

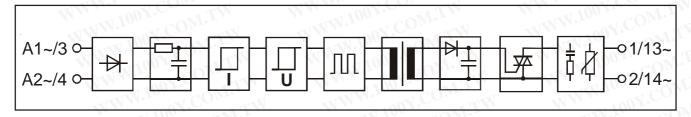
# SL-series solid state output relay

• Plug-in output relay for AC loads, 230 VAC control

- 1 A continuous current, 90 A/20 ms
- 0...240 VAC nominal load voltage
- Small leakage current
- · Works correctly from zero load upwards
- Power factor independent (0...1)
- · Immune to disturbances on signal or load lines
- · Shielded signal cabling not required
- cULus Listed (UL and CSA)
- CE (EMC and LVD)
- Not for motor loads

勝 特 力 材 料 886-3-5753170 胜特力电子(上海) 86-21-54151736 胜特力电子(深圳) 86-755-83298787 Http://www.100y.com.tw

## **Block diagram**



# Specifications (at temperature of 25 °C)

#### **Primary**

nominal	220240 VAC
typical	5 mA
maximum	6 mA
minimum	190 VAC
maximum	265 VAC
typical	46 kΩ
typical	170 VAC
maximum	190 VAC
typical	110 VAC
	typical maximum minimum maximum typical typical maximum

## Secondary

Load voltage	minimum	0 VAC
	nominal	240 VAC
(absolute)	maximum	265 VAC
Load current	maximum	1 A
Load current 20 ms	maximum	90 A
Voltage drop at max. load	typical	1 V
Output leakage	typical	1,5 mA
Switch-on delay	typical	50 ms
	maximum	- 
Switch-off delay	typical	50 ms
	maximum	
Load power factor, cos o		01
dV/dt off-state	typical	200 V/μs

## Physical dimensions and other data

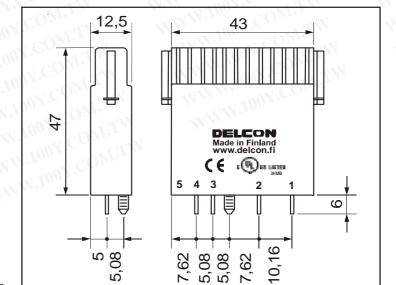
minimum

90 VAC

Breakdown voltage Material of casing Weight Air/creepage distance Capacitance I/O

minimum thermoplastic typical minimum typical

Color of casing: black



Dimensions in mm.

4000 VAC rms

UL 94 V-0

40 g

8 mm

3 pF

## **Temperature derating**

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## Ambient temperature Limitation

# -25 °C...+40 °C Allowed maximum load current is 50 % of the curve below when assembled side by side.

+40 °C...+55 °C Only every other relay should be in on-state at current which is 50 % of the curve below or less

when assembled side by side.

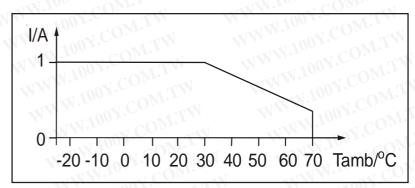
+55 °C...+70 °C If relays are even part of the time on, there should be a gap in both sides at least 12,5 mm. Notice

also the curve below.

#### Temperature range:

Storage: -40 °C...+70 °C Operation: -25 °C...+70 °C

Derating curve for the relay when there is at least 12,5 mm gap between relays. Allowed load is derated to 1/3 linearly from +30 °C to +70 °C ambient temperature.



## Derating when switching inductive loads

There is no need to derate solid state output relay using a triac switch. The relay is indifferent to the power factor of the load. Calculation should be made however that the surge current does not exceed the specification. For reasons of heat dissipation, when the load will be switched frequently, the average current over a reasonable time should not exceed the specification for continuous operation.

## **Fusing**

To protect relay against short circuit and overload a fast fuse with the correct rating for the load and the capacity of the relay should be chosen, for instance from the Wickman 193 range. Note that when overload current is not large it is possible that the fuse will not protect the relay because of the tolerance on the fuse rating.

### **Approvals**



UL-certificate 251006 - E162828



The relay fulfils EMC-directive 89/336/EEC requirements. Product has been designed according to generic standards EN61000-6-4 and EN61000-6-2. The relay fulfils also requirements of the low voltage directive 73/23/EEC.

#### Guarantee

The solid state I/O relays and accessories made by Delcon Oy are guaranteed free from design and manufacturing defects for a period of three years from the shipping date. For electromechanical relays the guarantee is one year. The guarantee liability is limited to replacement of defective material and related shipping charges. Defective products must be returned to the manufacturer for evaluation. This guarantee does not cover damage due to incorrect use or electrical overload.

**Delcon Oy** 

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