GE Series 90-30 Series Service Manual

IC693MDL241

1. Description

The IC693MDL241 is a Series 90-30, 24 VAC / 24 VDC Positive / Negative Logic discrete input module. This module is formerly produced by GE Fanuc, now acquired by Emerson Automation. It features Sixteen (16) discrete input channels in a single group. Each channel accepts an input voltage range of 0-30 VDC or 0-30 VAC along with an input current of 7 mA at rated voltage.

2. Specifications

Specification	Value
Brand	**GE Intelligent Platforms/GE Fanuc**
Series	**Series 90-30**
Manufacturer	**GE Fanuc**
Manufacturer	**GE Fanuc (Former); Emerson Automation (Current)**
Part	**Number IC693MDL241**
Product	**Description Discrete input module**
Series	**Series 90-30**
No	**of Channels Sixteen (16)**
Part	**Number IC693MDL241**
Wiring	**configuration Positive / Negative logic**
Input	**grouping Single group of 16 inputs**
Product	**Type Input Module**
Input	**signal range 0-30 VAC / VDC**
Isolation	**1500 VAC between field side and logic side**
Voltage	**24 V DC**
Nominal	**Input voltage 24 VAC / VDC**
Input	**voltage range 0 to +30 volts DC or 0 to +30 volts AC, 50/60 Hz**
Input	**current 7 mA at rated voltage**
Nominal	**output voltage 24 VAC / 24 VDC**
Inputs	**16**
Current	**draw 80 mA @ 5 VDC when all inputs on; 125 mA from the isolated 24 VDC backplane bus or the user provided external power supply.**
Off	**response time, maximum 28 ms**
Frequency	**50/60 Hz**
On	**State Voltage 11.5 - 30.0 VAC / VDC**
On-state	**Voltage 11.5 to 30 volts AC or DC**
Input	**Current at a Rated Voltage 7 mA**
Off	

3. Product Information

The IC693MDL241 is a Series 90-30, 24 VAC / 24 VDC Positive / Negative Logic discrete input module. This module is formerly produced by GE Fanuc, now acquired by Emerson Automation. It features Sixteen (16) discrete input channels in a single group. Each channel accepts an input voltage range of 0-30 VDC or 0-30 VAC along with an input current of 7 mA at rated voltage.

Technical specifications for IC693MDL241

Brand GE Intelligent Platforms/GE Fanuc

Series Series 90-30

Manufacturer GE Fanuc

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

Part Number IC693MDL241

Product Description Discrete input module

Series Series 90-30

No of Channels Sixteen (16)

Part Number IC693MDL241

Wiring configuration Positive / Negative logic

Input grouping Single group of 16 inputs

Product Type Input Module

Input signal range 0-30 VAC / VDC

Isolation 1500 VAC between field side and logic side

Voltage 24 V DC

Nominal Input voltage 24 VAC / VDC

Input voltage range 0 to +30 volts DC or 0 to +30 volts AC, 50/60 Hz

Input current 7 mA at rated voltage

Nominal output voltage 24 VAC / 24 VDC

Inputs 16

Current draw 80 mA @ 5 VDC when all inputs on; 125 mA from the isolated 24 VDC backplane bus or the user provided external power supply.

Off response time, maximum 28 ms

Frequency 50/60 Hz

On State Voltage 11.5 - 30.0 VAC / VDC

On–state Voltage 11.5 to 30 volts AC or DC

Input Current at a Rated Voltage 7 mA

Off state voltage 0-4 VAC / VDC

Off–state Voltage 0 to +4 volts AC or DC

Isolation between field side and logic side 1500 V RMS

On state current 3.2 mA

On–state Current 1 mA maximum

DC Power Yes

Off state current 1 mA

AC Power Yes

On response time, typical 12 ms

LED Indicators 16

On response time, maximum 12ms

Logic reading %I

Product Lifecycle Status Discontinued/Obsolete

The IC693MDL241 is a discrete input module from the series 90-30 Programmable Logic Controller (PLC) series. This module features Sixteen (16) output channels in one output group having a single common terminal. It operates at input voltages ranges of 0-30 VDC or 0-30 VAC while the module’s rated voltages are 24 VAC / 24 VDC. This module supports wiring of binary or On / Off or dual state-input devices such as limit switches, push-button switches, proximity switches, auxiliary contacts, and similar devices. The IC693MDL241 is provided with Two (2) rows of LED status indicators, used to depict the energization of each input channel. An input channel that is actively receiving an input current of 7 mA at rated voltage has its corresponding LED activated. Aside from the LED indicators, modules inserts are provided where a short description or input tags can be written for easy identification of input channels. This module is compatible with being installed to a 5-slot or 10-slot baseplate of the Series 90-30 PLC platform. The on-state voltage rating of the input channels is 11.5 - 30 VAC / VDC while the Off-state voltage is 0 - 4 VDC / VAC. Similarly, the maximum On-state current is 3.2 mA while the maximum Off-state current is 1 mA. The module’s On signal transition delay is 12 ms while the Off response time is 28 ms. The power consumption of this module is rated 80 mA @ 5 VDC when all inputs are at logic 1 state and 125 mA from the isolated 24 VDC backplane bus or the user-provided external power supply.

The IC693MDL241 module is a positive/negative input module manufactured by GE Fanuc as part of the Series 90-30 PLC systems. It operates on a voltage rating of 24 Volts AC/DC and it features a single group of 16 input points all located in a common power input terminal. This module is designed and intended for use with AC or DC operator-supplied input power, so it can have either positive or negative logic characteristics while in the DC input mode. These input characteristics are appropriate for a wide range of user-supplied input units, like pushbuttons, electronic proximity switches, and limit switches. The IC693MDL241 module comes with an input voltage ranging between 0 and 30 Volts AC or DC at a frequency of 50 to 60 Hertz and a typical input current of 7 milliamps at the rated voltage. It has an on-state voltage of 11.5 to 30 Volts AC or DC and an off-state voltage of 0 to 4 Volts AC or DC. The GE IC693MDL241 module comes with a minimum on-state current of 3.2 milliamps, and a maximum off-state current of 1 Amp, with a response time of 28 milliseconds when it is off and one of 12 milliseconds when it is on. When the current passes through the input point, the result in the input status table is Logic 1 (%I). The operators

can provide the necessary power to run the field devices, or use the isolated 24 Volts DC output voltage source as the power supply to the DC inputs. The GE Fanuc IC693MDL241 features LED on/off status indicators for each of the points on the top of the module. The LED block hosts the LEDs in 2 horizontal rows, each with 8 green LEDs. The top LED row is labeled from A1 to A8 for points 1 to 8 while the bottom row is labeled from B1 to B8 for points 9 to 16.