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
- 2 year warranty





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





RF

	AVP Series Specificat	ions									
Model	<u>AVP-31C1-24D</u>	<u>AVP-31C1-120A</u>									
Price	\$35.00	\$35.00									
Weight (lbs)	0.3										
Valve Type	3-way 2 position										
Acting	Direct acting, normally closed, spring return										
Diagram	А	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 120psi, (0 to 0.8 MPa), (0 to 8.3 bar)										
Voltage	20.4 - 26.4 VDC	102 - 132 VAC (50/60 Hz)									
Power Consumption	DC: 3.0W AC: 4.5 VA; c	ontinuous duty (100% ED)									
Maximum Frequency	10 сус	les/sec									
Operating Life	50,000,0	00 cycles									
Insulation	Bc	lass									
Min Response	0.05	5 sec									
Temperature	-5~60°C (23~140°F)									
Lubrication	Not Re	equired									
Protection	IP65 (DI	N40050)									
Connection	11mm DIN Termi	nal with Grommet									
Material of Body	Alumini	um Alloy									
Agency Approvals	Solenoid CE r	marked; RoHS									

62.4

63.4 [2.50]

complete Engineering drawings.

See our website www.AutomationDirect.com for



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



<u>AVP-31KIT</u> Note: One kit is required for each additional AVP-31 valve added to the stack.

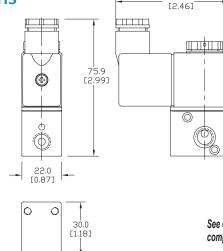


<u>AVP-31BKT</u>

Dimensions in mm [inches]

Dimensions

mm [inches] AVP-31C1





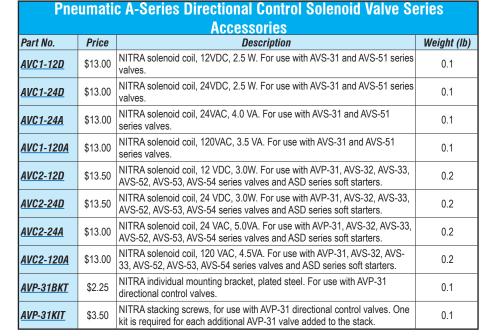
Pneumatic A-Series Direction Control Solenoid Valves - Accessories



AVC1-12D



AVC2-12D





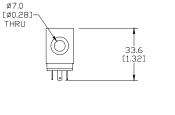
AVP-31BKT

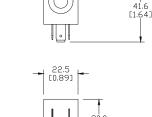


AVP-31KIT

Dimensions







30.0

[1.18]

Ø9.N [ø0.35]

THRU

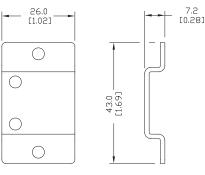
M3X0.5 THREADEI

THREADED **AVC1** Series Coils

M3X0 5

0.69

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



<u>AM-31BP</u>

Pneu	matic	Directional Control Solenoid Valve Series Acces	sories
Part No.	Price	Description	Weight (lb)
<u>AM-312</u>	\$27.00	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-31 series.	0.2
<u>AM-314</u>	\$39.00	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>	\$46.50	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>	\$61.00	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>	\$5.50	NITRA blanking plate, plated steel. For use with AM-31 series manifolds.	0.1
<u>AM-322</u>	\$25.00	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>	\$43.50	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>	\$62.00	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>	\$81.00	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>	\$5.50	NITRA blanking plate, plated steel. For use with AM-32 series manifolds.	0.1
<u>AM-332</u>	\$28.00	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>	\$50.00	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>	\$89.00	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>	\$94.00	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>	\$6.00	NITRA blanking plate, plated steel. For use with AM-33 series manifolds.	0.1
<u>AM-512</u>	\$13.50	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>	\$24.50	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>	\$35.00	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>	\$48.50	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>	\$6.75	NITRA blanking plate, plated steel. For use with AM-51 series manifolds.	0.1
<u>AM-522</u>	\$18.00	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>	\$35.50	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>	\$51.00	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-52 series.	1.2
<u>AM-528</u>	\$69.00	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
<u>AM-52BP</u>	\$7.50	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



