

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

GE PACSYSTEMS RX3I

IC694MDL930D

EIGHT-POINT ISOLATED RELAY OUTPUT MODULE

Used with the applicable PACSystems RX3i discrete I/O configuration.

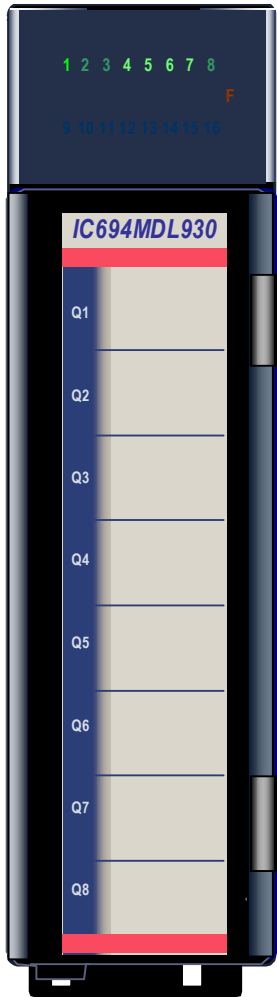
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OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: GE official manufacturer documentation

7.18 Output Module, Isolated Relay, N.O., 4 Amp, 8-Point: IC694MDL930



The **4 Amp Isolated Relay Output** module, IC694MDL930, provides eight normally–open relay circuits for controlling output loads. The output switching capacity of each circuit is 4 Amps. Each output point is isolated from the other points, and each point has a separate common power output terminal. The relay outputs can control a wide range of output devices, such as: motor starters, solenoids, and indicators.

The user must supply the AC or DC power to operate the field devices connected to this module.

Individual numbered LEDs show the ON/OFF status of each output point. There are no fuses on this module. The red bands on the label show that MDL930 is a high-voltage module.

This module can be installed in any I/O slot in an RX3i system.

Module does not support insertion into or removal from an RX3i Universal Backplane which is under power (see *Hot Insertion and Removal Not Supported*, Section 2.6.4.2).

Figure 227: IC694MDL930

7.18.1 Specifications: MDL930

Rated Voltage	24 Vdc, 120/240 Vac (nominal - refer to the following table for exceptions)
Operating Voltage	5 to 30 Vdc
	5 to 250 Vac, 50/60 Hz
Outputs per Module	8 isolated outputs
Isolation:	
Field to Backplane and to	250 Vac continuous;
Frame Ground	1500 Vac for 1 minute
Point to Point	250 Vac continuous; 1500 Vac for 1 minute
Maximum Load	4 Amps resistive maximum per output
	2 Amps pilot duty per output

Minimum Load	20 Amps maximum per module for UL installations
Maximum Inrush	Maximum Load depends on the ambient temperature as displayed in Figure 228
On Response Time²⁷	10mA
Off Response Time²⁷	5 Amps
Power Consumption	15ms maximum
	15ms maximum
	6mA (all outputs on) from 5 Vdc bus on backplane
	70mA (all outputs on) from relay 24Vdc bus on backplane

For product standards and general specifications, refer to Appendix A.

