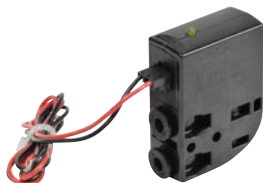




# Pneumatic Directional Control Solenoid Valves – BVS-3 Series



BVS Series Solenoid with Leads

BVS Series Solenoid with DIN  
43650 Form C

NITRA pneumatic BVS-3 series modular solenoid valves are body ported 3-port (3-way) poppet valves available in 2-position, normally open or normally closed configurations. Most models have removable flying leads that can be used with BVM series manifolds. Two models are available with an 8 mm Micro DIN connector. Units are only DIN rail mountable when used with BVM series manifolds.

## Features

- Body ported, 3-port (3-way) poppet valves
- 5/32" (4mm) push-to-connect ports
- Flow coefficients (Cv) from 0.02 to 0.05
- 2-position, single solenoid spring return
- Normally open or normally closed
- 12VDC, 24VDC or 120VAC solenoid coils with LED status indication & surge suppression diode
- Flying leads or 8mm DIN connection
- Pushbutton manual operator
- 2-year warranty

## Valve Symbols

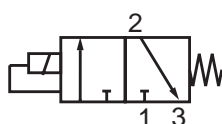


Diagram A 3/2 NC

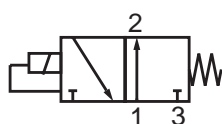


Diagram B 3/2 NO

## BVS (3-port, 2-position) Series Specifications

Models	<i>BVS-32C1-12D</i>	<i>BVS-32A1-24D</i>	<i>BVS-32C1-24D</i>	<i>BVS-32C1-120A</i>	<i>BVS-32C2-12D</i>	<i>BVS-32C2-24D</i>	<i>BVS-33C1-12D</i>	<i>BVS-33C1-24D</i>
Price	\$32.50	\$32.50	\$32.50	\$35.00	\$32.50	\$32.50	\$32.50	\$32.50
Weight (lbs)	0.1							
Valve Type	Normally Closed	Normally Open	Normally Closed	Normally Closed	Normally Closed	Normally Closed	Normally Closed	Normally Closed
Acting	Direct Solenoid Poppet							
Diagram	A	B	A	A	A	A	A	A
Port Size	5/32" (4mm) Push-to-Connect							
Orifice Size	0.9 mm (Cv=0.02)						1.4 mm (Cv=0.05)	
Fluid	Air or Inert Gas (to be filtered by 40µ filter element)							
Min. / Max. Pressure	0 - max 120psi (8.3 bar)	0 - max 90psi (6.2 bar)	0 - max 120psi (8.3 bar)				0 - max 30psi (2.1 bar)	
Vacuum	28 in. Hg							
Body	Glass Reinforced Thermoplastic							
Voltage	12VDC	24VDC	24VDC	120VAC	12VDC	24VDC	12VDC	24VDC
Inrush Power	1.6 W	1.4 W	1.4 W	1.7 W	1.6 W	1.4 W	1.6 W	1.4 W
Continuous ON Power	1.3 W	1.2 W	1.2 W	1.5 W	1.3 W	1.2 W	1.3 W	1.2 W
Expected Life	50,000,000 cycles at max 3 cycles/second	10,000,000 cycles at max 3 cycles/second	50,000,000 cycles at max 3 cycles/second					
Wiring	Removable 18" Flying Leads				DIN 43650 Form C		Removable 18" Flying Leads	
Response Time	0.01 sec							
Temperature - Operation and Storage	0~120°F (-18~49°C)							
Lubrication	Not Required							
Protection	n/a				IP 65		n/a	



# Pneumatic Directional Control Solenoid Valves – BVS-3 Series Low Current



BVS Series Solenoid with Leads

BVS Series Solenoid with DIN  
43650 Form C

NITRA pneumatic BVS-3 series modular solenoid valves are body ported 3-port (3-way) poppet valves available in 2-position, normally open or normally closed configurations. Most models have removable flying leads that can be used with BVM series manifolds. Four models are available with an 8 mm Micro DIN connector. Units are only DIN rail mountable when used with BVM series manifolds.

