

## Available Modules



### 1762 Expansion I/O Modules

Cat. No.	Description
<b>Digital</b>	
1762-IA8	8-Point 120V AC Input Module
1762-IQ8	8-Point Sink/Source 24V DC Input Module
1762-IQ8OW6	8 Point Sink/Source 24V DC Input/6-Point AC/DC Relay Output Combination Module
1762-IQ16	16-Point Sink/Source 24V DC Input Module
1762-OA8	8-Point 120/240V AC Triac Output Module
1762-OB8	8-Point Sourcing 24V DC Output Module
1762-OB16	16-Point Sourcing 24V DC Output Module
1762-OW8	8-Point AC/DC Relay Output Module
1762-OW16	16-Point AC/DC Relay Output Module
1762-OX6I	6-Point Isolated AC/DC Relay Output Module
1762-OV32T	32-Point Solid State 24V DC Sink Output Module
1762-OB32T	32-Point Solid State 24V DC Source Output Module
1762-IQ32T	32-Point DC Input Module
<b>Analog</b>	
1762-IF4	4-Channel Voltage/Current Analog Input Module
1762-OF4	4-Channel Voltage/Current Analog Output Module
1762-IF2OF2	Combination 2-Channel Input 2-Channel Output Voltage/Current Analog Module
<b>Specialty</b>	
1762-IR4	4-Channel RTD/Resistance Input Module
1762-IT4	4-Channel Thermocouple/mV Input Module

## 1762 Digital I/O

### 1762 Digital Expansion Input Modules Specifications

Attribute	1762-IA8	1762-IQ8	1762-IQ80W6 (inputs)	1762-IQ16	1762-IQ32T
Voltage Category	100/120V AC	24V DC (sink/source) <sup>(1)</sup>	24V DC (sink/source) <sup>(1)</sup>	24V DC (sink/source) <sup>(1)</sup>	24V DC sink/source <sup>(1)</sup>
Operating Voltage Range	79...132V AC @ 47...63 Hz	10...26.4V DC @ 55 °C (131 °F) 10...30V DC @ 30 °C (86 °F)	10...26.4V DC @ 65 °C (149 °F) 10...30V DC @ 30 °C (86 °F)	10...26.4V DC 10...30V DC <sup>(3)(2)</sup>	10...26.4V DC 10...30V DC
Number of Inputs	8	8	8	16	32
Number of Commons	1	1	inputs: 2 outputs: 1	2	4
Bus Current Draw, max	50 mA @ 5V DC (0.25 W)	50 mA @ 5V DC (0.25 W)	110 mA @ 5V DC (0.55 W) 80 mA @ 24V DC (1.92 W)	70 mA @ 5V DC (0.35 W) <sup>(3)</sup>	170 mA @ 5V DC 0 mA @ 24V DC
Heat Dissipation, max	2.0 Total Watts	3.7 Total Watts	5.0 Total Watts @ 30V 4.4 Total Watts @ 26.4V	5.4 Total Watts @ 30V 4.3 Total Watts @ 26.4V <sup>(3)</sup>	5.4 Total Watts @ 26.4V 6.8 Total Watts @ 30.0V
Signal Delay, max	On Delay: 20.0 ms Off Delay: 20.0 ms	On Delay: 8.0 ms Off Delay: 8.0 ms	On Delay: 8.0 ms Off Delay: 8.0 ms	On Delay: 8.0 ms Off Delay: 8.0 ms	On Delay: 8.0 ms Off Delay: 8.0 ms
Off-state Voltage, max	20V AC	5V DC	5V DC	5V DC	5V DC
Off-state Leakage Current, max	2.5 mA	1.5 mA	1.5 mA	1.5 mA	1.0 mA
On-state Voltage, min	79V AC, min, 132V AC, max	10V DC	10V DC	10V DC	10V DC
On-state Current min nom max	5.0 mA @ 79V AC 47 Hz 12.0 mA @ 120V AC 60 Hz 16.0 mA @ 132V AC 63 Hz	2.0 mA @ 10V DC 8.0 mA @ 24V DC 12.0 mA @ 30V DC	2.0 mA @ 10V DC 8.0 mA @ 24V DC 12.0 mA @ 30V DC	2.0 mA @ 10V DC 8.0 mA @ 24V DC 12.0 mA @ 30V DC	1.6 mA @ 10V DC (min) 2 mA @ 15V DC (min) 5.7 mA @ 26.4V DC (max) 6.5 mA @ 30.0V DC (max)
Inrush Current, max	250 mA	---	250 mA	---	--

