



BBG-Relay Stackable Eight Channel Multiplexor

Description

The BBG-RELAY Eight Channel Multiplexor provides multiplexing capability of six analog or digital inputs or outputs. These 4 inch x 5 inch modules provide an eight-to-one or one-to-eight multiplex or connect together to provide a sixteen-to-two or two-to-sixteen multiplex. Multiplexing is controlled by one digital switch or parallel port. Applications include analog and digital multiplexing in switching networks or data acquisition systems.

The BBG-RELAY is designed to connect directly to the BBG-4000 Dual Universal Conversion Engine (DUCE) providing interfaces to synchro, resolver, and NEMA-0183 message formats using RS-232, RS-422, RS-423, RS-485, or MIL-STD-188C protocols.

Resistive Load Ratings:

Max switched power: 60 W or 125 VA
Max switched current: 2 A
Max switched voltage: 150 VDC or 300 VAC
Max carry current: 3 A

picture not available

Features

- EIGHT-TO-ONE OR ONE-TO-EIGHT MULTIPLEX OF SIX DATA LINES
- STACKABLE TO PROVIDE EIGHT-TO-ONE OR ONE-TO-EIGHT MULTIPLEX OF TWELVE DATA LINES
- DIGITAL SWITCH OR PARALLEL PORT CONTROL
- 60 WATT OR 125 VA
- 2 AMP AT 30 VDC LOAD
- 1 AMP AT 120 VAC LOAD



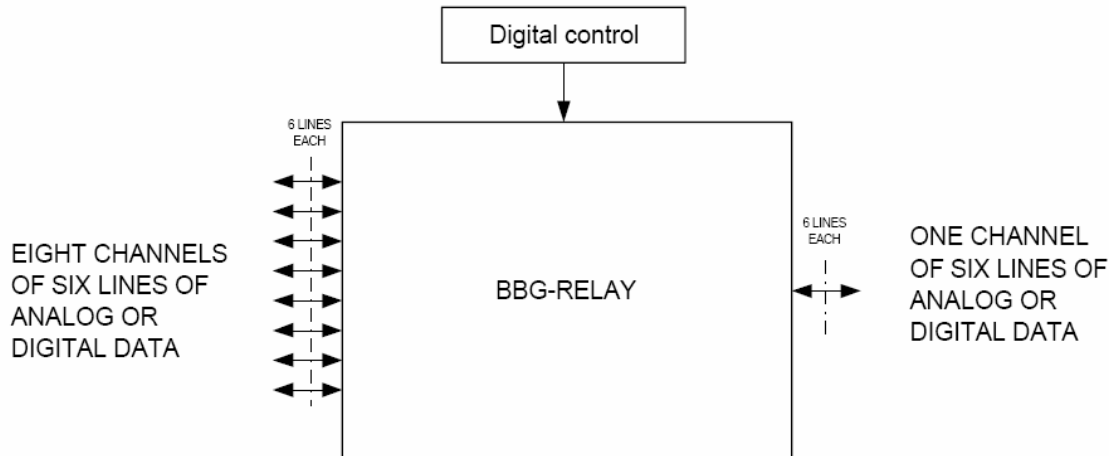
Chart

Figure 1. BBG-Relay Functional Diagram

Overview

The BBG-RELAY is a stand alone module which multiplexes eight channels of six signal line inputs or outputs. The BBG-RELAY provides multiplexing capability of analog or digital inputs or outputs. These 4 inch x 5 inch modules provide an eight-to-one or one-to-eight multiplex or connect together to provide a sixteen-to-two or two-to-sixteen multiplex. Multiplexing is controlled by one digital switch or parallel port. Applications include analog and digital multiplexing in switching networks or data acquisition systems.

The BBG-RELAY is designed to connect directly to the BBG-4000 Dual Universal Conversion Engine (DUCE) providing interfaces to synchro, resolver, and NEMA-0183 message formats using RS-232, RS-422, RS-423, RS-485, or MIL-STD-188C protocols.



