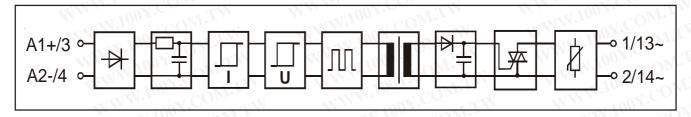


SL-series solid state output relay

- Plug-in output relay for AC loads
- 3 A continuous current, 90 A/20 ms
- 0...240 VAC nominal load voltage
- Transient protection in input and RC-snubber in output
- · 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 General Use & Pilot Duty tested
- CE (EMC and LVD tested)
- Not for motor loads

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Block diagram



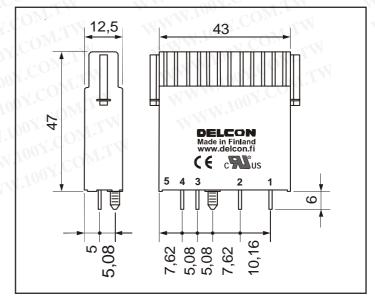
Specifications (at temperature of 25 °C)

Primary			Secondary		
Input voltage	nominal	24 VDC	Load voltage	minimum	0 VAC
Input current at	typical	15 mA		nominal	240 VAC
nominal voltage	maximum	17 mA	(absolute)	maximum	265 VAC
Input voltage	minimum	18 VDC	Load current	maximum	3 A
range (abs.)	maximum	32 VDC	Load current 20 ms	maximum	90 A
Input impedance	typical	1,4 kΩ	Voltage drop at max. load	typical	1 V
Switch-on voltage	typical	16 VDC	Output leakage	typical	2 mA
	maximum	18 VDC	Switch-on delay	typical	0,5 ms
Switch-off voltage	typical	14 VDC		maximum	1 ms
•	minimum	12 VDC	Switch-off delay	maximum	11 ms
		AL TOUX	Load power factor, cos o		01
			dV/dt off-state	typical	1000 V/μs

Physical dimensions and other data

Breakdown voltage minimum 4000 VAC rms $10^{10}\,\Omega$ Resistance minimum Material of casing thermoplastic UL 94 V-0 40 g Weight typical Air/creepage distance minimum 8 mm Capacitance I/O typical 3 pF

Color of casing: black



Dimensions in mm.

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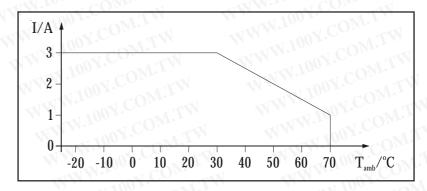
Delcon SL-series solid state output relay

Temperature derating

Allowed load is derated to 1/3 linearly from +30 °C to +70 °C ambient temperature. When relays are mounted in mounting base the maximum load current for long period of time should be restricted in total to 50 % of the current from the curve. I.e. all relays at 50 % load continuously or 50 % of the relays at 100 % load continuously or all relays at 100 % load 50 % of the time. This restriction does not apply if there is at least 12,5 mm gap between relays.

Temperature range:

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



Derating curve for the relay.

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

CRUS UL-file E 162828



The relay fulfils EMC-directive 89/336/EEC requirements. Product has been tested according generic standards EN500812 and EN50082-2. 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 factory for evaluation. This guarantee does not cover damage due to incorrect use or electrical overload.

Delcon Oy

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