

### General Description

The DSL103, 3-way spool valves are used as low flow directional valves, pilot valves, or selector valves. They can be used in normally open or normally closed applications.

### Operation

In the de-energized mode, the spool is positioned by spring force. The solenoid, when energized, directly shifts the spool against the spring, thus changing the flow path through the valve.

### Features

- High flow capacity with reduced space requirements
- Standard valve bodies and common cavities
- One-piece encapsulated coil with minimal amperage draw
- Manual overrides, seal variations and other options available
- No dynamic seals
- Variety of coil terminations

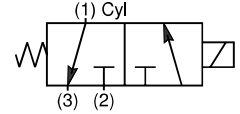
### Specifications

<b>Rated Flow (At 70 PSI ΔP)</b>	<b>DSL103</b>
	N.O. 22.5 LPM (6.0 GPM)
	N.C. 18.8 LPM (5.0 GPM)
	Selector 13.1 LPM (3.5 GPM)
	<b>DSL103B</b>
	N.C. 18.8 LPM (5.0 GPM)
Selector 15.0 LPM (4.0 GPM)	
<b>DSL103N</b>	N.O. 22.5 LPM (6.0 GPM)
	Selector 30.0 LPM (8.0 GPM)
<b>Maximum Inlet Pressure</b>	210 Bar (3000 PSI)
<b>Leakage</b>	160 cc/min. (10 cu. in./min.) maximum at 210 Bar (3000 PSI)
<b>Minimum Operating Voltage</b>	90% of rated voltage at 210 Bar (3000 PSI)
<b>Operating Temp. Range (Ambient)</b>	-40°C to +93.3°C (Nitrile) (-40°F to +200°F) -31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)
<b>Cartridge Material</b>	All parts steel. All operating parts hardened steel.
<b>Body Material</b>	Steel or Aluminum
<b>Filtration</b>	ISO Code 16/13, SAE Class 4 or better
<b>Mounting</b>	No restrictions
<b>Cavity</b>	Common Cavity No. C10-3

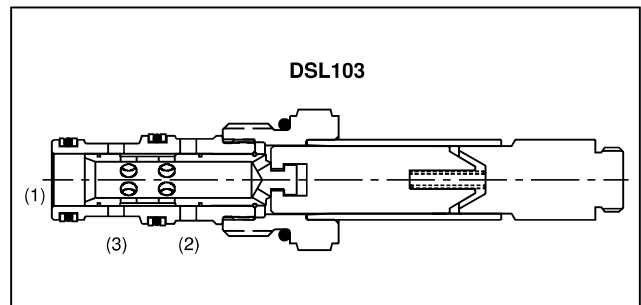
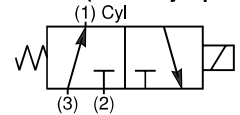
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**DSL103 (Normally Closed)**

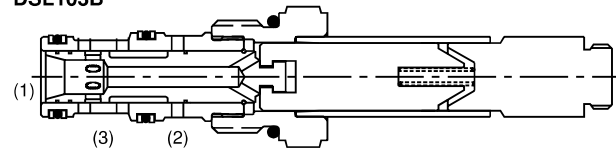


**DSL103 (Normally Open)**

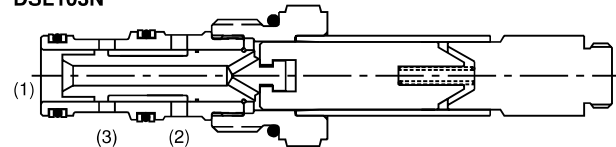


### Construction

**DSL103B**



**DSL103N**



### Solenoid Coil Specifications

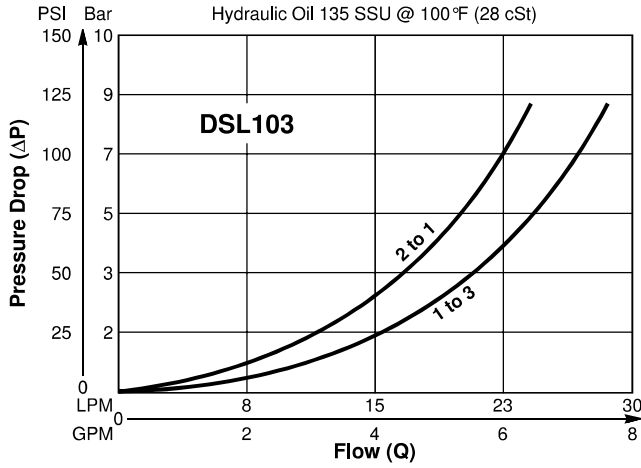
Voltage	Watts	Amps
10 VDC	20	1.45
12 VDC	20	1.17
24 VDC	20	0.57
120 VAC	20	.144
240 VAC	20	.079

