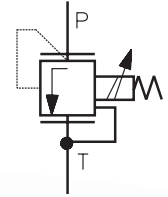


Size 7/8-14 UNF • p_{max} bis 350 bar (5076PSI)
• Q_{max} 60 L/min(15.85GPM) Q_{min} 5L/min(1.32GPM)

- Screw-in cartridge design
- 3 pressure stages
- Pilot stage SR1P-A2 for 3/4"UNF cavity
- 12V or 24V exciting coils
- PWM excitation in 100-200Hz range, recommended 160Hz
- Without mechanical protection of upper pressure



Functional Description

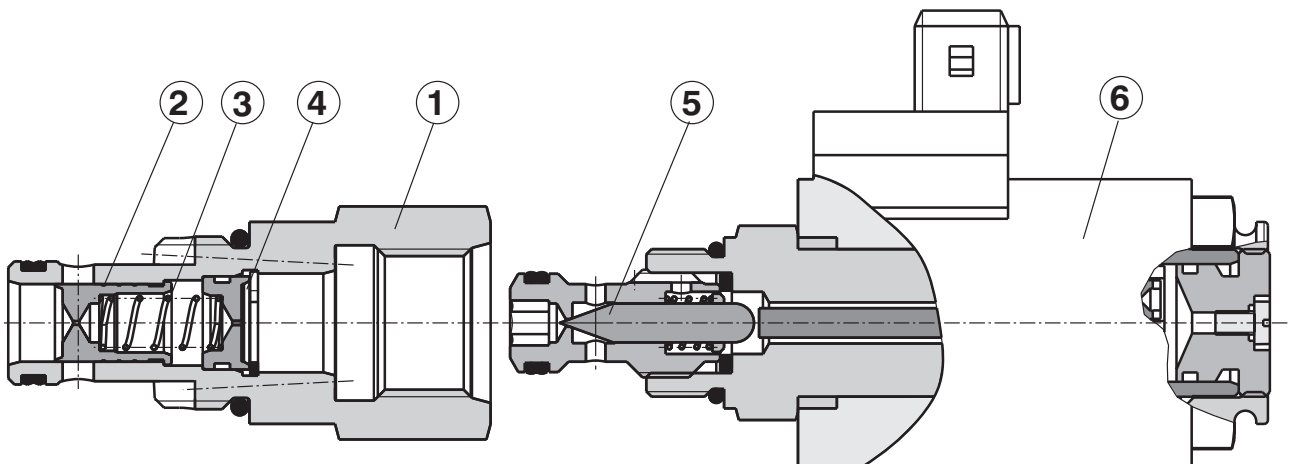
The pilot operated pressure relief valve is used for a pressure control in hydraulics circuits. It consists of a main and a pilot stage. The main stage consists of valve body (1), spool (2), springs (3) and nozzles (4). The main stage is controlled by pilot flow rate, which flows through the spool and the nozzle. The pilot stage, due to the force of the proportional solenoid (6) to the popped (5), produces desired pressure drop in the pilot seat. This pressure drop, which acts at the spool of the main stage, controls the pressure at the valve inlet P. On the pilot side the main stage is equipped with the 3/4-16 UNF cavity and it can be used it with excessive current applied could cause the valve to function beyond stated

pressure limits. The pilot stage can be also used separately, such as proportional pressure relief valve for very small flow rates to $2dm^3 \cdot min^{-1}$. Attention: The proportional pressure relief valve is not mechanically protected and it does not perform the relief valve function. By the coil overexciting the pressure grows above the mentioned pressure ranges.

The basic surface coating of the valve is zinc.

