

Bulletin 1760, 1761, 1762, 1764, 1769, 1790, 1791 Programmable Controllers


Quick Selection Table

Bulletin No.	1761	1762	1764-LSP	1764-LRP
Type	MicroLogix 1000	MicroLogix 1200	MicroLogix 1500	
Memory				
User Program/Data Space	1K	4K / 2K (max) configurable	3.6K / 4K (max) configurable	10K / 4K (max) configurable
Data Logging / Recipe Storage	—	—	Recipe only (User Program)	48K bytes
EEPROM Back-up	✓	✓	—	—
Battery Back-up	—	✓	✓	✓
Back-up Memory Module	Only through hand-held programmer	✓	✓	✓
I/O				
Up to 32	Embedded	Embedded	Embedded w/Local Expansion	
Up to 128	—	Embedded w/Local Exp.	Embedded w/Local Expansion	
Up to 256	—	—	Embedded w/Local Expansion	
Thousands of I/O	—	—	Local & Networked Expansion using 1769-SDN	
Additional Functionality				
Analog	Embedded	Expansion	Expansion	
Trim Potentiometers	—	2	2	2
PID	—	✓	✓	✓
High-Speed Counters	1 @ 6.6 kHz	1 @ 20 kHz	2 @ 20 kHz	
Real Time Clock	—	✓	✓	✓
Simple Motion: Pulse Width Modulated/Pulse Train Outputs	—	1 @ 20 kHz	2 @ 20 kHz	
Single Axis Servo Control	—	Through embedded PTO	Through embedded PTO	
Data Access Tool	—	—	✓	✓
Data Logging	—	—	—	Up to 48K bytes
Recipe Storage	—	—	Uses User Program Memory	Program Memory or 48K Data Logging Memory
Floating Point Math	—	✓	✓	✓
Programming Software				
Windows® - RSLogix 500 & RSLogix 500 Starter	✓	✓	✓	✓
Communications				
RS-232 Ports	(1) - 8-pin Mini DIN	(1) - 8-pin Mini DIN	(1) - 8-pin Mini DIN	(1) - 8-pin Mini DIN & (1) - isolated 9 pin D-shell
DeviceNet Peer to Peer/Slave	w/ 1761-NET-DNI	w/ 1761-NET-DNI	w/ 1761-NET-DNI or 1769-SDN	
DeviceNet Scanner	—	—	w/ 1769-SDN	
Ethernet	w/ 1761-NET-ENI	w/ 1761-NET-ENI	w/ 1761-NET-ENI	
DH-485	w/ 1761-NET-AIC	w/ 1761-NET-AIC	w/ 1761-NET-AIC	
DF1 Half-Duplex Master/Slave	Slave only	✓	✓	✓
SCADA RTU - Modbus RTU	—	Slave only	Slave only	
ASCII	—	✓	✓	✓
Operating Power				
120/240V AC / 24V DC	✓	✓	✓	✓
Standards/Approvals	UL, CSA or C-UL, CE, Class I Div. 2		UL, CSA or C-UL, CE, Class I Div. 2	
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Bulletin No.	1769	1790D	1791D
Type	Compact I/O Expansion I/O for MicroLogix 1500	CompactBlock LDX Distributed I/O	CompactBlock I/O for DeviceNet
Features	<ul style="list-style-type: none"> • Unique, compact, modular, rackless design allowing front insertion and removal of the modules on DIN rail with easy to operate latches • Easy change-out of modules due to unique patented bus connector • Removable terminal blocks with finger-safe covers • Individual point diagnostic LED's for ease of troubleshooting • Software keying to prevent incorrect placing of module within the system • DeviceNet network adapter supporting AutoBaud and Auto Device replacement • ODVA conformance ensures high level of interoperability with other DeviceNet products • DeviceNet scanner for cost effective OEM solutions 	<ul style="list-style-type: none"> • Wide breadth of I/O types that can handle diverse applications • Expandable up to 3 digital expansion blocks (64 I/O's) • Universal sink/source inputs reduces the number of components to stock and allows flexibility of input types • Selectable termination types (D-shell or screw) • Easy to connect and configure using modular EDS files • ODVA conformance ensures high level of interoperability with other DeviceNet products • Analog DeviceNet bases for current, voltage, PT100 and thermocouple execution • CompactBlock LDX I/O are also available for other network • 24VDC, 120V AC and relay discrete blocks with built-in DeviceNet adapter • Cyclic and change-of-state messaging increases network throughput, increases productivity • Auto baud rate detection 	<ul style="list-style-type: none"> • 10 - 30V DC device power accommodates a broad range of applications • IEC/NEMA Type 3+ inputs offers widest range of compatible sensors • Removable terminal blocks reduces maintenance cost • Output short-circuit protection • Hardware watchdog function • Includes DeviceLogix Smart Component Technology enabling localized, simple control functions • Compact size of I/O block • Autobaud detection • Rotary node address switches • Selectable input filters • Change-of-state operation • ODVA conformance ensures high level of interoperability with other DeviceNet products • RIO and other network bases are also available
I/O	Wide selection of I/O's Up to 30 modules per node	Up to 64 I/O with discrete bases and up to 36 I/O with analog bases	Up to 32 I/O with expansion block
Analog Inputs/Outputs	4/2/6 (Voltage & current, RTD, Thermocouple)	4 & 2 (Voltage /Current/RTD/Thermocouple)	4/2 (Voltage /Current)
Software	RSNetworkx for DeviceNet	RSNetworkx for DeviceNet	RSNetworkx for DeviceNet
Mounting	Horizontal Panel or DIN rail mounted	Horizontal / Vertical Panel or DIN rail mounted	Horizontal / Vertical Panel or DIN rail mounted
Operating Power	120V AC / 240V AC / 24V DC	120V AC / 24V DC	24V DC
Standards/Approvals	UL/cUL Listed, CE certified	UL/cUL Listed, CE certified	UL/cUL Listed, CE certified
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Bulletin 1760, 1761, 1762, 1764, 1769, 1790, 1791 Programmable Controllers