1708 South Park Court • Chesapeake, VA 23320
Phone: (757) 366-9211 • Fax: (757) 366-9170
E-mail: sales@bbginc.com • Website: www.bbginc.com

Technical Specifications

BBG-RELAY SPECIFICATIONS		
PARAMETER	Units	Value
POWER SUPPLY	Volts	5
	Milliamps	250
Digital Control		
V(IH) Min	Volts	2
V(IL) Max	Volts	0.8
I(IH)	Micro Amps	120
I(IL)	Milliamps	-4.8
Resistive Load Rating		
Max Switch Power	Watts	60
	Volts Amps	125
Max Switched Current	Amps	2
Max Switched Voltage	Volts DC	150
	Volts AC	300
Max Carry Current	Amps	3
Rated Load:		
2 A at 30 VDC		
1 A at 120 VA		
Temperature Range		
Operating	C°	0 to +50
Storage	C°	-65 to +150
Physical Characteristics		
	Inches	4.0 x 5.0 x 1.2
	Centimeters	10.2 x 12.7 x 3.0

Table 1. BBG-SSBA-25 Specifications



1708 South Park Court • Chesapeake, VA 23320

Phone: (757) 366-9211 • Fax: (757) 366-9170

E-mail: sales@bbginc.com • Website: www.bbginc.com

INPUTS/OUTPUTS

Inputs and outputs are available on 26 pin and 50 pin IDC connectors. Each input/output channel contains six (6) signal lines that can be used for digital or analog data. The BBG-RELAY can be stacked together to provide sixteen (16) channels of six (6) digital or analog data signals or eight (8) channels of twelve (12) digital or analog signals.

CHANNEL SELECTION

Channels are selected using inputs D7 - D0 on connector J2 or J3. Channel selection uses a standard Binary Coded Decimal (BCD) format as follows:

BBG-RELAY CHANNEL SELECTION								
Channel	D7 - D0 Inputs							
0	X	X	X	X	X	0	0	0
1	X	X	X	X	X	0	0	1
2	X	X	X	X	X	0	1	0
3	X	X	X	X	X	0	1	1
4	X	X	X	X	X	1	0	0
5	X	1	X	X	X	1	0	1
6	X	0	X	X	X	1	1	0
7	X	0	X	X	X	1	1	1
1 = +5, 0 = GND, X = Don't Care								

Table 1. BBG-RELAY Configuration Switch



CONNECTOR LIST FOR BBG-RELAY**CONNECTOR: J1**

I/O CONNECTOR TYPE: 50 pin male header

CONNECTOR MATE: 50 pin female header

Pin Num.	Signal	Pin Num.	Signal
1	SPARE	26	SIGNAL
2	SPARE	27	I/O1_4 (INPUT/OUTPUT)
3	I/O6_7 (INPUT/OUTPUT)	28	I/O6_3 (INPUT/OUTPUT)
4	I/O5_7 (INPUT/OUTPUT)	29	I/O5_3 (INPUT/OUTPUT)
5	I/O4_7 (INPUT/OUTPUT)	30	I/O4_3 (INPUT/OUTPUT)
6	I/O3_7 (INPUT/OUTPUT)	31	I/O3_3 (INPUT/OUTPUT)
7	I/O2_7 (INPUT/OUTPUT)	32	I/O2_3 (INPUT/OUTPUT)
8	I/O1_7 (INPUT/OUTPUT)	33	I/O1_3 (INPUT/OUTPUT)
9	I/O6_6 (INPUT/OUTPUT)	34	I/O6_2 (INPUT/OUTPUT)
10	I/O5_6 (INPUT/OUTPUT)	35	I/O5_2 (INPUT/OUTPUT)
11	I/O4_6 (INPUT/OUTPUT)	36	I/O4_2 (INPUT/OUTPUT)
12	I/O3_6 (INPUT/OUTPUT)	37	I/O3_2 (INPUT/OUTPUT)
13	I/O2_6 (INPUT/OUTPUT)	38	I/O2_2 (INPUT/OUTPUT)
14	I/O1_6 (INPUT/OUTPUT)	39	I/O1_2 (INPUT/OUTPUT)
15	I/O6_5 (INPUT/OUTPUT)	40	I/O6_1 (INPUT/OUTPUT)
16	I/O5_5 (INPUT/OUTPUT)	41	I/O5_1 (INPUT/OUTPUT)
17	I/O4_5 (INPUT/OUTPUT)	42	I/O4_1 (INPUT/OUTPUT)
18	I/O3_5 (INPUT/OUTPUT)	43	I/O3_1 (INPUT/OUTPUT)
19	I/O2_5 (INPUT/OUTPUT)	44	I/O2_1 (INPUT/OUTPUT)
20	I/O1_5 (INPUT/OUTPUT)	45	I/O1_1 (INPUT/OUTPUT)
21	I/O6_4 (INPUT/OUTPUT)	46	I/O6_0 (INPUT/OUTPUT)
22	I/O5_4 (INPUT/OUTPUT)	47	I/O5_0 (INPUT/OUTPUT)
23	I/O4_4 (INPUT/OUTPUT)	48	I/O4_0 (INPUT/OUTPUT)
24	I/O3_4 (INPUT/OUTPUT)	49	I/O3_0 (INPUT/OUTPUT)
25	I/O2_4 (INPUT/OUTPUT)	50	I/O2_0 (INPUT/OUTPUT)



