



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

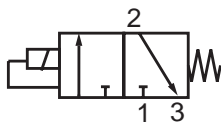


Diagram A 3/2 NC

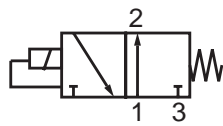


Diagram B 3/2 NO

BVS (3-port, 2-position) Series Specifications								
Models	BVS-32C1-12D	BVS-32A1-24D	BVS-32C1-24D	BVS-32C1-120A	BVS-32C2-12D	BVS-32C2-24D	BVS-33C1-12D	BVS-33C1-24D
Price								
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



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.

BVS Series Solenoid with Leads **BVS Series Solenoid with DIN 43650 Form C**

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

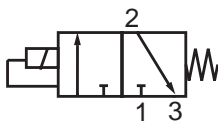


Diagram A 3/2 NC

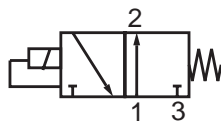


Diagram B 3/2 NO

BVS (3-port, 2-position) Low Current Series Specifications								
Models	BVS-32A1-3DL	BVS-32A1-5DL	BVS-32A1-12DL	BVS-32A1-24DL	BVS-32C1-3DL	BVS-32C1-5DL	BVS-32C1-12DL	BVS-32C1-24DL
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	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

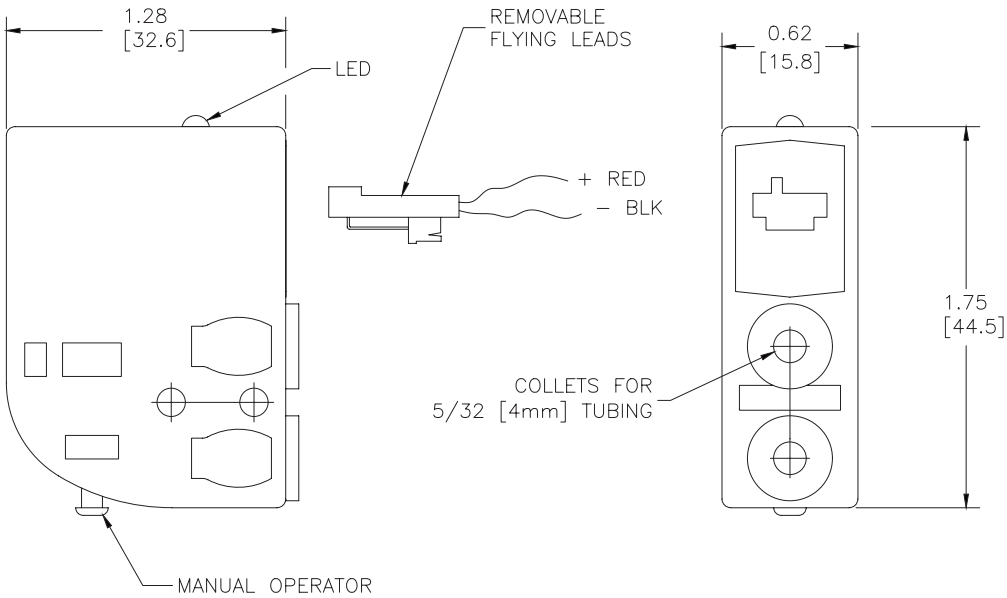
BVS (3-port, 2-position) Low Current Series Specifications								
Models	BVS-32A2-3DL	BVS-32A2-5DL	BVS-32A2-12DL	BVS-32A2-24DL	BVS-32C2-3DL	BVS-32C2-5DL	BVS-32C2-12DL	BVS-32C2-24DL
Price								
Weight (lbs)	0.1							
Valve Type	Normally Open				Normally Closed			
Acting	Direct Solenoid Poppet							
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							



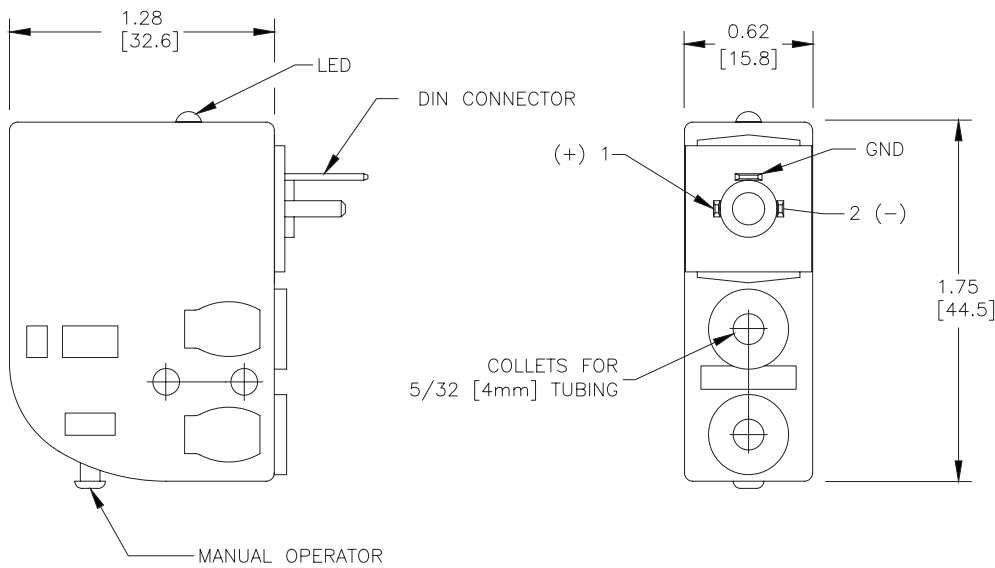
Pneumatic Directional Control Solenoid Valves – BVS-3 Series Dimensions

