

SLC 500 System Overview

The Allen-Bradley SLC 500 is a small chassis-based family of programmable controllers, discrete, analog, and specialty I/O, and peripheral devices. The SLC 500 family delivers power and flexibility with a wide range of communication configurations, features, and memory options. The RSLogix 500 ladder logic programming package provides flexible editors, point-and-click I/O configuration, and a powerful database editor, as well as diagnostic and troubleshooting tools to help you save project development time and maximize productivity.



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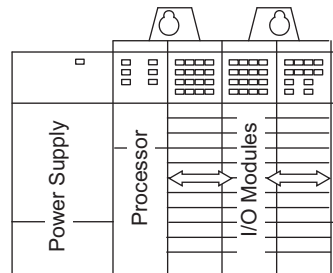
Typical Systems

With up to 64 K of configurable data/program memory available and over 60 types of I/O modules, as well as a choice of networking options, the SLC system provides a powerful solution for stand-alone or distributed industrial control.

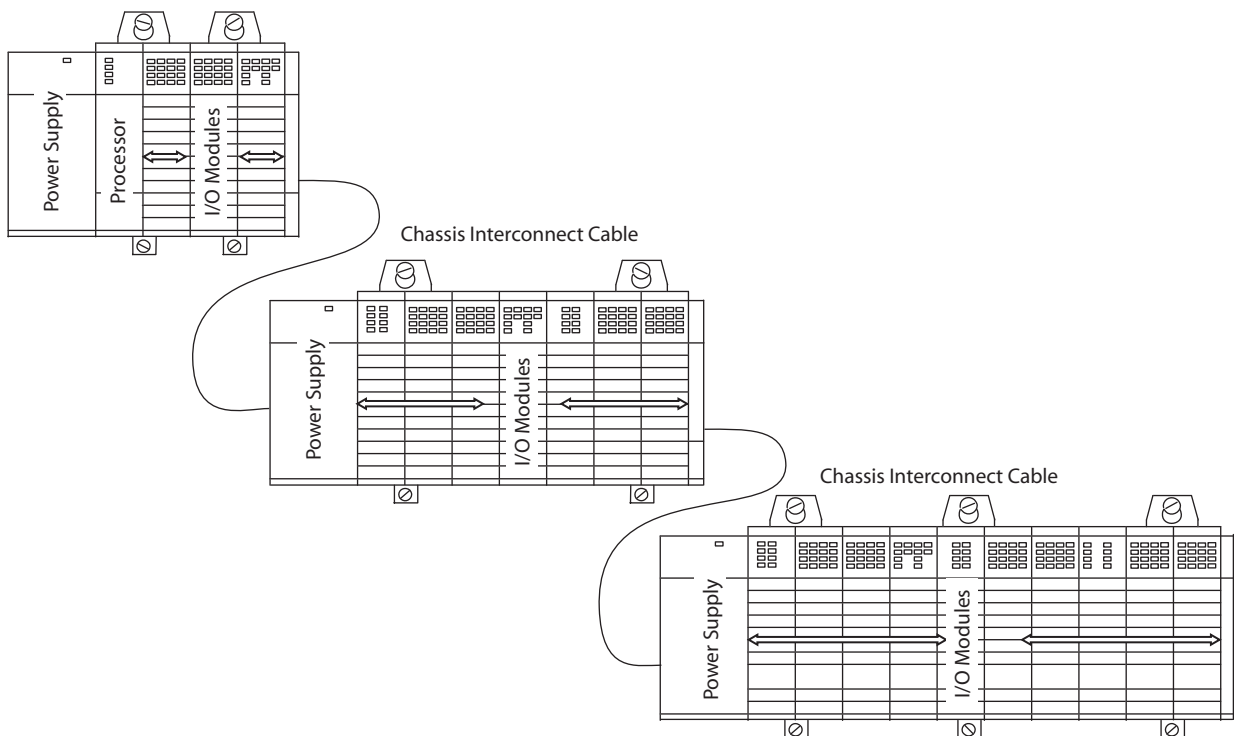
Allen-Bradley 1746-IV32

Local Systems

At minimum, a modular hardware SLC 500 control system consists of a processor module and I/O modules in a single 1746 chassis with a power supply.



