

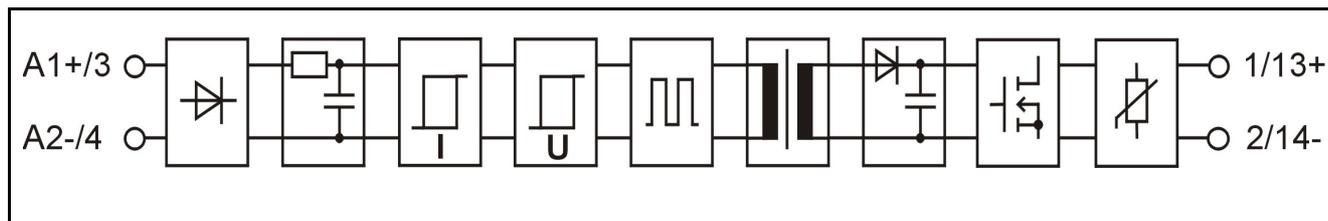
## SLO 220CRA

SL-series plug-in relay

### Main features

- Solid state output relay
- cULus Listed, CE (EMC and LVD)
- Integrated status LED
- For resistive and inductive 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	Red		
Weight	typical	40	g
Temperature range:			
Storage	range	-40...+70	°C
Operation	range	-25...+70	°C

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

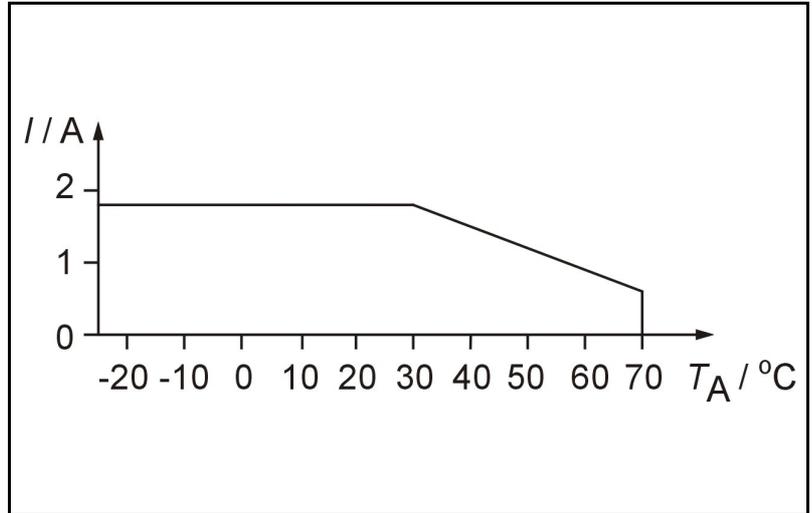
Primary				Secondary			
Input voltage	nominal	220	VDC	Load voltage	minimum	0	VDC
Input current at nominal voltage	typical	3,5	mA		nominal	250	VDC
	maximum	4	mA		maximum	300	VDC
Input voltage range (abs.)	minimum	190	VDC	Load current	maximum	1,8	A
	maximum	265	VDC	Load current	maximum	12	A (10 ms)
Input impedance	typical	63	kΩ	Voltage drop	typical	1	V (1,8 A)
Switch-on voltage	typical	170	VDC	Switch-on delay	typical	0,5	ms
	maximum	190	VDC		maximum	1	ms
Switch-off voltage	typical	120	VDC	Switch-off delay	typical	0,5	ms
	minimum	80	VDC		maximum	1	ms
				Inductive load, L/R	maximum	10	ms (250 V, 1,8 A)
					maximum	100	ms (24 V, 1,8 A)
				Leakage current (off-state)	maximum	1	mA

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

## Temperature limitations and derating

Ambient temperature ( $T_A$ )	Limitations at allowed load
-25 °C...+40 °C	No limitations
+40 °C...+55 °C	Only every other relay should be in on-state 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.

