MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

GE FANUC

IC670MDL640

16-POINT 24 V DC POSITIVE/NEGATIVE INPUT MODULE

Used with the applicable Field Control configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

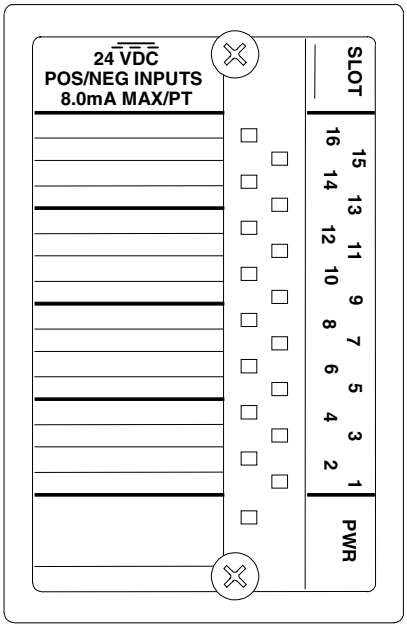
Selected official manufacturer pages follow this cover.

Source: GE Fanuc Field Control I/O Modules User's Manual GFK-0826J

Chapter 6

24VDC Positive/Negative Discrete Input Module IC670MDL640

The 24 VDC Positive/Negative Input Module (IC670MDL640) provides a single group of 16 discrete inputs, which may be driven by positive or negative logic.



Power Sources

The module receives power from the Field Processor to run its own 5-volt logic. An external 24VDC supply is needed to power the input devices.

LEDs

Individual LEDs (logic side), visible through the transparent portion of the module top, indicate the on/off status of each input. The PWR LED is on when field and backplane power are present.

Host Interface

Intelligent processing for this module is performed by the Bus Interface Unit or elsewhere in the system. This includes configuring features such as input defaults and fault reporting. The module has 16 bits (two bytes) of discrete input data. A Bus Interface Unit is required to provide this input data to the host and/or local processor.

Module Specifications

Module Characteristics	
Rated Voltage	24VDC
Input Voltage Range	0-30 VDC
User Input Current	7.5 mA per point @ 24 VDC
Isolation: User input to logic, user input to frame ground, group to group	250 VAC continuous, 1500 VAC for 1 minute. No isolation between individual points in a group.
Indicators	1 LED per point shows individual point status PWR LED indicates field and backplane power are present
Current drawn from Bus Interface Unit Power Supply	75 mA, typical (all points on) 83 mA, maximum
Input Characteristics	
Input Impedance	3K typical
On state voltage Off state voltage	Positive logic: +15V to +30V Negative logic: -15V to -30V Positive logic: 0 to +5V Negative logic: 0 to -5V
On state Current Off state Current	3.0mA to 8mA 0mA to 1.5mA
On response time Off response time	6ms typical, 10ms maximum 6ms typical, 10ms maximum

Keying Locations

Optional keying locations for the 24VDC Positive/Negative Input Module are shown below.

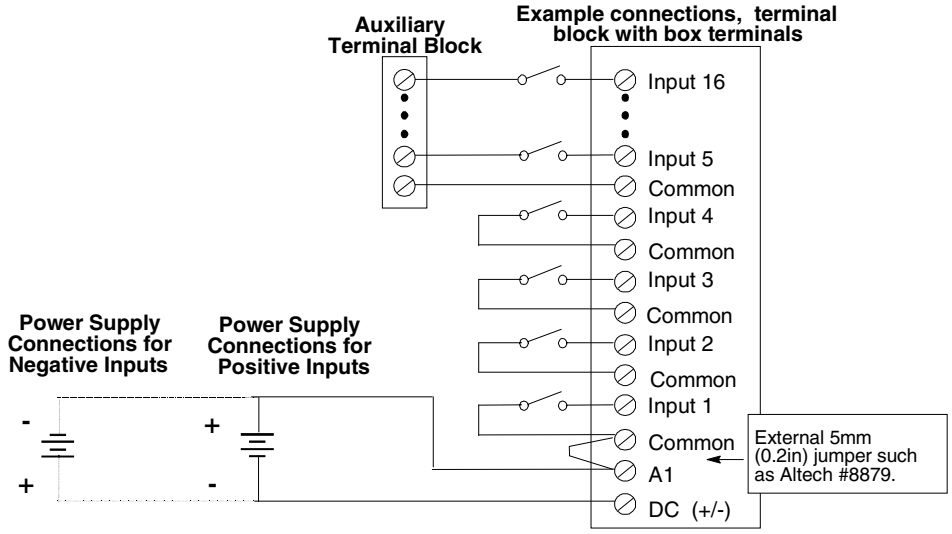
Keying Locations									
A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**J**	**K**
x		x				x	x		

Wiring Examples with Auxiliary Terminal Blocks

If the module is installed on an I/O Terminal Block with Barrier Terminals, an Auxiliary Terminal Block can be used to provide additional wiring terminals. For the I/O Terminal Block with Wire to Board Connectors, external connection points are usually be preferred, although an Auxiliary Terminal Block can be used.

Auxiliary Terminal Blocks have all terminals connected together internally. The Auxiliary Terminal Block with box terminals has 13 terminals, each of which accommodates one AWG #14 (avg 2.1mm^2 cross section) to AWG #22 (avg 0.36mm^2 cross section) wire, or two wires up to AWG #18 (avg. 0.86mm^2 cross section). The Auxiliary Terminal Block with barrier terminals has nine terminals, each of which can accommodate one or two wires up to AWG #14 (avg 2.1mm^2 cross section).

The following illustration shows how an Auxiliary Terminal Block with Box Terminals can be used for power connections to an I/O Terminal Block with Box Terminals.



For an I/O Terminal Block with Barrier Terminals, an Auxiliary Terminal Block with Barrier Terminals might be connected as shown in the following example.

