GE Series 90-30 Series Service Manual

IC693MDL660

1. Description

The IC693MDL660 is a Series 90-30, 24 VDC Positive / Negative Logic discrete input module. This module is formerly produced by GE Fanuc, now acquired by Emerson Automation. It features Thirty-Two (32) discrete input channels in Four (4) groups of Eight (8) channels. Each channel accepts an input voltage range of 24 volts DC (+10%, –20%) along with an input current of 7.5 mA at rated voltage.

2. Specifications

Specification	Value
Brand	**GE Fanuc**
Series	**Series 90-30**
Manufacturer	**GE Fanuc (Former); Emerson Automation (Current)**
Part	**Number IC693MDL660**
Series	**Series 90-30**
Rated	**Voltage 24 Volts DC**
Part	**Number IC693MDL660**
Input	**Voltage Range 0-30 VDC**
Product	**Description Discrete input module**
Inputs	**per Module 32 (four groups with two commons per group)**
No	**of Channels Thirty-Two (32)**
Isolation	**1500 Volts between field side and logic side**
No.	**of groups Four (4)**
Input	**Current 7.0 mA at rated voltage**
No.	**of channels per group Eight (8)**
On-state	**Voltage 15 Volts DC minimum**
Isolation	**1500 VAC between field side and logic side**
Nominal	**output voltage 24 VDC**
Voltage	**Type DC**
Current	**draw 5 mA**
Product	**Lifecycle Status* Discontinued/Obsolete**
On	**response time, maximum 2 ms**
Off	**response time, maximum 2 ms**
On–state	**Voltage 15 VDC**
Off–state	**Voltage 6 VDC**
On–state	**Current 4.5 mA**
Off-state	**Current 2 mA maximum**
Wiring	**configuration Positive / Negative logic wiring**
The	**IC693MDL660 is a discrete input module from the Series 90-30 Program**

3. Product Information

The IC693MDL660 is a Series 90-30, 24 VDC Positive / Negative Logic discrete input module. This module is formerly produced by GE Fanuc, now acquired by Emerson Automation. It features Thirty-Two (32) discrete input channels in Four (4) groups of Eight (8) channels. Each channel accepts an input voltage range of 24 volts DC (+10%, –20%) along with an input current of 7.5 mA at rated voltage.

Technical specifications for IC693MDL660

Brand GE Fanuc

Series Series 90-30

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

Part Number IC693MDL660

Series Series 90-30

Rated Voltage 24 Volts DC

Part Number IC693MDL660

Input Voltage Range 0-30 VDC

Product Description Discrete input module

Inputs per Module 32 (four groups with two commons per group)

No of Channels Thirty-Two (32)

Isolation 1500 Volts between field side and logic side

No. of groups Four (4)

Input Current 7.0 mA at rated voltage

No. of channels per group Eight (8)

On-state Voltage 15 Volts DC minimum

Isolation 1500 VAC between field side and logic side

Nominal output voltage 24 VDC

Voltage Type DC

Current draw 5 mA

Product Lifecycle Status* Discontinued/Obsolete

On response time, maximum 2 ms

Off response time, maximum 2 ms

On–state Voltage 15 VDC

Off–state Voltage 6 VDC

On–state Current 4.5 mA

Off-state Current 2 mA maximum

Wiring configuration Positive / Negative logic wiring

The IC693MDL660 is a discrete input module from the Series 90-30 Programmable Logic Controller (PLC) platform of GE Fanuc. This module features Thirty-Two (32) input channels, accepting an input voltage signal range of 0-30 VD with a nominal voltage of 24 VDC. This is a high-density input module that is designed to be used with either the IC694TBB032 box style or IC694TBS032 spring clamp style terminal block. The IC693MDL660 is a single slot module that is mounted to any I/O slot of the Series 90-30 5-slot or 10-slot baseplate. The input channels of this module are grouped into Four (4) with Eight (8) channels per group. Each of the points are assigned with a number of status LED indicator that illuminates Green when at Logic 1 condition. An input channel activates at an input voltage range of 11.5 - 30.0 VDC and inputs current of 7 mA, typical, at rated voltage. The number of IC693MDL660instances is limited by the I/O capacity of the host controller, memory capacity, and the slots available. It can be used as a local output module component of modular and compact series 90-30 controller or as a distributed output module component of larger remote I/O networks. This module supports positive and negative logic wiring configurations. This enables compatibility for use in different regions, areas of installation, and safety considerations. Positive logic wiring is used when the positive wire of the voltage source is used to force the logic 1 state of an input channel whereas, a negative logic wiring refers to the negative wire being used to indicate logic 1 state. In positive logic, the common wire is the negative wire while in negative logic, the common wire is the positive wire.

The IC693MDL660 module is a GE Fanuc discrete I/O module. The module is classified under Series 90-30 of the GE Fanuc Programmable Logic Controllers or PLCs. It is a DC voltage input module featuring 24 Volts DC positive or negative logic and it comes with up to 32 input points. The module features an active lifecycle status and it is a discrete input module type featuring an input voltage range of 0 to 30 Volts DC. The IC693MDL660 module comes with an input current rating of 7 milliamps and it is a 32-point module with a response time of 50 milliseconds ON and OFF. The IC693MDL660 module features a trigger voltage of 11.5 to 30 Volts with up to 8 points per connection. The component features internal power used at 300 milliamps per 5 Volts DC. The GE Fanuc IC693MDL660 module and various discrete input modules serve as the interface between the PLC and the external input devices. Examples of the input devices where the discrete inputs are used include the proximity sensors, the pushbuttons, the switches, and the BCD thumbwheels. The output modules by GE Fanuc provide the interface between the PLC and the external output devices which include the contractors, the interposing relays, the BDC displays, and the indicator lamps. Note that the GE Fanuc discrete I/O modules support different voltage ranges and types. Moreover, the current capacity, the isolation, and the response time to meet the application requirements will differ depending on the module. The IC693MDL660 module is a versatile module that is built to be programmed for a variety of applications and to be assembled from a wide variety of modular plug-together components.