



M12 Junction Blocks – Specifications



Note: 2 port caps for unused ports are included.



Overview

ZIPport multi-port interconnection junction blocks provide a simple and effective way to organize machine wiring for a variety of control systems, such as packaging equipment and conveying systems. These systems typically have many I/O points,

such as sensors or solenoid-operated valves, consolidated in one location. Many times these devices are hardwired to a junction box or separately wired back to the main control cabinet. ZIPport multi-port junction blocks provide a more efficient and cost-effective solution: a main homerun control cable is run back to the

main control cabinet, so the cost associated with errors in wiring, rewiring, and I/O replacement is greatly reduced. The designer can choose from a variety of circuit configurations in industry standard M12-style connection, in port configurations of 4-, 6- and 8-pole, with a choice of one I/O per port or two I/O per port.

ZIPport Junction Block Specifications			
Electrical Specifications			
Voltage Rating	Without LEDs: 0 to 150 V AC/DC max. With LEDs: 48 VDC max, in accordance with LED Configuration		
Current Rating	3 A per connector, 8 A per block		
Technical Specifications			
Agency Approvals	UL file E328610, RoHS compliant		
Degree of Protection	IP 67, with proper field wiring cable and all ports being used or covered with a protective cap.		
Operating Temperature Range	-20°C to +80°C (-4°F to 176°F)		
Material Specifications			
Body	Polypropylene		
Inserts	Polyamide		
Coupling Nuts	4, 6, and 8-Port: PBT		
Screws	Two m3x0.5x14 screws are used to assemble backshell.		
O-Ring	BUNA-N		
Cable Gland	M20x1.5		
Recommended Cable Diameters for Field Wireable	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> With inner grommet intact: <ul style="list-style-type: none"> • Max OD: 0.31" [7.9mm]. • Min OD: For PUR Cable 0.19" [4.8mm], For PVC Cable 0.17" [4.3mm] </td> <td style="width: 50%; vertical-align: top;"> With inner grommet removed: <ul style="list-style-type: none"> • Max OD: 0.49" [12.5mm]. • Min OD: For PUR Cable 0.28" [7.2mm], -For PVC cable 0.28" [7.2mm], -For SJT/SJE/ST/SE Cable 0.305" [7.75mm] </td> </tr> </table>	With inner grommet intact: <ul style="list-style-type: none"> • Max OD: 0.31" [7.9mm]. • Min OD: For PUR Cable 0.19" [4.8mm], For PVC Cable 0.17" [4.3mm] 	With inner grommet removed: <ul style="list-style-type: none"> • Max OD: 0.49" [12.5mm]. • Min OD: For PUR Cable 0.28" [7.2mm], -For PVC cable 0.28" [7.2mm], -For SJT/SJE/ST/SE Cable 0.305" [7.75mm]
With inner grommet intact: <ul style="list-style-type: none"> • Max OD: 0.31" [7.9mm]. • Min OD: For PUR Cable 0.19" [4.8mm], For PVC Cable 0.17" [4.3mm] 	With inner grommet removed: <ul style="list-style-type: none"> • Max OD: 0.49" [12.5mm]. • Min OD: For PUR Cable 0.28" [7.2mm], -For PVC cable 0.28" [7.2mm], -For SJT/SJE/ST/SE Cable 0.305" [7.75mm] 		
LED Lens	Polycarbonate		
Contacts	Copper Alloy with Gold Plating		
Marker Tags	Polyamide (supplied on all units)		
Accessories	2 port caps for unused ports included. Purchase additional caps (in packs of 5) separately.		