You can configure a system with one, two, or three local chassis, for a maximum total of 30 local I/O or communication modules. You connect multiple local chassis together with chassis interconnect cables to extend the backplane signal lines from one chassis to another.



Distributed Systems

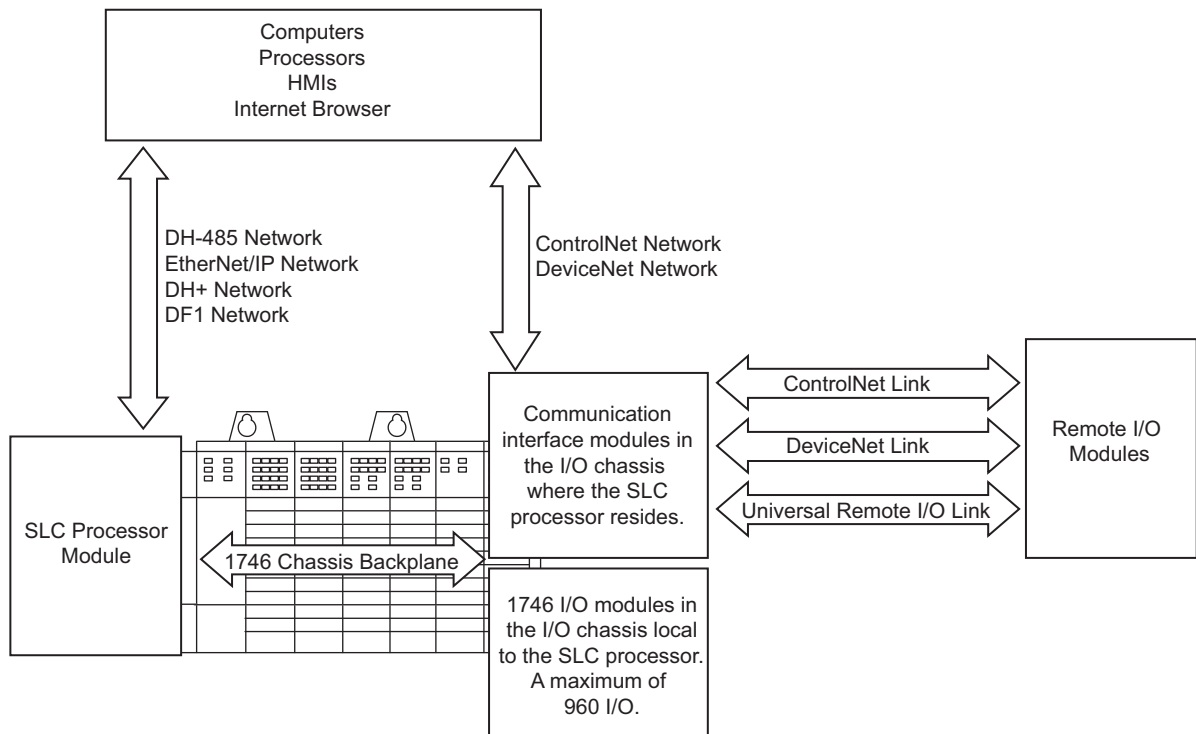
More complex systems can use:

- distributed I/O.

- multiple controllers joined across networks.
- I/O in multiple platforms that are distributed in many locations and connected over multiple I/O links.

Choose the processor module with the on-board communication ports you need. You optionally add modules to provide additional communication ports for the processor. For I/O in locations remote from the processor, you can choose between a ControlNet, DeviceNet, or Universal I/O link. A communication interface module is required in both the local and remote chassis.

Depending upon the communication ports available on your particular SLC control system, you can select operator interfaces that are compatible.



Laying Out the System

Lay out the system by determining the amount of I/O necessary, the network configurations, and the placement of components in each location. Decide at this time whether each chassis will have its own controller or a networked solution.

SLC 500 processors are available with a large range of memory sizes (1 K...64 K) and can control up to 4096 input and 4096 output signals. All modular processors except the SLC 5/01 processor are capable of controlling remotely located I/O. By adding an I/O scanner module, you can use these processors to control/monitor these remotely located I/O across ControlNet, DeviceNet, and Universal Remote I/O links.

