



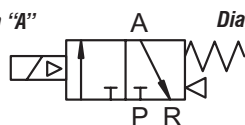
# Pneumatic Directional Control Solenoid Valves – AVS-3 Series



AVS-3221

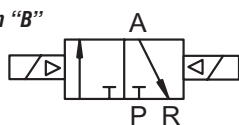
AVS-3211

Diagram "A"



2-Pos, Spring Return

Diagram "B"



2-Pos, Double Solenoid

NITRA™ pneumatic AVS-3 series directional control solenoid valves are body ported 3-port (3-way) spool valves. Available port sizes are 1/8", 1/4" or 3/8" NPT with flow coefficients (Cv) from 0.67 to 1.67. The single solenoid models provide 2-position, normally closed, spring return operation and the double solenoid models provide 2-position, energize open/energize closed operation. Solenoid coils are available in either 24VDC or 120VAC control voltages. The DIN style wiring connector includes LED indication of the solenoid coil status.

## Features

- Body ported, 3-port (3-way) spool valves
- 1/8", 1/4" or 3/8" NPT ports
- 2-position, single solenoid normally closed spring return; 2-position, double solenoid energize open/energize closed
- 24VDC or 120VAC solenoid coils
- DIN style wiring connector with LED indication
- Locking manual operator
- 2 year warranty



See [www.AutomationDirect.com](http://www.AutomationDirect.com)  
for a wide variety of fitting options

## AVS-3 Series Specifications

AVS-3 Series Specifications									
Model	AVS-3111-24D	AVS-3111-120A	AVS-3211-24D	AVS-3211-120A	AVS-3221-24D	AVS-3212-24D	AVS-3212-120A	AVS-3222-24D	AVS-3222-120A
Price	\$04zn:	\$-04zl:	\$04zp:	\$04zo:	\$04zu:	\$04zs:	\$04zq:	\$04zx:	\$04zv:
Weight (lb)	0.3	0.3	0.5	0.5	0.8	0.5	0.5	0.7	0.7
Valve Type	3 port 2 position								
Acting	Internally Piloted								
Diagram	A		A		B	A		B	
Port Size	In/Out=1/8"		In/Out=1/8"			In/Out=1/4"			
Orifice Size	12mm² (Cv=0.67)		14mm² (Cv=0.78)			16mm² (Cv=0.89)			
Fluid	Air (to be filtered by 40μ filter element)								
Pressure	Working: 20~115 psi, (0.15~0.8 MPa), (1.5~8.0 bar); Proof: 215 psi, (1.48 MPa), (14.8 bar)								
Voltage	24VDC single solenoid	120VAC single solenoid	24VDC single solenoid	120VAC single solenoid	24VDC double solenoid	24VDC single solenoid	120VAC single solenoid	24VDC double solenoid	120VAC double solenoid
Power Consumption	DC: 2.5W   AC: 3.5 VA; continuous duty (100% ED)		DC: 3.0W   AC: 4.5 VA; continuous duty (100% ED)						
Max Frequency	5 cycles/sec								
Operating Life	50,000,000 cycles								
Insulation	B class								
Min Response	0.05 sec								
Temperature	-5~60°C (23~140°F)								
Lubrication	Not Required								
Protection	IP65 (DIN40050)								
Connection	9.4 mm DIN Terminal		11mm DIN Terminal						
Body	Aluminum Alloy								
Agency Approvals	Solenoid CE marked; RoHS								



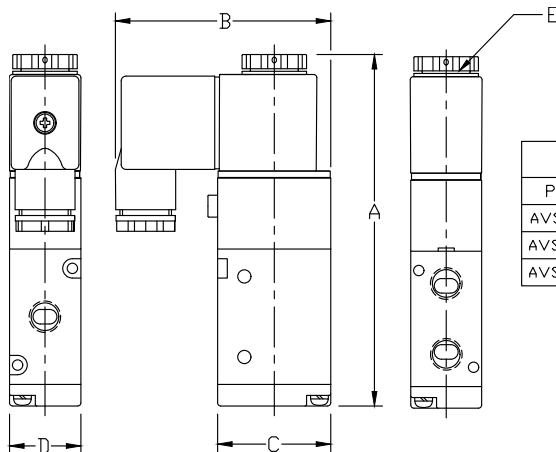
# Pneumatic Directional Control Solenoid Valves – AVS-3 Series

AVS-3 Series Specifications							
Model	AVS-3312-24D	AVS-3312-120A	AVS-3322-24D	AVS-3313-24D	AVS-3313-120A	AVS-3323-24D	AVS-3323-120A
Price	\$04zz:	\$04zy:	\$04#8:	\$04#6:	\$.04zj:	\$04#a:	Retired
Weight (lb)	0.7	0.7	0.9	0.7	0.7	0.9	0.9
Valve Type	3 port 2 position						
Acting	Internally Piloted						
Diagram	A		B	A		B	
Port Size	In/Out=1/4"			In/Out=3/8"			
Orifice Size	16mm² (Cv=1.39)			25mm² (Cv=1.67)			
Fluid	Air (to be filtered by 40µ filter element)						
Pressure	Working: 20~115 psi, (0.15~0.8 MPa), (1.5~8.0 bar); Proof: 215 psi, (1.48 MPa), (14.8 bar)						
Voltage	24VDC single solenoid	120VAC single solenoid	24VDC double solenoid	24VDC single solenoid	120VAC single solenoid	24VDC double solenoid	120VAC double solenoid
Power Consumption	DC: 3.0W   AC: 4.5 VA; continuous duty (100% ED)						
Max Freq	5 cycles/sec						
Insulation	B class						
Min Response	0.05 sec						
Temperature	-5~60°C (23~140°F)						
Lubrication	Not Required						
Protection	IP65 (DIN40050)						
Connection	11mm DIN Terminal						
Body	Aluminum Alloy						
Agency Approvals	Solenoid CE marked; RoHS						

## Dimensions

mm [inches]

AVS-311x,  
AVS-321x,  
AVS-331x



DIMENSION TABLE						
PART NO.	A	B	C	D	E	
AVS-311X-XXX	88.4 [3.48]	54.6 [2.15]	27.0 [1.06]	18.0 [0.71]	M7 - 0.5	
AVS-321X-XXX	109.0 [4.29]	66.7 [2.63]	35.0 [1.38]	22.0 [0.87]	M8 - 0.75	
AVS-331X-XXX	119.8 [4.72]	69.1 [2.72]	40.0 [1.57]	27.0 [1.06]	M8 - 0.75	