Quick Selection Table

	
Bulletin No.	1760
Type	Pico Controllers
Features	<ul style="list-style-type: none"> • Simplicity, performs basic PLC functions, such as logic, timing and counting. Any user can write simple programs or make data adjustments • Intelligent relay replacement, Changing system functions is a simple matter of reprogramming Pico. No rewiring necessary! • Real-time clock functionality • Analog inputs • Programs are stored in non-volatile EEPROM memory • Commissioning status display • View the real-time analysis of the logic circuit • Relay outputs, reduce panel space and system cost with high current relay outputs that eliminate interposing relays
Memory	EEPROM
I/O	Up to 38 I/O with expansion module
Analog Inputs/Outputs	2 x 0...10V (Input)
Real Time Clock	✓
Programming Software	PicoSoft™ configuration software or via the LCD and Keypad
Mounting	DIN-rail or panel mounted,
Operating Power	120V/240V AC / 12V and 24V DC
Standards/Approvals	UL/cUL Listed, CE certified
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MicroLogix 1000



- Memory Size and Type:
1 K EEPROM (approximately 737 instruction words, 437 data words)
- Data Elements:
512 internal bits, 40 timers, 32 counters, 16 control files, 105 integer files, 33 diagnostic status
- Throughput:
1.5 ms (for a typical 500-instruction program)

Controller Power and I/O Configuration

Line Power	Inputs	Outputs	High Speed I/O	Cat. No.	PQ
120/240V AC	(10) 120V AC	(6) Relay	N/A	1761-L16AWA	1
120/240V AC	(20) 120V AC	(12) Relay	N/A	1761-L32AWA	
120/240V AC	(12) 120V AC, (4) Analog	(8) Relay, (1) Analog	N/A	1761-L20AWA-5A	
120/240V AC	(6) 24V DC	(4) Relay	(1) 6.6 kHz input	1761-L10BWA	
120/240V AC	(10) 24V DC	(6) Relay	(1) 6.6 kHz input	1761-L16BWA	
120/240V AC	(12) 24V DC, (4) Analog	(8) Relay, (1) Analog	(1) 6.6 kHz input	1761-L20BWA-5A	
120/240V AC	(20) 24V DC	(12) Relay	(1) 6.6 kHz input	1761-L32BWA	
120/240V AC	(20) 120V AC	(10) Triac, (2) Relay ❶	N/A	1761-L32AAA	
120/240V AC	(10) 24V ac or dc	(6) Relay	N/A	1761-L16NWA	
24V DC	(6) 24V DC	(4) Relay	(1) 6.6 kHz input	1761-L10BWB	
24V DC	(10) 24V DC	(6) Relay	(1) 6.6 kHz input	1761-L16BWB	
24V DC	(12) 24V DC	(8) Relay	(1) 6.6 kHz input	1761-L20BWB-5A	
24V DC	24V DC	(12) Relay	(1) 6.6 kHz input	1761-L32BWB	
24V DC	24V DC	(2) MOSFET sourcing, (2) relay ❶	(1) 6.6 kHz input	1761-L10BWB	
24V DC	24V DC	(4) MOSFET sourcing, (2) relay ❶	(1) 6.6 kHz input	1761-L16BBB	
24V DC	24V DC	(10) MOSFET sourcing, (2) relay ❶	(1) 6.6 kHz input	1761-L32BBB	
24V DC	(10) 24V AC or DC	(6) Relay	N/A	1761-L16NWB	

❶ Two isolated relays per unit.

Hand-Held Programmer and Connecting Cable

The HHP allows you to create, edit, monitor, and troubleshoot Instruction List (Boolean) programs for your MicroLogix 1000 controller. This device also allows you to store programs and to transfer programs through the use of an optional removable memory module.

