GE Genius I-O Series Service Manual

IC660BBA106

1. Description

The IC660BBA106 is a Current-source Analog Input Block with six channels of GE Fanuc series 90-30 PLCs. The required power supply for this block is 115VAC or 125VDC. It has six current inputs of 4mA to 20mA. Each one provides a 24V current loop power supply with accuracy as precise as 0.1% and is isolated. It also has a BSM circuit electrically common to input 1 but is isolated from the others.

2. Specifications

Specification	Value
Brand	**GE Fanuc**
Series	**Genius I-O**
Part	**Number IC660BBA106**
Heat	**Dissipation 12 Watts**
Channel	**to channel isolation 1500V RMS**
Product	**Description Current source input block**
No.	**of Inputs Six (6)**
Supported	**signals 0-20 mA; 4-20 mA**
Input	**Resolution 1 µA**
Input	**conversion time 16.6ms to 400ms (user selectable)**
Block	**Power, nominal 115 VAC / 125 VDC**
Block	**Power, input range 93-132 VAC / 105-145 VDC**
Status	**LEDs Unit OK, I/O Enabled**
Size	**(HxWxD) 8.83 x 3.56 x 4.42 inches**
Weight	**4 Pounds**
Description	**Analog input block**
Channels	**6**
Current	**4-20 mA**
Voltage	**115 Volts AC, 125 Volts DC**
Thermal	**drift 70 ppm**
Input	**impedance 100 ohms**
Input	**accuracy 0.1% with a full reading Description**
The	**IC660BBA106 is a Genius I/O Block that is a Current-source analog input block. This I/O block features Six (6) input point with individually isolated channels. This module accepts 0-20 mA and 4-20 mA input signals for interfacing a variety of devices such as transmitters, Variable Frequency Drive (VFD), Dampers, panel met**

3. Product Information

The IC660BBA106 is a Current-source Analog Input Block with six channels of GE Fanuc series 90-30 PLCs. The required power supply for this block is 115VAC or 125VDC. It has six current inputs of 4mA to 20mA. Each one provides a 24V current loop power supply with accuracy as precise as 0.1% and is isolated. It also has a BSM circuit electrically common to input 1 but is isolated from the others.

When power is provided to the block, input channels translate analog current to digital value as whole integers using voltage to frequency converters; after that, they send it to CPU. Input conversion time can be selected to provide the appropriate combination of noise rejection and input resolution. Conversion times are programmable from 16mS to 400mS. Resolution increases as the conversion time is lengthened. Input resolution is 1µA for 200mS conversion time. Upper and lower alarm limits can be programmed for each input circuit. If either limit is exceeded, the block indicates a fault and sends a message to the handheld mnitor, which is required for configuration and control of the IC660BBA106 Current-source Analog Input Block. In each bus scan, the block broadcasts 12 bytes of input data. Each input consists of two bytes of data.

The IC660BBA106 has 32 terminals. Power source connects to terminals 6 and 7. Input cables connect to the self-powered inputs 10 to 32. The bus switching module connects to terminals 8-9. The GE Fanuc IC660BBA106 is a Current-source analog input block. This block has Six (6) input points with individual isolation. It supports input range of 0-20 mA and 4-20 mA with resolution of One (1) µA with a user selectable update rate of 16.6 mS to 400mS. Technical specifications for IC660BBA106

Brand GE Fanuc

Series Genius I-O

Part Number IC660BBA106

Heat Dissipation 12 Watts

Channel to channel isolation 1500V RMS

Product Description Current source input block

No. of Inputs Six (6)

Supported signals 0-20 mA; 4-20 mA

Input Resolution 1 µA

Input conversion time 16.6ms to 400ms (user selectable)

Block Power, nominal 115 VAC / 125 VDC

Block Power, input range 93-132 VAC / 105-145 VDC

Status LEDs Unit OK, I/O Enabled

Size (HxWxD) 8.83 x 3.56 x 4.42 inches

Weight 4 Pounds

Description Analog input block

Channels 6

Current 4-20 mA

Voltage 115 Volts AC, 125 Volts DC

Thermal drift 70 ppm

Input impedance 100 ohms

Input accuracy 0.1% with a full reading Description

The IC660BBA106 is a Genius I/O Block that is a Current-source analog input block. This I/O block features Six (6) input point with individually isolated channels. This module accepts 0-20 mA and 4-20 mA input signals for interfacing a variety of devices such as transmitters, Variable Frequency Drive (VFD), Dampers, panel meters, data loggers, signal isolators, converters and other devices.

The IC660BBA106 Block I/O is powered by supplying an external voltage of 115VAC or 125VDC, nominal value and actual operating range of 93-132VAC or 105-145 VDC. It has a resolution of One (1) µA with user selectable update rate of 16.6mS to 400mS. It has channel-channel isolation rated at 1500V RMS. It has a built-in internal diagnostics such as Underrange, Overrange, High Alarm, Low Alarm, and Open Wire.

The IC660BBA106 is required to be operated at a temperature range of 0° C to +60° C (+32° to +140° F) with storage temperature of -40° to +100° C (-40° to +212° F) and humidity of 5% to 95%, non-condensing, and operating vibration of 5-10 Hz 0.2” (5.08mm) displacement, 10-200 Hz at 1G.

The IC660BBA106 has an open circuit voltage of 24VDC, short circuit current of <75 mA and loop impedance of 1000 Ohms maximum (0mA to 20mA) and 800 Ohms maximum (20mA to 25mA) and normal mode rejection -45dB at 50, 60Hz.

The IC660BBA106 has built-in status LED indicators such as Unit OK and I/O enabled. Under normal operation, the both LED indicators should remain at steady ON state. Other LED characteristic may depict forced, disabled and a not communicating block I/O module.

The IC660BBA106 I/O block is designed with fault reporting that can diagnose the system automatically and check over-range and under range situations in the flow of inputs, alarms, and other events. The GE IC660BBA106 I/O block dissipates 12 Watts of maximum heat for normal use. The operating temperature requirement is 0-60 degrees Celsius for regular operation. Each individual circuit of the block has 2 alarms. One alarm is used for a low value and the other is used for a high value. The block features circuit scaling, CPU redundancy, and input conversion time. The channel to channel isolation is 1500 Volts RMS and the thermal drift of the block is 70 ppm per degree Celsius. The input impedance of the I/O block is 100 ohms. The IC660BBA106 I/O block has a normal mode rejection at -45 dB for a frequency of 50 to 60 Hertz. The input accuracy of the block is 0.1% of the full reading.