

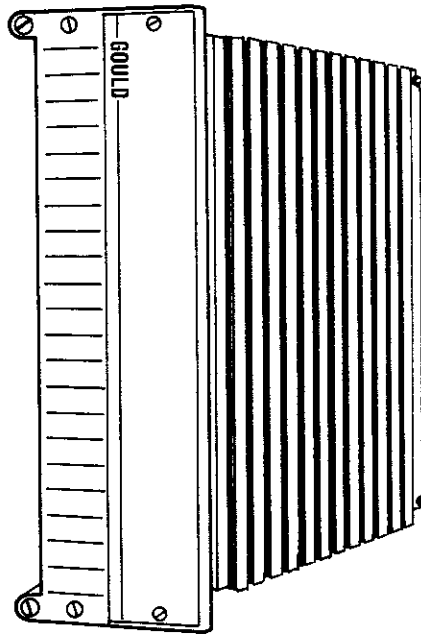
I/O MODULES

Type	Voltage	Series		
		200	500	800
Discrete/BCD Input	5 Vdc (TTL) 5-28 Vdc 9-56 Vdc	B237-501	B557-001 B531-001 B553-001 B559-001	B829-016
	10-60 Vdc 12 Vdc 12 Vdc (Intrinsic, Safe) 24 Vdc	B275-501 B273-001 B225-001 B233-501		B821-008 B825-016 B833-016 B827-032
	90-150 Vdc 18-30 Vac 36-60 Vac 115 Vac	B279-001 B271-001 B231-501 B247-501 B235-501 B245-001	B561-001 B565-001 B569-001 B551-001 B555-001	B803-008 B805-016
	220 Vac 230 Vac			B809-016
Discrete/BCD Output	5 Vdc (TTL) 9-56 Vdc	B236-501	B556-001 B552-001 B558-001	B828-016
	10-60 Vdc 24 Vdc	B248-501 B224-001 B232-501		B820-008 B824-016 B826-032 B832-016
	90-150 Vdc 10-60 Vac 115 Vac	B278-001 B230-501 B246-501	B560-001 B564-001 B550-001	B802-008 B804-016 B810-008
	220 Vac 230 Vac	B234-501 B244-101	B554-001	B808-016
Analog — Inputs	1-5 Vdc, 4-20 MADC	B243-105		B873-001 B875-001
	0-10 Vdc -10 to +10 Vdc +0 to 10 Vdc	B243-110 B243-110		B873-011 B875-011
Analog — Outputs	0-5 Vdc 0-10 Vdc 1-5 Vdc 4-20 MADC	B260-005 B260-010 B260-010 B262-001		B872-002
Hi Speed Counter		B239-001		B883-001
Reed Relay	115 Vac N.O. 220 Vac N.O.	B266-501 B268-001	B592-001	B840-008
	115 Vac N.C. 220 Vac N.C.	B274-001 B276-001	B596-001	B842-008
Relay	120/240 Vac, 30 Vdc N.O. 120/240 Vac, 30 Vdc N.C.			B814-001 B814-002
Thermocouple		B281		J871
RTD		B283		
Proximity Switch			B583-001	
Absolute Encoder				
Analog Mux		B258-101		B846-001
Register Mux Out			B570	
Register Mux In			B571	
Register Output	4 BCD or Binary 8 BCD or Binary 8 BCD or Binary (Channel Select)			B862-001 B864-001 B868-001
Register Input	4 BCD or Binary 8 BCD or Binary 8 BCD or Binary (Channel Select)			B863-001 B865-001 B869-001

200 SERIES

Features

- Each output individually fused
- I/O circuits optically isolated from logic
- I/O status indicators
- Blown fuse indicators
- Active indicator
- Transient protection
- Remove and replace without disturbance to field wiring
- UL approved
- Operates from 0 to 60°C
- Operates from 0 to 95% relative humidity (non-condensing)



B230 I/O MODULE

General Description

An I/O status indicator and blown fuse indicator accompanies each output circuit. When a circuit is ON or a fuse has blown, the appropriate indicator lights. All output circuits are isolated from the controller's logic via optical couplers. Self-contained snubber networks and voltage limiting varistors suppress line voltage spikes and prevent false triggering. This allows the module to withstand severe voltage transients which often occur in an industrial environment.