Dimensions

inches [mm]



BVS w/Removable Leads

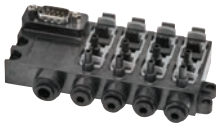


BVS w/DIN 43650 Form C

See our website
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

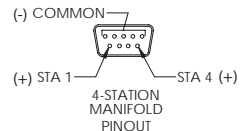
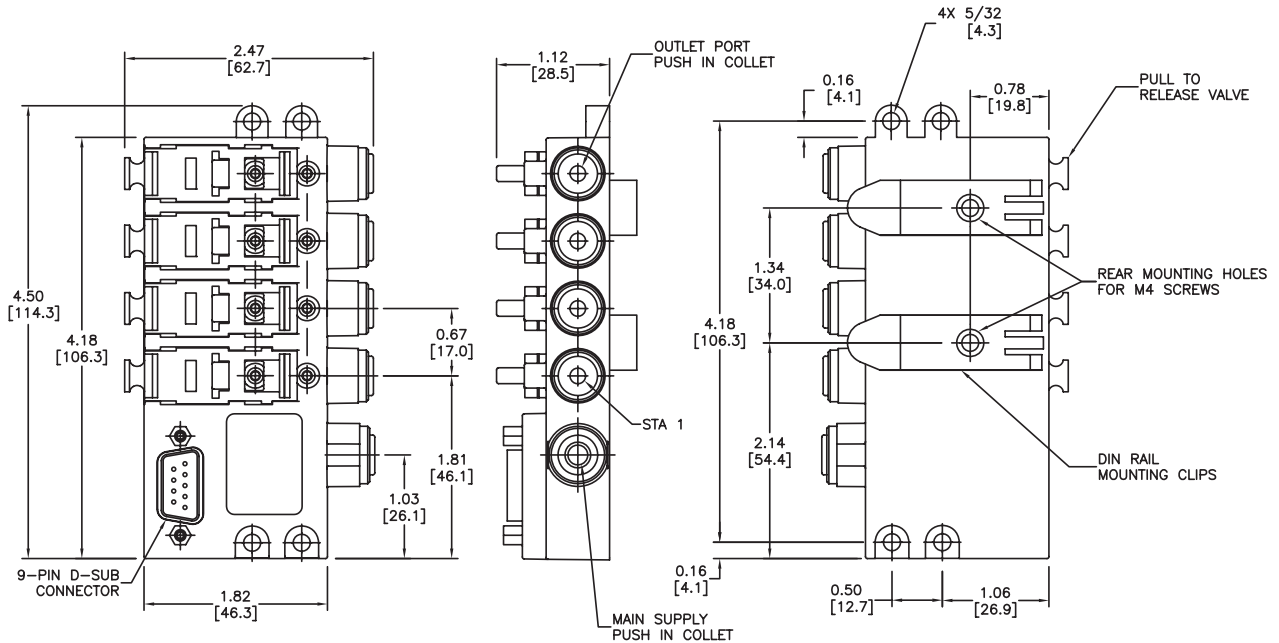
- No tools required to install/remove valves
- 2, 3, 4 or 8-station manifolds available
- 6mm or 1/4" tube inlets
- 35mm DIN rail mounting clips included
- 9-pin D-sub connector for easy wiring
- 2-year warranty

