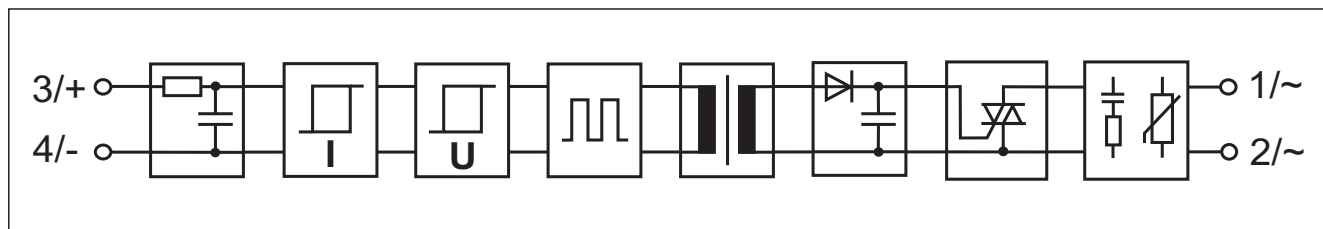


GL-series solid state output relay

- Plug-in output relay for AC-loads
- 2,5 A continuous current, 90 A/20 ms
- 0...240 VAC nominal load voltage
- Transient protection and RC-snubber in output
- Integrated status LED
- Works from zero loads upwards
- Power factor independent (0...1)
- CE (EMC and LVD)
- Not for motor loads

Block diagram



Specifications (at temperature of 25 °C)

Primary

Input voltage	nominal	5 VDC
Input current	typical	15 mA
Input current at nominal voltage	maximum	17 mA
Input voltage range	minimum	3 VDC
Input voltage range (abs.)	maximum	7 VDC
Input impedance	typical	0,3 kΩ
Switch-on voltage	typical	2,7 VDC
	maximum	3 VDC
Switch-off voltage	typical	2,5 VDC
	minimum	2 VDC

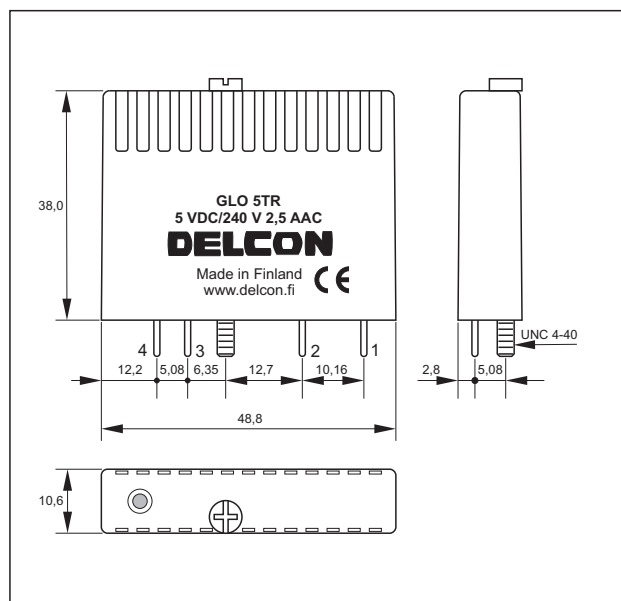
Secondary

Load voltage	minimum	0 VAC
	nominal	240 VAC
	maximum	265 VAC
Load current (absolute)	maximum	2,5 A
Load current 20 ms	maximum	90 A
Voltage drop at max. load	typical	1 VAC
Output leakage	typical	1,5 mA
Switch-on delay	typical	0,5 ms
	maximum	1 ms
Switch-off delay	maximum	11 ms
Load power factor, cos φ		0...1
dv/dt off-state	typical	200 V/μs

Physical dimensions and other data

Breakdown voltage I/O	Minimum	4300 VAC rms
Material	thermoplastic	UL 94 V-0
Weight	typical	30 g
Air/creepage distance I/O	minimum	8 mm
Capacitance I/O	typical	3 pF
Temperatures		
storage		-40 °C...+70 °C
operation		-10 °C...+70 °C

Color of casing: black

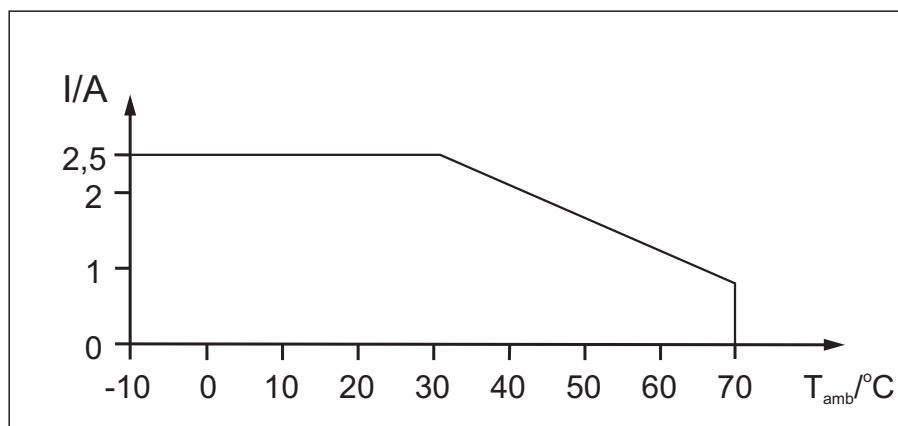


Dimensions in mm.

Temperature derating

Allowed load current 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 the relay.



Derating when switching inductive loads

There is no need to derate solid state relay using a triac switch. The relay is indifferent to the power factor of the load. The surge current is not allowed to exceed the specification. For reason of the 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.

Approvals



Product has been designed to meet the main requirements of the EMC-directive 2004/108/EC requirements.

The relay fulfils requirements of the low voltage directive 2006/95/EC.

Guarantee

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 materials 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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