

Features

- Serial/RS232, 8 channel, opto-isolated relay card
- Relays & PCB tracking are designed to handle 240VAC @ 10 amps. Stackable design
- Relays are SPDT, Form C, changeover type, with N/O, COM and N/C contacts taken to screw terminal blocks along each side of the card
- Command set & software interface is identical to our existing range of Serial & USB port products. If you have previously used our products, your code can be easily ported to this product
- Can be used in conjunction with the IOBridge, internet/web control product
- Example code downloads available for: Labview, Lab Windows CVI, VB, VC, C#, JAVA, Agilent VEE & Delphi. Uses simple ASCII/Hex text command strings. SW overhead & operate/release time 10ms max. Write & read functions supported.
- OS compatibility: Win98SE/2K/XP/Vista/7, Windows CE, Mac OSX and Linux
- External +5V DC power can be connected via 2 way screw terminal connector or 2.1mm jack socket. Requires approx 500mA if all relays activated.
- LED channel & 5VDC status indicators.
- Protective perspex cover & base & DIN rail mount option available. Supplied with nylon feet (will take self tapping screws)
- CE & RoHS & BS9001:2000 compliant

Description

General purpose Serial/RS232) 8 channel, opto isolated relay card. Relays & PCB tracking are designed to handle 240VAC@10A.

Relay control/activation is via simple ASCII/Hex characters. USB version appears as a 'virtual' All relay contacts are connected to screw terminal blocks along each side of the card.

Requires 5VDC power (approx 500mA if all relays activated).

Power connection is made via a 2.1mm jack socket or 2 way screw terminal block.

The card is stackable, via corner fixing holes. Available with a Perspex cover and DIN rail mount option if required.

Can be used in conjunction with the IOBridge, internet/web control product.

Specifications

Control Interface

Serial. RS232 (9 W D Type female connector)

Power supply

5V DC (@ approx 60mA per relay)

