

## I/O Modules And Hardware

### Digital I/O Modules

#### 1746 Digital AC Input Modules

Cat. No.	Operating Voltage	Signal Delay, Max.	Off-State Current, Max.	Number of Inputs	Backplane Current Load @ 5V	Applications
1746-IA4	85...132V AC	on = 35 ms off = 45 ms	2 mA	4	35 mA	General-purpose 120V AC inputs
1746-IA8			2 mA	8	50 mA	
1746-IA16			2 mA	16	85 mA	
1746-IM4	170...265V AC	on = 35 ms off = 45 ms	2 mA	4	35 mA	General-purpose 220/240V AC inputs
1746-IM8			2 mA	8	50 mA	
1746-IM16			2 mA	16	85 mA	
1746-IN16	24V AC DC Sink (Source Load)	on = 15 ms DC off = 15 ms DC on = 25 ms AC off = 25 ms AC	1 mA	16	85 mA	V-AC or V-DC operation

#### 1746 Digital DC Input Modules

Cat. No.	Operating Voltage	Signal Delay, Max.	Off-State Current, Max.	Number of Inputs	Backplane Current Load @ 5V	Applications
1746-IG16	4.5...5.5V DC source (sink load)	on = 0.25 ms off = 0.50 ms	—	16	140 mA	• TTL input • BCD inputs
1746-IB8	10...30V DC sink (source load)	on = 8 ms off = 8 ms	1 mA	8	50 mA	General-purpose DC inputs
1746-IB16	10...30V DC sink (source load)		1 mA	16	85 mA	
1746-IV8	10...30V DC source (sink load)	on = 8 ms off = 8 ms	1 mA	8	50 mA	Fast response for time-critical applications
1746-IV16			1 mA	16	85 mA	
1746-ITV16		on = 0.3 ms* off = 0.5 ms	1.5 mA	16	85 mA	
1746-ITB16	10...30V DC sink (source load)	on = 0.30 ms* off = 0.50 ms	1.5 mA	16	85 mA	General-purpose DC inputs. High-density for limited panel space
1746-IB32	15...30V DC sink (source load)	on = 3 ms off = 3 ms	1 mA	32	106 mA	
1746-IV32	15...30V DC source (sink load)	on = 3 ms off = 3 ms	1 mA	32	106 mA	
1746-IC16	30...55V DC sink (source load)	on = 4 ms off = 4 ms	1.5 mA	16	85 mA	General-purpose 48V DC inputs
1746-IH16	90...146V DC‡ sink (source load)	on = 9 ms off = 9 ms	0.8 mA	16	85 mA	General-purpose 125V DC inputs

\* Typical signal delay for these modules: on = 0.1 ms, off = 0.25 ms @ 24V DC.

‡ Consult the user manual for module deratings at 146V DC and 60 °C.

#### 1746 Digital AC Output Modules

Cat. No.	Operating Voltage	Continuous Current per Output, Max.	Continuous Current/Module, Max.	Number of Outputs	Backplane Current Load	Applications
1746-OA8	85...265V AC	1.0 A at 30 °C 0.5 A at 60 °C	8 A at 30 °C 4 A at 60 °C	8	185 mA at 5V	General-purpose 120/240V AC outputs
1746-OA16		0.5 A at 30 °C 0.25 A at 60 °C	8 A at 30 °C 4 A at 60 °C	16	370 mA at 5V	
1746-OAP12		2.0 A at 30 °C 1.25 A at 55 °C 1.0 A at 60 °C	9.0 A at 30 °C 6.0 A at 60 °C	12	370 mA at 5V	High-current 120/240V AC outputs; 6 outputs per common; fused commons protect module