## Features

- Body ported, 3-port (3-way) poppet valves
- 5/32" (4mm) push-to-connect ports
- Flow coefficients (Cv) of 0.02
- 2-position, single solenoid spring return
- Normally open or normally closed
- 3VDC, 5VDC, 12VDC or 24VDC solenoid coils with LED status indication & surge suppression diode
- Flying leads or 8mm DIN connection
- Pushbutton manual operator
- 2-year warranty

## Valve Symbols

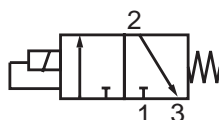


Diagram A 3/2 NC

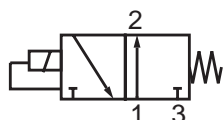


Diagram B 3/2 NO

## BVS (3-port, 2-position) Low Current Series Specifications

Models	<u>BVS-32A1-3DL</u>	<u>BVS-32A1-5DL</u>	<u>BVS-32A1-12DL</u>	<u>BVS-32A1-24DL</u>	<u>BVS-32C1-3DL</u>	<u>BVS-32C1-5DL</u>	<u>BVS-32C1-12DL</u>	<u>BVS-32C1-24DL</u>
Price	\$31.00	\$31.00	\$31.00	\$31.00	\$31.00	\$31.00	\$31.00	\$31.00
Weight (lbs)	0.1							
Valve Type	Normally Open				Normally Closed			
Acting	Direct Solenoid Poppet							
Diagram	B				A			
Port Size	5/32" (4mm) Push-to-Connect							
Orifice Size	0.9 mm (Cv=0.02)							
Fluid	Air or Inert Gas (to be filtered by 40µ filter element)							
Min. / Max. Pressure	0 - max 37psi (2.5 bar)				0 - max 45psi (3bar)			
Vacuum	28 in. Hg							
Body	Glass Reinforced Thermoplastic							
Voltage	3VDC	5VDC	12VDC	24VDC	3VDC	5VDC	12VDC	24VDC
Inrush Power	0.56 W	0.50 W	0.56 W	0.53 W	0.56 W	0.50 W	0.56 W	0.53 W
Continuous ON Power	0.51 W	0.47 W	0.51 W	0.49 W	0.51 W	0.47 W	0.51 W	0.49 W
Expected Life	50,000,000 cycles at max 3 cycles/second							
Wiring	Removable 18" Flying Leads							
Response Time	0.01 sec							
Temperature - Operation and Storage	0-120°F (-18-49°C)							
Lubrication	Not Required							
Protection	n/a							