Allen-Bradley 1746-IV32

SLC 500 processors are single-slot modules that you place into the left-most slot of a 1746 I/O chassis. For I/O in a location remote from the processor, the I/O adapter is a single-slot module that you place in the left-most slot of the I/O chassis. SLC 500 modular systems provide separate power supplies which must be mounted directly on the left end of the 1746 I/O chassis.

The 1746 I/O chassis are designed for back-panel mounting and available in sizes of 4, 7, 10, or 13 module slots. The 1746 I/O modules are available in densities up to a maximum of 32 channels per module.

Communications

Evaluate what communications need to occur. Knowing your communications requirements will help you determine which processor and which communications devices your application might require.

An SLC processor communicates across the 1746 backplane to 1746 I/O modules in the same chassis in which the processor resides. Various models of SLC processors have various on-board ports for communication with other processors or computers. Also, separate modules are available to provide additional communication ports for communication with other processors, computers, and remotely located I/O.

Each processor has one or two built-in ports for either EtherNet/IP, DH+, DH-485, or RS-232 (DF1, ASCII, or DH-485 protocol) communication.

In addition to the on-board ports available with SLC processors, you have the option of providing another communication port for an SLC processor by adding a communication module.

Adapter modules for 1746 I/O are available for ControlNet and Universal Remote I/O links. An I/O adapter module in a chassis with I/O modules interfaces the I/O modules with the I/O link for communication with a scanner port for a processor at another location.

The following specifications apply to all SLC 500 modular components unless noted.

Environmental Specifications

Attribute	Value
Temperature, operating	IEC 60068-2-1 (Test Ad, Operating Cold), IEC 60068-2-2 (Test Bd, Operating Dry Heat), IEC 60068-2-14 (Test Nb, Operating Thermal Shock): 0...60 °C (32...140 °F)
Temperature, nonoperating	IEC 60068-2-1 (Test Ab, Unpackaged Nonoperating Cold), IEC 60068-2-2 (Test Bb, Unpackaged Nonoperating Dry Heat), IEC 60068-2-14 (Test Na, Unpackaged Nonoperating Thermal Shock): -40...85 °C (-40...185 °F)
Relative humidity	IEC 60068-2-30 (Test Db, Unpackaged Damp Heat): 5...95% without condensation

SLC 500 Common Specifications

Environmental Specifications

Attribute	Value
Vibration, operating	IEC 60068-2-6 (Test Fc, Operating): 1 g @ 5...2000 Hz
Vibration, nonoperating	2.5 g @ 5...2000 Hz
Shock, operating	30 g (3 pulses, 11 ms) – for all modules except relay contact 10 g (3 pulses, 11 ms) – for relay contact modules 1746-OWx and 1746-IOx combo
Shock, nonoperating	50 g, 3 pulses, 11 ms
Free fall (drop test)	Portable, 2.268 kg (5 lb) or less @ 0.762 m (30 in.), six drops Portable, 2.268 kg (5 lb) or less @ 0.1016 m (4 in.), three flat drops
Isolation voltage	Isolation between communication circuits: 500V DC Isolation between backplane and I/O: 1500V AC

Certifications

Certifications when product is marked⁽¹⁾	Value
UL	UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations. See UL File E10314.
c-UL	UL Listed for Class I, Division 2 Group A,B,C,D Hazardous Locations, certified for Canada. See UL File E10314.
CE	European Union 2004/108/EC EMC Directive, compliant with: EN 61000-6-2; Industrial Immunity EN 61000-6-4; Industrial Emissions EN 61131-2; Programmable Controllers (Clause 8, Zone A & B) European Union 2006/95/EC LVD, compliant with: EN 61131-2; Programmable Controllers (Clause 11)
C-Tick	Australian Radiocommunications Act, compliant with: AS/NZS CISPR 11; Industrial Emissions
KC	Korean Registration of Broadcasting and Communications Equipment, compliant with: Article 58-2 of Radio Waves Act, Clause 3

(1) See the Product Certification link at <http://www.rockwellautomation.com/products/certification/> for Declarations of Conformity, Certificates, and other certification details.

Allen-Bradley 1746-IV32

SLC 500 System Checklist

Use the following Checklist as a guide to completing your own system specification.

