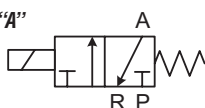




Pneumatic Directional Control Solenoid Valves – AVP Series



Diagram "A"



2-Pos, Spring Return

NITRA™ pneumatic AVP series directional control solenoid valves are 3-way stackable poppet style valves with 1/8" NPT ports. They provide 2-position, normally closed, spring return operation with either 24 VDC or 120 VAC solenoid coils. The AVP series can be used in individual valve applications or multiple valves can be field assembled (stacked) to share supply air, simplifying piping connections. The DIN style wiring connector includes LED indication of the solenoid coil status.

Features

- 3-way stackable poppet style valves
- 1/8" NPT ports
- 2-position, normally closed, spring return
- 24 VDC or 120 VAC solenoid coils
- DIN style wiring connector with LED indication
- Single valve or multiple stacked valve applications
- 2-year warranty



See www.AutomationDirect.com for a wide variety of fitting options



Stacked example using [AVP-31KIT](#) stacking screw kit and shown with mounting bracket [AVP-31BKT](#)



AVP-31KIT

Note: One kit is required for each additional AVP-31 valve added to the stack.



AVP-31BKT

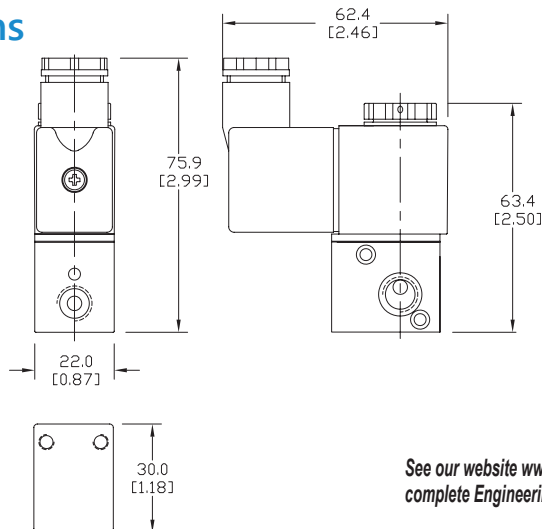
Dimensions in mm [inches]

AVP Series Specifications	
Model	AVP-31C1-120A
Price	
Weight (lbs)	0.3
Valve Type	3-way 2 position
Acting	Direct acting, normally closed, spring return
Diagram	A
Port Size	1/8"
Orifice Size	1.2 mm, Cv=0.051
Fluid	Air (to be filtered by 40µ filter element)
Operating Pressure	0 to 120 psi, (0 to 0.83 MPa), (0 to 8.3 bar)
Voltage	102 - 132 VAC (50/60 Hz)
Power Consumption	DC: 3.0 W AC: 4.5 VA; continuous duty (100% ED)
Maximum Frequency	10 cycles/sec
Operating Life	50,000,000 cycles
Insulation	B class
Min Response	0.05 sec
Temperature	-5 to +60 °C (23 to 140 °F)
Lubrication	Not Required
Protection	IP65 (DIN40050)
Connection	11 mm DIN Terminal with Grommet
Material of Body	Aluminum Alloy
Agency Approvals	Solenoid CE marked; RoHS

Dimensions

mm [inches]

AVP-31C1



See our website www.AutomationDirect.com for complete Engineering drawings.