# Pneumatic Directional Control Solenoid Valves – BVS-3 Series Low Current

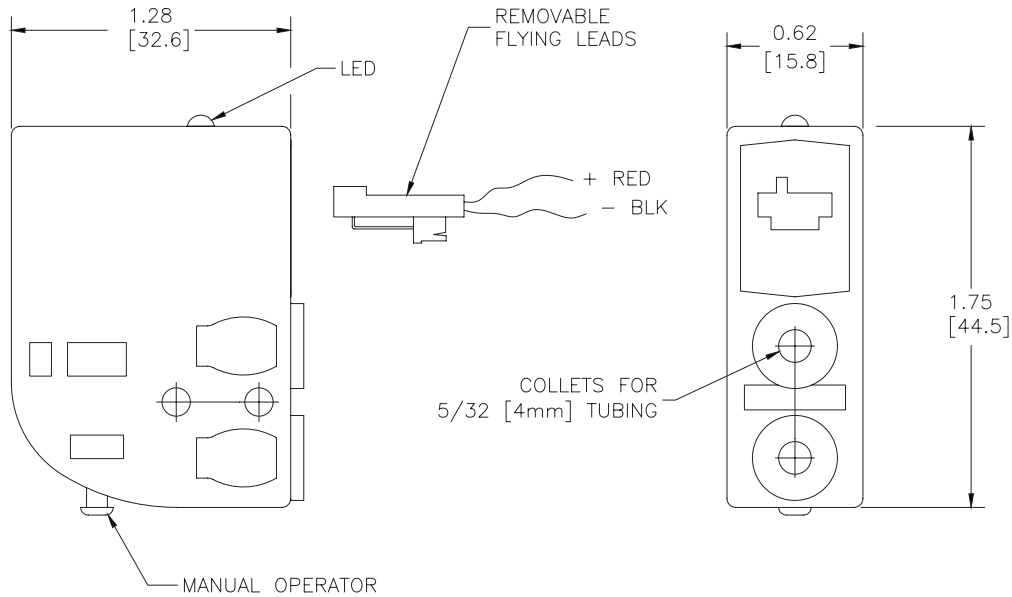
BVS (3-port, 2-position) Low Current Series Specifications								
Models	<u>BVS-32A2-3DL</u>	<u>BVS-32A2-5DL</u>	<u>BVS-32A2-12DL</u>	<u>BVS-32A2-24DL</u>	<u>BVS-32C2-3DL</u>	<u>BVS-32C2-5DL</u>	<u>BVS-32C2-12DL</u>	<u>BVS-32C2-24DL</u>
<b>Price</b>	\$31.00	\$31.00	\$31.00	\$31.00	\$31.00	\$31.00	\$31.00	\$31.00
<b>Weight (lbs)</b>	0.1							
<b>Valve Type</b>	Normally Open				Normally Closed			
<b>Acting</b>	Direct Solenoid Poppet							
<b>Diagram</b>	B				A			
<b>Port Size</b>	5/32" (4mm) Push-to-Connect							
<b>Orifice Size</b>	0.9 mm (Cv=0.02)							
<b>Fluid</b>	Air or Inert Gas (to be filtered by 40µ filter element)							
<b>Min. / Max. Pressure</b>	0 - max 37psi (2.5 bar)				0 - max 45psi (3bar)			
<b>Vacuum</b>	28 in. Hg							
<b>Body</b>	Glass Reinforced Thermoplastic							
<b>Voltage</b>	3VDC	5VDC	12VDC	24VDC	3VDC	5VDC	12VDC	24VDC
<b>Inrush Power</b>	0.56 W	0.50 W	0.56 W	0.53 W	0.56 W	0.50 W	0.56 W	0.53 W
<b>Continuous ON Power</b>	0.51 W	0.47 W	0.51 W	0.49 W	0.51 W	0.47 W	0.51 W	0.49 W
<b>Expected Life</b>	50,000,000 cycles at max 3 cycles/second							
<b>Wiring</b>	DIN 43650 Form C							
<b>Response Time</b>	0.01 sec							
<b>Temperature - Operation and Storage</b>	0-120°F (-18-49°C)							
<b>Lubrication</b>	Not Required							
<b>Protection</b>	IP 65							



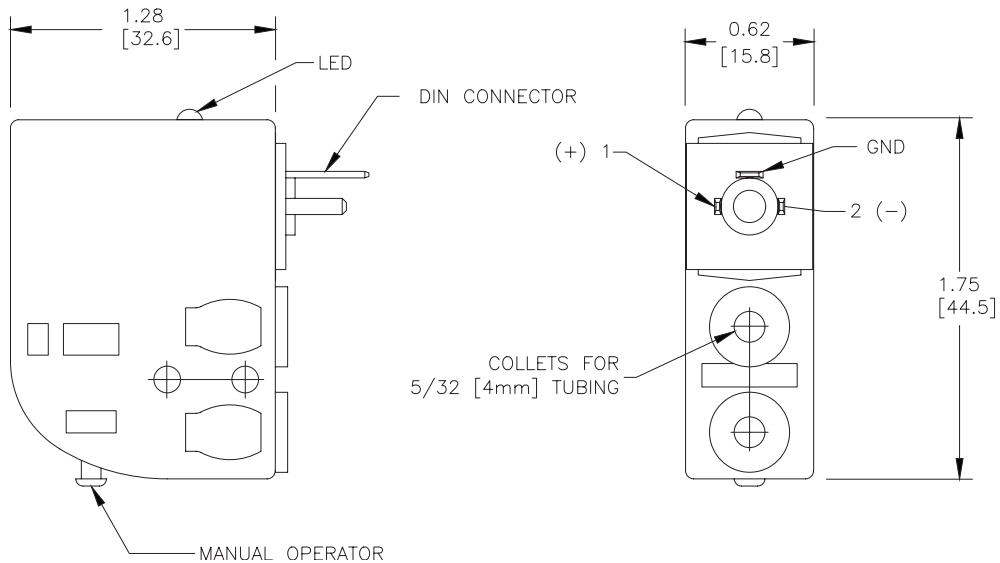
# Pneumatic Directional Control Solenoid Valves – BVS-3 Series Dimensions

