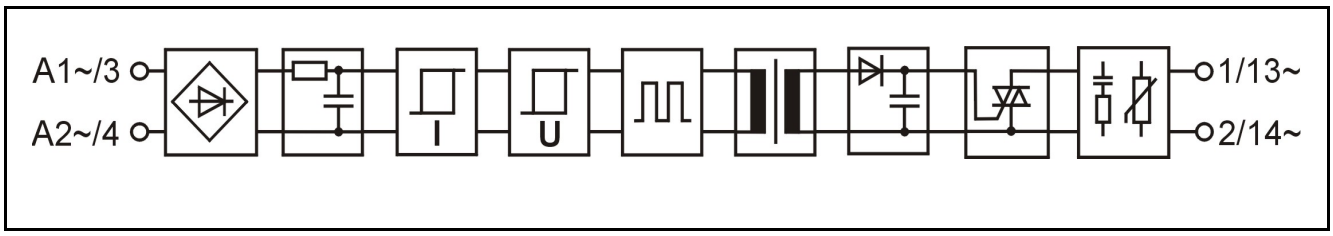
SLO P230TR

SL-series plug-in output relay

Main features

- Solid state output relay
- cULus Listed, CE (EMC and LVD)
- Integrated status LED
- For static AC-loads
- Proximity switch compatible input

Functional block diagram



Main specifications

Breakdown voltage I/O	minimum	4300	VAC rms
Air/creepage distances I/O	minimum	8	mm
Capacitance I/O	typical	3	pF
Material of the casing	PBT	UL 94V-0	
Colour of the casing		Black	
Weight	typical	40	g
Temperature range:			
Storage	range	-40...+70	℃
Operation	range	-25...+70	℃

Electrical specifications (T_A = 25 ℃)

Primary				**Secondary**			
Input voltage	nominal	220...240	VAC	Load voltage	minimum	0	VAC
Input current at nominal voltage	typical	5	mA		nominal	240	VAC
	maximum	6	mA		maximum	265	VAC
Input voltage range (abs.)	minimum	190	VAC	Load current	maximum	1,5	A
	maximum	265	VAC	Load current	maximum	90	A (20 ms)
Input impedance	typical	46	kΩ	Voltage drop	typical	1	V
Switch-on voltage	typical	170	VAC	Switch-on delay	typical	10	ms
	maximum	190	VAC		maximum	-	ms
Switch-off voltage	typical	110	VAC	Switch-off delay	typical	20	ms
	minimum	90	VAC		maximum	-	ms
Switch-off current	typical	3	mA	Load power factor, cos Φ		0...1	
				dv/dt, off-state	typical	200	V/µs
				Leakage current (off-state)	typical	1,5	mA

Ambient temperature (T_A) means the temperature immediate in vicinity of relays, where the air flow meets the relays.

Delcon Oy
Veikkointie 4
FIN-03100 NUMMELA
Finland

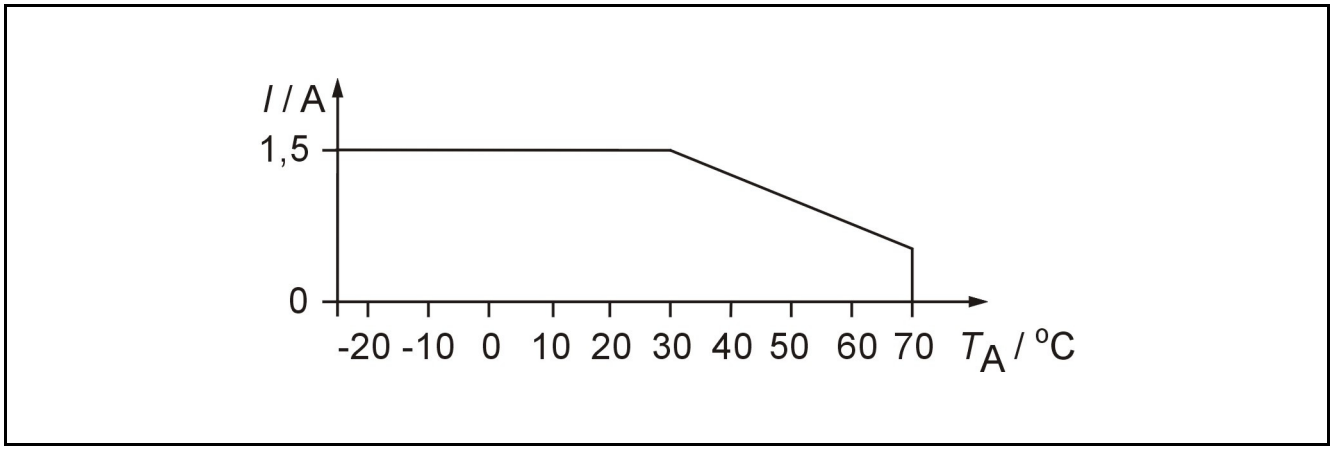
www.delcon.fi
sales@delcon.fi
Tel. +358 9 7771180
Fax +358 9 77711840

