

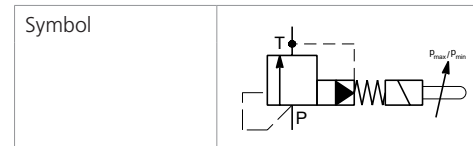
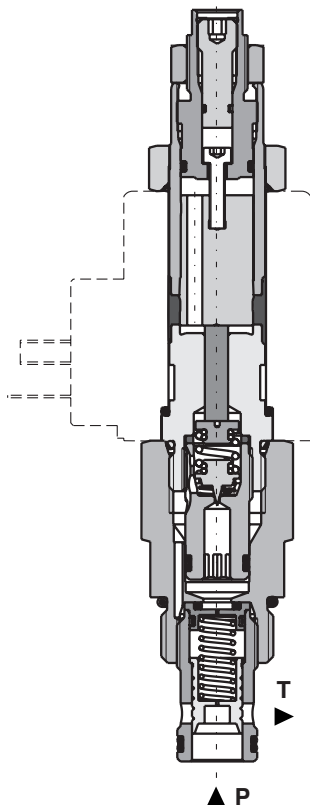
**Technical Features**

- › Combines the functionality of a normally-open solenoid valve with a pressure relief valve
- › Designed for cost-efficient and compact installation, typically used for motor control circuit
- › Two-stage pressure valve for ON/OFF function
- › Excellent stability throughout flow range with rapid response to dynamic pressure changes
- › Low hysteresis, accurate pressure control and low pressure drop through CFD optimized flow paths
- › Wide pressure range up to 350 bar
- › High flow capacity
- › Cartridges are voltage interchangeable
- › Coils interchangeable across SD\*-B\* product line
- › In the standard version, the valve is zinc-coated for 240 h protection acc. to ISO 9227

**Functional Description**

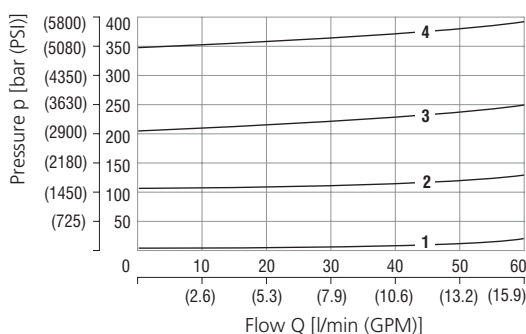
The valve is used as an integrated two-stage pressure valve for unloading the flow passage. It supports the setting of two pressure values,  $p_{min}$  and  $p_{max}$ . When energized the valve blocks the low-pressure passage and allows the pressure to rise at most to the circuit relief pressure ( $p_{max}$ ). Both  $p_{min}$  and  $p_{max}$  are manually adjustable.

Any pressure at port T is additive to the valve setting, therefore port T should preferably be connected directly to tank. Unobstructed air venting is necessary for proper function of the valve. It is therefore recommended to install the valve in a vertical position with the solenoid facing downwards.


**Technical Data**

Valve size / Cartridge cavity		7/8-14 UNF-2A / B2
Max. flow	l/min (GPM)	60 (15.9)
Max. operating pressure	bar (PSI)	350 (5080)
Max. pressure (port T)	bar (PSI)	100 (1450)
Min. set pressure	bar (PSI)	7 (102)
Fluid temperature range (FPM)	°C (°F)	-20 ... +80 (-4 ... 176)
Ambient temperature range	°C (°F)	-20 ... +50 (-4 ... 122)
Supply voltage tolerance	%	AC, DC ± 10
Max. switching frequency	1/h	5 000
Mass	kg (lbs)	0.57 (1.23)
Mounting position: If possible, the valve should be mounted with the coil vertically downward.		
General information		Datasheet
Coil types		Type
Valve bodies		Products and operating conditions
In-line mounted	SB_0018	C 19B*
Sandwich mounted	SB-04(06)_0028	SB-B2*
Cavity details / Form tools		SB-*B2*
Spare parts		SMT-B2*
		SP_8010