Description	Length	Cat. No.	PQ
Hand-Held Programmer	—	1761-HHP-B30	1
Connecting Cable	2 m	1761-CBL-HM02	

Programming Software, Network Interface Devices and Cables see Page 187

See Publication 1761-S0001A-US-P, Publication 1761-TD001A-EN-P for complete product information
PQ = Package Quantity

Bulletin 1760, 1761, 1762, 1764, 1769, 1790, 1791 Programmable Controllers

Product Selection: 1762

MicroLogix 1200



- Memory Size and Type:
6K flash memory: 4K user program, 2K user data
- Data Elements:
Configurable, user-defined file structure, 2K max. data size
- Throughput:
2 ms (for a typical 1K word user program)

Controller Power and I/O Configuration

Line Power	Inputs	Outputs	High Speed I/O	Cat. No.	PQ
120/240V AC	(14) 120V AC	(10) Relay	N/A	1762-L24AWA	1
120/240V AC	(24) 120V AC	(16) Relay	N/A	1762-L40AWA	
120/240V AC	(10) Standard 24V DC (4) Fast 24V DC	(10) Relay	(4) 20 kHz input	1762-L24BWA	
120/240V AC	(20) Standard 24V DC (4) Fast 24V DC	(16) Relay	(4) 20 kHz input	1762-L40BWA	
24V DC	(10) Standard 24V DC (4) Fast 24V DC	(5) Relay (4) Standard 24V DC FET (1) Fast 24V DC FET	(4) 20 kHz input (1) 20 kHz output	1762-L24BXB	
24V DC	(20) Standard 24V DC (4) Fast 24V DC	(8) Relay (7) Standard 24V DC FET (1) Fast 24V DC FET	(4) 20 kHz input (1) 20 kHz output	1762-L40BXB	

Memory and Real-Time Clock Modules



- User program and data back-up
- Program compare
- Data file protection
- Memory module write protection
- Removal/insertion under power
- Memory back-up and real-time clock combination module

Description	Cat. No.	PQ
Memory Module	1762-MM1	1
Memory and Real-Time Clock Module	1762-MM1RTC	
Real-Time Clock Module	1762-RTC	

Expansion I/O Modules

Description	Cat. No.	PQ
8-point 120V AC input	1762-IA8	1
8-point sink/source 24V DC input	1762-IQ8	
16-point sink/source 24V DC input	1762-IQ16	
8-point AC triac output	1762-OA8	
8-point sourcing 24V DC output	1762-OB8	
16-point sourcing 24V DC output	1762-OB16	
8-point AC/DC relay output	1762-OW8	
16-point AC/DC relay output	1762-OW16	
4-channel analog voltage/current input	1762-IF4	
2-channel analog voltage/current input, 2-channel analog voltage/current output	1762-IF2OF2	
4-channel thermocouple/mV input module	1762-IT4	
4-channel RTD/resistance input module	1762-IR4	

Programming Software, Network Interface Devices and Cables see Page 187

See Publication 1762-S0001A-US-P, Publication 1762-TD001A-EN-P for complete product information
PQ = Package Quantity

MicroLogix 1500



- Memory Size and Type:
If using 1764-LSP processor: 7K user memory (total user program plus data). If using 1764-LRP processor: 14K user memory (total user program plus data)
- Data Elements:
Configurable, user-defined file structure, 4K max. data size
- Throughput:
1 ms (for a typical 1K word user program)
- Base Unit with embedded I/O and Communication Port RS 232 (8-pin Mini DIN)

Base Units: Controller Power and I/O Configuration

Line Power	Inputs	Outputs	High Speed I/O	Cat. No.	PQ
120/240V AC	(12) 120V AC	(12) Relay, 2 isolated relays per unit	N/A	1764-24AWA	1
	(8) Standard 24V DC (4) Fast 24V DC	(12) Relay, 2 isolated relays per unit	(4) 20 kHz input	1764-24BWA	
24V DC	(8) Standard 24V (8) Fast 24V DC	(6) Relay, 2 isolated relays per unit (4) Standard 24V dc FET (2) Fast 24V dc FET	(8) 20 kHz input (2) 20 kHz output	1764-28BWB	

Processors

Description	Cat. No.	PQ
Processor Unit with 14K User and 48K Data Logging Memory and 2nd Comms port (9-pin D-Shell)	1764-LRP	1
Processor Unit with 7K User Memory	1764-LSP	

Memory and Real-Time Clock Modules



- User programs and data to be stored as backup
- Transport programs for use with other controllers
- Safety/security for press control and other critical applications
- Auto recovery, through a power cycle, after a controller fault
- Comparison of programs
- Data file and memory module write protection

Description	Cat. No.	PQ
Real-Time Clock	1764-RTC	
Memory Module	1764-MM1	
Memory Module and Real-Time Clock	1764-MM1RTC	1
Memory Module	1764-MM2	1
Memory Module and Real-Time Clock	1764-MM2RTC	1

Data Access Tool



- Direct access to 48 bit elements
- Direct access to 48 integer elements
- Two function keys
- Display of controller faults
- Removal/Insertion under Power