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

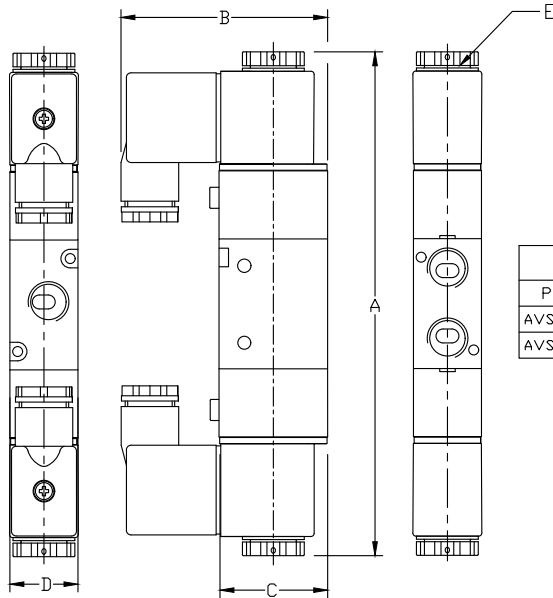


# Pneumatic Directional Control Solenoid Valves – AVS-3 Series

## Dimensions

**mm [inches]**

**AVS-322x,  
AVS-332x**



DIMENSION TABLE					
PART NO.	A	B	C	D	E
AVS-322X-XXX	162.8 [6.41]	66.8 [2.63]	34.8 [1.37]	22.0 [0.87]	M8 - 0.75
AVS-332X-XXX	174.8 [6.88]	69.2 [2.72]	40.0 [1.57]	27.0 [1.06]	M8 - 0.75

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



# Exhaust Silencers

NITRA™ exhaust silencers are available in three styles and nine popular NPT and BSPT sizes. Add these to the exhaust ports of NITRA directional control solenoid valves to reduce noise.

## Features

- Inch and metric sizes available
- Bronze cone and flat styles
- Plastic cylindrical
- Maximum pressure = 150 psi (10 bar)



SBC Series

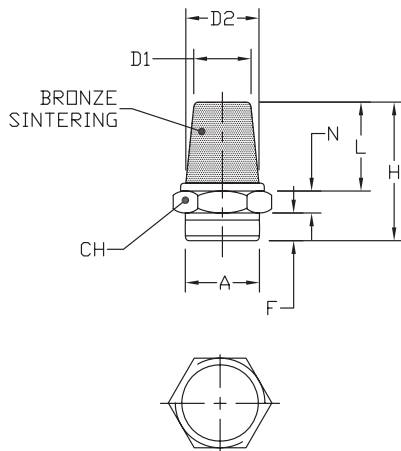


SBF Series



SPL Series

## SBC Silencers

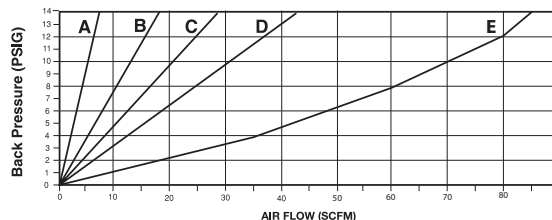


NITRA™ Bronze Cone Silencers											
Inch Sizes - dimensions in inches [mm]											
Part No.	Price	A	CH	D1	D2	F	H	L	N	Package Weight (lb)	Qty. per pack
<b><u>SBC-18N</u></b>	\$4q8:	MNPT 1/8	0.47 [12.0]	0.32 [8.0]	0.28 [7.0]	0.24 [6.0]	0.94 [24.0]	0.55 [14.0]	0.16 [4.0]	0.01	2
<b><u>SBC-14N</u></b>	\$4q6:	MNPT 1/4	0.63 [16.0]	0.47 [12.0]	0.40 [10.0]	0.32 [8.0]	1.18 [30.0]	0.71 [18.0]	0.16 [4.0]	0.01	
<b><u>SBC-38N</u></b>	\$4qa:	MNPT 3/8	0.71 [18.0]	0.55 [14.0]	0.39 [11.0]	0.35 [9.0]	1.38 [35.0]	0.83 [21.0]	0.197 [5.0]	0.05	
<b><u>SBC-12N</u></b>	\$04q4:	MNPT 1/2	0.94 [24.0]	0.75 [19.0]	0.59 [15.0]	0.40 [10.0]	1.73 [44.0]	1.10 [28.0]	0.24 [6.0]	0.15	
Metric Sizes - dimensions in inches [mm]											
<b><u>SBC-M5</u></b>	\$4qc:	M5	0.31 [8.0]	0.20 [5.0]	0.16 [4.0]	0.20 [5.0]	0.79 [20.0]	0.47 [12.0]	0.12 [3.0]	0.01	2
<b><u>SBC-18R</u></b>	\$4q9:	R 1/8	0.47 [12.0]	0.32 [8.0]	0.28 [7.0]	0.24 [6.0]	0.94 [24.0]	0.55 [14.0]	0.16 [4.0]	0.01	
<b><u>SBC-14R</u></b>	\$4q7:	R 1/4	0.63 [16.0]	0.47 [12.0]	0.40 [10.0]	0.32 [8.0]	1.18 [30.0]	0.71 [18.0]	0.16 [4.0]	0.01	
<b><u>SBC-38R</u></b>	\$4qb:	R 3/8	0.71 [18.0]	0.55 [14.0]	0.39 [11.0]	0.35 [9.0]	1.38 [35.0]	0.83 [21.0]	0.197 [5.0]	0.05	
<b><u>SBC-12R</u></b>	\$04q5:	R 1/2	0.94 [24.0]	0.75 [19.0]	0.59 [15.0]	0.40 [10.0]	1.73 [44.0]	1.10 [28.0]	0.24 [6.0]	0.15	

