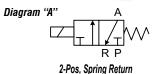


Pneumatic Directional Control Solenoid Valves – AVP Series





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
- 24VDC or 120VAC solenoid coils
- DIN style wiring connector with LED indication
- Single valve or multiple stacked valve applications

AVP-31C1-120A

\$32.00

102 - 132 VAC (50/60 Hz)

· 2 year warranty

0.3

3-way 2 position

Direct acting, normally closed, spring return

1/8

1.2 mm, Cv=0.051

Air (to be filtered by 40µ filter element)

0 to 120psi, (0 to 0.8 MPa), (0 to 8.3 bar)

DC: 3.0W | AC: 4.5 VA; continuous duty (100% ED)

10 cycles/sec

50,000,000 cycles

B class

0.05 sec

-5~60°C (23~140°F)

Not Required

IP65 (DIN40050)

11mm DIN Terminal with Grommet

Aluminum Alloy

Solenoid CE marked; RoHS

AVP Series Specifications

AVP-31C1-24D

\$32.00

20.4 - 26.4 VDC





See <u>www.AutomationDirect.com</u> for a wide variety of fitting options





Stacked example using <u>AVP-31KIT</u> stacking screw kit and shown with mounting bracket AVP-31BKT



Dimensions

mm [inches]

AVP-31C1

Model

Price

Acting

Fluid

Voltage

Diagram Port Size

Orifice Size

Operating Pressure

Power Consumption

Maximum Frequency

Operating Life

Min Response

Temperature

Lubrication

Protection

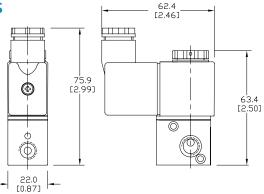
Connection

Material of Body

Agency Approvals

Insulation

Weight (lbs) Valve Type





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



AVP-31KIT

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



AVP-31BKT

Dimensions in mm [inches]



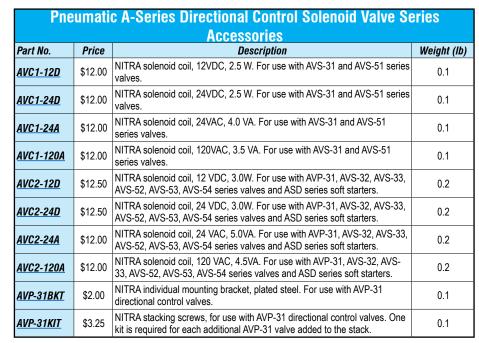
Pneumatic A-Series Direction Control Solenoid Valves - Accessories



AVC1-12D



AVC2-12D





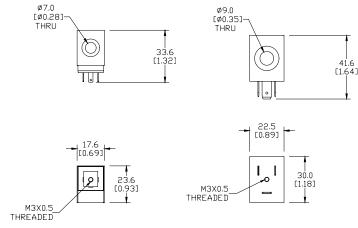
AVP-31BKT



AVP-31KIT

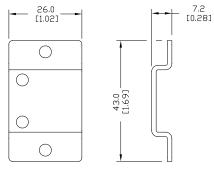
Dimensions

mm [inches]



