

Specifications – 1746-OB8, 1746-OB16, and 1746-OB16E

Attribute	Value		
	1746-OB8	1746-OB16 ⁽⁴⁾	1746-OB16E ⁽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 @ 0...60 °C (32...140 °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⁾

- ⁽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 K Ω , 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 [1747-UM011](#), 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 HMT: 1746-OB16E = 2920.
- ⁽⁶⁾ Fast turn-off modules (1746-OB6EI, 1746-OBP8 Series B and later, 1746-OB16E Series B and later, 1746-OBP16, and 1746-OVP16) provide fast OFF delay for inductive loads. Comparative OFF delay times for 1746-OB8/1746-OVB and fast turn-off modules, when switching Bulletin 100-B110 (24W sealed) contactor, are: 1746-OB8/1746-OVB 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-OBP8 series B and later, 1746-OB16E series B and later, 1746-OBP16, and 1746-OVP16 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 [1747-UM011](#), for more information on transient pulses and guidelines to reduce inadvertent processor operation.

Specifications – 1746-OB6EI, 1746-OBP8, and 1746-OBP16

Attribute	Value		
	1746-OB6EI ⁽⁵⁾⁽⁶⁾	1746-OBP8 ⁽⁵⁾⁽⁶⁾⁽⁸⁾	1746-OBP16 ⁽⁵⁾⁽⁶⁾⁽⁹⁾⁽¹⁰⁾
Voltage category	24V DC Signal Output		
Number of outputs	6	8	16
Points per common	Individually isolated	4	16

Specifications – 1746-IM4, 1746-IM8, and 1746-IM16

Attribute	Value		
	1746-IM4	1746-IM8	1746-IM16 ⁽²⁾
Input current	12 mA @ 240V AC, nom		
Inrush current, max ⁽¹⁾	1.6 A		
Inrush current time duration, max	0.5 ms		

⁽¹⁾ An AC input device must be compatible with SLC 500 input circuit inrush current. A current limiting resistor can be used to limit inrush current; however, the operating characteristics of the AC input-circuit will be affected.

⁽²⁾ Removable terminal block.

DC Input Modules**Specifications – 1746-IB8, 1746-IB16, 1746-ITB16, and 1746-IC16**

Attribute	Value			
	1746-IB8	1746-IB16 ⁽¹⁾	1746-ITB16 ⁽¹⁾	1746-IC16 ⁽¹⁾⁽³⁾
Voltage category	24V DC signal input (sinking)			48V DC signal input (sinking)
Number of inputs	8	16	16	16
Points per common	8	16	16	16
Voltage, operating	10...30V DC (sinking)			30...60V DC @ 55 °C (131 °F) sinking 30...55V DC @ 60 °C (140 °F) sinking
Backplane current consumption	5V DC	0.050 A		
	24V DC	0.0 A		
Signal delay, max	On = 8 ms Off = 8 ms	On = 8 ms Off = 8 ms	On = 0.3 ms Off = 0.5 ms ⁽²⁾	On = 4 ms Off = 4 ms
Off-state voltage, max	5.0V DC			10.0V DC
Off-state current, max	1 mA	1 mA	1.5 mA	1.5 mA
Input current, nom	8 mA @ 24V DC			4.1 mA @ 48V DC

⁽¹⁾ Removable terminal block.

⁽²⁾ Use ID Code 0509 when configuring your system with programming software or the HMT.

⁽³⁾ Typical signal delay for these modules: ON = 0.1 ms, OFF = 0.25 ms @ 24V DC.