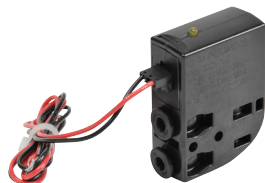




# Pneumatic Directional Control Solenoid Valves – BVS-3 Series



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

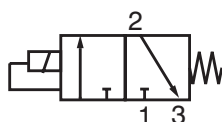


Diagram A 3/2 NC

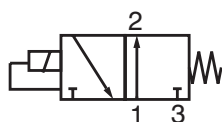


Diagram B 3/2 NO

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

Models	<u>BVS-32C1-12D</u>	<u>BVS-32A1-24D</u>	<u>BVS-32C1-24D</u>	<u>BVS-32C1-120A</u>	<u>BVS-32C2-12D</u>	<u>BVS-33C1-12D</u>	<u>BVS-33C1-24D</u>
Price							
Weight (lbs)	0.1						
Valve Type	Normally Closed	Normally Open	Normally Closed	Normally Closed	Normally Closed	Normally Closed	Normally Closed
Acting	Direct Solenoid Poppet						
Diagram	A	B	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	12VDC	24VDC
Inrush Power	1.6 W	1.4 W	1.4 W	1.7 W	1.6 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	1.3 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

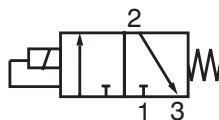


Diagram A 3/2 NC

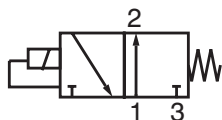


Diagram B 3/2 NO

## 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>
Price							
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
Inrush Power	0.56 W	0.50 W	0.56 W	0.53 W	0.56 W	0.50 W	0.56 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
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

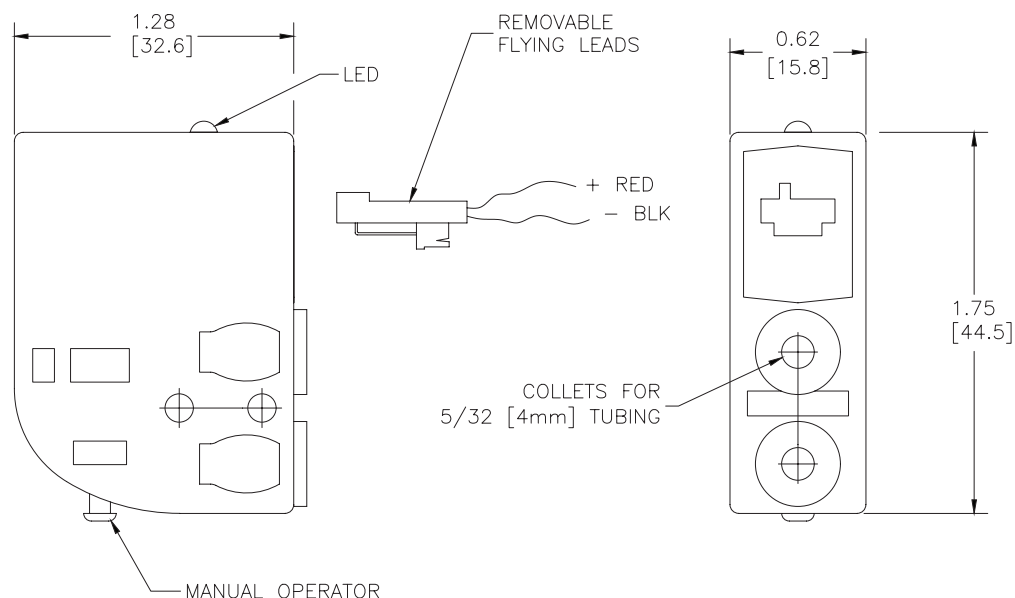
BVS (3-port, 2-position) Low Current Series Specifications								
Models	<a href="#"><u>BVS-32A2-3DL</u></a>	<a href="#"><u>BVS-32A2-5DL</u></a>	<a href="#"><u>BVS-32A2-12DL</u></a>	<a href="#"><u>BVS-32A2-24DL</u></a>	<a href="#"><u>BVS-32C2-3DL</u></a>	<a href="#"><u>BVS-32C2-5DL</u></a>	<a href="#"><u>BVS-32C2-12DL</u></a>	<a href="#"><u>BVS-32C2-24DL</u></a>
Price								
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	DIN 43650 Form C							
Response Time	0.01 sec							
Temperature - Operation and Storage	0~120°F (-18~49°C)							
Lubrication	Not Required							
Protection	IP 65							