## Dimensions

inches [mm]



**BVS w/Removable Leads**



**BVS w/DIN 43650 Form C**

See our website [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete Engineering drawings.



# Manifolds for Modular Solenoid Valves – BVM-3 Series



**BVM - 4-Station**



**BVM - 8-Station**

NITRA pneumatic BVM-3 series modular manifolds simplify the mounting and wiring of BVS-3 series solenoid valves\*. Made of sturdy glass reinforced thermoplastic with DIN rail mounting clips included, they are available in 4 and 8-station models. Push-to-connect inlet and out connections and a 9-pin D-sub connector allow quick and easy tubing and wiring.

## Features

- No tools required to install/remove valves
- 2, 3, 4 or 8-station manifolds available
- 6mm or 1/4" tube inlets
- 35mm DIN rail mounting clips included
- 9-pin D-sub connector for easy wiring
- 2-year warranty

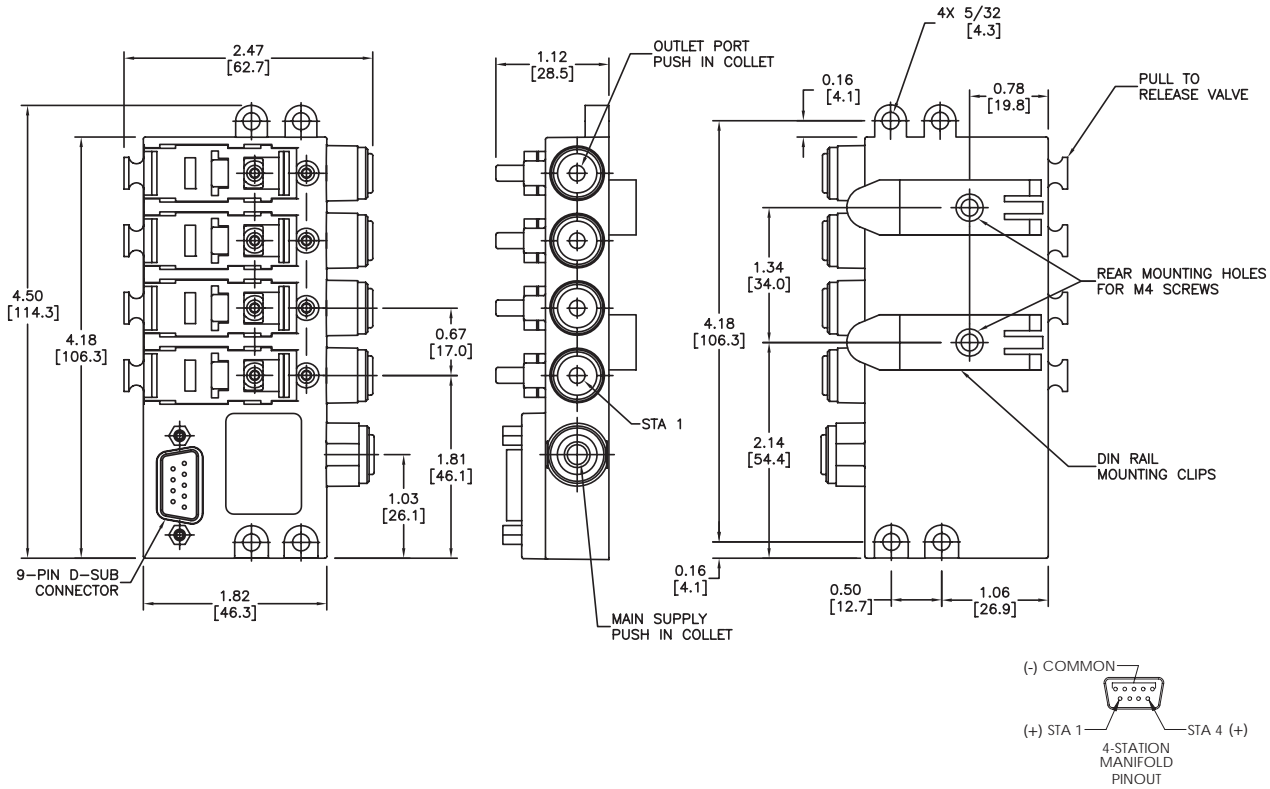
BVM Series Manifolds						
Part No.	Stations	Inlet	Outlet	Connection	Price	Weight (lbs)
<b>BVM-3425</b>	4	1/4"	5/32" (4mm)	9-pin D-sub	\$62.00	0.3
<b>BVM-346M</b>	4	6mm			\$60.00	0.3
<b>BVM-3825</b>	8	1/4"			\$97.00	0.5
<b>BVM-386M</b>	8	6mm			\$97.00	0.5