Error-free communication between the controller and the module is indicated by a module active indicator. This indicator lights when error-free, output status information is received by the controller's logic. If error-free communication fails, the indicator will go out and all outputs will shut off after a 250 msec delay.

200-SERIES I/O EQUIPMENT

Discrete/BCD Input Modules

24 Vdc, 16 inputs (True High)	B225-001
115 Vac, 16 inputs (4 per common)	B231-501
24 Vdc, 16 inputs (4 per common)	B233-501
220 Vac, 16 inputs (4 per common)	B235-501
5V TTL, 16 inputs (4 per common)	B237-501
220 Vac, 8 inputs (separate commons)	B245-001
115 Vac, 8 inputs (separate commons)	B247-501
36-60 Vac, 16 inputs (4 per common)	B271-001
12 Vdc, 16 intrinsically safe inputs (4 per common), requires B242 housing. Approved by S.E.V. (Switzerland) and Factory Mutual (USA)	B273-001
10-60 Vdc, 16 inputs (4 per common)	B275-501
18-30 Vac, 16 inputs (4 per common)	B279-001

Discrete/BCD Output Modules

24 Vdc, 16 outputs (True High)	B224-001
115 Vac, 16 outputs (4 per common)	B230-501
24 Vdc, 16 outputs (4 per common)	B232-501
220 Vac, 16 outputs (4 per common)	B234-501
5V TTL, 16 outputs (4 per common)	B236-501
220 Vac, 8 outputs (separate commons)	B244-101
115 Vac, 8 outputs (separate commons)	B246-501
10-60 Vdc, 16 outputs (4 per common)	B248-501
Reed Relay, 8 N.O. outputs (115 Vac coils)	B266-501
Reed Relay, 8 N.O. outputs (220 Vac coils)	B268-001
Reed Relay, 8 N.C. outputs (115 Vac coils)	B274-001
Reed Relay, 8 N.C. outputs (220 Vac coils)	B276-001
20-60 Vac, 16 outputs (4 per common)	B278-001

Analog Input Modules

A/D, 1 to 5 V or 4 to 20 ma, 4 inputs	B243-105
A/D, 0 to 10 V or -10 to +10 V, 4 inputs	B243-110

Analog Output Modules

D/A, 0 to 5 V, 4 outputs	B260-005
D/A, 0 to 10 V, 4 outputs	B260-010
D/A, 4 to 20 ma, 4 outputs	B262-001

Special Purpose Modules

0-30 kHz Pulse Counter, 2 inputs	B239-001
Analog Multiplexer. Operates as a single register output that multiplexes one of 16 analog signals into one input of a B243 Analog Input Module.	B258-101

200 Series Housing

Standard Housing. Accommodates 4 I/O Modules	B240-000
Standard Housing. Accommodates 2 I/O Modules	B241-000
Intrinsically safe housing. Accommodates four B273 Input Modules	B242-004

POWER SUPPLY LOADING AND ADDRESS PIN ASSIGNMENT WORKSHEET FOR 200 SERIES I/O

USED	
IN	OUT
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8

MODULE	TYPE	LOAD
B230	115 VAC OUTPUT	2
B231	115 VAC INPUT	1
B232	24 VDC OUTPUT	2
B233	24 VDC INPUT	1
B234	220 VAC OUTPUT	2
B235	220 VAC INPUT	1
B236	5 VDC TTL OUTPUT	2
B237	5 VDC TTL INPUT	1
B238	24 VDC @ 2½ amp OUT	2
B239	2x HI-SPEED CTR	3
B243	ANALOG INPUT	2
B244	220 VAC OUT ISO	2
B245	220 VAC IN ISO	1
B246	115 VAC OUT ISO	2
B247	115 VAC IN ISO	1
B248	10-60 VDC OUT	2
B258	ANALOG MUX.	2
B260	ANALOG OUT: VOLTS	2
B262	4-20mA OUTPUT	2
B266	REED RELAY OUT	2
B270	48 VAC OUTPUT	2
B271	48 VAC INPUT	1
B275	10-60 VDC INPUT	1
J340	I/O COMM	1
J342	I/O COMM w/SWITCH	2
J540	500 I/O ADAPTER	3
J540 + 1	CHANNEL I/O	13
I425	REMOTE DRIVER	5