AVC1 Series Coils

AVC2 Series Coils



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

	natic	Directional Control Solenoid Valve Series Acces	sories
Part No.	Price	Description	Weight (lb)
<u>AM-312</u>	\$24.50	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
<u>AM-314</u>	\$35.50	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
<u>AM-316</u>	\$42.50	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
<u>AM-318</u>	\$56.00	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
<u>AM-31BP</u>	\$5.00	NITRA blanking plate, plated steel. For use with AM-31 series manifolds.	0.1
<u>AM-322</u>	\$23.00	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
<u>AM-324</u>	\$39.50	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
<u>AM-326</u>	\$57.00	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
<u>AM-328</u>	\$74.00	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
<u>AM-32BP</u>	\$5.00	NITRA blanking plate, plated steel. For use with AM-32 series manifolds.	0.1
<u>AM-332</u>	\$25.50	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
<u>AM-334</u>	\$46.00	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
<u>AM-336</u>	\$81.00	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
<u>AM-338</u>	\$86.00	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
<u>AM-33BP</u>	\$5.50	NITRA blanking plate, plated steel. For use with AM-33 series manifolds.	0.1
<u>AM-512</u>	\$12.50	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
<u>AM-514</u>	\$22.50	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
<u>AM-516</u>	\$32.00	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
<u>AM-518</u>	\$44.50	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
<u>AM-51BP</u>	\$6.25	NITRA blanking plate, plated steel. For use with AM-51 series manifolds.	0.1
<u>AM-522</u>	\$16.50	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
<u>AM-524</u>	\$32.50	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
<u>AM-526</u>	\$46.50	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
<u>AM-528</u>	\$63.00	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



Pneumatic Directional Control Solenoid Valve Manifolds and Accessories



AM-5 Series Manifolds



AM-31GS

Pneu	matic l	Directional Control Solenoid Valve Series Access Continued	sories
Part No.	Price	Description	Weight (lb)
<u>AM-532</u>	\$22.00	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
<u>AM-534</u>	\$44.00	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
<u>AM-536</u>	\$66.00	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
<u>AM-538</u>	\$88.00	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
<u>AM-53BP</u>	\$6.75	NITRA blanking plate, plated steel. For use with AM-53 series manifolds.	0.1
<u>AM-542</u>	\$29.00	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
<u>AM-544</u>	\$59.00	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
<u>AM-546</u>	\$91.00	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
<u>AM-548</u>	\$109.00	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
<u>AM-54BP</u>	\$6.75	NITRA blanking plate, plated steel. For use with AM-54 series manifolds.	0.1
<u>AM-31GS</u>	\$5.25	NITRA manifold mounting set, for use with AM-31 series manifolds.	0.1
<u>AM-32GS</u>	\$6.00	NITRA manifold mounting set, for use with AM-32 series manifolds.	0.1
<u>AM-33GS</u>	\$6.00	NITRA manifold mounting set, for use with AM-33 series manifolds.	0.1
<u>AM-51GS</u>	\$5.25	NITRA manifold mounting set, for use with AM-51 series manifolds.	0.1
<u>AM-52GS</u>	\$6.00	NITRA manifold mounting set, for use with AM-52 series manifolds.	0.1
<u>AM-53GS</u>	\$6.00	NITRA manifold mounting set, for use with AM-53 series manifolds.	0.1
AM-54GS	\$6.25	NITRA manifold mounting set, for use with AM-54 series manifolds.	0.1

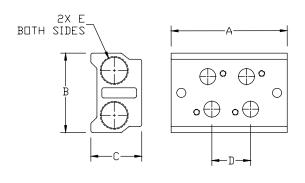


Pneumatic Directional Control Solenoid Valve Manifolds and Accessories

Dimensions

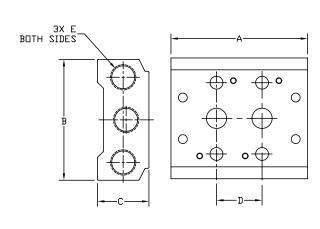
mm [inches]