Description	Cat. No.	PQ
	1764-DAT	1

1 For the 1764-LRP processor to support larger program and data requirements

Programming Software, Network Interface Devices and Cables see Page 187

See Publication 1764-S0001A-US-P, Publication 1764-TD001A-EN-P for complete product information
 PQ = Package Quantity

Bulletin 1760, 1761, 1762, 1764, 1769, 1790, 1791 Programmable Controllers

Product Selection: 1769

Compact I/O Expansion I/O for MicroLogix 1500



Expansion I/O Modules for MicroLogix 1500

Compact Digital AC Input Modules

Number of Inputs	Voltage Category	Commons per Module	Bus Current Draw (max.)	Cat. No.	PQ
8	100/120V AC	8	90 mA at 5V DC	1769-IA8I	1
16		1	115 mA at 5V DC	1769-IA16	
12	200/240V AC	1	100 mA at 5V DC	1769-IM12	

Compact Digital AC Output Modules

Number of Outputs	Voltage Category	Commons per Module	Max. Current per Output	Max. Current per Module	Bus Current Draw (max.)	Cat. No.	PQ
8	100...240V AC	2	0.25A at 60°C 0.5A at 30°C	2.0 A at 60°C 4.0 A at 30°C	145 mA at 5V DC	1769-OA8	1
16				4.0 A at 60°C 8.0 A at 30°C	225 mA at 5V DC	1769-OA16	

Compact Digital DC Input Modules

Number of Inputs	Voltage Category/Type, Input	Commons per Module	Bus Current Draw (max.)	Cat. No.	PQ
16	24V DC, sinking or sourcing	2	115 mA at 5V DC	1769-IQ16	1
16		2	100mA at 5V DC	1769-IQ16F	
32		4	170 mA at 5V DC	1769-IQ32	

Compact Digital DC Output Modules

Number of Outputs	Voltage Category/Type, Input	Commons per Module	Max. Current per Output	Max. Current per Module	Bus Current Draw (max.)	Cat. No.	PQ
8	24V DC, sourcing	2	0.5A @ 60°C 1.0A @ 30°C	8.0A @ 60°C	145 mA at 5V DC	1769-OB8	1
16		1		4.0A @ 60°C	200 mA at 5V DC	1769-OB16	
16		1		8.0A @ 30°C	160 mA at 5V DC	1769-OB16P	
32		2		8.0A @ 60°C 16.0A @ 30°C	300 mA at 5V DC	1769-OB32	
16	24V DC, sinking	1		4.0A @ 60°C 8.0A @ 30°C	200 mA at 5V DC	1769-OV16	

Compact Relay Output Modules

Number of Outputs	Voltage Category/Type, Input	Max. Current per Output	Max. Current per Module	Bus Current Draw (max.)		Cat. No.	PQ
				at 5V DC	at 24V DC		
8	24V DC	0.5A @ 60°C	16 A	125 mA	100 mA	1769-OW8	1
8		1.0A @ 30°C		125 mA	100 mA	1769-OW8I	
16		2.5 A	20 A	205 mA	180 mA	1769-OW16	

❶ Power Supply Distance Rating = 8. The maximum distance an I/O module may be located from the power supply is 8 modules.
(Exception for 1769-OB32 the Power Supply Distance Rating = 6)

See Publication 1769-SG002B-EN-P, Publication 1769-TD001E-EN-P for complete product information
PQ = Package Quantity

Compact I/O Expansion I/O for MicroLogix 1500, continued

Combination Input and Output Modules ❶

Description	Voltage Category	Number of I/O	Commons per Module	Max. Current per Output	Max. Current per Module	Bus Current Draw (max.)		Cat. No.	PQ
						at 5V DC	at 24V DC		
DC (sink/source) inputs	24V DC	6 inputs	1	N/A	N/A	105 mA	50 mA	1769-IQ6XOW4	1
AC/DC Relay outputs	5...265V AC 5...125V DC	4 outputs	1	2.5 A	8 A				

Analog I/O Modules ❷

Description	Input Channels per Module	Output Channels per Module	Bus Current Draw (max.)		Cat. No.	PQ
			at 5V DC	at 24V DC		
14-bit current/voltage input module	4 differential or single-ended	N/A	120 mA	60 mA	1769-IF4	1
	N/A	2 single-ended	120 mA	120 mA	1769-OF2	
8-bit combination input/output module	4 differential or single-ended	2 single-ended	120 mA	160 mA	1769-IF4XOF2	

Temperature and PT100 Input Modules ❸

Description	Input Channels per Module	Bus Current Draw (max.)	Cat. No.	PQ
Supports thermocouple and millivolt signal measurement	6 input channels plus 2 CJC sensors	100 mA at 5V DC 40 mA at 24V DC	1769-IT6	1
Supports RTD and direct resistance signal measurement	6 input channels	100 mA at 5V DC 45 mA at 24V DC	1769-IR6	