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

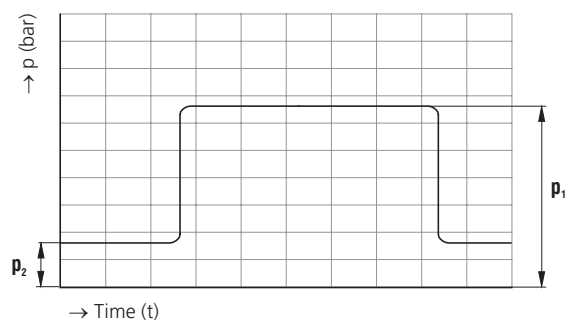
**Relief pressure related to flow rate**


Pressure range	Typical performance
4 35	Typical performance
3 21	
2 12	
1 Min. pressure setting	
Solenoid de-energized	

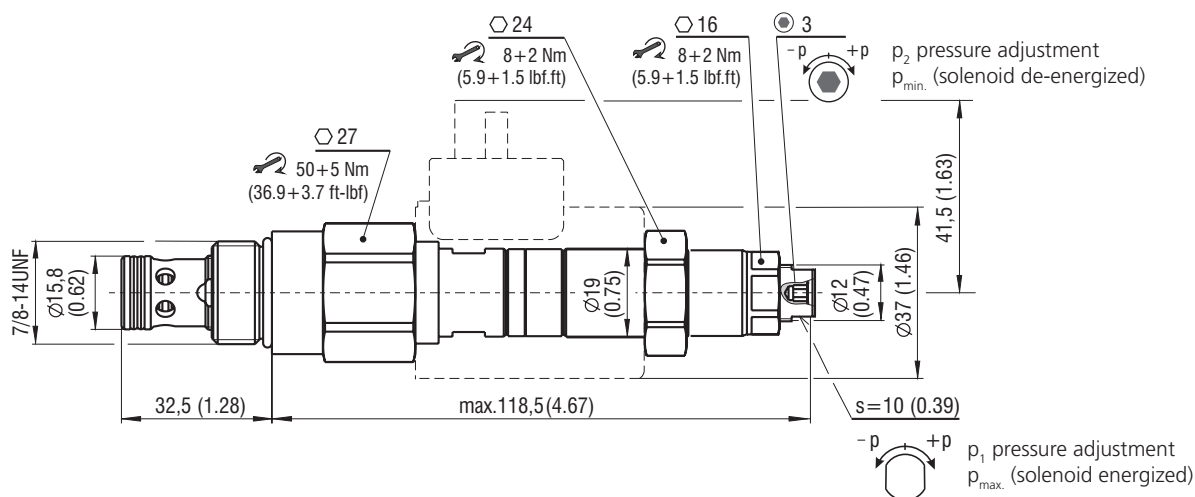
**Example showing the adjustable pressures**
 **$p_1$  and  $p_2$  ( $p_1 \geq p_2$ )**

$p_1$  ( $p_{max}$ , relief pressure) is set as the higher working pressure (solenoid energized)

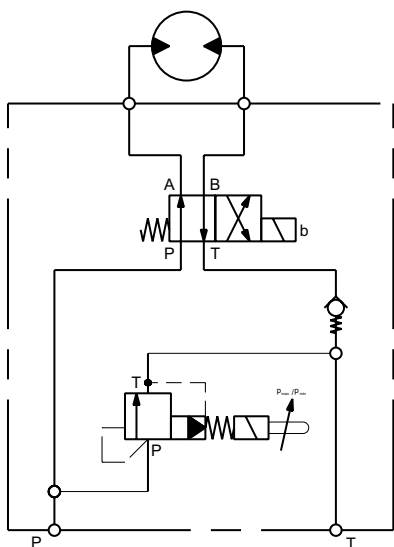
$p_2$  ( $p_{min}$ , vented pressure) is set as a lower working pressure (solenoid de-energized)



**Dimensions** in millimeters (inches)



**Application example**



The valve is used to unload a pump to tank with a very low pressure drop. This results in less heating of the oil and therefore lower energy costs for the user.

$p_1$  ( $p_{max}$ ) must be set before  $p_2$  ( $p_{min}$ ). To set  $p_1$ , the solenoid is energized and the pressure adjusted with a flat wrench (size 10). The solenoid is then de-energized and the lower pressure adjusted with an allen key (hex. 3).

**Ordering Code**

SR4E2-B2 /    -

**Pressure relief valve, solenoid operated, spool type, piloted 7/8-14 UNF**

**Model**  
High performance

H

**Pressure ranges**  
up to 120 bar (1740 PSI)  
up to 210 bar (3050 PSI)  
up to 350 bar (3080 PSI)

12

21

35

**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)