AM 3x Series Manifolds



		MANIFOLD	DIMENSION	12.	
PART NO.	Α	В	С	D	E
AM-312	57.0 [2.24]			19.0 [.075]	
AM-314	95.0 [3.74]	39.0 [1.54]	25.0 [0.98]	3X 19.0 [.075]	
AM-316	133.0 [5.24]	35.0 [1.34]	23.0 [0.36]	5X 19.0 [.075]	
AM-318	171.0 [6.73]			7X 19.0 [.075]	1/4 NPT
AM-322	69.0 [2.72]			23.0 [0.91]	1/4 NP1
AM-324	115.0 [4.53]	45.0 [1.77]	25.0 [0.98]	3X 23.0 [0.91]	
AM-326	161.0 [6.34]	45.0 [1.77]	23.0 [0.36]	5X 23.0 [0.91]	
AM-328	207.0 [8.15]			7X 23.0 [0.91]	
AM-332	82.0 [3.23]			28.0 [1.10]	
AM-334	138.0 [5.46]	52.0 [2.05]	29.0 [1.14]	3X 28.0 [1.10]	3/8 NPT
AM-336	194.0 [7.64]	JC'0 [5'02]	C 7.U LI.14]	5X 28.0 [1.10]	3/0 NP1
AM-338	250.0 [9.84]			7X 28.0 [1.10]	

AM 5x Series Manifolds



		MANITEEN D	DIMENIOTES	10			
			DIMENSION				
PART NO.	Α	В	С	D	E		
AM-512	57.0 [2.24]			19.0 [.075]*			
AM-514	95.0 [3.74]	58.0 [2.28]	25.0 [0.98]	3X 19.0 [.075]∗			
AM-516	133.0 [5.24]	20'0 [5'50]	23.0 [0.36]	5X 19.0 [.075]*			
AM-518	171.0 [6.73]			7X 19.0 [.075]*	1/4 NPT		
AM-522	69.0 [2.72]			23.0 [0.91]	174 NF1		
AM-524	115.0 [4.53]	61.0 [2.40]	26.0 [1.02]	3X 23.0 [0.91]			
AM-526	161.0 [6.34]	61.0 [2.40]	26.0 [1.02]	5X 23.0 [0.91]			
AM-528	207.0 [8.15]			7X 23.0 [0.91]			
AM-532	82.0 [3.23]			28.0 [1.10]			
AM-534	138.0 [5.46]	75.0 [2.95]	30.0 [1.19]	3X 28.0 [1.10]	3/8 NPT		
AM-536	194.0 [7.64]	73.0 [2.93]	30.0 [1.19]	5X 28.0 [1.10]	3/6 NF1		
AM-538	250.0 [9.84]			7X 28.0 [1.10]			
AM-542	98.0 [3.86]			35.0 [1.38]			
AM-544	168.0 [6.61]	104.0 [4.09]	38.0 [1.50]	3X 35.0 [1.38]	1/2 NPT		
AM-546	238.0 [9.37]	104.0 [4.09]	30.0 [1:20]	5X 35.0 [1.38]	1/2 NP1		
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.

8mm Connectors

Dimensions shown mm [inches]

Solenoid Valve Cables and Connectors

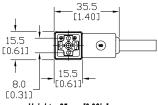


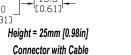
These high quality connectors and over-molded cables help reduce wiring time. The lower voltage models, 24V or 110V AC/DC, include built-in surge suppression, Yellow LED indicator and are rated for connecting with electronics. The 230V AC/DC models are rated for straight wired products. All models are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

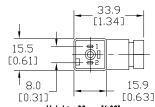
Features

- 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)









Height = 26mm [1.02] Field Wireable Connector

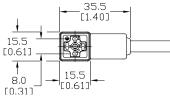
				8mm	(3-pole) C	onnecto	rs (p	er DIN 43650 Fo	rm C)			
Part No.	Price	Voltage (AC/DC)	Current Rating	IP Rating	Wire Size	Cable Dia. (in.)	LED	Surge Protection	Wiring Figure	Screw Size/ Torque	Weight (lbs)	Agency Approval
SC8-LS24-3	\$15.50	24 ±20%						zener diode	1	m2.5-	0.40	
SC8-LS24-5	\$18.50	24 ±20 /0	max 4A				yes	(D-Z DO-15 47V 2W)	ı	0.45x25mm/ 0.4 Nm (3.5 in lb)	0.65	CSA (080128-0-000)
SC8-LS110-3	\$19.00	110 ±10%	IIIdx 4A	67	18 AWG	0.23	yes	zener diode	7		0.41	
SC8-LS110-5	\$22.00	110 ± 10 /0						(D-Z DO-41 ZY200 2W)	,	(3.3 111 10)	0.63	
SC8-3	\$12.50								2		0.39	
<u>SC8-0</u>	\$8.25	230	max 6A	65	Solid 12 AWG Stranded 14 AWG w/Ferrule 16 AWG	field wireable gland size 0.20 to 0.24	no	none	9	m2.5- 0.45x25mm/ 0.5 Nm (4.4 in lb)	0.10	none
SC8-1	\$16.50			67	18 AWG	0.23			2	(1.11110)	0.10	
<u>SC8-5</u>	\$17.50			07	10 AWG	0.23					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		
<u>SC8-5T</u>	\$23.50	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.

