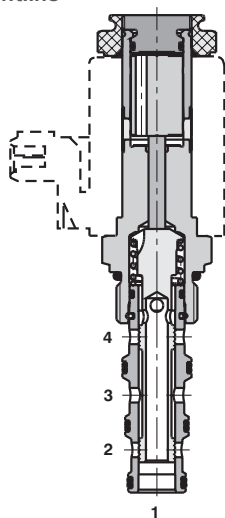


## 4/2 Directional Valve, Solenoid Operated, Spool Type, Direct Acting

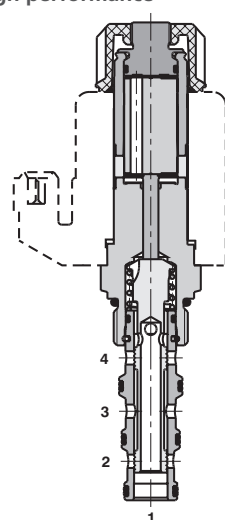
### SD2E-B4

7/8-14 UNF •  $Q_{max}$  60 l/min (16 GPM) •  $p_{max}$  350 bar (5100 PSI)

#### Lightline



#### High performance



#### 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\*-B\* 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 directional spool valve in form of a screw-in cartridge. The valve is used mainly to direct flow to actuators.

Model Code	2Z11	2Z51	2X21
Symbol			

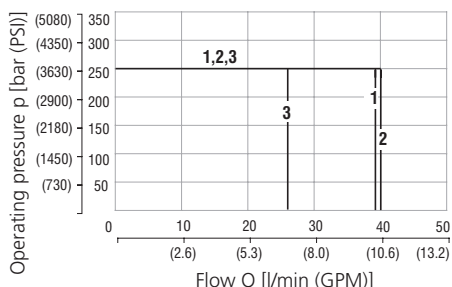
#### Technical Data

Valve size / Cartridge cavity		7/8-14 UNF-2A / B4 (C-10-4)	
		Lightline	High performance
Max. flow	l/min (GPM)	50 (13.2)	60 (15.9)
Max. operating pressure	bar (PSI)	250 (3630)	350 (5080)
Fluid temperature range (NBR)	°C (°F)	-30...60 (-22...140)	-30...80 (-22...176)
Fluid temperature range (FPM)	°C (°F)	-20...60 (-4...140)	-20...80 (-4...176)
Ambient temperature range	°C (°F)	-30...50 (-22...122)	-30...80 (-22...176)
Supply voltage tolerance	%	AC, DC: ± 10	
Max. switching frequency	1/h	15 000	
Weight without coil	kg (lbs)	0.25 (0.55)	0.32 (0.71)
General information		Type	
Valve size / Cartridge cavity		Datasheet	
GI_0060		Products and operating conditions	
Coil types		C_8007	C19B* C22B*
Valve bodies		In-line mounted: SB_0018	SB-B4*
		Sandwich mounted: SB-04(06)_0028	SB-*B4*
Cavity details / Form tools		SMT-B4*	
SMT_0019			
Spare parts		SP_8010	

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

##### Operating limits - Lightline

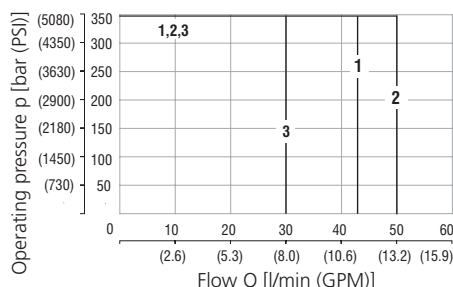
Oil 60 °C (140 °F) / Ambient temperature  
50 °C (122 °F) / Voltage  $U_n$  -10% (21.6 VDC)



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

##### Operating limits - High performance

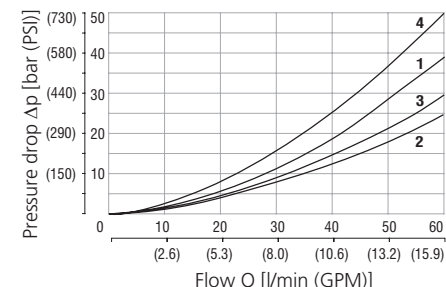
Oil 80 °C (176 °F) / Ambient temperature  
50 °C (122 °F) / Voltage  $U_n$  -10% (21.6 VDC)



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

##### Pressure drop related to flow rate

- Lightline, High performance

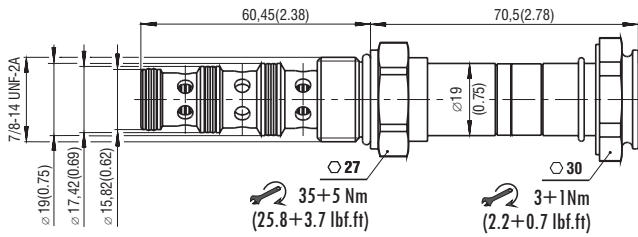


Model	Connection
1 2Z11	3→2
1 2Z11	4→1
3 2Z51 - only for L	3→4
3 2Z51 - only for L	2→1
2 2Z51 - only for H	3→4
3 2Z51 - only for H	2→1
3 2X21	3→2
4 2X21	4→1
3 2X21 $Q_{max}$ 50 l/min	3→4
2 2X21 $Q_{max}$ 40 l/min	2→1

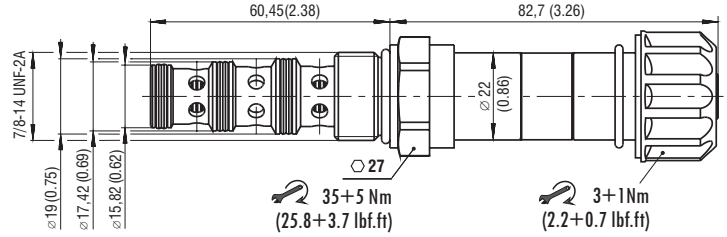
For operating limits under conditions and flow directions other than shown contact our technical support.

### 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 ~ 70,5 (2.78) H ~ 82,7 (3.26)</p>	<p>L ~ 82,0 (3.23) H ~ 100,0 (3.94)</p>	<p>L ~ 78,1 (3.07) H ~ 84,8 (3.34)</p>	<p>L ~ 70,5 (2.78) 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

**SD2E-B4 /**     -

**4/2 directional valve, solenoid operated, spool type, direct acting**

**Valve cavity**  
7/8-14 UNF (C-10-4)

Lightline  
High performance

**Functional symbol**

**2Z11**  
**2Z51**  
**2X21**

**Surface treatment**

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

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

**Manual override**  
No designation  
**M2** standard  
**M5** rubber boot protected  
**M9** socket head screw  
without manual override