#### 1746 Digital DC Output Modules

Cat. No.	Operating Voltage	Continuous Current per Output, Max.	Continuous Current/Module, Max.	Number of Outputs	Backplane Current Load	Applications
1746-OB6E1	10...30V DC source	2.0 A at 0...60 °C	12 A at 0...60 °C	6	46 mA at 5V	Individually isolated electronically fused DC outputs that automatically reset
1746-OB8	10...50V DC source	1.0 A at 30 °C 0.5 A at 60 °C	8 A at 30 °C 4 A at 60 °C	8	135 mA at 5V	General-purpose DC outputs
1746-OV8	10...50V DC sink	1.0 A at 30 °C 0.5 A at 60 °C	8 A at 30 °C 4 A at 60 °C	8	135 mA at 5V	General-purpose DC outputs
1746-OB16	10...50V DC source	0.50 A at 30 °C 0.25 A at 60 °C	8 A at 30 °C 4 A at 60 °C	16	280 mA at 5V	General-purpose DC outputs
1746-OB16E	10...30V DC source	1.00 A at 30 °C 0.50 A at 60 °C	8 A at 0...60 °C	16	135 mA at 5V	Electronically fused DC outputs that automatically reset
1746-OV16	10...50V DC sink	0.5 A at 30 °C 0.25 A at 60 °C	8 A at 30 °C 4 A at 60 °C	16	270 mA at 5V	General-purpose DC outputs
1746-OBP8	20.4...26.4V DC source	2.0 A at 60 °C	8.0 A at 0...60 °C	8	135 mA at 5V	High-current DC source output
1746-OBP16	20.4...26.4V DC source	1.5 A at 30 °C 1.0 A at 60 °C	6.4 A at 0...60 °C	16	250 mA at 5V	High-current DC source output
1746-OVP16	20.4...26.4V DC sink	1.5 A at 30 °C 1.0 A at 60 °C	6.4 A at 0...60 °C	16	250 mA at 5V	High-current DC sink output, fused common
1746-OG16	5V DC sink	0.024 A	0.384 A	16	180 mA at 5V	TTL loads; sink-load display devices
1746-OB32	5...50V DC source	0.5 A at 30 °C 0.2 A at 60 °C	8.0 A at 0...60 °C	32	190 mA at 5V	High-density low-current DC outputs
1746-OB32E	10...32V DC source	0.5 A at 30 °C 0.25 A at 60 °C	8.0 A at 0...60 °C	32	190 mA at 5V	Electronically fused DC outputs that automatically reset
1746-OV32	5...50V DC sink	0.5 A at 30 °C 0.25 A at 60 °C	8.0 A at 0...60 °C	32	190 mA at 5V	High-density low-current DC outputs

### 1746 Digital Contact Output Modules

Cat. No.	Operating Voltage	Continuous Current per Output, Max.*	Continuous Current/Module, Max.	Number of Outputs	Type of Contact Outputs	Backplane Current Load	Applications
1746-OX8	5...125V DC 5...265V AC	3 A at 120V AC 1.2 A at 24V DC	See†	8	N.O. relay contact outputs	85 mA at 5V DC 90 mA at 24V DC	Individually isolated high-current relay contact outputs
1746-OW4		1.5 A at 120V AC 1.2 A at 24V DC	8 A	4		45 mA at 5V DC 45 mA at 24V DC	Relay contact outputs
1746-OW8		1.5 A at 120V AC 1.2 A at 24V DC	16 A 8 A per common	8 (2 sets of 4)		85 mA at 5V DC 90 mA at 24V DC	Relay contact outputs; 4 outputs per common
1746-OW16		1.5 A at 120V AC 1.2 A at 24V DC	16 A‡ 8 A per common	16 (2 sets of 8)		170 mA at 5V DC 180 mA at 24V DC	Relay contact outputs; 8 outputs per common

\* Inductive load rating.

‡ The continuous current per module must be limited to 1440 VA.

### 1746 Digital I/O Combination Modules

Cat. No.	Inputs				Outputs			Backplane Current Load	Applications
	Operating Voltage	Signal Delay, Max.	Off-State Current, Max.	Number of Inputs	Operating Voltage/Type	Continuous Current per Output, Max.*	Number of Outputs		
1746-IO4	85...132V AC	on = 35 ms off = 45 ms	2 mA	2	5...265V AC 5...125V DC N.O. relay contact	1.5 A at 120V AC 1.2 A at 24V DC	2	30 mA at 5V DC 25 mA at 24V DC	Combination 120V AC inputs and relay contact outputs
1746-IO8				4			4	60 mA at 5V DC 45 mA at 24V DC	
1746-IO12				6			6	90 mA at 5V DC 70 mA at 24V DC	
1746-IO12DC	10...30V DC	on = 8 ms off = 8 ms	1 mA	6			6	80 mA at 5V DC 60 mA at 24V DC	Combination 24V DC inputs and relay contact outputs

\* Inductive load rating.