

VersaMax 12/24VDC 0.5Amp Positive Logic Output Module

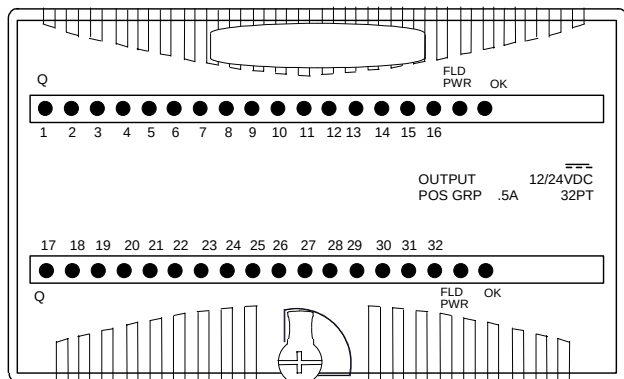
October 2008

GFK-2537

Discrete output modules IC200MDL740 and BXI00D1624 provide one group of 16 discrete outputs.

Discrete output modules IC200MDL750 (shown below) and BXI00D3224 provide two groups of 16 discrete outputs.

The outputs are positive or sourcing type outputs. They switch the loads to the positive side of the DC supply and thus supply current to the loads.



Note: 12V output functionality requires module version -B or higher.

An external DC power supply must be provided to switch power to the loads.

Intelligent processing for this module is performed by the CPU or NIU.

LED Indicators

Individual green LEDs indicate the on/off state of the output points. Operation of these LEDs is dependent on field power but independent of load conditions.

The green FLD PWR LED is on when field power is applied to the module.

The green OK LED is on when backplane power is present to the module.

Preinstallation Check

Carefully inspect all shipping containers for damage. If any equipment is damaged, notify the delivery service immediately. Save the damaged shipping container for inspection by the delivery service. After unpacking the equipment, record all serial numbers. Save the shipping containers and packing material in case it is necessary to transport or ship any part of the system.

Product Revision History

Rev	Date	Description
IC200MDL740F / BXI00D1624F IC200MDL750F / BXI00D3224F	October 2008	Updated Power Supply OK signal circuitry.
IC200MDL740E / BXI00D1624E IC200MDL750E / BXI00D3224E	April 2005	Improvement to latching mechanism
IC200MDL740D IC200MDL750D	April 2004	Changed to V0 plastic for module housing.
IC200MDL740C IC200MDL750C	January 2004	ATEX approval for Group 2 Category 3 applications.
BXI00D1624D BXI00D3224D	January 2004	Changed to V0 plastic for module housing. ATEX approval for Group 2 Category 3 applications.
IC200MDL740B / BXI00D1624B IC200MDL750B / BXI00D3224B	November 1999	Added output operation at 12VDC, and negative logic inputs.
IC200MDL740A BXI00D1624A IC200MDL750A BXI00D3224A	September 1998	Initial product release.

Module Characteristics

Points	IC200MDL740, BXI00D1624: 1 group of 16 outputs IC200MDL750, BXI00D3224: 2 groups of 16 outputs
Module ID	IC200MDL740, BXI00D1624: FFFF8080 IC200MDL750, BXI00D3224: 80808080
Isolation:	User input to logic (optical) and frame ground: 250VAC continuous; 1500VAC for 1 minute IC200MDL740, BXI00D1624: Group to group: not applicable IC200MDL750, BXI00D3224: Group to group: 250VAC continuous; 1500VAC for 1 minute Point to point: none
LED indicators	One LED per point shows individual point on/off state FLD PWR LED indicates field power is present OK LED indicates backplane power is present
Backplane current consumption	IC200MDL740, BXI00D1624: 5V output: 45mA maximum IC200MDL750, BXI00D3224: 5V output: 90mA maximum
External power supply	+10.2 to +30VDC, +12/24VDC nominal
Thermal derating	See diagrams

Output Characteristics

Output voltage	+10.2 to +30VDC, +12/24VDC nominal
Output voltage drop	0.3V maximum
Load current	0.5A at 30VDC maximum (resistive) 2.0A maximum for 100ms inrush
Output leakage current	0.5mA at 30VDC maximum
On response time Off response time	0.2ms, maximum 1.0ms maximum
Protection	No internal fuses

Installation in Hazardous Locations

- EQUIPMENT LABELED WITH REFERENCE TO CLASS I, GROUPS A, B, C & D, DIV. 2 HAZARDOUS LOCATIONS IS SUITABLE FOR USE IN CLASS I, DIVISION 2, GROUPS A, B, C, D OR NON-HAZARDOUS LOCATIONS ONLY
- WARNING - EXPLOSION HAZARD - SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2;
- WARNING - EXPLOSION HAZARD - WHEN IN HAZARDOUS LOCATIONS, TURN OFF POWER BEFORE REPLACING OR WIRING MODULES; AND
- WARNING - EXPLOSION HAZARD - DO NOT DISCONNECT EQUIPMENT UNLESS POWER HAS BEEN SWITCHED OFF OR THE AREA IS KNOWN TO BE NONHAZARDOUS.

Operating Note

If hot insertion of a module is done improperly, the operation of other modules on the same backplane may be disrupted. See *Installing a Module on a Carrier* in the *VersaMax Modules Manual*, GFK-1504.