Operating temp range

-20 to +80°C

Relays

See page 3 for technical details of the relays used

Dimensions

Dimensions approx 100mm (L) 115mm (W) 20mm (H) (exc feet), Weight, 160g

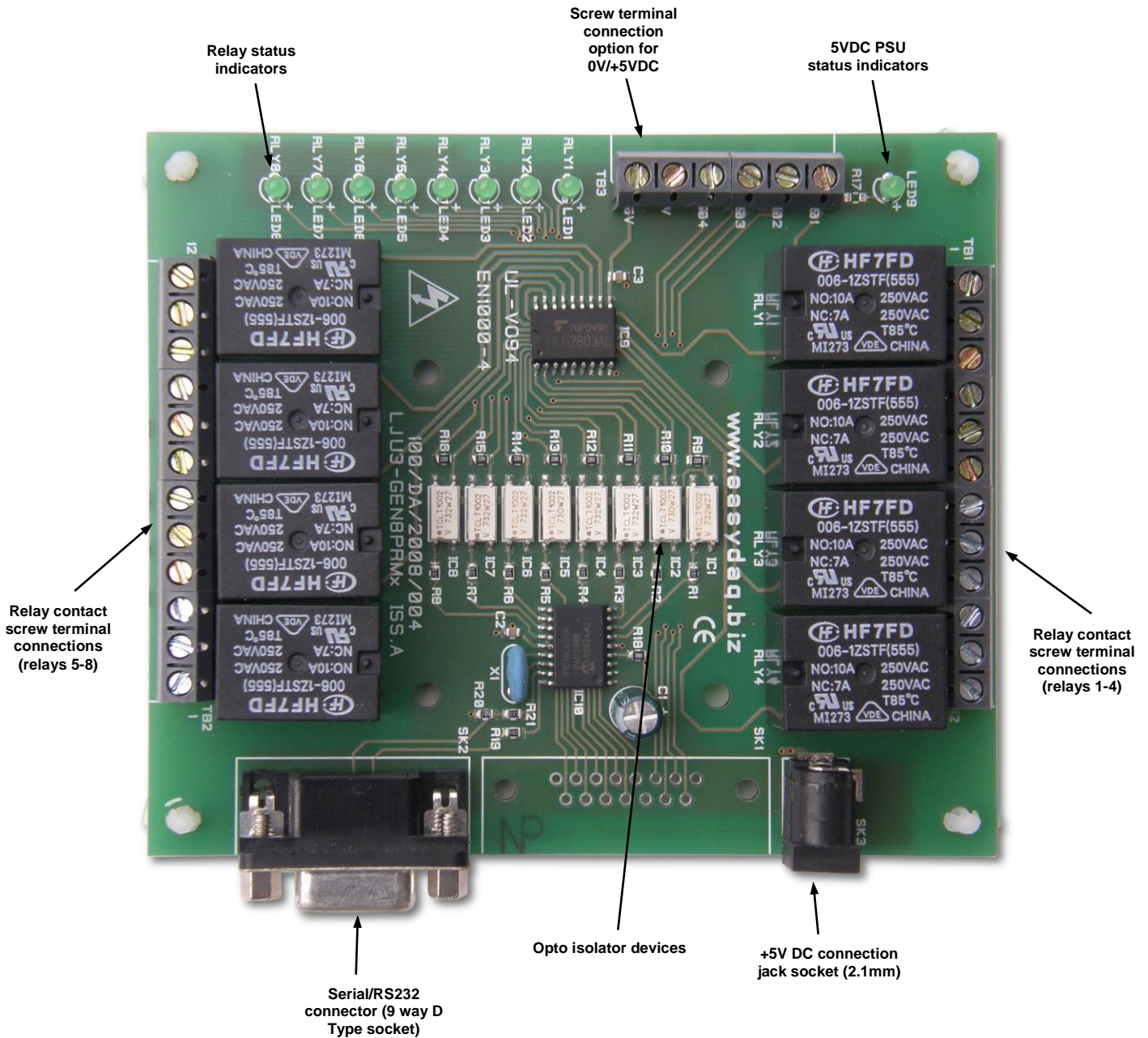
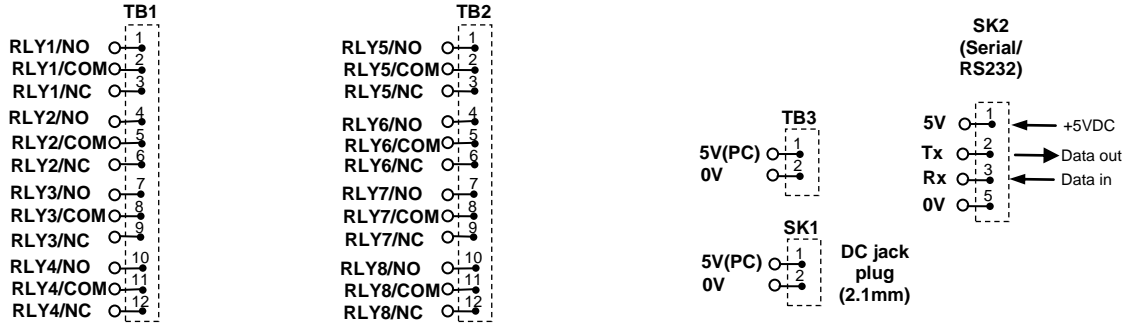
Order code

SER8PRMx

Serial/RS232, 8 channel, opto isolated relay card. Relays & PCB tracking designed to handle 240VAC@10Amps. Screw terminal blocks give access to NO/COM/NC relay contacts. 9 way D type (female) Serial/RS232 connector. Requires external +5V PSU. PSU connection is via 2.1mm DC jack connector or 2 way screw terminal block.

Connection details

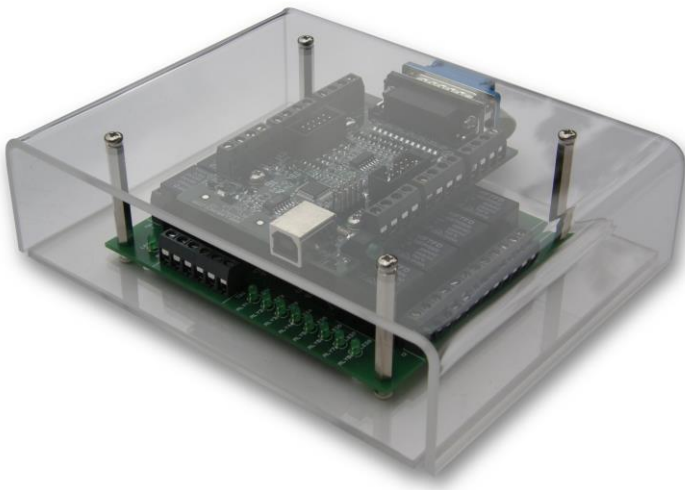
External & screw terminal block connections to the relay cards are shown below:



