DELCON
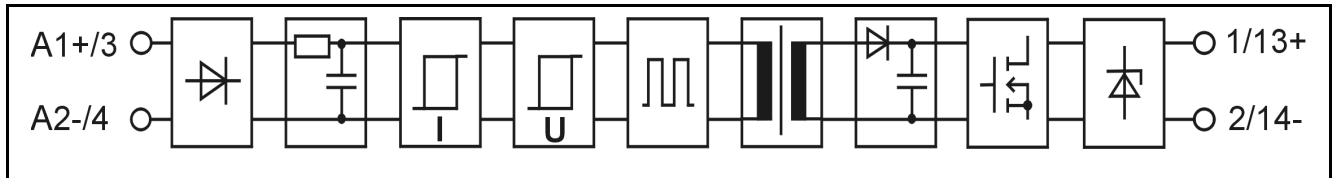
SLO 48CRXSN
SL-series DIN-rail relay

Main features

- Solid state output relay with integrated status LED
- cULus Listed, CE (EMC and LVD)
- For high currents and for resistive and slightly 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
Screw terminals:			
Torque	range	0,5...0,6	Nm
Solid wire	maximum	4 mm^2 (AWG 12) (range 12...24 AWG)	
Stranded	maximum	2,5 mm^2 (AWG 14) (range 14...24 AWG)	
Materials:			
Relay casing	PBT	UL 94V-0	
DIN-rail socket	ABS/PC	UL 94V-0	
Colour of the relay casing		Red	
Weight	typical	55	g
Temperature range:			
Storage	range	-40...+70	℃
Operation	range	-40...+70	℃

Electrical specifications (T_A = 25 ℃)

Primary				Secondary			
Input voltage	nominal	48	VDC	Load voltage	minimum	0	VDC
Input current at nominal voltage	typical	3,5	mA		nominal	24	VDC
	maximum	4	mA		maximum	32	VDC
Input voltage range (abs.)	minimum	35	VDC	Load current	maximum	10	A
	maximum	60	VDC	Load current	maximum	80	A (10 ms)
Input impedance	typical	13	kΩ	Voltage drop	typical	0,3	V (10 A)
Switch-on voltage *	typical	30	VDC	Switch-on delay	typical	0,5	ms
	maximum	35	VDC		maximum	1	ms
Switch-off voltage	typical	25	VDC	Switch-off delay	typical	0,5	ms
	minimum	20	VDC		maximum	1	ms
				Inductive load, L/R	maximum	0,5	ms (32 V, 10 A)
					maximum	2	ms (24 V, 5 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.

* In the operational temperature range -40 ℃…+70 ℃ the switch-on voltage is 40,8 VDC maximum (48 VDC - 15 %).

Deratings

Allowed load is derated to 1/3 linearly from +30 ºC to +70 ºC 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. These deratings apply when assembled to the horizontal rail. If assembled to the vertical rail, must be taken care that the relays do not heat up too much.
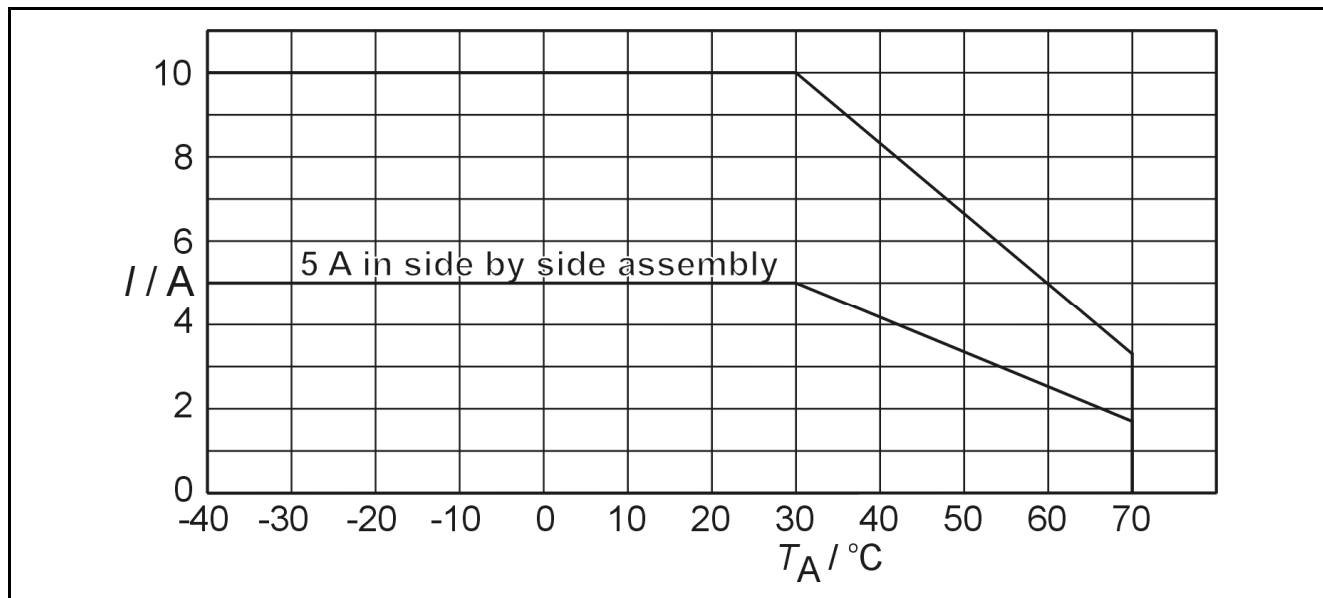
Derating curve for SLO 48CRXSN.