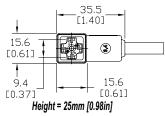


Solenoid Valve Cables and Connectors

9.4mm Connectors

Dimensions shown mm [inches]





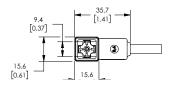
Connector with Cable

			9.4mn	n (3-p	ole)	Connect	ors	(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	\$15.50	24 ±20%						zener diode	1		0.40			
SC9-LS24-5	\$18.50	24 ±20%	max 4A				1/00	(D-Z DO-15 47V 2W)	'	m3-0.5x26mm/ - 0.4 Nm (3.5 in lb)	0.64	CSA (080128-0-000)		
SC9-LS110-3	\$19.00	110 ±10%	IIIax 4A		18		yes	zener diode	7		0.40	CSA (000 120-0-000)		
SC9-LS110-5	\$22.00	110 ±10 /6		67	AWG	0.23		(D-Z DO-41 ZY200 2W)	,	,	0.64			
<u>SC9-3</u>	\$12.50									m3-0.5x26mm/	0.40			
<u>SC9-5</u>	\$17.50	230	max 6A				no	none	2	0.5 Nm (4.4 in lb)	0.64	none		

9.4mm Connectors

Dimensions shown mm [inches]

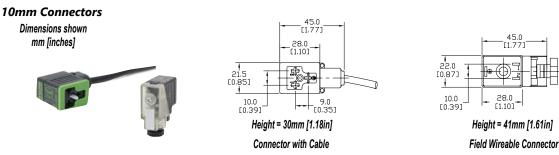




Height = 25mm [0.98in] Connector with Cable

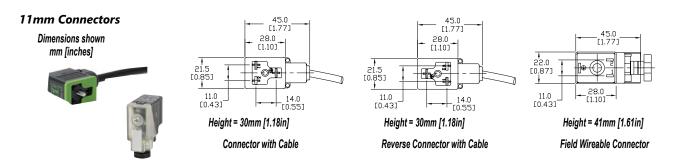
		9.4n	nm (4-	pole)	Conn	ectors	(DIN Style, Form C Industrial)						
Part No.	Price	Voltage (AC/DC)	Current Rating	IP Rating	Wire Size	Cable Dia.	Cable Length	LED	Surge Protection	Wiring Figure	Screw Size/ Torque	Weight (lbs)	Agency Approval
7000-94141-6270300	\$18.00	230 VAC/			18	5.6–6.2	9.8ft/3m				m3- 0.5x26mm/	0.50	CSA
<u>7000-94141-6270500</u>	\$24.00	VDC	max 6A	IP67	AWG	5.0-6.2 mm	16.4ft/5m	no	none	8	0.5x26fffff/ 0.4 Nm (3.5 in lb)	0.79	(080128-0-000)/ RoHS