<u>AM-31GS</u>

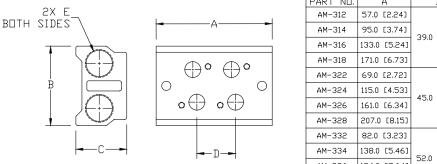
Pneu	matic I	Directional Control Solenoid Valve Series Access Continued	sories
Part No.	Price	Description	Weight (lb)
<u>AM-532</u>	\$24.00	NITRA pneumatic valve manifold, aluminum, 2 stations, (2) 3/8in FNPT inlet port(s), (4) 3/8in FNPT exhaust port(s). For use with AVS-53 series.	0.8
<u>AM-534</u>	\$48.00	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>	\$72.00	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>	\$96.00	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>	\$7.50	NITRA blanking plate, plated steel. For use with AM-53 series manifolds.	0.1
<u>AM-542</u>	\$32.00	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>	\$65.00	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>	\$100.00	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>	\$119.00	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>	\$7.50	NITRA blanking plate, plated steel. For use with AM-54 series manifolds.	0.1
<u>AM-31GS</u>	\$5.75	NITRA manifold mounting set, for use with AM-31 series manifolds.	0.1
<u>AM-32GS</u>	\$6.50	NITRA manifold mounting set, for use with AM-32 series manifolds.	0.1
<u>AM-33GS</u>	\$6.50	NITRA manifold mounting set, for use with AM-33 series manifolds.	0.1
<u>AM-51GS</u>	\$5.75	NITRA manifold mounting set, for use with AM-51 series manifolds.	0.1
<u>AM-52GS</u>	\$6.50	NITRA manifold mounting set, for use with AM-52 series manifolds.	0.1
<u>AM-53GS</u>	\$6.50	NITRA manifold mounting set, for use with AM-53 series manifolds.	0.1
<u>AM-54GS</u>	\$6.75	NITRA manifold mounting set, for use with AM-54 series manifolds.	0.1

Pneumatic Directional Control Solenoid VelMATICS Valve Manifolds and Accessories

Dimensions

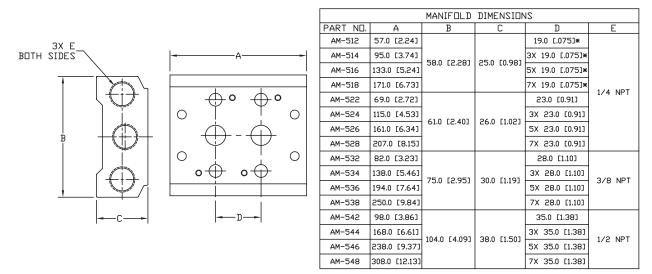
mm [inches]

AM 3x Series Manifolds



		MANIFOLD	DIMENSIONS							
PART ND.	A	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]	59.0 LI.341	23.0 10.983	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]	174 NET					
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]	4J.U LI.//J	23.0 10.983	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]	JE'N 15'031	C7.0 LI.14J	5X 28.0 [1.10]	3/0 NP1					
AM-338	250.0 [9.84]			7X 28.0 [1.10]						

AM 5x Series Manifolds



* 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

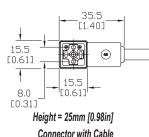


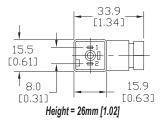


These high quality connectors and over-molded cables help reduce wiring time. The lower voltage models, 24V or 110V AC/DC, include built-in surge suppression, Yellow LED indicator and are rated for connecting with electronics. The 230V AC/DC models are rated for straight wired products. All models are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





