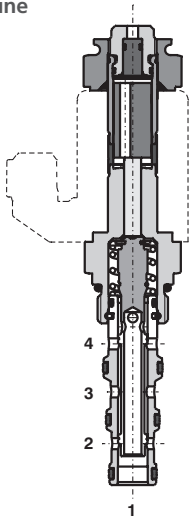


4/2 Directional Valve, Solenoid Operated, Spool Type, Direct Acting

SD2E-A4

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

Lightline



Technical Features

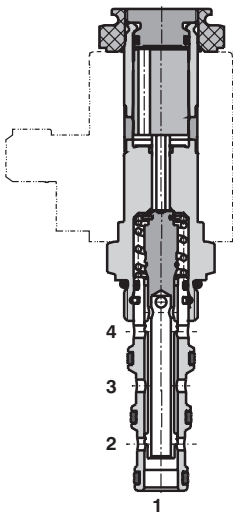
- › Hardened precision parts
- › High flow capacity
- › High transmitted hydraulic power
- › Wide range of manual overrides available
- › All ports may be fully pressurized
- › Variety of optional spools available
- › Coil interchangeability among SD*-A* product line
- › Standard version zinc-coated 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	2Y61

High performance



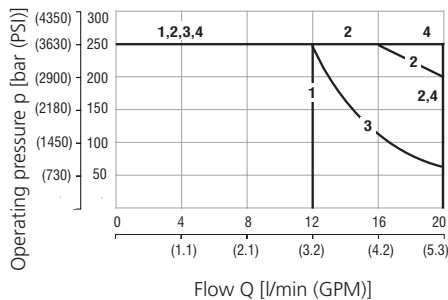
Technical Data

Valve size / Cartridge cavity		3/4-16 UNF-2A / A4 (C-8-4)	
		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 (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	%	DC ± 10 AC, DC: ± 15	
Max. switching frequency	1/h	15 000	
Weight without coil	kg (lbs)	0.15 (0.33)	0.23 (0.51)
General information		Type	
Coil types		Products and operating conditions	
C 8007		C 14B*	C 19B*
Valve bodies	In-line mounted	SB-A4*	
	Sandwich mounted	SB-*A4*	
Cavity details / Form tools		SMT-A4*	
Spare parts		SP_8010	

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

Operating limits - Lightline

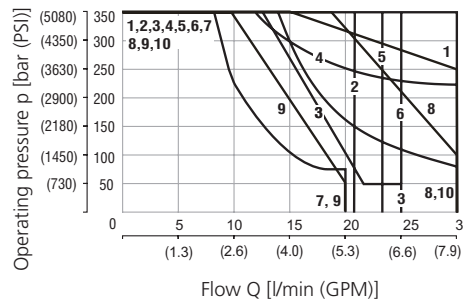
Oil 60 °C (140 °F) / Ambient temperature
50 °C (122 °F) / Voltage U_n -10% (21.6 V DC)



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

Operating limits - High performance

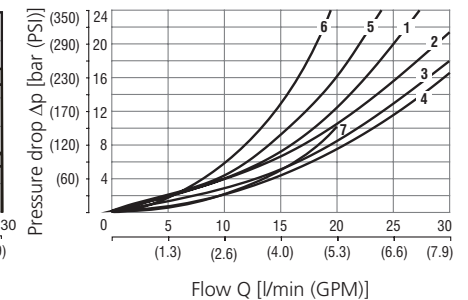
Oil 80 °C (176 °F) / Ambient temperature
50 °C (122 °F) / Voltage U_n -10% (21.6 V DC)



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
8 2Y61	3→2
9 2Y61	4→1
10 2Y61	1→4

Pressure drop related to flow rate

- Lightline, High performance

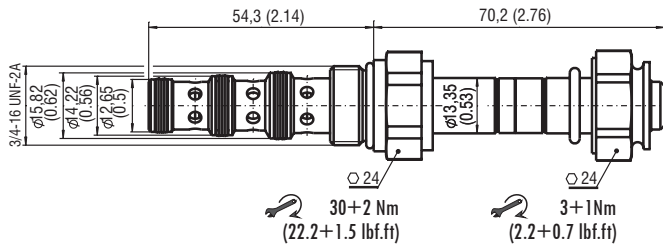


Model	Connection	Model	Connection
1 2Z11	4→1	2R21	2→1
1 2Y61	3→2		
2 2Z11	3→2	2Z51	2→1
2 2X21	3→4, 4→1	2R21	3→2
3 2Z51	3→4	2R21	3→4
3 2Y11	3→2, 4→1		
4 2X21	3→2, 2→1	2C51	3→2, 4→1
5 2R21	4→1		
6 2C51	3→1		
7 2Y61	4→1		

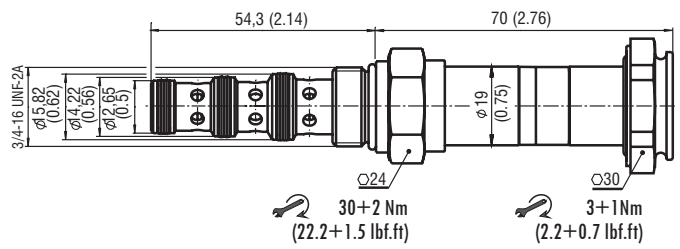
For operating limits under conditions and flow directions other than shown contact our technical support.

Dimensions in millimeters (inches)

Lightline



High performance



Manual Override in millimeters (inches)

No Designation - standard	Designation M2 - rubber boot protected	Designation M4 - hand screw (only for High performance)	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>H ~ 89,6 (3.53)</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,

Valve cavity
3/4-16 UNF (C-8-4)

Lightline
High performance

L
H

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

Functional symbol

		2Z11
		2Z51
		2X21
		2R21
		only for L 2P51
		only for H 2Y11
		only for H 2Y61
		only for H 2C51

No designation
V

Seals
NBR
FPM (Viton)

Manual override
standard
M2 rubber boot protected
M4 hand screw (only for High performance)
M5 socket head screw
M9 without manual override