

**Product Datasheet 5B**

**Features**

- Requires 12V DC external power supply (via 2.5mm jack socket), and 5V connected via 50 way header connector - power consumption approx 800mA max (all channels active)
- PCB Tracking will handle 2.5 amps (10 amp relay contacts)
- Channels can be individually configured as either inputs or outputs via user selectable links
- Opto-isolated input drive voltage 0/5V to 75V DC. 2K2 opto-isolator input resistor per channel.
- Relays are SPDT, Form C, changeover type, with N/O, COM and N/C contacts taken to the header connectors
- Input opto-isolation 2500V rms (minimum)
- Pin compatible with our USBDIO24 and SERDIO24 cards and also the NIDAQ DIO24/6503 DIO card
- 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 for all relay card types
- 5V max output voltage per channel
- 20mA (max) drive current per output (40mA max per 8 channels) when driven from 24 channel DIO card
- CE compliant, BS9001:2000 manufacture



**Description**

These cards are general purpose 24 channel relay cards. All cards have digital I/O control via a 50 way header connector (compatible with our USBDO24 card and the NIDAQ DIO24/6503 DIO card) which connects to opto-isolated input relay drive signals. All relay contacts are connected to two 25 way D type (female) connectors and a 26 way header connector. The 26 way header can be connected to a

third 25 way D type via a short length of ribbon cable. Digital inputs can be connected via the N/O connection and onboard header links, directly to the 50 way header.

This card is compatible with our range of 24 channel USB & serial port DIO cards which can be used to control upto 24 relays or to achieve a mixture of relay control and logic level digital input & output signals.

**Specifications**

**Control Interface**

50 way, (90°) male header connector, 0/5V -75V DC drive signal (2K2 input resistor/10mA max).

**Power supply**

5V DC/150mA (max, supplied from DIO24 card)) & 12V DC/800mA (max)

**Operating temp range**

0-70°C

**Relays**

See page 3 for technical details of the relays used

**Output channels**

5V (max) @ 20mA (max) per output or 40mA (max) for per group of 8 channels

**Dimensions**

Dimensions approx 175mm (D) 126mm (W) 22mm (H) (exc feet)

**Order code**

**DIO24MxHdr-25D**

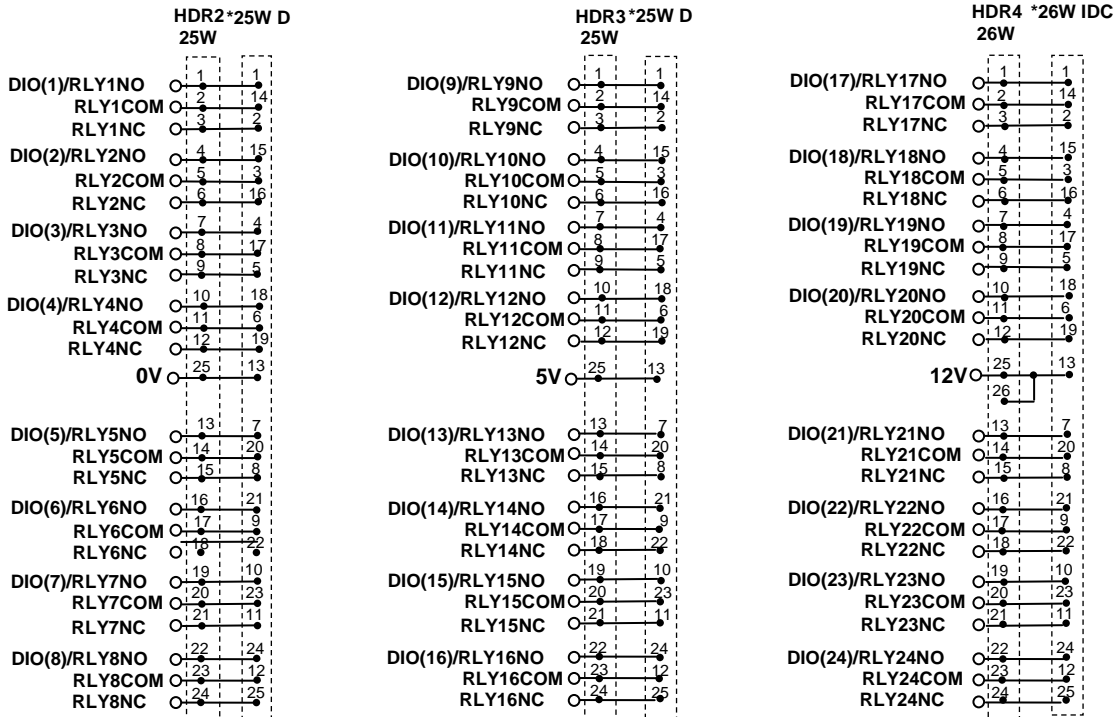
24 chan relay card, with two 25 way D type Female and one 26 way header connectors for connections to all relay contacts.

