

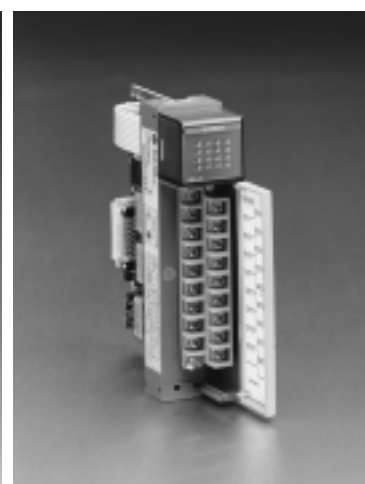
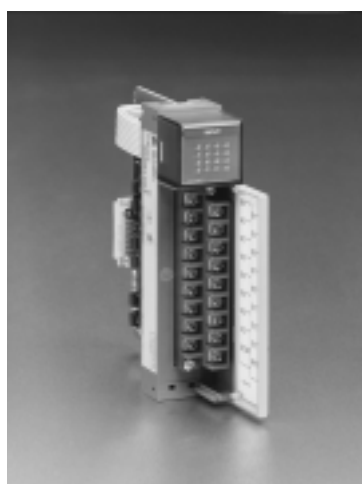


Allen-Bradley

Technical Data

Discrete Input and Output Modules

(Catalog Numbers 1746-IA4, -IA8, -IA16, -IB8, -IB16, -IB32, -IC16, -IG16, -IH16, -IM4, -IM8, -IM16, -IN16, -ITB16, -ITV16, -IV8, -IV16, -IV32, -OA8, -OA16, -OAP12, -OB6EI, -OB8, -OB16, OB16E, -OB32, OB32E, -OBP8, -OBP16, -OG16, -OV8, -OV16, OV32, -OVP16, -OW4, -OW8, -OW16, -OX8, -IO4, -IO8, -IO12, -IO12DC)



Inside	page
Discrete I/O Module Summary	2
Features and Benefits	3
I/O Module Operation	5
Enhanced Discrete I/O Modules	7
Terms and Symbols Used in the Specification Tables and Wiring Diagrams	12
Specifications, Wiring, and Circuit Diagrams	15
Fixed I/O Chassis and Module Compatibility	47
Discrete I/O Power Dissipation	49
Environmental Specifications	50
Accessories	50
Allen-Bradley Support	51

Our wide variety of input, output, and combination modules makes the SLC 500™ family the smart choice for all of your small PLC applications. I/O

modules 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 added flexibility, combination modules are also available in 2-input/2-output, 4-input/4-output, and 6-input/6-output versions.

Designed and tested for industrial applications, our modules are of the highest quality. The modules feature input filtering, optical isolation, and built-in surge protection to enhance the reliability of operation in noisy industrial environments.

Class 1, Division 2 certified by UL and CSA. CE compliant. All modules are UL 508 listed and CSA 22.2 142 approved and meet Class 1, Division 2 hazardous location requirements of both Underwriter's Laboratory and the Canadian Standards Association (except for those noted in the module summary on page 2). For use within the European Union or EEA regions, most modules have been tested to meet Council Directive 89/336 Electromagnetic Compatibility (exceptions are listed on page 2).

AC/DC Relay Output Modules (1746-OW4, -OW8, -OW16, -OX8)

Specification		Catalog Number			
		1746-OW4	1746-OW8	1746-OW16 (RTB)	1746-OX8 (RTB)
Voltage Category		ac/dc Relay			
Operating Voltage		5 to 265V ac at 47 to 63 Hz / 5 to 125V dc			
Number of Outputs		4	8	16	8
Points per Common		4	4	8	Individually Isolated
Backplane Current Draw	5V dc	0.045A	0.085A	0.170A	0.085A
	24V dc	0.045A	0.090A	0.180A	0.090A
Signal Delay (max.) (Resistive Load)		on = 10 ms / off = 10 ms			
Off-State Leakage (max.)		0 mA			
Load Current (min.)		10 mA at 5V dc			
Continuous Current per Point ⁽¹⁾ (max.)		See the <i>Relay Contact Ratings</i> tables shown below.			
Continuous Current per Module (max.)		8.0A ac	16.0A ac	16.0A ac	(2)
Current per Common (max.)		8.0A	8.0A	8.0A	

Relay Contact Ratings for 1746-OW4, OW8, and OW16

Maximum Volts		Amperes ⁽¹⁾		Amperes Continuous ⁽²⁾	Volt-Amperes	
		Make	Break		Make	Break
ac	240V ac	7.5A	0.75A	2.5A	1800 VA	180 VA
	120V ac	15A	1.5A			
dc	125V dc	0.22A ⁽³⁾		1.0A	28 VA	
	24V dc	1.2A ⁽³⁾		2.0A		

