

GE Genius I-O Series Service Manual

IC660BBD024

1. Description

The IC660BBD024 is a 12/24 VDC 32-Circuit Source I/O Block that sends current to field output devices. This block is an intelligent, configurable module that interfaces the controller to devices that send or receive a binary signal. The IC660BBD024 works with electronic proximity switches in 2-wire and 3-wire configurations, as well as a number of other input devices.

2. Specifications

Specification	Value
Brand	GE Fanuc
Series	Genius Block I/O
Part	Number IC660BBD024
Module	type Discrete block I/O
No.	of channels Thirty-Two (32); configurable as input / output and output with feedback
Input	voltage 12/24VDC
Input	Impedance 3.3k Ohms
Input	processing time (typical) 1.4 ms (plus selectable filter delay)
Input	filters 1, 2, 3, 4, 5, 10, 20, 30, 40, 50, 60, 70, 80, 90, or 100ms
Maximum	output current (steady state) 0.5 Amps per circuit
Maximum	inrush current 4 Amps up to 10ms (once every .5 sec. maximum)
Block	output current (total) 16 Amps
Output	turn-on delay 0.5 ms, maximum
Output	Diagnostics Switch Fault
Description	Block I/O
Voltage	12/24 Volts DC
TTL	5 Volts
Input	points 32
Isolation	850 Volts
Power	supply drop out 4 ms at 12 Volts, 20 ms at 24 Volts
Temperature	0-60 degrees Celsius
Compatibility	Series 90-30, 90-70 Description
The	IC660BBD024 is a GE Fanuc intelligent Block I/O module. This module is a high-density Thirty-Two (32) point Discrete I/O block that features individually

3. Product Information

The IC660BBD024 is a 12/24 VDC 32-Circuit Source I/O Block that sends current to field output devices. This block is an intelligent, configurable module that interfaces the controller to devices that send or receive a binary signal. The IC660BBD024 works with electronic proximity switches in 2-wire and 3-wire configurations, as well as a number of other input devices.

The IC660BBD024 block's 32 identical discrete circuits can be set as input, output, or output with feedback. Block circuits are self-protecting. When a circuit is used as an output, block software protects its driver and guards against shorted electrical loads caused by wiring errors. In the interest of block operation, circuit protection also allows for short-duration surges.

Like other products in this class of electronics, block configuration is done with a handheld monitor. If a handheld monitor is not available, the user may choose to configure the block by sending a Write Configuration datagram from the host to the block. Block calibration is not necessary as it is performed by the manufacturer. Configuration, however, is performed by the user.

Genius I/O Source Blocks, including the IC660BBD024, provide current to field output devices but can function as a Bus Switching Module (BSM) controller. If needed, the user can replace the electronics assembly in this block without reconfiguring the block or removing field wiring if the replacement assembly is from a compatible block model. Like other blocks in the Genius I/O family, the IC660BBD024 should be installed within a protective enclosure. It can be mounted right-side up or upside down. The GE Fanuc IC660BBD024 is an intelligent high-density 32-point discrete sourcing Input / Output (I/O) block. Individual channels of this module are configurable as input, output or output with feedback. The input channels are rated 24VDC while output channels delivers 0.5 Amperes per channel. This module supports Genius Bus protocol and capable of advanced diagnostics. Technical specifications for IC660BBD024

Brand GE Fanuc

Series Genius Block I/O

Part Number IC660BBD024

Module type Discrete block I/O

No. of channels Thirty-Two (32); configurable as input / output and output with feedback

Input voltage 12/24VDC

Input Impedance 3.3k Ohms

Input processing time (typical) 1.4 ms (plus selectable filter delay)

Input filters 1, 2, 3, 4, 5, 10, 20, 30, 40, 50, 60, 70, 80, 90, or 100ms

Maximum output current (steady state) 0.5 Amps per circuit

Maximum inrush current 4 Amps up to 10ms (once every .5 sec. maximum)

Block output current (total) 16 Amps

Output turn-on delay 0.5 ms, maximum

Output Diagnostics Switch Fault

Description Block I/O

Voltage 12/24 Volts DC

TTL 5 Volts

Input points 32

Isolation 850 Volts

Power supply drop out 4 ms at 12 Volts, 20 ms at 24 Volts

Temperature 0-60 degrees Celsius

Compatibility Series 90-30, 90-70 Description

The IC660BBD024 is a GE Fanuc intelligent Block I/O module. This module is a high-density Thirty-Two (32) point Discrete I/O block that features individually configurable channels as input, output or output with feedback. This module supports Source wiring and provided with resettable self-protecting circuits and advanced diagnostics.

The IC660BBD024 input characteristics include compatibility with 12/24VDC as ON-state signal values. Specifically, for 12VDC, On-state range is 8-12VDC while 18-24VDC for 24VDC On-state. It has an input impedance of 3.3 K Ohms, 1.4 ms input processing time, affected by the configured signal filtering with a wide variety of options such as 1, 2, 3, 4, 5, 10, 20, 30, 40, 50, 60, 70, 80, 90, or 100ms.

When configured as output, each channel is able to deliver 0.5 Ampere with turn-ON delay of 0.5 ms and able to withstand a maximum Inrush current of 4 Amperes for 10 ms that may be repeated once every .5 sec. This block I/O is capable of up to 16 Amperes. Each configured output channel has a voltage drop of 2.0 volts maximum at 4 Amps inrush and capable of detecting switch fault.

The IC660BBD024 supports Genius Bus protocol for communication with partner device that is compatible with the mentioned protocol. Specifically, bus controllers such as IC66*CBB902 or CBB 903, any version; or model IC66*CBB900 or CBB901 version 1.3 or later may be used. Additionally, it may also be configured using the IC66*HHM501 Hand-Held monitor. For Bus Switching Module (BSM), the IC66*BSM021 is compatible for use with the IC660BBD024 block I/O.

The IC660BBD024 I/O block can also work with 2-wire and 3-wire proximity switches, along with relays, contactors, and lamps. The 32 identical I/O points on the front panel can be easily configured. A corresponding LED indicator next to the contact illuminates when a connection is made with the contact. The block-to-block isolation rating of the GE Fanuc IC660BBD024 I/O block is 850 Volts. It has a maximum ripple of 10% for 12 to 24 Volts and of 1% for 5 Volts. The IC660BBD024 I/O block has a power supply dropout of 4 milliseconds at 12 Volts, and one of 20 milliseconds at 24 Volts. During the installation of the block, proper handling should be ensured. The block comes with an open enclosure and hence should be kept in a clean location that has no airborne contaminants. It can be mounted in an upward or downward position with at least 2 inches of space between adjacent blocks. The operating temperature range for the IC660BBD024 I/O block should be set between 0 and 60 degrees Celsius with a maximum humidity level of 95% non-condensing humidity.