GENDIO8R
8 channel relay card
Low cost DAQ & Control products

EasyDAQ
Neat products, low cost, no frills

Product Datasheet 14

Features

- PC104 format card with 8 onboard changeover relays

- Card tracking will handle 4.5 amps (relays have a 10 amp contact rating)

- User selectable opto-isolated inputs allow a max DC input voltage of 70V

- Input channels can be configured for use as either relay contacts or digital input channels via onboard links

- LED channel and power status indicators

- Screw terminal power connection option

- Supplied with nylon feet (will take self tapping screws)

- Corner mounting holes allow cards to be stacked if required

- A protective perspex cover & base is also available

- 0V, 5V and 12V connected via header connector or separate 3 way screw terminal block (adjacent to the relay contact screw terminal block)

Description

This card is an industry standard PC104 profile, eight channel relay card. It is designed to be connected to the DIO16R card as part of a 16 channel relay configuration but can also be used as a generic 8 channel relay card.

The PCB tracking will handle 4.5 amps (relays have a 10 amp contact rating).

The card is available with two screw terminal blocks which allow connection to all of the NO/Com/NC contacts of the 8 onboard relays. A third screw terminal block is provided giving user access to the 0V, 5V and 12V DC power connections.

Specifications

Input drive current
Opto isolated input drive 5V @ 2.5mA (max) per input

Power supply
5v and 12V DC

Power consumption
10 mA standby, 300 mA all relays active

Operating temp range
0-70^{0}C

Relays
See page 3 for technical details of the relays used

Buffered output channels
12V (max) @ 500mA per channel

Dimensions
Approx 90mm (D) 95mm (W) 22mm (H) (exc feet)

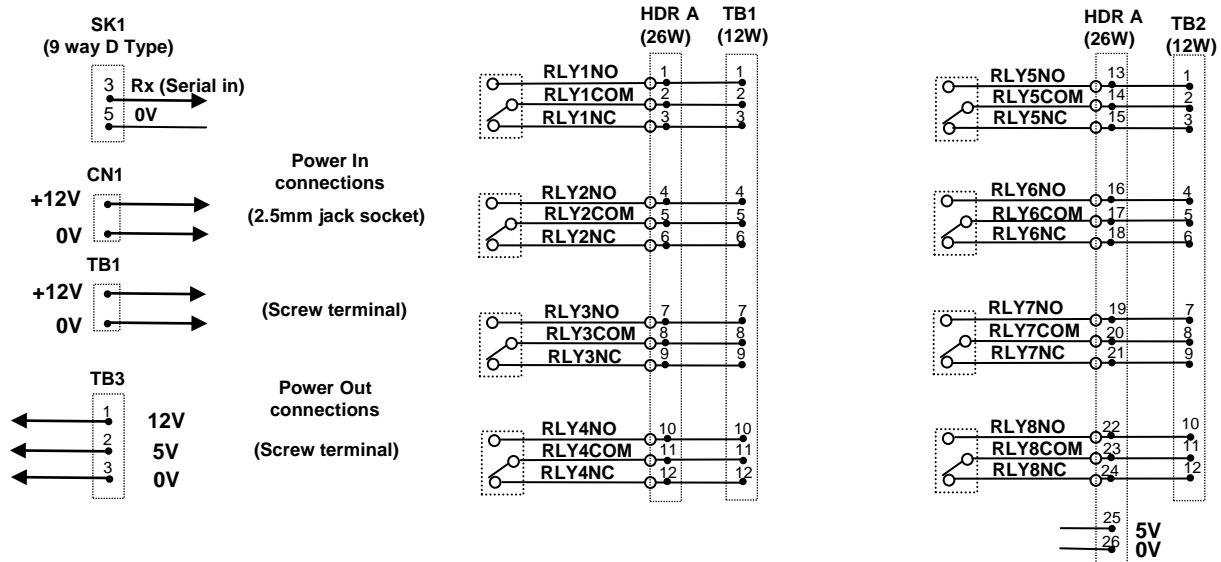## Order codes
GENDIO8R
14 way header input & screw terminal output connector for relay contacts & additional power I/O connection option

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Connection details

External connections to the card are shown below:

Serial Port settings

Baud rate:	9600
Parity:	0
Data:	8 bits
Stop bits:	1

Handshaking

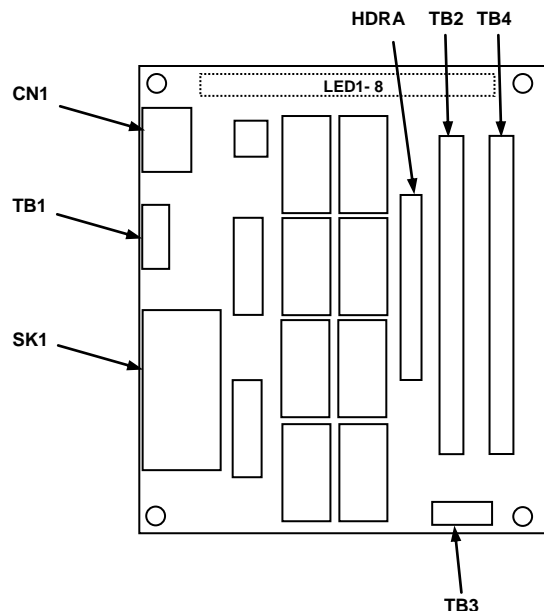None – output status reflects incoming data bytes.

Command format

Command format:
01H=1st data bit (LS)
02H=2nd data bit
03H=1st & 2nd data bit etc

Valid data bytes are latched by the card until a further valid data byte is written to it.

Using Windows Hyperterminal

In order to test operation, the card can be connected to a serial port and controlled from Hyperterminal. Ensure port configuration is set as shown above:
Typing the following (ASCII) characters will give the bit settings shown below:
ASCII '0' = 30H
ASCII '1' = 31H
ASCII '2' = 32H
ASCII '3' = 33H
ASCII '4' = 34H
etc

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Specifications: Relays

Parameter	Specification (Power relays)	Specification (Signal relays)
Rated voltage/current	5VDC/80mA	5VDC/42mA
Must operate/release voltage	75%/10% of rated voltage	75%/10% of rated voltage
Contact ratings	10A/240VAC/8A 30VDC	1A/120VAC/1A 30VDC
Contact resistance	100mΩ max	100mΩ max
Operate/release time	10mS/5mS	5mS/5mS
Contact bounce period	0.6mS operate/ 7.2mS release	0.6mS operate/ 7.2mS release
Contact material	$AgSnO_2$	AgAu
Operational life (min)	Mechanical 10^7 / Electrical 10^5	Mechanical 10^7 / Electrical 10^5
Contact arrangement	SPDT	SPDT