GE Genius I-O Series Service Manual

IC660EBA101

1. Description

GENIUS Electronic Assembly for BBA101 (EBA Only) 24/48VDCRTD EB IC660E IC660EB IC660EBA The IC660EBA101 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 IC660TBA101 terminal base to form the IC660BBA101 115 VAC / 125 VDC RTD Block. Technical specifications for IC660EBA101

2. Specifications

Specification	Value
Brand	**GE Fanuc**
Series	**Genius I-O**
Manufacturer	**Emerson Automation / GE Fanuc (formerly)**
Manufacturer	**GE Fanuc / Emerson Automation**
Part	**Number IC660EBA101**
Series	**Genius I/O**
Series	**Block I/O**
Type	**Electronics Assembly**
Part	**Number IC660EBA101**
Compatible	**Module IC660BBA101**
Main	**equipment I/O Block**
Product	**Description Electronics Assembly**
IC660TBA101	**IC660TBA101**
Input	**6 inputs divided into 3 isolated groups**
Compatible	**Block I/O IC66*BBA101 15 VAC / 125 VDC 6-channel RTD input block**
Nominal	**Operating voltage 115 VAC, / 125 VDC nominal; 125 VDC**
LEDs	**1 unit LED and 1 input LED**
Compatible	**Terminal base IC66*TBA101**
Supply	**voltage range 93-132 VAC, 47-63 Hz; 105-145 VDC with 10% ripple**
Power	**Supply, AC 93-132V AC**
Operating	**voltage 15 VAC / 125 VDC**
Group	**to group isolation 1500 V rms**
Power	**Supply, DC 105-145V DC**
Communication	**protocol Genius Protocol**
Operating	**Temperature 0 Degree to 60 Degree Celsius**
Heat	**Dissipation 7 Watts**
Block	**to Block Isolation 1500 V for 1 minute**
Storage	**temperature of -40 D**

3. Product Information

GENIUS Electronic Assembly for BBA101 (EBA Only) 24/48VDCRTD EB IC660E IC660EB IC660EBA The IC660EBA101 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 IC660TBA101 terminal base to form the IC660BBA101 115 VAC / 125 VDC RTD Block. Technical specifications for IC660EBA101

Brand GE Fanuc

Series Genius I-O

Manufacturer Emerson Automation / GE Fanuc (formerly)

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Part Number IC660EBA101

Series Genius I/O

Series Block I/O

Type Electronics Assembly

Part Number IC660EBA101

Compatible Module IC660BBA101

Main equipment I/O Block

Product Description Electronics Assembly

IC660TBA101 IC660TBA101

Input 6 inputs divided into 3 isolated groups

Compatible Block I/O IC66*BBA101 15 VAC / 125 VDC 6-channel RTD input block

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

LEDs 1 unit LED and 1 input LED

Compatible Terminal base IC66*TBA101

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

Power Supply, AC 93-132V AC

Operating voltage 15 VAC / 125 VDC

Group to group isolation 1500 V rms

Power Supply, DC 105-145V DC

Communication protocol Genius Protocol

Operating Temperature 0 Degree to 60 Degree Celsius

Heat Dissipation 7 Watts

Block to Block Isolation 1500 V for 1 minute

Storage temperature of -40 Degree Celsius to 100 Degree Celsius

LEDs (I/O Block) Unit OK, I/O Enabled

5-95% non-condensing Operating vibration

Weight 1.8 kg

Operating Temperature -0degrees to +60degrees C (32degrees to +140degrees F)

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

Input update frequency 400, 800, or 1600 ms

Storage Temperature -40 degrees C (-40degrees to +212degrees F)

discontinued

Humidity 5% to 95% (non-condensing)

Vibration 5-10Hz 0.2" (5.08mm) displacement, 10-200Hz at 1G Description

The IC660EBA101 is an electronics assembly that is part of the Genius I/O block. This assembly is specifically used with IC660TBA101 terminal base to form the IC660BBA101 115 VAC / 125 VDC RTD Block to form a Six (6) channel Resistance Temperature Detector (RTD) compatible inputs in Three (3) isolated groups of Two (2) channels each. The IC660EBA101 provides the necessary electronic circuits that are used to convert, condition, and isolate the signals. Specifically, it contains the Analog to Digital Converter (ADC) which is used to translate the received analog data to digital format. Internally installed opto-couplers are also installed providing group to group isolation rated 300 V and Block to Block isolation rated 1500 V. The IC660EBA101’s circuit is designed to receive input supply voltages such as 115 VAC, / 125 VDC nominal at voltage ranges of 93-132 VAC, 47-63 Hz and 105-145 VDC with 10% ripple, respectively. The IC660EBA101 is installed when the entire Three (3) piece assembly is not actively receiving supply voltage. Installing with power supplied may cause voltage arcing that may damage the electronic assembly and nearby components. For maintenance, each component of the module assembly can be dismantled one by one and replaced whichever component malfunctioned with a functional unit. This contributes to faster troubleshooting and reduces downtime. The IC660EBA101 has an operating temperature of 0 Degree to 60 Degree Celsius and storage temperature of -40 Degree Celsius to 100 Degree Celsius while humidity is 5095% non-condensing with operating vibration of 5-10 Hz, 2” or 5.088 displacements.

The IC660EBA101 electronics assembly is an electronics assembly for the 115 Volts AC and 125 Volts DC rated RTD block. This assembly has been designed and manufactured by GE Fanuc Automation. This assembly has been designed to be used with a specific I/O block, and it provides all the electronic components that are required by this block to fulfill its application purposes. The block has 6 RTD compatible inputs that are divided into 3 groups of 2 inputs each. These groups are isolated from each other. The GE Fanuc Automation IC660EBA101 electronics assembly belongs to the Genius I/O GE device series and it is intelligent and configurable. This specific model comes with 2 LEDs: one for the status of the whole unit and the other for the status of the inputs, and it operates with a heat dissipation rating of 7 Watts maximum. The GE Fanuc Automation Genius I-O IC660EBA101 electronics assembly operates with a power supply voltage range of 93 to 132 Volts AC or 105 to 145 Volts DC. It has a frequency rainge of 47 to 63 Hertz and a ripple of 10 percent maximum. The inputs can be nickel, copper, or platinum inputs. The GE Fanuc Automation IC660EBA101 electronics assembly includes diagnostics features that include detection for input shorted errors, internal faults, wiring errors, open wire errors, and overrange errors. This block can be exposed to a temperature of up to 60 degrees Celsius and a relative humidity of

5 to 95 percent. If the ambient air temperature exceeds 60 degrees Celsius, this it might negatively affect its functioning.