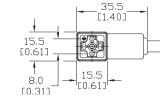
Field Wireable Connector

					00111							
				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
<u>SC8-LS24-3</u>	\$15.50	24 ±20%						zener diode	1	m2.5-	0.40	
<u>SC8-LS24-5</u>	\$18.50	24 ±20%	max 4A					(D-Z DO-15 47V 2W)	I	0.45x25mm/	0.65	CSA
<u>SC8-LS110-3</u>	\$19.00	110 ±10%		67	18 AWG	0.23	yes	zener diode	7	0.4 Nm (3.5 in lb)	0.41	(080128-0-000)
<u>SC8-LS110-5</u>	\$22.00	110 ± 10 %						(D-Z DO-41 ZY200 2W)	1	(ai ni c.c)	0.63	
<u>SC8-3</u>	\$12.50								2		0.39	
<u>SC8-0</u>	\$9.00	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
<u>SC8-1</u>	\$18.00			67	18 AWG	0.23			2	(0.10]
<u>SC8-5</u>	\$17.50			0/	TO AWG	0.23			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		
<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.

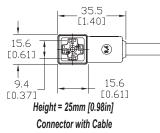


Solenoid Valve Cables and Connectors

9.4mm Connectors

Dimensions shown mm [inches]



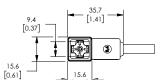


			9.4mn	n (3-p	ole)	Connect	ors	(DIN Style, Form C Industrial)						
Part No.	Price	Voltage (AC/DC)	Current Rating	IP Rating	Wire Size	Cable Dia. (in.)	LED	Surge Protection	Wiring Figure	Screw Size/ Torque	Weight (lbs)	Agency Approval		
<u>SC9-LS24-3</u>	\$15.50	24 ±20%						zener diode	1		0.40			
<u>SC9-LS24-5</u>	\$18.50	24 ±20%	max 4A		18 AWG			(D-Z DO-15 47V 2W)	I	m3-0.5x26mm/	0.64	CSA (080128-0-000)		
<u>SC9-LS110-3</u>	\$19.00	110 ±10%	IIIdX 4A				yes	zener diode	7	(3.5 in lb)	0.40	CSA (000120-0-000)		
<u>SC9-LS110-5</u>	\$22.00	110 ± 10%		67		0.23		(D-Z DO-41 ZY200 2W)	1	· · · /	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

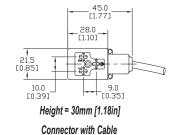
		9.4 n	nm (4-	pole)	Conn	onnectors (DIN Style, Form C Industrial)							
Part No.	Price	Voltage (AC/DC)	Current Rating	IP Rating	Wire Size	Cable Dia.	Cable Length	LED	Surge Protection	Wiring Figure	Screw Size/ Torque	Weight (lbs)	Agency Approval
7000-94141-6270300	\$20.00	220 1401			10	5.6–6.2	9.8ft/3m				m3-	0.50	CSA
<u>7000-94141-6270500</u>	\$26.50	230 VAC/ VDC	max 6A	IP67	18 AWG	5.0-0.2 mm	16.4ft/5m	no	none	8	0.5x26mm/ 0.4 Nm (3.5 in lb)	0.79	(080128-0-000)/ RoHS

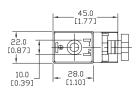
Solenoid Valve Cables and Connectors

10mm Connectors

Dimensions shown mm [inches]







Height = 41mm [1.61in] Field Wireable Connector

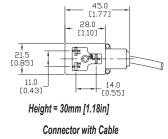
	10mm (3-pole) Connectors (per DIN 43650 Form B)														
Part No.	Price	Voltage (AC/DC)	Current Rating	IP Rating	Wire Size	Cable Dia. (in.)	LED	Surge Protection	Wiring Figure	Screw Size/ Torque	Weight (lbs)	Agency Approval			
<u>SC10-LS24-3</u>	\$15.50	24 ±20%	max 4A					zener diode	10		0.43				
<u>SC10-LS24-5</u>	\$18.50	24 ±20%	max 4A				yes	(D-Z DO-15 47V 2W)	10	m3-0.5x30mm/ 0.4 Nm	0.68	CSA (080128-0- 000)			
<u>SC10-LS110-3</u>	\$19.00	110 ±10%	max 4A	67	7 18 AWG	0.23		zener diode	6		0.43				
<u>SC10-LS110-5</u>	\$22.00		max 4A	07		0.23		(D-Z DO-41 ZY200 2W)	0	(3.5 in lb)	0.68				
<u>SC10-3</u>	\$12.50	230	max 10A					2020	3		0.43				
<u>SC10-5</u>	\$17.50		max 10A				no	none	3		0.68				
<u>SC10-LS24-0</u>	\$12.50	24 ±20%	max 4A	65	Solid 12 AWG Stranded 14	field wireable gland size 0.24 to 0.32		zener diode (D-Z DO-15 47V 2W)	4	m3-0.5x42mm/ 0.5 Nm	0.07	2020			
<u>SC10-LS110-0</u>	\$14.00	110 ±10%	max 1A	00	AWG w/Ferrule 16 AWG			mov (SIOV S10 K130)	5	(4.4 in lb)	0.07	none			

