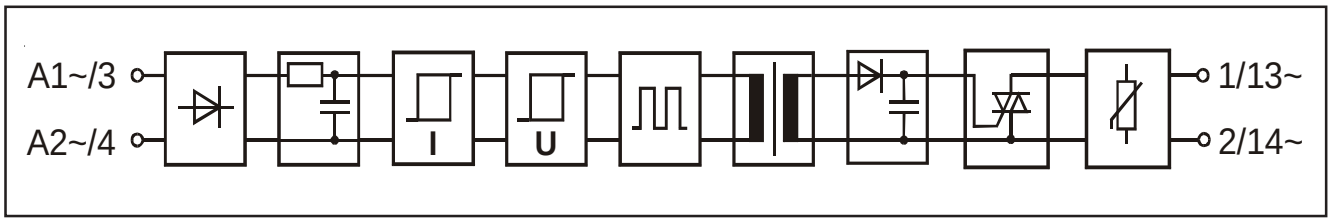
SLO P230TR

SL-series solid state output relay

- Plug-in output relay for AC loads, 230 VAC control
- 1,5 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)
- Proximity switch compatible input
- Full vawe rectification in input side
- cULus tested
- CE (EMC and LVD tested)
- Not for motor loads

Block diagram



Specifications (at temperature of 25 °C)

Primary

Input voltage	nominal	220...240 VAC
Input current at	typical	5 mA
nominal voltage	maximum	6 mA
Input voltage	minimum	190 VAC
range (abs.)	maximum	265 VAC
Input impedance	typical	46 kΩ
Switch-on voltage	typical	170 VAC
	maximum	190 VAC
Switch-off voltage	typical	110 VAC
	minimum	90 VAC
Switch-off current	typical	3 mA

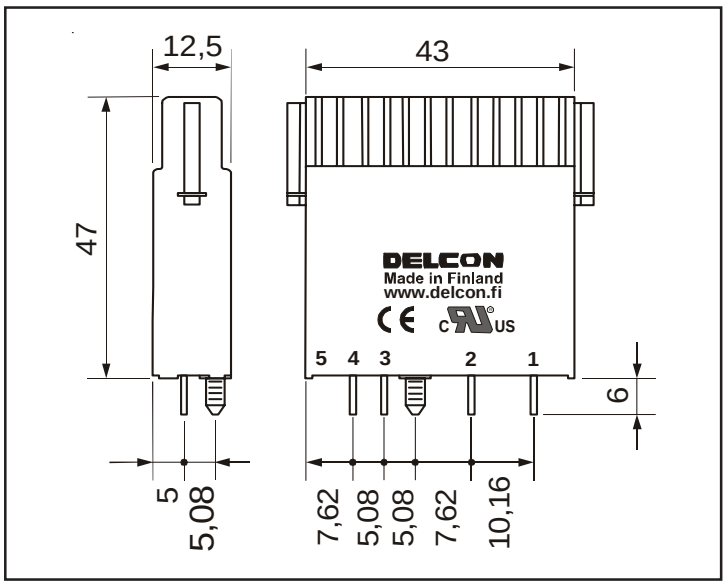
Secondary

Load voltage	minimum	0 VAC
	nominal	240 VAC
(absolute)	maximum	265 VAC
Load current	maximum	1,5 A
Load current 20 ms	maximum	90 A
Voltage drop at max. load	typical	1 V
Output leakage	typical	2 mA
Switch-on delay	typical	10 ms
	maximum	-
Switch-off delay	typical	20 ms
	maximum	-
Load power factor, cos ϕ		0...1
dV/dt off-state	typical	200 V/µs

Physical dimensions and other data

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

Color of casing: black



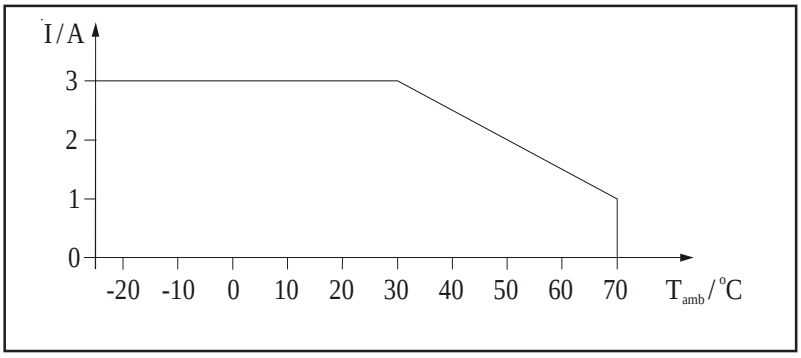
Dimensions in mm.

Temperature derating

Ambient temperature	Limitation
-25 ºC...+40 ºC	Allowed maximum load current is 33 % of the curve below when assembled side by side.
+40 ºC...+55 ºC	Only every other relay should be in on-state at current which is 33 % of the curve below or less when assembled side by side.
+55 ºC...+70 ºC	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 ºC...+70 ºC
Operation: -25 ºC...+70 ºC



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 ºC to +70 ºC 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

c UL us UL-file E 162828

CE The relay fulfils EMC-directive 89/336/EEC requirements. Product has been tested according generic standards EN50081-2 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.

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