Solenoid Valve Cables and Connectors



			10m	ım (3-	-pole) Con	nectors	(pe	r DIN 43650 For	m 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	\$15.50	24 ±20%	may 1A					zener diode	10		0.43	
<u>SC10-LS24-5</u>	\$18.50	24 ±20%	max 4A				yes	(D-Z DO-15 47V 2W)	10		0.68	CSA (080128-0- 000)
SC10-LS110-3	\$19.00	110 ±10%	may 1A	67	18 AWG	0.00		zener diode	6	m3-0.5x30mm/ 0.4 Nm (3.5 in lb)	0.43	
SC10-LS110-5	\$22.00	110 ± 10%	max 1A	07		0.23		(D-Z DO-41 ZY200 2W)	0		0.68	
SC10-3	\$12.50	230	max 10A						3		0.43	
<u>SC10-5</u>	\$17.50	230	max TUA				no	none	3		0.68	
SC10-LS24-0	\$12.50	24 ±20%	max 4A	65	Solid 12 AWG Stranded 14 AWG	field wireable	V00	zener diode (D-Z DO-15 47V 2W)	4	m3-0.5x42mm/ 0.5 Nm	0.07	nono
<u>SC10-LS110-0</u>	\$14.00	110 ±10%	max 1A	00	w/Ferrule 16 AWG	gland size 0.24 to 0.32	yes	mov (SIOV S10 K130)	5	(4.4 in lb)	0.07	none

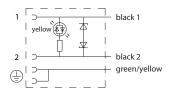
Last digit in part number denotes cable length in meters, a 0 indicates field termination.



			11mm	(3- pol	e) Connec	tors (DI	N St	yle, Form B In	dustri	al)		
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	\$15.50	24 ±20%	may 11					zener diode	10		0.44	
SC11-LS24-5	\$18.50	24 ±20%	max 4A					(D-Z DO-15 47V 2W)	10		0.67	
SC11-LS110-3	\$19.00	110 ±10%	max 1A					zener diode (D-Z DO-41 ZY200	6		0.44	
<u>SC11-LS110-5</u>	\$22.00	110 ± 10%	IIIax IA					2W)	0		0.67	
SC11-LS24-3R	\$15.50	24 ±20%	10	67	18 AWG	0.23	yes	zener diode	10	m3-0.5x30mm/	0.44	CSA
SC11-LS24-5R	\$18.50	24 ±20%	max 4A	67	10 AVVG	0.23		(D-Z DO-15 47V 2W)	10	0.4 Nm (3.5 in lb)	0.67	(080128-0-000)
SC11-LS110-3R	\$19.00	110 ±10%	may 1A					zener diode	6	, ,	0.44] ` ′
SC11-LS110-5R	\$22.00	110 ± 10%	max 1A					(D-Z DO-41 ZY200 2W)	0		0.67	
SC11-3	\$12.50	230	may 10A					200	3		0.44	
SC11-5	\$17.50	230	max 10A				no	none	3		0.67	
SC11-LS24-0	\$12.50	24 ±20%	max 4A		Solid 12 AWG Stranded 14	field wireable	ves	zener diode (D-Z DO-15 47V 2W)	4	m3-0.5x42mm/	0.07	
<u>SC11-LS110-0</u>	\$14.00	110 ±10%	max 1A	65	AWG w/Ferrule 16	gland size 0.24 to	yes	mov (SIOV S10 K130)	5	0.5 Nm (4.4 in lb)	0.07	none
SC11-0	\$10.50	230	max 10A		AWG	0.32	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



black 1 or brown

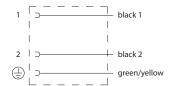


Figure No. 1

Figure No. 2

Figure No. 3

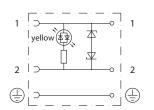


Figure No. 4

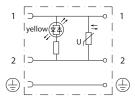


Figure No. 5

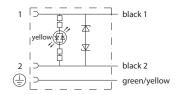


Figure No. 6

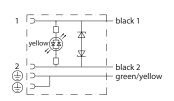


Figure No. 7



Figure No. 8



Figure No. 9

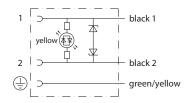


Figure No. 10