- Company Information
- Systems Overview
- Programmable Controllers
- Field I/O
- Software
- C-more & other HMI
- Drives
- Soft Starters
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- Steppers/Servos
- Motor Controls
- Proximity Sensors
- Photo Sensors
- Limit Switches
- Encoders
- Current Sensors
- Pressure Sensors
- Temperature Sensors
- Pushbuttons/Lights
- Process
- Relays/Timers
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- Power
- Circuit Protection
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- Tools
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- Appendix
- Product Index
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M12 Junction Blocks – Selection

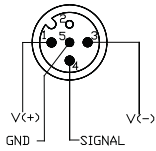


ZP-JBH85-N2-5 shown

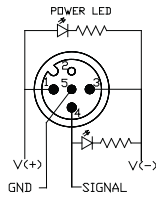
ZIPport M12 Series Selection Chart											
Part Number	Price	Ports	Wire/ Pins	Indicating LEDs	I/O per Socket	Rating per Socket	Home Run Connection Type	Wiring	Pin Out Table	Dimensions	Accessories
4 Port											
ZP-JBH44-00-FW	<--->	4	4/5	No LED	1	150V AC/DC max, 3 A	cable clamp for field wiring	Diagram 1-A	--	Figure 1	ZP-JBH-CAP CDP12-0B-010-AA CDP12-0B-030-AA CDP12-0B-010-BB CDP12-0B-030-BB
ZP-JBH44-2P-FW	<--->			PNP	1	48V DC max, 3 A	cable clamp for field wiring	Diagram 1-B	--	Figure 1	
ZP-JBH44-2N-FW	<--->			NPN	1	48V DC max, 3 A	cable clamp for field wiring	Diagram 1-C	--	Figure 1	
ZP-JBH44-00-5	<--->			No LED	1	150V AC/DC max, 3 A	5-meter integrated cable	Diagram 1-A	Table 1	Figure 1	
ZP-JBH44-2P-5	<--->			PNP	1	48V DC max, 3 A	5-meter integrated cable	Diagram 1-B	Table 1	Figure 1	
ZP-JBH44-2N-5	<--->			NPN	1	48V DC max, 3 A	5-meter integrated cable	Diagram 1-C	Table 1	Figure 1	
ZP-JBH45-00-FW	<--->		5/5	No LED	2	150V AC/DC max, 3 A	cable clamp for field wiring	Diagram 2-A	--	Figure 2	
ZP-JBH45-2P-FW	<--->			PNP	2	48V DC max, 3 A	cable clamp for field wiring	Diagram 2-B	--	Figure 2	
ZP-JBH45-2N-FW	<--->			NPN	2	48V DC max, 3 A	cable clamp for field wiring	Diagram 2-C	--	Figure 2	
ZP-JBH45-00-5	<--->			No LED	2	150V AC/DC max, 3 A	5-meter integrated cable	Diagram 2-A	Table 2	Figure 2	
ZP-JBH45-2P-5	<--->			PNP	2	48V DC max, 3 A	5-meter integrated cable	Diagram 2-B	Table 2	Figure 2	
ZP-JBH45-2N-5	<--->			NPN	2	48V DC max, 3 A	5-meter integrated cable	Diagram 2-C	Table 2	Figure 2	
6 Port											
ZP-JBH64-00-FW	<--->	6	4/5	No LED	1	150V AC/DC max, 3 A	cable clamp for field wiring	Diagram 3-A	--	Figure 3	ZP-JBH-CAP CDP12-0B-010-AA CDP12-0B-030-AA CDP12-0B-010-BB CDP12-0B-030-BB
