

MANUFACTURER DOCUMENT PACKAGE

# Manufacturer's Manual

Reference package for procurement and maintenance review

GE PACSYSTEMS RX3i

## IC694MDL645E

16-POINT DC INPUT MODULE

Used with the applicable PACSystems RX3i I/O configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: GE official manufacturer documentation



### Discrete I/O Modules (Input)

Input modules provide the interface between the PLC and external input devices such as proximity sensors, push buttons, switches, and BCD thumbwheels. Output modules provide the interface between the PLC and external output devices such as contactors, interposing relays, BCD displays and indicator lamps. GE offers a variety of modules that support different voltage ranges and types, current capacity, isolation and response time to meet your application needs.

|                                                     | IC694ACC300                                             | IC694MDL230                                                              | IC694MDL250                                                               | IC694MDL231                                                              | IC694MDL240                                                      |
|-----------------------------------------------------|---------------------------------------------------------|--------------------------------------------------------------------------|---------------------------------------------------------------------------|--------------------------------------------------------------------------|------------------------------------------------------------------|
| <b>Product Name</b>                                 | PACSystems RX3i DC Voltage Input Simulator, 8/16 Points | PACSystems RX3i AC Voltage Input Module, 120 VAC Isolated, 8 Point Input | PACSystems RX3i AC Voltage Input Module, 120 VAC Isolated, 16 Point Input | PACSystems RX3i AC Voltage Input Module, 240 VAC Isolated, 8 Point Input | PACSystems RX3i AC Voltage Input Module, 120 VAC, 16 Point Input |
| <b>Lifecycle Status</b>                             | Active                                                  | Active                                                                   | Active                                                                    | Active                                                                   | Active                                                           |
| <b>Module Type</b>                                  | Input Simulator                                         | Discrete Input                                                           | Discrete Input                                                            | Discrete Input                                                           | Discrete Input                                                   |
| <b>Backplane Support</b>                            | No Backplane Restrictions                               | No Backplane Restrictions                                                | No Backplane Restrictions                                                 | No Backplane Restrictions                                                | No Backplane Restrictions                                        |
| <b>Number of Slots Module Occupies on Backplane</b> | 1                                                       | 1                                                                        | 1                                                                         | 1                                                                        | 1                                                                |
| <b>Input Voltage Range</b>                          | N/A                                                     | 0-132 VAC                                                                | 0-132 VAC                                                                 | 0-264 VAC                                                                | 0-132 VAC                                                        |
| <b>Input Current (mA)</b>                           | N/A                                                     | 14.5                                                                     | 14.5                                                                      | 15                                                                       | 12                                                               |
| <b>Number of Points</b>                             | 16                                                      | 8                                                                        | 16                                                                        | 8                                                                        | 16                                                               |
| <b>Response Time (ms)</b>                           | 20 on/30 off                                            | 30 on/45 off                                                             | 30 on/45 off                                                              | 30 on/45 off                                                             | 30 on/45 off                                                     |
| <b>Trigger Voltage</b>                              | N/A                                                     | 74-132                                                                   | 74-132                                                                    | 148-264                                                                  | 74-132                                                           |
| <b>Points per Common</b>                            | 16                                                      | 1                                                                        | 1                                                                         | 1                                                                        | 16                                                               |
| <b>Diagnostic Supported</b>                         | N/A                                                     | N/A                                                                      | N/A                                                                       | N/A                                                                      | N/A                                                              |
| <b>Connector Type</b>                               | Switches                                                | Terminal Block (20 screws), included with module.                        | IC694TBBx32 or IC694TBSx32. Sold Separately.                              | Terminal Block (20 screws), included with module.                        | Terminal Block (20 screws), included with module.                |
| <b>Internal Power Used</b>                          | 120 mA @ 5 VDC                                          | 60 mA @ 5 VDC                                                            | 60 mA @ 5 VDC                                                             | 60 mA @ 5 VDC                                                            | 90 mA @ 5 VDC                                                    |



