MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

GE VERSAMAX

IC200MDL744

32-POINT NEGATIVE-LOGIC DC OUTPUT MODULE

Used with the applicable VersaMax discrete I/O configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: GE official manufacturer documentation

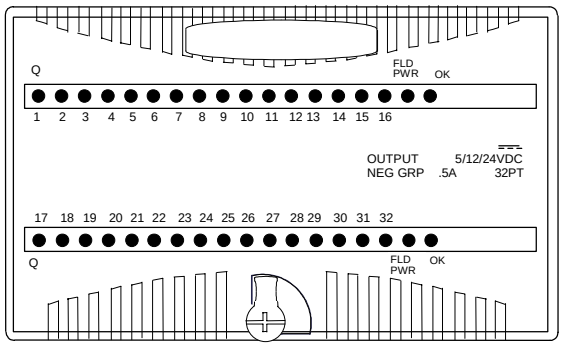
VersaMax 5/12/24VDC 0.5Amp Negative Logic Output Module

October 2008 GFK-2536

Discrete output modules IC200MDL743 and BXIOODN1624 provide one group of 16 discrete outputs.

Discrete output modules IC200MDL744 (shown below) and BXIOODN3224 provide two groups of 16 discrete outputs.

The outputs are negative or sinking type outputs. They switch the loads to the negative (return) side of the DC supply and thus receive current from the loads.



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. The module receives 32 bits of discrete output data.

LED Indicators

Individual green LEDs indicate the on/off state of the output points. The LEDs are powered from the backplane. LED operation is dependent on the application of valid 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.

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.

Module Characteristics

Points	IC200MDL743, BXIOODN1624: 1 group of 16 outputs IC200MDL744, BXIOODN3224: 2 groups of 16 outputs
Module ID	IC200MDL742, BXIOODN1624: FFFF8080 IC200MDL744, BXIOODN3224: 80808080
Isolation:	User input to logic (optical) and frame ground: 250VAC continuous; 1500VAC for 1 minute
	IC200MDL742, BXIOODN1624: Group to group: not applicable
	IC200MDL744, BXIOODN3224: Group to group: 250VAC continuous; 1500VAC for 1 minute
	Point to point: none
LED indicators	One green 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	IC200MDL742, BXIOODN1624: 5V output: 70mA maximum IC200MDL744, BXIOODN3224: 5V output: 140mA maximum
External power supply	5VDC-TTL mode: +4.75 to +5.25VDC, +5VDC nominal 12/24VDC mode: +10.2 to +30VDC, +12/24VDC nominal
Thermal derating	IC200MDL743, BXIOODN1624: none IC200MDL744, BXIOODN3224: See diagrams

Output Characteristics

Output voltage	5VDC-TTL mode: +4.75 to +5.25VDC, +5VDC nominal 12/24VDC mode: +10.2 to +30VDC, +12/24VDC nominal
Output voltage drop	5VDC-TTL mode: 0.4V maximum 12/24VDC mode: 0.3V maximum
Load current	5VDC-TTL mode: 25mA maximum 12/24VDC mode: 0.5A at 30VDC maximum (resistive) 2.0A inrush maximum for 100ms
Output leakage current	0.5mA at 30VDC maximum
On response time Off response time	0.2ms maximum 1.0ms maximum
Protection	No internal fuses

Product Revision History

Rev	Date	Description
IC200MDL743E BXIOODN1624E IC200MDL744E BXIOODN3224E	October 2008	Updated Power Supply OK signal circuitry.
IC200MDL743D BXIOODN1624D IC200MDL744D BXIOODN3224D	April 2005	Improvement to latching mechanism
IC200MDL743C IC200MDL744C	April 2004	Changed to V0 plastic for module housing.
BXIOODN1624C BXIOODN3224C	January 2004	Changed to V0 plastic for module housing. ATEX approval for Group 2 Category 3 applications.
IC200MDL743B IC200MDL744B	January 2004	ATEX approval for Group 2 Category 3 applications.
IC200MDL743A BXIOODN1624A IC200MDL744A BXIOODN3224A	September 2000	Initial product release.

VersaMax 5/12/24VDC 0.5Amp Negative Logic Output Module

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.

