



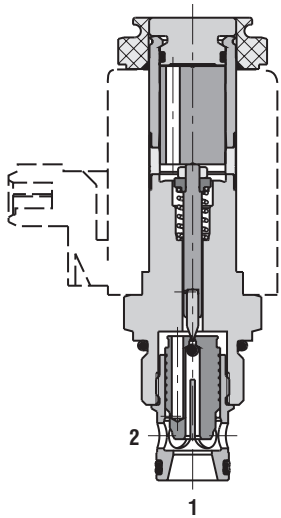
## SD3E-B2

**2/2 Directional Valve, Solenoid Operated,  
Poppet Type, Piloted**



- 7/8-14 UNF
- $Q_{\max}$  75 l/min (20 GPM)
- $p_{\max}$  420 bar (6100 PSI)

### Normally Open



### Technical Features

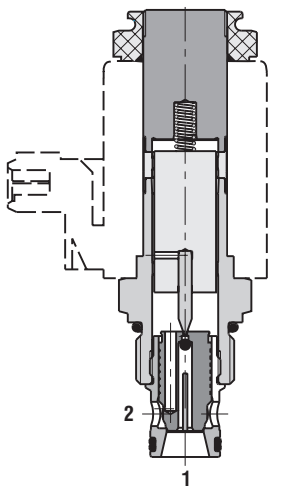
- › Hardened precision parts
- › High flow capacity and leak-free closing
- › High transmitted hydraulic power up to 420 bar
- › Normally open and normally closed version
- › Wide range of manual overrides available
- › All ports may be fully pressurized
- › Coil interchangeability among SD\*- B\* product line
- › Standard version zinc-coated with surface protection acc. to ISO 9227 (240 h salt spray)

### Functional Description

2-way, 2-position high pressure piloted poppet valve in form of a screw-in cartridge. The valve is used mainly for on-off bi-directional control of flow to actuators with leak-free closing in one direction.

Model Code	2O2	2L2
Symbol		

### Normally Closed



### Technical Data

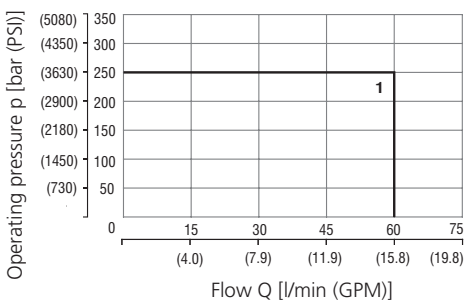
Valve size / Cartridge cavity		7/8-14 UNF-2A / B2	
		Lightline	High performance
Max. flow	l/min (GPM)	60 (13.2)	75 (15.9)
Max. operating pressure	bar (PSI)	250 (3630)	420 (5080)
Fluid temperature range	°C (°F)	-20...60 (-4...140)	-20...80 (-4...176)
Ambient temperature range	°C (°F)	-20...50 (-4...122)	-20...80 (-4...176)
Supply voltage tolerance	%	AC, DC: ± 10	AC, DC: ± 15
Max. switching frequency	1/h	15 000	
Mass without coil	kg (lbs)	0.23 (0.51)	0.30 (0.66)

		Datasheet	Type	
General information		GI_0060	Products and operating conditions	
Coil types		C_8007	C19B*	C22B*
Valve bodies	In-line mounted	SB_0018	SB-B2*	
	Sandwich mounted	SB-04(06)_0028	SB-*B2*	
Cavity details / Form tools		SMT_0019	SMT-B2*	
Spare parts		SP_8010		

### Characteristics measured at $v = 32 \text{ mm}^2/\text{s}$ (156 SUS)

#### Operating limits - Lightline

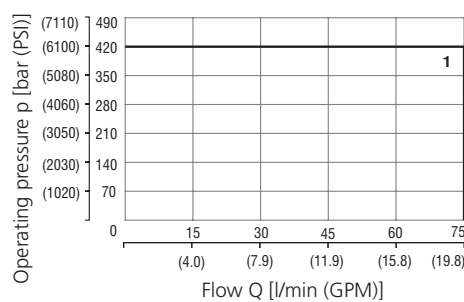
Oil 60 °C (140 °F) / Ambient temperature  
50 °C (122 °F) / Voltage  $U_n$  -10% (21.6 VDC)