CHANNEL #

B _____	1	B _____	1	B _____	1	B _____	1	B _____	1
	2		2		2		2		2
	3		3		3		3		3
	4		4		4		4		4
	5		5		5		5		5
LOAD	6	LOAD	6	LOAD	6	LOAD	6	LOAD	6
	7		7		7		7		7
	8		8		8		8		8
B _____	1	B _____	1	B _____	1	B _____	1	B _____	1
	2		2		2		2		2
	3		3		3		3		3
	4		4		4		4		4
	5		5		5		5		5
LOAD	6	LOAD	6	LOAD	6	LOAD	6	LOAD	6
	7		7		7		7		7
	8		8		8		8		8
B _____	1	B _____	1	B _____	1	B _____	1	B _____	1
	2		2		2		2		2
	3		3		3		3		3
	4		4		4		4		4
	5		5		5		5		5
LOAD	6	LOAD	6	LOAD	6	LOAD	6	LOAD	6
	7		7		7		7		7
	8		8		8		8		8
B _____	1	B _____	1	B _____	1	B _____	1	B _____	1
	2		2		2		2		2
	3		3		3		3		3
	4		4		4		4		4
	5		5		5		5		5
LOAD	6	LOAD	6	LOAD	6	LOAD	6	LOAD	6
	7		7		7		7		7
	8		8		8		8		8

INDEX PIN UTILIZATION			
	# IN	# OUT	ASSIGN TO:*
B239	2	2	ODD PINS
B243	4	—	1 OR 5
B258	—	1	ANY
B260	—	4	1 OR 5
B263	—	4	1 OR 5

OTHER ANY

TOTAL LOAD

USING ANY OTHER PIN ADDRESS WILL NOT WORK AT ALL — THE ACTIVE LIGHT WILL NOT COME ON.

POWER AVAILABLE:
 MAIN POWER SUPPLY = 54 UNITS OF LOAD
 AUX. POWER SUPPLIES = 27 UNITS OF LOAD
 P453 POWER SUPPLY = 54 UNITS OF LOAD

500 SERIES

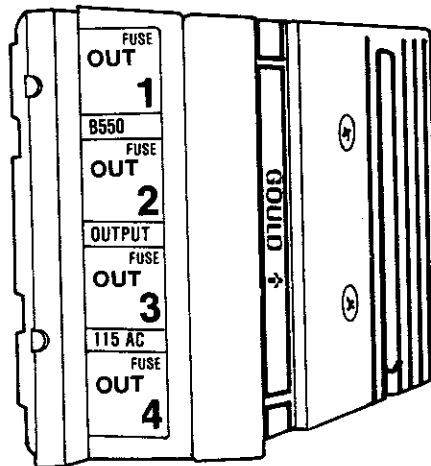
Features

- Four circuits per module
- Circuits optically isolated from logic
- Output status indicators
- Blown fuse indicators
- Simple fuse replacement
- Transient protection
- Easy installation
- Removed and replaced without disturbance to field wiring
- May be mounted in full length, 8 module housing (B545) or half-high, 4 module housing (B546)
- UL rated and approved
- Operates from 0 to 60° C
- Operates from 0 to 95% relative humidity (non-condensing)

General Description

An I/O status indicator and blown fuse indicator lamp accompanies each output circuit. The appropriate indicator lights when either the circuit is ON, or a fuse has blown. All output circuits are optically isolated from the controller's logic.

This prevents damage resulting from severe voltage transients prevalent in an industrial environment. Self-contained damping networks and voltage limiting varistors suppress line voltage spikes and prevent false triggering.