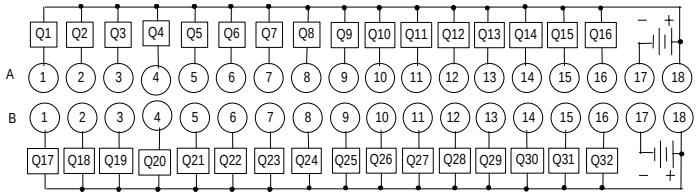
Each group of 16 outputs has a DC+ and a DC- terminal.

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 IC200MDL741 and BXIOODP1624, 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.

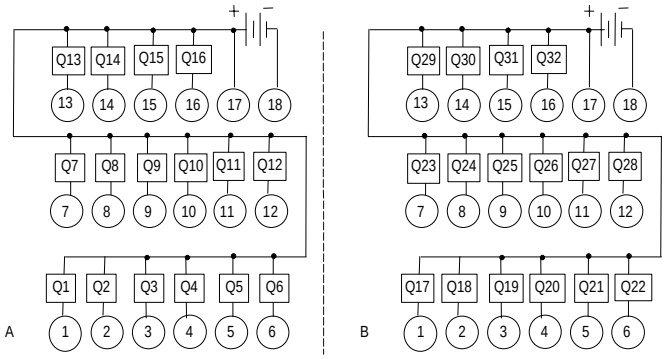
Wiring Connections for Carriers with Two Rows of Terminals

Row B connections are for 32-point modules only.



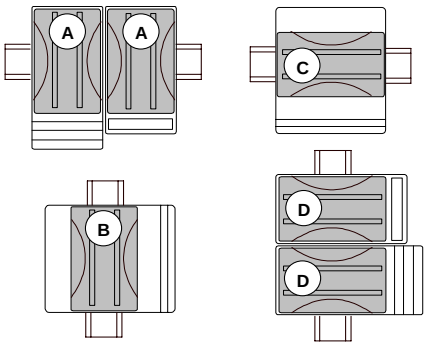
Wiring Connections for Carriers with Three Rows of Terminals

Side B connections are for 32-point modules only.



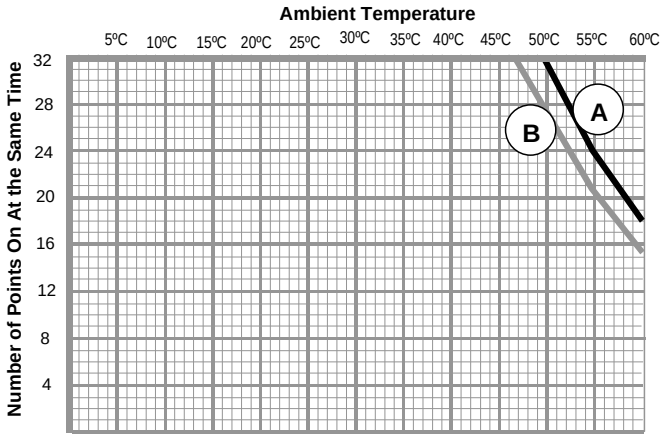
Thermal Derating

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.

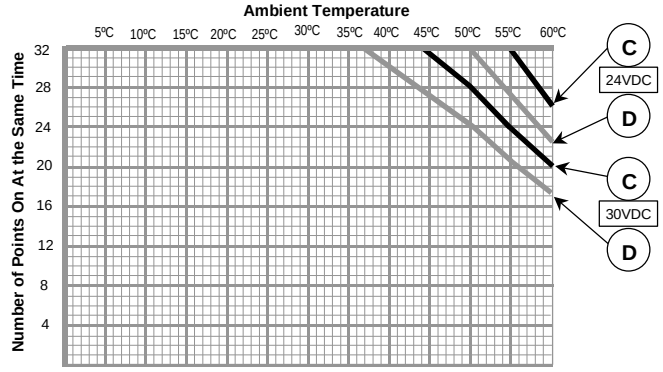


Thermal Derating Charts for Modules IC200MDL744, BXIOODN3224

No derating at 24VDC with modules mounted vertically. Derating at 30VDC for modules mounted vertically is shown below.



Deratings for modules mounted horizontally at 24VAC and 30VDC shown below.



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.