



# Process Pipeline Solenoid Valves

## DVP-2D & DVP-3D Series

Part No. **DVP-2DC1D-24D**

The Nitra DVP-2D and DVP-3D Series valves are composite body solenoid valves offered in both 2-way and 3-way normally closed styles in three orifice sizes. Features include a direct acting solenoid utilizing a long-life spring compensated poppet at the heart of an all stainless solenoid operator. Body construction is glass filled nylon with Viton seals, making the valves compatible with air, oil, inert gas, water and caustics\*. Operating voltages of 24VDC, 24VAC or 120VAC are available.

### Features

- 2-way and 3-way poppet style valves
- 1/8, 1/4 or 3/8" FNPT ports
- 2-position, normally closed, spring return
- 24VDC, 24VAC or 120VAC solenoids
- DIN style wiring connector

Valve Symbols



2-way, 2-pos, NC

See [www.AutomationDirect.com](http://www.AutomationDirect.com)

for a wide variety of fitting and cable options



DVP-2D Series Solenoid Valve Specifications									
Model	<u>DVP-2DC1D-24D</u>	<u>DVP-2DC1D-24A</u>	<u>DVP-2DC1D-120A</u>	<u>DVP-2DC2E-24D</u>	<u>DVP-2DC2E-24A</u>	<u>DVP-2DC2E-120A</u>	<u>DVP-2DC3F-24D</u>	<u>DVP-2DC3F-24A</u>	<u>DVP-2DC3F-120A</u>
Price	\$04sf:	\$04se:	\$04sd:	\$04si:	\$04sh:	\$04sg:	\$04sl:	\$04sk:	\$04sj:
Weight (lbs)	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Valve Type	2-way, 2-position								
Acting	Poppet valve, normally closed, spring return						Poppet valve, normally closed, spring return		
Port Size	1/8" FNPT			1/4" FNPT			3/8" FNPT		
Orifice Size	0.062" [1.6 mm]			0.094" [2.4 mm]			0.118" [3.0 mm]		
Cv	0.12			0.245			0.315		
Media	Air, oil, inert gas, water, caustics*								
Pressure Range	0–250 psi [0–17.2 bar]						0–150 psi [0–10.3 bar]		0–250 psi [0–17.2 bar]
Voltage (±10%)	24VDC	24VAC 50/60 Hz	120VAC 50/60 Hz	24VDC	24VAC 50/60 Hz	120VAC 50/60 Hz	24VDC	24VAC 50/60 Hz	120VAC 50/60 Hz
Inrush AC	–	26VA		–	26VA		–	26VA	
Power Consumption	10W	11.5 VA		10W	11.5 VA		10W	11.5 VA	
Max Freq	25Hz								
Insulation	Class F (continuous duty)								
Min Response	16–40 ms								
Temperature	14°F to 122°F [-10°C to 50°C]								
Lubrication	Not Required								
Protection	NEMA Type 4								
Connection	18mm DIN terminal								
Construction	Glass filled nylon body; Viton seals; Operator Stainless Steel								
Life Cycle	10 million								
Agency Approvals	CE								

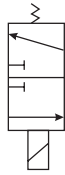
\* Check the chemical compatibility of the valve materials with the process media being used.



