Installation Instructions

Allen-Bradley

SLC 500 Digital I/O Modules

Input Catalog Numbers 1746-IA4, 1746-IA8, 1746-IA16, 1746-IB8, 1746-IB16, 1746-IC16, 1746-IG16, 1746-IH16, 1746-IM4, 1746-IM8, 1746-IM16, 1746-IN16, 1746-ITB16, 1746-ITV16, 1746-IV8, 1746-IV16

Output Catalog Numbers 1746-OA8, 1746-OA16, 1746-OAP12, 1746-OB8, 1746-OB6EI, 1746-OB16, 1746-OB16E, 1746-OBP8, 1746-OBP16, 1746-OG16, 1746-OV8, 1746-OV16, 1746-OVP16, 1746-OW4, 1746-OW8, 1746-OW16, 1746-OX8

Combination Input/Output Catalog Numbers 1746-IO4, 1746-IO8, 1746-IO12, 1746-IO12DC

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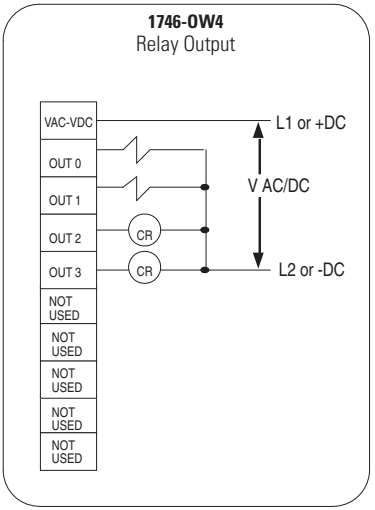
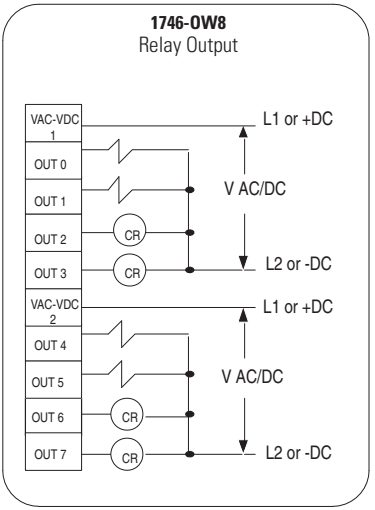
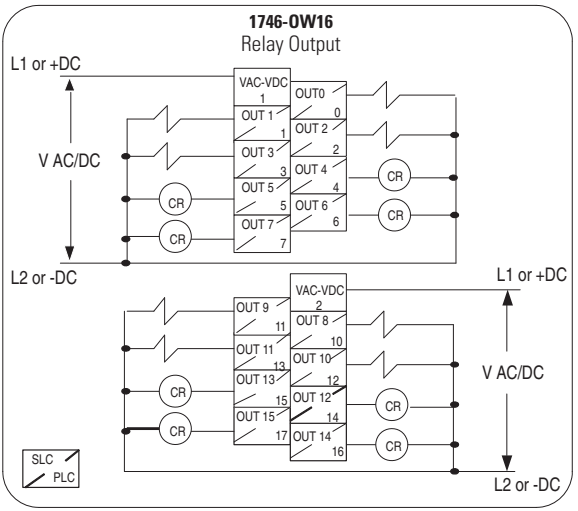
Relay Contact Output Modules Wiring Diagrams

1746-OW4, 1746-OW8, 1746-OW16







Output Modules Heat Dissipation

Catalog Numbers	Watts per Point	Minimum Watts	Total Watts
1746-OV8	0.775	0.675	6.90
1746-OV16	0.388	1.400	7.60
1746-OVP16	0.310	1.250	6.26
1746-OW4	0.133	1.310	1.90
1746-OW8	0.138	2.590	3.70
1746-OW16	0.033	5.170	5.70
1746-OX8	0.825	2.590	8.60

Combination Input/Output Modules Heat Dissipation

Catalog Numbers	Watts per Point	Minimum Watts	Total Watts
1746-IO4	0.27 per input point 0.133 per output point	0.75	1.60
1746-IO8	0.27 per input point 0.133 per output point	1.38	3.00
1746-IO12	0.27 per input point 0.133 per output point	2.13	4.60
1746-IO12DC	0.20 per input point 0.133 per output point	1.84	3.90

ATTENTION: To avoid potential damage to TTL modules, handle them by the ends of the module, not metallic surfaces. Electrostatic discharges can damage the module. Take care to prevent exposure of terminals or components to electrostatic charges.

