



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 hard-wired 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 home-run 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	3A per connector, 8A per block	
Technical Specifications		
Approvals*	UL file E328610, CE	
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 to 80°C [-4 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	With inner grommet intact: • Max OD: 0.31" [7.9 mm]. • Min OD: For PUR Cable 0.19" [4.8 mm], For PVC Cable 0.17" [4.3 mm]	With inner grommet removed: • Max OD: 0.49" [12.5 mm]. • Min OD: For PUR Cable 0.28" [7.2 mm], For PVC cable 0.28" [7.2 mm], For SJT/SJE/ST/SE Cable 0.305" [7.75 mm]
LED Lens	Polycarbonate (LEDs visible only when power is supplied to the block)	
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.	
Port Cap	Nylon	

*To obtain the most current agency approval information, see the Agency Compliance & Certifications Checklist section on the specific part number's web page.



M12 Junction Blocks – Selection

ZIPport M12 Series Selection Chart

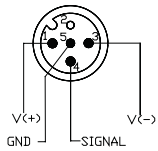
Part Number	Price	Ports	Wires/ Poles	Indicating LEDs	I/O per Socket	Rating per Socket	Home Run Connection Type	Wiring	Pin Out Table	Dims.	Accessories			
4 Port														
ZP-JBH44-00-FW	\$0846:	4	4/5	No LED	1	150V AC/DC max, 3A	Cable clamp for field wiring	Diagram 1-A	–	Figure 1	ZP-JBH-CAP CDP12-0B-010-AA CDP12-0B-030-AA CDP12-0B-010-BB CDP12-0B-030-BB CDP12-0B-030-BB			
ZP-JBH44-2P-FW	\$084a:			PNP	1	48VDC max, 3A		Diagram 1-B	–	Figure 1				
ZP-JBH44-2N-FW	\$0848:			NPN	1	48VDC max, 3A		Diagram 1-C	–	Figure 1				
ZP-JBH44-00-5	\$00845:			No LED	1	150V AC/DC max, 3A	5m integrated cable	Diagram 1-A	Table 1	Figure 1				
ZP-JBH44-2P-5	\$00849:			PNP	1	48VDC max, 3A		Diagram 1-B	Table 1	Figure 1				
ZP-JBH44-2N-5	\$00847:			NPN	1	48VDC max, 3A		Diagram 1-C	Table 1	Figure 1				
ZP-JBH45-00-FW	\$084c:		5/5	No LED	2	150V AC/DC max, 3A	Cable clamp for field wiring	Diagram 2-A	–	Figure 2				
ZP-JBH45-2P-FW	\$0084g:			PNP	2	48VDC max, 3A		Diagram 2-B	–	Figure 2				
ZP-JBH45-00-5	\$0084b:			No LED	2	150V AC/DC max, 3A	5m integrated cable	Diagram 2-A	Table 2	Figure 2				
