

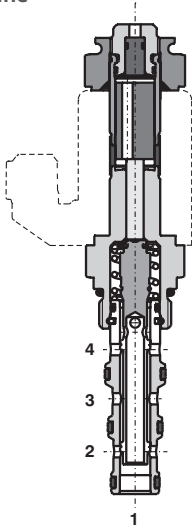
## SD2E-A4

### 4/2 Directional Valve, Solenoid Operated, Spool-Type, Direct-Acting



- 3/4-16 UNF
- $Q_{\max}$  30 l/min (8 GPM)
- $p_{\max}$  350 bar (5100 PSI)

**Lightline**



**Technical Features**

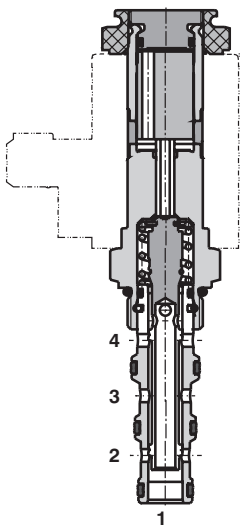
- › Hardened precision parts
- › High flow capacity
- › High transmitted hydraulic power
- › Wide range of manual overrides available
- › All ports may be fully pressurized
- › Variety of optional spools available
- › Coil interchangeability among SD\*-A\* product line
- › Standard version zinc-coated with surface protection acc. to ISO 9227 (240 h salt spray)

**Functional Description**

4-way, 2-position high pressure bi-directional spool valve in the form of a screw-in cartridge. The valve is used mainly to direct flow to actuators.

2Z11	2Z51	2X21	2R21	2P51	2Y11	2C51

**High performance**



**Technical Data**

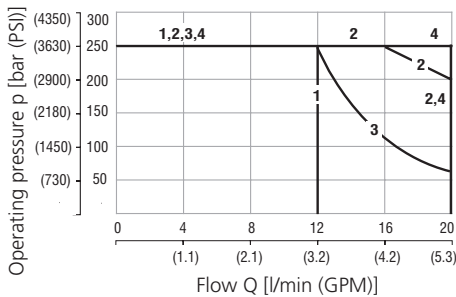
Valve size / Cartridge cavity		3/4-16 UNF-2A / A4	
		Lightline	High performance
Max. flow	l/min (GPM)	20 (5.3)	30 (7.9)
Max. operating pressure	bar (PSI)	250 (3630)	350 (5080)
Fluid temperature range	°C (°F)	-20...60 (-4...140)	-20...80 (-4...176)
Ambient temperature range	°C (°F)	-20...50 (-4...122)	-20...80 (-4...176)
Supply voltage tolerance	%	DC ± 10	AC, DC: ± 15
Max. switching frequency	1/h	15 000	
Mass without coil	kg (lbs)	0.15 (0.33)	0.23 (0.51)

		Datasheet	Type	
General information			Products and operating conditions	
Coil types		C_8007	C14B*	C19B*
Valve bodies	In-line mounted	SB_0018	SB-A4*	
	Sandwich mounted	SB-04(06)_0028	SB-*A4*	
Cavity details / Form tools		SMT_0019	SMT-A4*	
Spare parts		SP_8010		

**Characteristics** measured at v = 32 mm<sup>2</sup>/s (156 SUS)

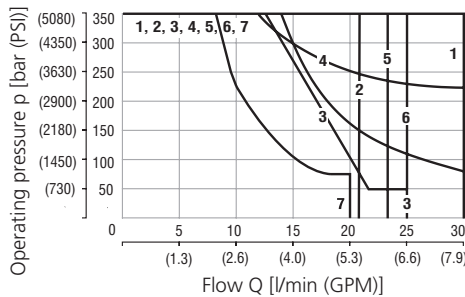
**Operating limits - Lightline**

Oil 60 °C (140 °F) / Ambient temperature  
50 °C (122 °F) / Voltage U<sub>n</sub> -10% (21.6 VDC)