## Flow Characteristics

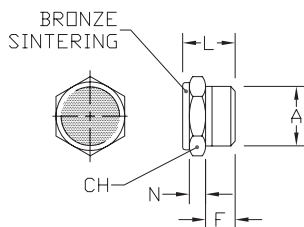
### Bronze Cone Silencers

- A: SBC-M5  
 B: SBC-18N; SBC-18R  
 C: SBC-14N; SBC-14R  
 D: SBC-38N; SBC-38R  
 E: SBC-12N; SBC-12R



Noise Elimination = > 20db  
 Filtered Element = 40 micron

## SBF Silencers



NITRA™ Bronze Flat Silencers								
Inch Sizes - dimensions in inches [mm]								
Part No.	Price	A	CH	F	L	N	Package Weight (lb)	Qty. per pack
<a href="#"><b>SBF-18N</b></a>	\$4qh:	MNPT 1/8	0.47 [12.0]	0.24 [6.0]	0.47 [12.0]	0.16 [4.0]	0.01	2
<a href="#"><b>SBF-14N</b></a>	\$4qf:	MNPT 1/4	0.67 [17.0]	0.32 [8.0]	0.59 [15.0]	0.16 [4.0]	0.01	
<a href="#"><b>SBF-38N</b></a>	\$4qj:	MNPT 3/8	0.75 [19.0]	0.35 [9.0]	0.67 [17.0]	0.20 [5.0]	0.05	
<a href="#"><b>SBF-12N</b></a>	\$04qd:	MNPT 1/2	0.94 [24.0]	0.40 [10.0]	0.71 [18.0]	0.24 [6.0]	0.15	
Metric Sizes - dimensions in inches [mm]								
<a href="#"><b>SBF-M5</b></a>	\$4qi:	M5	0.31 [8.0]	0.20 [5.0]	0.35 [9.0]	0.12 [3.0]	0.01	2
<a href="#"><b>SBF-18R</b></a>	\$4qi:	R 1/8	0.47 [12.0]	0.24 [6.0]	0.47 [12.0]	0.16 [4.0]	0.01	
<a href="#"><b>SBF-14R</b></a>	\$4qg:	R 1/4	0.67 [17.0]	0.32 [8.0]	0.59 [15.0]	0.16 [4.0]	0.01	
<a href="#"><b>SBF-38R</b></a>	\$4qk:	R 3/8	0.75 [19.0]	0.35 [9.0]	0.67 [17.0]	0.20 [5.0]	0.05	
<a href="#"><b>SBF-12R</b></a>	\$04qe:	R 1/2	0.94 [24.0]	0.40 [10.0]	0.71 [18.0]	0.24 [6.0]	0.15	

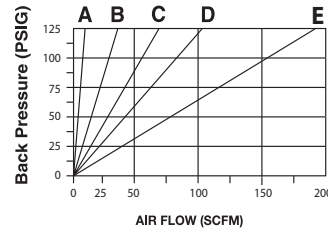


# Exhaust Silencers

## Flow Characteristics

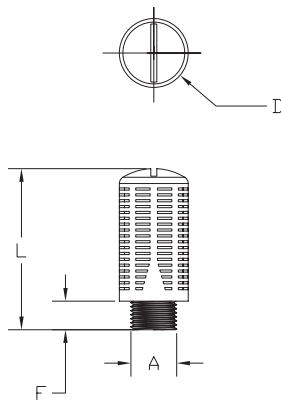
### Bronze Flat Silencers

- A: SBF-M5  
 B: SBF-18N; SBF-18R  
 C: SBF-14N; SBF-14R  
 D: SBF-28N; SBF-38R  
 E: SBF-12N; SBF-12R



Noise Elimination = > 30db  
 Filtered Element = 40 micron

### SPL Silencers



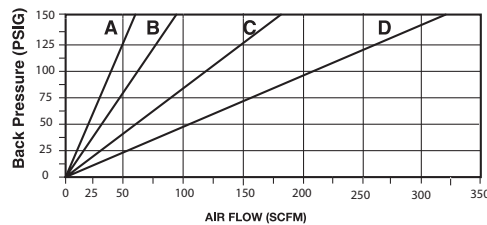
Note: SPL series plastic exhaust silencers have a maximum pressure of 80 PSI (5.5 bar).

NITRA™ Plastic Exhaust Silencers							
Inch Sizes - dimensions in inches [mm]							
Part No.	Price	A	D	L	F	Package Weight (lbs)	Qty. per pack
<a href="#"><u>SPL-18N</u></a>	\$4y_:	MNPT 1/8	0.55 [13.8]	1.28 [32.4]	0.33 [8.3]	0.02	2
<a href="#"><u>SPL-14N</u></a>	\$;4y[	MNPT 1/4	0.68 [17.3]	1.68 [42.5]	0.39 [9.9]	0.03	
<a href="#"><u>SPL-38N</u></a>	\$;4y[	MNPT 3/8	0.87 [22.0]	2.10 [53.4]	0.40 [10.0]	0.06	
<a href="#"><u>SPL-12N</u></a>	\$4yy:	MNPT 1/2	1.00 [25.4]	2.66 [67.6]	0.44 [11.1]	0.08	
Metric Sizes - dimensions in inches [mm]							
<a href="#"><u>SPL-18R</u></a>	\$4y#:	R 1/8	0.60 [15.2]	1.33 [33.7]	0.24 [6.1]	0.02	2
<a href="#"><u>SPL-14R</u></a>	\$;4y[	R 1/4	0.60 [18.8]	1.60 [40.6]	0.31 [7.7]	0.03	
<a href="#"><u>SPL-38R</u></a>	\$4y?:	R 3/8	0.94 [24.0]	2.20 [55.9]	0.39 [9.9]	0.06	
<a href="#"><u>SPL-12R</u></a>	\$4yz:	R 1/2	0.94 [24.0]	2.20 [55.9]	0.39 [9.9]	0.08	

## Flow Characteristics

### Plastic Silencers

- A: SPL-18N; SPL-18R  
 B: SPL-14N; SPL-14R  
 C: SPL-38N; SPL-38R  
 D: SPL-12N; SPL-12R



Noise Elimination = > 30db  
 Filtered Element = 40 micron



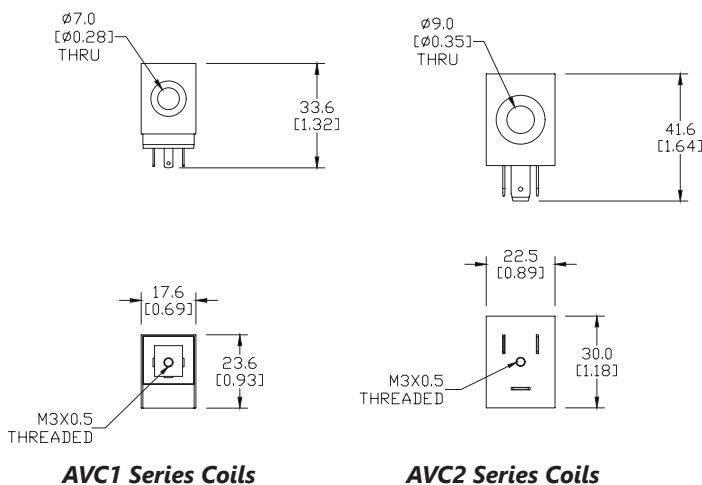
# Pneumatic A-Series Direction Control Solenoid Valves - Accessories