7.18.1.1 Thermal Derating: MDL930

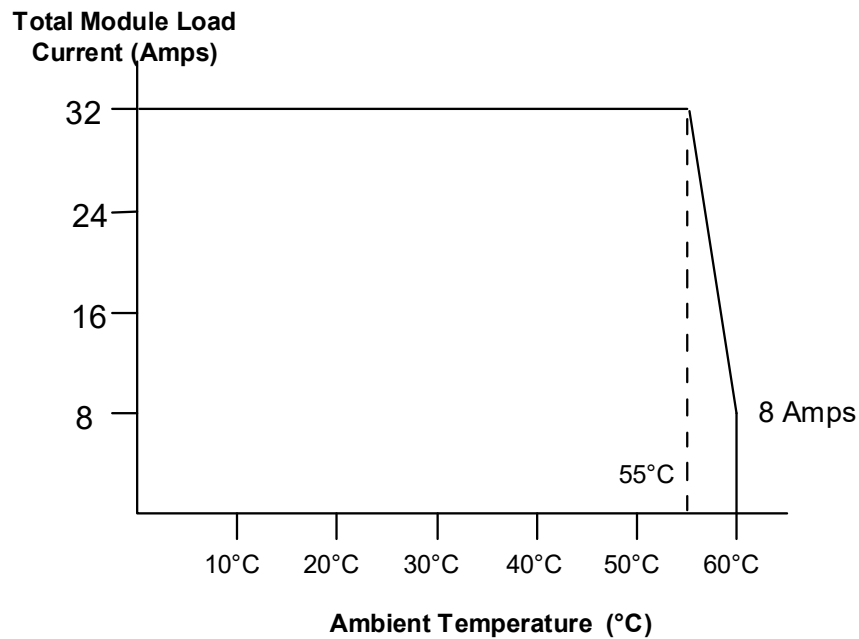


Figure 228: Thermal Derating Curve MDL930

²⁷ When this module is used with DC power supply IC695PSD040 or PSD140, special precautions should be taken because dropouts in the source voltage will be seen by this module and may cause relay dropouts.

7.18.1.2 Load Current Limitations: MDL930

Operating Voltage	Maximum Current for Load Type		Typical Contact Life (Number of Operations)
	Resistive	Lamp or Solenoid ²⁸	
24 to 120 Vac	4 Amps	2 Amps	150,000
24 to 120 Vac	1 Amp	0.5 Amp	500,000
24 to 120 Vac	0.1 Amp	0.05 Amp	1,000,000
240 Vac	4 Amps	2 Amps	50,000
240 Vac	0.1 Amp	0.05 Amp	500,000
240 Vac	1 Amp	0.5 Amp	200,000
24Vdc	—	3 Amps	50,000
24Vdc	4 Amps	2 Amps	100,000
24Vdc	1 Amp	0.5 Amp	500,000
24Vdc	0.1 Amp	0.05 Amp	1,000,000
125Vdc	0.2 Amp	0.1 Amp	300,000

Relay contact life, when switching inductive loads, will approach resistive load contact life if suppression circuits are used. Examples of typical suppression circuits for AC and DC loads are displayed in the following figure. The 1A, 200V diode shown in the DC load typical suppression example is an industry standard 1N4935. The resistor and capacitor shown for AC load suppression are standard components, available from most electronics distributors.

7.18.1.2.1 Load Suppression Examples for Output Module MDL930

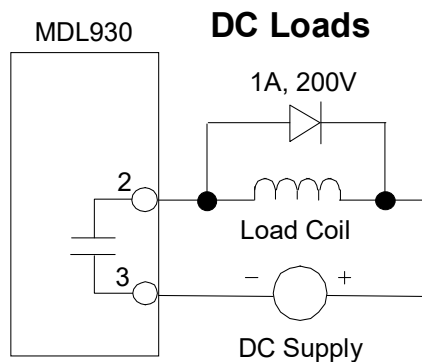


Figure 229: Suppression of DC Loads MDL930

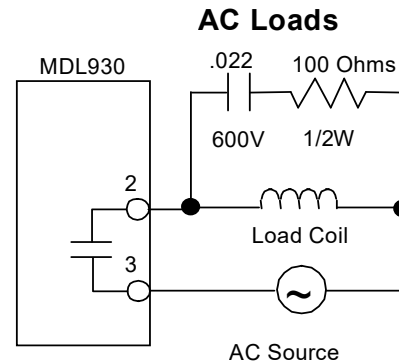


Figure 230: Suppression of AC Loads MDL930

²⁸ Assumes a 7ms time constant

7.18.2 Field Wiring: MDL930

Terminal	Connection	Module Circuits	Terminals	Field Wiring
1	No connection		1	NC
2	Output 1-1		2	V
3	Output 1-2		3	Q1
4	Output 2-1		4	V
5	Output 2-2		5	Q2
6	Output 3-1		6	V
7	Output 3-2		7	Q3
8	Output 4-1		8	V
9	Output 4-2		9	Q4
10	No connection		10	NC
11	No connection		11	NC
12	Output 5-1		12	V
13	Output 5-2		13	Q5
14	Output 6-1		14	V
15	Output 6-2		15	Q6
16	Output 7-1		16	V
17	Output 7-2		17	Q7
18	Output 8-1		18	V
19	Output 8-2		19	Q8
20	No connection		20	NC

Figure 231: Field Wiring MDL930