GE RX3i PacSystem Series Service Manual

IC694MDL655

1. Description

The IC694MDL655 is a 24 VDC Positive / Negative Logic discrete input module. It is part of the PACSystem RX3i platform, currently under Emerson Automation, formerly produced by GE Intelligent Platforms (GE IP). This module has Thirty-Two (32) digital input channels arranged in Four (4) groups of Eight (8) channels each. Each input channel is rated 24 volts DC, operating at input voltage range of 0-30 VDC and input current of 7.0 mA at rated voltage.

2. Specifications

Specification	Value
Brand	**GE Fanuc**
Series	**PACSystem RX3i**
Manufacturer	**GE Fanuc**
Manufacturer	**GE Intelligent Platforms (Former); Emerson Automation (Current)**
Part	**Number IC694MDL655**
Product	**Description High Density Discrete input module**
Part	**Number IC694MDL655**
Type	**Input module**
No	**of Channels Thirty-Two (32)**
No.	**of groups Four (4)**
Inputs	**32**
No.	**of groups Eight (8) channels per group**
No.	**of channels per group Eight (8)**
Logic	**Positive/Negative**
Wiring	**configuration Positive / Negative Logic**
Input	**voltage range 0-30 VDC**
Rated	**Voltage 48V DC**
Input	**signal range 0-30 VDC**
Input	**current 7.0 mA at rated voltage**
Input	**Voltage Range 0-60V DC**
Nominal	**Input voltage 24 VDC**
Response	**time, maximum (On and Off) 2 ms**
Input	**Current 1.7 mA at 48V DC**
Input	**current 7 mA per channel**
On-state	**Voltage 11.5 to 30.0 VDC**
Response	**Time 2 ms maximum (on and off)**
Current	**draw 195mA (maximum) from +5V bus on backplane; (29mA +0.5mA/point ON +4.7mA/LED ON) 224mA (typical) from isolated +24V bus on backplane or from user input supply @ 24VDC**

3. Product Information

The IC694MDL655 is a 24 VDC Positive / Negative Logic discrete input module. It is part of the PACSystem RX3i platform, currently under Emerson Automation, formerly produced by GE Intelligent Platforms (GE IP). This module has Thirty-Two (32) digital input channels arranged in Four (4) groups of Eight (8) channels each. Each input channel is rated 24 volts DC, operating at input voltage range of 0-30 VDC and input current of 7.0 mA at rated voltage.

Technical specifications for IC694MDL655

Brand GE Fanuc

Series PACSystem RX3i

Manufacturer GE Fanuc

Manufacturer GE Intelligent Platforms (Former); Emerson Automation (Current)

Part Number IC694MDL655

Product Description High Density Discrete input module

Part Number IC694MDL655

Type Input module

No of Channels Thirty-Two (32)

No. of groups Four (4)

Inputs 32

No. of groups Eight (8) channels per group

No. of channels per group Eight (8)

Logic Positive/Negative

Wiring configuration Positive / Negative Logic

Input voltage range 0-30 VDC

Rated Voltage 48V DC

Input signal range 0-30 VDC

Input current 7.0 mA at rated voltage

Input Voltage Range 0-60V DC

Nominal Input voltage 24 VDC

Response time, maximum (On and Off) 2 ms

Input Current 1.7 mA at 48V DC

Input current 7 mA per channel

On–state Voltage 11.5 to 30.0 VDC

Response Time 2 ms maximum (on and off)

Current draw 195mA (maximum) from +5V bus on backplane; (29mA +0.5mA/point ON +4.7mA/LED ON) 224mA (typical) from isolated +24V bus on backplane or from user input supply @ 24VDC and all 32 inputs ON)

Off–state Voltage 0-5 VDC

Cable Length 30 m

On State Voltage 11.5 - 30 VDC

On–state Current 3.2 mA

Isolation 250 V AC

Off state voltage 0 - +5 VDC

Off-state Current 1.1 mA maximum

Connector Two male 24-pin connector

On state current 3.2 mA

Off state current 1.1 mA

On response time, typical 2 ms

Off response time, maximum 2 ms

Product Lifecycle Status Active

The IC694MDL655 is a discrete input module from the PACSystem RX3i controller platform of Emerson Automation, formerly produced by GE Intelligent Platforms (GE IP). This module is a high-density discrete input module featuring Thirty-Two (32) digital (binary) operating input channels, designed to receive 24 DC nominal or 0-30 VDC input voltage range and 7.0 mA current at rated voltage. This module is commonly used to interface On/Off switches similarly binary operating devices such as auxiliary contacts, proximity ad photosensors and other devices. The IC694MDL655 is a single slot module that directly mounts to an empty slot of a PACSystem RX3i backplane. It can be installed to the local rack or to a distributed I/O station. The number of module installation is limited by the memory capacity of the processor or the slots available to the baseplate. The IC694MDL655 is a positive and negative logic module therefore, it can be used in different regions as some countries support positive logic while some support otherwise. Positive logic refers the positive wire connected to the module input channel while the negative wire being terminated to the common terminal. With negative logic, the connection is reversed. The IC694MDL655 input channels are grouped into Four (4) inputs with each group having Eight (8) inputs each. Module isolation is within groups, allowing groups to be wired independently, according to what is required by the application. The isolation rating of this module is 250 VAC continuous and 1500 VAC for one minute between backplane and frame ground while the module’s group to group isolation is 50 VAC continuous and 500 VAC for one minute.

The IC694MDL655 input module is a positive and negative input module that has been designed and distributed by GE Fanuc Automation and included in the GE PACSystems series, specifically in the RX3i product line. The IC694MDL655 input module comes with 32 input points that can operate in both positive and negative logic, which makes it versatile enough to be used in different applications and with different kinds of equipment regardless of the type of logic that is required. Each one of the 32 inputs can operate at up to 30 Volts. The power required by this module needs to be provided from an external supply or it can also be obtained from the module’s isolated output that is 24 Volts DC rated. The IC694MDL655

operates with a rated voltage of 24 Volts DC and each input has a voltage range of 0 to 30 Volts DC. This module has an input current of 7.0 milliamps at a voltage of 24 Volts DC and an on-stage voltage of 11.5 to 30 Volts DC. The GE Fanuc Automation IC694MDL655 positive and negative input module has a response time of 2 milliseconds maximum, which can be the on-response time or the off-response time. The module does not include any communication module for any CPU. The 32 inputs are divided into 4 groups and the maximum cable length that can be used with this module must not exceed the 30 meters. The GE Fanuc Automation IC694MDL655 positive and negative input module comes with a LED indicator for each input and a blue label that indicates that the module is a low-voltage module.