Pneumatic A-Series Direction Control Solenoid Valves - Accessories

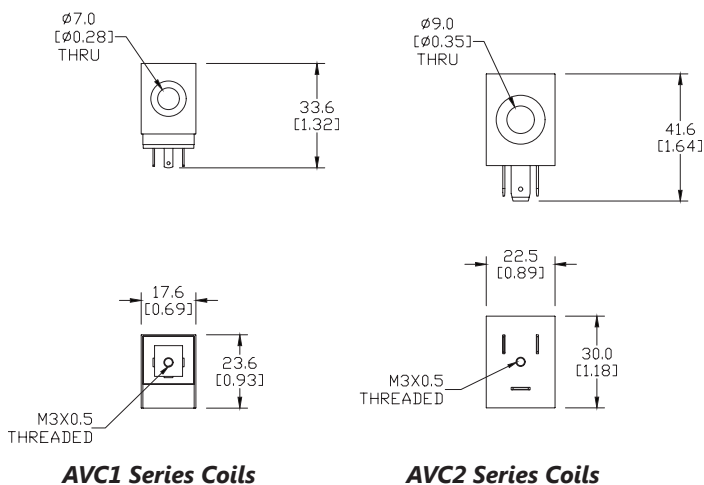
**AVC1****AVC2**

Pneumatic A-Series Directional Control Solenoid Valve Series Accessories			
Part No.	Price	Description	Weight (lb)
<u>AVC1-24D</u>		NITRA solenoid coil, 24 VDC, 2.5 W. For use with AVS-31 and AVS-51 series valves.	0.1
<u>AVC1-24A</u>		NITRA solenoid coil, 24 VAC, 4.0 VA. For use with AVS-31 and AVS-51 series valves.	0.1
<u>AVC1-120A</u>		NITRA solenoid coil, 120 VAC, 3.5 VA. For use with AVS-31 and AVS-51 series valves.	0.1
<u>AVC2-12D</u>		NITRA solenoid coil, 12 VDC, 3W. For use with AVP-31, AVS-32, AVS-33, AVS-52, AVS-53, AVS-54 series valves and ASD series soft starters.	0.2
<u>AVC2-24D</u>		NITRA solenoid coil, 24 VDC, 3W. For use with AVP-31, AVS-32, AVS-33, AVS-52, AVS-53, AVS-54 series valves and ASD series soft starters.	0.2
<u>AVC2-120A</u>		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
<u>AVP-31BKT</u>		NITRA individual mounting bracket, plated steel. For use with AVP-31 directional control valves.	0.1
<u>AVP-31KIT</u>		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

**AVP-31BKT****AVP-31KIT**

Dimensions

mm [inches]

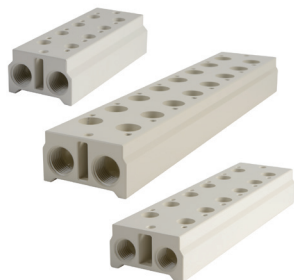


See our website www.AutomationDirect.com for complete Engineering drawings.

