GE Series 90-30 Series Service Manual

IC693MDL653

1. Description

The IC693MDL653 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 with Two (2) commons per group. Each channel accepts an input voltage range of 024 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**
Manufacturer	**GE Fanuc (Former); Emerson Automation (Current)**
Part	**Number IC693MDL653**
Product	**Description Discrete input module**
Series	**Series 90-30**
Rated	**Voltage 24 Volts DC**
No	**of Channels Thirty-Two (32)**
Part	**Number IC693MDL653**
Input	**Voltage Range 19.2 - 28.8 VDC**
No.	**of input groups Four (4)**
No.	**of groups Four (4)**
Inputs	**per Module 32 (four groups with two commons per group)**
No.	**of inputs per group Eight (8)**
No.	**of channels per group Eight (8)**
Isolation	**1500 Volts between field side and logic side**
Input	**signal range 19.2 VDC - 26.4 VDC**
No	**of common terminal per group Two (2)**
Input	**Current 7.5 mA at rated voltage**
Nominal	**Input voltage 24 VDC**
Isolation	**1500 VAC between field side and logic side**
On-state	**Voltage 15 Volts DC minimum**
Input	**current 7.5 mA per channel**
Nominal	**output voltage 24 VDC**
Off-state	**Voltage 6 Volts DC maximum**
Current	**draw 5 mA @ 5VDC**
Current	**draw 5 mA**
On-state	**Current 4.5 mA minimum**
On	**State Voltage 15 VDC**
Off	**r**

3. Product Information

The IC693MDL653 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 with Two (2) commons per group. Each channel accepts an input voltage range of 024 volts DC (+10%, –20%) along with an input current of 7.5 mA at rated voltage.

Technical specifications for IC693MDL653

Brand GE Fanuc

Series Series 90-30

Manufacturer GE Fanuc

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

Part Number IC693MDL653

Product Description Discrete input module

Series Series 90-30

Rated Voltage 24 Volts DC

No of Channels Thirty-Two (32)

Part Number IC693MDL653

Input Voltage Range 19.2 - 28.8 VDC

No. of input groups Four (4)

No. of groups Four (4)

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

No. of inputs per group Eight (8)

No. of channels per group Eight (8)

Isolation 1500 Volts between field side and logic side

Input signal range 19.2 VDC - 26.4 VDC

No of common terminal per group Two (2)

Input Current 7.5 mA at rated voltage

Nominal Input voltage 24 VDC

Isolation 1500 VAC between field side and logic side

On-state Voltage 15 Volts DC minimum

Input current 7.5 mA per channel

Nominal output voltage 24 VDC

Off-state Voltage 6 Volts DC maximum

Current draw 5 mA @ 5VDC

Current draw 5 mA

On-state Current 4.5 mA minimum

On State Voltage 15 VDC

Off response time, maximum 2 ms

Off-state Current 2 mA maximum

Off State voltage 6 VDC

On–state Voltage 15 VDC

On response Time 2 ms maximum

On state current 4.5 mA

Off–state Voltage 6 VDC

Off response Time 2 ms maximum

Off state current 2 mA

On–state Current 4.5 mA

Internal Power Consumption 5 mA (16 inputs on) from 5 volt bus on the backplane

On response time, typical 2 ms

On response time, maximum 2 ms

Product Lifecycle Status Discontinued/Obsolete

The IC693MDL653 is a Negative / Positive logic discrete input module that is part of the Series 90-30 Programmable Logic Controller (PLC) series. This module is a high-density discrete input module that accepts an input voltage range of 19.2 - 28.8 VDC with a nominal voltage of 24 VDC and an input current of 7.5 mA at rated voltage. This module is a high-density input module that comes with Thirty-Two (32) input channels, arranged in Four (4) groups of Eight (8) inputs each with each group provided with Two (2) common terminals. With support for positive and negative logic and wiring and a number of input groups, wiring combinations can be implemented to this module. With this, operational flexibility is achieved and a form of input isolation is established as input groups may continue to operate even if other groups have malfunctioned. The IC693MDL653 has a maximum on-state voltage of 15 VDC; an Off-state voltage of 6VDC; a maximum On-state current of 4.5 mA and a maximum Off-state current of 2 mA. The module’s On and Off response times are typical which is 2 ms, maximum. This module has a backplane current draw of 5 mA with all 16 inputs energized. The IC693MDL653 is installed to any I/O slot of a 5-slot or 10-slot baseplate. High-Density modules such as this module require the use of pre-wired cables for fast and error-free signal connection. Wiring connectors include a mating connector that directly connects to the module with flying leads on the other end for termination to I/O terminal blocks.

The IC693MDL653 input controller is part of the programmable logic controller (PLC) system manufactured by GE Fanuc Automation. The IC693MDL653 controller is classified under Series 90-30 of the GE Fanuc PLCs. The IC693MDL653 input controller is built to ensure ease of installation and configuration.