High-Speed Counter Module ❹

Description	Input Channels per Module	Output Channels per Module	Bus Current Draw (max.)	Cat. No.	PQ
1 MHz High-Speed Counter/Encoder Module	(4) single-input counters, or (2) quadrature (ABZ) differential inputs -30 to +30V DC	(4) 5 to 30V DC sourcing outputs	425 mA at 5V DC	1769-HSC	1

Communication Modules ❺

Description	Bus Current Draw (max.)	Cat. No.	PQ
Compact DeviceNet Scanner Module	440 mA at 5V DC	1769-SDN	1
Compact DeviceNet Adapter Module	500 mA at 5V DC	1769-ADN/B	

Power Supplies

Power Supply Voltage	Nominal Input Voltage	Output Bus Current Capacity (0°...55° C)	Cat. No.	PQ
85 to 265V AC (no jumper DIP switch required) 47 to 63 Hz	120V or 240V AC	2 A @ 5V DC 0.8 A @ 24V DC	1769-PA2	1
19.2 to 31.2V DC	24V DC		1769-PB2	
85 to 132V AC (170 to 265 or switch selectable)	120V or 240V AC	4 A @ 5V DC 2 A @ 24V DC	1769-PA4	
19.2 to 31.2V DC	24V DC		1769-PB4	

- ❶ Power Supply Distance Rating = 8. The maximum distance an I/O module may be located from the power supply is 8 modules.
- ❷ Power Supply Distance Rating = 4. The maximum distance an I/O module may be located from the power supply is 4 modules
- ❸ The series A 1769-ADN adapter does not support the 1769-OA16, 1769-OW16, 1769-IF4XOF2, or 1769-HSC modules.

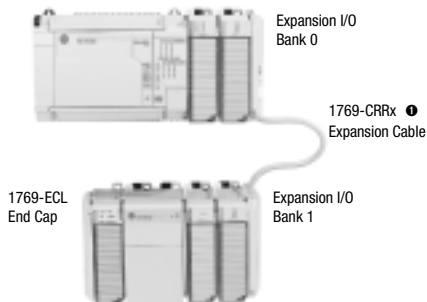
See Publication 1769-SG002B-EN-P, Publication 1769-TD001E-EN-P for complete product information
PQ = Package Quantity

Bulletin 1760, 1761, 1762, 1764, 1769, 1790, 1791 Programmable Controllers

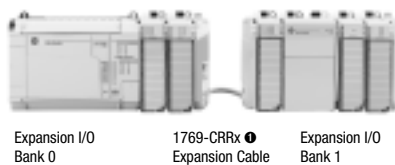
Product Selection: 1769

Compact I/O Expansion I/O for MicroLogix 1500

Vertical Orientation



Horizontal Orientation



❶ The x in this catalog number can be either a 1 or a 3 representing the length of the cable: 1 = 1 foot (305 mm) and 3 = 3.28 feet (1 meter).

Expansion Cables

Cable Type	Length	Cat. No.	PQ
Right bank-to-right bank	305 mm	1769-CRR1	1
Right bank-to-right bank	1 m	1769-CRR3	
Right bank-to-left bank	305 mm	1769-CRL1	
Right bank-to-left bank	1 m	1769-CRL3	

End Caps

Description	Cat. No.	PQ
Right end cap	1769-ECR	1
Left end cap	1769-ECL	

See Publication 1769-SG002B-EN-P, Publication 1769-TD001E-EN-P for complete product information
PQ = Package Quantity

Accessories for MicroLogix 1000, 1200 and 1500

Programming Software

The RSLogix 500 ladder logic programming package helps you maximize performance, save project development time, and improve productivity. This product has been developed to operate on Windows 98 and above operating system. RSLogix 500 can be used for programming both the SLC 500 and MicroLogix controller families.

Description	Cat. No.	PQ
RSLogix 500 Standard Edition Programming Software for SLC 500 and MicroLogix controller families. (CD-ROM)	9324-RL0300ENE	1
RSLogix 500 Starter Edition Progr. Software for MicroLogix controller families. (CD-ROM)	9324-RL0100ENE	
RSLogix 500 Professional Edition. CD-ROM also includes RSLogix Emulate 500, RSNetworx for DeviceNet and RSNetworx for ControlNet.	9324-RL0700NXENE	

Programming Cable for MicroLogix 1000, 1200, and 1500 Channel 0 (8-pin Mini DIN)

Description	Length	Cable Type	Cat. No.	PQ
Cable to connect MicroLogix controller to an IBM compatible PC	2 m	8-pin Mini DIN to 9-pin D Shell	1761-CBL-PM02	1

Programming Cable for MicroLogix 1500 with 1764-LRP Processor, Channel 1 (9-pin RS-232)

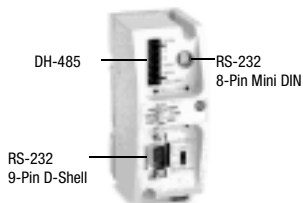
Description	Length	Cable Type	Cat. No.	PQ
Cable to connect port 1 to the 9-Pin DTE port of a personal computer	3 m	9-pin D Shell to 9-pin D Shell	1747-CP3	1
Cable to connect the MicroLogix 1500 base port to an IBM compatible PC	2 m	9-pin D Shell to 8-pin Mini DIN	1761-CBL-PM02	