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)
<u>AM-312</u>		NITRA pneumatic valve manifold, aluminum, 2 stations, (2) 1/4 in FNPT inlet port(s), (2) 1/4 in FNPT exhaust port(s). For use with AVS-31 series.	0.2
<u>AM-316</u>		NITRA pneumatic valve manifold, aluminum, 6 stations, (2) 1/4 in FNPT inlet port(s), (2) 1/4 in FNPT exhaust port(s). For use with AVS-31 series.	0.4
<u>AM-318</u>		NITRA pneumatic valve manifold, aluminum, 8 stations, (2) 1/4 in FNPT inlet port(s), (2) 1/4 in FNPT exhaust port(s). For use with AVS-31 series.	0.5
<u>AM-31BP</u>		NITRA blanking plate, plated steel. For use with AM-31 series manifolds.	0.1
<u>AM-322</u>		NITRA pneumatic valve manifold, aluminum, 2 stations, (2) 1/4 in FNPT inlet port(s), (2) 1/4 in FNPT exhaust port(s). For use with AVS-32 series.	0.2
<u>AM-324</u>		NITRA pneumatic valve manifold, aluminum, 4 stations, (2) 1/4 in FNPT inlet port(s), (2) 1/4 in FNPT exhaust port(s). For use with AVS-32 series.	0.4
<u>AM-326</u>		NITRA pneumatic valve manifold, aluminum, 6 stations, (2) 1/4 in FNPT inlet port(s), (2) 1/4 in FNPT exhaust port(s). For use with AVS-32 series.	0.5
<u>AM-328</u>		NITRA pneumatic valve manifold, aluminum, 8 stations, (2) 1/4 in FNPT inlet port(s), (2) 1/4 in FNPT exhaust port(s). For use with AVS-32 series.	0.7
<u>AM-32BP</u>		NITRA blanking plate, plated steel. For use with AM-32 series manifolds.	0.1
<u>AM-332</u>		NITRA pneumatic valve manifold, aluminum, 2 stations, (2) 3/8 in FNPT inlet port(s), (2) 3/8 in FNPT exhaust port(s). For use with AVS-33 series.	0.4
<u>AM-334</u>		NITRA pneumatic valve manifold, aluminum, 4 stations, (2) 3/8 in FNPT inlet port(s), (2) 3/8 in FNPT exhaust port(s). For use with AVS-33 series.	0.6
<u>AM-336</u>		NITRA pneumatic valve manifold, aluminum, 6 stations, (2) 3/8 in FNPT inlet port(s), (2) 3/8 in FNPT exhaust port(s). For use with AVS-33 series.	0.9
<u>AM-338</u>		NITRA pneumatic valve manifold, aluminum, 8 stations, (2) 3/8 in FNPT inlet port(s), (2) 3/8 in FNPT exhaust port(s). For use with AVS-33 series.	1.1
<u>AM-33BP</u>		NITRA blanking plate, plated steel. For use with AM-33 series manifolds.	0.1
<u>AM-516</u>		NITRA pneumatic valve manifold, aluminum, 6 stations, (2) 1/4 in FNPT inlet port(s), (4) 1/4 in FNPT exhaust port(s). For use with AVS-51 series.	0.8
<u>AM-518</u>		NITRA pneumatic valve manifold, aluminum, 8 stations, (2) 1/4 in FNPT inlet port(s), (4) 1/4 in FNPT exhaust port(s). For use with AVS-51 series.	1.1
<u>AM-51BP</u>		NITRA blanking plate, plated steel. For use with AM-51 series manifolds.	0.1
<u>AM-522</u>		NITRA pneumatic valve manifold, aluminum, 2 stations, (2) 1/4 in FNPT inlet port(s), (4) 1/4 in FNPT exhaust port(s). For use with AVS-52 series.	0.5
<u>AM-526</u>		NITRA pneumatic valve manifold, aluminum, 6 stations, (2) 1/4 in FNPT inlet port(s), (4) 1/4 in FNPT exhaust port(s). For use with AVS-52 series.	1.2
<u>AM-52BP</u>		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)
<u>AM-534</u>		NITRA pneumatic valve manifold, aluminum, 4 stations, (2) 3/8 in FNPT inlet port(s), (4) 3/8 in FNPT exhaust port(s). For use with AVS-53 series.	1.4
<u>AM-538</u>		NITRA pneumatic valve manifold, aluminum, 8 stations, (2) 3/8 in FNPT inlet port(s), (4) 3/8 in FNPT exhaust port(s). For use with AVS-53 series.	2.5
<u>AM-53BP</u>		NITRA blanking plate, plated steel. For use with AM-53 series manifolds.	0.1
<u>AM-542</u>		NITRA pneumatic valve manifold, aluminum, 2 stations, (2) 1/2 in FNPT inlet port(s), (4) 1/2 in FNPT exhaust port(s). For use with AVS-54 series.	1.7
<u>AM-544</u>		NITRA pneumatic valve manifold, aluminum, 4 stations, (2) 1/2 in FNPT inlet port(s), (4) 1/2 in FNPT exhaust port(s). For use with AVS-54 series.	2.8
<u>AM-546</u>		NITRA pneumatic valve manifold, aluminum, 6 stations, (2) 1/2 in FNPT inlet port(s), (4) 1/2 in FNPT exhaust port(s). For use with AVS-54 series.	4.0
<u>AM-548</u>		NITRA pneumatic valve manifold, aluminum, 8 stations, (2) 1/2 in FNPT inlet port(s), (4) 1/2 in FNPT exhaust port(s). For use with AVS-54 series.	5.2
<u>AM-54BP</u>		NITRA blanking plate, plated steel. For use with AM-54 series manifolds.	0.1
<u>AM-31GS</u>		NITRA manifold mounting set, for use with AM-31 series manifolds.	0.1
<u>AM-32GS</u>		NITRA manifold mounting set, for use with AM-32 series manifolds.	0.1
<u>AM-33GS</u>		NITRA manifold mounting set, for use with AM-33 series manifolds.	0.1
<u>AM-51GS</u>		NITRA manifold mounting set, for use with AM-51 series manifolds.	0.1
<u>AM-52GS</u>		NITRA manifold mounting set, for use with AM-52 series manifolds.	0.1
<u>AM-53GS</u>		NITRA manifold mounting set, for use with AM-53 series manifolds.	0.1
<u>AM-54GS</u>		NITRA manifold mounting set, for use with AM-54 series manifolds.	0.1