<b>Response Time</b> (Dependent on flow and pressure)	50 ms to 150 ms
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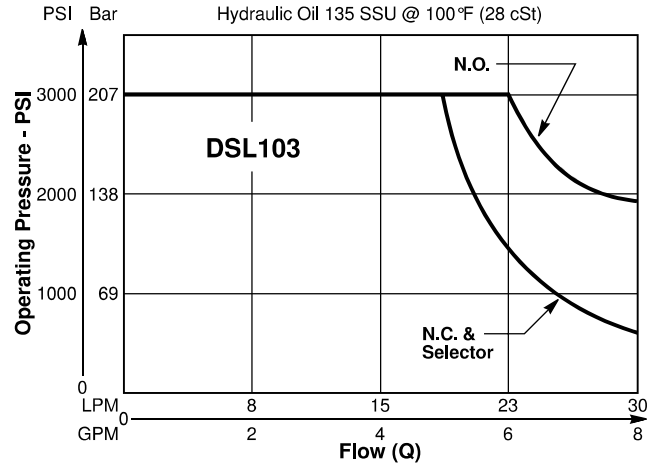
<b>Wire Class</b>	"H" for all voltages
<b>A.C. Rectifiers</b>	Integral full wave bridge

**Performance Curves**

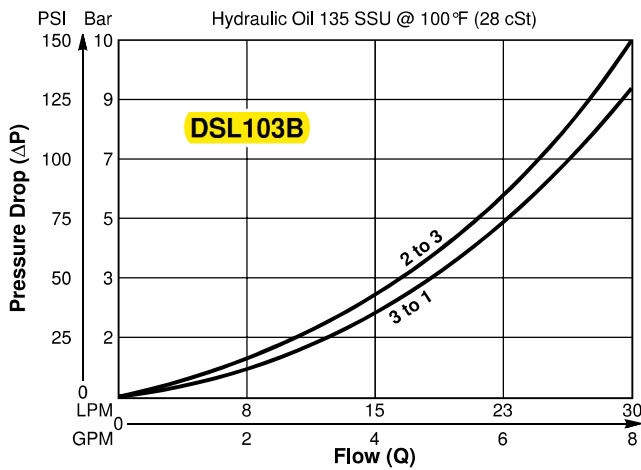
**Pressure Drop vs. Flow (Through cartridge only)**



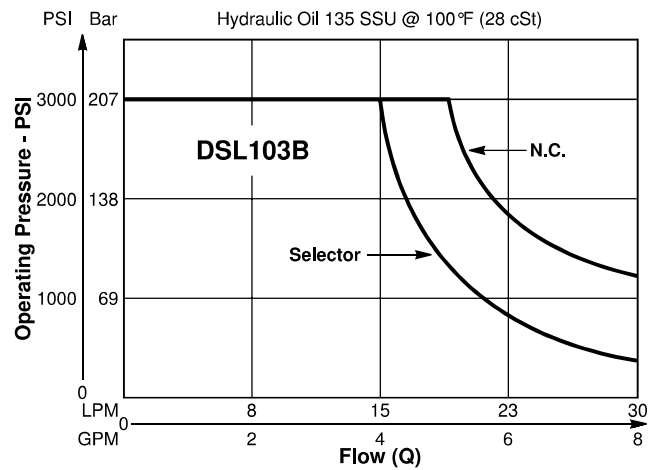
**Operating Characteristics (Through cartridge only)**



