GE Field Control Series Service Manual

IC670ALG330

1. Description

The IC670ALG330 is an 8 Point Analog Current-Source Output Module from the Field control series of GE Fanuc. This module has Eight (8) single-ended, 0-20 mA output channels with resolution of 16 bits and channel update time of 1.5 ms, typical. It requires an external power supply ranging 18-30 VDC, 24 VDC typical. This module is capable of reporting underrange, overrange and open wire Technical specifications for IC670ALG330

2. Specifications

Specification	Value
Manufacturer	**GE Fanuc**
Series	**Field Control**
Manufacturer	**GE Fanuc**
Wiring	**configuration Single-ended**
Part	**Number IC670ALG330**
Series	**Field I/O control**
Output	**signal, nominal 0-20 mA**
Product	**Type Output Module**
Part	**Number IC670ALG330**
Output	**signal, range 0.0-20.48 mA**
Signal	**Type Analog**
Product	**Description 8-Point Analog Current-Source Output Module**
Analog	**resolution 0.3125 µA per count, maximum resolution**
Current	**or Voltage Outputs Current Outputs**
No	**of Channels Eight (8) Current Source outputs**
Conversion	**resolution 16 bits**
Number	**of Channels 8**
Output	**signal range 0-20 mA**
Output	**load capacitance 2000 pF, maximum**
Current	**Range 0 to 20.48 milliamps**
Isolation	**1500 VAC for 1 minute, 250 VAC continuous**
Output	**load inductance 0.5H, maximum**
Number	**of LEDs 1**
Update	**time 1.5mS typical**
Update	**time 1.5 mS, typical**
Output	**Resolution 16 Bits**
Resolution	**16 bits, typical**
Open	**wire output current threshold 1.0 mA minimum, 3.5 mA maximum**
Magnitude	**data size 14 bits**
External	**Power supply 18 to 30 VDC, 24 VD**

3. Product Information

The IC670ALG330 is an 8 Point Analog Current-Source Output Module from the Field control series of GE Fanuc. This module has Eight (8) single-ended, 0-20 mA output channels with resolution of 16 bits and channel update time of 1.5 ms, typical. It requires an external power supply ranging 18-30 VDC, 24 VDC typical. This module is capable of reporting underrange, overrange and open wire Technical specifications for IC670ALG330

Manufacturer GE Fanuc

Series Field Control

Manufacturer GE Fanuc

Wiring configuration Single-ended

Part Number IC670ALG330

Series Field I/O control

Output signal, nominal 0-20 mA

Product Type Output Module

Part Number IC670ALG330

Output signal, range 0.0-20.48 mA

Signal Type Analog

Product Description 8-Point Analog Current-Source Output Module

Analog resolution 0.3125 µA per count, maximum resolution

Current or Voltage Outputs Current Outputs

No of Channels Eight (8) Current Source outputs

Conversion resolution 16 bits

Number of Channels 8

Output signal range 0-20 mA

Output load capacitance 2000 pF, maximum

Current Range 0 to 20.48 milliamps

Isolation 1500 VAC for 1 minute, 250 VAC continuous

Output load inductance 0.5H, maximum

Number of LEDs 1

Update time 1.5mS typical

Update time 1.5 mS, typical

Output Resolution 16 Bits

Resolution 16 bits, typical

Open wire output current threshold 1.0 mA minimum, 3.5 mA maximum

Magnitude data size 14 bits

External Power supply 18 to 30 VDC, 24 VDC typical. 10% maximum ripple

Linearity 1 LSB resolution value

Current Drawn from BIU power supply 85 mA maximum

Supply Voltage range 18-30 VDC

Current Drawn from external power supply 250 mA maximum (with all 8 outputs at 20 mA)

Nominal supply voltage 24 VDC

Current draw from Bus Interface Unit (BIU) 85 mA

Current drawn from external power 250 mA

Product Lifecycle Status Discontinued/Obsolete Description

The IC670ALG330 is a Field control module that is manufacture by GE Fanuc. This module mainly features Eight (8) single-ended analog output channels, providing 0-20 mA output current signal. This module has a built-in Digital to Analog Converter (DAC) with conversion resolution of 16-bits, digital resolution of 0.3125 µA per count. The IC670ALG330 requires an external power supply to operate the module. Applicable power supply range is 18-30VDC with nominal supply voltage of 24 VDC. This module is designed to operate with a Bus Interface Unit (BIU) with BIU power supply maximum current draw of 85 mA and 250 mA from the external power supply, with all analog output channels generating 20 mA output. The IC670ALG330 has an operating temperature range of 0-55 Degrees Celsius with isolation rating to ground and logic of 1500 VAC for 1 minute and 250 VAC, continuous. It has maximum output load capacitance of 2000 pF and maximum output load inductance of 0.5 Henry. Each channel of this module has rated update time of 1.5 ms, typical while the minimum open wire output current threshold is 1.0 mA and maximum of 3.5 mA. The IC670ALG330 output channels are configurable to hold last state in the event of BIU resetting the the IC670ALG330 module; No output data received from the BUI after the timeout period has elapsed; backplane power is lost or the module's watchdog timer has expired. In addition, at occurrence of backplane power lost and watchdog timer expiration, the resolution of the held value is reduced from 16 bit to 14 bits.

The GE Fanuc IC670ALG330 module is a field control module that has 8 analog output current channels. Each of the module's cannel is scalable and can be configured by the users. The users specifically can configure the scaling parameters and the output level. The IC670ALG330 module can also be reset to its factory calibration settings because the module's flash memory stores all of the calibration data. The output currents can be anywhere between 0 and 20 milliamps with 16-bit resolution. The data types that the IC670ALG330 field control module supports are the bit data types and the word data types. The GE Fanuc IC670ALG330 field control module has alarms for situations like under-range, over-range, and open wire errors. This module only has 1 LED indicator, that can depict that the module is appropriately powered on and operating properly when glowing steadily; faulted when flashes intermittently and at powered off state or has experienced fatal error if not illuminated. The purpose of the IC670ALG330 module is to transmit data. It receives output data in engineering units from a BIU or Bus Interface Unit, it scales this data according to the parameter settings and calibrations that the users have given it, and it finally converts this data into an output current rated at 0 to about 20.48 milliamps.