**AVC1-12D****AVC2-12D****AVP-31BKT****AVP-31KIT**

Pneumatic A-Series Directional Control Solenoid Valve Series Accessories			
Part No.	Price	Description	Weight (lb)
<a href="#"><u>AVC1-12D</u></a>	\$,-12fi:	NITRA solenoid coil, 12VDC, 2.5 W. For use with AVS-31 and AVS-51 series valves.	0.1
<a href="#"><u>AVC1-24D</u></a>	\$,-12fj:	NITRA solenoid coil, 24VDC, 2.5 W. For use with AVS-31 and AVS-51 series valves.	0.1
<a href="#"><u>AVC1-24A</u></a>	\$,-12fk:	NITRA solenoid coil, 24VAC, 4.0 VA. For use with AVS-31 and AVS-51 series valves.	0.1
<a href="#"><u>AVC1-120A</u></a>	\$,-12fl:	NITRA solenoid coil, 120VAC, 3.5 VA. For use with AVS-31 and AVS-51 series valves.	0.1
<a href="#"><u>AVC2-12D</u></a>	\$,-12fn:	NITRA solenoid coil, 12 VDC, 3.0W. For use with AVP-31, AVS-32, AVS-33, AVS-52, AVS-53, AVS-54 series valves and ASD series soft starters.	0.2
<a href="#"><u>AVC2-24D</u></a>	\$,-12fo:	NITRA solenoid coil, 24 VDC, 3.0W. For use with AVP-31, AVS-32, AVS-33, AVS-52, AVS-53, AVS-54 series valves and ASD series soft starters.	0.2
<a href="#"><u>AVC2-24A</u></a>	\$,-12fp:	NITRA solenoid coil, 24 VAC, 5.0VA. For use with AVP-31, AVS-32, AVS-33, AVS-52, AVS-53, AVS-54 series valves and ASD series soft starters.	0.2
<a href="#"><u>AVC2-120A</u></a>	\$,-12fq:	NITRA solenoid coil, 120 VAC, 4.5VA. For use with AVP-31, AVS-32, AVS-33, AVS-52, AVS-53, AVS-54 series valves and ASD series soft starters.	0.2
<a href="#"><u>AVP-31BKT</u></a>	\$,-4[2:	NITRA individual mounting bracket, plated steel. For use with AVP-31 directional control valves.	0.1
<a href="#"><u>AVP-31KIT</u></a>	\$,-4[3:	NITRA stacking screws, for use with AVP-31 directional control valves. One kit is required for each additional AVP-31 valve added to the stack.	0.1

## Dimensions

mm [inches]



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

**AVP-31BKT**



# Pneumatic Directional Control Solenoid Valve Manifolds and Accessories



**AM-3 Series Manifolds**



**AM-31BP**

Pneumatic Directional Control Solenoid Valve Series Accessories			
Part No.	Price	Description	Weight (lb)
<a href="#"><u>AM-312</u></a>	\$;12fy:	NITRA pneumatic valve manifold, aluminum, 2 stations, (2) 1/4in FNPT inlet port(s), (2) 1/4in FNPT exhaust port(s). For use with AVS-31 series.	0.2
<a href="#"><u>AM-314</u></a>	\$;12fz:	NITRA pneumatic valve manifold, aluminum, 4 stations, (2) 1/4in FNPT inlet port(s), (2) 1/4in FNPT exhaust port(s). For use with AVS-31 series.	0.3
<a href="#"><u>AM-316</u></a>	\$;12fj:	NITRA pneumatic valve manifold, aluminum, 6 stations, (2) 1/4in FNPT inlet port(s), (2) 1/4in FNPT exhaust port(s). For use with AVS-31 series.	0.4
<a href="#"><u>AM-318</u></a>	\$;12fj:	NITRA pneumatic valve manifold, aluminum, 8 stations, (2) 1/4in FNPT inlet port(s), (2) 1/4in FNPT exhaust port(s). For use with AVS-31 series.	0.5
<a href="#"><u>AM-31BP</u></a>	\$12gc:	NITRA blanking plate, plated steel. For use with AM-31 series manifolds.	0.1
<a href="#"><u>AM-322</u></a>	\$;12f.:	NITRA pneumatic valve manifold, aluminum, 2 stations, (2) 1/4in FNPT inlet port(s), (2) 1/4in FNPT exhaust port(s). For use with AVS-32 series.	0.2
<a href="#"><u>AM-324</u></a>	\$;12f#:	NITRA pneumatic valve manifold, aluminum, 4 stations, (2) 1/4in FNPT inlet port(s), (2) 1/4in FNPT exhaust port(s). For use with AVS-32 series.	0.4
<a href="#"><u>AM-326</u></a>	\$;12f!:	NITRA pneumatic valve manifold, aluminum, 6 stations, (2) 1/4in FNPT inlet port(s), (2) 1/4in FNPT exhaust port(s). For use with AVS-32 series.	0.5
<a href="#"><u>AM-328</u></a>	\$;12f?:	NITRA pneumatic valve manifold, aluminum, 8 stations, (2) 1/4in FNPT inlet port(s), (2) 1/4in FNPT exhaust port(s). For use with AVS-32 series.	0.7
<a href="#"><u>AM-32BP</u></a>	\$12gd:	NITRA blanking plate, plated steel. For use with AM-32 series manifolds.	0.1
<a href="#"><u>AM-332</u></a>	\$;12f.:	NITRA pneumatic valve manifold, aluminum, 2 stations, (2) 3/8in FNPT inlet port(s), (2) 3/8in FNPT exhaust port(s). For use with AVS-33 series.	0.4
<a href="#"><u>AM-334</u></a>	\$12g0:	NITRA pneumatic valve manifold, aluminum, 4 stations, (2) 3/8in FNPT inlet port(s), (2) 3/8in FNPT exhaust port(s). For use with AVS-33 series.	0.6
<a href="#"><u>AM-336</u></a>	\$12g1:	NITRA pneumatic valve manifold, aluminum, 6 stations, (2) 3/8in FNPT inlet port(s), (2) 3/8in FNPT exhaust port(s). For use with AVS-33 series.	0.9
<a href="#"><u>AM-338</u></a>	\$12g2:	NITRA pneumatic valve manifold, aluminum, 8 stations, (2) 3/8in FNPT inlet port(s), (2) 3/8in FNPT exhaust port(s). For use with AVS-33 series.	1.1
<a href="#"><u>AM-33BP</u></a>	\$12ge:	NITRA blanking plate, plated steel. For use with AM-33 series manifolds.	0.1
<a href="#"><u>AM-512</u></a>	\$0e9z:	NITRA pneumatic valve manifold, aluminum, 2 stations, (2) 1/4in FNPT inlet port(s), (4) 1/4in FNPT exhaust port(s). For use with AVS-51 series.	0.4
<a href="#"><u>AM-514</u></a>	\$;0e9j:	NITRA pneumatic valve manifold, aluminum, 4 stations, (2) 1/4in FNPT inlet port(s), (4) 1/4in FNPT exhaust port(s). For use with AVS-51 series.	0.6
<a href="#"><u>AM-516</u></a>	\$;0e9j:	NITRA pneumatic valve manifold, aluminum, 6 stations, (2) 1/4in FNPT inlet port(s), (4) 1/4in FNPT exhaust port(s). For use with AVS-51 series.	0.8
<a href="#"><u>AM-518</u></a>	\$0e9.:	NITRA pneumatic valve manifold, aluminum, 8 stations, (2) 1/4in FNPT inlet port(s), (4) 1/4in FNPT exhaust port(s). For use with AVS-51 series.	1.1
<a href="#"><u>AM-51BP</u></a>	\$;4cj:	NITRA blanking plate, plated steel. For use with AM-51 series manifolds.	0.1
<a href="#"><u>AM-522</u></a>	\$;04j7:	NITRA pneumatic valve manifold, aluminum, 2 stations, (2) 1/4in FNPT inlet port(s), (4) 1/4in FNPT exhaust port(s). For use with AVS-52 series.	0.5
<a href="#"><u>AM-524</u></a>	\$0ea0:	NITRA pneumatic valve manifold, aluminum, 4 stations, (2) 1/4in FNPT inlet port(s), (4) 1/4in FNPT exhaust port(s). For use with AVS-52 series.	0.9
<a href="#"><u>AM-526</u></a>	\$0ea1:	NITRA pneumatic valve manifold, aluminum, 6 stations, (2) 1/4in FNPT inlet port(s), (4) 1/4in FNPT exhaust port(s). For use with AVS-52 series.	1.2
<a href="#"><u>AM-528</u></a>	\$0ea2:	NITRA pneumatic valve manifold, aluminum, 8 stations, (2) 1/4in FNPT inlet port(s), (4) 1/4in FNPT exhaust port(s). For use with AVS-52 series.	1.5
<a href="#"><u>AM-52BP</u></a>	\$;4j0:	NITRA blanking plate, plated steel. For use with AM-52 series manifolds.	0.1