Derating when switching inductive loads

This relay is meant for resistive and slightly inductive loads. A clamp diode with the load must be used when switching 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.
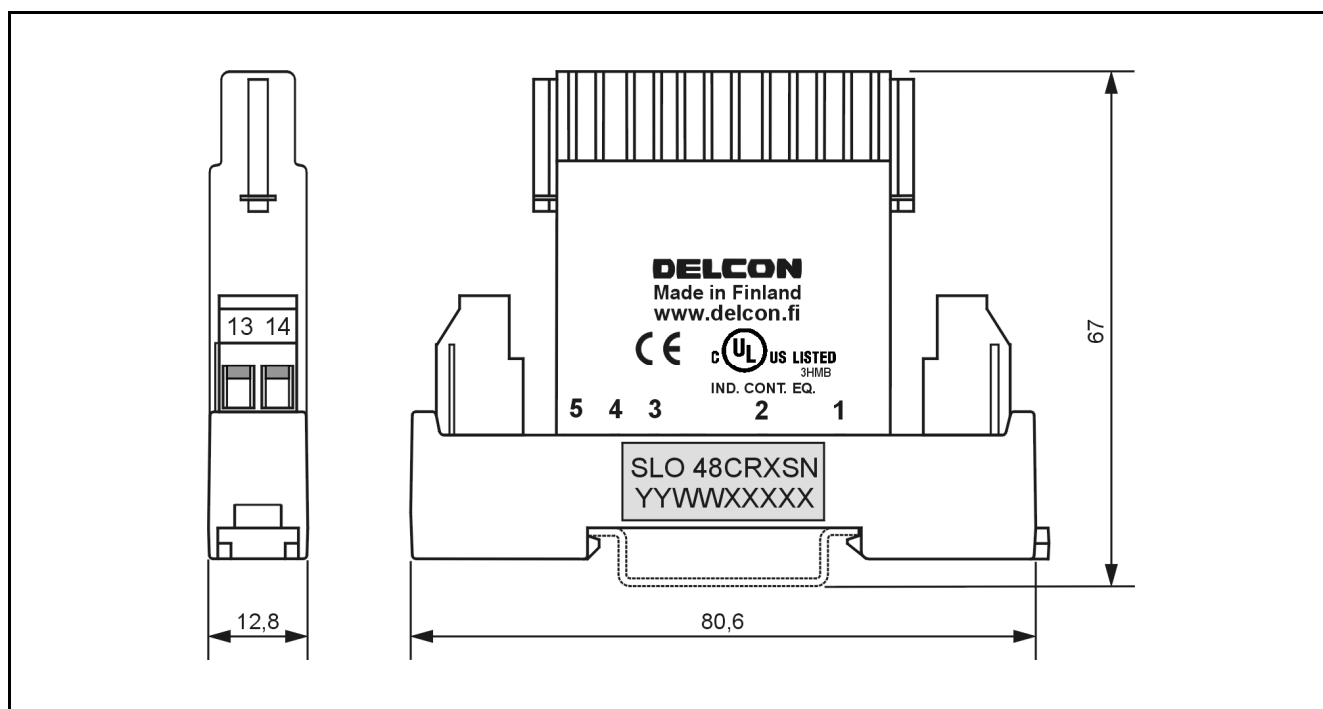
Fusing

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

Can be assembled to standard 35 mm DIN-rail. Use proper tool size to tighten the screws. Use 60/75 °C copper wire only. Over-torqueing may cause screw terminal breakage.

Delcon Oy
Veikkointie 4
FI-03100 NUMMELA
Finland

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

Mechanical dimensions

SLO 48CRXSN (dimensions in mm, nominal).

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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FI-03100 NUMMELA
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