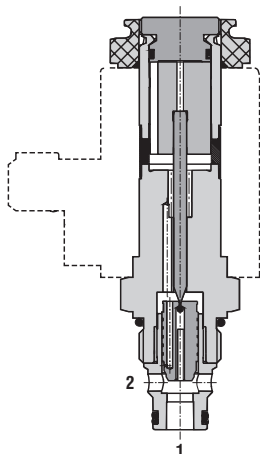


## 2/2 Directional Valve, Solenoid Operated, Poppet Type, Piloted

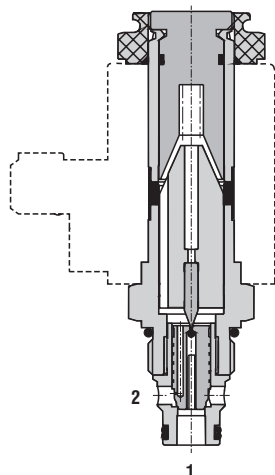
### SD3E-A2

3/4-16 UNF •  $Q_{max}$  30 l/min (8 GPM) •  $p_{max}$  420 bar (6100 PSI)

#### Normally Open



#### Normally Closed



#### Technical Features

- › Hardened precision parts
- › High flow capacity and leak-free closing
- › High transmitted hydraulic power up to 420 bar
- › Lightline design 250 bar with reduced solenoid power for production cost saving
- › Normally open and normally closed version
- › Wide range of manual overrides available
- › All ports may be fully pressurized
- › Coil interchangeability among SD\*- A\* 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, pilot operated 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		

#### Technical Data

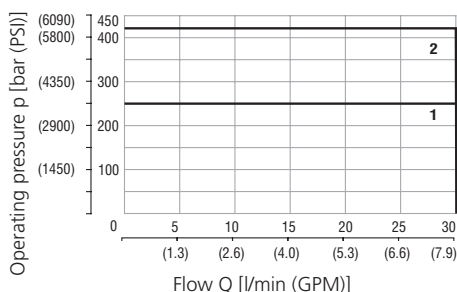
Valve size / Cartridge cavity		3/4-16 UNF-2A / A2	
		Lightline	High performance
Max. flow	l/min (GPM)	30 (7.9)	30 (7.9)
Max. operating pressure	bar (PSI)	250 (3630)	420 (6090)
Fluid temperature range	°C (°F)	-20...60 (-4...140)	-20...80 (-4...176)
Ambient temperature range	°C (°F)	-20...50 (-4...122)	-20...80 (-4...176)
Supply voltage tolerance	%	DC: ± 10	AC, DC: ± 15
Max. switching frequency	1/h	15 000	
Mass without coil	kg (lbs)	0.12 (0.26)	0.20 (0.44)

General information		Datasheet		Type	
		GI_0060		Products and operating conditions	
Coil types		C_8007		C 14B*	C 19B*
Valve bodies	In-line mounted	SB_0018		SB-A2*	
	Sandwich mounted	SB-04(06)_0028		SB-*A2*	
Cavity details / Form tools		SMT_0019		SMT-A2*	
Spare parts		SP_8010			

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

#### Operating limits - Lightline + High performance

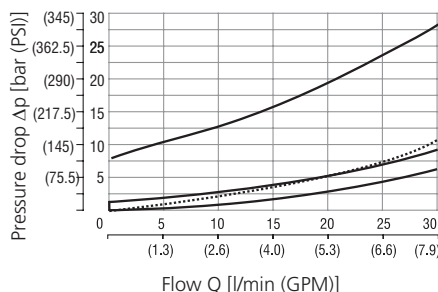
L - Oil 60 °C (140 °F) / Ambient temperature/  
50 °C (122 °F) / Voltage  $U_n$  -10% (21.6 VDC)  
HP - Oil 80 °C (176 °F) Ambient temperature  
50 °C (122 °F) / Voltage  $U_n$  -10% (21.6 VDC)



Model	Connection
1 L2L2	1→2, 2→1
1 L2O2	1→2, 2→1
2 H2L2	1→2, 2→1
2 H2O2	1→2, 2→1

#### Pressure drop related to flow rate

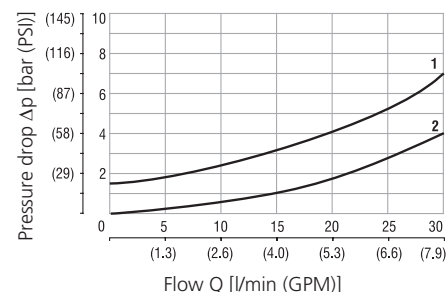
- Lightline



Model	Connection	Solenoid
1 L2L2	1→2	on
1 L2L2	2→1	on
1 L2O2	2→1	off
2 L2L2	1→2	off
3 L2O2	1→2	on
4 L2O2	1→2	off