# Pneumatic Directional Control Solenoid Valve Manifolds and Accessories



**AM-5 Series Manifolds**



**AM-31GS**

Pneumatic Directional Control Solenoid Valve Series Accessories Continued			
Part No.	Price	Description	Weight (lb)
<a href="#"><u>AM-532</u></a>	\$0ea3:	NITRA pneumatic valve manifold, aluminum, 2 stations, (2) 3/8in FNPT inlet port(s), (4) 3/8in FNPT exhaust port(s). For use with AVS-53 series.	0.8
<a href="#"><u>AM-534</u></a>	\$0ea4:	NITRA pneumatic valve manifold, aluminum, 4 stations, (2) 3/8in FNPT inlet port(s), (4) 3/8in FNPT exhaust port(s). For use with AVS-53 series.	1.4
<a href="#"><u>AM-536</u></a>	\$0ea5:	NITRA pneumatic valve manifold, aluminum, 6 stations, (2) 3/8in FNPT inlet port(s), (4) 3/8in FNPT exhaust port(s). For use with AVS-53 series.	1.9
<a href="#"><u>AM-538</u></a>	\$0ea6:	NITRA pneumatic valve manifold, aluminum, 8 stations, (2) 3/8in FNPT inlet port(s), (4) 3/8in FNPT exhaust port(s). For use with AVS-53 series.	2.5
<a href="#"><u>AM-53BP</u></a>	\$.4{1:	NITRA blanking plate, plated steel. For use with AM-53 series manifolds.	0.1
<a href="#"><u>AM-542</u></a>	\$0e9#:	NITRA pneumatic valve manifold, aluminum, 2 stations, (2) 1/2in FNPT inlet port(s), (4) 1/2in FNPT exhaust port(s). For use with AVS-54 series.	1.7
<a href="#"><u>AM-544</u></a>	\$.0e9!:	NITRA pneumatic valve manifold, aluminum, 4 stations, (2) 1/2in FNPT inlet port(s), (4) 1/2in FNPT exhaust port(s). For use with AVS-54 series.	2.8
<a href="#"><u>AM-546</u></a>	\$00e9?:	NITRA pneumatic valve manifold, aluminum, 6 stations, (2) 1/2in FNPT inlet port(s), (4) 1/2in FNPT exhaust port(s). For use with AVS-54 series.	4.0
<a href="#"><u>AM-548</u></a>	\$.00e9.:	NITRA pneumatic valve manifold, aluminum, 8 stations, (2) 1/2in FNPT inlet port(s), (4) 1/2in FNPT exhaust port(s). For use with AVS-54 series.	5.2
<a href="#"><u>AM-54BP</u></a>	\$.4c{:	NITRA blanking plate, plated steel. For use with AM-54 series manifolds.	0.1
<a href="#"><u>AM-31GS</u></a>	\$.12gf:	NITRA manifold mounting set, for use with AM-31 series manifolds.	0.1
<a href="#"><u>AM-32GS</u></a>	\$12gg:	NITRA manifold mounting set, for use with AM-32 series manifolds.	0.1
<a href="#"><u>AM-33GS</u></a>	\$12gh:	NITRA manifold mounting set, for use with AM-33 series manifolds.	0.1
<a href="#"><u>AM-51GS</u></a>	\$.12gi:	NITRA manifold mounting set, for use with AM-51 series manifolds.	0.1
<a href="#"><u>AM-52GS</u></a>	\$.12gj:	NITRA manifold mounting set, for use with AM-52 series manifolds.	0.1
<a href="#"><u>AM-53GS</u></a>	\$12gk:	NITRA manifold mounting set, for use with AM-53 series manifolds.	0.1
<a href="#"><u>AM-54GS</u></a>	\$.12gl:	NITRA manifold mounting set, for use with AM-54 series manifolds.	0.1