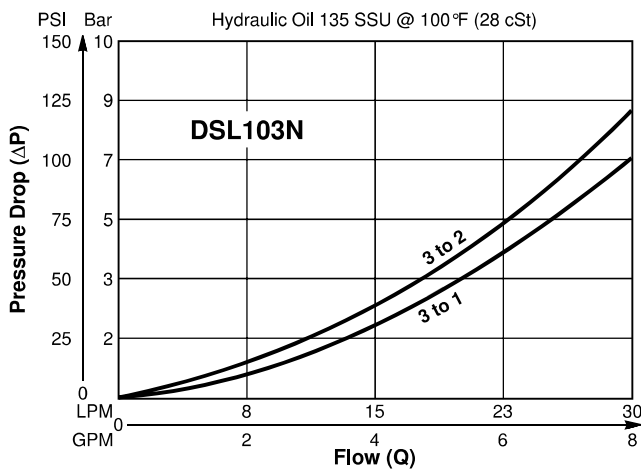
**Pressure Drop vs. Flow (Through cartridge only)**



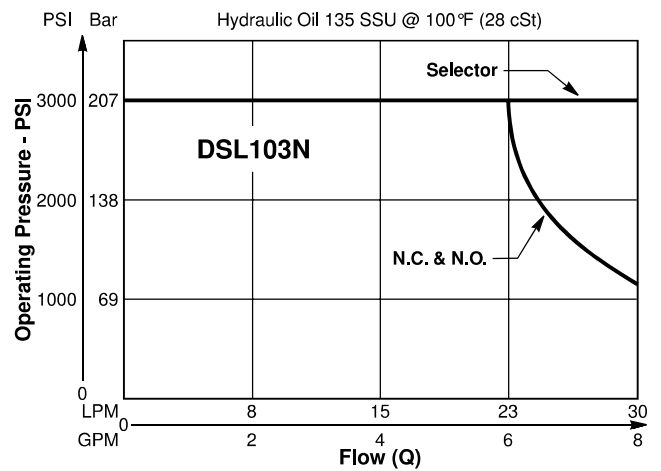
**Operating Characteristics (Through cartridge only)**



