Product Details and Certifications

Cross Reference RA Part Number: 1746-OB8 A

Product: 1746-OB8

Description: 1746 SLC System, 8 Ch-DC Output Module for Programmable Controller

Representative Photo Only (actual product may vary based on configuration sections)

I/O MODULES AND HARDWARE

Bulletin Number	1746 SLC 500 I/O Module
Number of Outputs	8
Points per Common	8
Voltage Category	24V DC
Operating Voltage Range	10…50V DC
Backplane Current (mA) @ 5V	135 mA
Backplane Current (mA) @ 24V	0 mA
Voltage Drop, On-State Output, Max	1.2V @ 1.0A
Load Current, Min	1 mA
Leakage Current, Off-State Output, Max	1 mA

Sinking DC Output Modules

Specifications	1746-OG16	1746-OV8	1746-OV16	1746-OV32	1746-OVP16[5]
Voltage drop, on-state output, max.	—	1.2V @ 1.0 A	1.2V @ 0.5 A	1.2V @ 0.5 A	1.0 V @ 1.0 A
Load current, min.	0.15 mA	1 mA	1 mA	1 mA	1 mA
Leakage current, off-state output,max	0.1 mA	1 mA[3]	1 mA[3]	1 mA[3]	1 mA[3]
Signal On Delay, max (resistive load)	0.25 ms	0.1 ms	0.1 ms	0.1 ms	0.1 ms[6]
Signal Off Delay, max (resistive load)	0.50 ms	1.0 ms	1.0 ms	1.0 ms	1.0 ms
Continuous current per module	N/A	8.0 A @ 30 °C (86 °F) 4.0 A @ 60 °C (140 °F)		8.0 A @ 0…60 °C (32…140 °F)	6.4 A @ 0…60 °C (32…140 °F)
Continuous current per point	24 mA	1.0 A @ 30 °C (86 °F) 0.5 A @ 60 °C (140 °F)	0.50 A @30 °C (86 °F) 0.25 A @60 °C (140 °F)[4]	0.50 A @ 30 °C 0.25 A @ 60 °C	1.5 A @ 30 °C (86 °F) 1.0 A @ 60 °C (140 °F)[7]
Surge current per point for 10 ms[1]	N/A	3.0 A		1.0 A @ 30 °C (86 °F) 1.0 A @ 60 °C (140 °F)	4.0 A[8]

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

(2) 50 mV peak to peak ripple, max.

(3) 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 5.6 K Ω, 1/2 W resistor.

(4) 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.

(5) The 1746-OVP16 module features a fused common and blown fuse LED indicator.

(6) Fast turn-off modules provide fast OFF delay for inductive loads. Fast turn-off delay for inductive loads is accomplished with surge suppressors on this module. 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. Comparative OFF delay times for 1746-OB8, 1746-OV8 and fast turn-off modules, when switching Bulletin 100-B110 (24 W sealed) contactor, are: 1746-OB8 and 1746-OV8 modules OFF delay = 152 ms; fast turnoff modules OFF delay = 47 ms.

(7) Fast off-delay for inductive loads is accomplished with surge suppressors on the 1746-IB6EI and 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.

Sourcing DC Output Modules

Specifications	1746-OB6EI	1746-OB8	1746-OB16	1746-OB16E	1746-OB32	1746-OB32E	1746-OBP8[4]	1746-OBP16
Number of outputs	6 Electronically Protected	8	16	16 Electronically Protected	32	32 Electronically Protected	8	16[5]
Points per common	Individually isolated	8	16	16	16	16	4	16
Voltage category	24V DC							
Operating voltage range	10 …30V DC	10…50V DC		10…30V DC	5…50V DC	10…30V DC	20.4…26.4V DC	
Backplane current (mA) @ 5V	46 mA	135 mA	280 mA	135 mA	190 mA		135 mA	250 mA
Backplane current (mA) @ 24V	0 mA	0 mA	0 mA	0 mA	0 mA	0 mA	0 mA	0 mA

Sourcing DC Output Modules

Specifications	1746-OB6EI	1746-OB8	1746-OB16	1746-OB16E	1746-OB32	1746-OB32E	1746-OBP8[4]	1746-OBP16
Voltage drop, on-state output, max.	1.0V @ 2.0 A	1.2V @ 1.0 A	1.2V @ 0.5 A	1.0V @ 0.5 A	1.2V @ 0.5 A		1.0V @ 2.0 A	1.0V @ 1.0 A
Load current, min.	1 mA	1 mA	1 mA	1 mA	1 mA	1 mA	1 mA	1 mA
Leakage current, off-state output,max	1 mA	1 mA	1 mA	1 mA	1 mA	1 mA	1 mA	1 mA
Signal on delay, max (resistive load)	1.0 ms[2]	0.1 ms	0.1 ms	1.0 ms[3]	0.1 ms	1.0 ms	1.0 ms[3]	0.1 ms[3]
Signal off delay, max (resistive load)	2.0 ms	1.0 ms	1.0 ms	1.0 ms	1.0 ms	2.0 ms	2.0 ms	1.0 ms
Continuous current per module	12.0 A @ 0…60 °C (32 °…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)				6.4 A @ 0…60 °C (32…140 °F)
Continuous current per point	2.0 A @ 0…60 °C (32 °…140 °F)[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)	1.0 A @ 30 °C (86 °F) 0.50 A @ 60 °C (140 °F)[4]	0.50 A @ 30 °C (86 °F) 0.25 A @ 60 °C (140 °F)		2.0 A @ 0…60 °C (32…140 °F)[4]	1.5 A @ 30 °C (86 °F) 1.0 A @ 60 °C (140 °F)[4]
Surge current per point for 10 ms[1]	4.0 A	3.0 A		2.0 A	1.0 A @ 30 °C (86 °F) 1.0 A @ 60 °C (140 °F)		4.0 A	

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

(2) Fast turn-off modules provide fast OFF delay for inductive loads. Comparative OFF delay times for 1746-OB8, 1746-OV8 and fast turn-off modules, when switching Bulletin 100-B110 (24 W sealed) contractor, are: 1746-OB8 and 1746-OV8 modules OFF delay = 152 ms; fast turn-off modules OFF delay = 47 ms.

(3) Fast off-delay for inductive loads is accomplished with surge suppressors on the 1746-IB6EI, 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.

(4) An external fuse can be used to protect this module from short circuits. Recommended fuse is SANO MQ 4-3.15 A, 5 x 20 mm.

(5) The 1746-OBP16 module features a fused common and blown fuse LED indicator.

AC Input Modules

Specifications	1746-IA4	1746-IA8	1746-IA16	1746-IM4	1746-IM8	1746-IM16	1746-IN16
Number of inputs	4	8	16	4	8	16	16
Points per common	5	8	16	4	8	16	16
Voltage category	100/120V AC			200/240V AC			24V AC/DC
Operating voltage range	85…132V AC @ 47…63 Hz			170…265V AC @ 47…63 Hz			10…30V AC 10…30V DC
Backplane current (mA) @ 5V	35 mA	50 mA	85 mA	35 mA	50 mA	85 mA	85 mA
Backplane current (mA) @ 24V	0 mA	0 mA	0 mA	0 mA	0 mA	0 mA	0 mA
Voltage, off-state input, max	30V AC			50V AC			3.0V DC 3.0V AC