GE Series 90-30 Series Service Manual

IC693MDL752

1. Description

The IC693MDL752 is a Series 90-30 negative logic, 5/24 VDC (TTL) discrete output module. This module is formerly produced by GE Fanuc, now acquired by Emerson Automation. It features Thirty-Two (32) discrete output channels in Four (4) groups of Eight (8) channels. Each channel is configurable to deliver an output voltage range of 10.2 -28.8 VDC in 12/24 VDC and mode and 4.75 - 5.25

2. Specifications

Specification	Value
Brand	**GE Fanuc**
Series	**Series 90-30**
Manufacturer	**GE Fanuc; Emerson Automation (Current)**
Part	**Number IC693MDL752**
Series	**Series 90-30**
Product	**type Digital I/O**
Product	**Description Discrete output module**
Compatibility	**GE Fanuc 90-30 PLCs**
No	**of Channels Thirty-Two (32)**
Output	**points 32**
No.	**of output groups Four (4)**
Output	**groups 4**
Channels	**per group Eight (8)**
Output	**modes TTL mode, 12 / 24 Volts DC mode**
Isolation:	**1500 volts between field side and logic side; 250 Volts between groups**
LED	**indicators Yes**
Output	**voltage range 10.2-28.8 VDC (12/24 VDC mode); 4.74 - 5.25 VDC (TTL Mode)**
Output	**connection 2 x 24-pin connectors**
Nominal	**output voltage 12-24 VDC (12/24 VDC mode); 5 VDC (TTL Mode)**
Product	**Lifecycle Status* Discontinued/Obsolete**
Output	**current 12/24 VDC Mode: 0.5 Amperes per point; 4 Amperes per module; 3 Amperes per group common pin 5 VDC (TTL Mode): 0.25 mA**
Maximum	**inrush current 4.6 A for 20 ms**
Current	**draw 260 mA (maximum) from 5 volt bus on backplane; (13 mA + 3 mA/point ON + 4.7 m**

3. Product Information

The IC693MDL752 is a Series 90-30 negative logic, 5/24 VDC (TTL) discrete output module. This module is formerly produced by GE Fanuc, now acquired by Emerson Automation. It features Thirty-Two (32) discrete output channels in Four (4) groups of Eight (8) channels. Each channel is configurable to deliver an output voltage range of 10.2 -28.8 VDC in 12/24 VDC and mode and 4.75 - 5.25

Technical specifications for IC693MDL752

Brand GE Fanuc

Series Series 90-30

Manufacturer GE Fanuc; Emerson Automation (Current)

Part Number IC693MDL752

Series Series 90-30

Product type Digital I/O

Product Description Discrete output module

Compatibility GE Fanuc 90-30 PLCs

No of Channels Thirty-Two (32)

Output points 32

No. of output groups Four (4)

Output groups 4

Channels per group Eight (8)

Output modes TTL mode, 12 / 24 Volts DC mode

Isolation: 1500 volts between field side and logic side; 250 Volts between groups

LED indicators Yes

Output voltage range 10.2-28.8 VDC (12/24 VDC mode); 4.74 - 5.25 VDC (TTL Mode)

Output connection 2 x 24-pin connectors

Nominal output voltage 12-24 VDC (12/24 VDC mode); 5 VDC (TTL Mode)

Product Lifecycle Status* Discontinued/Obsolete

Output current 12/24 VDC Mode: 0.5 Amperes per point; 4 Amperes per module; 3 Amperes per group common pin 5 VDC (TTL Mode): 0.25 mA

Maximum inrush current 4.6 A for 20 ms

Current draw 260 mA (maximum) from 5 volt bus on backplane; (13 mA + 3 mA/point ON + 4.7 mA/LED); 12 mA (maximum) per group from user supply @ 5VDC and all eight outputs in group ON 25 mA (maximum) per group from user supply @ 12 VDC and all eight outputs in group ON 44 mA (maximum) per group from user supply @ 24 VDC and all eight outputs in group ON

On response time, maximum 0.5 ms

Off response time, maximum 0.5 ms

Output Voltage Drop 0.3 volt, maximum

Off-state Leakage 1 mA maximum

The IC693MDL752 is a dual-mode discrete output module from the Series 90-30 Programmable Logic Controller (PLC) product family. This product family is formerly manufactured by GE Fanuc however, recently acquired by Emerson Automation. This module supports 12/24 VDC mode and 5VDC TTL mode, negative logic output module. It features Thirty-Two (32) point outputs in groups of Four (4) with each group having Eight (8) output channels each. Depending on the operating mode of the module, the output current per point varies. Specifically, with 12/24 VDC mode, the output current rating of the module is 0.5 Amperes per point, 4 Amperes per group, and 3 Amperes maximum per common pin while when configured to operate at TTL mode, each output channel has an output current rating of 0.25 mA. Similarly, the output voltage varies depending on the selected mode. At 12/24 VDC mode, the output voltage range is 10.2 - 28.8 VDC with a nominal output of 24 VDC. For TTL mode, the output voltage range is 4.75 VDC - 5.25 VDC with a nominal output voltage of 5 VDC. Each output groups are independently configurable to operate in 12/24 VDC or TTL mode providing operational flexibility. This module has rated isolation of 1500 volts between the field side and logic side and 250 Volts between groups. Two (2) methods are recommended when wiring output devices to this module particularly, the direct method with the use of IC693CBL327 and IC693CBL328 pre-wired cables where one end is a pre-assembled connector while the other end of the cable is flying leads. Another supported method is the TBQC method utilizing a terminal block quick connect.

The IC693MDL752 is a 5 to 24 Volts DC rated TTL negative logic output module for the Series 90-30 PLCs from GE Fanuc. The IC693MDL752 negative logic output module provides 32 discrete outputs arranged in 4 groups which are isolated from each other. Each group of 4 outputs has its own common. The outputs on the module are sinking type outputs or negative logic outputs for which the ON state corresponds to an active low output state. The IC693MDL752 negative logic output module has 2 operating modes. In the TTL mode, the module outputs can switch loads across 5 Volts DC voltage and they can sink a peak current of 25 milliamps per point. In the 12/24 Volts DC mode, the module outputs can switch loads over 12 to 24 Volts DC and they can sink a peak current of 0.5 Amps per point. Each group of outputs on the IC693MDL752 negative logic output module can be used in the operating mode that is required for any particular application. When using different groups in different operating modes, the effects of electrical noise should be considered. One integrated pull-up resistor is provided for each output point. Backplane isolation between the logic side and field side is provided through opto-couplers. The LED indicators on the IC693MDL752 negative logic output module provide status updates for the output points. The IC693MDL752 negative logic output module uses 32 bits of discrete output data. Connections from the IC693MDL752 negative logic output module to output circuits are made through 2 male 24-pin connectors which are mounted on the front side of the I/O module. The maximum current output ratings in the TTL mode and in the 12/24 Volts mode are 25 milliamps and 0.5 Amps per point, respectively.