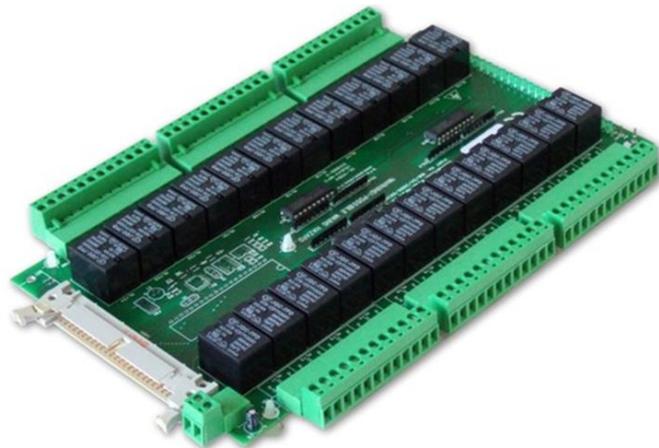


Product Datasheet 27

Features

- Choice of either 240VAC/10 Amp power relays or 30VDC/1A, high sensitivity (gold contact, low contact resistance) signal relays
- Relays are SPDT, Form C, changeover type, with N/O, COM and N/C contacts taken to two part screw terminal blocks allowing quick connect/ disconnect of card
- Requires 5V DC external power supply (via screw terminals)@ 500mA (all channels active)
- Signal relays are high sensitivity, low contact resistance type. Contact material is AgAu, rated at 1A (30VDC/120V AC). 100mOhms Max
- Operate/release time 5mS Max
- LED channel & 5VDC status indicators are located along one end of the card give visual indication of activation status
- PCB Tracking is designed to handle 240VAC @ 10 amps
- Stackable design with horizontal entry, 2 part (male/female) screw terminal blocks
- Card design allows for rapid connect/disconnect from target wiring
- Can be used in conjunction with our USBDO96 card to provide a convenient 96 channel relay card stack
- Pin compatible with NIDAQ DIO24/6503 DIO card
- Supplied with nylon feet (will take self-tapping screws)
- Protective Perspex cover & base available
- DIN rail mount Perspex cover/base option also available for this card



Description

General purpose 24 channel relay card, available with a choice of either power (240VAC/10amp) or signal (gold contact, low contact resistance) relays.

Relay control/activation is via logic level inputs via the 50 way male header connector. All relay contacts are connected to two-part screw terminal blocks along each side of the card. The use of horizontal mounted screw terminal connectors and header connector ejector latches allow easy and rapid connect/disconnect from users target system. DC power connection is made via a 2 way screw terminal block in one corner of the card.

The card is stackable, via corner fixing holes, and is also compatible with our 96 channel USB Digital output card, allowing low cost implementation of relay stack or matrix functions.

Specifications:

Control Interface

50 way, (90°) male header connector, 0/5V DC drive signal, 3mA typ per chan).

Power supply

See Specifications: Relays below for voltage and current requirements.

Operating temp range

-20 to +80°C

Relays

See page 3 for technical details of the relays used.

Dimensions

Dimensions approx.
205mm (D) 126mm (W)
22mm (H) (exc feet),
Weight 360g (signal relays), 540g (power relays).

Order codes summary

DO24MxP

24 channel relay card, fitted with 240VAC/10Amp Power relays & two part (right angle) screw terminal blocks giving access to NO/COM/NC relay contacts (for all channels & the DC supply).

DO24MxS

As above, but fitted with 30VDC/1A, high sensitivity (gold contact) signal relays. Suitable for low voltage/current, or low contact resistance signal switching applications.

