



Allen-Bradley

**SLC 500™ Fixed
Hardware Style**

**(Cat. No. 1747-L20, 1747-L30,
and 1747-L40 Processors)**

product icon

Installation and Operation Manual

Configuration Options

The following table provides configuration options for 20, 30, or 40 I/O points.

Catalog Number	Line Power	I/O Configuration		High-Speed Counter	User Power
		Input	Output		
1747-L20A	120/240 VAC	(12) 120 Volts AC	(8) AC/DC Relay	No	NA
1747-L30A		(18) 120 Volts AC	(12) AC/DC Relay	No	NA
1747-L40A		(24) 120 Volts AC	(16) AC/DC Relay	No	NA
1747-L20B		(12) 120 Volts AC	(8) AC Triac	No	NA
1747-L30B		(18) 120 Volts AC	(12) AC Triac	No	NA
1747-L40B		(24) 120 Volts AC	(16) AC Triac	No	NA
1747-L20C		(12) 24 Volts DC Sink	(8) AC/DC Relay	Yes	24V-200mA
1747-L30C		(18) 24 Volts DC Sink	(12) AC/DC Relay	Yes	24V-200mA
1747-L40C		(24) 24 Volts DC Sink	(16) AC/DC Relay	Yes	24V-200mA
1747-L20D		(12) 24 Volts DC Sink	(8) AC Triac	Yes	24V-200mA
1747-L30D		(18) 24 Volts DC Sink	(12) AC Triac	Yes	24V-200mA
1747-L20E		(12) 24 Volts DC Sink	(8) DC Transistor Source	Yes	24V-200mA
1747-L40E		(24) 24 Volts DC Sink	(16) DC Transistor Source	Yes	24V-200mA
1747-L20L		(12) 24 Volts DC Source	(8) DC Transistor Sink	Yes	24V-200mA
1747-L30L		(18) 24 Volts DC Source	(12) DC Transistor Sink	Yes	24V-200mA
1747-L40L		(24) 24 Volts DC Source	(16) DC Transistor Sink	Yes	24V-200mA
1747-L20R		(12) 240 Volts AC	(8) AC/DC Relay	No	NA
1747-L20P		(12) 240 Volts AC	(8) AC Triac	No	NA
1747-L30P		(18) 240 Volts AC	(12) AC Triac	No	NA
1747-L40P		(24) 240 Volts AC	(16) AC Triac	No	NA
1747-L20F	24 VDC±10%	(12) 24 Volts DC Sink	(8) AC/DC Relay	Yes	NA
1747-L40F		(24) 24 Volts DC Sink	(16) AC/DC Relay	Yes	NA
1747-L20G		(12) 24 Volts DC Sink	(8) DC Transistor Source	Yes	NA
1747-L20N		(12) 24 Volts DC Source	(8) DC Transistor Sink	Yes	NA

Chapter 1

Selecting Your Hardware Components

Relay Contact Ratings

Maximum Volts	Amperes		Amperes Continuous	Voltamperes	
	Make	Break		Make	Break
240 VAC 120 VAC	7.5A 15A	0.75A 1.5A	2.5A	1800 VA	180 VA
125 VDC	0.22A		1.0A	28 VA	
24 VDC	1.2A		2.0A	28 VA	

To calculate make and break ratings for other load voltages, divide the voltampere rating by the load voltage; for example:

$$28 \text{ VA} / 48 \text{ VDC} = 0.583 \text{ A}$$

Selecting the 2-Slot Chassis

For the 20, 30, and 40 I/O fixed controllers, an optional 2-slot expansion chassis lets you add two additional I/O modules providing even more versatility. The power supply provides backplane power for the modules in the optional expansion chassis.

Refer to chapter 3 for chassis dimensions and chapter 4 for mounting directions.

Selecting Discrete I/O Modules

There are three types of I/O modules: input, output, and combination I/O. They are available in a wide variety of densities including 4, 8, 16, and 32 point and can interface to AC, DC, and TTL voltage levels. Output modules are available with solid-state AC, solid-state DC, and relay contact type outputs.

For a complete, up-to-date listing of discrete I/O modules and their specifications, contact your Allen-Bradley sales office for the latest product data entitled *Discrete Input and Output Modules*, Publication Number 1746-2.35.

Refer to chapter 4 for installation directions.