### Discrete I/O Modules (Input)

Input modules provide the interface between the PLC and external input devices such as proximity sensors, push buttons, switches, and BCD thumbwheels. Output modules provide the interface between the PLC and external output devices such as contactors, interposing relays, BCD displays and indicator lamps. GE offers a variety of modules that support different voltage ranges and types, current capacity, isolation and response time to meet your application needs.

|                                                     | IC694MDL260                                                      | IC694MDL241                                       | IC694MDL632                                                                   | IC694MDL634                                                                  | IC694MDL645                                                                   |
|-----------------------------------------------------|------------------------------------------------------------------|---------------------------------------------------|-------------------------------------------------------------------------------|------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| <b>Product Name</b>                                 | PACSystems RX3i AC Voltage Input Module, 120 VAC, 32 Point Input | AC/DC Voltage Input Module, 24 VAC/VDC            | PACSystems RX3i DC Voltage Input Module, 125 VDC Pos/Neg Logic, 8 Point Input | PACSystems RX3i DC Voltage Input Module, 24 VDC Pos/Neg Logic, 8 Point Input | PACSystems RX3i DC Voltage Input Module, 24 VDC Pos/Neg Logic, 16 Point Input |
| <b>Lifecycle Status</b>                             | Active                                                           | Active                                            | Active                                                                        | Active                                                                       | Active                                                                        |
| <b>Module Type</b>                                  | Discrete Input                                                   | Discrete Input                                    | Discrete Input                                                                | Discrete Input                                                               | Discrete Input                                                                |
| <b>Backplane Support</b>                            | No Backplane Restrictions                                        | No Backplane Restrictions                         | No Backplane Restrictions                                                     | No Backplane Restrictions                                                    | No Backplane Restrictions                                                     |
| <b>Number of Slots Module Occupies on Backplane</b> | 1                                                                | 1                                                 | 1                                                                             | 1                                                                            | 1                                                                             |
| <b>Input Voltage Range</b>                          | 0-132 VAC                                                        | 0-30 VDC                                          | 0-150 VDC                                                                     | 0-30 VDC                                                                     | 0-30 VDC                                                                      |
| <b>Input Current (mA)</b>                           | 12                                                               | 7                                                 | 4.5                                                                           | 7                                                                            | 7                                                                             |
| <b>Number of Points</b>                             | 32                                                               | 16                                                | 8                                                                             | 8                                                                            | 16                                                                            |
| <b>Response Time (ms)</b>                           | 30 on/45 off                                                     | 12 on/28 off                                      | 7 on/7 off                                                                    | 7 on/7 off                                                                   | 7 on/7 off                                                                    |
| <b>Trigger Voltage</b>                              | 74-132                                                           | 11.5-30                                           | 90-150                                                                        | 11.5-30                                                                      | 11.5-30                                                                       |
| <b>Points per Common</b>                            | 16                                                               | 16                                                | 4                                                                             | 8                                                                            | 16                                                                            |
| <b>Diagnostic Supported</b>                         | N/A                                                              | N/A                                               | N/A                                                                           | N/A                                                                          | N/A                                                                           |
| <b>Connector Type</b>                               | IC694TBBx32 or IC694TBSx32. Sold Separately.                     | Terminal Block (20 screws), included with module. | Terminal Block (20 screws), included with module.                             | Terminal Block (20 screws), included with module.                            | Terminal Block (20 screws), included with module.                             |
| <b>Internal Power Used</b>                          | 90 mA @ 5 VDC                                                    | 80 mA @ 5 VDC;<br>125 mA @ 24 VDC                 | 40 mA @ 5 VDC                                                                 | 45 mA @ 5 VDC;<br>62 mA @ 24 VDC Isolated<br>Isolated                        | 80 mA @ 5 VDC;<br>125 mA @ 24 VDC<br>Isolated                                 |



