MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

GE VERSAMAX

IC200ALG260

EIGHT-CHANNEL VOLTAGE/CURRENT ANALOG INPUT MODULE

Used with the applicable VersaMax analog I/O configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: GE official manufacturer documentation

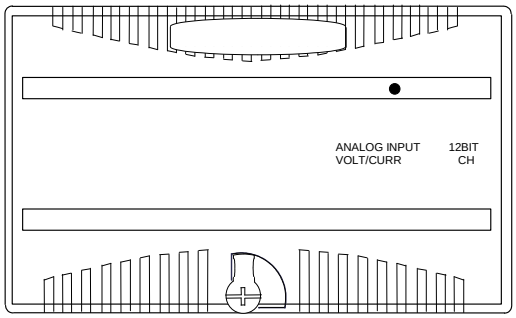
Analog Input Module, 12-Bit Voltage/Current, 4 or 8 Channels

January 2012 GFK-2525B

Product Description

Analog Input Module IC200ALG230 / BXIOAI4 provides an interface to either 4 voltage inputs or 4 current inputs.

Analog Input Module IC200ALG260 / BXIOAI8 provides an interface to either 8 voltage inputs or 8 current inputs.



The module receives power from the backplane power supply. No external power source is required for module operation. Power for the user's transceivers must be supplied from an external source.

Diagnostics

The module reports a Loss of Internal Power fault for field-side circuits.

LED Indicators

The green INT PWR LED indicates the presence of internally-generated field power for the analog field-side circuits.

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

Configuration Parameters

Two jumpers on the carrier terminals can be used to configure voltage or current mode and unipolar or bipolar operation in voltage mode. One jumper selects either voltage or current operating mode. With this jumper connected, the module accepts current inputs in the 4mA to 20mA range. With no jumper installed the module accepts -10VDC to +10VDC inputs.

In voltage mode, another jumper on the carrier can be used to select the 0 to 10VDC range.

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.

Module Characteristics	
Channels	IC200ALG230 / BXIOAI4: 4 single ended, one group IC200ALG260 / BXIOAI8: 8 single-ended, one group
Module ID	IC200ALG230 / BXIOAI4: FFFF9004 IC200ALG260 / BXIOAI8: FFFF9008
Isolation: User input to logic (optical) and to frame ground: Group to group: Channel to channel:	 250VAC continuous; 1500VAC for 1 minute Not applicable None
LED indicators	INT PWR LED indicates internally-generated field power is present. OK LED indicates backplane power is present
Backplane current consumption	IC200ALG230 / BXIOAI4: 5V output: 125mA max. IC200ALG260 / BXIOAI8: 5V output: 130mA max.
External power supply	None
Thermal derating	None
Configuration parameters	Range select, Mode select (jumpers on carrier)
Diagnostics	Loss of Internal Power
Input Characteristics: Voltage Mode (Default)	
Input voltage:	Bipolar: +/-10VDC (default) Unipolar: 0 to 10V (configurable)
Input Impedance	126kOhms maximum
Accuracy at: 25 degrees C* 0 to 60 degrees C	+/-0.3% typical of full scale, +/-0.5% maximum of full scale +/-1% maximum of full scale
Resolution: Bipolar mode: Unipolar mode:	2.5mV = 8 counts 2.5mV = 8 counts
Filter response	5.0ms
Update rate per module	0.4ms
Common mode voltage	0 V
Channel-to-channel crosstalk rejection	30dB minimum
Input Characteristics: Current Mode	
Input current	4 to 20mA
Input Impedance	200 Ohms maximum
Accuracy at: 25 degrees C* 0 to 60 degrees C	+/-0.3% typical of full scale, +/-0.5% maximum of full scale +/-1% maximum of full scale
Resolution	4μA = 8 counts
Filter response	5ms
Update rate per module	0.4ms
Channel-to-channel crosstalk rejection	30dB minimum

* In the presence of severe RF interference, (IEC 1000-4-3, 10V/m), accuracy may be degraded to +/-3%.

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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.

Field Wiring Terminals

Terminal assignments for the module are shown below.

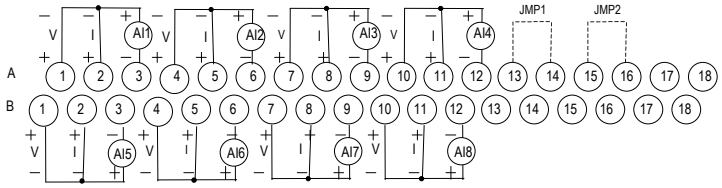
All inputs are single-ended, and share a common return. Either voltage or current devices may be connected per channel (not both).