\* Works with BVS series valves with flying leads ONLY. Does not accept DIN connector valves

## Dimensions

inches [mm]

### 4-Station Manifold



See our website [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete Engineering drawings.



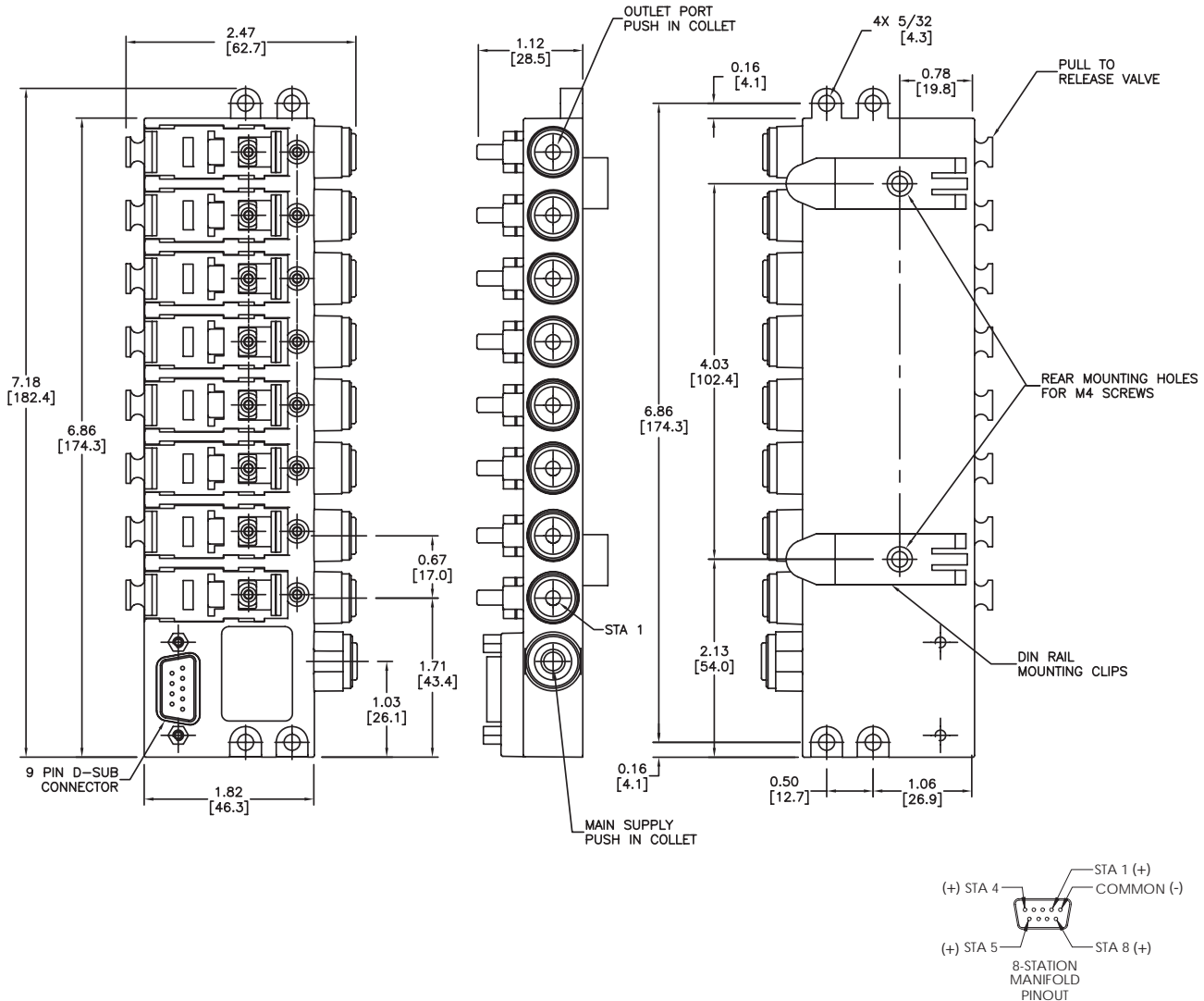
# Manifolds for Modular Solenoid Valves

## - BVM-3 Series

### Dimensions

inches [mm]

#### 8-Station Manifold



See our website [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete Engineering drawings.



# Pneumatic Directional Control Solenoid Valves – BVS Series - Accessories

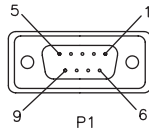
## Accessories

BVM Series Manifold Accessories			
Part No.	Description	Price	Weight (lbs)
<b>BVM-3BP</b>	Blanking plug, fiberglass reinforced plastic. For use with BVM-3x manifolds.	\$8.50	0.1
