

DO10-RE5 Power Output Card



Product ID. : DO10-RE5
Rev. : 1.00
Date : Nov 23, 2007
Firmware Rev. : N/A

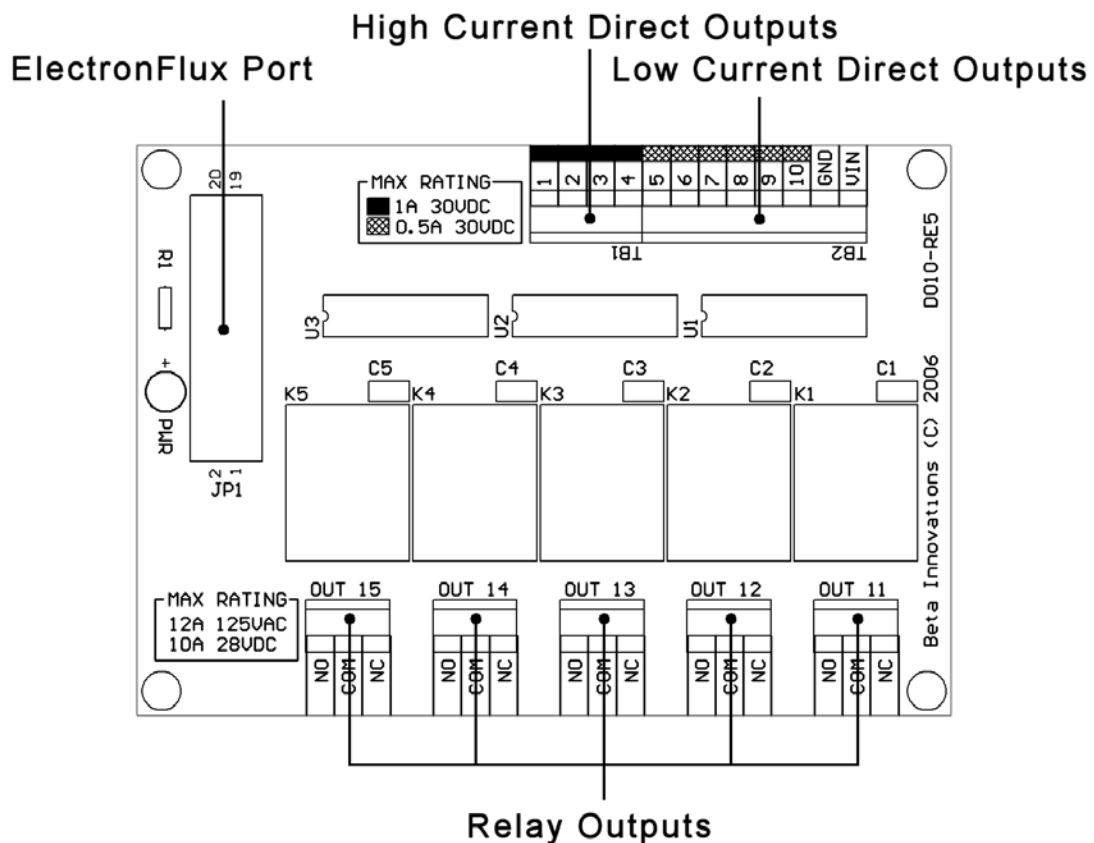
Table of Contents

Connecting the DO10-RE5 Card.....	3
Output Channels 1 to 10.....	4
Suppression Diodes Input.....	4
Connecting Output Channels 1 to 10.....	5
Relay Output Channels 11 - 15	6
Absolute Max Rating	6
Equivalent SPDT Relay Circuit.	6
Mechanical Specifications	7

Connecting the DO10-RE5 Card

IMPORTANT: DO NOT PLUG the DO10-RE5 module into any port while the USB module is powered. Turn off power to the module before installing the DO10-RE5 card.

With the module's power turned off, connect the DO10-RE5 card to any of the ports using a keyed ribbon cable if supplied with your card. If using your own cable, care must be taken to ensure that the orientations of pin 1 on the cable connectors are matched to pin 1 of the IO port and the DO10-RE5 port.