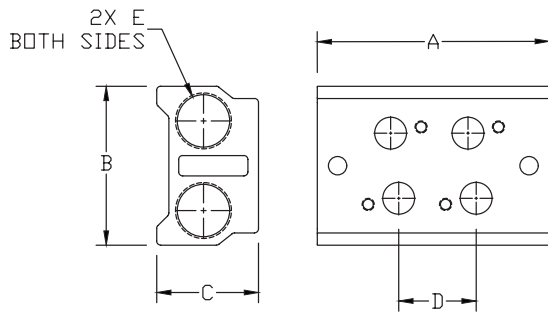


# Pneumatic Directional Control Solenoid Valve Manifolds and Accessories

## Dimensions

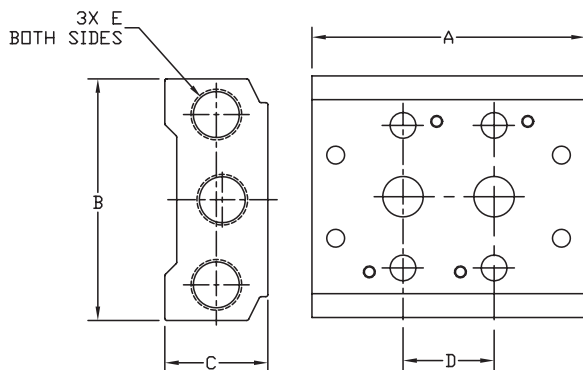
mm [inches]

### AM 3x Series Manifolds



MANIFOLD DIMENSIONS					
PART NO.	A	B	C	D	E
AM-312	57.0 [2.24]	39.0 [1.54]	25.0 [0.98]	19.0 [0.75]	1/4 NPT
AM-314	95.0 [3.74]			3X 19.0 [0.75]	
AM-316	133.0 [5.24]			5X 19.0 [0.75]	
AM-318	171.0 [6.73]			7X 19.0 [0.75]	
AM-322	69.0 [2.72]	45.0 [1.77]	25.0 [0.98]	23.0 [0.91]	1/4 NPT
AM-324	115.0 [4.53]			3X 23.0 [0.91]	
AM-326	161.0 [6.34]			5X 23.0 [0.91]	
AM-328	207.0 [8.15]			7X 23.0 [0.91]	
AM-332	82.0 [3.23]	52.0 [2.05]	29.0 [1.14]	28.0 [1.10]	3/8 NPT
AM-334	138.0 [5.46]			3X 28.0 [1.10]	
AM-336	194.0 [7.64]			5X 28.0 [1.10]	
AM-338	250.0 [9.84]			7X 28.0 [1.10]	

### AM 5x Series Manifolds



MANIFOLD DIMENSIONS					
PART NO.	A	B	C	D	E
AM-512	57.0 [2.24]	58.0 [2.28]	25.0 [0.98]	19.0 [0.75]*	1/4 NPT
AM-514	95.0 [3.74]			3X 19.0 [0.75]*	
AM-516	133.0 [5.24]			5X 19.0 [0.75]*	
AM-518	171.0 [6.73]			7X 19.0 [0.75]*	
AM-522	69.0 [2.72]	61.0 [2.40]	26.0 [1.02]	23.0 [0.91]	1/4 NPT
AM-524	115.0 [4.53]			3X 23.0 [0.91]	
AM-526	161.0 [6.34]			5X 23.0 [0.91]	
AM-528	207.0 [8.15]			7X 23.0 [0.91]	
AM-532	82.0 [3.23]	75.0 [2.95]	30.0 [1.19]	28.0 [1.10]	3/8 NPT
AM-534	138.0 [5.46]			3X 28.0 [1.10]	
AM-536	194.0 [7.64]			5X 28.0 [1.10]	
AM-538	250.0 [9.84]			7X 28.0 [1.10]	
AM-542	98.0 [3.86]	104.0 [4.09]	38.0 [1.50]	35.0 [1.38]	1/2 NPT
AM-544	168.0 [6.61]			3X 35.0 [1.38]	
AM-546	238.0 [9.37]			5X 35.0 [1.38]	
AM-548	308.0 [12.13]			7X 35.0 [1.38]	

\* Exhaust holes have 1mm offset from spacing centerline.

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

# Solenoid Valve Cables and Connectors



These high quality connectors and over-molded cables help reduce wiring time. The lower voltage models, 24V or 110V AC/DC, include built-in surge suppression, Yellow LED indicator and are rated for connecting with electronics. The 230V AC/DC models are rated for straight wired products. All models are available in five sizes based on DIN 43650.

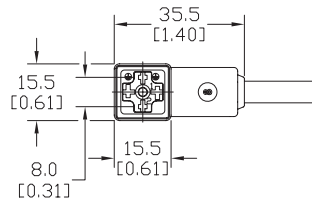
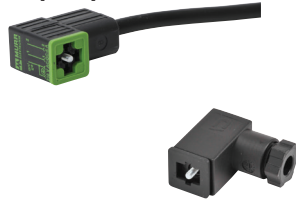
## Features

- 8mm, 9.4mm, 10mm, 11mm and 18mm square DIN styles
- Fits most popular solenoid valves and sensors
- Suppression and LED indication available in 24V or 110V AC/DC models
- PVC jacketed cables in 1, 3 or 5 meter lengths on select connectors
- Field wireable connectors on select models
- Polarity insensitive (follow solenoid, sensor, or other devices wiring diagram)



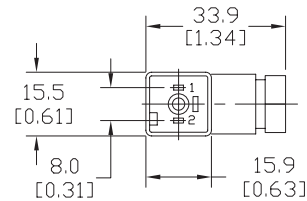
### 8mm Connectors

Dimensions shown  
mm [inches]



Height = 25mm [0.98in]

Connector with Cable



Height = 26mm [1.02]

