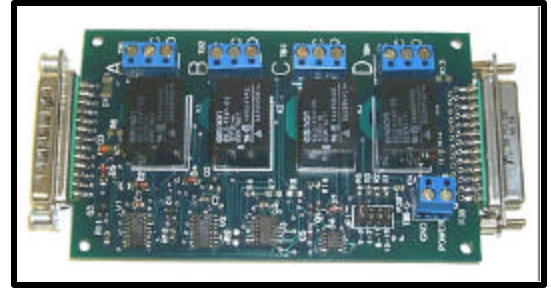


# Turn On/Off Devices with Your PC

## Model SDDRB4



### Introduction

The SDDRB4 is a modular board with four relays designed to work with B&B Models 232SDD16 and 485SDD16 digital I/O modules. Relay connections on the SDDRB4 are made through terminal blocks or solder pads. I/O lines pass through on DB25 connectors that interface directly with the B&B line of SDD16 modules. The SDDRB4 passes all 25 lines through except 2, and allows the user to select which group of channels the relays connect to. Multiple boards may be connected end to end, allowing the user to expand in multiples of 4 up to the full 16 outputs available on the SDD16. Measuring 5.6 X 2.75 inches (14 X 7 cm) this board is compatible with our SNAPTRACK mounting track. The SDDRB4 can be powered separately on terminal blocks, or on pins 7 and 8, allowing for use of a single power supply for the entire system. A single SDDRB4 requires 200mA at 10 to 16VDC, and 4 boards require 800mA at 12 to 16VDC for all 16 relays.

### Power Connections

The SDDRB4 can be powered either directly on board or by passing power through from another board. To power the board directly, connect power supply leads into the terminal blocks labeled “Power” and “GND” or to the solder pads directly in front of them. A single SDDRB4 requires 10 to 16 VDC at 200 mA maximum. When stacking multiple SDDRB4s to get more than 4 relays, each board may be powered individually or power from a single supply can be passed through to all the boards. To pass power through from previous boards, power the SDDRB4 closest to the SDD16. The voltage brought into the board less 0.4 V appears on pins 8 (power) and 7 (GND) of its female connector. The resultant voltage is then passed through the next SDDRB4 on pins 2 and 7 with a 0.4 V drop across each additional board.

### I/O Connections

Connections to the I/O lines on the SDD16 are made through DB25 connectors. The male connector plugs directly into the SDD16 and all lines are carried straight through to the female connector so another SDDRB4 can be connected to expand to more than 4 relays. JP1 is used to select which I/O channels the SDDRB4 connects to. Table 1 shows the channel each relay (A, B, C, or D) connects to depending on the position of JP1.

Table 1

JP1	A		B		C		D	
Position	Channel	Pin	Channel	Pin	Channel	Pin	Channel	Pin
0-3	0	9	1	10	2	11	3	12
4-7	4	13	5	25	6	24	7	23
8-11	8	22	9	21	10	19	11	18
12-15	12	17	13	16	14	15	15	14

### Using Multiple Boards

The SDDRB4 passes through all lines but 2 so that other devices can be connected to the channels. This means that multiple boards can be “stacked” to get the full set of I/O lines without making any channels inaccessible. Simply plug the female connector of Board 1 into the male connector of Board 2. Power is carried through from Board 1 to 2, or each may be powered separately. Up to 4 boards can be stacked in this manner to accommodate all 16 lines from the SDD16.

### Relay Connections

Normally Closed (NC), Normally Open (NO), and Common (C) relay connections are provided on terminal blocks. When the relay is not energized (digital 0) there is continuity between NC and C. When the relay is energized (digital 1) there is continuity between NO and C.

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## Specifications

Dimensions	5.6 X 2.8 inches (14.2 X 7 cm)
Power Requirements	
Single Board	10 to 16 VDC @ 200 mA max.
4 Boards	12 to 16 VDC @ 800 mA max.
Max Current Throughput	1 A
Relays	
Number of Channels	4
Contact Rating	10 A @ 120 VDC 8 A @ 30 VDC (resistive)
Max. Switching Capacity	1200 VA/240 W
Max. Operating Voltage	250 VAC/125 VDC
Max. Carrying Current	10 A (AC), 8 A (DC) (standard)
Relay Form	Form C, Single-Pole Double-Throw (SPDT)
Output Terminals	Normally Open (NO) , Normally Closed (NC)
Relay Life (mech.)	10 million operations minimum
Relay Life (load dependent)	100 thousand operations minimum
Operating Time	10 msec. max. (mean ~5.1msec.)
Environment	
Operating temperature	0° to 70° C
Storage Temperature	-20° to 70° C
Operating Humidity	5% to 95% non-condensing

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