Main stage

Pilot stage



Ordering Code

SR4P-B2 / -

Proportional Pilot Operated Pressure Relief Valve

High performance

H

Pressure range

up to 120 bar (1740 PSI)
up to 210 bar (3046 PSI)
up to 350 bar (5076 PSI)

12
21
35

without designation
V

Seals
NBR
FPM (Viton)

Type of solenoid coil

E1 with terminal for the connector
E2 with terminal for the connector, and quenching diode*
E3 with AMP-Junior-Timer-connector
E4 with AMP-Junior-Timer-connector and quenching diode*
* Preferred exciting coils of the solenoid

Nominal solenoid supply voltage

12 supply voltage 12V DC
24 supply voltage 24 V DC

Ordering Code FOR SEPARATED ORDER OF THE PILOT STAGE

SR1P-A2 / -

Proportional Direct Operated Pressure Relief Valve

High performance

H

Pressure range

up to 120 bar (1740 PSI)
up to 210 bar (3046 PSI)
up to 350 bar (5076 PSI)

12
21
35

without designation
V

Seals
NBR
FPM (Viton)

Type of solenoid coil

E1 with terminal for the connector
E2 with terminal for the connector, and quenching diode*
E3 with AMP-Junior-Timer-connector
E4 with AMP-Junior-Timer-connector and quenching diode*
* Preferred exciting coils of the solenoid

Nominal solenoid supply voltage

12 supply voltage 12V DC
24 supply voltage 24 V DC

Ordering Code FOR SEPARATED ORDER OF THE MAIN STAGE

SR6H-B2 / -

Main Stage is Externally Controlled Spool Design Relief Valve

High performance

H

without designation
V

Seals
NBR
FPM (Viton)

Technical Data

Cartridge thread		7/8-14 UNF-2B
Maximum operating pressure at ports P	bar (PSI)	350 (5076)
Maximum operating pressure at port T*	bar (PSI)	100 (1450)
Flow rate range	L/min (GPM)	5 ÷ 60 (1.32 ÷ 15.85)
Hydraulic fluid		Hydraulic oils of power classes (HL, HLP) to DIN 51524
Fluid temperature range (NBR / FPM)	°C (°F)	-30 ...90 (-22 ...194)
Ambient temperature, max.	°C (°F)	+50 (122)
Viscosity range	mm ² /s (SUS)	10 ... 500 (49 ... 2450)
Duty cycle	%	100
Enclosure type to EN 60 529		IP 65
Maximum valve tightening torque	Nm (lbf.ft)	35+5 (25.81 +3.68)
Control	Hz	PWM-signal 160
Quenching		BZW 06 P28B
Maximum degree of fluid contamination		Class 21/18/15 according to ISO 4406 (1999).
Minimum prssure on Q = 10 L/min (2.64GPM)	bar (PSI)	3 (43.51)
Hysteresis	%	< 6
Weight of the whole valve		0,53 (1.168)
Main stage	kg (lb)	0,13 (0.287)
Pilot stage with exciting coil		0,40 (0.882)
Mounting position		any, preferably horizontal

Solenoid Technical Data

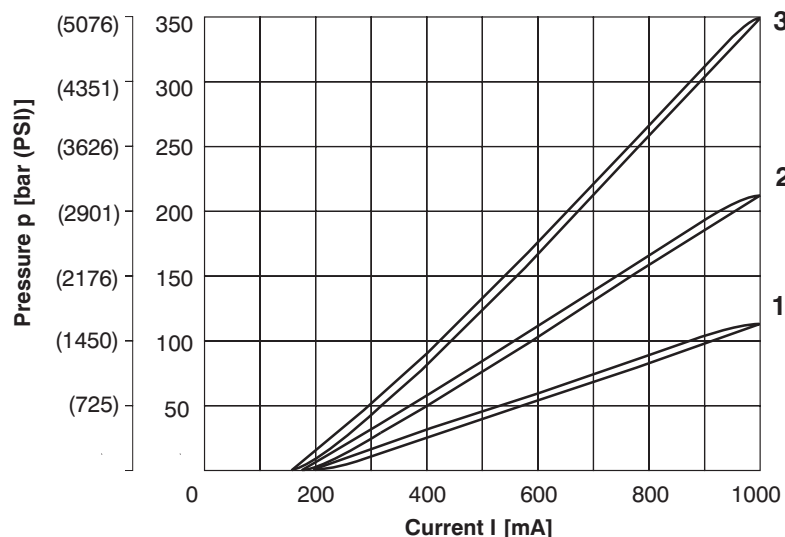
Type of coil	V	12 DC	24 DC
Limit current	A	1	0,75
Resistance at 20 °C (68 °F)	Ω	7,1	21

*Pressure in T influences $p=f(I)$ characteristics

p-I Characteristics

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

$p = f(I)$, 12 V, Q = 10 l/min(2.64GPM)