Field Wireable Connector

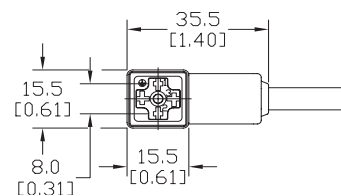
### 8mm (3-pole) Connectors (per DIN 43650 Form C)

Part No.	Price	Voltage (AC/DC)	Current Rating	IP Rating	Wire Size	Cable Dia. (in.)	LED	Surge Protection	Wiring Figure	Screw Size/ Torque	Weight (lbs)	Agency Approval					
<a href="#">SC8-LS24-3</a>	\$:04t2:	24 ±20%	max 4A	67	18 AWG	0.23	yes	zener diode (D-Z DO-15 47V 2W)	1	m2.5-0.45x25mm/ 0.4 Nm (3.5 in lb)	0.40	CSA (080128-0-000)					
<a href="#">SC8-LS24-5</a>	\$:04t3:										0.65						
<a href="#">SC8-LS110-3</a>	\$:04t0:	110 ±10%					max 6A	65	Solid 12 AWG Stranded 14 AWG w/Ferrule 16 AWG	field wireable gland size 0.20 to 0.24	no		none	7	0.41		
<a href="#">SC8-LS110-5</a>	\$:04t1:														0.63		
<a href="#">SC8-3</a>	\$:04s1:	230	max 6A	67	18 AWG	0.23									2	0.39	none
<a href="#">SC8-0</a>	\$4s:															0.10	
<a href="#">SC8-1</a>	\$04s#:						9		0.10								
<a href="#">SC8-5</a>	\$04s?:								0.68								

Last digit in part number denotes cable length in meters, a 0 indicates field termination.

### 8mm Transmitter Connector

Dimensions shown  
mm [inches]



Height = 25mm [0.98in]

Connector with Cable

### 8mm (4-pole) Connectors (per DIN 43650 Form C)

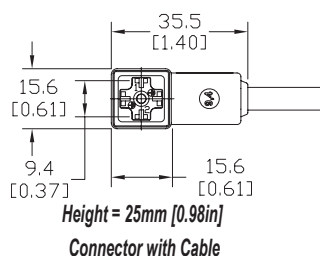
Part No.	Price	Voltage (AC/DC)	Current Rating	IP Rating	Wire Size	Cable Dia. (in.)	LED	Surge Protection	Wiring Figure	Screw Size/Torque	Weight (lbs)	Agency Approval
SC8-5T	\$:04s:	230	max 6A	67	18 AWG	0.26	yes	none	8	m3-0.5x42mm/0.5 Nm (4.4 in lb)	0.80	CSA (080128-0-000)

Last numeric digit in part number denotes cable length in meters, a 0 indicates field termination.

# Solenoid Valve Cables and Connectors

## 9.4mm Connectors

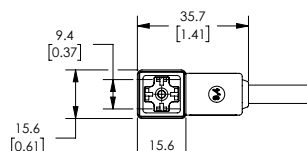
Dimensions shown  
mm [inches]



9.4mm (3-pole) Connectors (DIN Style, Form C Industrial)												
Part No.	Price	Voltage (AC/DC)	Current Rating	IP Rating	Wire Size	Cable Dia. (in.)	LED	Surge Protection	Wiring Figure	Screw Size/ Torque	Weight (lbs)	Agency Approval
<a href="#">SC9-LS24-3</a>	\$:04t8:	24 ±20%	max 4A	67	18 AWG	0.23	yes	zener diode (D-Z DO-15 47V 2W)	1	m3-0.5x26mm/ 0.4 Nm (3.5 in lb)	0.40	CSA (080128-0-000)
<a href="#">SC9-LS24-5</a>	\$:04t9:								0.64			
<a href="#">SC9-LS110-3</a>	\$:04t6:	110 ±10%							zener diode (D-Z DO-41 ZY200 2W)		7	
<a href="#">SC9-LS110-5</a>	\$:04t7:							0.64				
<a href="#">SC9-3</a>	\$:04t4:	230	max 6A				no	none	2	m3-0.5x26mm/ 0.5 Nm (4.4 in lb)	0.40	none
<a href="#">SC9-5</a>	\$:04t5:										0.64	

## 9.4mm Connectors

Dimensions shown  
mm [inches]



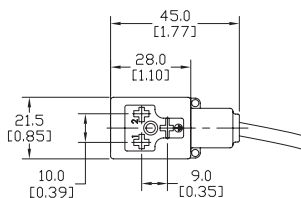
Height = 25mm [0.98in]  
Connector with Cable

9.4mm (4-pole) Connectors (DIN Style, Form C Industrial)													
Part No.	Price	Voltage (AC/DC)	Current Rating	IP Rating	Wire Size	Cable Dia.	Cable Length	LED	Surge Protection	Wiring Figure	Screw Size/ Torque	Weight (lbs)	Agency Approval
<a href="#">7000-94141-6270300</a>	\$4p49:	230 VAC/ VDC	max 6A	IP67	18 AWG	5.6–6.2 mm	9.8ft/3m	no	none	8	m3-0.5x26mm/ 0.4 Nm (3.5 in lb)	0.50	CSA (080128-0-000) RoHS
<a href="#">7000-94141-6270500</a>	\$4p4a:						16.4ft/5m					0.79	

# Solenoid Valve Cables and Connectors

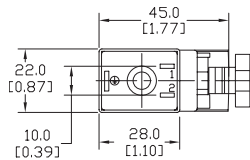
## 10mm Connectors

Dimensions shown  
mm [inches]



Height = 30mm [1.18in]

Connector with Cable



Height = 41mm [1.61in]

Field Wireable Connector

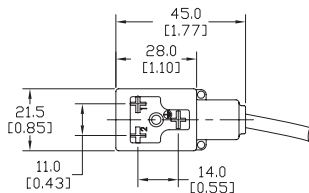
### 10mm (3-pole) Connectors (per DIN 43650 Form B)