ZP-JBH64-2P-FW	<--->			PNP	1	48V DC max, 3 A	cable clamp for field wiring	Diagram 3-B	--	Figure 3	
ZP-JBH64-2N-FW	<--->			NPN	1	48V DC max, 3 A	cable clamp for field wiring	Diagram 3-C	--	Figure 3	
ZP-JBH64-00-5	<--->			No LED	1	150V AC/DC max, 3 A	5-meter integrated cable	Diagram 3-A	Table 3	Figure 3	
ZP-JBH64-2P-5	<--->			PNP	1	48V DC max, 3 A	5-meter integrated cable	Diagram 3-B	Table 3	Figure 3	
ZP-JBH64-2N-5	<--->			NPN	1	48V DC max, 2 A	5-meter integrated cable	Diagram 3-C	Table 3	Figure 3	
ZP-JBH65-00-FW	<--->		5/5	No LED	2	150V AC/DC max, 3 A	cable clamp for field wiring	Diagram 4-A	--	Figure 4	
ZP-JBH65-2P-FW	<--->			PNP	2	48V DC max, 3 A	cable clamp for field wiring	Diagram 4-B	--	Figure 4	
ZP-JBH65-2N-FW	<--->			NPN	2	48V DC max, 3 A	cable clamp for field wiring	Diagram 4-C	--	Figure 4	
ZP-JBH65-00-5	<--->			No LED	2	150V AC/DC max, 3 A	5-meter integrated cable	Diagram 4-A	Table 4	Figure 4	
ZP-JBH65-2P-5	<--->			PNP	2	48V DC max, 3 A	5-meter integrated cable	Diagram 4-B	Table 4	Figure 4	
ZP-JBH65-2N-5	<--->			NPN	2	48V DC max, 3 A	5-meter integrated cable	Diagram 4-C	Table 4	Figure 4	
8 Port											
ZP-JBH84-00-FW	<--->	8	4/5	No LED	1	150V AC/DC max, 3 A	cable clamp for field wiring	Diagram 5-A	--	Figure 5	ZP-JBH-CAP CDP12-0B-010-AA CDP12-0B-030-AA CDP12-0B-010-BB CDP12-0B-030-BB
ZP-JBH84-2P-FW	<--->			PNP	1	48V DC max, 3 A	cable clamp for field wiring	Diagram 5-B	--	Figure 5	
ZP-JBH84-2N-FW	<--->			NPN	1	48V DC max, 3 A	cable clamp for field wiring	Diagram 5-C	--	Figure 5	
ZP-JBH84-00-5	<--->			No LED	1	150V AC/DC max, 3 A	5-meter integrated cable	Diagram 5-A	Table 5	Figure 5	
ZP-JBH84-2P-5	<--->			PNP	1	48V DC max, 3 A	5-meter integrated cable	Diagram 5-B	Table 5	Figure 5	
ZP-JBH84-2N-5	<--->			NPN	1	48V DC max, 3 A	5-meter integrated cable	Diagram 5-C	Table 5	Figure 5	
ZP-JBH85-00-FW	<--->		5/5	No LED	2	150V AC/DC max, 3 A	cable clamp for field wiring	Diagram 6-A	--	Figure 6	
ZP-JBH85-2P-FW	<--->			PNP	2	48V DC max, 3 A	cable clamp for field wiring	Diagram 6-B	--	Figure 6	
ZP-JBH85-2N-FW	<--->			NPN	2	48V DC max, 3 A	cable clamp for field wiring	Diagram 6-C	--	Figure 6	
ZP-JBH85-00-5	<--->			No LED	2	150V AC/DC max, 3 A	5-meter integrated cable	Diagram 6-A	Table 6	Figure 6	
ZP-JBH85-2P-5	<--->			PNP	2	48V DC max, 3 A	5-meter integrated cable	Diagram 6-B	Table 6	Figure 6	
ZP-JBH85-2N-5	<--->			NPN	2	48V DC max, 3 A	5-meter integrated cable	Diagram 6-C	Table 6	Figure 6	
Accessories											
Part Number	Price	Pcs/Pkg	Description								Use With
ZP-JBH-CAP	<--->	5	Protective cap for unused ports.								 M12 ZipPort junction blocks