ZP-JBH45-2P-5	\$,0084f:			PNP	2	48VDC max, 3A		Diagram 2-B	Table 2	Figure 2				
6 Port														
ZP-JBH64-00-FW	\$-082j:	6	4/5	No LED	1	150V AC/DC max, 3A	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	\$0082o:			PNP	1	48VDC max, 3A		Diagram 3-B	–	Figure 3				
ZP-JBH64-2N-FW	\$-0082l:			NPN	1	48VDC max, 3A		Diagram 3-C	–	Figure 3				
ZP-JBH64-00-5	\$-0082i:			No LED	1	150V AC/DC max, 3A	5m integrated cable	Diagram 3-A	Table 3	Figure 3				
ZP-JBH64-2P-5	\$0082n:			PNP	1	48VDC max, 3A		Diagram 3-B	Table 3	Figure 3				
ZP-JBH64-2N-5	\$0082k:			NPN	1	48VDC max, 2A		Diagram 3-C	Table 3	Figure 3				
ZP-JBH65-00-FW	\$0082q:		5/5	No LED	2	150V AC/DC max, 3A	Cable clamp for field wiring	Diagram 4-A	–	Figure 4				
ZP-JBH65-2P-FW	\$0082v:			PNP	2	48VDC max, 3A		Diagram 4-B	–	Figure 4				
ZP-JBH65-00-5	\$0082p:			No LED	2	150V AC/DC max, 3A	5m integrated cable	Diagram 4-A	Table 4	Figure 4				
ZP-JBH65-2P-5	\$0082u:			PNP	2	48VDC max, 3A		Diagram 4-B	Table 4	Figure 4				
8 Port														
ZP-JBH84-00-FW	\$00827:	8	4/5	No LED	1	150V AC/DC max, 3A	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	\$0082b:			PNP	1	48VDC max, 3A		Diagram 5-B	–	Figure 5				
ZP-JBH84-2N-FW	\$00829:			NPN	1	48VDC max, 3A		Diagram 5-C	–	Figure 5				
ZP-JBH84-00-5	\$007_o:			No LED	1	150V AC/DC max, 3A	5m integrated cable	Diagram 5-A	Table 5	Figure 5				
ZP-JBH84-2P-5	\$0082a:			PNP	1	48VDC max, 3A		Diagram 5-B	Table 5	Figure 5				
ZP-JBH84-2N-5	\$00828:			NPN	1	48VDC max, 3A		Diagram 5-C	Table 5	Figure 5				
ZP-JBH85-00-FW	\$0082d:		5/5	No LED	2	150V AC/DC max, 3A	Cable clamp for field wiring	Diagram 6-A	–	Figure 6				
ZP-JBH85-2P-FW	\$0082h:			PNP	2	48VDC max, 3A		Diagram 6-B	–	Figure 6				
ZP-JBH85-2N-FW	\$,0082f:			NPN	2	48VDC max, 3A		Diagram 6-C	–	Figure 6				
ZP-JBH85-00-5	\$0082c:			No LED	2	150V AC/DC max, 3A	5m integrated cable	Diagram 6-A	Table 6	Figure 6				
ZP-JBH85-2P-5	\$0082g:			PNP	2	48VDC max, 3A		Diagram 6-B	Table 6	Figure 6				
ZP-JBH85-2N-5	\$0082e:			NPN	2	48VDC max, 3A		Diagram 6-C	Table 6	Figure 6				
Accessories														
Part Number	Price			Qty	Description							Use With		
ZP-JBH-CAP	\$,7#f:	5	ZIPport junction block M12 protective cap.							 M12 ZipPort junction blocks				