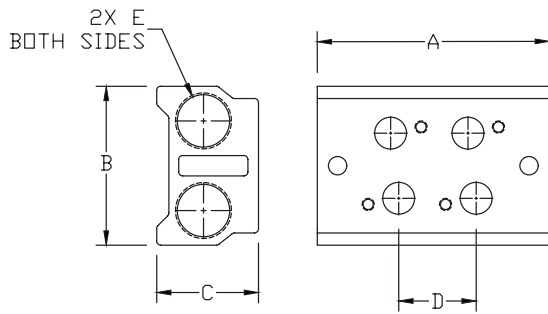


Pneumatic Directional Control Solenoid Valve Manifolds and Accessories

Dimensions

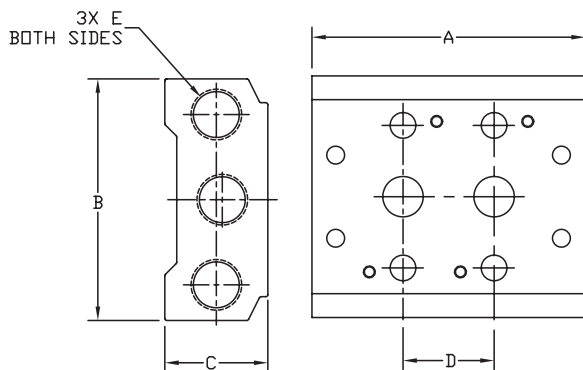
mm [inches]

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.

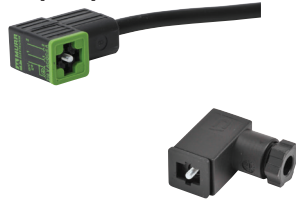
See our website www.AutomationDirect.com for complete Engineering drawings.

Solenoid Valve Cables and Connectors



8mm Connectors

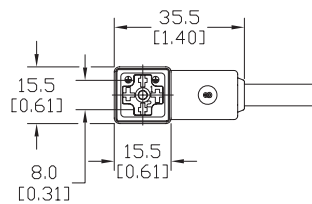
Dimensions shown
mm [inches]



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

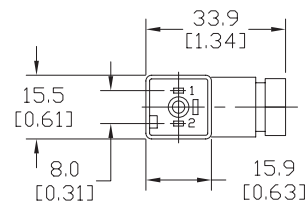
Features

- 8 mm, 9.4 mm, 10 mm, 11 mm and 18 mm square DIN styles
- Fits most popular solenoid valves and sensors
- Suppression and LED indication available in 24 V or 110 V 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)



Height = 25mm [0.98in]

Connector with Cable



Height = 26mm [1.02]

Field Wireable Connector

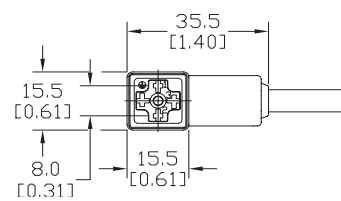
8mm (3-pole) Connectors (per DIN 43650 Form C)

