

## SLO 24IRAI

SL-series type plug-in relay, 1 NC 1,2A/240 VAC/DC

### Typically used

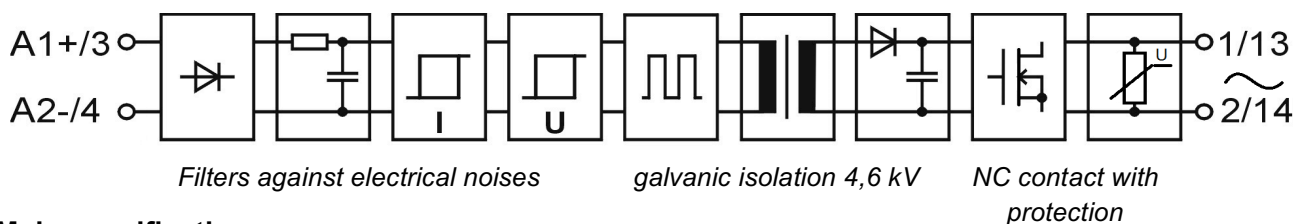
- Fast AC switching (1kHz)
- When load voltage type not defined (AC/DC)

### Main features

- Normal closed function without external power supply connection
- 10-year warranty
- cULus Listed, CE (EMC and LVD)
- Integrated status LED



### Functional block diagram



### 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	Black		
Weight	typical	43	g
Temperature range:			
Storage	range	-40...+85	°C
Operation	range	-25...+75	°C

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

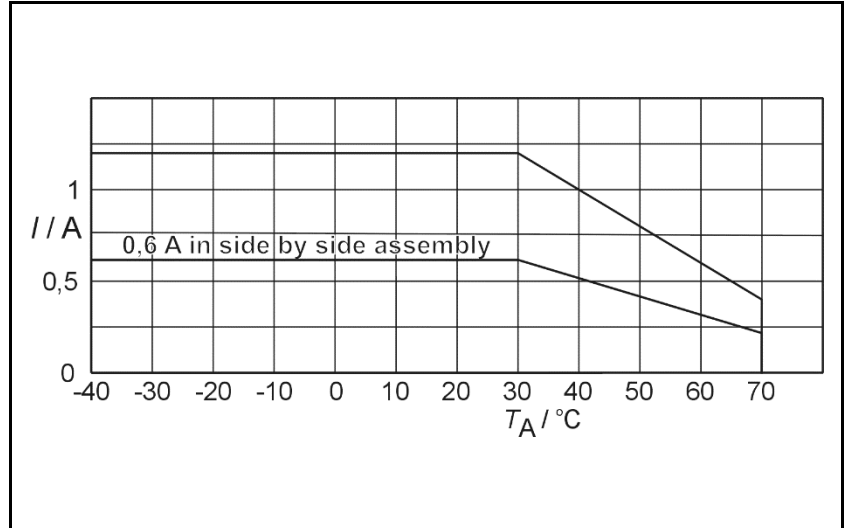
Primary				Secondary				
Input voltage	nominal	24	VDC	Load voltage	minimum	0	V AC/DC	
Input current at nominal voltage	typical	9	mA		nominal	240	V AC/DC	
	maximum	10	mA		maximum	300	V AC/DC	
Input voltage range (abs.)	minimum	16	VDC	Load current	maximum	1,2	A AC/DC	
	maximum	32	VDC	Load current	maximum	16	A (0,3 ms)	
Input impedance	typical	2,4	kΩ	Voltage drop	typical	0,4	V (1,2 A)	
Switch-on voltage *	typical	15	VDC	Switch-on delay (at 24 V input)	typical	0,5	ms	
	maximum	16	VDC		maximum	1	ms	
Switch-off voltage *	typical	12	VDC	Switch-off delay (at 24 V input)	typical	0,5	ms	
	minimum	10	VDC		maximum	1	ms	
					Inductive load, $\cos \Phi$			0,3...1/240 VAC 1,2 A
					Switching frequency	maximum	1	kHz
					Leakage current (off-state)	maximum	50	uA

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.

## Deratings

Allowed load is derated to 1/2 linearly from +30 °C to +75 °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. These deratings apply when assembled to the horizontal and vertical rail.