Attribute	1762-IA8	1762-IQ8	1762-IQ8OW6 (inputs)	1762-IQ16	1762-IQ32T
Impedance, nom	12 k $\Omega$ @ 50 Hz 10 k $\Omega$ @ 60 Hz	3 k $\Omega$	3 k $\Omega$	3 k $\Omega$	4.7 k $\Omega$
Isolated Groups	Group 1: inputs 0...7 (internally connected commons)	Group 1: inputs 0...7 (internally connected commons)	Group 1: inputs 0...3 Group 2: inputs 4...7 Group 3: outputs 0...5	Group 1: inputs 0...7 Group 2: inputs 8...15	Group 1: Inputs 0...7 Group 2 : Inputs 8...15 Group 3 : Inputs 16...23 Group 4 : Inputs 24...31
Input Group to Backplane Isolation	Verified by one of the following dielectric tests: 1517V AC for 1 s or 2145V DC for 1 s 132V AC working voltage (IEC Class 2 reinforced insulation)	Verified by one of the following dielectric tests: 1200V AC for 1 s or 1697V DC for 1 s 75V DC working voltage (IEC Class 2 reinforced insulation)	Verified by one of the following dielectric tests: Input Group to Backplane isolation - 1200V AC for 1 s or 1697V DC for 1 s 75V DC working voltage (IEC Class 2 reinforced insulation) Output Group to Backplane isolation - 1836V AC for 1 s or 2596V DC for 1 s 265V AC working voltage (IEC Class 2 reinforced insulation) Input Group to Output Group isolation - 1836V AC for 1 s or 2596V DC for 1 s 265V AC working voltage (basic insulation) 150V AC working voltage (IEC Class 2 reinforced insulation)	Verified by one of the following dielectric tests: 1200V AC for 1 s or 1697V DC for 1 s 75V DC working voltage (IEC Class 2 reinforced insulation)	Verified by one of the following dielectric tests: 1,200V AC for 2 s or 1,697V DC for 2 s 75V DC working voltage (IEC Class 2 reinforced insulation)

- (1) Sinking/Sourcing Inputs - Sourcing/sinking describes the current flow between the I/O module and the field device. Sourcing I/O circuits supply (source) current to sinking field devices. Sinking I/O circuits are driven by a current sourcing field device. Field devices connected to the negative side (DC Common) of the field power supply are sinking field devices. Field devices connected to the positive side (+V) of the field supply are sourcing field devices.
- (2) Refer to Publication [1762-IN10](#), MicroLogix 1762-IQ16 DC Input Module Installation Instructions, for the derating chart.
- (3) Only applicable to Series B I/O modules

## Perform MicroLogix 1200 Controller System Expansion Calculations

A download is also available for system validation. On the Internet, go to <http://www.ab.com/micrologix>.

To have a valid system, both current and power requirements must be satisfied. Use the following worksheets to make your calculations.

Follow these steps to verify the controller power supply loading.

1. Use the following table to select the components for your system. Do not exceed the **MAXIMUM LIMIT** for the number of I/O modules.
2. Fill in the current amounts and add up the **TOTAL CALCULATED CURRENT**.

### MicroLogix 1200 Controller Power Supply Loading - Calculate System Current

Cat. No.	Bus Current Draw Attribute		Calculated Current for System		
	at 5V DC (mA)	at 24V DC (mA)	at 5V DC (mA)	at 24V DC (mA)	
1761-NET-AIC <sup>(1)(2)</sup>	0	120 <sup>(2)</sup>			
1761-NET-ENI, 1761-NET-ENIW <sup>(1)(2)</sup>	0	100 <sup>(2)</sup>			
2707-MVH232 or 2707-MVP232 <sup>(1)(2)</sup>	0	80 <sup>(2)</sup>			
Cat. No.	n = Number of Modules (6 max)	A	B	n x A	n x B
1762-IA8		50	0		
1762-IQ8		50	0		
1762-IQ8OW6		110	80		
1762-IQ16 (Series A)		60	0		
1762-OA8		115	0		
1762-OB8		115	0		
1762-OB16		175	0		
1762-OW8		80	90		
1762-OW16 (Series A)		120	140		
1762-OX6I		110	110		
1762-IF2OF2		40	105		
1762-IF4		40	50		
1762-OF4		40	165		
1762-IR4		40	50		
1762-IT4		40	50		
1762-OV32T		175	0		
1762-OB32T		175	0		
1762-IQ32T		170	0		
1762-IQ16 (Series B)		70	0		
1762-OW16 (Series B)		140	180		
<b>TOTAL MODULES:</b>		<b>TOTAL CALCULATED CURRENT:</b>		<b>(C)</b>	<b>(D)</b>
<b>For 1762-L24BWA, 1762-L40BWA, 1762-L24BWAR, and 1762-L40BWAR only, add sum of any User 24V DC Sensor Current</b>				<b>(E)</b>	