Bulletin 1760, 1761, 1762, 1764, 1769, 1790, 1791 Programmable Controllers

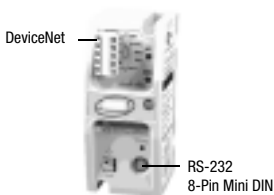
Accessories: 1761, 1762, 1764

Accessories for MicroLogix 1000, 1200 and 1500, continued

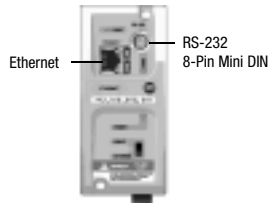
Network Interface Devices



1761-NET-AIC



1761-NET-DNI



1761-NET-ENI

Description	Cat. No.	PQ
AIC+ Advanced Interface Converter: The AIC+ provides an interface to DH-485 networks from an RS-232 port. It can be used with all MicroLogix controllers, SLC 5/03 and higher, and a number of PanelView terminals.	1761-NET-AIC	1
DNI DeviceNet Interface: Peer-to-peer messaging between MicroLogix controllers and other devices using the DF1 Full-Duplex protocol (real time communications – no polling required)	1761-NET-DNI	
ENI Ethernet Interface: The ENI provides EtherNet/IP connectivity for all MicroLogix controllers and other DF1 Full-Duplex devices.	1761-NET-ENI	
The ENIW provides also a basic level of Web Server functionality including: <ul style="list-style-type: none"> • Ability to display dynamically updated data values • Ability to label data values • Ability to modify data values (password protected) 	1761-NET-ENIW	

Network Cable

Use the communication cables listed below with MicroLogix 1000, 1200 and 1500 controllers. Cables come in several lengths and connector styles to provide connectivity between MicroLogix controllers and other devices.

Description	Connectors	Length	Cat. No.	PQ
Used to connect MicroLogix controller to Port 2 of 1761-NET-AIC+ or 1761-NET-DNI or 1761-HHP or PanelView	8-pin Mini DIN to 8-pin Mini DIN	0.5 m	1761-CBL-AM00	1
		2 m	1761-CBL-HM02	
		5 m	2711-CBL-HM05	
		10 m	2711-CBL-HM10	
Used to connect MicroLogix 1500 Processor (LRP) or Port 1 of 1761-NET-AIC+ to 9-pin DTE of Personal Computer	9-pin D Shell to 9-pin D Shell	0.5 m	1761-CBL-AC00	1
		3 m	1747-CP3	
Used to connect MicroLogix controller to Port 1 of 1761-NET-AIC+ or MicroLogix controller to PC or PanelView's to MicroLogix controller	8-pin Mini DIN to 9-pin D Shell	0.5 m	1761-CBL-AP00	1
		2 m	1761-CBL-PM02	
		5 m	2711-CBL-PM05	
		10 m	2711-CBL-PM10	

CompactBlock LDX I/O Blocks



- Small, easy expandable block I/O products with universal sink/source inputs
- Digital bases support up to 3 discrete expansion blocks (64 I/O's) and analog bases support up to 2 discrete expansion blocks
- Cost-effective I/O product line for light industrial and commercial automation
- Selectable terminations (D-shell or screw terminations)
- Wide breadth of I/O's including discrete, analog, thermocouple and RTD bases for different networks and discrete expansion blocks

Discrete I/O

DeviceNet Bases

Description	Cat. No.	PQ
DNet LDX, 16 sourcing output base, D-shell connector	1790D-0B16	
DNet LDX, 24V DC, 16 sinking output base, D-shell connector	1790D-0V16	
DNet LDX, 6 relay output base, D-shell connector	1790D-0W6	
DNet LDX, 24V DC, 16 universal input base, D-shell	1790D-16BV0	
DNet LDX, 24V DC, 8 univ In/8 source output base, D-shell	1790D-8BV8B	
DNet LDX, 24V DC, 8 univ In/8 sink output base, D-shell	1790D-8BV8V	
DNet LDX, 120V AC, 6 output base, terminal block	1790D-T0A6	
DNet LDX, 24V DC, 16 source output base, terminal block	1790D-T0B16	1
DNet LDX, 24V DC, 16 sinking output base, terminal block	1790D-T0V16	
DNet LDX, 6 relay output base, terminal block	1790D-T0W6	
DNet LDX, 24V DC, 16 universal input base, terminal block	1790D-T16BV0	
DNet LDX, 120V AC, 8 input base, terminal block	1790D-T8A0	
DNet LDX, 24V DC, 8 univ in/8 source output base, terminal block	1790D-T8BV8B	
DNet LDX, 24V DC, 8 univ in/8 sink output base, terminal block	1790D-T8BV8V	