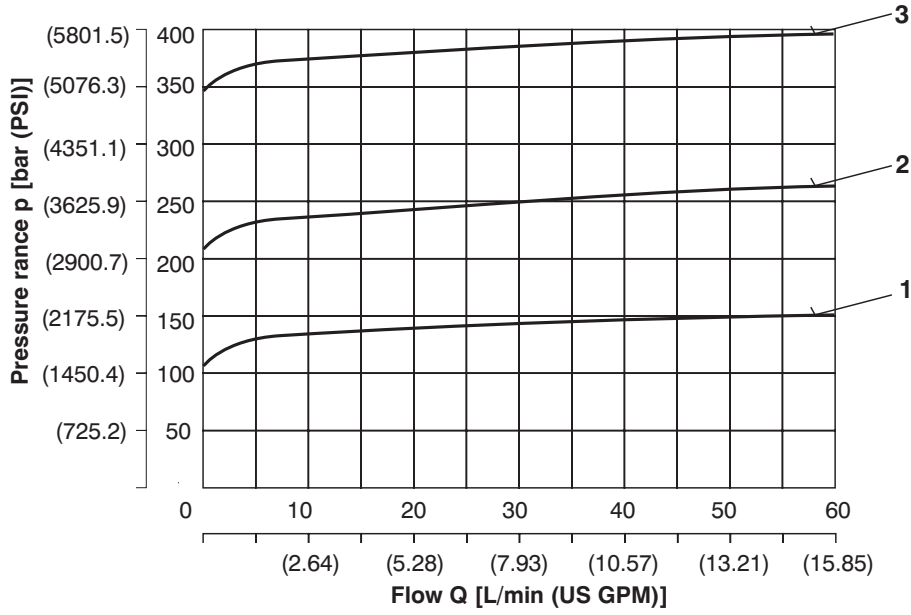
ATTENTION:

The proportional pressure relief valve is not mechanically protected and it does not perform the relief valve function. By the coil overexciting the pressure grows above the mentioned ranges.

3	Pressure range 35
2	Pressure range 21
1	Pressure range 12

p-Q Characteristics

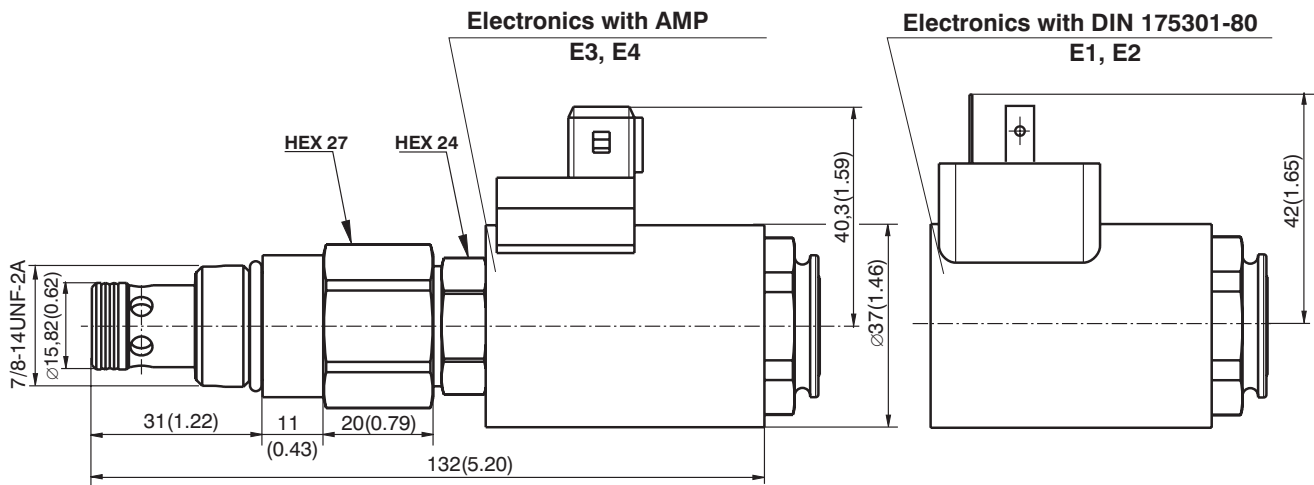
Measured at $v = 32 \text{ mm}^2/\text{s}$ (156 SUS)



