

Pneumatic Valve Wiring Reference Guide

Quick Connect Wiring Options for Pneumatic Valves

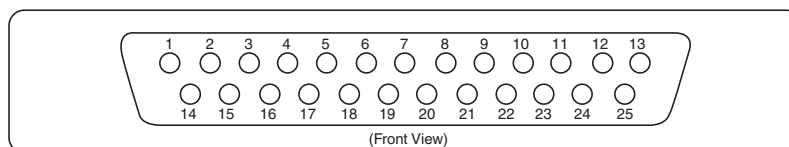
Pneumatic Valve Wiring Interface	Cabling to Pneumatic Valve	Supported by PanelConnect and Distribution Boxes
Manifold with direct connect interface with Mini-Plus connector (shown on page 4)	Double end 12-pin Mini-Plus Patch Cord	Yes – Parker Hannifin Manifold (see page 40)
Manifold with direct connect interface with M23 connector	Double end 12-pin M23 Patch Cord	Yes – Numatics Manifold (see page 40)
Manifold with direct connect interface with 25-pin D-Shell connector	Special Patch Cord Mini-Plus one end and 25-pin D-Shell	Yes– Festo Manifold (see page 40) Configuration on other valve manufactures 25-pin D-Shell must be verified (see wiring * below).
Single solenoid pneumatic valve with M12 connector (4 or 5-Pin)	4- or 5-Pin M12 Micro Patch Cord	Yes – But wiring configuration must be verified (see wiring * in the pages which follow).
Double solenoid pneumatic valve with M12 connector (4 or 5-pin)	4- or 5-pin M12 Micro Patch Cord	Yes – But wiring configuration must be verified (see wiring † in the pages which follow).
Single solenoid pneumatic valve with Mini connector (3-pin)	3-pin Mini Patch Cord	Yes – But wiring configuration must be verified (see wiring § in the pages which follow).
Single solenoid pneumatic valve with Mini connector (5-pin)	5-pin Mini Patch Cord	No
Double solenoid pneumatic valve with Mini connector (5-pin)	5-pin Mini patch cord	No
Single solenoid pneumatic valve with DIN 43650 connector	DIN 43650 DIN Connector with M12 micro connector (see DIN43650 configurations which follow)	Yes – See wiring ‡ in the pages which follow.
Double solenoid pneumatic valve with DIN 43650 connector	Two DIN 43650 DIN Connector with splitter to M12 micro connector (see DIN43650 configurations which follow)	Yes –See wiring ► in the pages which follow.

***PNP ¶ Typical 25-Pin D-Shell Wiring**

25-pin Pin Numbers	Manifold Wiring	PanelConnect	
		Pin Number	Output Address
1	Coil No. 1	Connector A Pin 1	00
2	Coil No. 2	Connector A Pin 2	01
3	Coil No. 3	Connector A Pin 3	02
4	Coil No. 4	Connector A Pin 4	03
5	Coil No. 5	Connector A Pin 5	04
6	Coil No. 6	Connector A Pin 6	05
7	Coil No. 7	Connector A Pin 7	06
8	Coil No. 8	Connector A Pin 8	07
9	No Connect	No Connect	-
10	No Connect	No Connect	-
11	No Connect	No Connect	-
12	No Connect	No Connect	-
13	No Connect	No Connect	-
14	No Connect	No Connect	-
15	No Connect	No Connect	-
16	No Connect	No Connect	-
17	No Connect	No Connect	-
18	No Connect	No Connect	-
19	No Connect	No Connect	-
20	No Connect	No Connect	-
21	No Connect	No Connect	-
22	No Connect	No Connect	-
23	No Connect	No Connect	-
24	Common	Connector A Pin 11	Common
25	Common	Connector A Pin 11	Common

¶NPN (differences from adjacent chart)

25-pin Pin Numbers	Manifold Wiring	PanelConnect	
		Pin Number	Output Address
24	V+	Connector A Pin 12	V+
25	V+	Connector A Pin 12	V+



PanelConnect™ Systems

PanelConnect™ Pneumatic Valve Reference

Typical Valve Individual DIN 43650 Connector with M12 Wiring Schematics, Continued

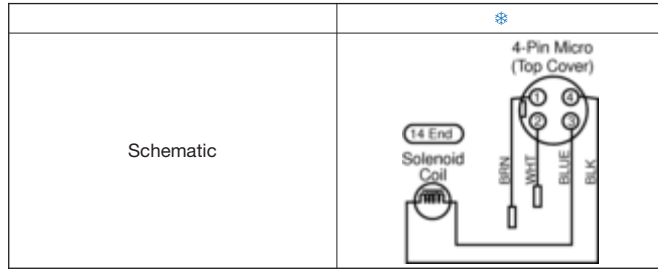
Examples of Manufactures Manifolds and Individual Valves

