SLO 37CH

SL-series type plug-in relay, 1 NO 4A (80A/10ms)/100 VDC

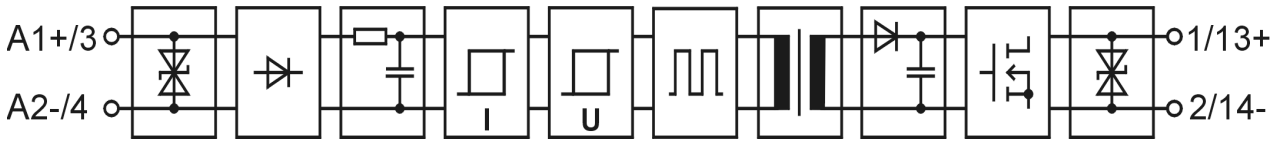
Typically used

- Can be used in both 24 VDC and 36 VDC (battery) control voltage applications
- Typically used in trains, metros, trams etc.

Main features

- For resistive and inductive loads
- 10-year warranty
- cULus Listed, CE (EMC and LVD)
- Integrated status LED

Functional block diagram



Filters against electrical noises *galvanic isolation 4,6 kV* *NO contact with protection*

Main specifications

Breakdown voltage I/O	minimum	4600	VAC rms
Air/creepage distances I/O	minimum	8	mm
Capacitance I/O	typical	3	pF
Material of the casing	PBT	UL 94 V-0	
Colour of the casing		Red	
Weight	typical	40	g
Temperature range:			
Storage	range	-40...+85	°C
Operation	range	-25...+75	°C

Electrical specifications (T_A = 25 °C)

Primary				**Secondary**			
Input voltage	nominal	24…37	VDC	Load voltage	minimum	0	VDC
Input current at nominal voltage	typical	9	mA		nominal	100	VDC
	maximum	10	mA		maximum	110	VDC
Input voltage range (abs.)	minimum	16	VDC	Load current	maximum	4	A
	maximum	45	VDC	Load current	maximum	80	A (10 ms)
Input impedance	typical	2,4	kΩ	Voltage drop	typical	0,4	V (4 A)
Switch-on voltage *	typical	15	VDC	Switch-on delay (at 37 V input)	typical	0,5	ms
	maximum	16	VDC		maximum	1	ms
Switch-off voltage *	typical	12	VDC	Switch-off delay (at 37 V input)	typical	0,5	ms
	minimum	10	VDC		maximum	1	ms
				Inductive load, *L*/*R*	maximum	30	ms (24 V/4 A)
				Switching frequency	maximum	1	Hz (24 V/4 A/ 30 ms)
				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 -25 °C…+75 °C the switch-on voltage is 16 VDC maximum and the switch-off voltage is 10 VDC minimum.*

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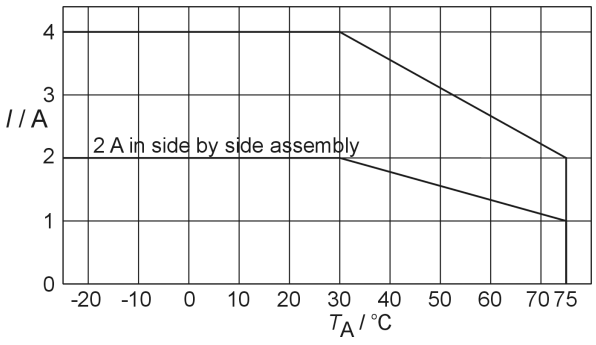
Deratings

Allowed load is derated to 1/2 linearly from +30 ºC to +75 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 37CH:



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.

