

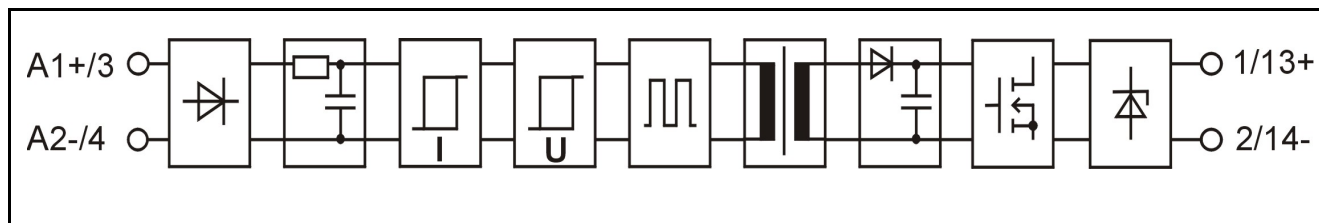
## SLO 12CR

SL-series plug-in output relay

### Main features

- Solid state output relay
- cULus Listed, CE (EMC and LVD)
- Integrated status LED
- 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      |
| 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      |

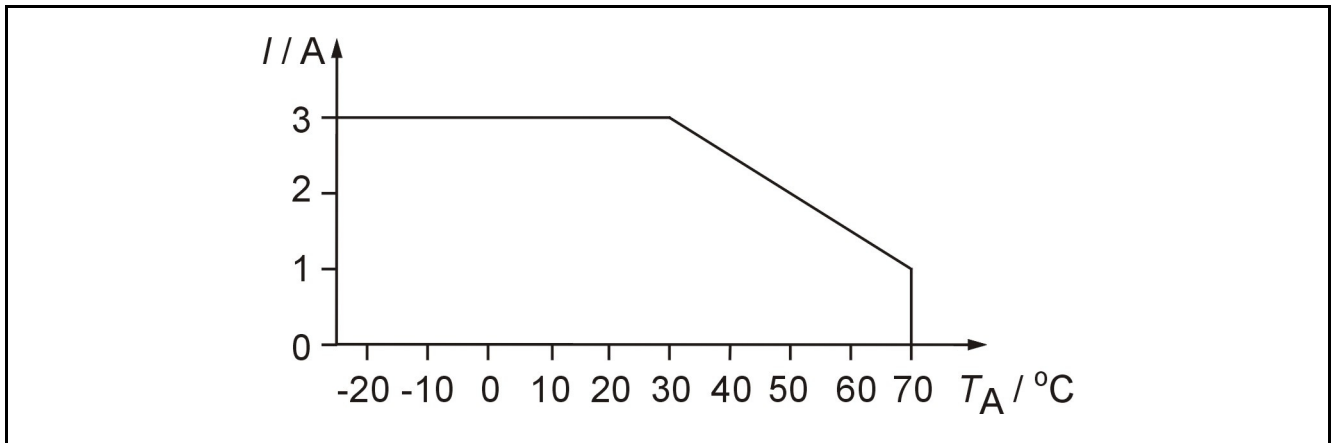
### Electrical specifications ( $T_A = 25\text{ °C}$ )

| Primary                          |         |     |     | Secondary                   |         |     |                |
|----------------------------------|---------|-----|-----|-----------------------------|---------|-----|----------------|
| Input voltage                    | nominal | 12  | VDC | Load voltage                | minimum | 0   | VDC            |
| Input current at nominal voltage | typical | 9   | mA  |                             | nominal | 60  | VDC            |
|                                  | maximum | 12  | mA  |                             | maximum | 66  | VDC            |
| Input voltage range (abs.)       | minimum | 9   | VDC | Load current                | maximum | 3   | A              |
|                                  | maximum | 18  | VDC | Load current                | maximum | 15  | A (10 ms)      |
| Input impedance                  | typical | 1,3 | kΩ  | Voltage drop                | typical | 0,5 | V (3 A)        |
| Switch-on voltage                | typical | 8   | VDC | Switch-on delay             | typical | 0,3 | ms             |
|                                  | maximum | 9   | VDC |                             | maximum | 0,5 | ms             |
| Switch-off voltage               | typical | 7   | VDC | Switch-off delay            | typical | 0,3 | ms             |
|                                  | minimum | 6   | VDC |                             | maximum | 0,5 | ms             |
|                                  |         |     |     | Inductive load, L/R         | maximum | 0,5 | ms (60 V, 3 A) |
|                                  |         |     |     |                             | maximum | 5   | ms (24 V, 2 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 derating