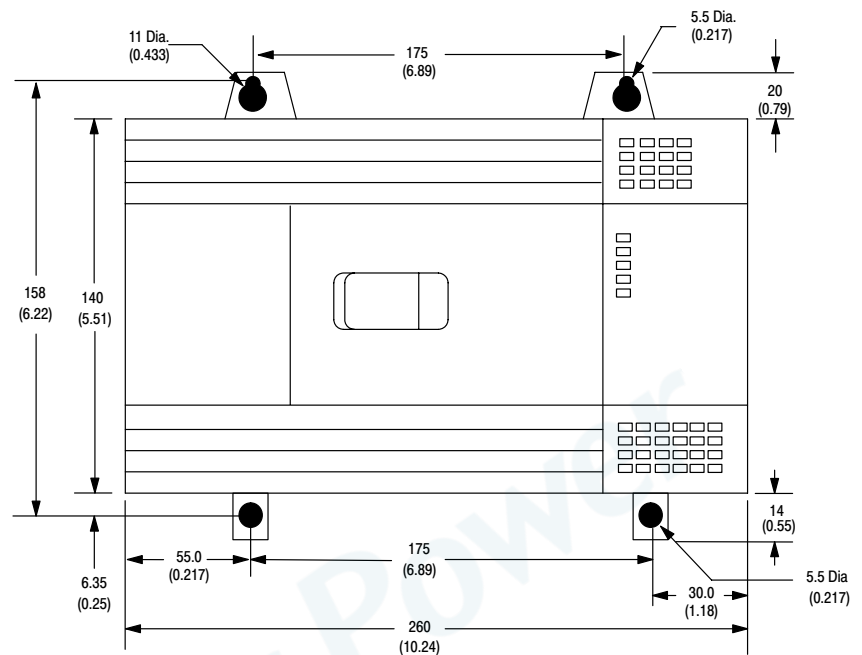
Selecting Speciality I/O Modules

The SLC 500 family offers specialty I/O modules that enhance your control system. These modules range in function from analog interface to motion control, from communication to high-speed counting.

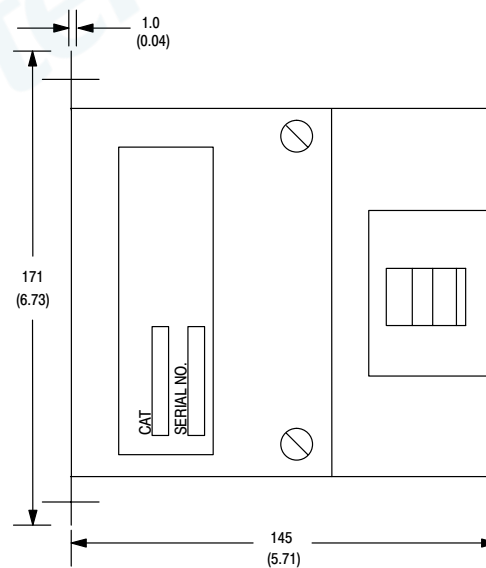
For a complete, up-to-date listing of specialty I/O modules and their specifications, contact your Allen-Bradley sales office for the latest System Overview entitled *SLC 500 Family of Small Programmable Controllers*, Publication Number 1747-2.30, or for a related product data.

Refer to chapter 4 for installation directions.

30 and 40 I/O Fixed Controller^①



Front View



Left Side View

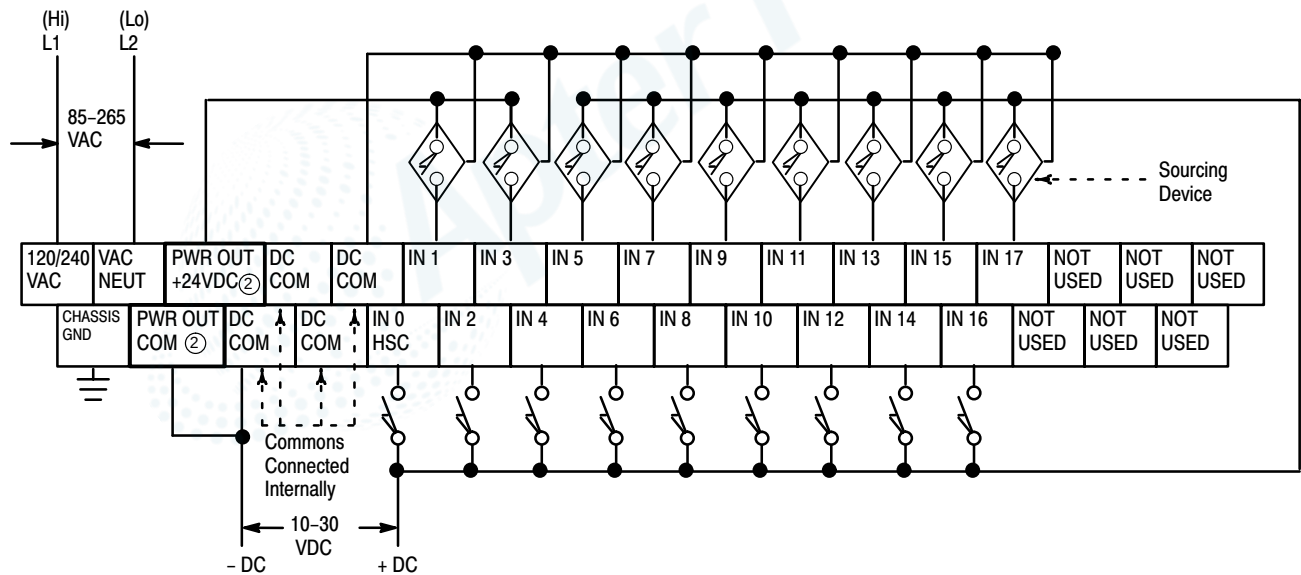
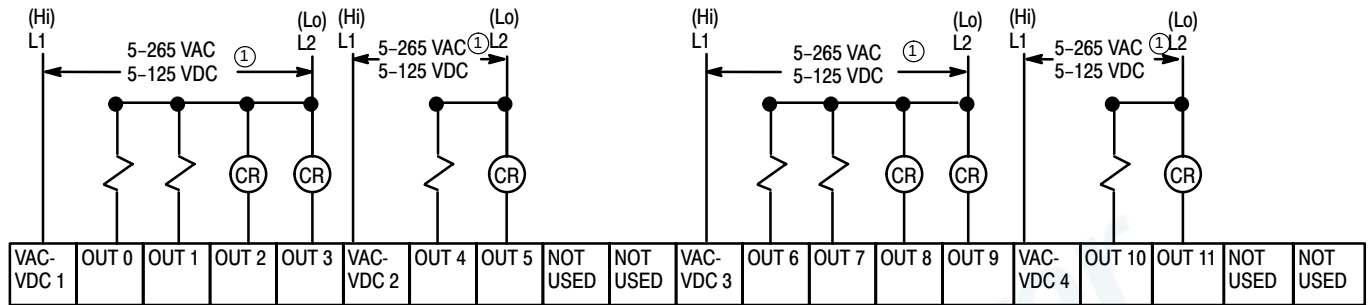
① Dimensions are in millimeters. (Dimensions in parentheses are in inches.)