Valve Manufacturer	Valve Series	Wiring Interface Option	Wiring Schematic required
Festo	Midi / Maxi	Manifold 25-pin D-Shell	*
Festo	Compact Performance	Manifold 25-pin D-Shell	*
Festo	ISO 599/2 Single Solenoid	Individual Valve 4-pin Micro (M12)	⊛
Festo	ISO 599/2 Double Solenoid	Individual Valve 4-pin Micro (M12)	‡
MAC	Series 42, 45, 46, 48, 82 MacConnect	Manifold 25-pin D-Shell	*Cable not developed
Parker Hannifin	F Series	Manifold Mini-Plus	12-Pin Mini-Plus Straight Wiring
Parker Hannifin	B Series Single Solenoid	Individual Valve DIN 43650	♣
Parker Hannifin	B Series Single Solenoid	Individual Valve DIN 43650	>
Numatics	2005 Manifold	Manifold M23	12-Pin M23 Straight Wiring
Numatics	2012 Manifold	Manifold M23	12-Pin M23 Straight Wiring
Numatics	ISO 599/2 Manifold	Manifold M23	12-Pin M23 Straight Wiring
Numatics	2012, Mark 8, Mark 15, Mark 55	Individual Valve 4-pin Micro (M12)	⊛
Numatics	Individual Valves (56Y option)	Individual Valve 4-pin Micro (M12)	⊛
SMC	ISO 599/2 Size 1, 2, and 3 Single Valve (61E Option)	Individual Valve 4-pin Micro (M12)	⊛
SMC	Series SV Single Solenoid	Individual Valve 4-pin Micro (M12)	‡

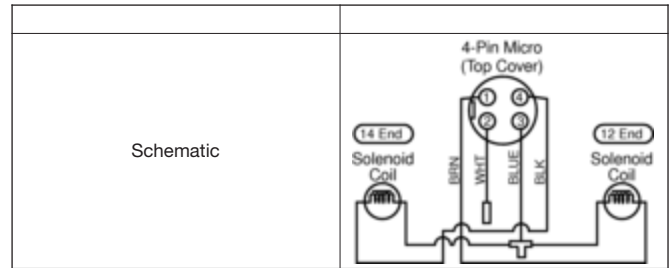
Note: These are just some of the valves provide my the manufactures listed above. All references to Festo, MAC Valves, Parker Hannifin, Numatics and SMC were obtained from manufactures commercial literature. Refer to manufactures literature for specific information.

Typical Individual Valve Wiring Schematics for M12 Micro and Mini Connectors

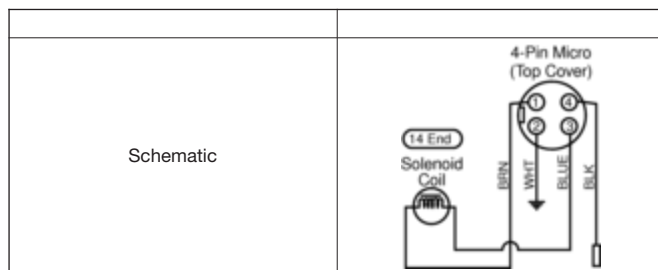
⊛ Single Solenoid SAE / Ford / GM Wiring 4-Pin Male Micro (M12)



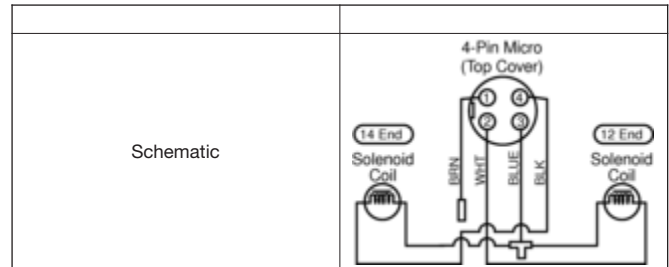
Double Solenoid GM Wiring 4-Pin Male Micro (M12)