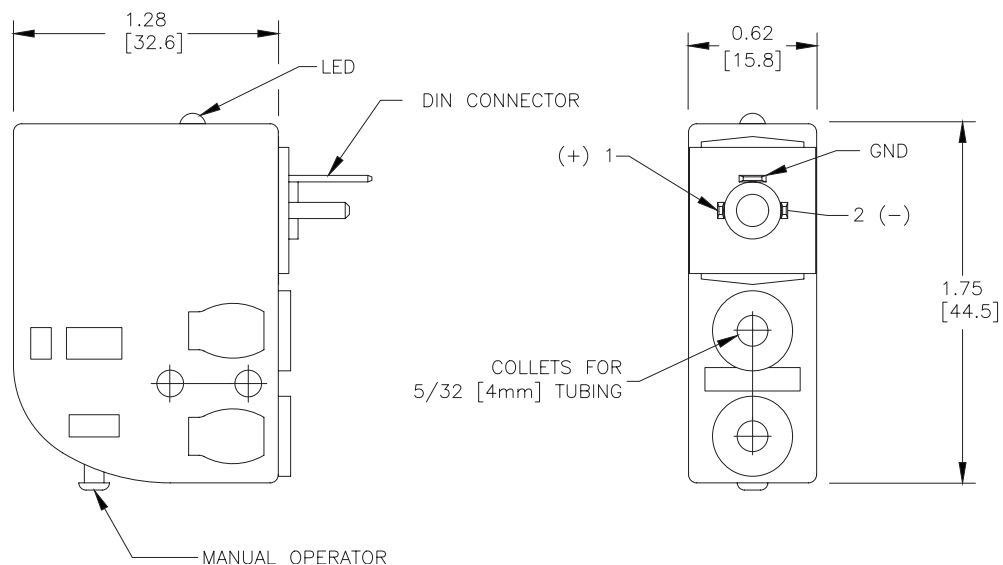
# Pneumatic Directional Control Solenoid Valves – BVS-3 Series Dimensions

## Dimensions

inches [mm]



**BVS w/Removable Leads**



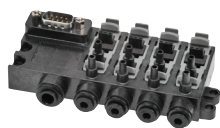
**BVS w/DIN 43650 Form C**

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

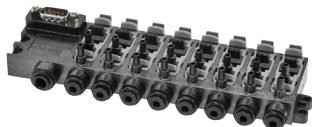


# Manifolds for Modular Solenoid Valves

## – 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

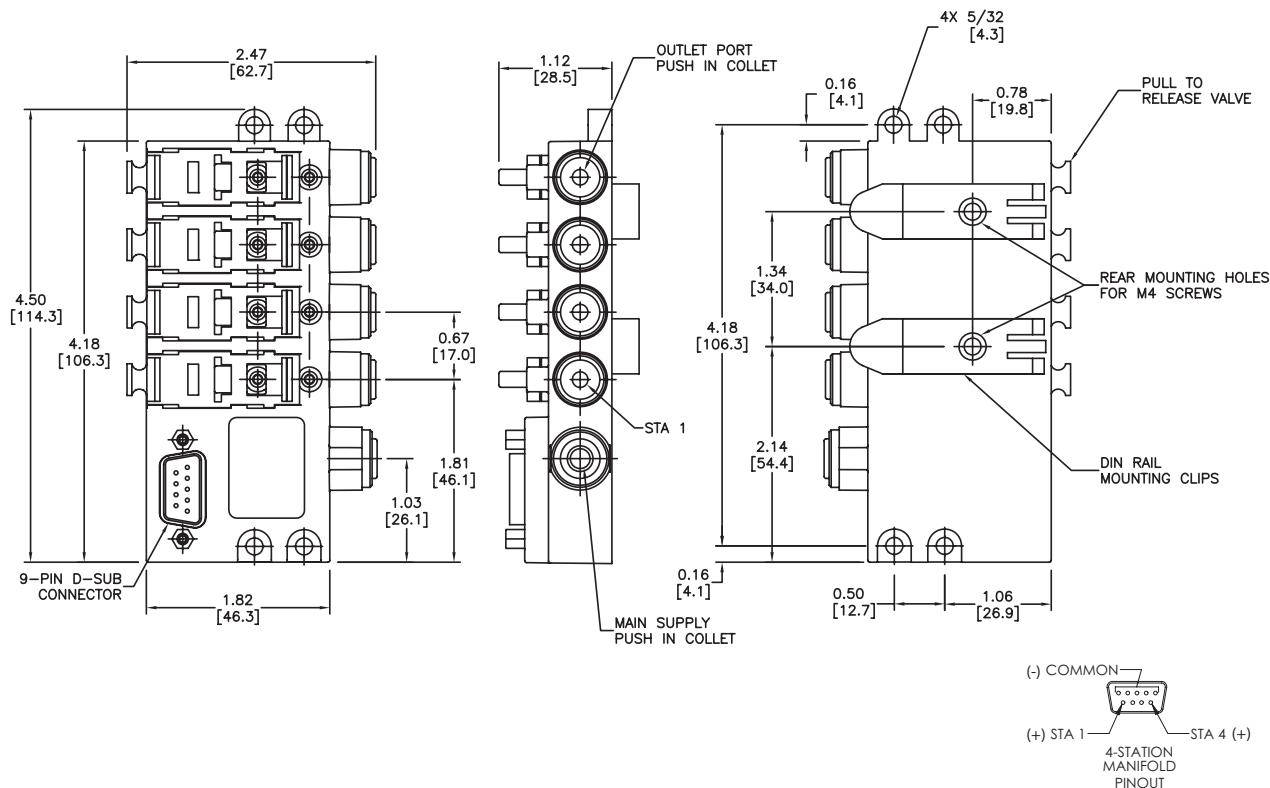
BVM Series Manifolds						
Part No.	Stations	Inlet	Outlet	Connection	Price	Weight (lbs)
<b>BVM-3425</b>	4	1/4"	5/32" (4mm)	9-pin D-sub		0.3
<b>BVM-346M</b>	4	6mm				0.3
<b>BVM-3825</b>	8	1/4"				0.5
<b>BVM-386M</b>	8	6mm				0.5