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

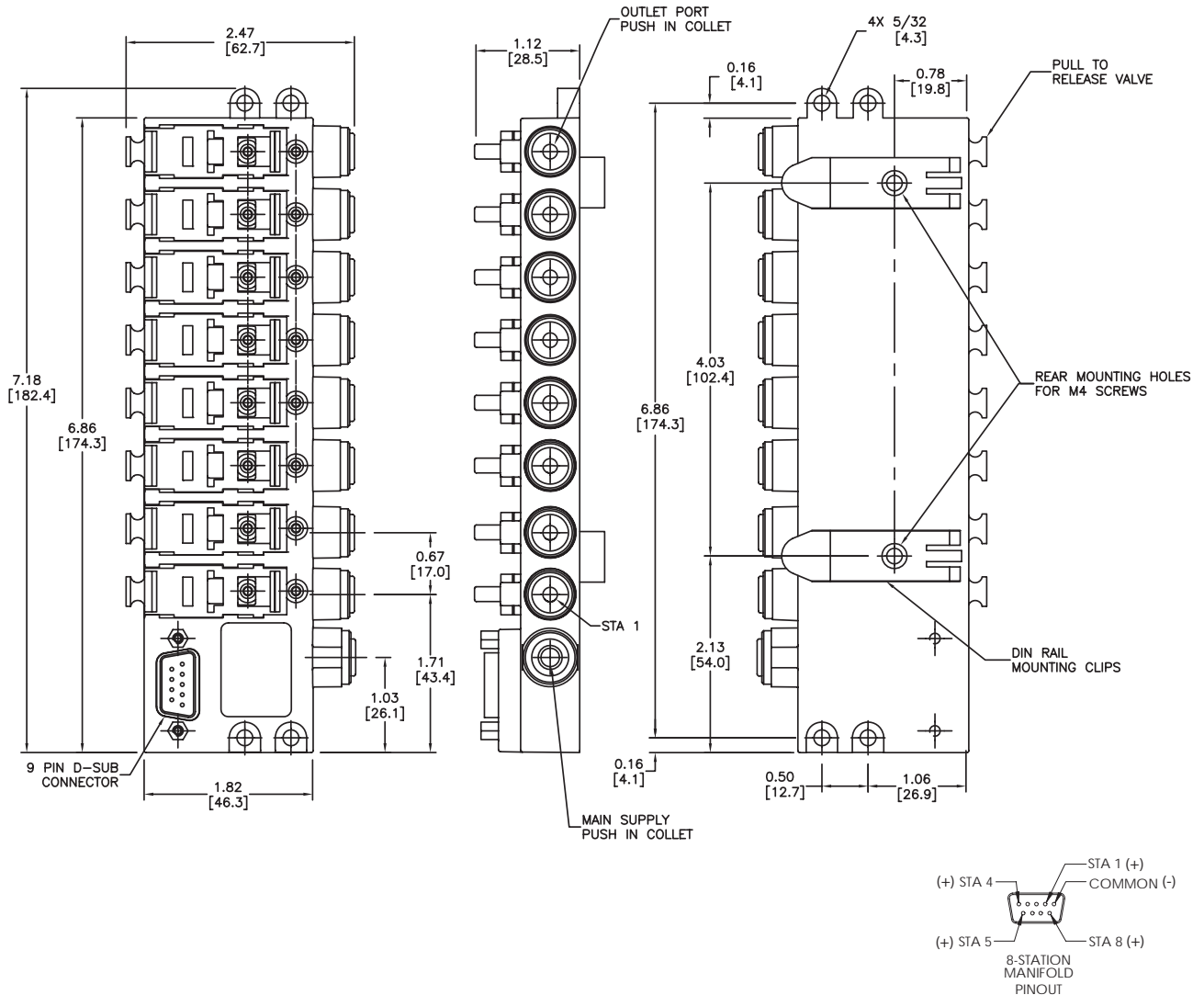


See our website
for complete Engineering drawings.

Dimensions

inches [mm]

8-Station Manifold



See our website
for complete Engineering drawings.



Pneumatic Directional Control Solenoid Valves – BVS Series - Accessories

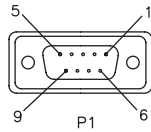
Accessories

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

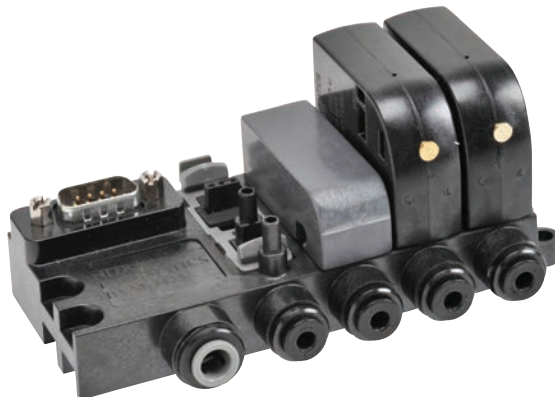
P1	P2	for BVM Series 4-station man	for BVM Series 8-station man
1	black	N/A	station 4
2	brown	N/A	station 3
3	red	N/A	station 2
4	orange	N/A	station 1
5	yellow	common	common
6	green	station 1	station 5
7	blue	station 2	station 6
8	violet	station 3	station 7
9	grey	station 4	station 8



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.