GE Field Control Series Service Manual

IC670GBI102

1. Description

The IC670GBI102 module is a GE Fanuc Genius Bus interface module. It has a nominal voltage rating of 120 Volts AC and 125 Volts DC. It is used in Field Control systems and it is used to control a wide variety of host architectures. It is fully compatible with the IC670GB and iC670GBI modules. The bus interface unit is mounted with a DIN Rail. The module comes with a metal grounding strip underneath the terminal block. The Bus interface module helps with intelligent processing and I/O scanning ap

2. Specifications

Specification	Value
Brand	**GE Fanuc**
Series	**Field Control**
Manufacturer	**GE Fanuc**
Manufacturer:	**GE Fanuc**
Part	**Number IC670GBI102**
Series	**Field I/O control**
Product	**Type: Profibus Bus Interface**
Type	**Bus interface unit**
Part	**Number IC670GBI102**
Product	**Family Field Control**
Compatibility	**Field control IC670GB / IC670GBI**
Product	**Description Bus Interface Unit (BUI)**
Part	**Number: IC670GBI102**
Nominal	**Rated Voltage 115 Volts AC, 125 Volts DC**
Supply	**Voltage range 90 to 135 VAC, 105 to 150 VDC**
Transmission	**speed 53.6 Kbaud standard, 153.6 Kbaud extended, 76.8 Kbaud, or 38.4 Kbaud**
Voltage	**Range 90 to 135 Volts AC / 105 to 150 Volts DC**
Nominal	**supply voltage 115 VAC, 125 VDC**
Terminating	**resistors 75 ohm, 100 ohm, 120 ohm, 150 ohm resistor**
Frequency	**47 to 63 Hertz**
Power	**consumption 115 VAC: 48VA maximum at full load (nominal voltage) 25 VAC: 24W maximum at full load (nominal voltage)**
Pre-fabricated	**cables IC660BLM506, IC660BLM508**
Power	**at 115 Volts AC 48 Volt-Amps (maximum) at full load**
Inrush	**Current 15-50 Amps peak, 3 mS ma**

3. Product Information

The IC670GBI102 module is a GE Fanuc Genius Bus interface module. It has a nominal voltage rating of 120 Volts AC and 125 Volts DC. It is used in Field Control systems and it is used to control a wide variety of host architectures. It is fully compatible with the IC670GB and iC670GBI modules. The bus interface unit is mounted with a DIN Rail. The module comes with a metal grounding strip underneath the terminal block. The Bus interface module helps with intelligent processing and I/O scanning applications and it connects up to 8 I/O modules at a time. The IC670GBI102 module interfaces with Field Control I/O modules and a host PLC or computer by using the Genius bus. It can exchange a maximum of 128 Bytes of input and output data with each host in a single bus scan. It helps with fault reporting, analog scaling, and range selection applications. The self diagnostics run when the module starts up and they check for errors.

The GE Fanuc IC670GBI102 Field Control Genius Bus interface module can be used with both a single bus and a dual bus setup. The bus interface module operates best with an ambient air temperature between 0 degrees Celsius and 60 degrees Celsius. The module is CE certified and listed with the cULus standard. The IC670GBI102 interface module comes with a D connector for connecting to a display monitor or terminal. Along with the connector, there are LED indicators to show the power status and the “Bus Active” status. The operating frequency of the bus interface module is 50 to 60 Hertz. The interface module has 9 N-m of rated torque. For wiring, this module uses 90 degrees Celsius rated copper conductor wire. The IC670GBI102 is a Genius Bus Interface module that is manufactured by GE Fanuc. This module is part of the Field control series, primarily used to implement distributed I/O architecture by interfacing Field control I/O modules to a host GE CPU via Genius bus network. It features an array of screw-type terminals for termination of the Genius main bus and optional redundant bus; Technical specifications for IC670GBI102

Brand GE Fanuc

Series Field Control

Manufacturer GE Fanuc

Manufacturer: GE Fanuc

Part Number IC670GBI102

Series Field I/O control

Product Type: Profibus Bus Interface

Type Bus interface unit

Part Number IC670GBI102

Product Family Field Control

Compatibility Field control IC670GB / IC670GBI

Product Description Bus Interface Unit (BUI)

Part Number: IC670GBI102

Nominal Rated Voltage 115 Volts AC, 125 Volts DC

Supply Voltage range 90 to 135 VAC, 105 to 150 VDC

Transmission speed 53.6 Kbaud standard, 153.6 Kbaud extended, 76.8 Kbaud, or 38.4 Kbaud

