**GEN8SR**
*Low cost Data Acquisition & Control products*
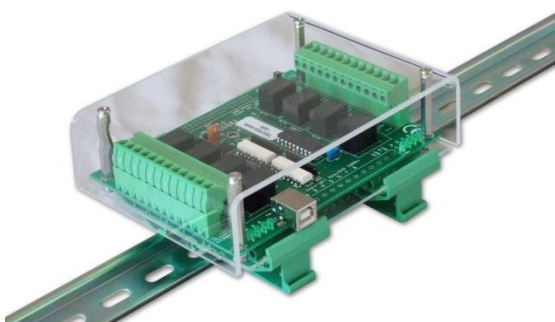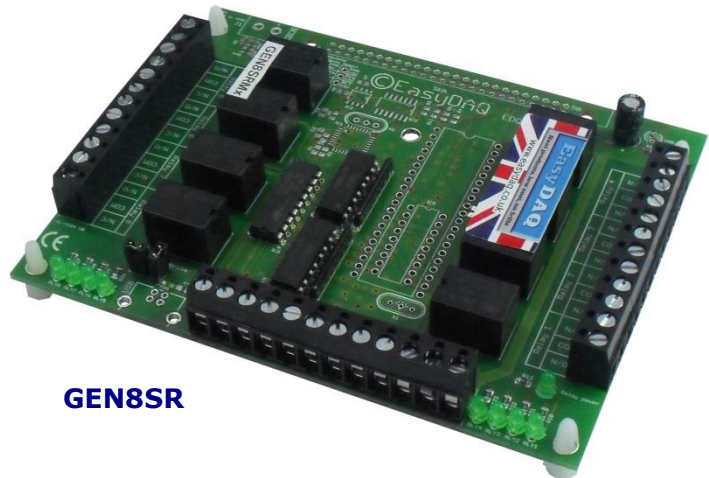**8 channel general purpose relay card**

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## Features

- 8 channel, general purpose, opto isolated signal relay card

- PCB tracking (& power relays) are designed to handle 3 amps @ 120V AC, or 3A @ 24V DC (switched or continuous).  Detailed relay spec – see page 2

- Screw terminal blocks allow connection to all relay contacts, the digital control signals & PSU input connections

- Two types of screw terminal connector available: Fixed screw terminal blocks or two part (male/ female), quick disconnect type connectors

- Relays are SPDT, Form C, changeover type, with N/O, COM and N/C contacts.  Edge mounted screw terminal block access to N/O COM & N/C relay contacts (8 onboard relays) via edge mounted screw terminal blocks

- Opto-isolation between control signal inputs & the eight onboard relays = 2500V (AC Vrms min).  Uncommitted opto-isolated inputs allow complete electrical isolation if needed

- Opto-isolated DC control signal input voltage range (Logic High): 4V to 75V (max, current must be limited to 10mA max), Logic Low 0V to 1.5V.  Suitable for driving from a low current signal source such as an 8255 programmable DIO type device

- LED status indicators for power and relay activation status

- Supplied with nylon feet.  Clear Perspex cover & base option available.  DIN rail base clip (with Perspex cover) mount option also available

- CE, RoHS & BS9001:2000 compliant

**GEN8SR**

## Description

Low cost, general purpose, 8 channel, opto-isolated relay card with the option of fixed screw terminal blocks or 2 part (male/female) allowing rapid connect/disconnect.

Relays are single pole changeover type, capable of switching 120VAC @ 3Amps.  PCB tracking is designed to handle 3 Amps.  Fitted with PSU & relay LED status indicators.

The screw terminal blocks give access to N/O, COM & N/C relay contacts, the channel input control signals and the 0V/5V DC supply terminals.

The card requires an external DC supply (if relays are 5V operating then 400mA max, assuming all relays activated).  Relays can be activated via any DC signal voltage input up to 75VDC (max). Control signal inputs are opto-isolated (2K2 input resistor).  Current per input channel is approx. 2.5mA @ 5VDC. Control input current must be limited to 10mA max per channel.