✓	Step	See
	1 Select I/O Modules <ul style="list-style-type: none"> • consider using an interface module or pre-wired 1492 cables • use a spreadsheet to record your selections 	page 9
	2 Select Communication Modules/Devices <ul style="list-style-type: none"> • determine your network communication requirements and select the necessary communication modules/devices • include appropriate communication cables • record your module/device selections on the system spreadsheet 	page 51
	3 Select an SLC 500 Processor <ul style="list-style-type: none"> • choose a processor based on memory, I/O, performance, programming requirements, and communication options 	page 69
	4 Select an SLC 500 Chassis <ul style="list-style-type: none"> • determine the number of chassis and any interconnect cables required based on the physical configuration of your system 	page 75
	5 Select an SLC 500 Power Supply <ul style="list-style-type: none"> • use the power supply loading worksheet to ensure sufficient power for your system • consider future system expansion when selecting a power supply 	page 79
	6 Select Programming Software <ul style="list-style-type: none"> • select the appropriate package of RSLogix 500 Programming Software for your application 	page 91

1746-OB16E, 1746-OB6EI, and 1746-OB32E modules provide electronic protection from short circuit and overload conditions.

Wiring of 16 and 32-channel modules can also be accomplished with a bulletin 1492 interface module and pre-wired cable. All 16-channel I/O modules and catalog numbers 1746-OX8, 1746-OBP8, 1746-OAP12, 1746-IO12 are equipped with color-coded removable terminal blocks.

Digital I/O Module Overview

Catalog Number	Voltage Category	I/O Points	Description	For Detailed Specifications, See
DC Modules				
1746-IB8	24V DC	8	Current Sinking DC Input Module	Sinking DC Input Modules page 11
1746-IB16	24V DC	16	Current Sinking DC Input Module	
1746-IB32	24V DC	32	Current Sinking DC Input Module	
1746-ITB16	24V DC	16	Fast Response DC Sinking Input Module	
1746-IC16	48V DC	16	Current Sinking DC Input Module	
1746-IH16	125V DC	16	Current Sinking DC Input Module	
1746-IV8	24V DC	8	Current Sourcing DC Input Module	Sourcing DC Input Modules page 12
1746-IV16	24V DC	16	Current Sourcing DC Input Module	
1746-IV32	24V DC	32	Current Sourcing DC Input Module	
1746-ITV16	24V DC	16	Fast Response DC Sourcing Input Module	
1746-IG16 ⁽¹⁾	5V DC	16	Current Sourcing TTL Input Module	
1746-OB6EI	24V DC	6	Electronically Protected Isolated Sourcing DC Output Module	Sourcing DC Output Modules page 13
1746-OB8	24V DC	8	Current Sourcing DC Output Module	
1746-OB16	24V DC	16	Current Sourcing DC Output Module	
1746-OB16E	24V DC	16	Electronically Protected Current Sourcing DC Output Module	
1746-OB32	24V DC	32	Current Sourcing DC Output Module	
1746-OB32E	24V DC	32	Electronically Protected Current Sourcing DC Output Module	
1746-OBP8	24V DC	8	High Current Sourcing DC Output Module	
1746-OBP16 ⁽²⁾	24V DC	16	High Current Sourcing DC Output Module	
1746-OV8	24V DC	8	Current Sinking DC Output Module	Sinking DC Output Modules page 12
1746-OV16	24V DC	16	Current Sinking DC Output Module	
1746-OV32	24V DC	32	Current Sinking DC Output Module	
1746-OVP16 ⁽²⁾	24V DC	16	High Current Sinking DC Output Module	
1746-OG16 ⁽¹⁾	5V DC	16	Current Sinking TTL Output Module	
AC Modules				

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Sinking DC Input Modules

Specifications	1746-IB8	1746-IB16	1746-IB32	1746-IC16	1746-IH16 ⁽¹⁾	1746-ITB16
Voltage, Off-State Input, max.	5.0V DC			10V DC	20V DC	5V DC
Nominal Input Current	8 mA @ 24V DC		5.1 mA @ 24V DC	4.1 mA @ 48V DC	2.15 mA @ 125V DC 2.25 mA @ 132V DC	8 mA @ 24V DC
Current, Off-State Input, Max.	1 mA		1.5 mA		0.8 mA	1.5 mA
Signal On Delay, Max	8 ms max		3 ms max	4 ms max	9 ms max	0.30 ms max
Signal Off Delay, Max	8 ms max		3 ms max	4 ms max	9 ms max	0.50 ms max