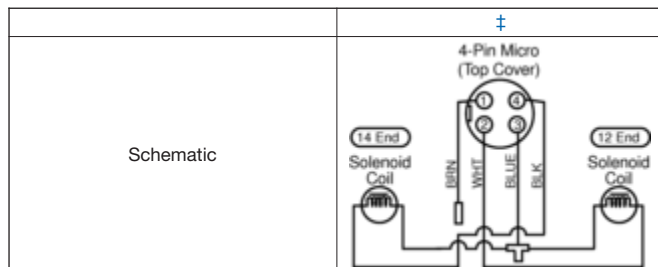
Single Solenoid Chrysler Wiring 4-Pin Male Micro (M12)



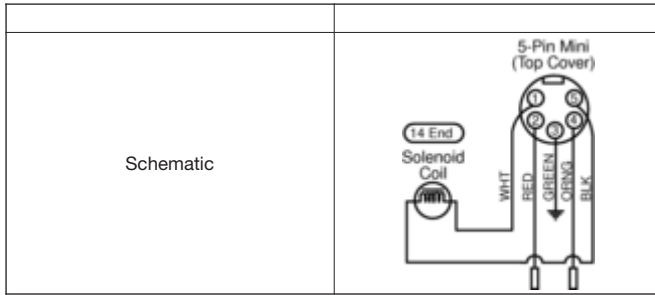
Double Solenoid Chrysler Wiring 4-Pin Male Micro (M12)



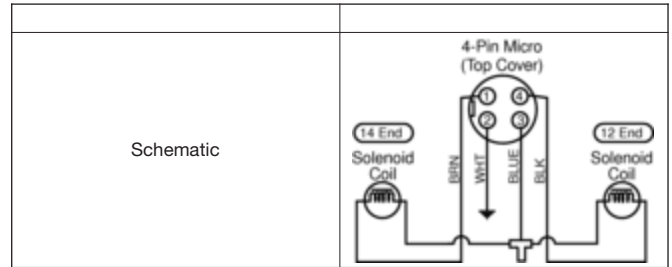
‡ Double Solenoid SAE / Ford Wiring 4-Pin Male Micro (M12)



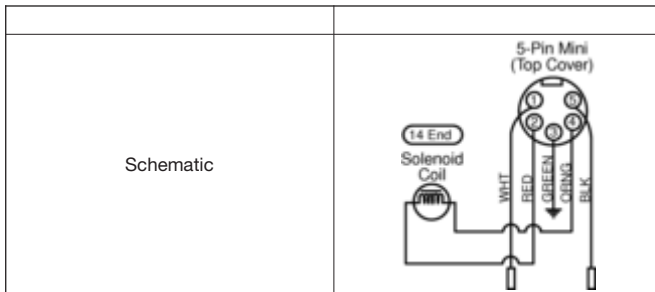
Single Solenoid SAE / Ford Wiring 5-Pin Male Micro (M12)



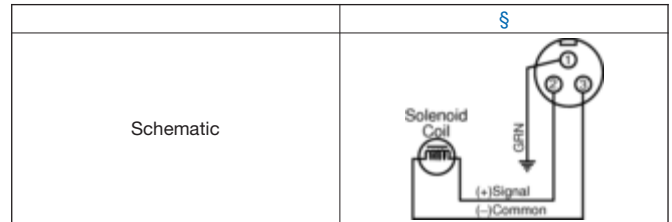
Double Solenoid Chrysler Wiring 4-Pin Male Micro (M12)



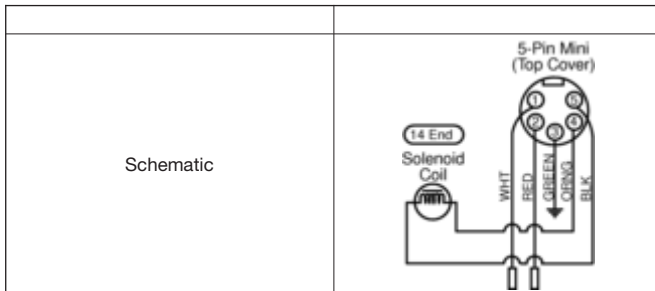
Single Solenoid GM Wiring 5-Pin Male Micro (M12)



§ Single Solenoid Wiring 3-Pin Male Mini

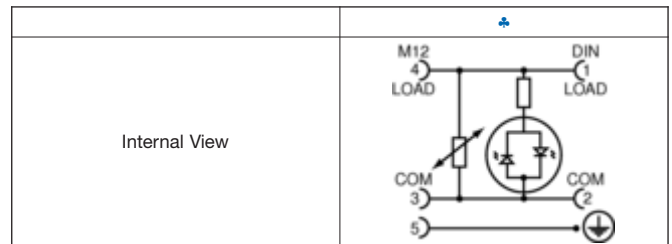


Single Solenoid Chrysler Wiring 5-Pin Male Micro (M12)