Appendix E

Wiring and Circuit Diagrams and Voltage Ranges
for Your Fixed Controller

Catalog Number 1747-L30C (18) 24 VDC Sinking Inputs, High-Speed Counter Input & (12) Relay Outputs

Wiring Diagram



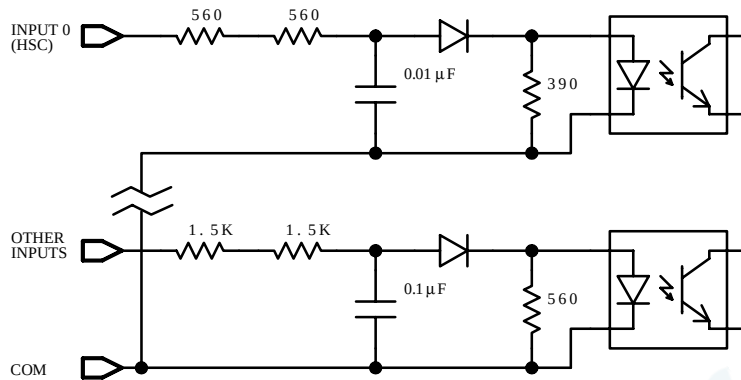
^① The outputs are isolated in groups as shown. Therefore, different voltages can be applied to each group as the specific application requires.

^② 24 VDC, 200mA user power is available for sensors.

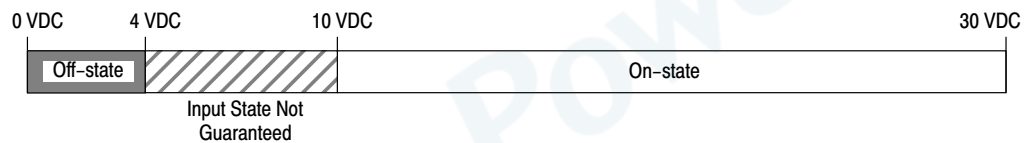
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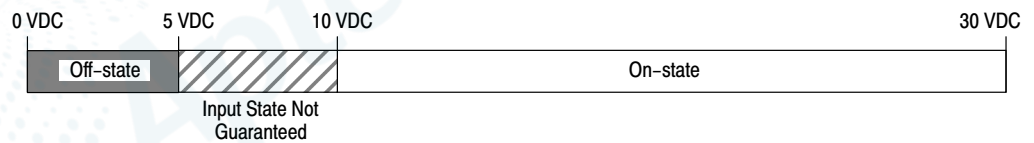
Input Circuit Diagram



On/Off State Voltage Ranges – Input 0 (HSC)



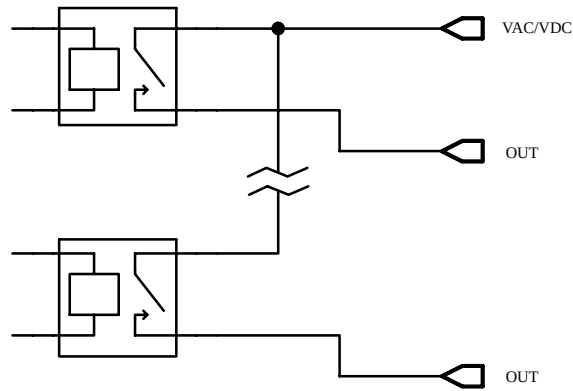
On/Off State Voltage Ranges – All Other Inputs



Appendix E

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Output Circuit Diagram



Operating Voltage Range

