GE Series 90-70 Series Service Manual

IC697MDL653

1. Description

The IC697MDL653 is a Series 90-70, 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 -3 to +30 VDC along with an input current of 10.0 mA at rated voltage.

2. Specifications

Specification	Value
Brand	**GE Fanuc**
Series	**Series 90-70**
Manufacturer	**GE Fanuc**
Manufacturer	**GE Fanuc (Former); Emerson Automation (Current)**
Part	**Number IC697MDL653**
Product	**Description Discrete input module**
Series	**Series 90-70**
Rated	**voltage 24 Volts DC**
No	**of Channels Thirty-Two (32)**
No.	**of groups Four (4)**
Input	**current 10 mA per channel**
No.	**of groups Eight (8) channels per group**
No.	**of channels per group Eight (8)**
Input	**voltage range -3 to +30 VDC**
Wiring	**configuration Positive / Negative Logic**
Isolation	**1500 V any input to backplane; 500 V between input groups**
Required	**current 0.3 Amps**
Input	**signal range -3 to +30 VDC**
Nominal	**output voltage 24 VDC**
Number	**of inputs per module 32**
Nominal	**Input voltage 24 VDC**
Input	**current 10 mA at rated voltage**
Isolation	**voltage 1500 Volts**
Current	**draw 300 mA**
On–state	**Voltage 13.5 - 30 VDC**
ON-state	**voltage 13.5 to 30 Volts**
On	**State Voltage 13.5 - 30 VDC**
Off–state	**Voltage 0-5 VDC**
OFF-state	**voltage 0 to 5 Volts**
Off	**state voltage 0 - +5 VDC**
On–state	**Current 6 mA to 15 mA VDC**
ON-s	

3. Product Information

The IC697MDL653 is a Series 90-70, 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 -3 to +30 VDC along with an input current of 10.0 mA at rated voltage.

Technical specifications for IC697MDL653

Brand GE Fanuc

Series Series 90-70

Manufacturer GE Fanuc

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

Part Number IC697MDL653

Product Description Discrete input module

Series Series 90-70

Rated voltage 24 Volts DC

No of Channels Thirty-Two (32)

No. of groups Four (4)

Input current 10 mA per channel

No. of groups Eight (8) channels per group

No. of channels per group Eight (8)

Input voltage range -3 to +30 VDC

Wiring configuration Positive / Negative Logic

Isolation 1500 V any input to backplane; 500 V between input groups

Required current 0.3 Amps

Input signal range -3 to +30 VDC

Nominal output voltage 24 VDC

Number of inputs per module 32

Nominal Input voltage 24 VDC

Input current 10 mA at rated voltage

Isolation voltage 1500 Volts

Current draw 300 mA

On–state Voltage 13.5 - 30 VDC

ON-state voltage 13.5 to 30 Volts

On State Voltage 13.5 - 30 VDC

Off–state Voltage 0-5 VDC

OFF-state voltage 0 to 5 Volts

Off state voltage 0 - +5 VDC

On–state Current 6 mA to 15 mA VDC

ON-state current 6 to 15 milliAmps

On state current 6mA - 15 mA

OFF-state current 0-2 mA

Off state current 0-2 mA

Product Lifecycle Status Discontinued / Obsolete

The IC697MDL653 is a digital input module that is part of the Serie 90-70 Programmable Logic Controller (PLC) series. This module is formerly manufactured by GE Fanuc Automation however, recently acquired by Emerson Automation. It features high-density input channels, specifically Thirty-Two (32) discrete input channels in Four (4) groups of Eight (8) channels each, providing group isolation. This module is designed to operate at an input voltage range of -3 to +3 VDC with a rated voltage of 24 VDV along with an input current of 10 mA at 24 VDC and a typical input impedance of 2.6 KOhm. The IC697MDL653 has an on-state voltage and on-state current of 13.5 volts to 30 volts and 6mA to 15mA. Conversely, the Off-state voltage and Off-state currents are 0 volts to 5 volts and 0 to 2mA (2mA minimum at 5V input), respectively. Every input channel of this module exhibits an input delay time of 1 ms or 10 ms, software configurable. This module draws current from the 5VDC bus amounting to 300 mA and is also designed compatibly with VME standard C.1. The module's individual channel isolation to backplane is 1500 Volts and isolation between groups is 500 VDC. The IC697MDL653 supports Positive and Negative logic wiring. Wiring configuration may differ at the group level as each input group is provided with a dedicated common terminal. With negative logic, the positive wire is terminated to the common terminal and the negative wire delivers the voltage signal to the input channels. Positive logic wiring is the opposite of the negative wiring method.

The IC697MDL653 positive/negative logic input module is manufactured by GE Fanuc and it is intended for use with programmable logic controllers from Series 90-70. The module has positive and negative logic features and it is a great choice if the system requires more control over its proximity switches, pushbuttons, and similar control parts. The IC697MDL653 module features 32 input points which are formatted in 4 sets of 8 inputs. The module features a selectable input filter that has a delay time of 1 millisecond or 10 milliseconds. This VME specified input module has a single input that can operate as an interrupt if the module is combined with a programmable logic controller with in the GE IC696 product line. The module can be used with other types of PLCs but some of the included features have limited capabilities. The IC697MDL653 module has top status LED indicators and they provide insight into each input status on the side of the PLC. Also, the module supports I/O configuration without the use of some common accessory parts such as DIP switches and jumpers. The MS-DOS configuration software of the IC697MDL653 module is programmed for the Windows 95 operating system and it can be executed in more than one way. The IC697MDL653 module has a rated voltage of 24 Volts DC and it includes an isolation voltage of 1500 Volts. The unit has an input current of 10 milliAmps and an input voltage range of -3 to 30 Volts DC. In addition to that, the unit has an on-state current of 6 to 15 milliAmps. The off-state current is 0 to 2 milliAmps. The on-state voltage is 13.5 to 30 Volts and off-state voltage is 0 to 5 Volts.