Derating curve for SLO 24IRAI:

## 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.

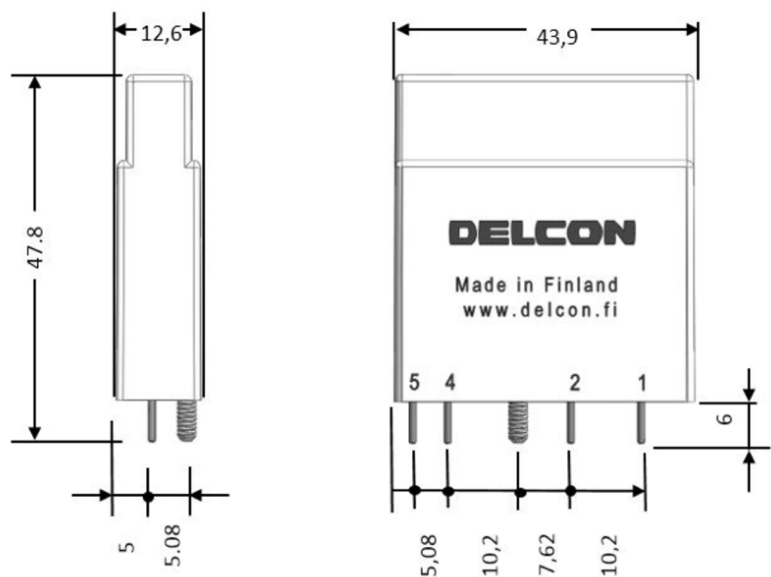
## Fusing

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.

## Assembly

All MOS 1... -mounting sockets, all MB/MBS 8/16... -mounting bases (check voltage limitations for the bases). The recommended installation is to the horizontal rail for better cooling of the relays.

## Mechanical dimensions



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

## Related products for SLOxxx relays

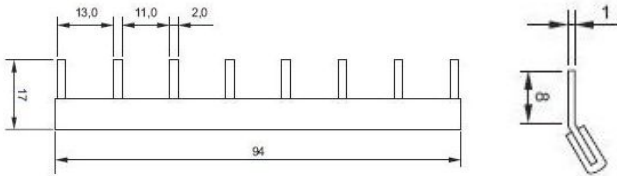
### DIN-rail sockets for single relays

**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



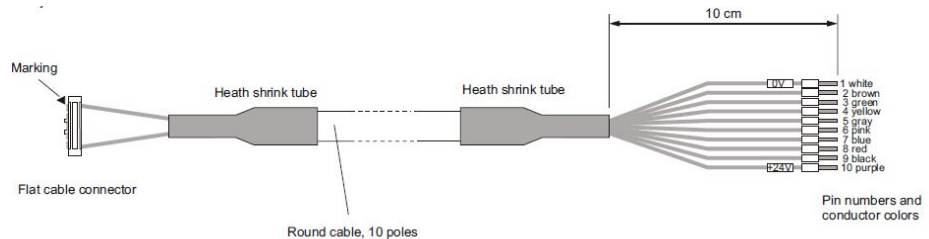
### DIN-rail mounting bases with easy PLC connection

**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



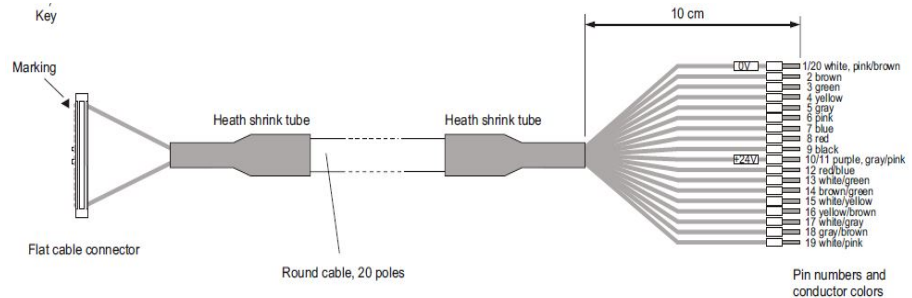
**MBS 16BIOP**  
**MBS 16BIOPCC**

for 16 relays, screw terminals  
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**

 <b>US LISTED</b> 3HMB IND. CONT. EQ.	Certificate: E162828
	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.