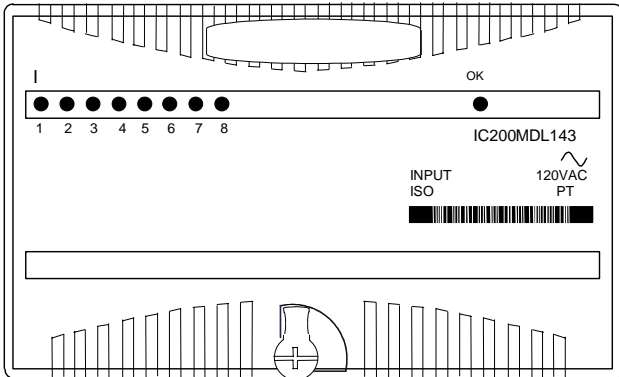# VersaMax 120VAC Isolated Input Modules

Product Description

Discrete Input Modules IC200MDL143 (shown below) and BXIOIAI8120 provide 8 isolated discrete inputs.

Discrete input modules IC200MDL243 and BXIOIAI16120 provide 16 isolated input points.

Module inputs are positive logic or sourcing-type inputs; they receive current from AC input devices and return the current on the common. Each input has its own return.

Power for module operation comes from the backplane.

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

LED Indicators

Individual green LEDs indicate the on/off state of each input point.

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	IC200MDL143, BXIOIAI8120: 8 Isolated inputs
	IC200MDL243, BXIOIAI16120: 16 Isolated inputs
Module ID	IC200MDL143, BXIOIAI8120: FFFF8804
	IC200MDL243, BXIOIAI16120: 88048804
Isolation:	User input to logic (optical) and frame ground 250VAC continuous; 1500VAC for 1 minute
	Group to group: not applicable
	Point to point : 250VAC continuous; 1500VAC for 1 minute
LED indicators	One LED per point shows individual point ON/OFF status OK LED indicates backplane power is present
Backplane current consumption (5V output)	IC200MDL143, BXIOIAI8120: 50mA maximum
	IC200MDL243, BXIOIAI16120: 100mA maximum
External power supply	None
Thermal derating	IC200MDL143, BXIOIAI8120: None
	IC200MDL243, BXIOIAI16120: See diagram

Input Characteristics

Input voltage	0 to 132VAC (47 to 63Hz), 120VAC nominal
On state voltage	70 to 132VAC
Off state voltage	0 to 20VAC
On state current	5mA minimum
Off state current	2.5mA maximum
On response time Off response time	1 cycle maximum 2 cycles maximum
Input impedance	8.6kOhms (reactive) at 60Hz, typical 10.32kOhms (reactive) at 50Hz, typical

Product Revision History

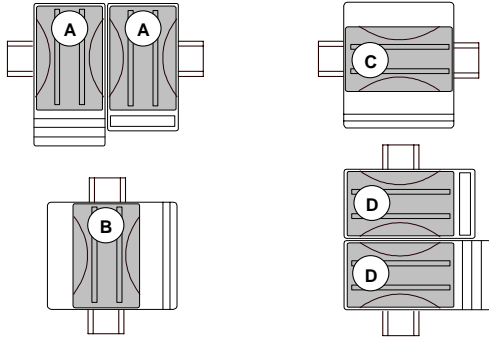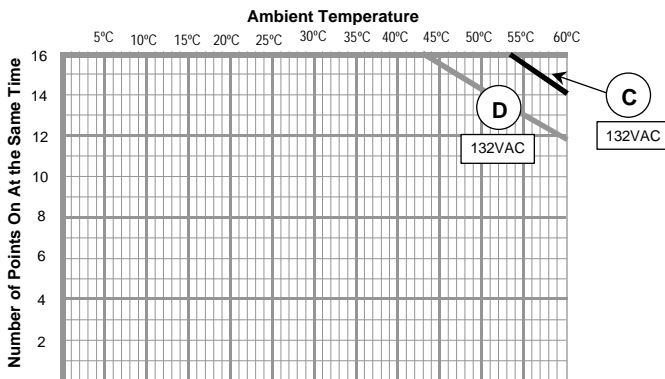| Rev	Date	Description
IC200MDL143E BXIOIAI8120E IC200MDL243E BXIOIAI16120E	October 2008	Updated Power Supply OK signal circuitry.
IC200MDL143D BXIOIAI8120D IC200MDL243D BXIOIAI16120D	April 2005	Plastic change on locking mechanism
IC200MDL143C IC200MDL243C	April 2004	Changed to V0 plastic for module housing.
BXIOIAI8120C BXIOIAI16120C	January 2004	Changed to V0 plastic for module housing. ATEX approval for Group 2 Category 3 applications.
IC200MDL143B IC200MDL243B	January 2004	ATEX approval for Group 2 Category 3 applications.
IC200MDL143A BXIOIAI8120A IC200MDL243A BXIOIAI16120A	April 2000	Initial product release

VersaMax 120VAC Isolated Input Modules

Thermal Derating

No derating is required for the 8-point modules in any orientation, or for the 16-point modules if they are mounted vertically (A, B) on the DIN rail.

For IC200MDL243 and BXIOIAI16120 modules that are mounted horizontally (C, D) on the DIN rail, no derating is required at 120VAC. Deratings at 132VAC are 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.
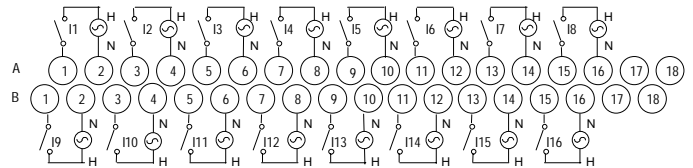
Field Wiring Terminals

Terminal	Connection	Terminal	Connection
A1	Input 1	B1	Input 9 *
A2	Input 1 Return	B2	Input 9 Return *
A3	Input 2	B3	Input 10 *
A4	Input 2 Return	B4	Input 10 Return *
A5	Input 3	B5	Input 11 *
A6	Input 3 Return	B6	Input 11 Return *
A7	Input 4	B7	Input 12 *
A8	Input 4 Return	B8	Input 12 Return *
A9	Input 5	B9	Input 13 *
A10	Input 5 Return	B10	Input 13 Return *
A11	Input 6	B11	Input 14 *
A12	Input 6 Return	B12	Input 14 Return *
A13	Input 7	B13	Input 15 *
A14	Input 7 Return	B14	Input 15 Return *
A15	Input 8	B15	Input 16 *
A16	Input 8 Return	B16	Input 16 Return *
A17	No connection	B17	No connection
A18	No connection	B18	No connection

* Inputs available on 16-point modules only.

Using a shorting bar with module IC200MDL143 or BXIOIA8120 eliminates its point-to-point isolation characteristics.

Wiring Connections for Carriers with Two Rows of Terminals

Row B connections shown below are for 16-point modules only.

Wiring Connections for Carriers with Three Rows of Terminals

Side B connections shown below are for 16-point modules only.