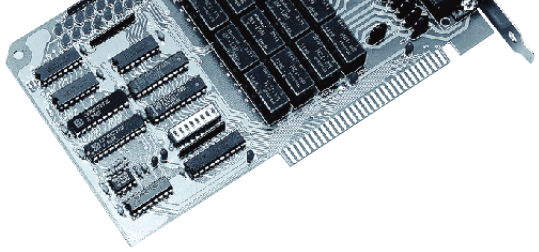

- Output status read back
- 16 LED indicator for each channel
- Connector: 37-pin D-type (ext. AR-B9007)
- Isolation: 2100VDC isolation acrosser open contacts
- 1400VDC isolation between coil and contacts
- For IBM PC/XT/AT personal computers and compatible
- Dimensions: 175mm x 108mm

Specifications

General

Number of Outputs	**12 Form A (SPST) and 4 Form C (SPDT) relays**
Max Switching Power	**Resistive load - AC 250VA, DC 120W, Inductive load - AC 125VA, DC 60W**
Max Switching Voltage	**250VAC, 220VDC**
Max Switching Current	**4A**
Contact Rating	**Resistive load - AC 125V, 1.0A or DC 30V, 3A, Inductive load - AC 125V, 0.6A or DC 30V, 2A**
Contact Resistance	**100 milli ohms maximum (Initial value)**
Operate Time	**8mS maximum at the rated voltage**
Release Time	**8mS maximum at the rated voltage**
Bounce Time	**8mS maximum**
Isolation	**Contact and coil - 1500Vrms, 2100VDC, Contact to contact - 1000Vrms, 1400VDC**
Life Expectancy	**100 million. (Ref. 10VDC, 10ma)**
Varistor Voltage	**140Vrms, 180VDC**
Varistor power	**0.2W**
Active Indicators	**16 LED**
I/O Address	**Base port switch selectable from 000H to 3FCH with increments of 4**
Power Consumption	**+5VDC@100mA max. (All relays On), +12VDC@300mA max. (All relays On)**
Dimensions	**175mm x 108mm**
Applications	**Control switching, Analog multiplexing, Motor starter control, Alarm control, Lighting control**

Registers

The AR-B2103 occupies 4 consecutive addresses in the PC I/O space of which only two actually used. The base or starting address is selected during the installation procedure.

The registers of the AR-B2103 are loca

Address	Output Register	Input Status
Base +0	Relay Port 1(write)	Relay Port 1(read)
Base +1	Relay Port 2(write)	Relay Port 2(read)
Base +2	Not Used	Not Used
Base +3	Not Used	Not Used

Registers

Note that all port are 8 bit (one byte) wide and require byte oriented write operations rather than work operations. All relays in a port are updated simultaneously. Writing a low (0) to a relay within a port deactivates the relay. Writing a high (1) to a relay activates it.

The registers of the AR-B2103 are located as follows:

BASE +							
D7	D6	D5	D4	D3	D2	D1	D0
CH8	CH7	CH6	CH5	CH4	CH3	CH2	CH1

BASE +							
D7	D6	D5	D4	D3	D2	D1	D0
CH16	CH15	CH14	CH13	CH12	CH11	CH10	CH9

When the output is energized, the status LED indicator will light up to indicate an active input.

Programming

No driver is supplied with the AR-B2103 since the program is very simple and can be accomplished most efficiently using direct I/O instructions, in whatever application language is used (i.e., Basic, C, Assembly, Pascal, etc.). For example, assume that one wishes to turn on relay channel 7. Also assume the AR-B2103 board has been set to base address 992(3E0 hex). To turn on relay channel 7, one simply writes 01000000 to base address 992. Likewise to turn on channel 10, 12 and 14 one writes 42 decimal (00101010 binary or 2A hex) to I/O address 993(3 E1 hex).The following example is the BASIC language but it can be easily been translated to other languages. Example: Assume the AR-B2103 is installed at base address 992(3E0 hex).

To turn on the channel 1 and 10, write as follows:

1000BASE_PORT = &H3E0: REM Base I/O addresses

1010 OUT BASE_PORT, 1: REM Turns channel 1 ON

1020 OUT BASE_PORT+1,2: REM Turns channel 10 ON

To control the desired relays but make no effect to other relays, write as follows:

2000 BASE_PORT = &H3E0 : REM Base I/O addresses

2010 PORT1 = (INP (BASE_PORT) OR1): REM Read back port 1 status and set bit of channel 1