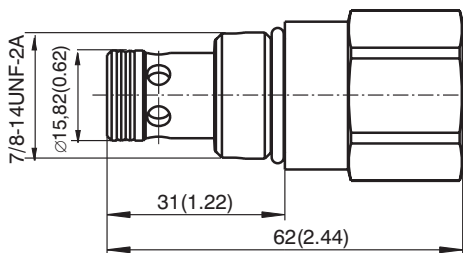
3	Pressure range 35
2	Pressure range 21
1	Pressure range 12

Valve Dimensions

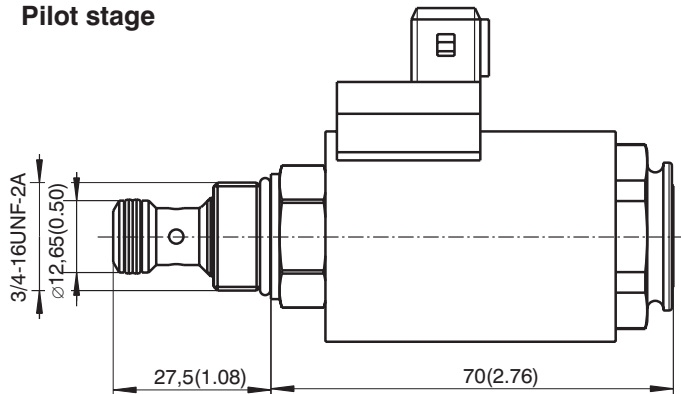
Dimensions in millimeters and (inches)



Main stage



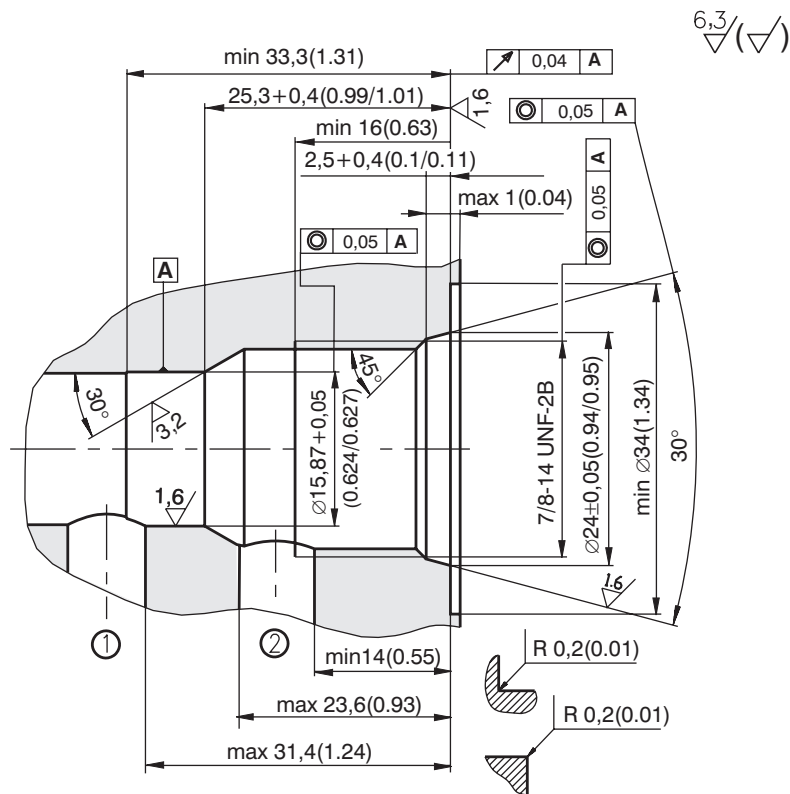
Pilot stage



Cavity 7/8-14 UNF

Dimensions in millimeters and (inches))