- (1) If the input module is connected in parallel with an inductive load, use surge suppression across the load to protect the input module from damage caused by reverse voltage. Refer to the SLC 500 Modular Hardware Style User Manual, publication [1747-UM011](#), for more information on surge suppression.
- (2) Maximum Points ON Simultaneously: 16 @ 146V DC and 30 °C (86 °F); 12 @ 146V DC and 50 °C (122 °F); 14 @ 132V DC and 55 °C (131 °F); 16 @ 125V DC and 60 °C (140 °F).

Sourcing DC Input Modules

Specifications	1746-IG16	1746-IV8	1746-IV16	1746-IV32	1746-ITV16
Number of inputs	16	8	16	32	16
Points per common	16	8	16	8	16
Voltage category	5V DC	24V DC	24V DC	24V DC	24V DC
Operating voltage range	4.5...5.5V DC ⁽¹⁾	10...30V DC		15...30V DC @ 50 °C (122 °F) 15...26.4V DC @ 60 °C (140 °F)	10...30V DC
Backplane current (mA) @ 5V	140 mA	50 mA	85 mA	50 mA	85 mA
Backplane current (mA) @ 24V	0 mA	0 mA	0 mA	0 mA	0 mA
Voltage, off-state input, max.	2...5.5V DC	5.0V DC	5.0V DC	5.0V DC	5.0V DC
Nominal input current	3.7 mA @ 5V DC	8 mA @ 24V DC		5.1 mA @ 24V DC	8 mA @ 24V DC
Current, off-state input, max.	4.1 mA	1 mA		1.5 mA	1.5 mA
Signal on delay, max	0.25 ms max	8 ms max		3 ms max	0.30 ms max
Signal off delay, max	0.50 ms max	8 ms max		3 ms max	0.50 ms max ⁽²⁾

(1) 50 mV peak-to-peak ripple (max.)

(2) Typical signal delay for this module: ON = 0.1 ms, OFF = 0.25 ms @ 24V DC.

Sinking DC Output Modules

Specifications	1746-OG16	1746-OV8	1746-OV16	1746-OV32	1746-OVP16 ⁽⁵⁾
Number of outputs	16	8	16	32	16
Points per common	16	8	16	16	16
Voltage category	5V DC	24V DC			
Operating voltage range	4.5...5.5V DC ⁽²⁾	10...50V DC		5...50V DC	20.4...26.4V DC
Backplane current (mA) @ 5V	180 mA	135 mA	270 mA	190 mA	250 mA
Backplane current (mA) @ 24V	0 mA	0 mA	0 mA	0 mA	0 mA

Relay Master and Expander 20-Terminal XIMs

Description	Cat. No.	I/O Module Catalog Number 1746-																		
		IA 16	IB 16	IC 16	IG 16	IH 16	IM 16	IN 16	ITB 16	ITV 16	IV 16	OA 16	OB 16	OB 16E	OBP 16	OG 16	OV 16	OVP 16	OW 16	OX8
Expander with eight (8) 24V DC relays	1492-XI M24-8R	-	-	-	-	-	-	-	-	-	-	-	(1)	(1)	(1)	-	-	-	-	-
Expander with eight (8) 120V AC relays	1492-XI M120-8R	-	-	-	-	-	-	-	-	-	-	(1)	-	-	-	-	-	-	-	-

Fusible Expander

8-channel expander with 24V DC blown fuse indicators	1492-XI MF-F24-2	-	-	-	-	-	-	-	-	-	-	(1)	(1)	(1)	-	-	-	-	-
8-channel expander with 120V AC blown fuse indicators	1492-XI MF-F120-2	-	-	-	-	-	-	-	-	-	(1)	-	-	-	-	-	-	-	-

Feed-through Expander

Expander with eight (8) feed-through channels 132V AC/DC max	1492-XI MF-2	-	-	-	-	-	-	-	-	-	(1)	-	-	-	-	-	-	-	-
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(1) One expander is connected to a master to provide a total of 16 outputs. An extender cable is included with each expander to attach it to the master.