Relay Contact Ratings for 1746-OX8

Maximum Volts		Amperes ⁽¹⁾		Amperes Continuous ⁽²⁾	Volt-Amperes	
		Make	Break		Make	Break
ac	240V ac	15A	1.5A	5.0A	3600 VA	360 VA
	120V ac	30A	3.0A			
dc	125V dc	0.22A ⁽³⁾		1.0A	28 VA	
	24V dc	1.2A ⁽³⁾		2.0A		

(1) Connecting surge suppressors across your external load extends the life of SLC 500 relay contacts. For recommended surge suppressors when switching ac inductive loads, consult the *SLC 500 Modular Hardware Style Installation and Operation User Manual* (Publication 1746-6.2) or the *SLC 500 Fixed Hardware Style Installation and Operation User Manual* (Publication 1747-6.21). Recommended surge suppression for switching 24V dc inductive loads is 1N4004 diode reverse wired across the load.

(2) The continuous current per module must be limited so the module power does not exceed 1440 VA.

(3) For dc voltage applications, the make/break ampere rating for relay contacts can be determined by dividing the 28 VA by the applied dc voltage. For example, 28 VA/48V dc = 0.58A. For dc voltage applications less than 14V, the make/break ratings for relay contacts cannot exceed 2A.

RTB = Removable Terminal Block.

Operating Voltage Range

(For ac operation: voltage is applied between L1 and L2.)

(For dc operation: voltage applied is between +VDC and DC common.)

0 V 5V ac
0 V 5V dc

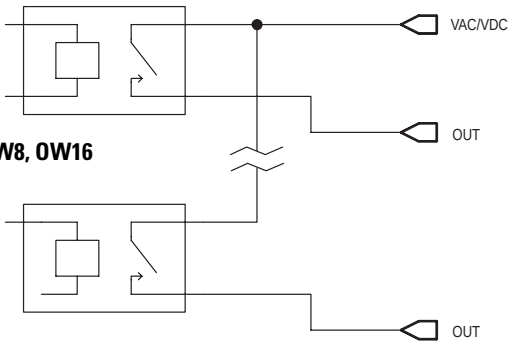
265V ac
125V dc



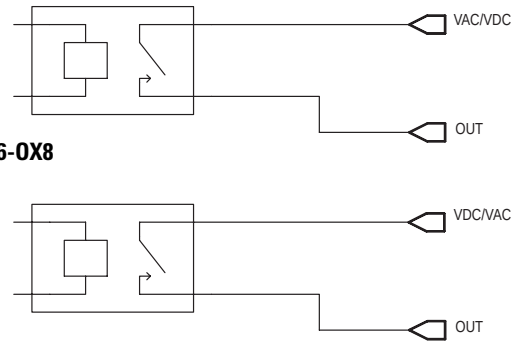
Operation Not
Guaranteed

Circuit Diagram

1746-OW4, OW8, OW16

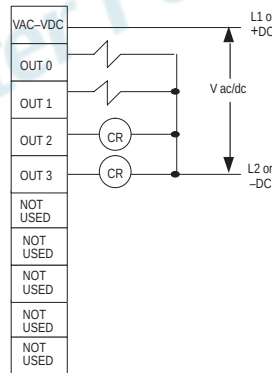


1746-0X8

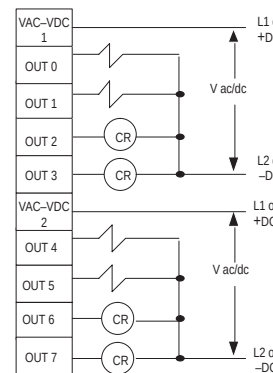


Wiring Diagrams

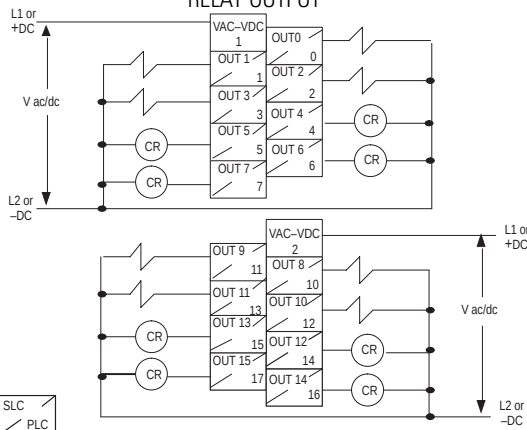
1746-OW4 RELAY OUTPUT



1746-OW8 RELAY OUTPUT



1746-OW16 RELAY OUTPUT



1746-0X8 ISOLATED RELAY OUTPUT