Model	Connection
1 2L2	1→2, 2→1
1 2O2	1→2, 2→1

#### Operating limits - High performance

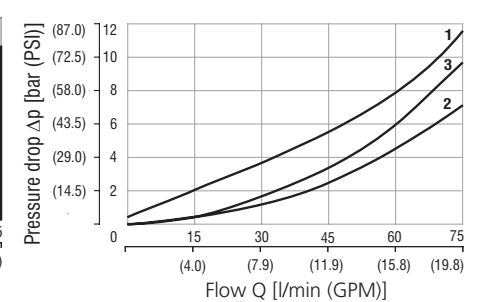
Oil 80 °C (176 °F) / Ambient temperature  
50 °C (122 °F) / Voltage  $U_n$  -10% (21.6 VDC)



Model	Connection
1 2L2	1→2, 2→1
1 2O2	1→2, 2→1

#### Pressure drop related to flow rate

- Lightline, High performance

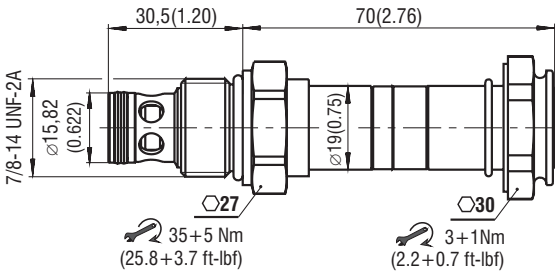


Model	Connection	Solenoid
1 2L2	1→2	off
2 2L2	2→1	on
2 2L2	1→2	on
2 2O2	1→2	off
3 2O2	2→1	off

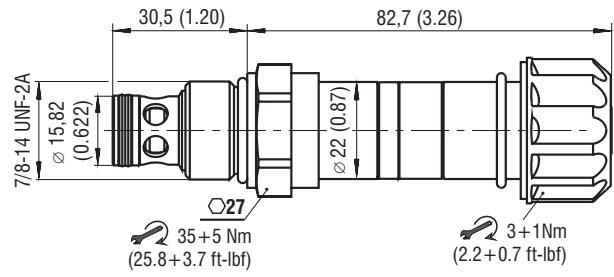
For operating limits under conditions and flow directions other than shown contact our technical support.

**Dimensions** in millimeters (inches)

**Lightline**



**High performance**



**Manual Override** in millimeters (inches)

No designation - for 2O2 - standard	Designation M2 for 2O2 - rubber boot protected	Designation M5 - for 2O2 - socket head screw, size 2.5	Designation M9 - for 2O2 - without manual override
<p>L ~ 70,0 (2.76) H ~ 82,7 (3.26)</p>	<p>L ~ 82,0 (3.23) H ~ 100,0 (3.94)</p>	<p>L ~ 77,6 (3.06) H ~ 84,8 (3.34)</p>	<p>L ~ 70,0 (2.76) H ~ 82,7 (3.26)</p>
		Designation M5 - for 2L2 - socket head screw, size 2.5	Designation M9 - for 2L2 - without manual override
		<p>L ~ 81,8 (3.22) H ~ 93,6 (3.69)</p>	<p>L ~ 70,0 (2.76) H ~ 82,7 (3.26)</p>

In case of solenoid malfunction or power failure, the spool of the valve can be shifted by manual override as long as the pressure in port T does not exceed 25 bar (363 PSI). For alternative manual overrides contact our technical support.

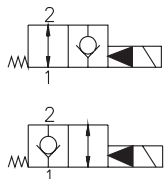
**Ordering Code**

**SD3E-B2 /**     -

**2/2 directional valve, solenoid operated, poppet-type, piloted, 7/8-14 UNF**

Lightline  
High performance

**Model**



2O2

2L2

**Surface treatment**  
A zinc-coated (ZnCr-3), ISO 9227 (240 h)  
B zinc-coated (ZnNi), ISO 9227 (520 h)

No designation  
V

**Seals**  
NBR  
FPM (Viton)

No designation  
M2  
M5  
M9

**Manual override**  
standard for 2O2  
rubber boot protected  
socket head screw  
without manual override