B550 I/O MODULE

I/O Housings

The 500 Series modules are installed into a B545 or B546 I/O housing. The B545 housing fits up to eight modules. The housings are normally connected to configure a complete channel of I/O. 128 inputs and 128 outputs. One channel contains thirty-two input modules and thirty-two output modules. A J540 adapter is used to interface the 500 Series I/O with the 584 Controller. The J540 is required for each standard 200 Series I/O channel.

Since 128 inputs can be supplied by 32 input modules and 128 outputs by 32 output modules, a complete channel of 500 Series I/O consists of 64 modules. The I/O housings are connected across their tops via a metallic duct.

500-SERIES I/O EQUIPMENT

Discrete/BCD Input Modules (Requires B545 or B546 Housings)

5-28 Vdc, 4 latched inputs (2 per common)	B531-001
115 Vac, 4 inputs (separate commons)	B551-001
9-56 Vdc, Current Source (True High), 4 inputs (2 per common)	B553-001
220 Vac, 4 inputs (separate commons)	B555-001
5 V TTL, 4 inputs (2 per common)	B557-001
9-56 Vdc, Current Sink (True Low), 4 inputs (2 per common)	B559-001
90-150 Vdc, 4 inputs (separate commons)	B561-001
18-30 Vac, 4 inputs (separate commons)	B565-001
36-60 Vac, 4 inputs (separate commons)	B569-001
Proximity Switch, 8 intrinsically safe, latched inputs (2 per common). Requires B547 or B548 housing.	B583-001

Discrete/BCD Output Modules (Requires B545 or B546 Housings)

115 Vac, 4 outputs (2 per common)	B550-001
9-56 Vdc, Current Source (True High), 4 outputs (2 per common)	B552-001
220 Vac, 4 outputs (2 per common)	B554-001
5 V TTL, 4 outputs (2 per common)	B556-001
9-56 Vdc, Current Sink (True Low), 4 outputs (2 per common)	B558-001
90-150 Vdc, 4 outputs (separate commons)	B560-001
20-60 Vac, 4 outputs (2 per common)	B564-001
Reed Relay, 4 outputs N.O. (115 Vac coils)	B592-001
Reed Relay, 4 outputs N.C. (115 Vac coils)	B596-001

Housing and Ducts

Standard Discrete Housing. Accommodates 8 I/O Modules.	B545-000
Standard Discrete Housing. Accommodates 4 I/O Modules.	B546-000
Standard I/O duct. Used to attach I/O housings to the right of a J540 Adapter.	5540-
2 housings	-002
3 housings	-003
4 housings	-004
6 housings	-006
8 housings	-008
10 housings	-010

800 SERIES I/O MODULES

Features

- Compact size
- Front accessible 3AG fuses
- Integral module handle
- Module "personality code" readable by 884 mainframe
- 2 amps/point (12 amps/module)
- Optical isolation
- Zero-cross firing
- Built-in noise suppression
- Individual module watchdog timers
- Field side status indicators
- Group blown fuse indicators
- "Module active" indicators
- Color-coded stripe
- Rugged metal housing
- Remove and replace without disturbing field wiring
- Output modules have even model number prefixes (B802-XXX) and input modules have odd model number prefixes (B803-XXX)

General Description

Each I/O module electrically connects to the module housing by way of the bull pin, card edge, and terminal block connectors. Two retaining screws secure the I/O module to the housing.

The equipment being controlled connects to the terminal block connector located on the housing. This connection creates a communication link between the 800 series I/O module and the equipment being controlled.

The I/O module card edge connects to the ourbus connector located on the housing's back plane. This connection allows the I/O modules to communicate with any 884 system components connected to the ourbus communication network.