PROFIBUS Bases

Description	Cat. No.	PQ
PROFIBUS, 6 relay out base, terminal block	1790P-T0W6	
PROFIBUS, 24V DC, 8 univ in/8 sink out base, terminal block	1790P-T8BV8V	1
PROFIBUS, 24V DC, 8 univ in/8 source out base, terminal block	1790P-T8BV8B	

Expansion Block I/O

Description	Cat. No.	PQ
LDX I/O, 24V DC, 16 source out expansion, D-shell	1790-0B16X	
LDX I/O, 24V DC, 16 sink out expansion, D-shell	1790-0V16X	
LDX I/O, 8 relay out, expansion, D-shell	1790-0W8X	
LDX I/O, 24V DC, 16 universal in expansion, D-shell	1790-16BV0X	
LDX I/O, 24V DC, 8 univ in/8 source out expansion, D-shell	1790-8BV8BX	
LDX I/O, 24V DC, 8 univ in/8 sink out expansion, D-shell	1790-8BV8VX	
LDX I/O, 120V AC, 8 output expansion module, terminal block	1790-T0A8X	
LDX I/O, 24V DC, 16 source out expansion, terminal block	1790-T0B16X	1
LDX I/O, 24V DC, 16 sink out expansion, terminal block	1790-T0V16X	
LDX I/O, 8 relay out, expansion, terminal block	1790-T0W8X	
LDX I/O, 24V DC, 16 universal in expansion, terminal block	1790-T16BV0X	
LDX I/O, 120V AC, 8 input expansion module, terminal block	1790-T8A0X	
LDX I/O, 24V DC, 8 univ in/8 source out expansion, terminal block	1790-T8BV8BX	
LDX I/O, 24V DC, 8 univ in/8 sink out expansion, terminal block	1790-T8BV8VX	

See Publication 1790-PP002C-EN-P, Publication 1790D-TD001A-EN-P for complete product information
PQ = Package Quantity

Bulletin 1760, 1761, 1762, 1764, 1769, 1790, 1791 Programmable Controllers

Product Selection: 1790D

CompactBlock LDX I/O Blocks, continued

Analog I/O

DeviceNet Bases

Description	Cat. No.	PQ
DNet LDX, 4 input RTD base, D-shell connector	1790D-4R0	1
DNet LDX, 4 input thermocouple base, D-shell connector	1790D-4T0	
DNet LDX, 2 output analog current base, D-shell connector	1790D-N0C2	
DNet LDX, 2 output voltage analog base, D-shell connector	1790D-N0V2	
DNet LDX, 4 input analog current base, D-shell connector	1790D-N4C0	
DNet LDX, 4 input voltage analog base, D-shell connector	1790D-N4V0	
DNet LDX, 4 input RTD base, terminal block	1790D-T4R0	
DNet LDX, 4 input thermocouple base, terminal block	1790D-T4T0	
DNet LDX, 2 output analog current base, terminal block	1790D-TN0C2	
DNet LDX, 2 output voltage analog base, terminal block	1790D-TN0V2	
DNet LDX, 4 input analog current base, terminal block	1790D-TN4C0	
DNet LDX, 4 input voltage analog base, terminal block	1790D-TN4V0	

PROFIBUS Bases

Description	Cat. No.	PQ
PROFIBUS, 4 input RTD base, terminal block	1790P-T4R0	1
PROFIBUS, 4 input thermocouple base, terminal block	1790P-T4T0	
PROFIBUS, 2 output analog current base, terminal block	1790P-TN0C2	
PROFIBUS, 4 input analog current base, terminal block	1790P-TN4C0	

Optional Components

Description	Cat. No.	PQ
LDX I/O replacement ribbon cable, 7cm (lots of 5)	1790-7CMCBL	1
LDX I/O longer ribbon cable, 15cm (lots of 5)	1790-15CMCBL	
5-position open style plug for DNet	1799-DNETCON	
5-position open style plug/locking screws for DNet	1799-DNETSCON	
DNet 5-position open plug to 5-pin micro male connector, straight (lots of 5)	1799-DNC5MMS	

See Publication 1790-PP002C-EN-P, Publication 1790D-TD001A-EN-P for complete product information
PQ = Package Quantity

CompactBlock I/O for DeviceNet



- Low Cost, Compact size
- Accommodates a broad range of I/O applications up to 32 I/O including analog expansion blocks
- Easy to install and use
- Removable terminal blocks to save maintenance cost
- Output short-circuit protection
- No software is needed to configure RIO blocks, done via DIP switches
- Includes DeviceLogix™ Smart Component Technology enabling localized, simple control functions for faster sense-to-actuation times

Discrete I/O

DeviceNet Bases

Description	Cat. No.	PQ
DNet, 24V DC CompactBlock I/O, 16 out source, base	1791D-0B16P	1
DNet, 24V DC CompactBlock I/O, 8 out source, base	1791D-0B8P	
DNet, 24V DC CompactBlock I/O, 16 out sink, base	1791D-0V16P	
DNet, 24V DC CompactBlock I/O, 16 in sink, base	1791D-16B0	
DNet, 24V DC CompactBlock I/O, 16 in source, base	1791D-16V0	
DNet, 24V DC CompactBlock I/O, 4 in sink (not expandable)	1791D-4B0	
DNet, 24V DC CompactBlock I/O, 4 in sink/4 out source, base	1791D-4B4P	
DNet, 24V DC CompactBlock I/O, 8 in sink/8 out source, base	1791D-8B8P	
DNet, 24V DC CompactBlock I/O, 8 in source/8 out sink, base	1791D-8V8P	