Part No.	Price	Voltage (AC/DC)	Current Rating	IP Rating	Wire Size	Cable Dia. (in.)	LED	Surge Protection	Wiring Figure	Screw Size/ Torque	Weight (lbs)	Agency Approval				
<a href="#">SC10-LS24-3</a>	\$04k9:	24 ±20%	max 4A	67	18 AWG	0.23	yes	zener diode (D-Z DO-15 47V 2W)	10	m3-0.5x30mm/ 0.4 Nm (3.5 in lb)	0.43	CSA (080128-0-000)				
<a href="#">SC10-LS24-5</a>	\$04ka:							zener diode (D-Z DO-41 ZY200 2W)	6		0.68					
<a href="#">SC10-LS110-3</a>	\$04k7:	110 ±10%	max 4A					no	none		3		0.43			
<a href="#">SC10-LS110-5</a>	\$04k8:						0.68									
<a href="#">SC10-3</a>	\$04k5:						230						max 10A	65	Solid 12 AWG Stranded 14 AWG w/Ferrule 16 AWG	field wireable gland size 0.24 to 0.32
<a href="#">SC10-5</a>	\$04k6:	5	0.07													
<a href="#">SC10-LS24-0</a>	\$043d:	24 ±20%	max 4A	65	Solid 12 AWG Stranded 14 AWG w/Ferrule 16 AWG	field wireable gland size 0.24 to 0.32	yes	zener diode (D-Z DO-15 47V 2W)	4	m3-0.5x42mm/ 0.5 Nm (4.4 in lb)	0.07	none				
<a href="#">SC10-LS110-0</a>	\$043c:	110 ±10%	max 1A					5	0.07							

Last digit in part number denotes cable length in meters, a 0 indicates field termination.

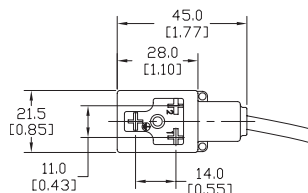
## 11mm Connectors

Dimensions shown  
mm [inches]



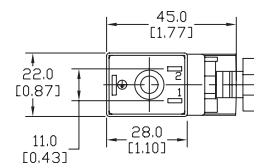
Height = 30mm [1.18in]

Connector with Cable



Height = 30mm [1.18in]

Reverse Connector with Cable



Height = 41mm [1.61in]

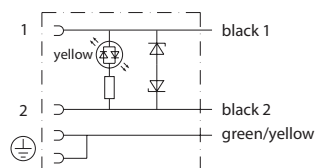
Field Wireable Connector

### 11mm (3-pole) Connectors (DIN Style, Form B Industrial)

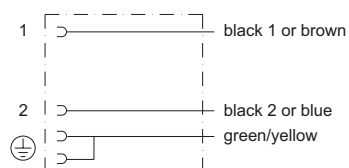
Part No.	Price	Voltage (AC/DC)	Current Rating	IP Rating	Wire Size	Cable Dia. (in)	LED	Surge Protection	Wiring Figure	Screw Size/ Torque	Weight (lbs)	Agency Approval
<a href="#">SC11-LS24-3</a>	\$04sy:	24 ±20%	max 4A	67	18 AWG	0.23	yes	zener diode (D-Z DO-15 47V 2W)	10	m3-0.5x30mm/ 0.4 Nm (3.5 in lb)	0.44	CSA (080128-0-000)
<a href="#">SC11-LS24-5</a>	\$.04sf:							zener diode (D-Z DO-41 ZY200 2W)	6		0.67	
<a href="#">SC11-LS110-3</a>	\$04ss:	110 ±10%	max 4A					zener diode (D-Z DO-15 47V 2W)	10		0.44	
<a href="#">SC11-LS110-5</a>	\$04su:							zener diode (D-Z DO-41 ZY200 2W)	6		0.67	
<a href="#">SC11-LS24-3R</a>	\$04sz:	24 ±20%	max 4A					zener diode (D-Z DO-15 47V 2W)	10		0.44	
<a href="#">SC11-LS24-5R</a>	\$.04sf:							zener diode (D-Z DO-41 ZY200 2W)	6		0.67	
<a href="#">SC11-LS110-3R</a>	\$.04st:	110 ±10%	max 4A					zener diode (D-Z DO-41 ZY200 2W)	6		0.44	
<a href="#">SC11-LS110-5R</a>	\$04sv:							0.67				
<a href="#">SC11-3</a>	\$04so:	230	max 10A				no	none	3		0.44	
<a href="#">SC11-5</a>	\$04sp:						0.67					
<a href="#">SC11-LS24-0</a>	\$04sx:	24 ±20%	max 4A	65	Solid 12 AWG Stranded 14 AWG w/Ferrule 16 AWG	field wireable gland size 0.24 to 0.32	yes	zener diode (D-Z DO-15 47V 2W)	4	m3-0.5x42mm/ 0.5 Nm (4.4 in lb)	0.07	none
<a href="#">SC11-LS110-0</a>	\$04sq:	110 ±10%	max 1A					mov (SIOV S10 K130)	5		0.07	
<a href="#">SC11-0</a>	\$04sn:	230	max 10A				no	none	9		0.07	

Last numeric digit in part number denotes cable length in meters, a 0 indicates field termination.

# Solenoid Valve Cables and Connectors Wiring Diagrams



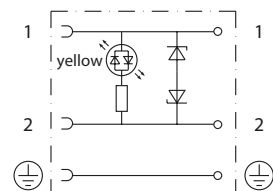
**Figure No. 1**



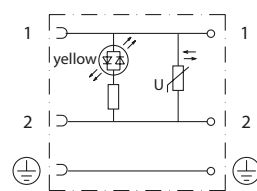
**Figure No. 2**



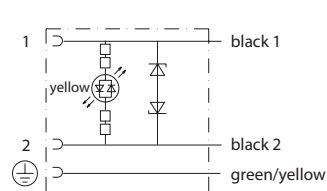
**Figure No. 3**



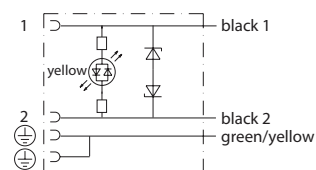
**Figure No. 4**



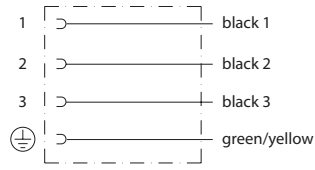
**Figure No. 5**



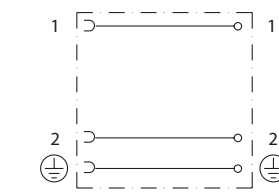
**Figure No. 6**



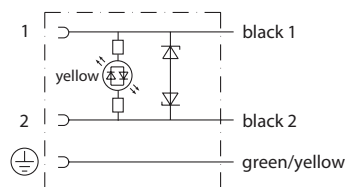
**Figure No. 7**



**Figure No. 8**



**Figure No. 9**



**Figure No. 10**