7.11 Output Module, 12/24Vdc 1A Positive Logic, 16-Point with ESCP per Group: IC694MDL742

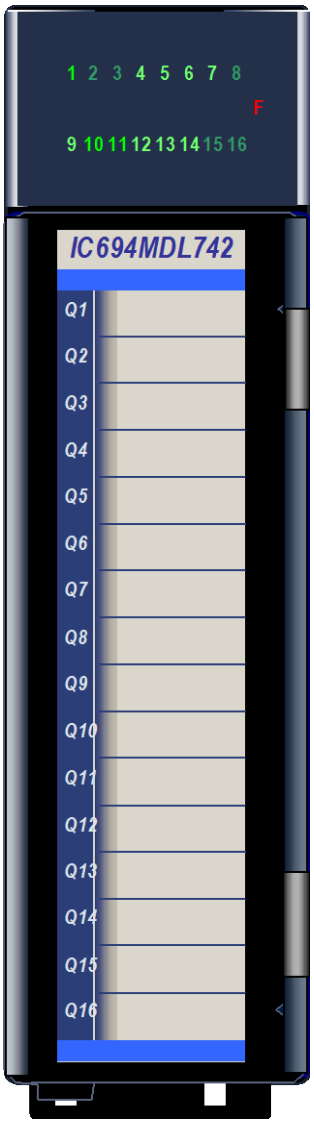

Figure 199: IC694MDL742

The ***12/24Vdc 1 Amp Positive Logic Electronic Short Circuit Protection (ESCP) Output*** module, IC694MDL742, provides sixteen output points in two groups of eight. Each group has a common power output terminal. This output module has positive logic characteristics: it sources current to the loads from the user common or positive power bus. Output devices are connected between the negative power bus and the output terminals. The output characteristics of this module are compatible with a wide range of load devices, such as: motor starters, solenoids, and indicators.

Power to operate the field devices must be supplied by the user.

Individual numbered LEDs show the ON/OFF status of each output point. There are no fuses on this module. The red LED (F) in the module header indicates electronic short circuit protection trips. The blue bands on the label show that MDL742 is a low-voltage module.

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

Module supports insertion into and removal from an RX3i Universal Backplane which is under power. Refer to *Hot Insertion and Removal*, Section 2.6.4.1.

7.11.1 Electronic Short-Circuit Protection (ESCP)

Module MDL742 has two Electronic Short Circuit Protection circuits. The first circuit protects points 1 to 8 and the second protect points 9 to 16. The module electronically monitors the common signal for each group. If a short circuit occurs, the module turns off the output points in that group, and turns on the red LED (F). The point LEDs do not turn off. Electronic Short Circuit Protection does not prevent individual outputs from exceeding their ratings, but it protects the module in case of a short-circuited load. Electronic Short Circuit Protection is reset by cycling the 12/24Vdc user power to the module.

7.11.2 Specifications: MDL742

Rated Voltage	12/24 Vdc
Output Voltage Range	12 to 24 Vdc (+20%, -15%)
Outputs per Module	16 (two groups of eight outputs each)
Isolation:	
Field to Backplane (optical) and to Frame Ground	250 Vac continuous; 1500 Vac for 1 minute
Group to Group	250 Vac continuous; 1500 Vac for 1 minute
Output Current	1 Amp maximum per point 4 Amps maximum per group at 50°C 3 Amps maximum per group at 60°C Maximum total load current depends on the ambient temperature as displayed in Figure 200.
Power Consumption	130mA (all outputs on) from 5Vdc bus on backplane
Output Characteristics	
Inrush Current	5.2 Amps for 10 ms
Output Voltage Drop	1.2 volts maximum
Off–state Leakage	1mA maximum
On Response Time	2ms maximum
Off Response Time	2ms maximum

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

7.11.3 Thermal Derating: MDL742

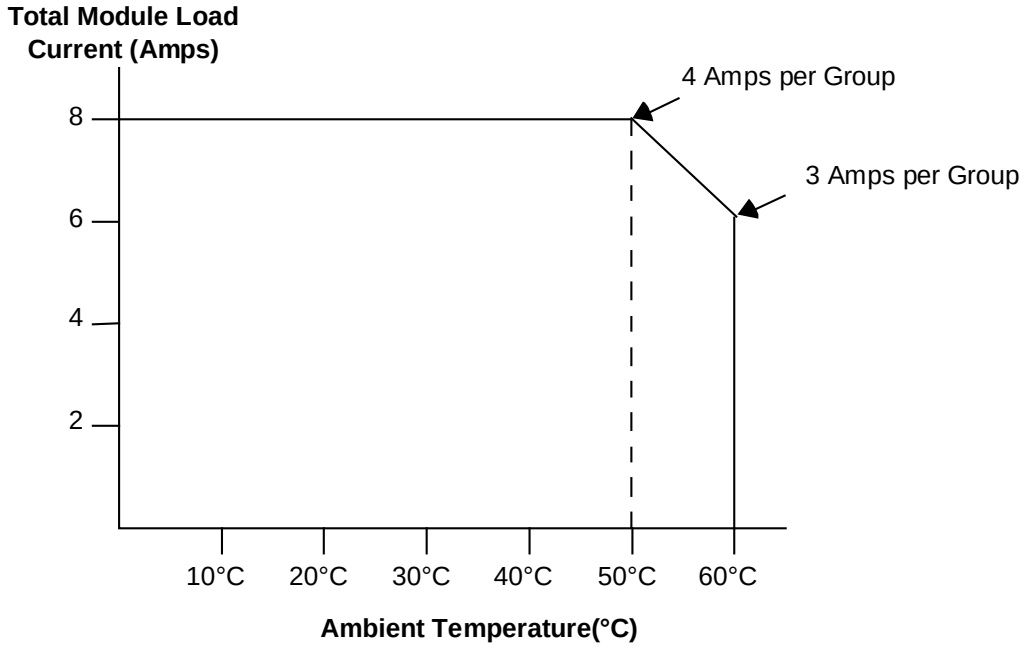

Figure 200: Thermal Derating Curve MDL742