Temperature limitations

Ambient temperature (T_A)	Limitations
-25 ℃...+40 ℃	Allowed maximum current is 33 % of the curve below when assembled side by side.
+40 ℃...+55 ℃	Only every other relay should be in on-state at current which is 33 % or less of the curve below when assembled side by side.
+55 ℃...+70 ℃	If relays are most of the time on, there should be a gap in both sides at least 12,5 mm. Notice also the curve below.

Temperature derating

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



Derating curve for SLO P230TR.

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.

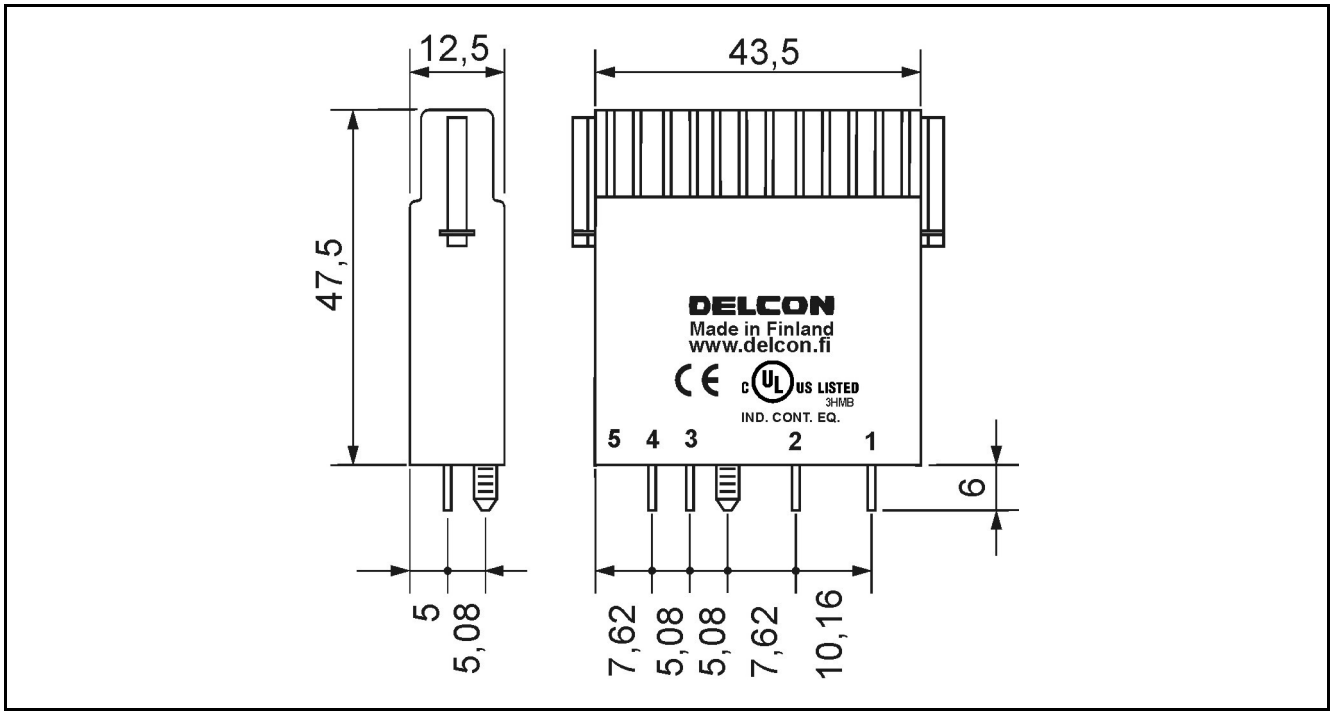
Fusing

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. 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.

Assembling

All MOS 1... -mounting sockets.

Mechanical dimensions



SLO-relay (plug-in), dimensions in mm.

Approvals

c UL us LISTED 3HMB IND. CONT. EQ.	Certificate: E162828
CE	Fulfils main requirements of the EMC-directive 2004/108/EC. Fulfils requirements of the low voltage directive (LVD) 2006/95/EC.

Guarantee

This solid state I/O relay type made by Delcon Oy is guaranteed free from design and manufacturing defects for a period of 10 years from the manufacturing date. 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.

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