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
SC8-LS24-3		24 ±20%	max 4 A	67	18 AWG	0.23	yes	zener diode (D-Z DO-15 47V 2 W)	1	m2.5-0.45 x 25 mm / 0.4 Nm (3.5 in lb)	0.40	CSA (080128-0-000)
SC8-LS24-5											0.65	
SC8-LS110-3		110 ±10%						zener diode (D-Z DO-41 ZY200 2 W)	7		0.41	
SC8-LS110-5											0.63	
SC8-3			max 6 A	65	Solid 12 AWG Stranded 14 AWG w/Ferrule 16 AWG	field wireable gland size 0.20 to 0.24	no	none	2	m2.5-0.45 x 25 mm / 0.5 Nm (4.4 in lb)	0.39	none
SC8-0		230							9		0.10	
SC8-1											0.10	
SC8-5									2		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)

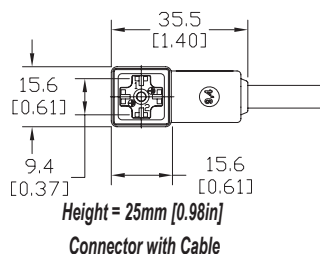
Part No.	Price	Voltage (AC/DC)	Current Rating	IP Rating	Wire Size	Cable Dia. (in.)	LED	Surge Protection	Wiring Figure	Screw Size/Torque	Weight (lbs)	Agency Approval
SC8-5T		230	max 6 A	67	18 AWG	0.26	yes	none	8	m3-0.5 x 42 mm / 0.5 Nm (4.4 in lb)	0.80	CSA (080128-0-000)

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

Solenoid Valve Cables and Connectors

9.4mm Connectors

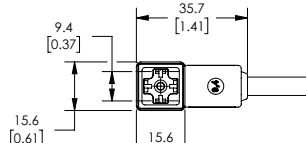
Dimensions shown
mm [inches]



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				
SC9-LS24-3		24 ±20%	max 4 A	67	18 AWG	0.23	yes	zener diode (D-Z DO-15 47V 2 W)	1	m3-0.5 x 26 mm / 0.4 Nm (3.5 in lb)	0.40	CSA (080128-0-000)				
SC9-LS24-5											0.64					
SC9-LS110-3		110 ±10%					zener diode (D-Z DO-41 ZY200 2 W)	7	0.40							
SC9-LS110-5										0.64						
SC9-3		230	max 6 A								no	none	2	m3-0.5 x 26 mm / 0.5 Nm (4.4 in lb)	0.40	none
SC9-5														0.64		

9.4mm Connectors

Dimensions shown
mm [inches]



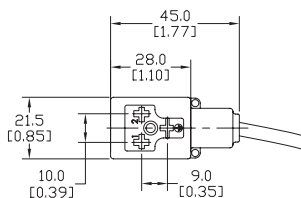
Height = 25mm [0.98in]
Connector with Cable

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
7000-94141-6270300		230 VAC/ VDC	max 6 A	IP67	18 AWG	5.6–6.2 mm	9.8ft/3m	no	none	8	m3-0.5 x 26 mm / 0.4 Nm (3.5 in lb)	0.50	CSA (080128-0-000) RoHS
7000-94141-6270500							16.4ft/5m					0.79	

Solenoid Valve Cables and Connectors

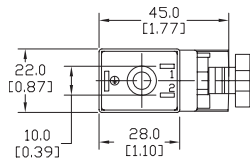
10mm Connectors

Dimensions shown
mm [inches]



Height = 30mm [1.18in]

Connector with Cable



Height = 41mm [1.61in]

Field Wireable Connector

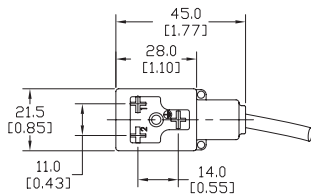
10mm (3-pole) Connectors (per DIN 43650 Form B)

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
SC10-LS24-3		24 ±20%	max 4 A	67	18 AWG	0.23	yes	zener diode (D-Z DO-15 47V 2 W)	10	m3-0.5 x 30 mm / 0.4 Nm (3.5 in lb)	0.43	CSA (080128-0-000)
SC10-LS24-5								zener diode (D-Z DO-41 ZY200 2 W)	6		0.68	
SC10-LS110-3		110 ±10%	max 4 A				no	none	3		0.43	
SC10-LS110-5											0.68	
SC10-3		230	max 10 A	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 2 W)	4	m3-0.5 x 42 mm / 0.5 Nm (4.4 in lb)	0.07	none
SC10-5								mov (SIOV S10 K130)	5		0.07	
SC10-LS24-0		24 ±20%	max 4 A				no	none				
SC10-LS110-0		110 ±10%	max 1 A									

