	25A	24-520VAC	1200V	90 - 240VAC/DC	30 kΩ	265A ² S	
SC864110	50A	24-520VAC	1200V	5 - 30VDC	1 kΩ	1500A ² S	
SC864810	50A	24-520VAC	1200V	17 - 80VAC/DC	3 kΩ	1500A ² S	
SC864910	50A	24-520VAC	1200V	90 - 240VAC/DC	30 kΩ	1500A ² S	
SC867110	75A	24-520VAC	1200V	5 - 30VDC	1 kΩ	5000A ² S	
SC867910	75A	24-520VAC	1200V	90 - 240VAC/DC	30 kΩ	5000A ² S	
SC868110	95A	24-520VAC	1200V	5 - 30VDC	1 kΩ	11000A ² S	
SC868910	95A	24-520VAC	1200V	90 - 240VAC/DC	30 kΩ	11000A ² S	
SC869110	125A	24-520VAC	1200V	5 - 30VDC	1 kΩ	20000A ² S	
SC869910	125A	24-520VAC	1200V	90 - 240VAC/DC	30 kΩ	20000A ² S	

PCB Mounting on Request

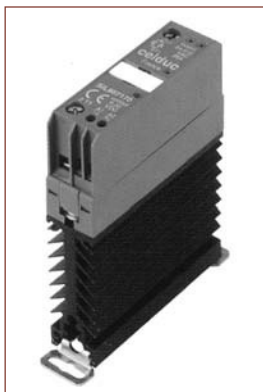


SC941110	12A	12-280VAC	600V	4 - 30VDC	1 kΩ	72A ² S	44.5 x 58.2 x 27
SC941160	12A	12-280VAC	600V	4 - 30VDC	600 kΩ	72A ² S	
SC942110	25A	12-280VAC	600V	4 - 30VDC	1 kΩ	312A ² S	
SC942120	25A	12-275VAC	600V	4 - 30VDC	1 kΩ	312A ² S	
SC942160	25A	12-280VAC	600V	4 - 30VDC	600 kΩ	312A ² S	
SC942900	25A	12-280VAC	600V	90 - 240VAC/DC	30 kΩ	312A ² S	
SC944110	40A	12-280VAC	600V	4 - 30VDC	1 kΩ	612A ² S	
SC944160	40A	12-280VAC	600V	4 - 30VDC	600 kΩ	612A ² S	
SC945160	50A	12-280VAC	600V	4 - 30VDC	600 kΩ	1500A ² S	
SC945900	50A	12-280VAC	600V	90 - 240VAC/DC	30 kΩ	1500A ² S	
SC947160	75A	12-280VAC	600V	4 - 30VDC	600 kΩ	5000A ² S	
SC948100	95A	12-280VAC	600V	4 - 30VDC	1 kΩ	11000A ² S	
SC961160	12A	24-600VAC	1200V	5 - 30VDC	600 kΩ	72A ² S	
SC962110	25A	24-600VAC	1200V	5 - 30VDC	1 kΩ	265A ² S	
SC962114	25A	24-600VAC	1200V	5 - 30VDC	1 kΩ	265A ² S	
SC962160	25A	24-600VAC	1200V	5 - 30VDC	600 kΩ	265A ² S	
SC962800	25A	24-600VAC	1200V	17 - 80VAC/DC	3 kΩ	265A ² S	
SC962960	25A	24-600VAC	1200V	90 - 240VAC/DC	30 kΩ	265A ² S	
SC965100	50A	24-600VAC	1200V	5 - 30VDC	1 kΩ	1500A ² S	
SC965160	50A	24-600VAC	1200V	5 - 30VDC	600 kΩ	1500A ² S	
SC967100	75A	24-600VAC	1200V	5 - 30VDC	1 kΩ	5000A ² S	
SC967160	75A	24-600VAC	1200V	5 - 30VDC	600 kΩ	5000A ² S	

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

SINGLE PHASE SOLID STATE RELAYS

POWER SSRs with Diagnostics



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

Diagnostic description :

Control	Control LED	Mains	Load	SSR	Status LED	Output Status
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

Product Reference	Switching Current	Switching Voltage	Peak Voltage	Control Voltage	Control Current	I ² t	Dimensions mm
SILD845160	32A	70-280VAC	600V	3-32VDC	I _c <10mA	1500A ² s	22,5 x 80 x 116
SILD865170	32A	150-510VAC	1200V	3,5-32VDC	I _c <10mA	1500A ² s	
SILD867170	35A	150-510VAC	1200V	3,5-32VDC	I _c <10mA	5000A ² s	

SOD



Product Reference	Switching Current	Switching Voltage	Peak Voltage	Control Voltage	Control Current	I ² t	Dimensions mm
SOD843180	35A	70-275VAC	600V	4-30VDC	1kΩ	1250A ² s	45 x 58,5 x 33,6
SOD845180	50A	70-275VAC	600V	4-30VDC	1kΩ	2500A ² s	
SOD865180	50A	150-510VAC	1200V	5-30VDC	1kΩ	2500A ² s	
SOD867180	75A	150-510VAC	1200V	5-30VDC	1kΩ	7200A ² s	

The SOD products should be mounted on heatsinks in order reach nominal current.

SCP Range - Transformer Starting



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

Product Reference	Switching Current	Switching Voltage	Peak Voltage	Control Voltage	Control Current	I ² t	Specifications	Dimensions mm
SCP49110	40A*	180-280VAC	600V	4-30VDC	1kΩ	610A ² s	Peak starting	44,5 x 58,2 x 27
SCP69110	40A*	300-480VAC	1200V	4-30VDC	1kΩ	610A ² s		

* See application note on the 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.

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

