

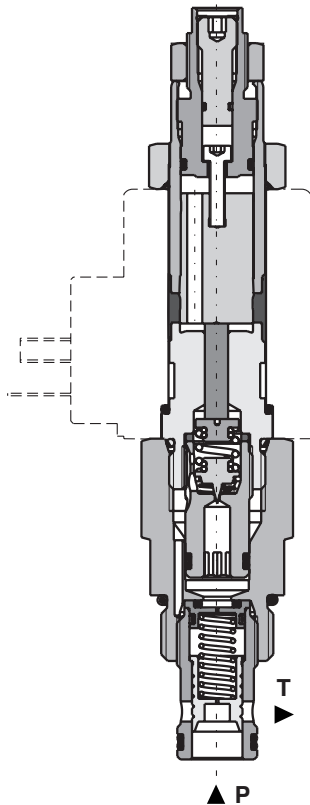
**Technical Features**

- › 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

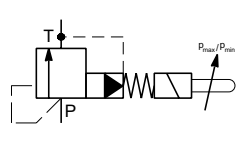
**Functional Description**

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.

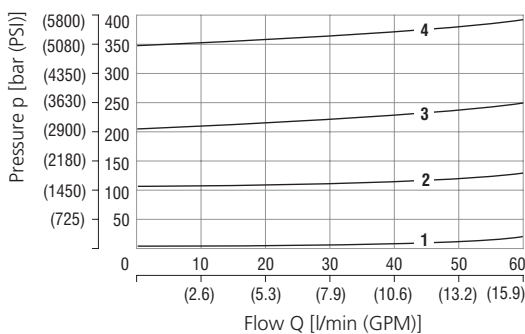


Symbol


**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 ... +80 (-4 ... 176)                  |
| Supply voltage tolerance   | %                | AC, DC ± 15                               |
| 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<br>GI_0060                      |
|  |                  | Type<br>Products and operating conditions |
| Coil types   |                  | C_8007<br>C_19B*                          |
| Valve bodies   | In-line mounted  | SB_0018<br>SB-B2*                         |
|  | Sandwich mounted | SB-04(06)_0028<br>SB-*B2*                 |
| Cavity details / Form tools  |                  | SMT_0019<br>SMT-B2*                       |
| Spare parts  |                  | SP_8010                                   |

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

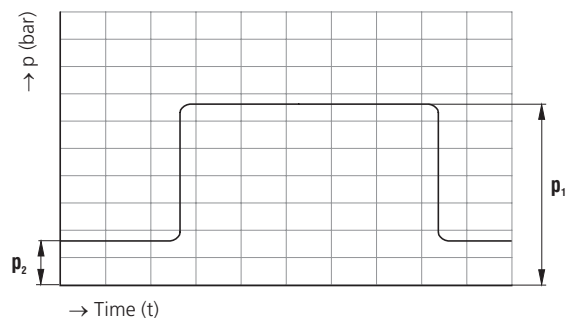
**Relief pressure related to flow rate**


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

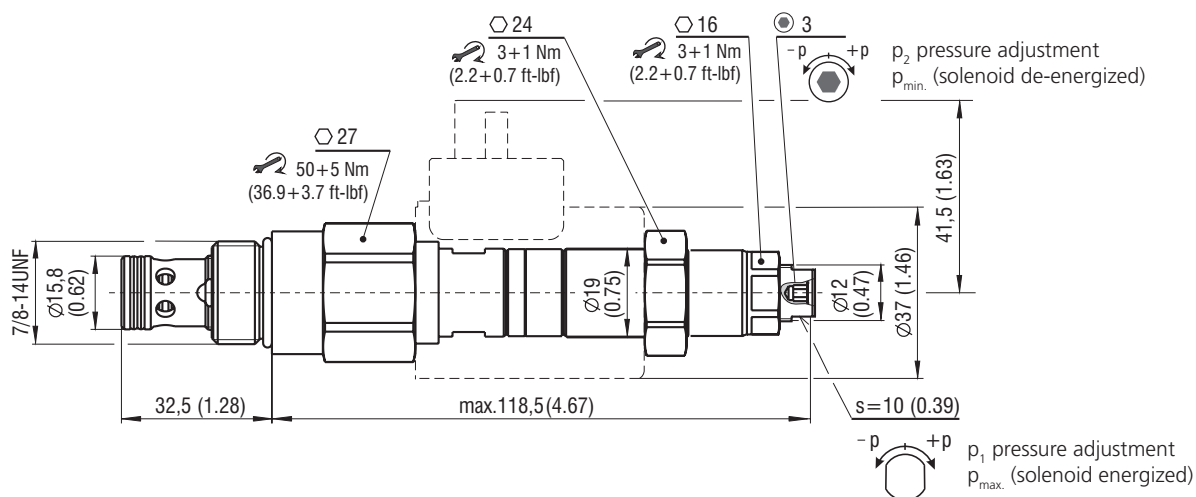
**Example showing the adjustable pressures  $p_1$  and  $p_2$  ( $p_1 \geq p_2$ )**

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

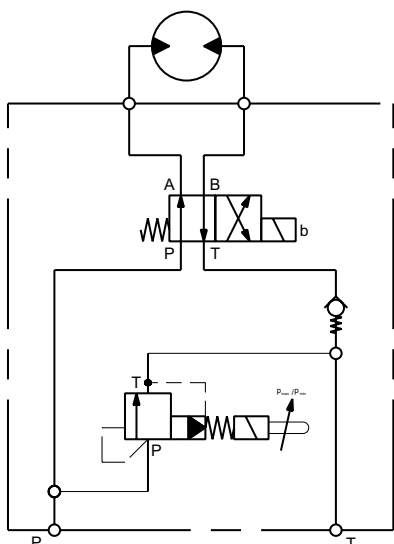
$p_2$  ( $p_{min}$ , vented pressure) is set as a lower working pressure (solenoid de-energized)



**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) **12**  
up to 210 bar (3050 PSI) **21**  
up to 350 bar (3080 PSI) **35**

**No designation**  
**V**

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

**Seals**  
NBR  
FPM (Viton)