Specifications – 1746-0A8, 1746-0A16, and 1746-0AP12

Attribute	Value			
	1746-0A8	1746-0A16 ⁽⁵⁾	1746-0AP12 ⁽⁵⁾⁽⁶⁾⁽⁷⁾	
Load current, min	10 mA		·	
Continuous current per point ⁽³⁾	1.0 A @ 30 °C (86 °F) 0.50 A @ 60 °C (140 °F)	0.50 A @ 30 °C (86 °F) 0.25 A @ 60 °C (140 °F)	2.0 A @ 30 °C (86 °F) 1.25 A @ 55 °C (131 °F) 1.0 A @ 60 °C (140 °F)	
Continuous current per module, max	8.0 A @ 30 °C (86 °F) 4.0 A @ 60 °C (140 °F)	8.0 A @ 30 °C (86 °F) 4.0 A @ 60 °C (140 °F)	9.0 A @ 30 °C (86 °F) 6.8 A @ 55 °C (131 °F) 6.0 A @ 60 °C (140 °F)	
On-state voltage drop, max	1.50V @ 1.0 A	1.50V @ 0.50 A	1.2V @ 2.0 A	
Surge current per point ⁽⁴⁾ , max	10.0 A for 25 ms	10.0 A for 25 ms	17.0 A for 25 ms ⁽⁸⁾	

⁽¹⁾ Triac outputs turn on at any point in the AC line cycle, and turn off at AC line zero cross.

(2) To limit the effects of leakage current through solid-state outputs, a loading resistor can be connected in parallel with your load. For 120V AC operation, use a 15 KQ, 2 W resistor.

- (3) Recommended surge suppression: For triac outputs when switching 120V AC inductive loads, use Harris Metal-Oxide Varistor, model number V220MA2A. Refer to the SLC 500 Modular Hardware Style User Manual, publication <u>1747-UM011</u>, for more information on surge suppression.
- (4) Repeatability is once every 1 s at 30 °C (86 °F). Repeatability is once every 2 s at 60 °C (140 °F).
- (5) Removable terminal block.
- (6) A fused common and blown fuse LED indicator are provided on this module. See Fuse Protection and Blown Fuse Diagnostics.
- ⁽⁷⁾ Use ID Code 2803 when configuring your system with programming software or the HHT.
- (8) Surge current = 35 A per common for 10 ms.

DC Output Modules

Specifications – 1746-0B8, 1746-0B16, and 1746-0B16E

Attribute		Value		
		1746-0B8	1746-0B16 ⁽⁴⁾	1746-0B16E ⁽⁴⁾⁽⁵⁾
Voltage category		24V DC Signal Output		·
Number of outputs		8	16	16
Points per common		8	16	16
Voltage, operating (V DC)		1050 (source)		1030 (source)
Backplane current consumption	5V DC	0.135 A	0.280 A	0.135 A
	24V DC	0.0 A		
Signal delay, max resistive load		On = 1 ms Off = 1.0 ms	On = 0.1 ms Off = 1.0 ms	On = 1.0 ms ⁽⁶⁾ Off = 1.0 ms
Off-state leakage, max ⁽¹⁾		1 mA		
Load current, min		1 mA		

Attribute	Value		
	1746-0B8	1746-0B16 ⁽⁴⁾	1746-0B16E ⁽⁴⁾⁽⁵⁾
Continuous current per point ⁽²⁾	1.0 A @ 30 °C (86 °F) 0.50 A @ 60 °C (140 °F)	0.50 A @ 30 °C (86 °F) 0.25 A @ 60 °C (140 °F)	1.0 A @ 30 °C (86 °F) ⁽⁷⁾ 0.50 A @ 60 °C (140 °F)
Continuous current per module, max	8.0 A @ 30 °C (86 °F) 4.0 A @ 60 °C (140 °F)	8.0 A @ 30 °C (86 °F) 4.0 A @ 60 °C (140 °F)	8.0 A @ 060 °C (32140 °F)
On-state voltage drop, max	1.2V @ 1.0 A	1.2V @ 0.50 A	1.0V @ 0.50 A
Surge current per point ⁽³⁾	3.0 A for 10 ms	3.0 A for 10 ms	2.0 A for 10 ms ⁽⁸⁾

Specifications - 1746-0B8, 1746-0B16, and 1746-0B16E

(1) To limit the effects of leakage current through solid-state outputs, a loading resistor can be connected in parallel with your load. For transistor outputs 24V DC operation, use a 5 KΩ, 1/2 W resistor.

(2) Recommended surge suppression: For transistor outputs when switching 24V DC inductive loads, use a 1N4004 diode reverse-wired across the load. Refer to the SLC 500 Modular Hardware Style User Manual, publication <u>1747-UM011</u>, for more information on surge suppression.

(3) Repeatability is once every 1 s at 30 °C (86 °F). Repeatability is once every 2 s at 60 °C (140 °F).

(4) Removable terminal block.

(5) Use the following ID Code when configuring your system with programming software or the HHT: 1746-0B16E = 2920.

- (6) Fast turn-off modules (1746-0B6EI, 1746-0BP8 Series B and later, 1746-0B16E Series B and later, 1746-0BP16, and 1746-0VP16) provide fast OFF delay for inductive loads. Comparative OFF delay times for 1746-0B8/1746-0V8 and fast turn-off modules, when switching Bulletin 100-B110 (24W sealed) contactor, are: 1746-0B8/1746-0V8 OFF delay = 152 ms; fast turn-off modules OFF delay = 47 ms.
- (7) Fast off delay for inductive loads is accomplished with surge suppressors on the 1746-OB6EI, 1746-OB78 series B and later, 1746-OB16E series B and later, 1746-OB916, and 1746-OP16 modules. A suppressor at the load is not needed unless another contact is connected in series. If this is the case, a 1N4004 diode should be reverse wired across the load. This defeats the fast turn-off feature.

(8) Surge current = 32 A per module for 10 ms.



ATTENTION: A transient pulse occurs in transistor outputs when the external DC supply voltage is applied to the output common terminals (for example, through the master control relay). This can occur regardless of the processor having power or not. For most applications, the energy of this pulse is not sufficient to energize the load.

Refer to the SLC 500 Modular Hardware Style User Manual, publication <u>1747-UM011</u>, for more information on transient pulses and guidelines to reduce inadvertent processor operation.

Attribute Value 1746-0B6EI⁽⁵⁾⁽⁶⁾ 1746-0BP8⁽⁵⁾⁽⁶⁾⁽⁸⁾ 1746-0BP16⁽⁵⁾⁽⁶⁾⁽⁹⁾⁽¹⁰⁾ Voltage category 24V DC Signal Output 1746-0BP16⁽⁵⁾⁽⁶⁾⁽⁹⁾⁽¹⁰⁾ Number of outputs 6 8 16 Points per common Individually isolated 4 16

Specifications – 1746-0B6EI, 1746-0BP8, and 1746-0BP16