40-Terminal IFMs and XIMs for 1746 Digital 32-Point I/O Modules

Feed-through 40-Terminal IFMs

Description	Catalog Number	I/O Module Catalog Number 1746-				
		IB32	IV32	OB32	OB32E	OV32
Standard 132V AC/DC max	1492-IFM40F	H	H	H	H	H
Extra terminals (2 per I/O) 132V AC/DC max	1492-IFM40F-2	H	H	H	H	H
3-wire sensor type input devices 60V AC/DC max	1492-IFM40F-3	H	H	-	-	-

LED Indicating 40-Terminal IFMs

Description	Catalog Number	I/O Module Catalog Number 1746-				
		IB32	IV32	OB32	OB32E	OV32
Standard with 24V AC/DC LEDs	1492-IFM40D24	H	H	H	H	H
24V AC/DC LEDs and extra terminals for outputs	1492-IFM40D24-2	-	-	H	H	H
24V AC/DC LEDs and extra terminals for inputs	1492-IFM40D24A-2	H	H	-	-	-
120V AC LEDs and extra terminals for outputs	1492-IFM40D120-2	-	-	-	-	-
120V AC LEDs and extra terminals for inputs	1492-IFM40D120A-2	-	-	-	-	-

LED Indicating 40-Terminal IFMs

Description	Catalog Number	I/O Module Catalog Number 1746-				
		IB32	IV32	OB32	OB32E	OV32
3-wire sensor with 24V AC/DC LEDs	1492-IFM40D24-3	H	H	–	–	–
16 Individually isolated with 24/48V AC/DC LEDs and four terminals/output	1492-IFM40DS24-4	–	–	–	–	–
16 Individually isolated with 24V AC/DC LEDs and four terminals/input	1492-IFM40DS24A-4	–	–	–	–	–
16 Individually isolated with 120V AC LEDs and four terminals/output	1492-IFM40DS120-4	–	–	–	–	–
16 Individually isolated with 120V AC LEDs and four terminals/input	1492-IFM40DS120A-4	–	–	–	–	–
16 Individually isolated with 240V AC LEDs and four terminals/input	1492-IFM40DS240A-4	–	–	–	–	–

Fusible 40-Terminal IFMs

Description	Catalog Number	I/O Module Catalog Number 1746-				
		IB32	IV32	OB32	OB32E	OV32
120V AC/DC with extra terminals for outputs	1492-IFM40F-F-2	–	–	H	H	H
Extra terminals with 24V AC/DC blown fuse indicators for outputs	1492-IFM40F-F24-2	–	–	H	H	H
Extra terminals with 120V AC/DC blown fuse indicators for outputs	1492-IFM40F-F120-2	–	–	–	–	–
16 Individually isolated with extra terminals for 120V AC/DC outputs	1492-IFM40F-FS-2	–	–	–	–	–
16 individually isolated with extra terminals and 24V AC/DC blown fuse indicators	1492-IFM40F-FS24-2	–	–	–	–	–
16 Individually isolated with 24V AC/DC blown fuse indicators and four terminals/output	1492-IFM40F-FS24-4	–	–	–	–	–
16 Individually isolated with extra terminals and 120V AC/DC blown fuse LED indicators	1492-IFM40F-FS120-2	–	–	–	–	–
16 Individually isolated with 120V AC/DC blown fuse indicators and four terminals/output	1492-IFM40F-FS120-4	–	–	–	–	–
16 Individually isolated with 240V AC/DC blown fuse indicators and four terminals/output	1492-IFM40F-FS240-4	–	–	–	–	–
16 Individually isolated with 24V AC/DC blown fuse indicators and four terminals/input	1492-IFM40F-FS24A-4	–	–	–	–	–
16 Individually isolated with 120V AC/DC blown fuse indicators and four terminals/input	1492-IFM40F-FS120A-4	–	–	–	–	–

