GE Genius I-O Series Service Manual

IC660EBD120

1. Description

GENIUS Electronic Assembly for BBD120 (EBD Only) High Speed Counter IC6 IC660EB IC660EBD The IC660EBD120 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 IC660TBD120 terminal base to form the IC660BBD120, High-Sped counter block. Technical specifications for IC660EBD120

2. Specifications

Specification	Value
Brand	**GE Intelligent Platforms/GE Fanuc**
Series	**Genius I-O**
Manufacturer	**GE Fanuc / Emerson Automation**
Part	**Number IC660EBD120**
Series	**Block I/O**
Part	**Number IC660EBD120**
Product	**Description Electronics Assembly**
Product	**Type Electronics Assembly**
Compatible	**Module IC660BBD120 High Speed Counter**
Operating	**Temperature 0 Degree to 60 Degree Celsius**
Compatible	**Terminal base IC660TBD120**
Storage	**Temperature -40 to 100 degrees Celsius**
Nominal	**input voltage 115 VAC**
Non-Condensing	**Humidity 5 to 95 percent**
Input	**voltage range 93-132 VAC**
Operating	**Voltage 93 to 132V AC/10 to 30V DC**
Frequency	**47-63 Hz**
Frequency	**47 to 63 Hz**
No.	**of discrete inputs Twelve (12)**
AC	**Power Supply Dropout Time 1 cycle**
No.	**of discrete outputs Four (4)**
DC	**Power Supply Dropout Time 10 ms at 12 V, 75 ms at 24 V**
Storage	**temperature of -40 Degree Celsius to 100 Degree Celsius**
LED	**block I/O Enabled, Unit OK**
5-95%	**non-condensing Operating vibration**
Circuit	**Overcurrent Threshold 4 Amps**
5-10	**Hz, 2” or 5.088 displacement Product lifecycle**

3. Product Information

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Brand GE Intelligent Platforms/GE Fanuc

Series Genius I-O

Manufacturer GE Fanuc / Emerson Automation

Part Number IC660EBD120

Series Block I/O

Part Number IC660EBD120

Product Description Electronics Assembly

Product Type Electronics Assembly

Compatible Module IC660BBD120 High Speed Counter

Operating Temperature 0 Degree to 60 Degree Celsius

Compatible Terminal base IC660TBD120

Storage Temperature -40 to 100 degrees Celsius

Nominal input voltage 115 VAC

Non-Condensing Humidity 5 to 95 percent

Input voltage range 93-132 VAC

Operating Voltage 93 to 132V AC/10 to 30V DC

Frequency 47-63 Hz

Frequency 47 to 63 Hz

No. of discrete inputs Twelve (12)

AC Power Supply Dropout Time 1 cycle

No. of discrete outputs Four (4)

DC Power Supply Dropout Time 10 ms at 12 V, 75 ms at 24 V

Storage temperature of -40 Degree Celsius to 100 Degree Celsius

LED block I/O Enabled, Unit OK

5-95% non-condensing Operating vibration

Circuit Overcurrent Threshold 4 Amps

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

Block Steady State Output Current 2 Amps max. Description

The IC660EBD120 is a component of the Genius I/O series, formerly by GE Fanuc Automation, recently acquired by Emerson Automation. This component is specifically an electronics assembly that is paired with the IC660TBD120 terminal base. These components form the I/O block with catalog number IC660BBD120 which is a High-Speed counter Block that accepts high-speed input signal with a switching frequency of up to 200 kHz. This High-Speed counter module is specially designed for use in Turbine Flow metering, meter proving, Velocity measurement, Material handling, and motion control. The IC660EBD120 being an electronics assembly hosts the electronic circuitry that enables module functionality. It is part of the modular approach of the module allowing ser and plant personnel to install, maintain and troubleshoot the module with ease as components can be detached without the need of dismantling existing wires. When installing this electronics assembly, it must be mounted without power. The IC660EBD120 circuitry is designed to accept the input supply voltage range of 93-132 VAC along with a frequency range of 47 - 63 Hz while the input channels are rated 5VDC - 30 VDC and accepts Single-ended TTL, Differential TTL, non TTL single-ended, and non-TTL differential voltage input. This electronics assembly accommodates 12 input and 4 outputs and supports the operation of 1, 2, or 4 counters with different complexity. The electronics assembly has the same operating, storage, relative humidity, and operation vibration requirements as to the Block I/O module which is 0 Degree to 60 Degree Celsius, -40 Degree Celsius to 100 Degree Celsius, 5-95% non-condensing, and 5-10 Hz, 2” or 5.088 displacements, respectively.

The IC660EBD120 electronics assembly is manufactured by GE Fanuc as part of the Genius I/O series. This is part of the high-speed counter module that is self-contained, and it is also a configurable I/O module that offers direct rapid pulse signal processing at up to 200 kilohertz. Some of the typical applications of this electronics assembly block include meter providing, velocity measurement, turbine flowmeter, process control, motion control, and material handling applications. The GE Fanuc IC660EBD120 electronics assembly block operates at 115 Volts AC or 10 to 30 Volts DC. When the block is powered by 115 Volts AC, the 10 to 30 Volts DC power is used as the backup power. Both the AC and DC power can be supplied concurrently when the 115 Volts AC power source fails, and the block can continue operating on the DC reserve power. Any source of DC power which can provide an output within the range of 10 to 30 volts DC can be used to operate the IC660EBD120 electronics assembly block. Nevertheless, these power sources must all adhere to the specifications of the manufacturer. Since the IC660EBD120 electronics assembly block has both AC and DC power sources, its power can be taken from the AC input provided that the DC voltage source does not exceed 20 Volts. This block offers 1, 2, or 4 counters of different complexity levels. When the block has its microprocessor and communication capability activated, it can count and offer outputs without having to communicate with the CPU. The IC660EBD120 electronics assembly block comes with 4 control outputs and it provides an output voltage of 5 Volts DC as well as a square wave oscillator output, which can be used for timing references.