Wiring Diagrams

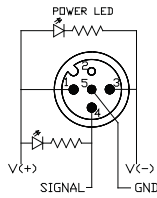
4 Port 4 Pin



No LED Version
Diagram 1-A

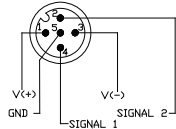


PNP Version
Diagram 1-B

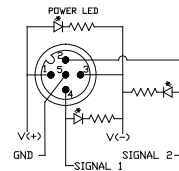


NPN Version
Diagram 1-C

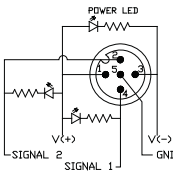
4 Port 5 Pin



No LED Version
Diagram 2-A

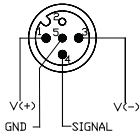


PNP Version
Diagram 2-B

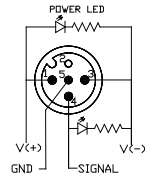


NPN Version
Diagram 2-C

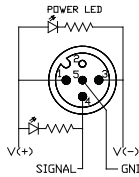
6 Port 4 Pin



No LED Version
Diagram 3-A

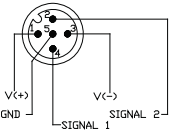


PNP Version
Diagram 3-B

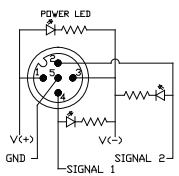


NPN Version
Diagram 3-C

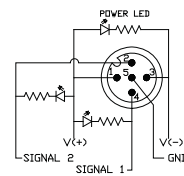
6 Port 5 Pin



No LED Version
Diagram 4-A

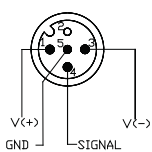


PNP Version
Diagram 4-B

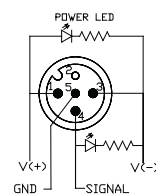


NPN Version
Diagram 4-C

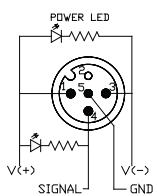
8 Port 4 Pin



No LED Version
Diagram 5-A

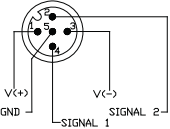


PNP Version
Diagram 5-B

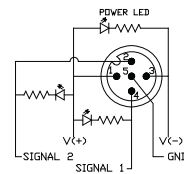
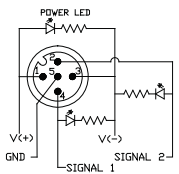


NPN Version
Diagram 5-C

8 Port 5 Pin



PNP Version
Diagram 6-B



NPN Version
Diagram 6-C

Pin-Out Tables

Pin Out Table 1	
M12 4 Port 4-Pin ZipPort	
Function	Cable O.D. 0.34"
+V	Brown
-V	Blue
Ground	Green/Yellow
Port 1 Pin 4	White
Port 2 Pin 4	Green
Port 3 Pin 4	Yellow
Port 4 Pin 4	Gray

Pin Out Table 2	
M12 4 Port 5-Pin ZipPort	
Function	Cable O.D. 0.38"
+V	Brown
-V	Blue
Ground	Green/Yellow
Port 1 Pin 2	Pink
Port 1 Pin 4	White
Port 2 Pin 2	Red
Port 2 Pin 4	Green
Port 3 Pin 2	Black
Port 3 Pin 4	Yellow
Port 4 Pin 2	Violet
Port 4 Pin 4	Gray

Pin Out Table 3	
M12 6 Port 4-Pin ZipPort	
Function	Cable O.D. 0.35"
+V	Brown
-V	Blue
Ground	Green/Yellow
Port 1 Pin 4	White
Port 2 Pin 4	Green
Port 3 Pin 4	Yellow
Port 4 Pin 4	Gray
Port 5 Pin 4	Pink
Port 6 Pin 4	Red

Pin Out Table 4	
M12 6 Port 5-Pin ZipPort	
Function	Cable O.D. 0.40"
+V	Brown
-V	Blue
Ground	Green/Yellow
Port 1 Pin 2	Gray/Pink
Port 1 Pin 4	White
Port 2 Pin 2	Red/Blue
Port 2 Pin 4	Green
Port 3 Pin 2	White/Green
Port 3 Pin 4	Yellow
Port 4 Pin 2	Brown/Green
Port 4 Pin 4	Gray
Port 5 Pin 2	White/Yellow
Port 5 Pin 4	Pink
Port 6 Pin 2	Yellow/Brown
Port 6 Pin 4	Red

Pin Out Table 5	
M12 8 Port 4-Pin ZipPort	
Function	Cable O.D. 0.35"
+V	Brown
-V	Blue
Ground	Green/Yellow
Port 1 Pin 4	White
Port 2 Pin 4	Green
Port 3 Pin 4	Yellow
Port 4 Pin 4	Gray
Port 5 Pin 4	Pink
Port 6 Pin 4	Red
Port 7 Pin 4	Black
Port 8 Pin 4	Violet