Relay Master and Expander 40-Terminal XIMs

Description	Catalog Number	I/O Module Catalog Number 1746-				
		IB32	IV32	OB32	OB32E	OV32
Relay Master						
40-pin master with eight (8) 24V DC relays	1492-XIM4024-8R	–	–	H	H	–
40-pin master with sixteen (16) 24V DC relays	1492-XIM4024-16R	–	–	H	H	–
40-pin master with sixteen (16) 24V DC relays with fusing	1492-XIM4024-16RF	–	–	H	H	–
Relay Expander						
Expander with eight (8) 24V DC relays	1492-XIM24-8R	–	–	(1)	(1)	–
Expander with eight (8) 120V AC relays	1492-XIM120-8R	–	–	–	–	–
Expander with sixteen (16) 24V DC relays with fusing	1492-XIM24-16RF	–	–	(2)	(2)	–
Fusible Expander						
8-channel expander with 24V DC blown fuse indicators	1492-XIMF-F24-2	–	–	(1)	(1)	–
8-channel expander with 120V AC blown fuse indicators	1492-XIMF-F120-2	–	–	–	–	–
Feed-through Expander						
Expander with eight (8) feed-through channels 132V AC/DC max	1492-XIMF-2	–	–	(1)	(1)	–

(1) Two or three expanders can be connected to a master to provide a total of 32 outputs. An extender cable is included with each expander to connect it to the master.

(2) Can have one expandable module per master.

Pre-Wired Cables for 1746 Digital I/O Modules

These pre-wired cables have a pre-wired removable terminal block (RTB) on one end to connect to the front of a Bulletin 1746 digital I/O module and a connector on the other end to plug into a 20- or 40-terminal IFM/XIM. You must first select the IFM/XIM from one of the preceding selection tables.

Cable Catalog Number	Standard Cable Lengths	Build to Order Available	Number of Conductors	Mating I/O Module Catalog Number
1492-CABLE ⁽¹⁾ A	0.5, 1.0, 2.5, 5.0 m	Yes	20	1746-IA16, -IM16
1492-CABLE ⁽¹⁾ B	0.5, 1.0, 2.5, 5.0 m	Yes	20	1746-IB16, -IH16, -IN16, -ITB16, -ITV16
1492-CABLE ⁽¹⁾ C	0.5, 1.0, 2.5, 5.0 m	Yes	20	1746-OA16
1492-CABLE ⁽¹⁾ CR	0.5, 1.0, 2.5, 5.0 m	Yes	20	1746-OA16
1492-CABLE ⁽¹⁾ D	0.5, 1.0, 2.5, 5.0 m	Yes	20	1746-OW16, -OX8
1492-CABLE ⁽¹⁾ E	0.5, 1.0, 2.5, 5.0 m	Yes	20	1746-IG16, -OB16, -OB16E, -OBP16, -OG16, -OV16, -OVP16

Cable Catalog Number	Standard Cable Lengths	Build to Order Available	Number of Conductors	Mating I/O Module Catalog Number
1492-CABLE ⁽¹⁾ G	0.5, 1.0, 2.5, 5.0 m	Yes	20	1746-OA16
1492-CABLE ⁽¹⁾ H	0.5, 1.0, 2.5, 5.0 m	Yes	20	1746-IB32, -IV32, -OB32, -OB32E, -OV32
1492-CABLE ⁽¹⁾ N	0.5, 1.0, 2.5, 5.0 m	Yes	20	1746-OW16, -OX8
1492-CABLE ⁽¹⁾ S	0.5, 1.0, 2.5, 5.0 m	Yes	20	1746-OX8

(1) Cables are available in standard lengths of 0.5 m, 1.0 m, 2.5 m, and 5.0 m. To order, insert the code for the desired cable length into the cat. no. (005 = 0.5 m, 010 = 1.0 m, 025 = 2.5 m, and 050 = 5.0 m). Example: Cat. No. 1492-CABLE005N is for a 0.5 m cable that could be used to connect a catalog number 1492-IFM20D24N IFM to a Catalog Number 1746-OW16 I/O module. Build-to-order lengths are also available.

I/O Module-Ready Cables for 1746 Digital I/O Modules

The I/O module-ready cables have a pre-wired RTB on one end to plug onto the front of a Bulletin 1746 I/O module and 20 or 40 individually colored #18 AWG conductors on the other end. These cables provide the convenience of pre-wired connections at the I/O module end, while still allowing the flexibility to fieldwire to standard terminal blocks of your choice.