**Pressure Drop vs. Flow (Through cartridge only)**

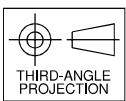
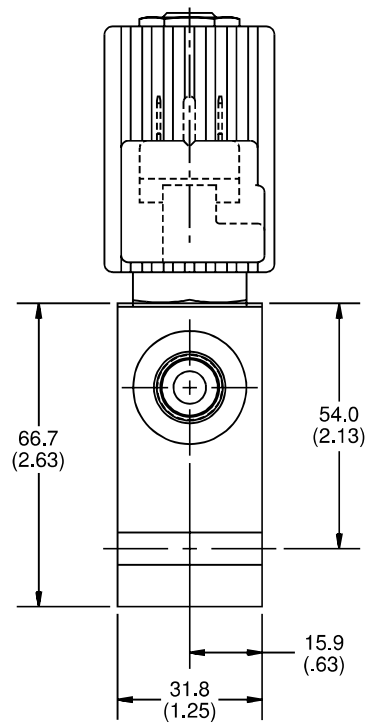
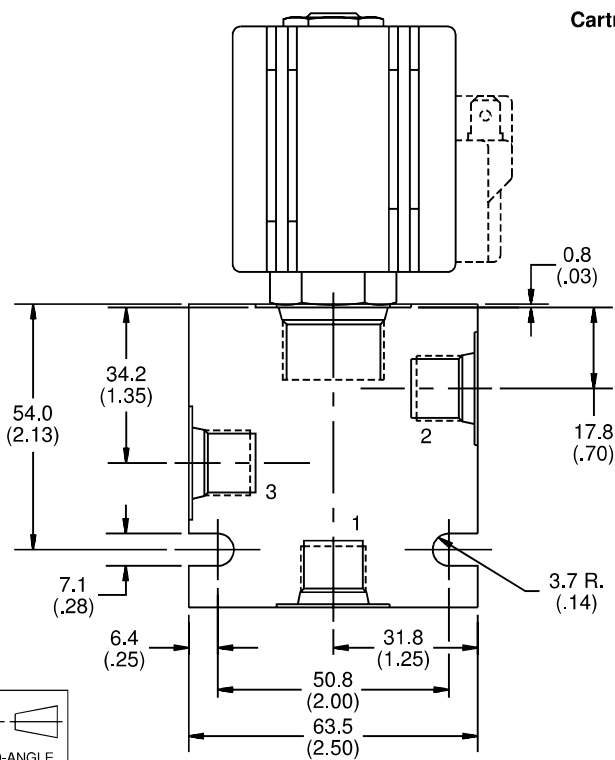
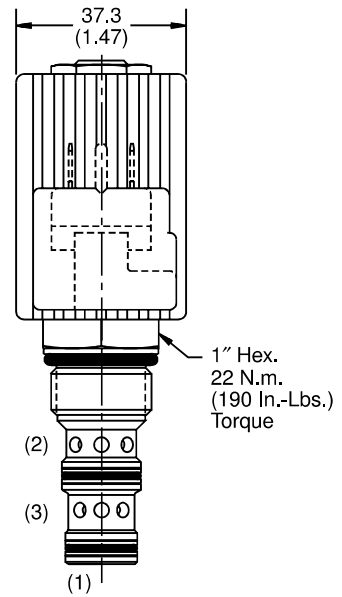
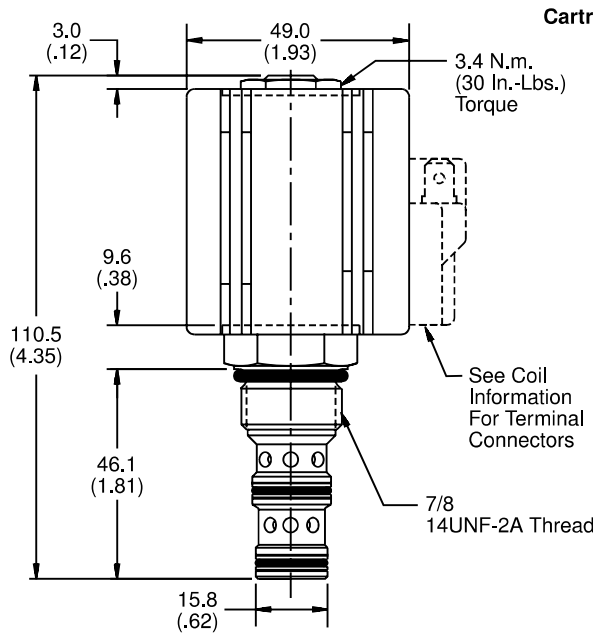
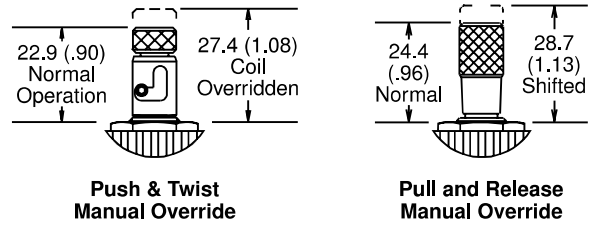