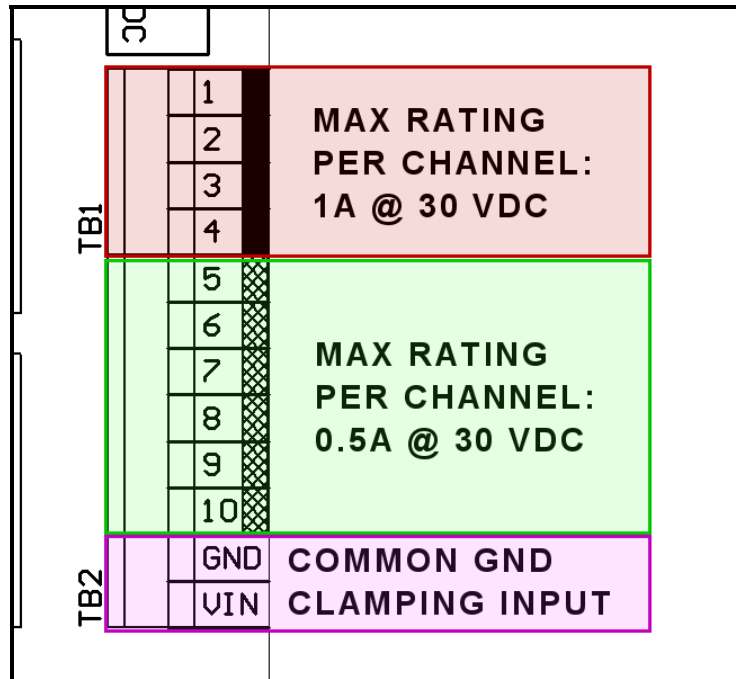


The DO10-RE5 card is a passive device and will not be automatically detected by your USB module. You will need to activate the port of your module and set it to Direct Output mode in the Device Manager utility in order to use the DO10-RE5 outputs.

Refer to the Device Manager utility help file for details on activating port features on your USB module.

Output Channels 1 to 10

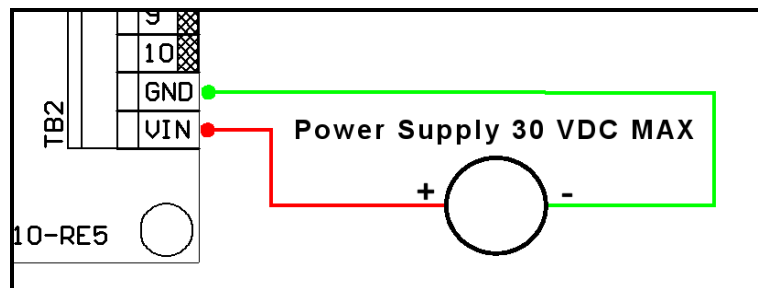
The DO10-RE5 power output card can provide up to 1A @ 30VDC max on channels 1 to 4 (TB1) and 0.5A @ 30VDC max on channels 5 to 10 on TB2.



In addition to isolating high voltage, high current loads from the IO port, clamping input on VIN provides additional protection when used with inductive loads.

Suppression Diodes Input

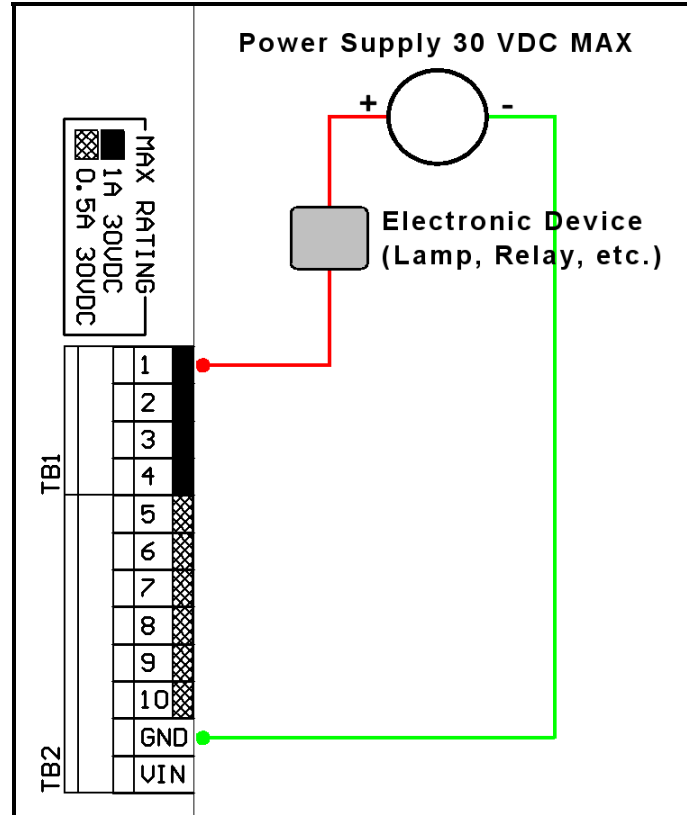
The DO10-RE5 card has been designed for driving loads with moderate inductive "kick-back". Through the use of suppression diodes, the VIN terminal on the DO10-RE5 card can be used to clamp any voltage spikes and provide a low impedance path for the current in the inductor to decay gradually.



