

### SL-series solid state input relay

0 VDC 60 VDC

50 mA \*) 5 V \*\*)

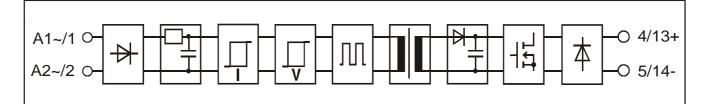
50 ms

50 ms

VDC load voltage

- Plug-in input relay for 220...240 VAC voltages
- 50 mA load current (limited at 24 VDC)
- 0...24 VDC load voltage (maximum 60 VDC)
- Works without logic supply (4 pole)For PLC input signal conditioning
- Immune to disturbances on signal lines
- Shielded signal cabling not required
- cULus tested (UL and CSA)
- CE (EMC and LVD tested)
- Integrated status LED

## **Block diagram**



Secondary

# Specifications (at temperature of 25 °C)

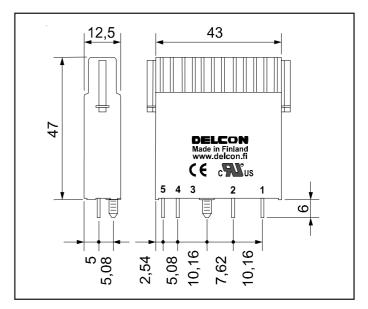
#### **Primary**

| Input voltage      | nominal | 220240 VAC | Load voltage                      | minimum       |
|--------------------|---------|------------|-----------------------------------|---------------|
| Input current      | typical | 5 mA       |                                   | maximum       |
| at nominal voltage | maximum | 6 mA       | Load current                      | maximum       |
| Input voltage      | minimum | 190 VAC    | Voltage drop at 10 mA             | typical       |
| range (abs.)       | maximum | 265 VAC    | Switch-on delay                   | typical       |
| Input impedance    | typical | 45 kΩ      |                                   | maximum       |
| Switch-on voltage  | typical | 170 VAC    | Switch-off delay                  | typical       |
|                    | maximum | 190 VAC    |                                   | maximum       |
| Switch-off voltage | typical | 110 VAC    |                                   |               |
|                    | minimum | 80 VAC     | *) limited by internal resistor a | at 24 VDC loa |
| Noise immunity     | typical | 55 mJ      | **) depends on the current, R     | = 500 Ω       |
|                    |         |            |                                   |               |

### Physical dimensions and other data

| Breakdown voltage<br>Resistance<br>Material of casing<br>Weight<br>Air/creepage distance<br>Capacitance I/O | minimum<br>minimum<br>thermoplastic<br>typical<br>minimum<br>typical | $\begin{array}{c} 4000 \text{ VAC rms} \\ 10^{10}  \Omega \\ \text{UL } 94 \text{ V-0} \\ 40 \text{ g} \\ 8 \text{ mm} \\ 3 \text{ pF} \end{array}$ |
|---|--|---|
|   |  |   |

Color of casing: yellow



Dimensions in mm.

## **Temperature limitations**

| Ambient temperature | Limitation   |
|---------------------|--|
| -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. In multichannel mounting bases every other place should be empty. |

#### Temperature range:

| Storage:   | -40 °C+70 °C |
|------------|--------------|
| Operation: | -25 °C+70 °C |

# Derating when switching inductive loads

This relay is ment for PLC inputs and similar loads. A clamp diode must be used when swiching inductive loads. Notice the current limitation at output.

# Fusing

There is no need to use fuse because of the current limitation.

## **Approvals**

CNUS UL-file E 162828

The relay fulfils EMC-directive 89/336/EEC requirements. Product has been tested according generic standards EN50081-2 and EN50082-2. The relay fulfils also requirements of the low voltage directive 73/23/EEC.

## Guarantee

CE

The solid state I/O relays and accessories made by Delcon Oy are guaranteed free from design and manufacturing defects for a period of three years from the shipping date. For electromechanical relays the guarantee is one year. The guarantee liability is limited to replacement of defective material and related shipping charges. Defective products must be returned to the factory for evaluation. This guarantee does not cover damage due to incorrect use or electrical overload.

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