

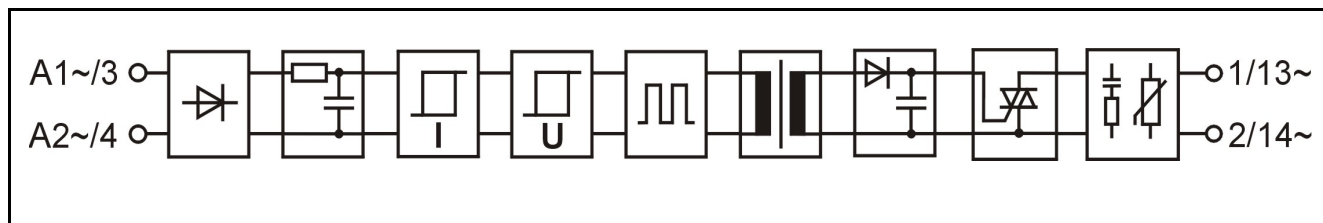
## SLO A120TR

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

### 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	°C
Operation	range	-25...+70	°C

### Electrical specifications ( $T_A = 25\text{ °C}$ )

Primary				Secondary			
Input voltage	nominal	120	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	95	VAC	Load current	maximum	1	A
	maximum	140	VAC	Load current	maximum	90	A (20 ms)
Input impedance	typical	24	k $\Omega$	Voltage drop	typical	1	V
Switch-on voltage	typical	80	VAC	Switch-on delay	typical	20	ms
	maximum	95	VAC		maximum	-	ms
Switch-off voltage	typical	65	VAC	Switch-off delay	typical	50	ms
	minimum	55	VAC		maximum	-	ms
				Load power factor, $\cos \Phi$	0...1		
				dv/dt, off-state	typical	200	V/ $\mu$ s
				Leakage current (off-state)	typical	1,5	mA

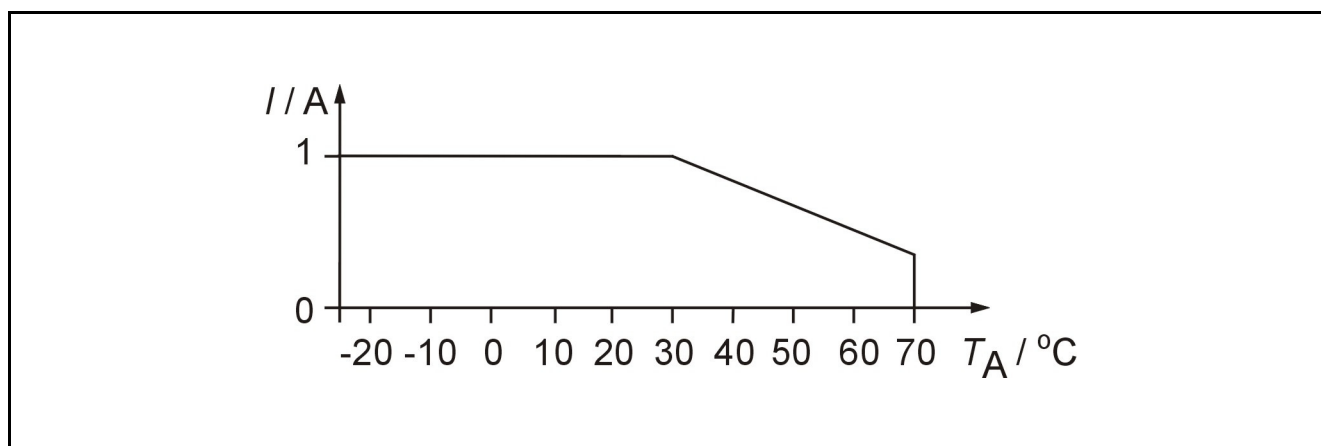
Ambient temperature ( $T_A$ ) means the temperature immediate in vicinity of relays, where the air flow meets the relays.

## Temperature limitations

Ambient temperature ( $T_A$ )	Limitations
-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 % or less of the curve below when assembled side by side.
+55 °C...+70 °C	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 °C to +70 °C ambient temperature. Derating curve for the relay when there is at least 12,5 mm gap between relays.



Derating curve for SLO A120TR.

## 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.

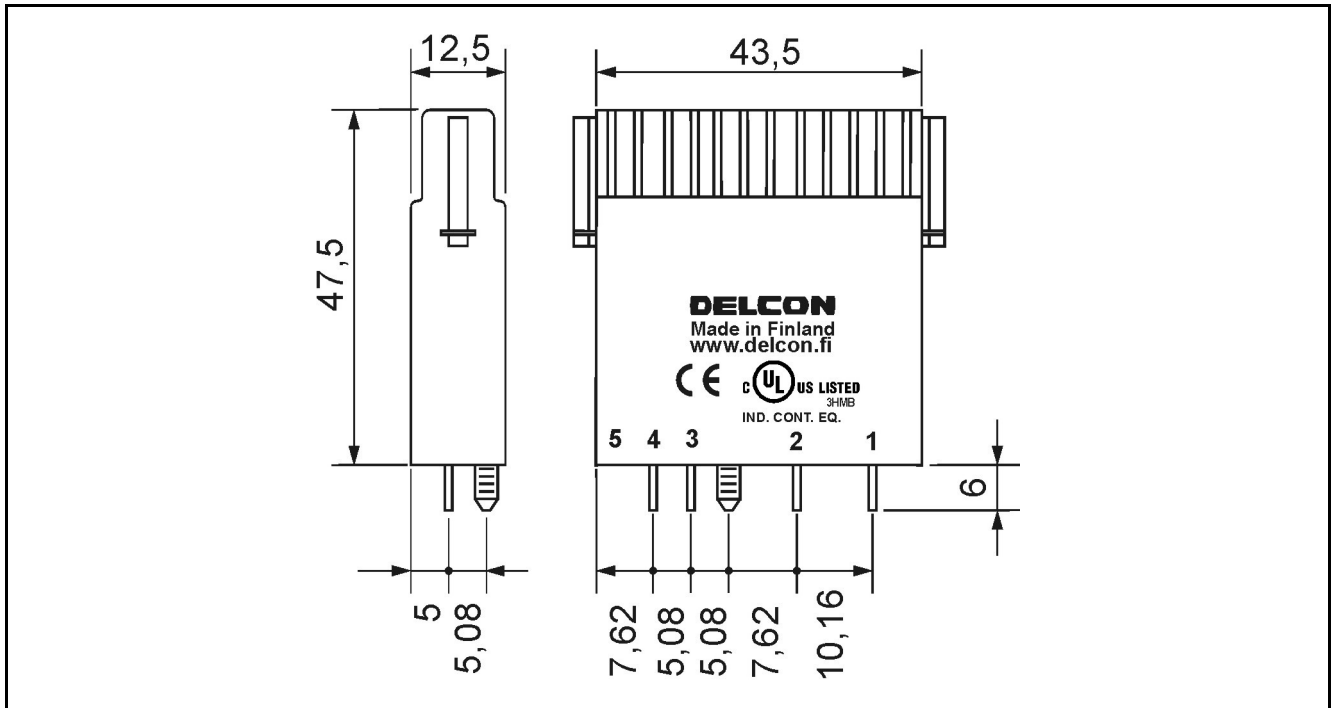
## Fusing

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

	<p>Certificate: E162828</p>
	<p>Fulfils main requirements of the EMC-directive 2004/108/EC. Fulfils requirements of the low voltage directive (LVD) 2006/95/EC.</p>

## 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.