800-SERIES I/O MODULES

Discrete Input Modules

115 Vac, 8 inputs (separate commons)	B803-008
115 Vac, 16 inputs (8 per common)	B805-016
230 Vac, 16 inputs (8 per common)	B809-016
10-60 Vdc, (True High), 8 inputs (2 per common)	B821-008
24 Vdc, (True High), 8 inputs (2 per common)	B825-016
24 Vdc, (True High), 16 inputs (16 per common)	B827-032
5 V TTL, 16 inputs	B829-016
24 Vdc, (True Low), 16 inputs (16 per common)	B833-016

Discrete Output Modules

115 Vac, 8 outputs (2 per common)	B802-008
115 Vac, 16 outputs (8 per common)	B804-016
230 Vac, 16 outputs (8 per common)	B808-016
115 Vac, 8 isolated outputs (separate commons)	B810-008
Dry Contact Relay, 8 N.O. outputs (120/240 Vac, 30 Vdc Max.)	B814-001
Dry Contact Relay, 8 N.O. outputs (120/240, 30 Vdc Max.)	B814-002
10-60 Vdc (True High), 8 outputs (2 per common)	B820-008
24 Vdc, (True High), 16 outputs (16 per common)	B824-016
24 Vdc, (True High), 32 outputs (32 per common)	B826-032
5 V TTL, 16 outputs	B828-016
24 Vdc, (True Low), 16 outputs (16 per common)	B832-016
Reed Relay, 8 N.O. outputs (115 Vac)	B840-008
Reed Relay, 8 N.C. outputs (115 Vac)	B842-008

Analog Input Modules

A/D, Analog Multiplexer, 16 channel	B846-001
A/D, 1 to 5 V or 4 to 20 mA, 4 inputs	B873-001
A/D, ± 0 to 10 V, 4 inputs	B873-011
A/D, 1 to 5 V or 4 to 20 mA, 8 inputs	B875-001
A/D, ± 0 to 10 V, 8 inputs	B875-011

Analog Output Modules

D/A, 4 to 20 mA, 4 outputs	B872-002
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Register Output Modules

4 BCD or binary output channels	B862-001
8 BCD or binary output channels	B864-001
8 BCD or binary outputs (channel select)	B868-001

Register Input Modules

4 BCD or binary input channels	B863-001
8 BCD or binary input channels	B865-001
8 BCD or binary inputs (channel select)	B869-001

800-SERIES I/O MODULES (Cont.)

Special Purpose Modules

High-speed counter module (2 outputs) B883-001

Housings

Module Housing

19-inch wide module housing for 884 Controller, power supply, I/O modules, and controller options. Suitable for 19-inch EIA rack or rear-panel mounting. Specify configuration. H819-

Primary housing for controller, power supply, I/O modules, and/or controller options. (ASCII, Remote I/O Driver, etc.) -007

Primary housing for controller, power, supply, and 4 I/O modules. -003

Secondary housing for 7 I/O modules only. -000

Module Housing

27-inch wide Module Housing for 884 Controller, power supply, I/O modules, and controller options. Suitable for rear panel mounting. Specify configuration. H827-

Primary housing for controller, power supply, I/O modules, and controller options. (ASCII, Remote I/O Driver, etc.) -007

Primary housing for controller, power supply, and 8 I/O modules. -003

Secondary housing for 11 I/O modules only. -000

Cables

Signal Cable (Housing-to-Housing). Specify length. W801-

1-foot	-001
6-foot	-006
12-foot	-012

Power Cable (Housing-to-Housing). Specify length. W802-

1-foot	-001
6-foot	-006
12-foot	-012

884 Auxiliary Power Cable. Specify length. W804-

1.5-foot	-002
5-foot	-006
12-foot	-012

I/O MODULES

This section contains data sheets for all I/O modules which are compatible with the 584. The data sheets are arranged in numerical order, starting with 200 series and proceeding thru 500, and 800 series modules.

Each data sheet typically contains the following information:

- Photo of unit.
- A brief description of the product's functional capabilities.
- Installation instructions, including any switch settings, calibrations, cabling and external power requirements.
- Troubleshooting.
- Bullpin location drawing (800 series I/O only).
- Simplified schematic.
- Diagnostic indicators.
- Terminal numbering and connections.
- Specifications.
- Operating instructions and sample networks as necessary.
- How to get technical assistance if required.