<b>ZL-DB9F-CBL-2P</b>	ZIPLink pigtail cable with 9-pin D-sub female connector, 28AWG, 2.0 meter (6.6 ft) length	\$8.75	0.3
<b>ZL-DB9F-CBL-5P</b>	ZIPLink pigtail cable with 9-pin D-sub female connector, 28AWG, 5.0 meter (16.4 ft) length	\$16.50	0.5



**BVM-3BP**

### ZL-DB9F-CBL-xP Pinout



pin out

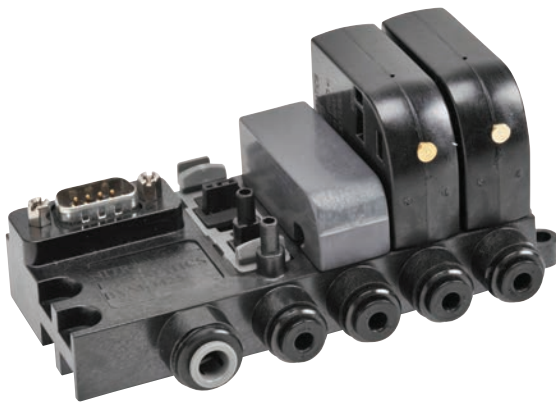
P1	P2	for BVM Series 4-station man	for BVM Series 8-station man
1	black	N/A	station 4
2	brown	N/A	station 3
3	red	N/A	station 2
4	orange	N/A	station 1
5	yellow	common	common
6	green	station 1	station 5
7	blue	station 2	station 6
8	violet	station 3	station 7
9	grey	station 4	station 8



**ZL-DB9F-CBL-xP**



See solenoid valve cables and connectors section



Above photo shows an assembled BVM Series manifold with BVS Series Solenoids and BVM blanking plug

Note: Manifold must have a BVS valve (flying leads ONLY) or BVM-3BP blanking plug installed in each station for proper operation.