Number	Connection	Number	Connection
A1	V1	B1	* V5
A2	I1	B2	* I5
A3	Return (common)	B3	* Return (common)
A4	V2	B4	* V6
A5	I2	B5	* I6
A6	Return (common)	B6	* Return (common)
A7	V3	B7	* V7
A8	I3	B8	* I7
A9	Return (common)	B9	* Return (common)
A10	V4	B10	* V8
A11	I4	B11	* I8
A12	Return (common)	B12	No connection
A13	JMP1-A	B13	No connection
A14	JMP1-B	B14	No connection
A15	JMP2-A	B15	No connection
A16	JMP2-B	B16	No connection
A17	NC	B17	No connection
A18	NC	B18	No connection

* Connections for module IC200ALG260 or BXIOAI8 only.

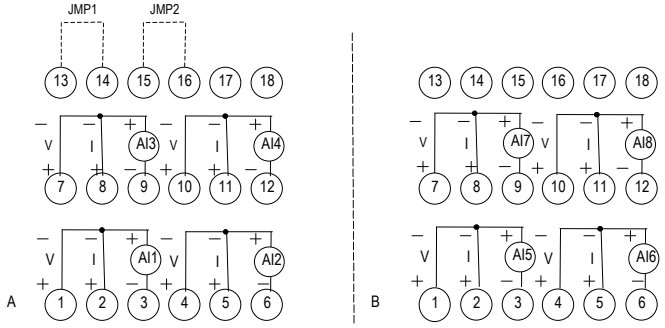
Wiring Connections for Carriers with Two Rows of Terminals

The diagram below shows wiring connections for this module when installed on a carrier with two rows of terminals. Row B connections shown below are for module IC200ALG260 or BXIOAI8 only.



Wiring Connections for Carriers with Three Rows of Terminals

The next diagram shows wiring connections for this module when installed on a carrier with three rows of terminals. Side B connections shown below are for module IC200ALG260 or BXIOAI8 only.

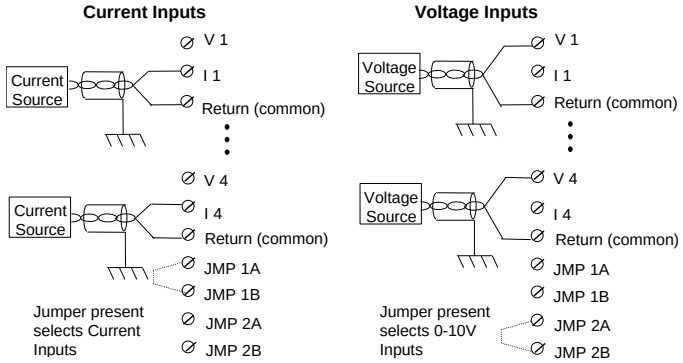


Jumper Selections

Jumpers on JMP 1 and JMP 2 select voltage or current operation and voltage range. In current mode, JMP2 is ignored.

Jumper	Range
None	+/-10V
1	4-20mA
2	0-10V
1 & 2	Not recommended

Wiring Examples



An external source must be provided to power input transceivers.

Product Revision History

Rev	Date	Description
IC200ALG230H IC200ALG260H	January 2012	Label change. No changes to features, performance or compatibility.
IC200ALG230F IC200ALG260F	September 2010	Manufacturing location change. No changes to functions, operation or compatibility.
IC200ALG230E BXIOAI4E IC200ALG260E BXIOAI8E	October 2008	Updated Power Supply OK signal circuitry.
IC200ALG230D BXIOAI4D IC200ALG260D BXIOAI8D	April 2005	Improvement to latching mechanism.
IC200ALG230C IC200ALG260C	April 2004	Changed to V0 plastic for module housing.
BXIOAI4C BXIOAI8C	January 2004	ATEX approval for Group 2 Category 3 applications. Changed to V0 plastic for module housing.
IC200ALG230B IC200ALG260B	January 2004	ATEX approval for Group 2 Category 3 applications.
IC200ALG230A BXIOAI4A IC200ALG260A BXIOAI8A		Initial product release

Important Product Information

If hot insertion of a module is done improperly, the operation of other modules on the same backplane may be disrupted. For proper installation of module on a carrier refer to *Installing a Module on a Carrier* in Chapter 2 of the *VersaMax Modules Manual,* GFK-1504.