**Operating Characteristics (Through cartridge only)**

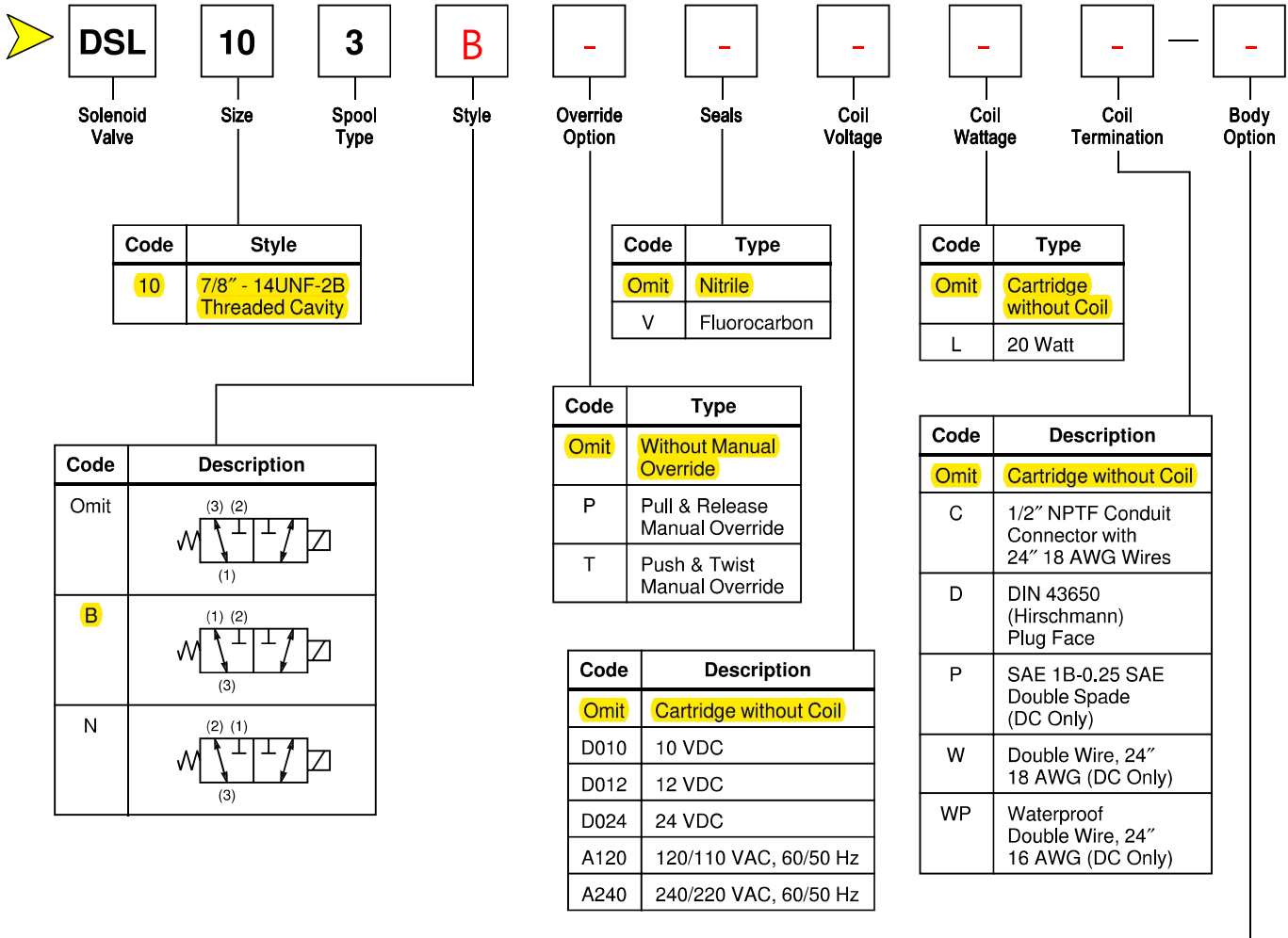


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\*Inch equivalents for millimeter dimensions are shown in (\*\*)



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**Shipping Weight**

Cartridge Only .19 kg (.43 lbs.)  
 Cartridge in Body .96 kg (2.1 lbs.)

**SERVICE PARTS**

Code	Size
S10	5/8" I.D.
SW10	5/8" I.D.

**DIN Connector:**  
See Coil Data Sheet

**Coil Nut:**  
DSL103 — 118127-00

**Nitrile Seal Kit:**  
DSL103 — SK10-3

**Fluorocarbon Seal Kit:**  
DSL103 — SK10-3V

Code	Description
C	Conduit
D	DIN 43650
P	Double Spade
S	Double Screw
W	Double Wire
WP	Waterproof Double Wire

**Notes:** See Series 10 Coil Data Sheet.  
 For other coil voltages and terminations, consult factory.  
 S10 Coil applies to all terminations except WP.  
 SW10 Coil applies to WP termination only.

Code	Port Size & Material	
Omit	Cartridge Only	
4P	1/4" NPTF (B10-3-4P)	Steel
A4P	1/4" NPTF (B10-3-A4P)	Aluminum
6P	3/8" NPTF (B10-3-6P)	Steel
A6P	3/8" NPTF (B10-3-A6P)	Aluminum
8P	1/2" NPTF (B10-3-8P)	Steel
A8P	1/2" NPTF (B10-3-A8P)	Aluminum
6T	SAE-6 (B10-3-6T)	Steel
A6T	SAE-6 (B10-3-A6T)	Aluminum
8T	SAE-8 (B10-3-8T)	Steel
A8T	SAE-8 (B10-3-A8T)	Aluminum
4B	1/4" BSPG (B10-3-4B)	Steel
A4B	1/4" BSPG (B10-3-A4B)	Aluminum
6B	3/8" BSPG (B10-3-6B)	Steel
A6B	3/8" BSPG (B10-3-A6B)	Aluminum
8B	1/2" BSPG (B10-3-8B)	Steel
A8B	1/2" BSPG (B10-3-A8B)	Aluminum