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

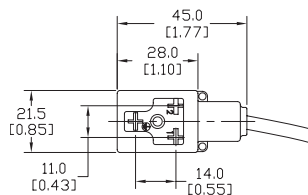
11mm Connectors

Dimensions shown
mm [inches]



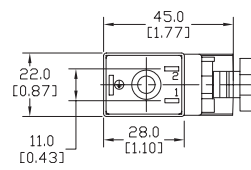
Height = 30mm [1.18in]

Connector with Cable



Height = 30mm [1.18in]

Reverse Connector with Cable



Height = 41mm [1.61in]

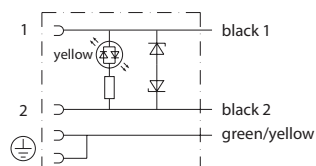
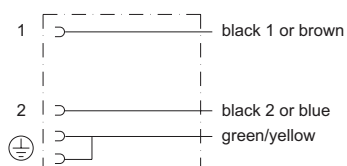
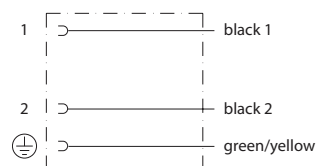
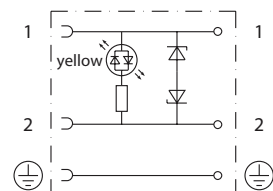
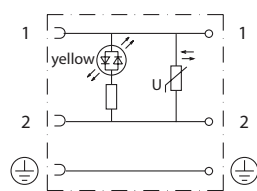
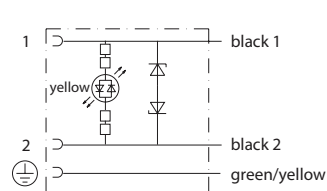
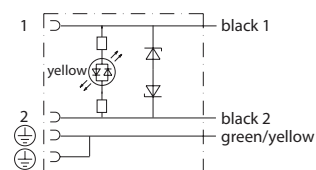
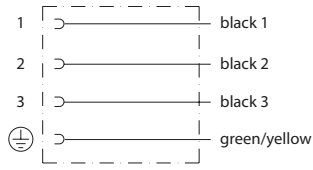
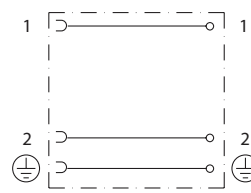
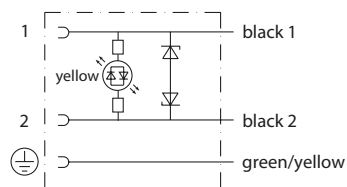
Field Wireable Connector

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
SC11-LS24-3		24 ±20%	max 4 A	67	18 AWG	0.23	yes	zener diode (D-Z DO-15 47V 2 W)	10	m3-0.5 x 30 mm / 0.4 Nm (3.5 in lb)	0.44	CSA (080128-0-000)
SC11-LS24-5								zener diode (D-Z DO-41 ZY200 2 W)	6		0.67	
SC11-LS110-3		110 ±10%	max 4 A				no	none	3		0.44	
SC11-LS110-5											0.67	
SC11-LS24-3R		24 ±20%	max 4 A	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 2 W)	10	m3-0.5 x 42 mm / 0.5 Nm (4.4 in lb)	0.44	none
SC11-LS24-5R								zener diode (D-Z DO-41 ZY200 2 W)	6		0.67	
SC11-LS110-3R		110 ±10%	max 4 A				no	none	3		0.44	
SC11-LS110-5R											0.67	
SC11-3		230	max 10 A	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 2 W)	4	m3-0.5 x 42 mm / 0.5 Nm (4.4 in lb)	0.07	none
SC11-5								mov (SIOV S10 K130)	5		0.07	
SC11-0		230	max 10 A				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**