Remote I/O Bases (RIO)

Description	Cat. No.	PQ
RIO, 24V DC CompactBlock I/O, 16 out source, base	1791R-0B16P	1
RIO, 24V DC CompactBlock I/O, 16 in sinking, base	1791R-16B0	
RIO, 24V DC CompactBlock I/O, 4 in sink/4 out source, base	1791R-4B4P	
RIO, 24V DC CompactBlock I/O, 8 in sink/8 out source, base	1791R-8B8P	
RIO, 24V DC CompactBlock I/O, 8 in source/8 out sink, base	1791R-8V8P	

PROFIBUS Bases

Description	Cat. No.	PQ
PROFIBUS, 24V DC CompactBlock I/O, 16 out sourcing, base	1791P-0B16P	1
PROFIBUS, 24V DC CompactBlock I/O, 16 in sinking, base	1791P-16B0	
PROFIBUS, 24V DC CompactBlock I/O, 4 in sink/4 out source, base	1791P-4B4P	
PROFIBUS, 24V DC CompactBlock I/O, 8 in sink/8 out source, base	1791P-8B8P	
PROFIBUS, 24V DC CompactBlock I/O, 8 in source/8 out sink, base	1791P-8V8P	

Universal Expansion Blocks

Description	Cat. No.	PQ
24V DC CompactBlock I/O Expansion, 16 out source	1791D-0B16PX	1
24V DC CompactBlock I/O Expansion, 16 out sink	1791D-0V16PX	
24V DC CompactBlock I/O Expansion, 16 in sink	1791D-16BOX	
24V DC CompactBlock I/O Expansion, 16 in source	1791D-16VOX	
Analog CompactBlock I/O Expansion, 4 inputs, 2 outputs	1791D-N4CV2X	

Optional Components

Description	Cat. No.	PQ
24V DC Block I/O longer ribbon cable, 15 cm	1791D-15CMCBL	1
24V DC Block I/O replacement ribbon cable, 4 cm	1791D-4CMCBL	
Block I/O replacement terminal block, 21-pin NEMA	1791D-RTBN21	
RIO 6-position connector, lock screws	1791R-RIOSCON	

• Universal expansion blocks function with DeviceNet, RIO and PROFIBUS Bases – 1 expansion per base block.

See Publication 1791D-PP002D-EN-P, Publication 1791D-TD001D-EN-P for complete product information for complete product information

Bulletin 1760, 1761, 1762, 1764, 1769, 1790, 1791 Programmable Controllers

Product Selection: 1760

Pico Controllers



Controllers

Line Power	Inputs	Outputs	Analog Outputs	Real-Time Clock	Display and Keypad	Cat. No.	PQ
120/240V AC	8 (120/240V AC)	4 (relay) ③	No	Yes	Yes	1760-L12AWA	1
				No	Yes	1760-L12AWA-NC	
	Yes	No		1760-L12AWA-ND			
	Yes	Yes		1760-L18AWA-EX ①			
24V DC	8 (24V DC) ②	4 (relay) ③	2 (0...10V DC) ⑤	Yes	Yes	1760-L12BWB	1
				No	Yes	1760-L12BWB-NC	
	Yes	No		1760-L12BWB-ND			
	Yes	Yes		1760-L18BWB-EX ①			
12V DC	8 (12V DC)	4 (relay) ③		Yes	Yes	1760-L12DWD	

Expansion Modules

Line Power	Inputs	Outputs	Cat. No.	PQ
120/240V AC	12 (120/240V AC)	6 (relay) ③	1760-IA12XOW6I	③ 1
24V DC	12 (24V DC) ②	8 (transistor) ④	1760-IB12XOB8	③

Memory Modules

Description	Cat. No.	PQ
For 12 I/O Pico Controller	1760-MM1	1
For 18 I/O Pico Controller	1760-MM2	

Programming Software

Description	Cat. No.	PQ
Configuration software included with processor	1760-PICOSOFT	1

Accessories

Description	Cat. No.	PQ
Programming Cable to be used with 1760-PICOSOFT configuration software	1760-CBL-PM02	1
Replacement connector for expansion I/O module	1760-RPLCONN	
Programming Cable	1760-CBL-PM02	

- ① EX = suitable for use with expansion modules
- ② Current sinking
- ③ Isolated
- ④ Current sourcing
- ⑤ Two digital inputs maybe used for analog
- ⑥ May be used with either: 1760-L18AWA-EX or 1760-L18BWB-EX

See Publication 1760-PP001D-EN-P for complete product information
PQ = Package Quantity