GE Genius I-O Series Service Manual

IC660EBA104

1. Description

GENIUS Electronic Assembly for BBA104 (EBA Only) 115Vac/125Vdc A IC660E IC660EB IC660EBA The IC660EBA104 is a component of the Genius Block I/O module from GE Fanuc Automation now under Emerson Automation. This component is an electronic assembly that is used to form a Genius I/O module, particularly paired with IC660TBA104terminal base to form the IC660BBA104 115 VAC / 125 VDC combination analog input and output Block. Technical specifications for IC660EBA104

2. Specifications

Specification	Value
Brand	**GE Fanuc**
Series	**Genius I-O**
Manufacturer	**GE Fanuc / Emerson Automation**
Part	**Number IC660EBA104**
Series	**Block I/O**
Type	**Electronic Assembly**
Part	**Number IC660EBA104**
Main	**equipment Analog output block**
Product	**Description Electronics Assembly**
Power	**supply voltage 93-132V AC and 105-145V DC**
Compatible	**Module IC660BBA104 Four (4) input and Two (2) output combination analog I/O module**
Maximum	**current 250 mA (AC) and 140 mA (dc)**
Compatible	**Terminal base IC660TBA104**
Frequency	**47-63 Hz**
Nominal	**Operating voltage 115 VAC, / 125 VDC nominal; 125 VDC**
Ripple	**10% max.**
Supply	**voltage range 93-132 VAC, 47-63 Hz; 105-145 VDC with 10% ripple**
Accuracy	**0.1% full scale reading at 25 Â°C**
Block	**to Block isolation 1500 V for 1 minute**
Heat	**dissipation 12 Watts max.**
Group	**to group isolation 300V rms**
Thermal	**drift 70 PPM per degree Celsius**
Operating	**Temperature 0 Degree to 60 Degree Celsius**
Diagnostics	**Yes**
Storage	**temperature of -40 Degree Celsius to 100 Degree Celsius**
Operating	**temperatura 0-60 degrees Celsius**

3. Product Information

GENIUS Electronic Assembly for BBA104 (EBA Only) 115Vac/125Vdc A IC660E IC660EB IC660EBA The IC660EBA104 is a component of the Genius Block I/O module from GE Fanuc Automation now under Emerson Automation. This component is an electronic assembly that is used to form a Genius I/O module, particularly paired with IC660TBA104terminal base to form the IC660BBA104 115 VAC / 125 VDC combination analog input and output Block. Technical specifications for IC660EBA104

Brand GE Fanuc

Series Genius I-O

Manufacturer GE Fanuc / Emerson Automation

Part Number IC660EBA104

Series Block I/O

Type Electronic Assembly

Part Number IC660EBA104

Main equipment Analog output block

Product Description Electronics Assembly

Power supply voltage 93-132V AC and 105-145V DC

Compatible Module IC660BBA104 Four (4) input and Two (2) output combination analog I/O module

Maximum current 250 mA (AC) and 140 mA (dc)

Compatible Terminal base IC660TBA104

Frequency 47-63 Hz

Nominal Operating voltage 115 VAC, / 125 VDC nominal; 125 VDC

Ripple 10% max.

Supply voltage range 93-132 VAC, 47-63 Hz; 105-145 VDC with 10% ripple

Accuracy 0.1% full scale reading at 25 Â°C

Block to Block isolation 1500 V for 1 minute

Heat dissipation 12 Watts max.

Group to group isolation 300V rms

Thermal drift 70 PPM per degree Celsius

Operating Temperature 0 Degree to 60 Degree Celsius

Diagnostics Yes

Storage temperature of -40 Degree Celsius to 100 Degree Celsius

Operating temperatura 0-60 degrees Celsius

5-95% non-condensing Operating vibration

5-10 Hz, 2” or 5.088 displacement Product lifecycle Description

The IC660EBA104 is an electronics assembly module that is part of the Genius I/O combination input and output module specifically, Four (4) 0-20 mA / 4-20 mA and Two (2) 0-20 mA / 4-20 mA current signals. The Genius I/O series, formerly from GE Fanuc Automation now under Emerson Automation is a modular style, distributed I/O component designed to implement a cost-effective, efficient I/O integration solution. With the important module components in the series capable of being individually separated and replaced, troubleshooting and maintenance are simple to perform especially in applications that require high availability or less downtime. Being an electronic assembly component, this module hosts the converters, isolator, multiplexer, input filters, and diagnostic circuits. The converter circuit is essentially an Analog to Digital Converter (ADC) for inputs and a Digital to Analog Converter for (DAC) for outputs. The received analog signal is translated to high-resolution digital format while the signal to be generated is returned to an analog value and made available to the terminal base. The isolator circuit provides a block to block isolation rated at 1500 V for 1 minute and group to group isolation rated at 300 V, continuous. Input filters are used to condition received signals, eliminating noises and fluctuations while diagnostic circuits provide underrange, overrange, and feedback error sensing capability. The IC660EBA104 along with the other components have the same operating, storage temperature, and relative humidity requirements specifically, operating Temperature of 0 Degree to 60 Degree Celsius, the storage temperature of -40 Degree Celsius to 100 Degree Celsius and Relative Humidity of5-95% non-condensing.

The IC660EBA104 I/O block is a current source analog I/O block electronic assembly that has been designed by GE Fanuc Automation in the GE Genius I/O series. This part includes only the electronics assembly of the block, which connects to a terminal assembly to form a complete I/O block. This electronics assembly includes all the internal components that are needed to provide the main functions of the block. This block is used to provide isolated power to different circuits in the system. Some of the features provided by the GE Fanuc Automation IC660EBA104 I/O block electronics assembly include the input alarm detection, output feedback checking, and CPU redundancy feature. It can perform diagnostics activities as well, and these include input open wire detection, output overrange, and underrange and output feedback error diagnostics. The GE Fanuc Automation IC660EBA104 current source analog input/output block electronics assembly is compatible with all the bus controllers, PCIM devices, and QBIM devices from the GE Genius I/O series. It is also compatible with Series 6 and 5 GE PLCs as long as certain requirements are met. The I/O block and the electronics assembly are only compatible with a Bus switching module with a voltage rating of 24 to 48 Volts DC. The GE Fanuc Automation IC660EBA104 I/O block electronics assembly operates with an AC power source rated at 92 to 132 Volts AC and a frequency of 47 to 63 Hertz and with a DC power source rated at 105 to 145 Volts DC and with a ripple of 10 percent maximum. Both the AC and DC voltages have maximum current ratings of 150 milliamps and 140 milliamps, respectively. This electronics assembly has a thermal drift of 70 PPM per degree Celsius.