

12/24 Volt DC Negative Logic 0.5 Amp Output - 16 Point IC693MDL741

The *12/24 volt DC Negative Logic 0.5 Amp Output* module for the Series 90-30 Programmable Logic Controller provides 16 output points in two groups. Each group has a common power output terminal. This output module is designed to have negative logic characteristics in that it sinks current from the loads to the user common or negative power bus. The output device is connected between the positive power bus and the module output. The output characteristics are compatible with a wide range of user-supplied load devices, such as: motor starters, solenoids, and indicators. Power to operate the field devices must be supplied by the user.

LED indicators which provide the ON/OFF status of each point are located at the top of the module. This LED block has two horizontal rows with eight green LEDs in each row; the top row labeled A1 through 8 (points 1 through 8) and the bottom row labeled B1 through 8 (points 9 through 16). An insert goes between the inside and outside surface of the hinged door. The surface towards the inside of the module (when the hinged door is closed) has circuit wiring information, and circuit identification information can be recorded on the outside surface. The outside left edge of the insert is color-coded blue to indicate a low-voltage module. There are no fuses on this module.

This module can be installed in any I/O slot of a 5 or 10-slot baseplate in a Series 90-30 PLC system.

Table 7-13. Specifications for IC693MDL741

Rated Voltage	12/24 volts DC
Output Voltage Range	12 to 24 volts DC (+20%, -15%)
Outputs per Module	16 (two groups of eight outputs each)
Isolation	1500 volts between field side and logic side 500 volts between groups
Output Current	0.5 amps maximum per point 2 amps maximum per common
Output Characteristics	
Output Voltage Drop	0.5 volts maximum
Off-state Leakage	1 mA maximum
On Response Time	2 ms maximum
Off Response Time	2 ms maximum
Power Consumption	110 mA (all outputs on) from 5 volt bus on backplane

Refer to Appendix B for product standards and general specifications.

IC693MDL741 Output Module Field Wiring Information

The following figure provides wiring information for connecting user supplied load devices and power source to the 12/24 volt DC negative logic 0.5 amp output module.