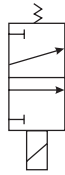
# Process Pipeline Solenoid Valves

## DVP-2D & DVP-3D Series

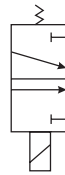
### Valve Symbols



3-way, 2-pos, NC



3-way, 2-pos, Mixing



3-way, 2-pos, Diverting

DVP-3D Series Solenoid Valve Specifications									
Model	DVP-3DC1D-24D	DVP-3DC1D-24A	DVP-3DC1D-120A	DVP-3DC2E-24D	DVP-3DC2E-24A	DVP-3DC2E-120A	DVP-3DC3F-24D	DVP-3DC3F-24A	DVP-3DC3F-120A
Price	\$,04p!:	\$04p#:	\$04ox:	\$04q0:	\$,04p,:	\$04p?:	\$04q3:	\$04q2:	\$04q1:
Weight (lbs)	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Valve Type	3-way, 2-position								
Acting	Poppet valve, normally closed, spring return								
Port Size	1/8" FNPT			1/4" FNPT			3/8" FNPT		
Orifice Size	0.062" [1.6 mm]			0.094" [2.4 mm]			0.118" [3.0 mm]		
Cv	0.12 (exhaust port 0.08)			0.245 (exhaust port 0.08)			0.315 (exhaust port 0.08)		
Media	Air, oil, inert gas, water, caustics*								
Pressure Range	0–220 psi [0–15.2 bar]			1–120 psi [0–8.3 bar]		1–150 psi [0–10.3 bar]	1–82 psi [0–5.7 bar]		1–90 psi [0–6.2 bar]
Voltage (±10%)	24VDC	24VAC 50/60 Hz	120VAC 50/60 Hz	24VDC	24VAC 50/60 Hz	120VAC 50/60 Hz	24VDC	24VAC 50/60 Hz	120VAC 50/60 Hz
Inrush AC	–	26VA		–	26VA		–	26VA	
Power Consumption	10W	11.5 VA		10W	11.5 VA		10W	11.5 VA	
Max Freq	25Hz								
Insulation	Class F (continuous duty)								
Min Response	16–40 ms								
Temperature	14°F to 122°F [-10°C to 50°C]								
Lubrication	Not Required								
Protection	NEMA Type 4								
Connection	18mm DIN terminal								
Construction	Glass filled nylon body; Viton seals; Operator Brass								
Life Cycle	10 million								
Agency Approvals	CE								

\* Check the chemical compatibility of the valve materials with the process media being used.

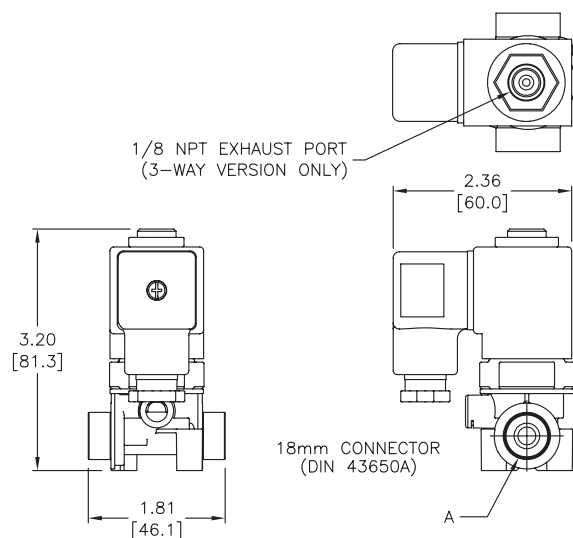


# Process Pipeline Solenoid Valves

## DVP-2D & DVP-3D Series

### Dimensions

inches [mm]



PORT SIZES	
PART NO.	DIM A
DVP-2DC1D-24/120	1/8 FNPT
DVP-2DC2E-24/120	1/4 FNPT
DVP-2DC3F-24/120	3/8 FNPT
DVP-3DC1D-24/120	1/8 FNPT
DVP-3DC2E-24/120	1/4 FNPT
DVP-3DC3F-24/120	3/8 FNPT

FNPT = FEMALE NATIONAL PIPE THREAD

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.

