GE Genius I-O Series Service Manual

IC660EBD021

1. Description

GENIUS Electronic Assembly for BBD021 (EBD Only) 24/48Vdc Sink I/O IC660 IC660EB IC660EBD The IC660EBD021 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 IC660TSD021 or IC660TSD023 terminal to form the IC660BBD021, 24 / 48 VDC 16-channel combination discrete input and output, and IC660BBD023, 24 VDC 16-channel combination discrete Techn

2. Specifications

Specification	Value
Brand	**GE Intelligent Platforms/GE Fanuc Automation**
Series	**Genius I-O**
Manufacturer	**GE Fanuc / Emerson Automation**
Part	**Number IC660EBD021**
Series	**Block I/O**
Part	**Number IC660EBD021**
Product	**Description Electronics Assembly**
Product	**Type Electronic Assembly**
Compatible	**Module IC660BBD021, 24 / 48 VDC 16-channel combination discrete input and output block; IC660BBD023, 24 VDC 16-channel combination discrete input and output block.**
Operating	**Voltage 18 to 56V DC/18 to 30V DC**
Compatible	**Terminal base IC660TSD021 or IC660TSD023 terminal bases**
Ripple	**10%**
Nominal	**input voltage 24 VDC / 48 VDC**
Required	**DC Power 300 mA (Max)**
Input	**voltage range 18-56 VDC**
No.	**of configurable Discrete inputs Sixteen (16)**
Block	**to Block Isolation 1500 V**
No.	**of configurable Discrete outputs Sixteen (16)**
Circuit	**LEDs Individual load side indicators**
Operating	**Temperature 0 Degree to 60 Degree Celsius**
Power	**Supply Dropout Time 10 microseconds**
Storage	**temperature of -40 Degree Celsius to 100 Degree Celsius**
Output	**Current (Ste**

3. Product Information

GENIUS Electronic Assembly for BBD021 (EBD Only) 24/48Vdc Sink I/O IC660 IC660EB IC660EBD The IC660EBD021 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 IC660TSD021 or IC660TSD023 terminal to form the IC660BBD021, 24 / 48 VDC 16-channel combination discrete input and output, and IC660BBD023, 24 VDC 16-channel combination discrete

Technical specifications for IC660EBD021

Brand GE Intelligent Platforms/GE Fanuc Automation

Series Genius I-O

Manufacturer GE Fanuc / Emerson Automation

Part Number IC660EBD021

Series Block I/O

Part Number IC660EBD021

Product Description Electronics Assembly

Product Type Electronic Assembly

Compatible Module IC660BBD021, 24 / 48 VDC 16-channel combination discrete input and output block; IC660BBD023, 24 VDC 16-channel combination discrete input and output block.

Operating Voltage 18 to 56V DC/18 to 30V DC

Compatible Terminal base IC660TSD021 or IC660TSD023 terminal bases

Ripple 10%

Nominal input voltage 24 VDC / 48 VDC

Required DC Power 300 mA (Max)

Input voltage range 18-56 VDC

No. of configurable Discrete inputs Sixteen (16)

Block to Block Isolation 1500 V

No. of configurable Discrete outputs Sixteen (16)

Circuit LEDs Individual load side indicators

Operating Temperature 0 Degree to 60 Degree Celsius

Power Supply Dropout Time 10 microseconds

Storage temperature of -40 Degree Celsius to 100 Degree Celsius

Output Current (Steady State) 2 Amps per circuit

5-95% non-condensing Operating vibration

Weight 4 lbs (1.8 kg)

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

Block Output Current 15 Amps at 35 degrees Celsius

discontinued

Output Off-State Leakage Current 1.0 mA Description

The IC660EBD021 is part of the Genius I/O Block series that is formerly manufactured by GE Fanuc Automation, now under Emerson Automation. This electronics assembly is used with a terminal base specifically, IC660TSD020 or IC660TSD023 to form a functional block I/O module such as IC660BBD021, 24 / 48 VDC 16-channel combination discrete input and output, and IC660BBD023, 24 VDC 16-channel combination discrete input and output block. the IC660EBD021 hosts the Sixteen (16) sink/source I/O circuits that are designed to receive 24 / 48 input voltages. The input and output circuits are both provided with Status LED indicators that energize when a specific channel becomes active. This electronic circuit is also responsible for communicating with the processor through the backplane as well as the power terminals to receive 5 VD backplane power. The IC660EBD021 is ideally used as a spare part to a functional IC660BBD021 and IC660BBD023 I/O Block. During replacement of the electronic assembly, module power must be removed to eliminate the possibility of electrical arcing that may damage nearby electronic components. Also, never touch the electronic parts and hold them to a grounded object for a while to discharge static electricity. When working in the field, place the module in the anti-static bag or on top of a grounded table. This electronic assembly also hosts the communication interface which is utilized by the module to exchange data with devices within the network such as the central Programmable Logic Controller (PLC). It supports Genius I/O protocol which is a multi-drop, ling distance, and high-speed communication protocol.

The IC660EBD021 I/O block is a 16-circuit DC I/O block manufactured by GE Intelligent Platforms/GE Fanuc as part of the GE Genius I/O series. This module is an intelligent, configurable block that can be used to interface with a variety of discrete DC actuators and sensors. It also includes 2 DC-powered 16-circuit sources that provide current to the field output devices. The IC660EBD021 16-circuit sinks or source I/O block comes with 16 isolated circuits that can be configured to be outputs, inputs, or tristate inputs. Output circuits can be connected to the input circuits without using any other components or logic state inversion. This unit comes with configurable features such as the output pulse test functionality, the output powerup defaults, and a selectable input filter time of 10 to 100 microseconds. It also has an output hold last state or default configuration feature. The GE Fanuc IC660EBD021 I/O block has diagnostics that can identify installation triggers and runtime errors. The diagnostics features of this block include failed switch detection, over-temperature protection, overload detection and shutdown, no-load detection, and open-wire detection for the tristate inputs. The GE Fanuc IC660EBD021 I/O block weighs approximately 4 pounds or 1.8 kilograms, and it has a heat dissipation rating of 68.8 Watts with all 16 outputs powered on at current of 2 Amps. The required current for DC power is 150 milliamps typical and 200 milliamps maximum. The power supply dropout time is 10 microseconds. When it is in the on-state, the voltage rating is 24 Volts DC of supply voltage with a source block voltage range of 16 to 24 Volts DC and a sink block voltage range of 0 to 8 Volts DC.