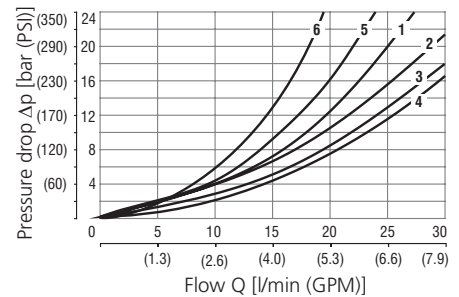


**Operating limits - High performance**

Oil 80 °C (176 °F) / Ambient temperature  
50 °C (122 °F) / Voltage U<sub>n</sub> -10% (21.6 VDC)



**Pressure drop related to flow rate**  
- Lightline, High performance



	Model	Connection
1	2Z11	3→2, 4→1
2	2Z51	3→4, 2→1
3	2R21	3→2, 4→1
4	2R21	3→4, 2→1
4	2P51	3→4, 2→1
4	2X21	3→4, 2→1
		3→2, 4→1

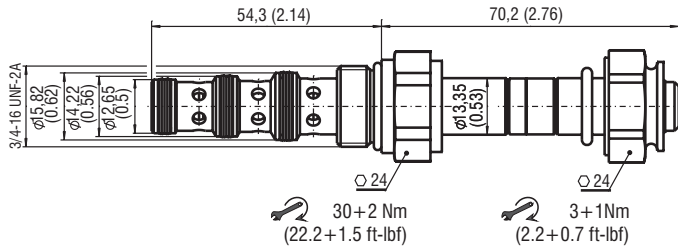
	Model	Connection
1	2Z51	3→4, 2→1
2	2Z11	3→2, 4→1
3	2R21	3→2, 4→1
4	2X21	3→4, 2→1
5	2X21	3→2, 4→1
1	2R21	3→4, 2→1
6	2Y11	3→2, 4→1
7	2C51	3→1

	Model	Connection	Model	Connection
1	2Z11	4→1	2R21	2→1
2	2Z11	3→2	2Z51	2→1
2	2X21	3→4, 4→1	2R21	3→2
3	2Z51	3→4	2R21	3→4
3	2Y11	3→2, 4→1		
4	2X21	3→2, 2→1	2C51	3→2, 4→1
5	2R21	4→1		
6	2C51	3→1		

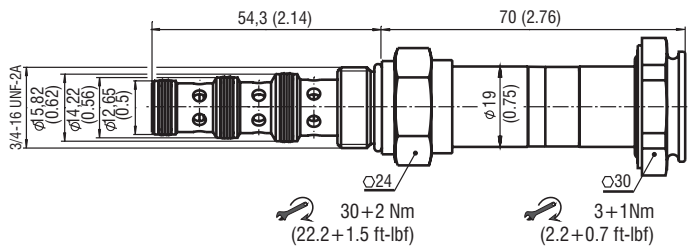
For operating limits under conditions and flow directions other than shown contact our technical support.

**Dimensions** in millimeters (inches)

**Lightline**



**High performance**



**Manual Override** in millimeters (inches)

No designation - standard	Designation M2 - rubber boot protected	Designation M5 - socket head screw, size 2.5	Designation M9 - without manual override
<p>L ~ 70,2 (2.63) H ~ 70,0 (2.76)</p>	<p>L ~ 81,7 (3.22) H ~ 81,5 (3.21)</p>	<p>L ~ 77,2 (3.04) H ~ 77,6 (3.06)</p>	<p>L ~ 67,2 (2.65) H ~ 70,0 (2.76)</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**

**SD2E-A4 /**     -

**4/2 directional valve, solenoid operated, spool-type, direct-acting, 3/4-16 UNF**

Lightline  
High performance

L  
H

**Model**

		<b>2Z11</b>
		<b>2Z51</b>
		<b>2X21</b>
		<b>2R21</b>
		<b>only for L 2P51</b>
		<b>only for H 2Y11</b>
		<b>only for H 2C51</b>

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

**Seals**  
**V** No designation  
 NBR  
 FPM (Viton)

**Manual override**  
 standard  
 M2 rubber boot protected  
 M5 socket head screw  
 M9 without manual override