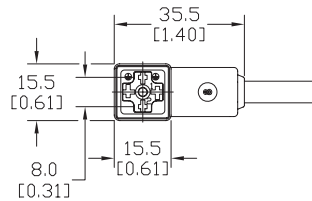
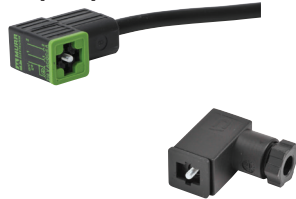
## Features

- 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)



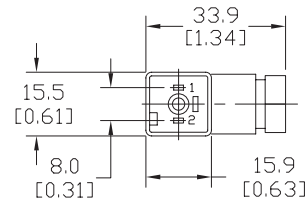
### 8mm Connectors

Dimensions shown  
mm [inches]



Height = 25mm [0.98in]

Connector with Cable



Height = 26mm [1.02]

Field Wireable Connector

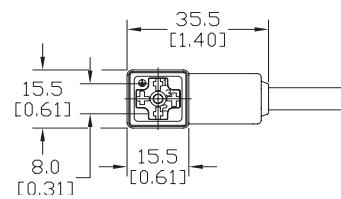
### 8mm (3-pole) Connectors (per DIN 43650 Form C)

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:														9	0.10	
<a href="#">SC8-1</a>	\$04s#:						2		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)

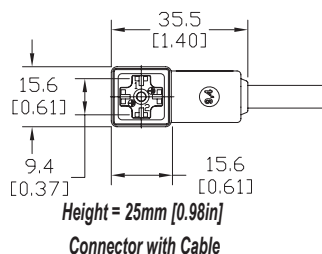
Part No.	Price	Voltage (AC/DC)	Current Rating	IP Rating	Wire Size	Cable Dia. (in.)	LED	Surge Protection	Wiring Figure	Screw Size/Torque	Weight (lbs)	Agency Approval
SC8-5T	\$:04s:	230	max 6A	67	18 AWG	0.26	yes	none	8	m3-0.5x42mm/0.5 Nm (4.4 in lb)	0.80	CSA (080128-0-000)

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

# Solenoid Valve Cables and Connectors

## 9.4mm Connectors

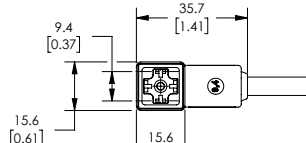
Dimensions shown  
mm [inches]



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				
SC9-LS24-3	\$,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)				
SC9-LS24-5	\$,04t9:								0.64							
SC9-LS110-3	\$,04t6:	110 ±10%					max 6A				no		zener diode (D-Z DO-41 ZY200 2W)	7	0.40	
SC9-LS110-5	\$,04t7:														0.64	
SC9-3	\$,04t4:	230	max 6A			max 6A				no	none	2	m3-0.5x26mm/ 0.5 Nm (4.4 in lb)	0.40	none	
SC9-5	\$,04t5:															0.64

## 9.4mm Connectors

Dimensions shown  
mm [inches]



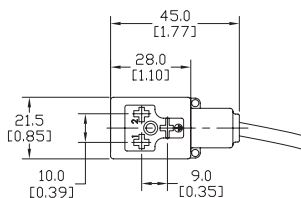
Height = 25mm [0.98in]  
Connector with Cable

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

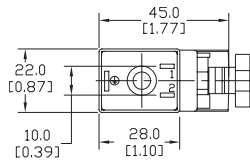
## 10mm Connectors

Dimensions shown  
mm [inches]



Height = 30mm [1.18in]

Connector with Cable



Height = 41mm [1.61in]

Field Wireable Connector

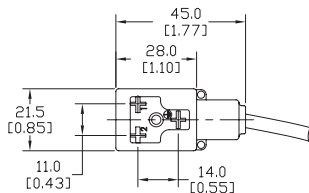
### 10mm (3-pole) Connectors (per DIN 43650 Form B)

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	yes
<a href="#">SC10-5</a>	\$04k6:	5	0.07														
<a href="#">SC10-LS24-0</a>	\$043d:	24 ±20%	max 4A	no	none	3		0.07									
<a href="#">SC10-LS110-0</a>	\$043c:	110 ±10%	max 1A														