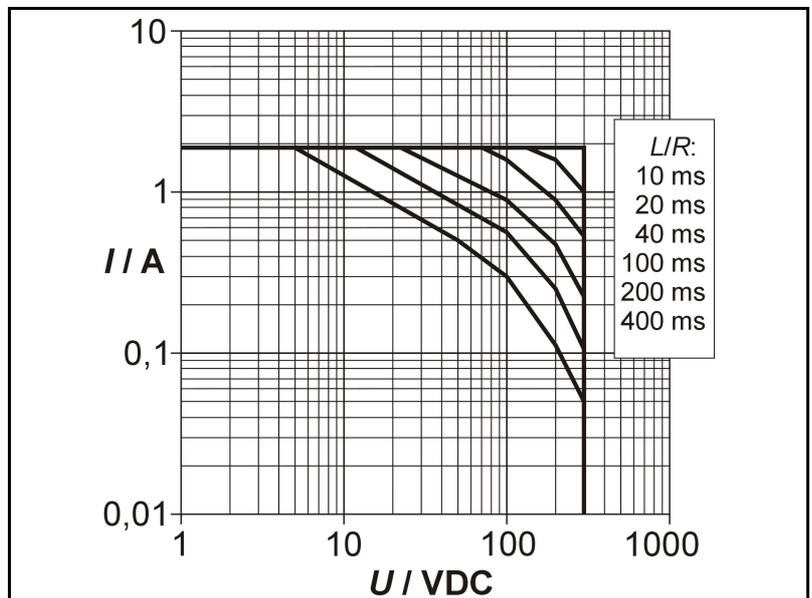
Allowed load is derated to 1/3 linearly from +30 °C to +70 °C ambient temperature. When relays are mounted together as a bank the maximum load current for long period of time should be restricted in total to 50 % of the current from the curve. I.e. all relays at 50 % load continuously or 50 % of the 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.



Derating curve for SLO 220CRA.

## Derating when switching inductive loads

This relay is meant for resistive and inductive loads. The surge current is not allowed to 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.



Derating curve for inductive loads.

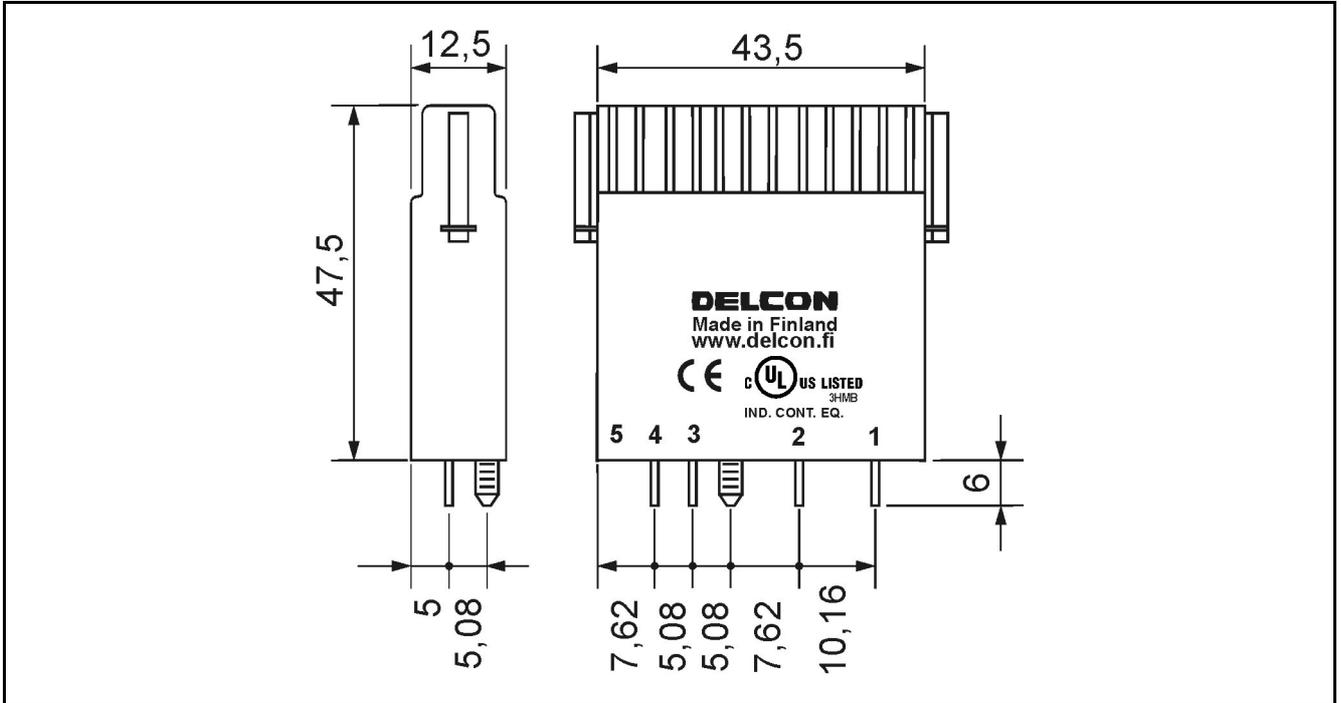
## Fusing

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><b>UL</b> US LISTED 3HMB IND. CONT. EQ.</p>	<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.