**COVERDIN8 (Acrylic cover and DIN rail mount base plate – fitted to a USB8SR2 relay card)**

## Specifications

| **Digital control signals** | **Power** |
|---|---|
| Input Low, 0V to 1.5VDC (Typ.). | 400mA @ 5V DC for Gen8SR |
| | |
| Input High, 4V to 75V DC (Max) per channel. | **Relays** See page 2 |
| | **Dimensions** |
| Inputs sink 2.5mA @5V. | 100mm x 130mm x 30mm (inc. feet & 2 part connectors) |
| Limit to 10mA max per channel. | **Weight** 120g. |

**Operating temp range**
-20 to +80$^0$C

Updated 9$^{th}$ March 2022

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## Specifications: Relays

| Parameter | 5V Signal relays | 12V Signal relays | 24V Signal relays |
|---|---|---|---|
| Rated voltage/current | 5VDC/40mA each | 12VDC/16mA each | 24VDC/8.3mA each |
| Must operate/release voltage | 75%/10% of rated voltage | | |
| Contact ratings | 3A/120VAC or 3A 24VDC (100,000 operations) | | |
| Operate/release time | 5mS/5mS | | |
| Contact material | AuAg overlay, Ag Alloy | | |
| Operational life (min) | Mechanical $10^7$ / Electrical $10^5$ | | |
| Contact arrangement | SPDT, Form C | | |

## Order codes

| | |
|---|---|
| **GEN8SR** | 8 sequentially operated power relays (3A), Single part connectors. 5V relays as standard. |
| **GEN8SR-12V** | As above except using 12V relays. |
| **GEN8SR-24V** | As above except using 24V relays. |
| **GEN8SR2** | 5V relays and 2 part vertical connectors |
| **GEN8SR2-12V** | As above except using 12V relays. |
| **GEN8SR2-24V** | As above except using 24V relays. |

## Optional accessories

| | | |
|---|---|---|
| **COVER8PR** | Clear Acrylic protective cover. |
| **COVER8PRDIN** | Clear Acrylic protective cover and DIN rail adaptors. |



**GEN8SR Top view**

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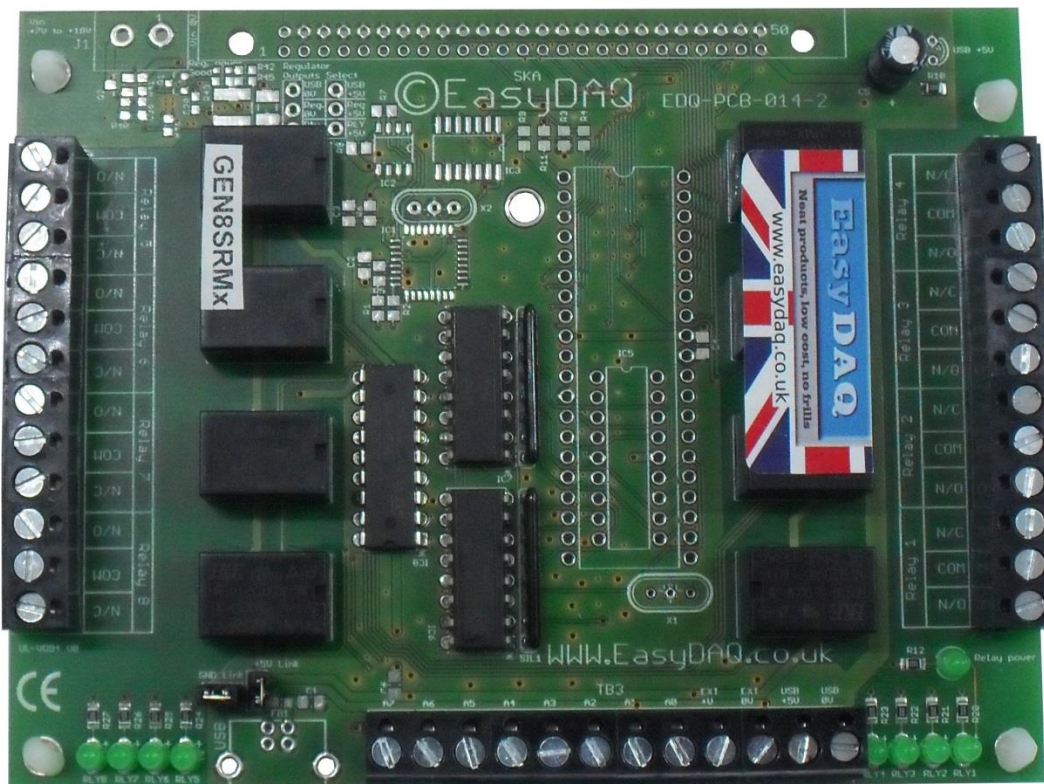
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## Document versions

| Version number | Date | Notes |
|---|---|---|
| V1.0 | Various | Original for EDQ-PCB-014-2 PCB. |
| | | |
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