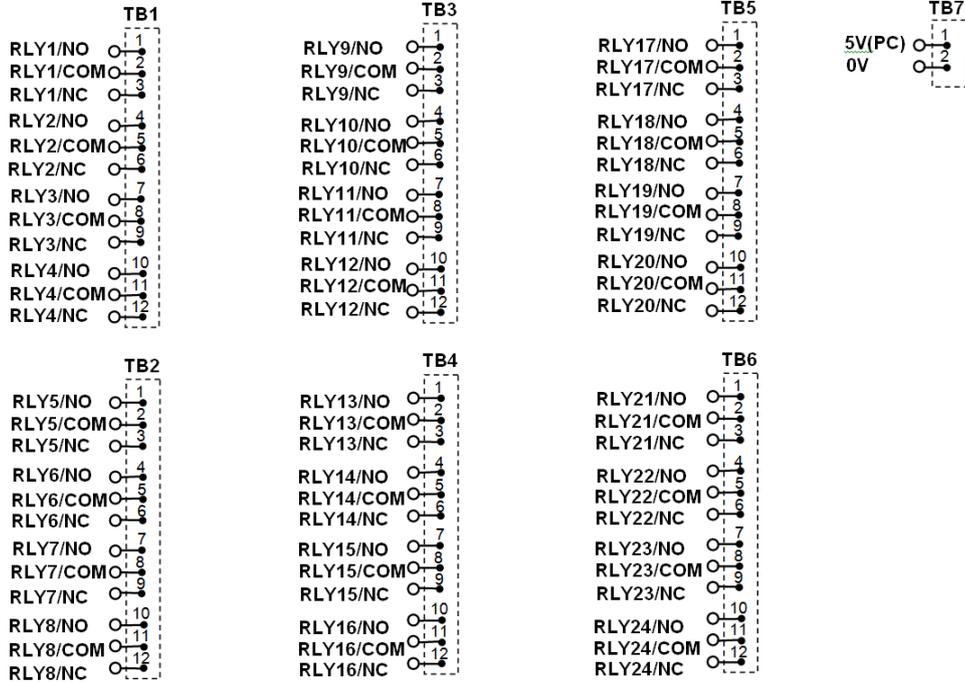
See Order codes table below for comprehensive list of options.

Product Datasheet 27

Connection details

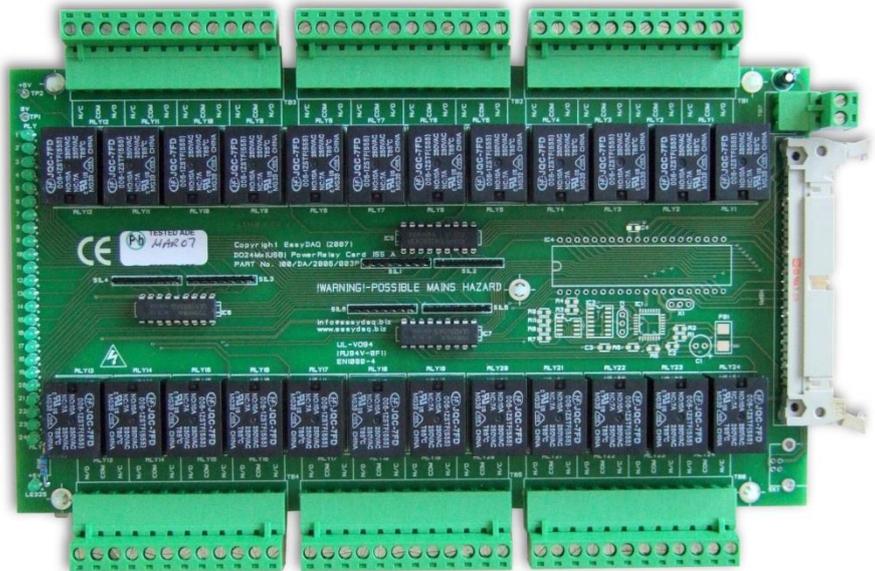
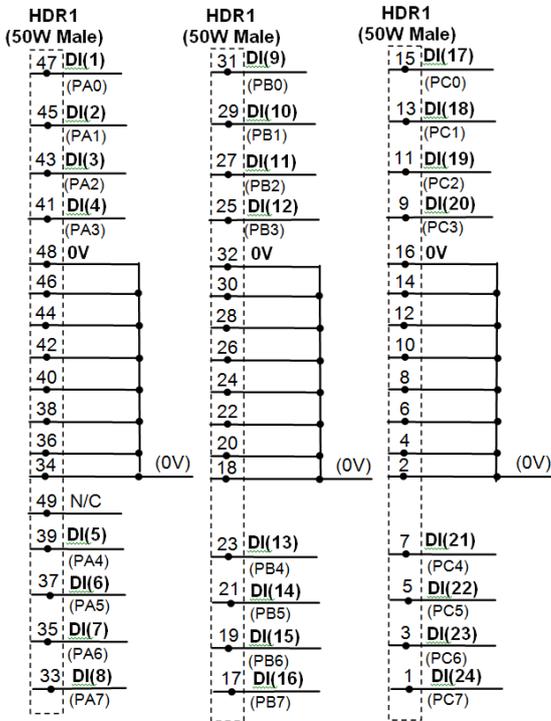
External connections to the cards are shown below:

Relay connections:



Drive & power connections:

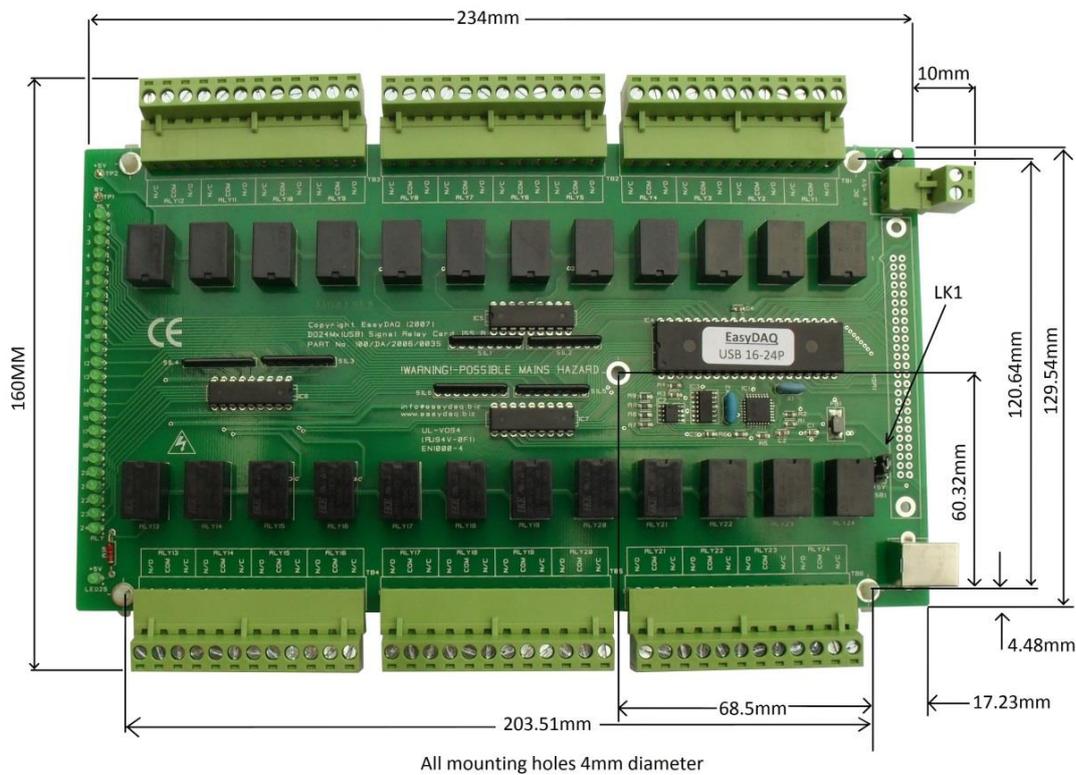
Face view showing connector & LED locations



Product Datasheet 27

<i>Specifications: Relays</i>					
Parameter	5V Power relays	6V Power relays	12V Power relays	24V Power relays	Signal relays
Rated voltage/current	5VDC/71mA each	6VDC/60mA each (50mA at 5V)	12VDC/44mA each	24VDC/22mA each	5VDC/42mA each
Must operate/release voltage	75%/10% of rated voltage				75%/10% of rated voltage
Contact ratings	10A/240VAC or 8A 30VDC				1A/120VAC or 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, Form C				SPDT, Form C

Dimensional drawing (USB24SRMx shown)



Order codes table.

<i>Order codes</i>	
DO24PRMx	Our original DO 24 channel relay card, fitted with 6V relays (activated from 5V for lower power operation), 240VAC/10Amp, SPDT Power relays and two part (right angle) screw terminal blocks giving access to NO/COM/NC relay contacts for all channels.
DO24PRMx-5V	As DO24 above but fitted with 5V relays for normal operation, using an external 5V power supply.
DO24PRMx-12V	As DO24 above but fitted with 12V relays for normal operation, using an external 12V power supply.
DO24PRMx-24V	As DO24 above but fitted with 24V relays for normal operation, using an external 24V power supply.
DO24SRMx	As above, but fitted with 5V, 30VDC/1A, high sensitivity (gold contact) signal relays. Suitable for low voltage/current, or low contact resistance signal switching applications. Use a 5V external power supply if more than 8 relays are to be activated at one time.

Product Datasheet 27

NOTE.

Information in this document is believed to be accurate and reliable. However, EasyDAQ does not give any representations or warranties, expressed or implied, as to the accuracy or completeness of such information and shall have no liability for the consequences of use of such information.

Document versions

Version number	Date	Notes
V1.x	Various	
V2.0	13th May 2021	Added relay voltage options for power relays. Added dimensions.