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#### Connection details

External connections to the cards are shown below:

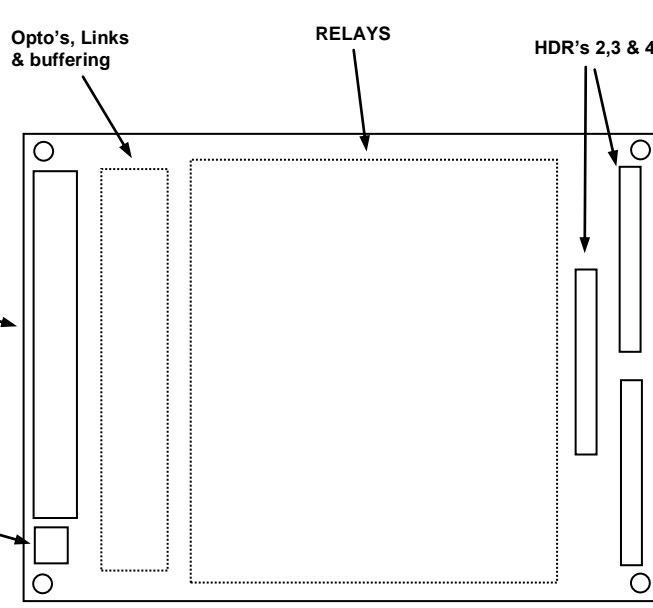
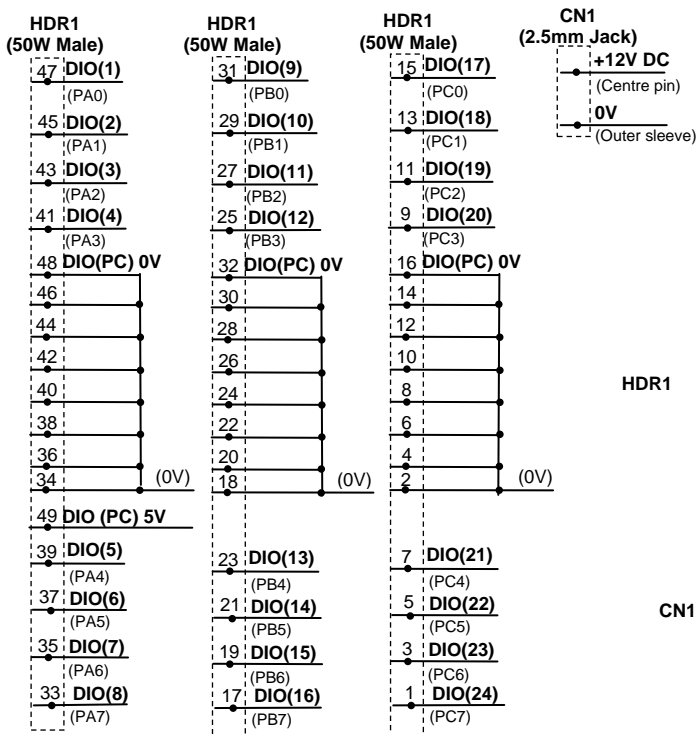
#### Relay connections:



\*Connections if 26W Header is connected via a ribbon cable to a 25W D type connector

#### Drive & power connections:

#### Card layout:



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<i>Specifications: Relays</i>	
<b>Parameter</b>	<b>Specification (Power relays)</b>
Rated drive voltage/current	12VDC/30mA
Must operate/release voltage	75%/10% of rated voltage
Contact ratings	10A/240VAC/8A 30VDC
Contact resistance	100mΩ max
Operate/release time	10mS/5mS
Contact bounce period	0.6mS operate/ 7.2mS release
Contact material	AgSnO <sub>2</sub>
Operational life (min)	Mechanical 10 <sup>7</sup> / Electrical 10 <sup>5</sup>
Contact arrangement	SPDT, Form C