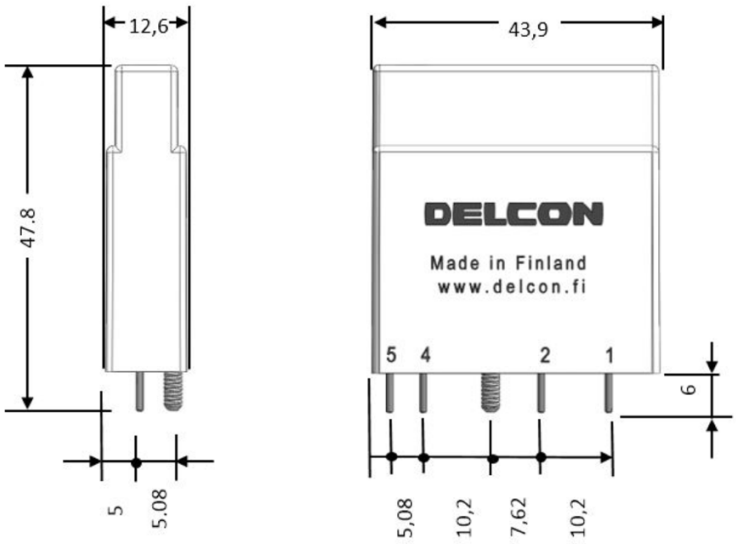
Maximum inductances (L/R values) and switching frequency at L/R value. If the L/R value is for instance 0,1 x L/R max, allowed switching frequency is 10 Hz.

Load voltage/V	Load current/A	L/R max./ms	fmax./Hz
100	4	7,5	1
100	2	15	1
100	1	30	1
50	4	15	1
50	2	30	1
50	1	60	1
37	4	20	1
37	2	40	1
37	1	80	1
24	4	30	1
24	2	60	1
24	1	120	1

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.

Mechanical dimensions



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

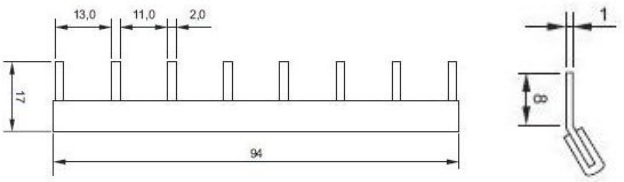
Related products for SLOxxx relays

DIN-rail sockets for single relays

MOS 1GN screw terminals
MOS 1CCN spring terminals

Jumper bars for cross-connecting relays in parallel

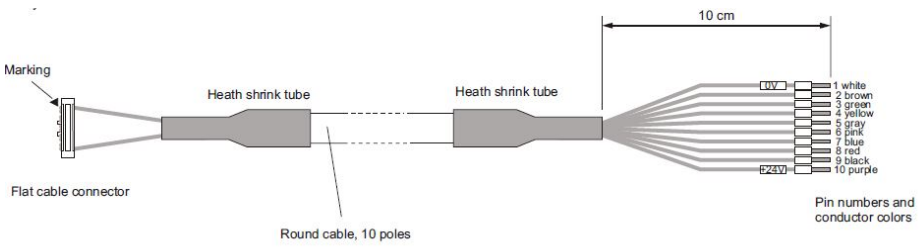
JUMPER 8-13 Chaining Jumper for 8 relays
JUMPER 16-13 Chaining Jumper for 16 relays



DIN-rail mounting bases with easy PLC connection

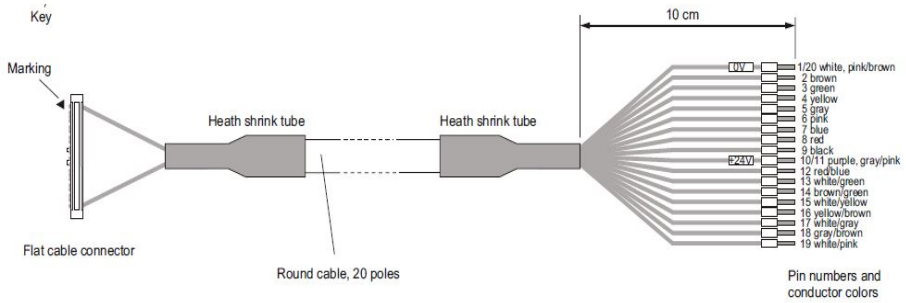
MBS 8BIOP for 8 relays, screw terminals
MBS 8BIOPCC for 8 relays, spring terminals

RC10X-xxx applicable 10-pole round cable (xxx = length /cm, in 50 cm steps)
Connection to PLC with colour coded single wires with ferrules



MBS 16BIOP for 16 relays, screw terminals
MBS 16BIOPCC for 16 relays, spring terminals

RC20X-xxx applicable 20-pole round cable (xxx = length/cm, in 50 cm steps)
Connection to PLC with colour coded single wires with ferrules



PCB sockets

PC0 1N

Installed pin connectors:
4 3 2 1

PCU 1N

Installed pin connectors:
5 4 3 2 1

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.