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Field Wiring Terminals

Terminal	Connection	Terminal	Connection
A1	Output 1	B1	Output 17 *
A2	Output 2	B2	Output 18 *
A3	Output 3	B3	Output 19 *
A4	Output 4	B4	Output 20 *
A5	Output 5	B5	Output 21 *
A6	Output 6	B6	Output 22 *
A7	Output 7	B7	Output 23 *
A8	Output 8	B8	Output 24 *
A9	Output 9	B9	Output 25 *
A10	Output 10	B10	Output 26 *
A11	Output 11	B11	Output 27 *
A12	Output 12	B12	Output 28 *
A13	Output 13	B13	Output 29 *
A14	Output 14	B14	Output 30 *
A15	Output 15	B15	Output 31 *
A16	Output 16	B16	Output 32 *
A17	DC -	B17	DC - *
A18	DC +	B18	DC + *

* Inputs for 32-point modules only.

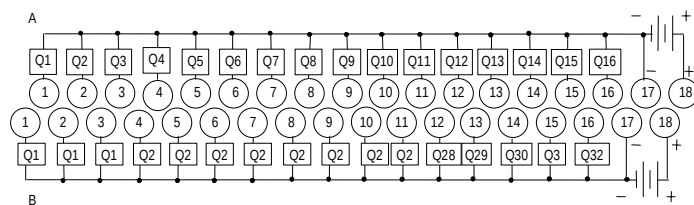
Each group of 16 outputs has a DC+ and a DC- terminal.

When wiring outputs to inductive loads, use of external suppression circuits is recommended. See chapter 2, "Installing Wiring for I/O Devices-Wiring to Inductive Loads" in the *VersaMax I/O System Manual*, GFK-1504, for more information.

For modules IC200MDL740 and BXI00D1624, if additional bussed terminals are needed, the B terminals can be made available by using a shorting bar. The shorting bar has a maximum current-carrying capacity of 2A per point. See chapter 2 of the *VersaMax I/O System Manual*, for additional information about the shorting bar.

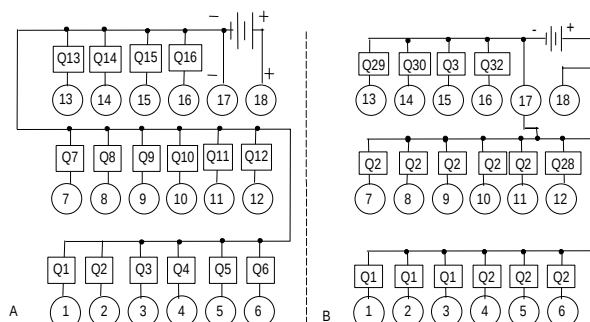
Wiring Connections for Carriers with Two Rows of Terminals

Row B connections are for 32-point modules only.



Wiring Connections for Carriers with Three Rows of Terminals

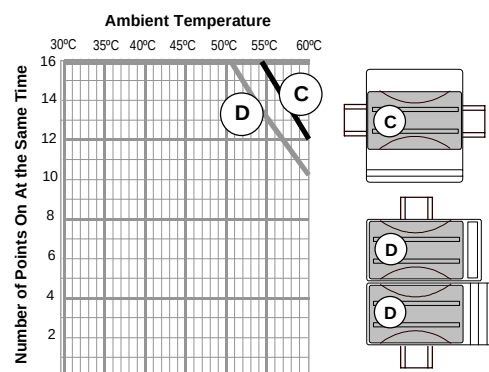
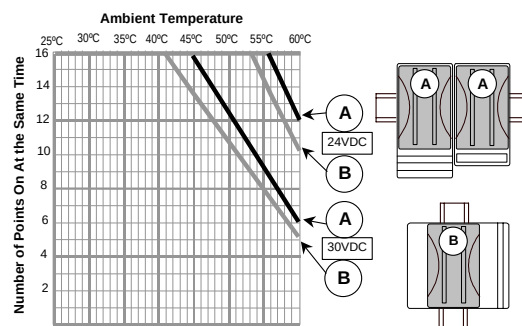
Side B connections are for 32-point modules only.



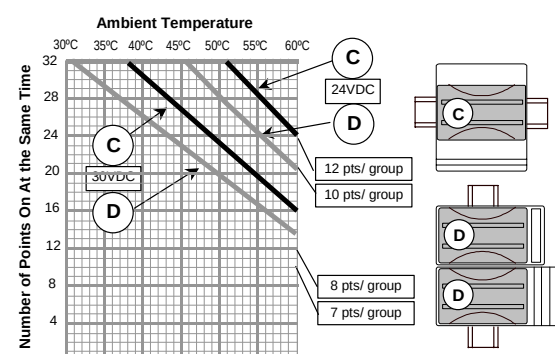
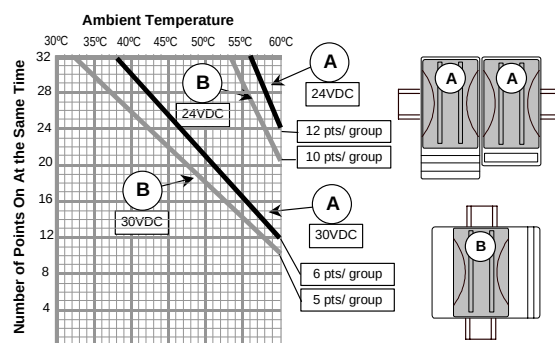
Thermal Derating

The number of points that can be on at the same time depends on the ambient temperature, the external voltage, and the orientation of the module and DIN rail. The charts below show example thermal deratings for the modules at 24VDC and 30VDC with the maximum output current per point.

Thermal Derating Charts for Modules IC200MDL740, BXI00D1624



Thermal Derating Charts for Modules IC200MDL750, BXI00D3224



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