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 12CR.

## 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.

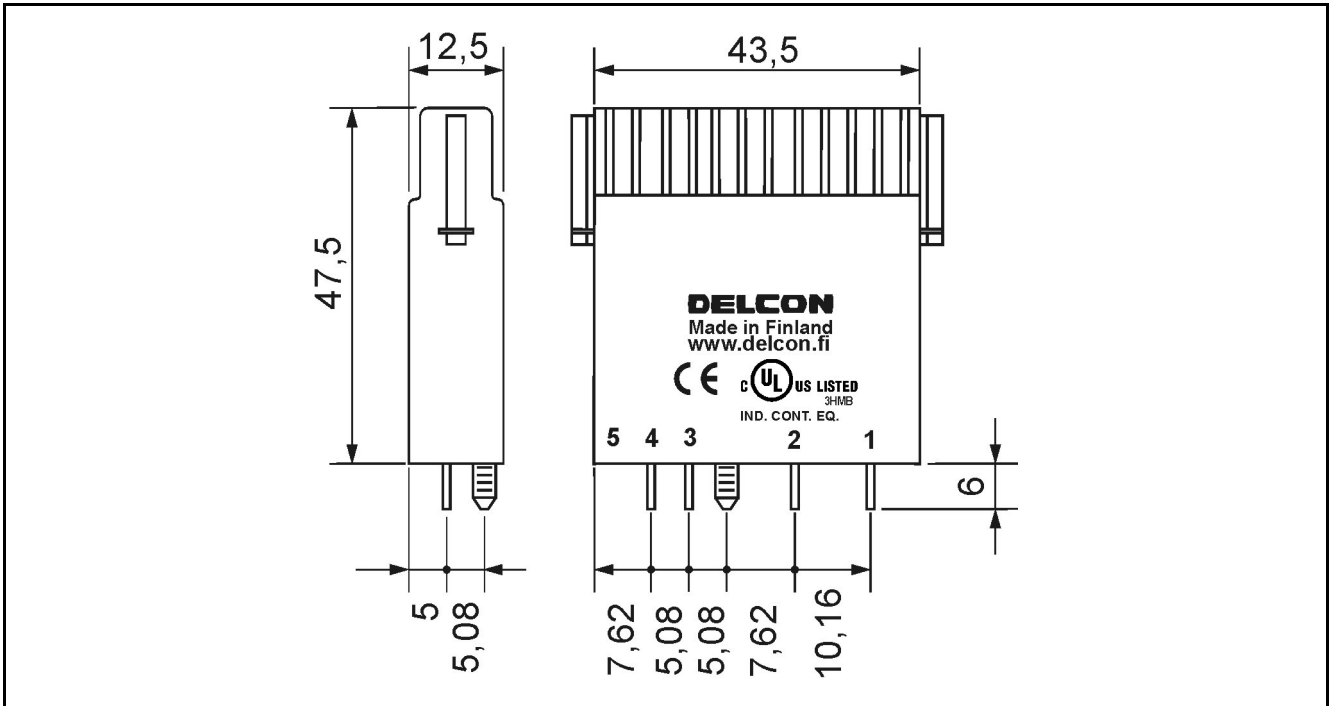
## Fusing

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



All MOS 1... -mounting sockets, all MB/MBS 8/16... -mounting bases.

## 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.<br/>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.