GE Genius I-O Series Service Manual

IC660BLM506

1. Description

GE Bus Terminator 150 Ohm (Qty 4) The IC660BLM506 is a Bus Terminating Resistor that is used with the Genius I/O series, formerly by GE Fanuc now under Emerson Automation. This is essentially a 150 Ohm resistor that is used to terminate the Genius I/O. It is installed across the S1 and S2 terminals of the Genius I/O Block. Technical specifications for IC660BLM506

2. Specifications

Specification	Value
Brand	**GE Fanuc**
Series	**Genius I-O**
Manufacturer	**GE Fanuc (Former); Emerson Automation (Current)**
Part	**Number IC660BLM506**
Series	**Genis I/O Block**
Product	**Type Terminating Plug**
Product	**Description Terminating Resistor**
Resistance	**150 Ohms**
Resistance	**value 150 Ohms**
Weight	**2 Pounds**
No.	**of connection pins Four (4)**
Installation	**Terminals Serial 1 and Serial 2**
Termination	**Type Bus Terminations**
Mounting	**Location First and Last node of the Genius I/O Bus**
Compatible	**Terminals Serial 1 and Serial 2**
Compatible	**Devices Genius I/O Block, Bus Switching Module (BSM), Bus Controller Module (BCM), PCIM**
Compatible	**Cables Conventional Bus Cables and Cables with Pre-Molded Connectors**
Compatible	**PLC Series Series 90-30; Series 90-70; Genius I/O Block**
Compatible	**Cable End The Female End**
Compatible	**prefabricated cables IC660BLC001; IC660BLC003**
Supported	**Topologies Simplex and Redundant Genius Bus**
Mounting	**tools Flat screwdriver**
Color	**Black**
Product	**Lifecycle Discontinued Description**
The	**IC660BLM506 is a terminatin**

3. Product Information

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Brand GE Fanuc

Series Genius I-O

Manufacturer GE Fanuc (Former); Emerson Automation (Current)

Part Number IC660BLM506

Series Genis I/O Block

Product Type Terminating Plug

Product Description Terminating Resistor

Resistance 150 Ohms

Resistance value 150 Ohms

Weight 2 Pounds

No. of connection pins Four (4)

Installation Terminals Serial 1 and Serial 2

Termination Type Bus Terminations

Mounting Location First and Last node of the Genius I/O Bus

Compatible Terminals Serial 1 and Serial 2

Compatible Devices Genius I/O Block, Bus Switching Module (BSM), Bus Controller Module (BCM), PCIM

Compatible Cables Conventional Bus Cables and Cables with Pre-Molded Connectors

Compatible PLC Series Series 90-30; Series 90-70; Genius I/O Block

Compatible Cable End The Female End

Compatible prefabricated cables IC660BLC001; IC660BLC003

Supported Topologies Simplex and Redundant Genius Bus

Mounting tools Flat screwdriver

Color Black

Product Lifecycle Discontinued Description

The IC660BLM506 is a terminating resistor that is used with the Genius I/O Block module. This is an accessory component that is specifically needed when the last node of the Genius I/O network is a Genius I/O Block module. Genius I/O Block is stand-alone, distributed I/O devices that are capable of functioning as an I/O module and communication adapter simultaneously as each I/O block is installed with different I/O densities and support specific I/O types, all able to exchange I/O data through Genius I/O Protocol over the daisy-chain topology of Genius Bus. This I/O platform is formerly manufactured by GE Fanuc Automation, now under Emerson Automation. The IC660BLM506 has a resistance value of 150 Ohms. This resistor can be used along with prefabricated cables as it can be installed by sliding the resistor onto the female cable end. This forms the connection to the Genius I/O terminals as well as the impedance needed to terminate the bus. If a redundant Genius I/O bus is being implemented and the last node is a Bus Switching Module (BSM), install the terminating resistor only across the S1 and S2 terminals of the BSM. There is no need to install a terminating resistor individually at each of the buses. If a Bus controller or PCIM device is the last node of the Genius I/O Bus, the onboard terminating resistors must not be set instead, the resistor with appropriate value such as the IC660BLM506 can be installed across the Serial 1 and Serial 2 connectors on the Bus Controller. The advantage of this method is that it permits boards to be replaced without the need of disconnecting or disrupting the connection since the Genius I/O Bus is continuously terminated by the separately installed resistor, not the onboard terminating resistors.

The IC660BLM506 plug is a prefabricated 150-Ohm terminating plug. The IC660BLM506 plug is installed in the Serial 1 and 2 terminals when a bus is terminated at a GE Fanuc Genius I/O block. The weight of the IC660BLM506 plug is 2 pounds. The IC660BLM506 plug can be used with conventional bus cables and with cables that have pre-molded connectors. The IC660BLM506 plug should be connected to the female end of the cable. There are 4 types of wiring that can be typically found in an industrial installation system. A PLC system using Genius I-O devices may have a mix of control wiring, analog wiring, and communication wiring, especially in restricted spaces. The Genius serial bus uses computer-grade twisted pair data cables. The bus is constructed through daisy-chaining where the Serial 1 and Serial 2 lines are tapped at intermediate locations along the bus. The bus connections need to be consistent because the signal is polarized. The cable shield is broken up into segments, and each segment shield is DC grounded at one end (Shield Oot) and terminated with a small capacitor at the other end (Shield In). This cable segmentation is done to break up extended ground loop paths. Capacitor termination helps to reduce common noise resulting from high frequency pickup and at the same time prevents high amplitude ground loop currents in the cable shield at low frequencies.