Careful wire routing within the enclosure helps cut down electrical noise between I/O lines. Refer to the SLC 500 Modular Hardware Style User Manual, publication 1747-UM011, for recommended wiring procedures for TTL modules.

Limit cable length to 3 m (10 ft) per point for outputs in standard environments.

Refer to Allen-Bradley Programmable Controller Wiring and Grounding Guidelines, publication 1770-IN041, for complete information.

Relay Contact Modules

WARNING: Exposure to some chemicals may degrade the sealing properties of materials used in the following devices: Relay Epoxy.

Catalog	Relay
1746-OX8	K1…K8
1746-IO4	K1 and K2
1746-IO8	K1…K4
1746-IO12	K1…K6
1746-IO12DC	K1…K6
1746-OW4	K1…K4
1746-OW8	K1…K8
1746-OW16	K1…K16

It is recommended that the user periodically inspect these devices for any degradation of properties and replace the module if degradation is found.

Specifications – 1746-OW4, 1746-OW8, 1746-OW16, and 1746-OX8

Attribute	Value			
	1746-OW4[2]	1746-OW8[2]	1746-OW16[2][3]	1746-OX8[2][3]
Voltage category	AC/DC Relay			
Number of outputs	4	8	16	8
Points per common	4	4	8	Individually isolated

Combination Input/Output Modules

Specifications – 1746-IO4, 1746-IO8, 1746-IO12, and 1746-IO12DC

Attribute		Value			
		1746-IO4[1][2]	1746-IO8[1][2]	1746-IO12[1][3][4]	1746-IO12DC[3][5][6][7]
Points per module		2 inputs 2 outputs	4 inputs 4 outputs	6 inputs 6 outputs	6 inputs 6 outputs
Points per common		2	4	6	6
Voltage category		120V AC			24V DC
Voltage, operating (inputs)		85...132V AC			10...30V DC
Voltage category (outputs)		100/120V AC Relay contact output			
Voltage, operating (outputs)		5...265V AC 5...125V DC			
Backplane current consumption	5V DC	0.030 A	0.060 A	0.090 A	0.080 A
	24V DC	0.025 A	0.045 A	0.070 A	0.060 A

(1) Certified for Class 1, Division 2 hazardous location by CSA.

(2) See specifications for catalog numbers 1746-IA4 and 1746-OW4. Continuous Current per 1746-IO4 Module is 4.0 A. Continuous Current per 1746-IO8 Module is 8.0 A.

(3) Removable terminal block.

(4) See specifications for catalog numbers 1746-IA16 and 1746-OW16. Continuous Current per 1746-IO12 Module is 8.0 A.

(5) See specification for catalog numbers 1746-IB16 and 1746-OW16. Continuous Current per 1746-IO12DC Module is 8.0 A.

(6) Certified for Class 1, Division 2 hazardous location by C-UL.

(7) Use the following ID Code when configuring your system with programming software or the HHT: 1746-IO12DC = 1512.

TIP For combination I/O modules 1746-IO4, 1746-IO8, 1746-IO12 and 1746-IO12DC):

The first several seconds of any powerup or when power is applied to a rack that is not under processor control, the output LED indicators of the combination input and output modules in the rack will be illuminated.

Racks are not under processor control if one of the following conditions exist:

- Modular Hardware Style (only): Processor is absent from the rack or the rack interconnect cable is not properly connected.
- Modular Hardware Style and Fixed Hardware Style: The processor does not have the firmware PROM installed or the processor is not functioning properly.