GE Genius I-O Series Service Manual

IC660EBA103

1. Description

GENIUS Electronic Assembly for BBA103 (EBA Only) 24/48VDCRTD GE IC660 IC660EB IC660EBA The IC660EBA103 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 an IC660TBA103 terminal base to form the IC660BBA103 115 VAC / 125 VDC Thermocouple Block. Technical specifications for IC660EBA103

2. Specifications

Specification	Value
Brand	**GE Fanuc**
Series	**Genius I-O**
Manufacturer	**Emerson Automation / GE Fanuc (formerly)**
Manufacturer	**GE Fanuc / Emerson Automation**
Part	**Number IC660EBA103**
Series	**Genius I/O**
Series	**Block I/O**
Type	**Electronics Assembly**
Part	**Number IC660EBA103**
Compatible	**Module IC660BBA103 6-channel Thermocouple Block input module**
Inputs	**6 thermocouple compatible inputs divided in three groups of 2 each.**
Product	**Description Electronics Assembly**
Nominal	**Operating voltage 115 VAC, / 125 VDC nominal; 125 VDC**
Power	**supply voltage AC 93-132V AC**
Compatible	**Block I/O IC660BBA103 115 VAC / 125 VDC 6-channel Thermocouple input block**
Supply	**voltage range 93-132 VAC, 47-63 Hz; 105-145 VDC with 10% ripple**
Power	**supply voltage DC 105-145V DC**
Compatible	**Terminal base IC660TBA103**
Group	**to group isolation 300V rms**
Heat	**dissipation 9 Watts maximum**
Operating	**voltage 115 VAC / 125 VDC**
Operating	**Temperature 0 Degree to 60 Degree Celsius**
LEDs	**Yes. 2**
Communication	**protocol Genius Protocol**
Storage	**temperature of -40 Degree Celsiu**

3. Product Information

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Brand GE Fanuc

Series Genius I-O

Manufacturer Emerson Automation / GE Fanuc (formerly)

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Series Block I/O

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Part Number IC660EBA103

Compatible Module IC660BBA103 6-channel Thermocouple Block input module

Inputs 6 thermocouple compatible inputs divided in three groups of 2 each.

Product Description Electronics Assembly

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

Power supply voltage AC 93-132V AC

Compatible Block I/O IC660BBA103 115 VAC / 125 VDC 6-channel Thermocouple input block

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

Power supply voltage DC 105-145V DC

Compatible Terminal base IC660TBA103

Group to group isolation 300V rms

Heat dissipation 9 Watts maximum

Operating voltage 115 VAC / 125 VDC

Operating Temperature 0 Degree to 60 Degree Celsius

LEDs Yes. 2

Communication protocol Genius Protocol

Storage temperature of -40 Degree Celsius to 100 Degree Celsius

Block to block isolation 1500V for 1 minute

Block to Block Isolation 1500 V for 1 minute

5-95% non-condensing Operating vibration

Frequency 47-63 Hertz

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

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

Ripple 10% maximum

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

discontinued

Weight 1.8 kg

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

Humidity 5% to 95% (non-condensing)

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

The IC660EBA103 is a modular component of the Genius I/O Thermocouple Block input module. This component is an electronics assembly that is used with the IC660TBA103 terminal base which comprises the IC660BBA103 Thermocouple Input and Output module. This formed I/O module is compatible for use with Thermocouple and voltage generating instruments, accepting input voltage range of -25 to +150 mV with a measurement accuracy of 8 Hz at 25 Degree Celsius. Genius Block I/O formerly under GE Fanuc Automation now by Emerson Automation. These are modular I/O platform that is mainly used for implementing distributed I/O architecture. The series has a modular design allowing components to be replaced and serviced one by one. With this feature, module servicing is simplified and effectively reduces downtime as an existing wire can be maintained and components are simple to install. The IC660EBA103 provides the electronic circuitry which is the Analog to Digital Converter (ADC), module to backplane isolation, and channel group isolation circuits with rated values of 1500 VAC for a single minute and 300 V, respectively. It also has the multiplexer circuit which intersperses the Two main Thermocouple input times, and input filters. This electronic assembly is designed for power supply voltage ranges of 93-123 VAC, 47-63 Hz at 9 Watts power with a nominal voltage of 115 VAC or 105-145 VDC with 10% ripple at 9 Watts power while the nominal voltage is 125 VDC. This module has an Operating Temperature of 0 Degree to 60 Degree Celsius; Storage temperature of -40 Degree Celsius to 100 Degree Celsius; Relative Humidity 5-95%, non-condensing and operating vibration of 5-10 Hz, 2” or 5.088 displacements.

The IC660EBA103 is an electronics assembly that is made to be part of the thermocouple blocks from the Genius I/O series by GE Fanuc Automation. This assembly provides electronic components for the correct functioning of 6 thermocouple compatible inputs that are divided into 3 groups. This type of block is used mainly to monitor temperature inputs and to measure low-level input signals. Each of the 3 input groups is isolated and they each contain 2 thermocouple input circuits and 2 compensation inputs that are remote cold junction input types. The GE Fanuc Automation IC660EBA103 electronics assembly can perform different diagnostics. These diagnostics are internal fault detection, open-wire detection, and high and low input alarm diagnostics. The GE Fanuc Automation IC660EBA103 electronics assembly is highly compatible with PCIM and QBIM modules. For these connections, the software for hand-held monitors that is version 3.5 or later is necessary. The block that the assembly is part of is also compatible with the GE Series 90-70 PLCs, Series 6 PLCs, and the Series 5 PLCs. For these PLCs, the CPUs must be revision 2 or later, revision 105 or later, and revision 3.0 or later, respectively. The block has a heat dissipation rating of 9 Watts maximum and a block to block isolation of 1500 Volts/min.