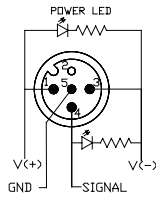
M12 Junction Blocks – Wiring

Wiring Diagrams

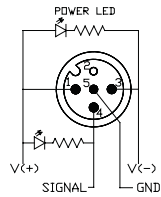
4-Port, 4-Wire/5-Pole



No LED Version
Diagram 1-A

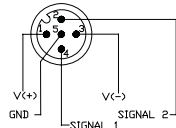


PNP Version
Diagram 1-B

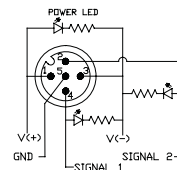


NPN Version
Diagram 1-C

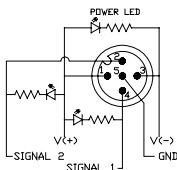
4-Port, 5-Wire/5-Pole



No LED Version
Diagram 2-A

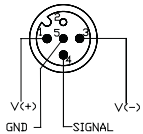


PNP Version
Diagram 2-B

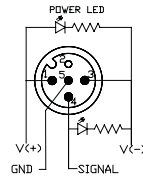


NPN Version
Diagram 2-C

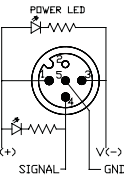
6-Port, 4-Wire/5-Pole



No LED Version
Diagram 3-A

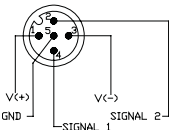


PNP Version
Diagram 3-B

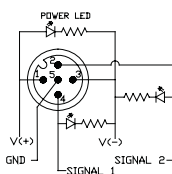


NPN Version
Diagram 3-C

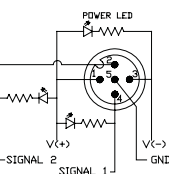
6-Port, 5-Wire/5-Pole



No LED Version
Diagram 4-A

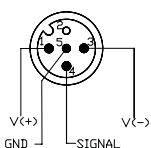


PNP Version
Diagram 4-B

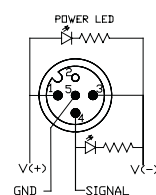


NPN Version
Diagram 4-C

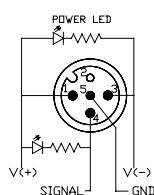
8-Port, 4-Wire/5-Pole



No LED Version
Diagram 5-A

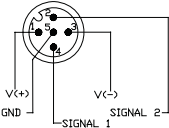


PNP Version
Diagram 5-B

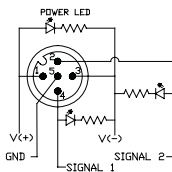


NPN Version
Diagram 5-C

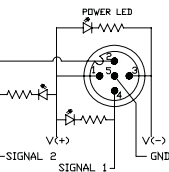
8-Port, 5-Wire/5-Pole



No LED Version
Diagram 6-A



PNP Version
Diagram 6-B



NPN Version
Diagram 6-C

Pin Out Tables

Pin Out Table 1

M12 4-Port, 4-Wire/5-Pole 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-Wire/5-Pole 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-Wire/5-Pole 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-Wire/5-Pole 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-Wire/5-Pole 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-Wire/5-Pole 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.



M12 Junction Blocks – Dimensions

Dimensions

inches [mm]

Figure 1: 4-Port, 4-Wire/5-Pole

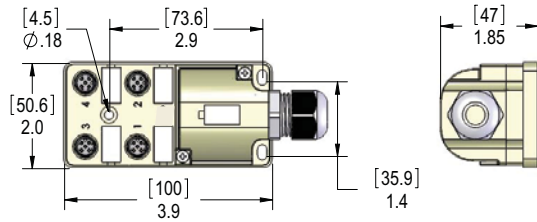


Figure 2: 4-Port, 5-Wire/5-Pole

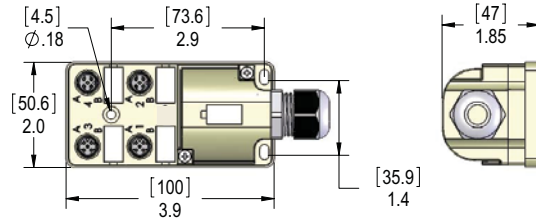


Figure 3: 6-Port, 4-Wire/5-Pole

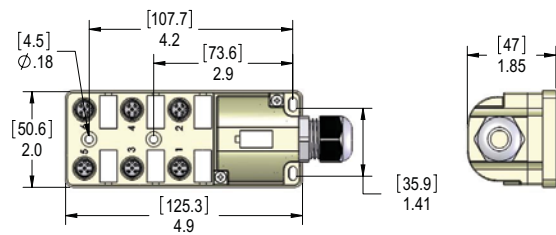


Figure 4: 6-Port, 5-Wire/5-Pole

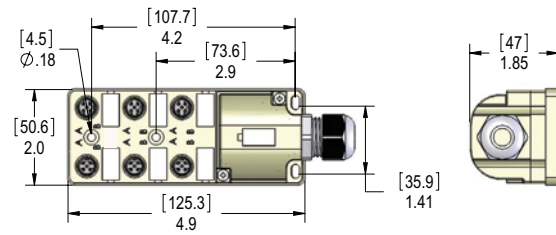


Figure 5: 8-Port, 4-Wire/5-Pole

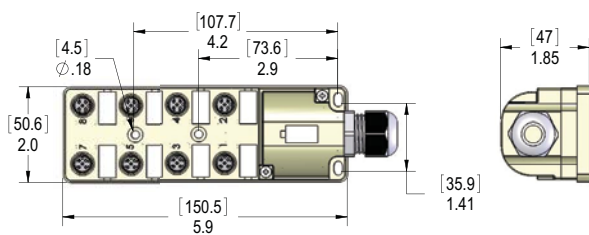


Figure 6: 8-Port, 5-Wire/5-Pole