\* 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.



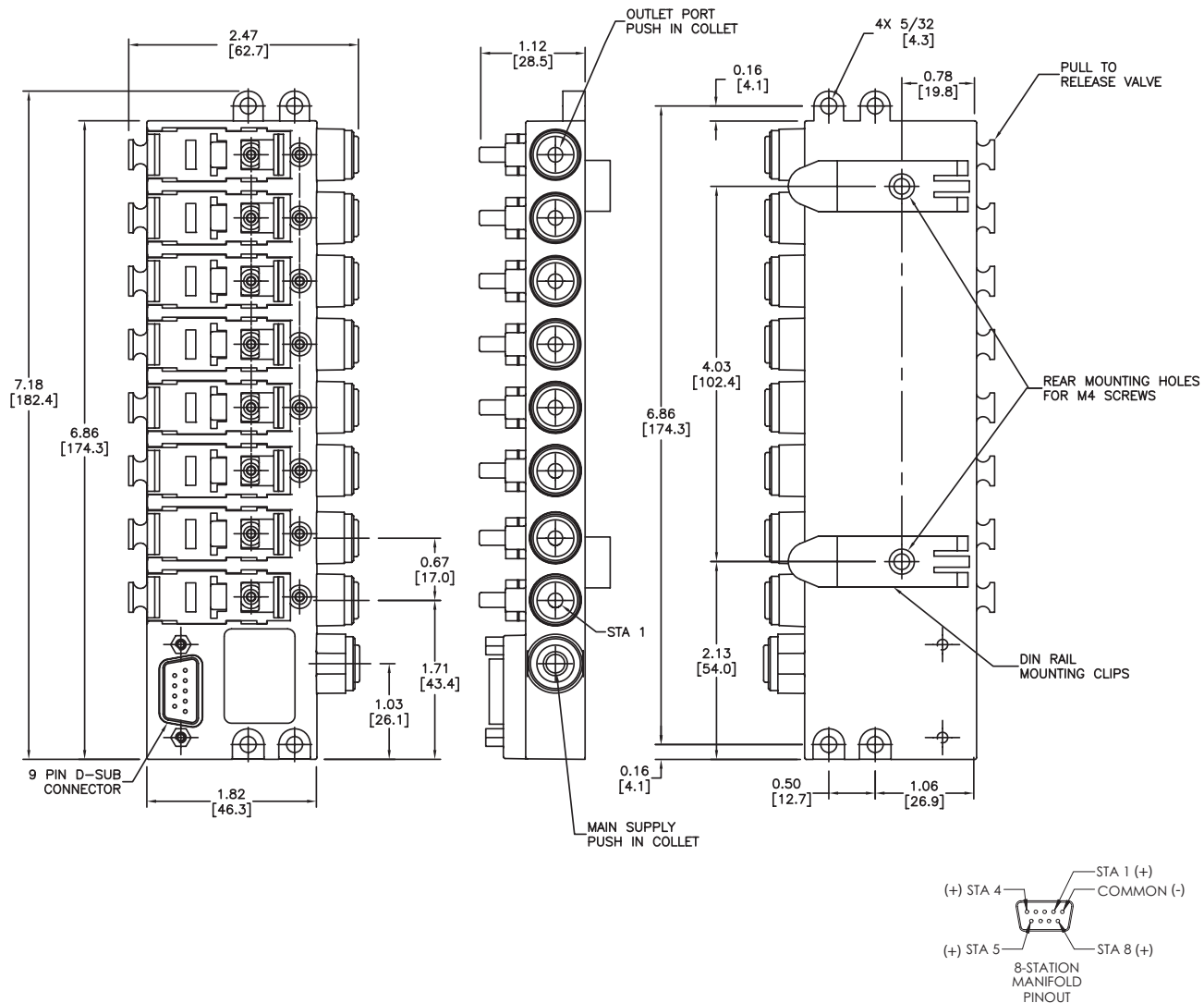
# Manifolds for Modular Solenoid Valves

## – 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

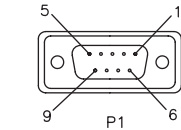
## Accessories

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