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

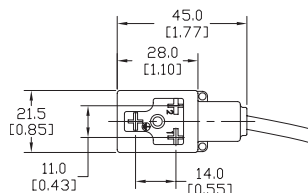
## 11mm Connectors

Dimensions shown  
mm [inches]



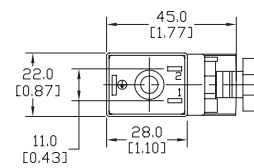
Height = 30mm [1.18in]

Connector with Cable



Height = 30mm [1.18in]

Reverse Connector with Cable



Height = 41mm [1.61in]

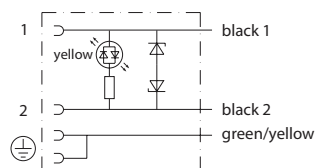
Field Wireable Connector

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

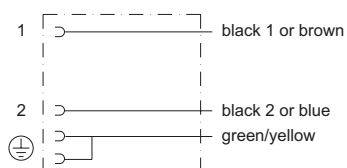
Part No.	Price	Voltage (AC/DC)	Current Rating	IP Rating	Wire Size	Cable Dia. (in)	LED	Surge Protection	Wiring Figure	Screw Size/ Torque	Weight (lbs)	Agency Approval
<a href="#">SC11-LS24-3</a>	\$04sy:	24 ±20%	max 4A	67	18 AWG	0.23	yes	zener diode (D-Z DO-15 47V 2W)	10	m3-0.5x30mm/ 0.4 Nm (3.5 in lb)	0.44	CSA (080128-0-000)
<a href="#">SC11-LS24-5</a>	\$.04s]:							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>	\$.04s]:							zener diode (D-Z DO-41 ZY200 2W)	6		0.67	
<a href="#">SC11-LS110-3R</a>	\$.04st:	110 ±10%	max 4A				no	none	3		0.44	
<a href="#">SC11-LS110-5R</a>	\$04sv:										0.67	
<a href="#">SC11-3</a>	\$04so:	230	max 10A								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.

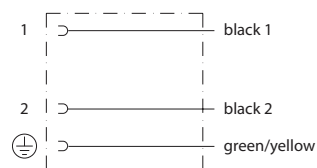
# Solenoid Valve Cables and Connectors Wiring Diagrams



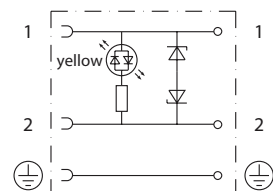
**Figure No. 1**



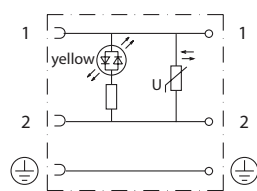
**Figure No. 2**



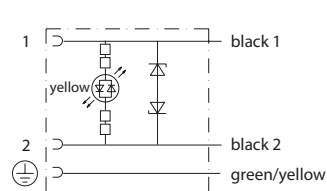
**Figure No. 3**



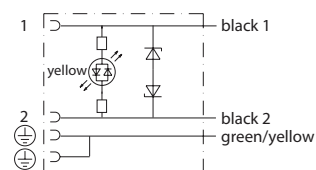
**Figure No. 4**



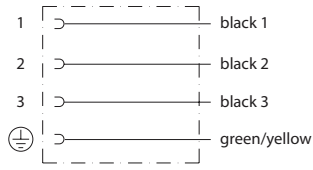
**Figure No. 5**



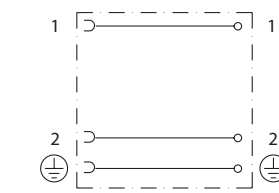
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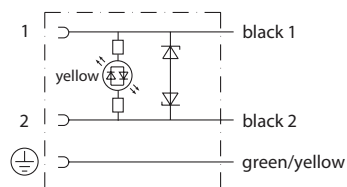
**Figure No. 7**



**Figure No. 8**



**Figure No. 9**



**Figure No. 10**