GE Series 90-30 Series Service Manual

IC693MDR390

1. Description

The IC693MDR390 is a Series 90-30, 24 VDC discrete combination I/O module. This module is formerly produced by GE Fanuc, now acquired by Emerson Automation. It features eight (8) discrete input channels in a single group that is designed to accept an input voltage signal range of -30 to 32 VDC and input current of 7.5 mA at rated voltage; Eight (8) Normally Open (N.O.) relay channels

2. Specifications

Specification	Value
Brand	**GE Fanuc**
Series	**Series 90-30**
Manufacturer	**GE Fanuc (Former); Emerson Automation (Current)**
Part	**Number IC693MDR390**
Series	**Series 90-30**
Input	**Rated Voltage 24 Volts DC**
Product	**Description Combination Discrete input / output module**
Input	**Voltage range -30 to +32 volts DC**
No	**of input channels Eight (8) 24 VDC inputs**
Inputs	**per Module 8**
No	**of output channels Eight (8) Normally Open (N.O.) contact outputs**
Output	**Rated Voltage 24 VDC, 120/240 VAC**
Nominal	**input voltage 24 VDC**
Output	**Operating Voltage 5 to 30 Volts DC, 5 to 250 Volts AC, 50/60 Hz**
Input	**current 7.5 mA at rated voltage**
Outputs	**per Module 8**
Output	**operating voltage range 5-30 VDC; 5-250 VAC**
Maximum	**Load per output 2 Amps**
Output	**nominal voltage 24 VDC; 120/240 VAC**
Maximum	**Load per common 4 Amps**
Maximum	**load 2 A, maximum**
Product	**Lifecycle Status* Discontinued/Obsolete**
Input	**On and Off response time 7 ms**
Output	**On and Off response time 15 ms**
Backplane	**current draw 80 mA when all IO are active; 70 mA with all output energized**
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3. Product Information

The IC693MDR390 is a Series 90-30, 24 VDC discrete combination I/O module. This module is formerly produced by GE Fanuc, now acquired by Emerson Automation. It features eight (8) discrete input channels in a single group that is designed to accept an input voltage signal range of -30 to 32 VDC and input current of 7.5 mA at rated voltage; Eight (8) Normally Open (N.O.) relay channels

Technical specifications for IC693MDR390

Brand GE Fanuc

Series Series 90-30

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

Part Number IC693MDR390

Series Series 90-30

Input Rated Voltage 24 Volts DC

Product Description Combination Discrete input / output module

Input Voltage range –30 to +32 volts DC

No of input channels Eight (8) 24 VDC inputs

Inputs per Module 8

No of output channels Eight (8) Normally Open (N.O.) contact outputs

Output Rated Voltage 24 VDC, 120/240 VAC

Nominal input voltage 24 VDC

Output Operating Voltage 5 to 30 Volts DC, 5 to 250 Volts AC, 50/60 Hz

Input current 7.5 mA at rated voltage

Outputs per Module 8

Output operating voltage range 5-30 VDC; 5-250 VAC

Maximum Load per output 2 Amps

Output nominal voltage 24 VDC; 120/240 VAC

Maximum Load per common 4 Amps

Maximum load 2 A, maximum

Product Lifecycle Status* Discontinued/Obsolete

Input On and Off response time 7 ms

Output On and Off response time 15 ms

Backplane current draw 80 mA when all IO are active; 70 mA with all output energized

The IC693MDR390 is a Series 90-30 Programmable Logic Controller (PLC) platform component module that functions as a combination of discrete input and output modules. This module features Eight (8) discrete input channels that are designed to accept input signal voltage ranges of -30 to +30 VDC with rated or nominal voltage of 24 VDC while the typical input current is 7.5 mA at rated voltage. It also has Eight (8) discrete output channels in the form of Normally Open (N.O.) relay contacts designed for voltage ranges of 5 to 30 VDC, 5-250 VAC along with a 50/60 Hz frequency with each output contact capable of 2 Amperes maximum load current and 4 Amperes, maximum current per common. The IC693MDR390 is a single slot module that is installed to any I/O slot of a series 90-30 baseplate. It can be used with any Central Processing Unit (CPU) modules such as embedded and modular CPUs. It may be installed in a local I/O baseplate, where the CPU is installed, or to an expansion or remote I/O baseplate. The IC693MDR390 input channels have an On-state voltage of 15-32 VDC and an On-state current of 4 mA while the Off-state voltage range is 0-5 VDC and an Off-state current of 1.5 mA. The input channels have a typical response time of 7 ms for both On and Off signal transitions. Conversely, the output channels have a typical response time of 15 ms for both signal transitions. This module has a backplane current consumption of 80 mA when all IO is active and 70 mA with all output energized.

The GE Fanuc IC693MDR390 I/O module is a solid-state I/O module that is specifically designed for the GE Fanuc Series 90–30 PLC product line. This I/O module has 8 DC inputs and 8 normally open relay output circuits. It works as a simple-to-use, 8-circuit trigger device, and it accepts discrete inputs coming from manual switches, pushbuttons, limit switches, and photocells. Each input corresponds to a relay output circuit that can be used to control user-defined loads such as motor starters, alarm indicators, and solenoid valves. The GE Fanuc IC693MDR390 8 DC input and 8 relay output module must be powered from a 24 Volts DC rated power source and it can function correctly on a -30 to +32 Volts DC rated power supply voltage range. The GE Fanuc IC693MDR390 8 DC input and 8 relay output module offers a low-cost solution for controlling up to 8 independent relay circuits by using DC signals. The operating voltage of the outputs can work in 2 ranges: 5 to 30 Volts DC or 5 to 250 Volts AC at 50 to 60 Hertz. The 8 relay outputs of the modules are divided into 2 groups of 4 outputs, and each group can be powered from different sources using different voltage ranges if needed. The GE Fanuc IC693MDR390 8 DC input and 8 relay output module comes with high isolation voltage of of 1500 Volts RMS between the inputs and outputs, and it has a lower value of 500 Volts RMS between the output groups. Both the ON and the OFF response times are of a maximum of 15 milliseconds. Every circuit has a status LED that indicates when the relay is open (in the normal condition) or is closed (in the energized condition).