### Discrete I/O Modules (Input)

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|                                                     | IC694MDL646                                                                         | IC694MDL654                                                                           | IC694MDL655                                                                   | IC694MDL660                                                                        | IC695MDL664                                                                                         |
|-----------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| <b>Product Name</b>                                 | PACSystems RX3i DC Voltage Input Module, 24 VDC Pos/Neg Logic, FAST, 16 Point Input | PACSystems RX3i DC Voltage Input Module, 5/12 VDC (TTL) Pos/Neg Logic, 32 Point Input | PACSystems RX3i DC Voltage Input Module, 24 VDC Pos/Neg Logic, 32 Point Input | PACSystems RX3i DC Voltage Input Module, 24 VDC Pos/Neg Logic, 32 Point Input      | PACSystems RX3i DC Voltage Input Module, 24VDC Positive Logic, Advanced Diagnostics, 16 Point Input |
| <b>Lifecycle Status</b>                             | Active                                                                              | Active                                                                                | Active                                                                        | Active                                                                             | Active                                                                                              |
| <b>Module Type</b>                                  | Discrete Input                                                                      | Discrete Input                                                                        | Discrete Input                                                                | Discrete Input                                                                     | Discrete Input                                                                                      |
| <b>Backplane Support</b>                            | No Backplane Restrictions                                                           | No Backplane Restrictions                                                             | No Backplane Restrictions                                                     | No Backplane Restrictions                                                          | Universal PCI Slot Only                                                                             |
| <b>Number of Slots Module Occupies on Backplane</b> | 1                                                                                   | 1                                                                                     | 1                                                                             | 1                                                                                  | 1                                                                                                   |
| <b>Input Voltage Range</b>                          | 0-30 VDC                                                                            | 0-15 VDC                                                                              | 0-30 VDC                                                                      | 0-30 VDC                                                                           | 0-30 VDC                                                                                            |
| <b>Input Current (mA)</b>                           | 7                                                                                   | 3.0 @ 5 V, 8.5 @ 12 V                                                                 | 7                                                                             | 7                                                                                  | 12.2                                                                                                |
| <b>Number of Points</b>                             | 16                                                                                  | 32                                                                                    | 32                                                                            | 32                                                                                 | 16                                                                                                  |
| <b>Response Time (ms)</b>                           | 1 on/1 off                                                                          | 1 on/1 off                                                                            | 2 on/2 off                                                                    | 0.5ms, 1.0ms, 2.0ms, 5ms, 10ms, 50ms and 100ms, selectable per module. On and off. | 0.5ms, 1.0ms, 2.0ms, 5ms, 10ms, 50ms and 100ms, selectable per module. On and off.                  |
| <b>Trigger Voltage</b>                              | 11.5-30                                                                             | 4.2-15                                                                                | 11.5-30                                                                       | 11.5-30                                                                            | 0.5 x VIN VDC                                                                                       |
| <b>Points per Common</b>                            | 16                                                                                  | 8                                                                                     | 8                                                                             | 8                                                                                  | 8                                                                                                   |
| <b>Diagnostic Supported</b>                         | N/A                                                                                 | N/A                                                                                   | N/A                                                                           | N/A                                                                                | Open Wire, Short to DC Negative Input Pulse Test Short to DC Plus                                   |
| <b>Connector Type</b>                               | Terminal Block (20 screws), included with module.                                   | Fujitsu Connector                                                                     | Fujitsu Connector                                                             | IC694TBBx32 or IC694TBSx32. Sold Separately.                                       | IC694TBB032 or IC694TBS032                                                                          |
| <b>Internal Power Used</b>                          | 80 mA @ 5 VDC; 125 mA @ 24 VDC Isolated                                             | 5 VDC -195 mA @ 5 VDC; 12 VDC -440 mA @ 5 VDC                                         | 195 mA @ 5 VDC                                                                | 300 mA @ 5 VDC                                                                     | 225 mA @ 5 VDC; 95 mA @ 3.3 VDC                                                                     |