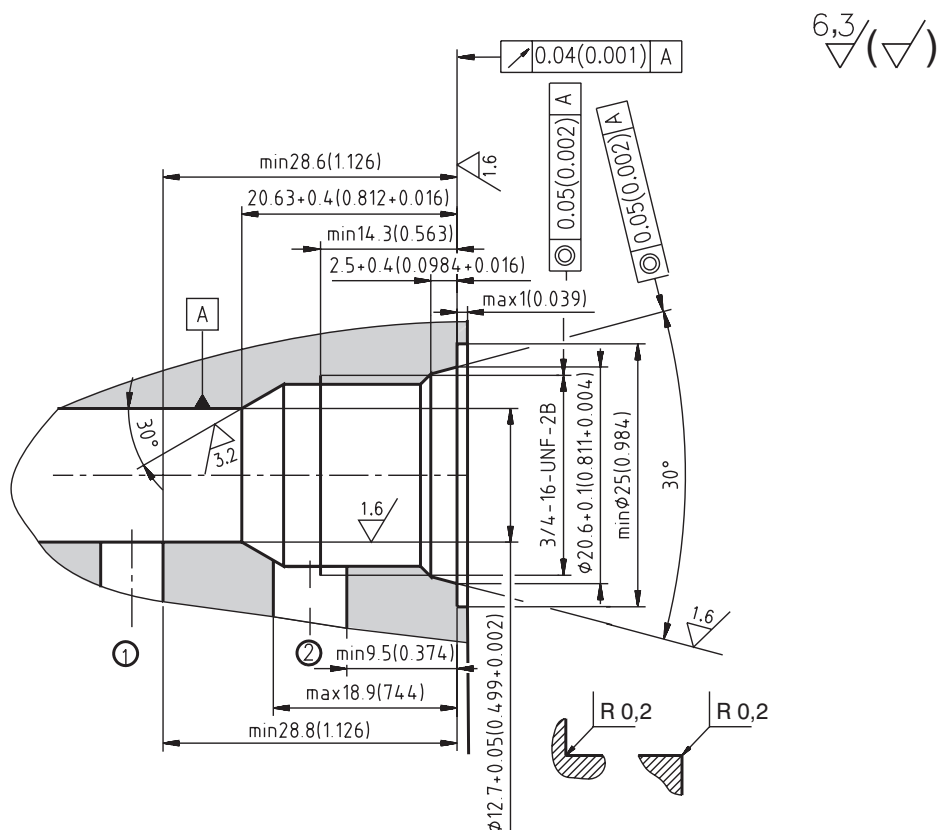
- for the whole valve SR4P-B2



Cavity 3/4-16 UNF

Dimensions in millimeters and (inches))

- for the pilot stage SR1P-A2



Type of the Solenoid Coil

Designation	Dimensional sketch	Description
E1		Solenoid coil with terminal for the electrical connector, EN 175301-803
E2		Solenoid coil with integrated quenching diode (bipolar transil diode) and terminal for the electrical connector, EN 175301-803
E3		Solenoid coil with terminal for AMP electrical connector.
E4		Solenoid coil with integrated quenching diode (bipolar transil diode) and terminal for AMP electrical connector.

Spare Parts

1. Solenoid coil			
Type designation of the coil voltage	Type of the coil		
	E2	E4	
Ordering number			
01200	18969900	23876300	
02400	16190400	16190300	

2. Solenoid retaining nut with seal ring		
Model of the nut	Seal ring	Ordering number
Standard nut	18 x 1,5 (1pc.)	15874500

3. Seal kit				
Type	Dimensions, quantity			Ordering number
	Dualseal - PU	O-ring - NBR	O-ring - Viton	
Main stage (NBR)	13,47 x 15,87 x 31 (1pc.)	19,4 x 2,1 (1pc.)	-	18960400
Main stage (Viton)	13,47 x 15,87 x 31 (1pc.)	-	19,4 x 2,1 (1pc.)	18960500
Pilot stage (NBR)	10,3 x 12,7 x 3,1 (1pc.)	17 x 1,8 (1pc.)	-	20776700
Pilot stage (Viton)	10,3 x 12,7 x 3,1 (1pc.)	-	17 x 1,8 (1pc.)	17014300

Caution!

- The packing foil is recyclable.
- The protective plate can be returned to manufacturer.
- The technical information regarding the product presented in this catalogue is for descriptive purposes only. It should not be construed in any case as a guaranteed representation of the product properties in the sense of law.

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