#### Pressure drop related to flow rate

- High performance

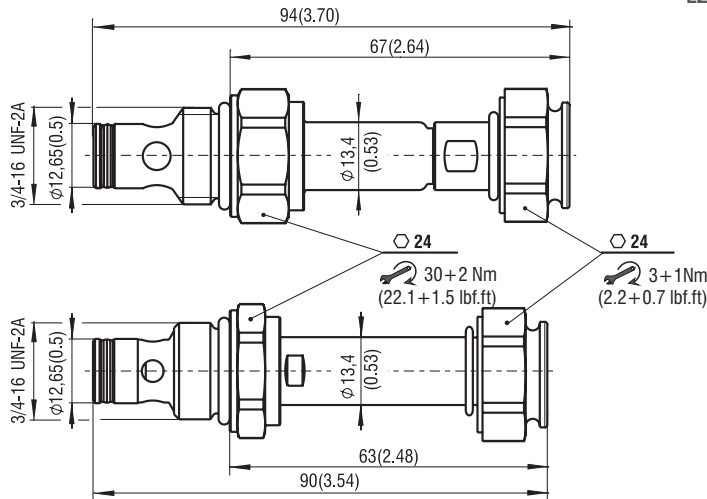


Model	Connection	Solenoid
1 H2L2	1→2	off
2 H2L2	1→2	on
2 H2L2	2→1	on
2 H2O2	1→2	off
2 H2O2	2→1	off
2 H2O2	1→2	on

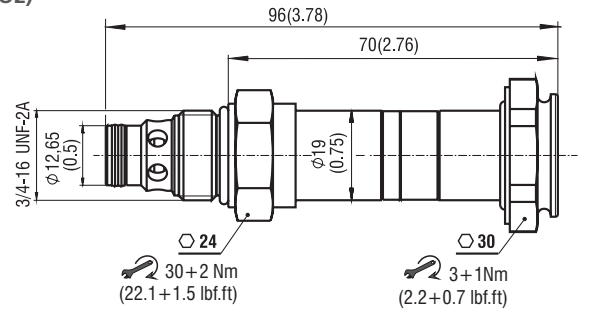
For operating limits under conditions and flow directions other than shown contact our technical support.

**Dimensions** in millimeters (inches)

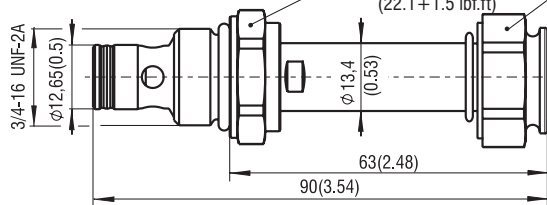
**Lightline L2**



**High performance L2 (O2)**



**O2**



**Manual Override** in millimeters (inches)

No designation - standard for 2O2*	Designation M2 for 2O2 - rubber boot protected *	Designation M5 for 2O2 - socket head screw, size 2.5 *	Designation M9 for 2O2 - without manual override
 ~ 70.0 (2.76)	 ~ 81.5 (3.21)	 ~ 77.6 (3.06)	 H ~70.0 (2.76) L ~90.0 (3.54)
*Only for High performance version		Designation M5 for 2L2 - socket head screw, size 2.5*	Designation M9 for 2L2 - without manual override
		 ~88.8 (3.50)	 H ~70.0 (2.76) L ~94.0 (3.70)

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-A2 /**     -

**2/2 directional valve, solenoid operated, poppet type, piloted, 3/4-16 UNF**

Lightline L  
High performance H

**Functional symbol**

**2O2**

**2L2**

**Surface treatment**  
A zinc-coated (ZnCr-3), ISO 9227 (240 h)  
B zinc-coated (ZnNi), ISO 9227 (520 h)\*  
\*Only for High performance version

**Seals**  
No designation NBR  
V FPM (Viton)\*  
\*Only for High performance version

**Manual override**  
standard for 2O2\*  
M2 rubber boot protected\*  
M5 socket head screw\*  
M9 without manual override  
\*Only for High performance version