1708 South Park Court • Chesapeake, VA 23320

Phone: (757) 366-9211 • Fax: (757) 366-9170

E-mail: sales@bbginc.com • Website: www.bbginc.com

CONNECTOR: J2

I/O CONNECTOR TYPE: 26 pin male header

CONNECTOR MATE: 26 pin female header

Pin Num.	SIGNAL	Pin Num.	SIGNAL
1	LD0 (INPUT)	14	GND
2	LD1 (INPUT)	15	I/O6_A (INPUT/OUTPUT)
3	LD2 (INPUT)	16	I/O5_A (INPUT/OUTPUT)
4	LD3 (INPUT)	17	I/O4_A (INPUT/OUTPUT)
5	LD4 (INPUT)	18	I/O3_A (INPUT/OUTPUT)
6	LD5 (INPUT)	19	I/O2_A (INPUT/OUTPUT)
7	LD6 (INPUT)	20	I/O1_A (INPUT/OUTPUT)
8	LD7 (INPUT)	21	I/O6_B (INPUT/OUTPUT)
9	CS1 (INPUT)	22	I/O5_B (INPUT/OUTPUT)
10	CS2 (INPUT)	23	I/O4_B (INPUT/OUTPUT)
11	5 (INPUT)	24	I/O3_B (INPUT/OUTPUT)
12	5 (INPUT)	25	I/O2_B (INPUT/OUTPUT)
13	GND	26	I/O1_B (INPUT/OUTPUT)



1708 South Park Court • Chesapeake, VA 23320

Phone: (757) 366-9211 • Fax: (757) 366-9170

E-mail: sales@bbginc.com • Website: www.bbginc.com

CONNECTOR: J3

I/O CONNECTOR TYPE: 26 pin male header

CONNECTOR MATE: 26 pin female header

Pin Num.	SIGNAL	Pin Num.	SIGNAL
1	LD0 (INPUT)	14	GND
2	LD1 (INPUT)	15	I/O6_A (INPUT/OUTPUT)
3	LD2 (INPUT)	16	I/O5_A (INPUT/OUTPUT)
4	LD3 (INPUT)	17	I/O4_A (INPUT/OUTPUT)
5	LD4 (INPUT)	18	I/O3_A (INPUT/OUTPUT)
6	LD5 (INPUT)	19	I/O2_A (INPUT/OUTPUT)
7	LD6 (INPUT)	20	I/O1_A (INPUT/OUTPUT)
8	LD7 (INPUT)	21	I/O6_B (INPUT/OUTPUT)
9	CS1 (INPUT)	22	I/O5_B (INPUT/OUTPUT)
10	CS2 (INPUT)	23	I/O4_B (INPUT/OUTPUT)
11	5 (INPUT)	24	I/O3_B (INPUT/OUTPUT)
12	5 (INPUT)	25	I/O2_B (INPUT/OUTPUT)
13	GND	26	I/O1_B (INPUT/OUTPUT)



1708 South Park Court • Chesapeake, VA 23320

Phone: (757) 366-9211 • Fax: (757) 366-9170

E-mail: sales@bbginc.com • Website: www.bbginc.com