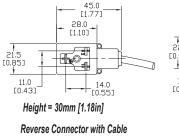
Last digit in part number denotes cable length in meters, a 0 indicates field termination.

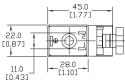
11mm Connectors

Dimensions shown mm [inches]









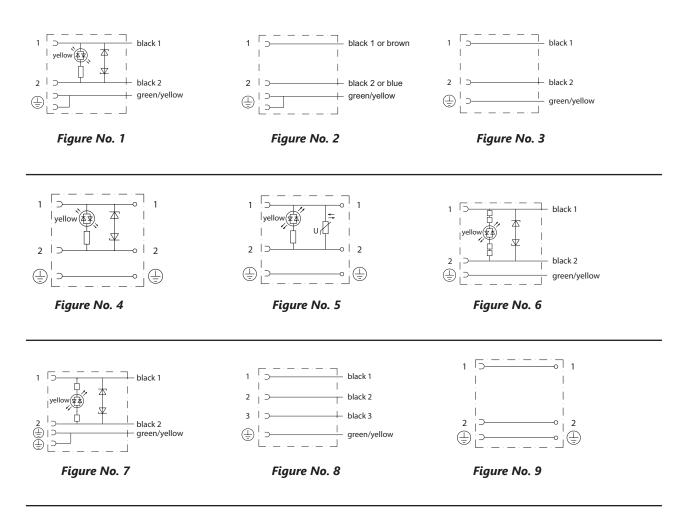
Height = 41mm [1.61in]

Field Wireable Connector

			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 (Ibs)	Agency Approval			
<u>SC11-LS24-3</u>	\$15.50	24 ±20%	max 14					zener diode	10		0.44				
<u>SC11-LS24-5</u>	\$18.50	24 ±20%	max 4A					(D-Z DO-15 47V 2W)	10		0.67				
<u>SC11-LS110-3</u>	\$19.00	110 ±10%	max 4A					zener diode (D-Z DO-41 ZY200	6		0.44				
<u>SC11-LS110-5</u>	\$22.00	110 ± 10%	IIIdX 4A					(D-2 DO-41 21200 2W)	0		0.67				
<u>SC11-LS24-3R</u>	\$15.50	24 ±20%	may 14	67	18 AWG	0.23	yes	zener diode	10	m3-0.5x30mm/ 0.4 Nm	0.44	CSA			
<u>SC11-LS24-5R</u>	\$18.50	24 ±20%	max 4A	07	10 AVVG	0.23		(D-Z DO-15 47V 2W)	10	(3.5 in lb)	0.67	(080128-0-000)			
<u>SC11-LS110-3R</u>	\$19.00	110 . 100/	110 ±10% max 4A	max 4A	max 4A	max 4A	1				zener diode	6		0.44	, , ,
<u>SC11-LS110-5R</u>	\$22.00	$110 \pm 10\%$				-		(D-Z DO-41 ZY200 2W)	0		0.67				
<u>SC11-3</u>	\$12.50	230	may 104	1					3		0.44				
<u>SC11-5</u>	\$17.50	230	max 10A				no	none	3		0.67				
<u>SC11-LS24-0</u>	\$12.50	24 ±20%	max 4A		Solid 12 AWG Stranded 14	field wireable		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			
<u>SC11-0</u>	\$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



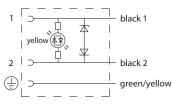


Figure No. 10