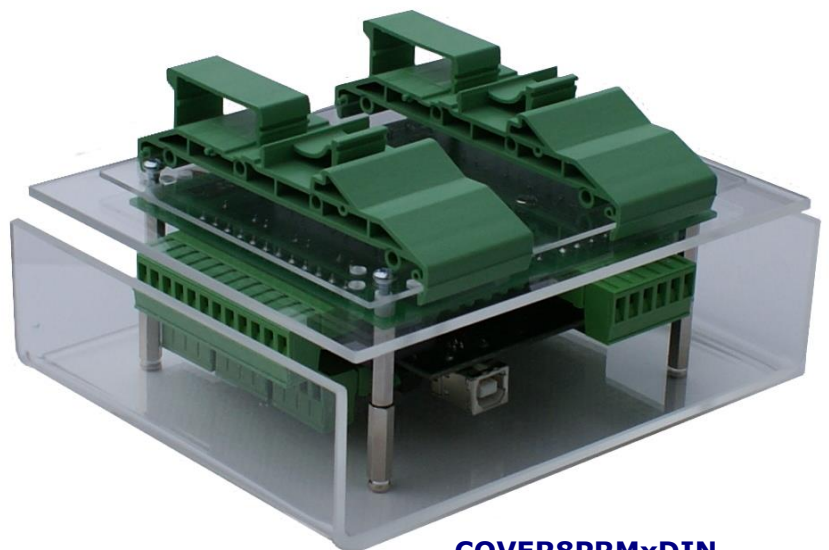
Face view showing screw terminal connectors & LED locations

Product Datasheet 44**Specifications: Relays**

Parameter	Specification (Power relays)
Rated voltage/current	5VDC/80mA
Must operate/release voltage	75%/10% of rated voltage
Contact ratings	10A/240VAC/8A 30VDC
Contact resistance	100mΩ max
SW overhead/ Operate/ release time	10mS
Contact bounce period	0.6mS operate/ 7.2mS release
Contact material	AgSnO ₂
Operational life (min)	Mechanical 10 ⁷ / Electrical 10 ⁵
Contact arrangement	SPDT, Form C



COVER8PRMx
(shown fitted to a
Different card/
product)



COVER8PRMxDIN
(shown fitted to a
Different card/
product)

Serial Port settings

Baud rate: 9600
Parity: 0
Data: 8 bits
Stop bits: 1
Handshaking: None

Auto detection & com port assignment

When you connect this card to the serial port of your PC, it will appear as a standard COM port connection. The COM port number can be manually re-assigned via the control panel if required.

Command format

The card is initialised & commanded by sending a single ASCII character followed by a hex number (representing the required port status). The commands address each port of the PIC device (there are three 8 bit ports. ASCII character Hex equiv shown in brackets). You must first set the port direction (as either input or output). If a channel is set as an input, your software must send a read command (of that channel) followed by a read of the serial port. The card can also be commanded via HyperTerminal – see below.

Port B, C & D (Channels 1-8, 9-16 & 17-24) commands:

ASCII 'B' (42H), X Initialises the card (sets the port & channel I/O directions). Set direction of Port B, 1=Input, 0= output. (i.e. where X=10111111 (AFH) = sets bit 7 as an output, the rest as inputs).
ASCII 'C' (43H), X Write data X to Port B (i.e. X=00000001 (01H), sets channel 1 to active). Valid data bytes are latched by the card until a further valid data byte is written to it.
ASCII 'E' (45H), X Initialises the card (sets the port & channel I/O directions). Set direction of Port C
ASCII 'F' (46H), X Write data X to Port C (i.e. X=00000001 (01H), sets channel 1 to active).
ASCII 'H' (48H), X Initialises the card (sets the port & channel I/O directions). Set direction of Port D
ASCII 'K' (4AH), X Write data X to Port D (i.e. X=00000001 (01H), sets channel 1 to active).

Using Windows HyperTerminal

In order to test operation, the card can be connected to a serial port and controlled from Windows HyperTerminal. Ensure port configuration is set as shown above, type (ASCII) characters shown above to achieve port initialisation/direction and read or write command/data.

Example downloads

Example driver files and executables are available from the 'downloads' button for this products webpage (of our website <http://www.easydaq.co.uk/>). Example programs are currently available for LabVIEW, Lab Windows CVI, Visual Basic, Visual C, C#, JAVA, Agilent VEE & Delphi.

Uses existing USB & serial port software examples

This card uses the same software drivers & command interface that is used in our existing range of USB/ Serial port relay & DIO card products. If you have already used our USB or serial port products on a previous project, you may be able to re-use some or all of your code.

If you are a Mac or Linux user, or require additional information and low level details on how to address and command the cards, please refer to this web link (paste this link into your browser):

[https://www.easydaq.co.uk/datasheets/Data%20Sheet%2034%20\(Using%20Linux%20with%20EasyDAQ%20USB%20Products\).pdf](https://www.easydaq.co.uk/datasheets/Data%20Sheet%2034%20(Using%20Linux%20with%20EasyDAQ%20USB%20Products).pdf)