I/O Module-Ready Cables for 1746 Digital I/O Modules

Cable Catalog Number	Standard Cable Lengths	Build to Order Available	Number of Conductors	Mating I/O Module Catalog Number
1492-CABLE ⁽¹⁾ N3	1.0, 2.5, 5.0 m	Yes	40	1746-IB32, -IV32, -OB32, -OV32, -OB32E
1492-CABLE ⁽¹⁾ RTBB	1.0, 2.5, 5.0 m	Yes	20	1746-IB16, -IC16, -IG16, -IH16, -IN16, -ITB16, -ITV16, -IV16, -OB16, -OB16E, -OBP8, -OBP16, -OG16, -OV16, -OVP16
1492-CABLE ⁽¹⁾ RTBO	1.0, 2.5, 5.0 m	Yes	20	1746-OW16, -OX8
1492-CABLE ⁽¹⁾ RTBR	1.0, 2.5, 5.0 m	Yes	20	1746-IA16, -OA16, -OAP12, -IM16

(1) Cables are available in standard lengths of 0.5 m, 1.0 m, 2.5 m, and 5.0 m. To order, insert the code for the desired cable length into the cat. no. (005 = 0.5 m, 010 = 1.0 m, 025 = 2.5 m, and 050 = 5.0 m). Example: Cat. No. 1492-CABLE005N is for a 0.5 m cable that could be used to connect a catalog number 1492-IFM20D24N IFM to a Catalog Number 1746-OW16 I/O module. Build-to-order lengths are also available.

IMPORTANT The following I/O Modules do not have RTBs: 1746-IA4, 1746-IA8, 1746-IB8, 1746-IM4, 1746-IM8, 1746-IV8, 1746-OA8, 1746-OB8.

Digital Input Modules

Catalog Number	Backplane Current (mA) @ 5V	Backplane Current (mA) @ 24V	Watts per point	Thermal dissipation, min.	Thermal dissipation, max.
1746-ITV16	85 mA	0 mA	0.200 W	0.425 W	3.625 W
1746-IV8	50 mA	0 mA	0.200 W	0.250 W	1.90 W
1746-IV16	85 mA	0 mA	0.200 W	0.425 W	3.60 W
1746-IV32	106 mA	0 mA	0.200 W	0.530 W	6.90 W

(1) Power supply loading for series D and later modules.

Digital Output Modules

Catalog Number	Backplane Current (mA) @ 5V	Backplane Current (mA) @ 24V	Watts per point	Thermal dissipation, min.	Thermal dissipation, max.
1746-OA8	185 mA	0 mA	1.00 W	0.925 W	9.00 W
1746-OA16	370 mA	0 mA	0.462 W	1.85 W	9.30 W
1746-OAP12	370 mA	0 mA	1.00 W	1.85 W	10.85 W
1746-OB8	135 mA	0 mA	0.775 W	0.675 W	6.90 W
1746-OB16	280 mA	0 mA	0.338 W	1.40 W	7.60 W
1746-OB32 ⁽¹⁾	190 mA	0 mA	0.078 W	2.26 W	4.80 W
1746-OBP8	135 mA	0 mA	0.300 W	0.675 W	3.08 W
1746-OBP16	250 mA	0 mA	0.310 W	1.25 W	6.21 W
1746-OB16E	135 mA	0 mA	0.338 W	1.40 W	7.60 W
1746-OB32E	190 mA	0 mA	0.078 W	2.26 W	4.80 W
1746-OG16	180 mA	0 mA	0.033 W	0.90 W	1.50 W
1746-OV8	135 mA	0 mA	0.775 W	0.675 W	6.90 W
1746-OV16	270 mA	0 mA	0.338 W	1.40 W	7.60 W
1746-OV32 ⁽¹⁾	190 mA	0 mA	0.078 W	2.26 W	4.80 W
1746-OVP16	250 mA	0 mA	0.310 W	1.25 W	6.21 W
1746-OW4	45 mA	45 mA	0.133 W	1.31 W	1.90 W
1746-OW8	85 mA	90 mA	0.138 W	2.59 W	3.70 W
1746-OW16	170 mA	180 mA	0.033 W	5.17 W	5.70 W
1746-OX8	85 mA	90 mA	0.825 W	2.59 W	8.60 W

(1) Power supply loading for series D and later modules.

Allen-Bradley 1746-IV32