(1) These are optional accessories. Current is consumed only if the accessory is installed.

(2) Current for the 1761-NET-AIC or 1761-NET-ENI(W) can be supplied by the controller's communication port or from an external 24V DC source. No current is consumed from the controller when a user-supplied, external source is used. If an external source is to be used, do not select the device here. The current for a 2707-MVH232 or 2707-MVP232 MicroView Operator Interface is supplied from the controller's communication port, if directly connected.

**Master List of Catalog Numbers**

<b>Cat. No.</b>	<b>Description</b>	<b>Quantity Selected</b>
1762-L40BWA	MicroLogix 1200 40-Point AC Controller	
1762-L40BWAR	MicroLogix 1200 40-Point AC Controller with Programming/HMI Port	
1762-L40BXB	MicroLogix 1200 40-Point DC Controller	
1762-L40BXHR	MicroLogix 1200 40-Point DC Controller with Programming/HMI Port	
1762-MM1	MicroLogix 1200 Memory Module	
1762-MM1RTC	MicroLogix 1200 Memory Module with Real-Time Clock	
1762-RTC	MicroLogix 1200 Real-Time Clock Module	
<b>MicroLogix 1100/1200/1400 I/O</b>		
1762-IA8	8-Point 120V AC Input Module	
1762-IF2OF2	Combination 2-Channel Input 2-Channel Output Voltage/Current Analog Module	
1762-IF4	4-Channel Voltage/Current Analog Input Module	
1762-IQ16	16-Point Sink/Source 24V DC Input Module	
1762-IQ8	8-Point Sink/Source 24V DC Input Module	
1762-IQ8OW6	8 Point Sink/Source 24V DC Input/6-Point AC/DC Relay Output Combination Module	
1762-IR4	4-Channel RTD/Resistance Input Module	
1762-IT4	4-Channel Thermocouple/mV Input Module	
1762-OA8	8-Point 120/240V AC Triac Output Module	
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1762-OB8	8-Point Sourcing 24V DC Output Module	
1762-OF4	4-Channel Voltage/Current Analog Output Module	
1762-OW16	16-Point AC/DC Relay Output Module	
1762-OW8	8-Point AC/DC Relay Output Module	
1762-OX6I	6-Point Isolated AC/DC Relay Output Module	
1762-OV32T	Solid State 24V DC Sink Output Module	
1762-OB32T	Solid State 24V DC Source Output Module	
1762-IQ32T	DC Input Module	
<b>MicroLogix 1400 Controllers and Accessories</b>		
1766-L32BWA	MicroLogix 1400 32-point AC controller	
1766-L32AWA	MicroLogix 1400 32-point AC controller	
1766-L32BXB	MicroLogix 1400 32-point DC controller	
1766-L32BWAA	MicroLogix 1400 32-point AC controller with Analog	
1766-L32AWAA	MicroLogix 1400 32-point AC controller with Analog	
1766-L32BXBA	MicroLogix 1400 32-point DC controller with Analog	
1766-MM1	MicroLogix 1400 Memory Module	
<b>MicroLogix 1500 Controllers and Accessories</b>		
1764-24AWA	MicroLogix 1500 24-Point AC Base Unit	
1764-24BWA	MicroLogix 1500 24-Point AC Base Unit	
1764-28BXB	MicroLogix 1500 28-Point DC Base Unit	
1764-DAT	MicroLogix Data Access Tool	
1764-LRP	MicroLogix 1500 Processor Unit with RS-232 Port	
1764-LSP	MicroLogix 1500 Processor Unit	
1764-MM1	MicroLogix 1500 8 KB Memory Module	
1764-MM1RTC	MicroLogix 1500 8 KB Memory Module with Real-Time Clock	
1764-MM2	MicroLogix 1500 16 KB Memory Module	