IMPORTANT: Any external power supply used with the DO10-RE5 card on channels 1 to 10 must be tied to VIN and GND terminals on TB2 as illustrated above. Failure to do so may cause irreparable damage to the card and will void the product warranty.

Connecting Output Channels 1 to 10

The DO10-RE5 power output card provides 10 channels individually controlled by the IO port on the ElectronFlux module. All channels must share a common power supply not exceeding the max rating of 30 VDC. Electronic circuits can be connected as illustrated below.



Multiple electronic devices such as lamps can be connected to the same channel provided the total current does not exceed max ratings for that channel.

CAUTION: Startup conditions of the ElectronFlux module may cause the channel outputs to toggle momentarily until power is stabilized and the IO port pins are properly initialized.

Relay Output Channels 11 - 15

The DO10-RE5 card provides up to 5 SPDT Relay outputs capable of driving AC sources up to 7A @ 250 VAC or DC sources up to 10A @ 28VDC.

Absolute Max Rating

Resistive Load	7A 250 VAC 12A 125 VAC 10A 28 VDC
Inductive Load	3A 125 VAC

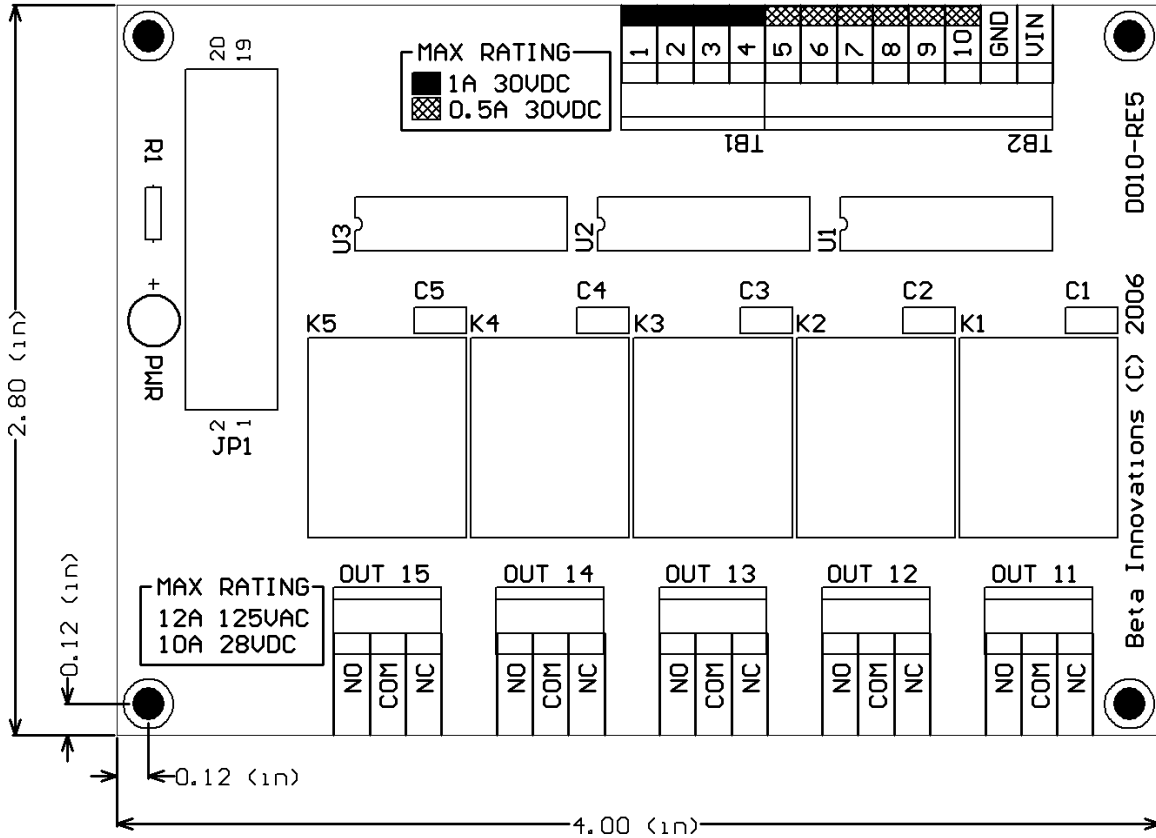
IMPORTANT: Exceeding max ratings will void the product warranty.

Equivalent SPDT Relay Circuit



CAUTION: Do not connect any AC sources to GND or to terminals 1 to 10 on TB1 and TB2. Startup conditions of the ElectronFlux module may cause the relay outputs to toggle momentarily until power is stabilized and the IO port pins are properly initialized.

Mechanical Specifications



Visit www.betainnovations.com for the availability of expansion modules and accessories.