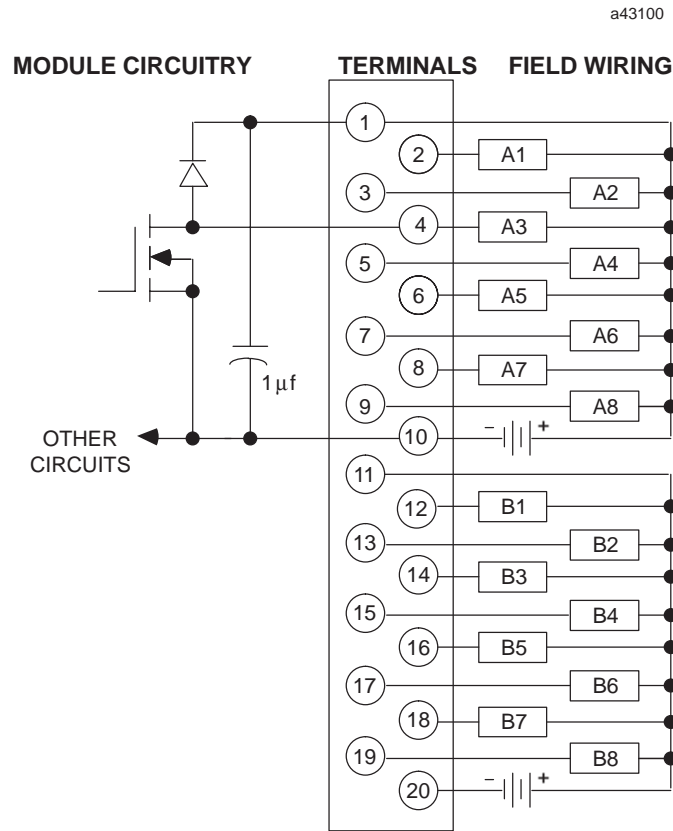


Figure 7-24. IC693MDL741 Output Module Field Wiring

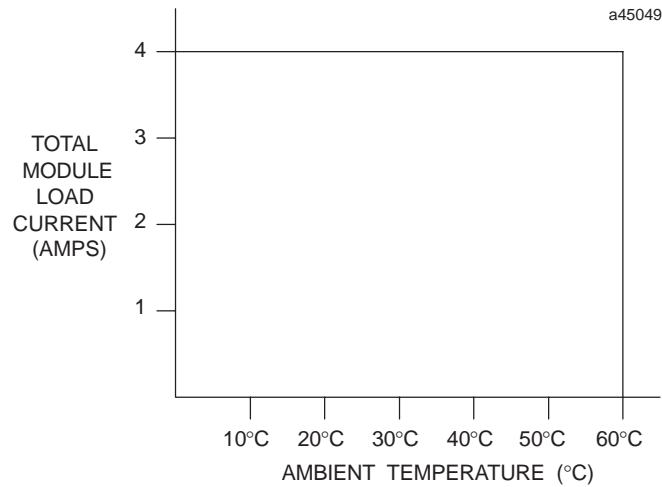


Figure 7-25. Load Current vs. Temperature for IC693MDL741

TBQC Components for 16-Point Modules

Installing a 16 point module typically takes 2 1/2 hours to wire from a PLC to a terminal blocks or strip. With the TBQC, you simply snap the terminal block onto a DIN rail, remove the I/O module's terminal assembly, snap in the I/O faceplate, and connect the cable. This reduces wiring time to about two minutes, reducing wiring costs and errors. TBQC components consist of terminal blocks, I/O Face Plates, and cables.

Terminal Blocks

Terminal blocks have three rows of terminals, arranged in three levels, as shown in Figure J-1. These terminal blocks feature an easy to use captive-screw, "rising cage" type connection system. Catalog numbers for the terminal blocks and the modules they can be used with are listed below.

Table C-1. TBQC Terminal Block Selection Table

Catalog Number	Use With These Modules	Module Description
IC693ACC329¹	IC693MDL240 IC693MDL645 IC693MDL646	Input, 120 VAC – 16 points Input, 24 VDC Pos./Neg Logic– 16 points Input, 24 VDC Pos./Neg, Logic, FAST – 16 points
IC693ACC330	IC693MDL740 IC693MDL742	Output, 12/24 VDC Pos Logic, 0.5A – 16 points Output, 12/24 VDC Pos Logic ESCP, 1A– 16 points
IC693ACC331	IC693MDL741	Output, 12/24 VDC Neg Logic, 0.5A– 16 points
IC693ACC332	IC693MDL940	Output, Relay, N.O. – 16 points
IC693ACC333	IC693MDL340	Output, 120 VAC, 0.5A – 16 points

¹ This Terminal Block may be used with most I/O modules that have up to 16 I/O points (can not be used with 32 point modules). Jumpers may have to be added; for details of required wiring connections, refer to module specifications in this manual.

Cable Current Rating

Each conductor in these 24-conductor cables has a current rating of 1.2 Amps. If using these cables with a 16-point Output module with a higher output current rating, you must use the lower value of 1.2 Amps for the maximum load current rating. If you have field devices that require more than 1.2 Amps, do not use a TBQC assembly – use the standard Terminal Board that comes with the module instead.

IC693ACC331 TBQC Terminal Block (for 16-Point Modules)

Use with the following 16-point I/O module:
IC693MDL741

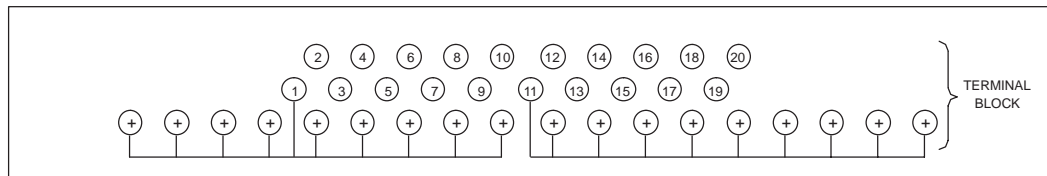
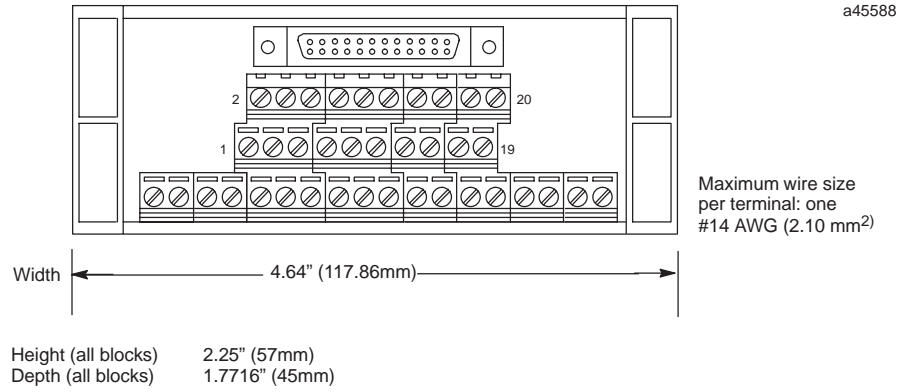


Figure C-5. IC693ACC331 TBQC Terminal Block

Note

Refer to the applicable chapter in this manual for module wiring diagrams.

Mounting

These terminal blocks are mounted on a standard, user-supplied 35 mm DIN-rail.