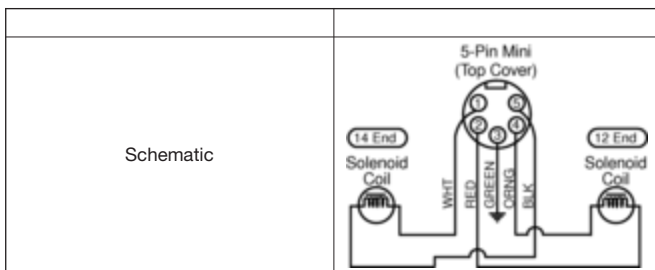


Typical Valve Individual DIN 43650 Connector with M12 Wiring Schematics

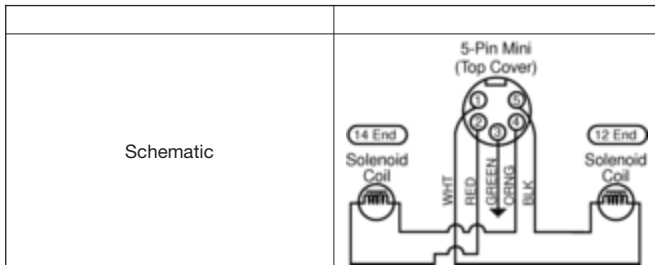
♣ Wiring Schematic (Internal)



Double Solenoid SAE / Ford Wiring 5-Pin Male Micro (M12)



Double Solenoid GM Wiring 5-Pin Male Micro (M12)



PanelConnect™ Systems
PanelConnect™ Pneumatic Valve Reference

Typical Valve Individual DIN 43650 Connector with M12 Wiring Schematics, Continued

♣ Wiring Schematics (External)

Face View	<p>3 = COM 4 = LOAD 5 = GND</p> <p>1 = LOAD 2 = COM ⊕ = GND</p>	<p>3 = COM 4 = LOAD 5 = GND</p> <p>1 = LOAD 2 = COM ⊕ = GND</p>	<p>3 = COM 4 = LOAD 5 = GND</p> <p>1 = LOAD 2 = COM ⊕ = GND</p>
Connector Style	DIN 43650 FORM A	DIN 43650 FORM B	Industry Standard FORM B

Face View	<p>3 = COM 4 = LOAD 5 = GND</p> <p>1 = LOAD 2 = COM ⊕ = GND</p>	<p>3 = COM 4 = LOAD 5 = GND</p> <p>1 = LOAD 2 = COM ⊕ = GND</p>
Connector Style	DIN 43650 FORM C	Industry Standard FORM C

Face View	<p>1 = LOAD 2 = COM ⊕ = GND</p> <p>3 = COM 4 = LOAD 5 = GND 1 = No Connect</p>	<p>1 = LOAD 2 = COM ⊕ = GND</p> <p>3 = COM 4 = LOAD 5 = GND 1 = No Connect</p>
Connector Style	Splitter with two FORM A DIN Plugs	Splitter with two FORM B DIN Plugs

Web Site Information

Visit the Industrial Control section of the <http://www.ab.com/catalogs/> web site for I/O wiring diagrams of the PanelConnect™ Modules and cables for:

- Bulletin 1746,
- Bulletin 1756,
- Bulletin 1771, and
- Bulletin 1769

Note: To locate the wiring diagram, navigate to one of the above platform sections on the web site and locate the desired product selection table. Select the desired I/O module, PanelConnect Module and pre-wired cable combination. A letter will appear in the box for all valid combinations. Wiring diagrams can be located by clicking on the underlined letter in the box.

Catalog Number Cross Reference

This chart cross references old 1492 PanelConnect products to the new 1667 PanelConnect products.

Old Catalog Number	New Catalog Number
1492-TPMA1008	1667-16IA1008
1492-TPMA1207	1667-16IA1207
1492-TPMA2209	1667-16IA2209
1492-TPMD1004	1667-16ID1004
1492-TPMD1201	1667-16ID1201
1492-TPMD1202	1667-16ID1202
1492-TPMD1203	1667-16ID1203
1492-TPMD2205	1667-16ID2205
1492-TPMD2206	1667-16ID2206
1492-TPMB	1667-ZB
1492-TPMC1	1667-ZC1
1492-TPMC2	1667-ZC2