Pin Out Table 6	
M12 8 Port 5-Pin ZipPort	
Function	Cable O.D. 0.43"
+V	Brown
-V	Blue
Ground	Green/Yellow
Port 1 Pin 2	Gray/Pink
Port 1 Pin 4	White
Port 2 Pin 2	Red/Blue
Port 2 Pin 4	Green
Port 3 Pin 2	White/Green
Port 3 Pin 4	Yellow
Port 4 Pin 2	Brown/Green
Port 4 Pin 4	Gray
Port 5 Pin 2	White/Yellow
Port 5 Pin 4	Pink
Port 6 Pin 2	Yellow/Brown
Port 6 Pin 4	Red
Port 7 Pin 2	White/Gray
Port 7 Pin 4	Black
Port 8 Pin 2	Gray/Brown
Port 8 Pin 4	Violet

Note: Pin Out Tables are For 5-meter integrated cable only. Please refer to product insert for field wiring.



Dimensions

Figure 1: 4 Port 4 Pin

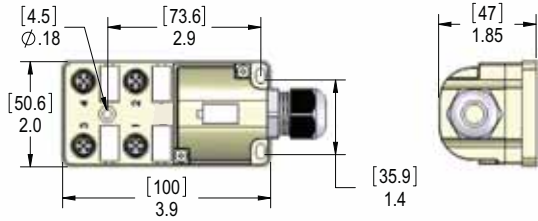


Figure 2: 4 Port 5 Pin

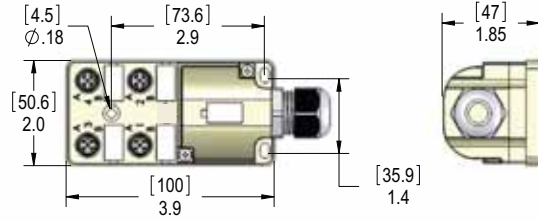


Figure 3: 6 Port 4 Pin

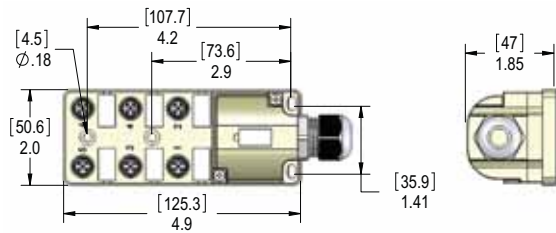


Figure 4: 6 Port 5 Pin

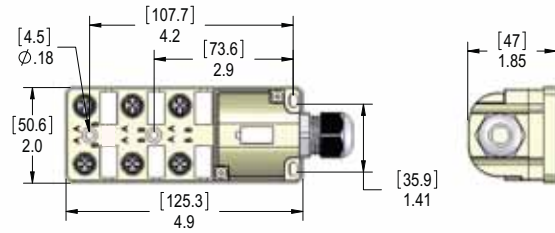


Figure 5: 8 Port 4 Pin

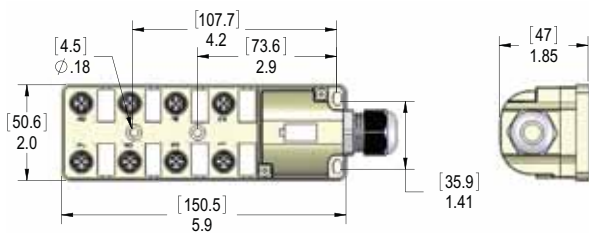
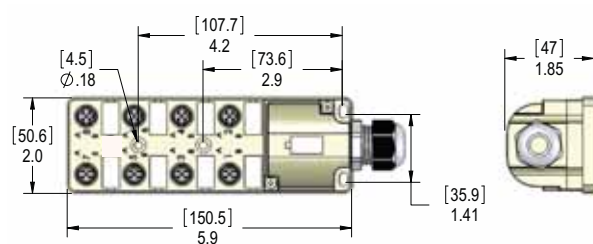


Figure 6: 8 Port 5 Pin



Note: All dimensions are shown in inches [millimeters]