Voltage Range 90 to 135 Volts AC / 105 to 150 Volts DC

Nominal supply voltage 115 VAC, 125 VDC

Terminating resistors 75 ohm, 100 ohm, 120 ohm, 150 ohm resistor

Frequency 47 to 63 Hertz

Power consumption 115 VAC: 48VA maximum at full load (nominal voltage) 25 VAC: 24W maximum at full load (nominal voltage)

Pre-fabricated cables IC660BLM506, IC660BLM508

Power at 115 Volts AC 48 Volt-Amps (maximum) at full load

Inrush Current 15-50 Amps peak, 3 mS maximum

Hot insertion and removal of modules IC670GBI002(F); IC670GBI102A

Power at 125 Volts AC 24 Watts (maximum) at full load

Power Supply Output 6.5 VDC ±5%

Reliability More than 183,000 hours operation MTBF, calculated

Inrush Current 20 Amps (peak), 3 milliseconds (maximum)

Current output to modules 2:00 AM

Mounting DIN Rail / Panel mount via the Profibus Bus Interface Unit (BIU) terminal block

Power Supply Output 6.5 Volts DC

Holdup time 10 ms

No. of supported I/O modules up to Eight (8) modules

Holdup Time 20 milliseconds (maximum)

Supported protocols Genius

Compatible Hand-Held Programmers IC660HHM501; IC693PRG300

Reliability More than 183,000 hours operation MTBF

Supported functions I/O forcing; Diagnostic display; Program upload/download

Product Lifecycle Status Discontinued/Obsolete

Power supply: 24 VDC

CPU Redundancy Supported

Hot Insertion and Removal of Modules Supported Description

The IC670GBI001 isa communication module from the Field Control series of GE Fanuc. This module specifically supports Genius Bus protocol, allowing users to implement distributed I/O architecture. This module is coupled with a Genius Bus Interface Unit terminal block to enable mounting DIN rail or Panel mounting. This terminal block module also hosts the screw terminals where main genius bus connection and optional redundancy network connectivity can be established. The IC670GBI001 supports daisy-chain topology architecture on

both the primary and secondary bus. The supported data transmission speed of this module are 153.6 Kbaud standard, 153.6 Kbaud extended, 76.8 Kbaud, or 38.4 Kbaud with available memory allocations for a variety of data types such as 256 Bytes for discrete inputs (%I), status data and intelligent modules; 256 Bytes for discrete outputs (%Q) and fault clearing for intelligent modules; 256 bytes for analog inputs (%AI) and 256 bytes for analog outputs (%AQ). Both the primary and secondary bus connection points are provided with terminating resistor connection points that is used to terminate the bus connection and maintain a stable connection across the network. This termination point is specifically allocated across the serial 1 and serial 2 terminals, installed at the start (first node) and end of the bus (last node). Resistor values include 75 ohm, 100 ohm, 120 ohm or 150 ohm terminating resistor. Pre-molded bus cables may also be used with this Bus Interface module with catalog number IC660BLM508 which uses 75 ohm resistor and IC660BLM506 which uses 150 ohm resistor.

The IC670GBI102 bus interface unit is a Field Control bus interface unit manufactured by GE Fanuc. The unit is part of the GE Field Control series and it is compatible with the IC670GB and IC670GBI modules. This programmable control module operates within a temperature range of 0 to 55 degrees Celsius (32 to 131 degrees Fahrenheit) and it has a storage temperature range of -40 to 85 degrees Celsius (-40 to 185 degrees Fahrenheit). The relative humidity range of the IC670GBI102 bus interface module is 5 to 95% (non-condensing). The IC670GBI102 bus interface unit can withstand a solid vibration and shock levels that are typical for industrial environments and it is installed on panel-mounted DIN rail. The IC670GBI102 bus interface unit can operate on both AC and DC power sources and the operating voltage range is 90 to 135 Volts AC and 105 to 150 Volts DC. The nominal rated voltage of the IC670GBI102 bus interface unit is 115 Volts AC and 125 Volts DC. The power consumption is a maximum of 48 Volt-Amps at 115 Volts AC and a maximum of 24 Watts at 125 Volts AC. The power consumption is specified for operation on a full load. The inrush current of the unit is 20 Amps at peak for a maximum of 3 milliseconds. The maximum holdup time of the unit is 20 milliseconds while the power supply output voltage is 6.5 Volts DC. The input frequency of the unit is 47 to 63 Hertz. The terminal block of the bus interface unit is 16 milliamps and its reliability rating is more than 600,000 hours.