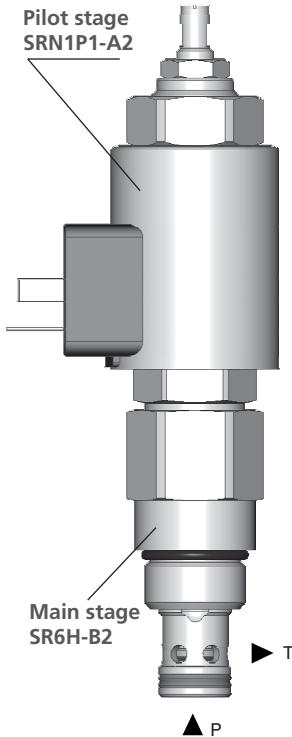
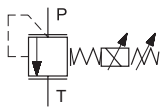


Proportional Pressure Control Valve, Relieving, Pilot Operated, Inverted

SRN4P1-B2

7/8-14 UNF • Q_{max} 60 l/min (16 GPM) • p_{max} 350 bar (5100 PSI)



Technical Features

- › Decreasing pressure output proportional with increasing DC current input
- › Low hysteresis, accurate pressure control and low pressure drop
- › Wide pressure range up to 350 bar
- › Mechanical adjustment of minimum cracking pressure
- › High flow capacity
- › Solenoid electrical terminal option acc. to EN 175301-803-A, AMP Junior Timer, or Deutsch DT04-2P
- › 12 or 24 V DC coils
- › In the standard version, the valve is zinc-coated for 240 h protection acc. to ISO 9227

Functional Description

A pilot operated proportional pressure relief spool valve in the form of a screw-in cartridge. The valve is designed for continuous regulation of system pressure. The complete valve consists of pilot stage SRN1P1-A2 and main stage with connection 7/8-14 UNF. To set the minimum cracking pressure use the adjusting screw (s=5) which incorporates also the air bleed screw. Back pressure on port T becomes additive to the pressure setting of the valve. Air bleeding is necessary for the correct function of the valve.
 Installation: When possible, the valve should be mounted below the reservoir oil level. This will keep oil in the actuator at all times, preventing instability caused by air enclosures. If this is not possible, mount the valve for best results vertically downward with proper air bleeding.

Technical Data

Valve size / Cartridge cavity		7/8-14 UNF-2A / B2	
Max. operating pressure (port P)	bar (PSI)	350 (5080)	
Max. operating pressure (port T)	bar (PSI)	100 (1450)	
Max. flow	l/min (GPM)	60 (15.9)	
Fluid temperature range (FPM)	°C (°F)	-20...+120 (-4...+248)	
Ambient temperature range	°C (°F)	-20...+80 (-4...+176)	
Min. setting pressure	bar (PSI)	7 bar (101.5 PSI) for 5 l/min (1.32 GPM)	
Hysteresis	%	< 5	
Solenoid data			
Supply voltage	V	12 DC	24 DC
Max. current	A	1	0.6
Rated resistance at 20 °C (68 °F)	Ω	6.5 ± 5 %	20.6 ± 5 %
Duty cycle	%	100	
Optimal PWM frequency	Hz	250	
Quenching diode		BZW06-19B	BZW06-33B
Enclosure type acc. to EN 60529**		IP65 / IP67 / IP69K	
Mass with solenoid	kg (lbs)	0.58 (1.28)	
Data Sheet		Type	
General information		GI_0060	
Coil types		C_8007	
Valve bodies		SB_0018	
Cavity details / Form tools		SMT_0019	
Spare parts		SP_8010	
		Products and operating conditions	
		C 19B*	
In-line mounted		SB-B2*	
		SMT-B2*	

**The indicated IP protection level is only reached with a properly mounted connector.

Dimensions in millimeters (inches)

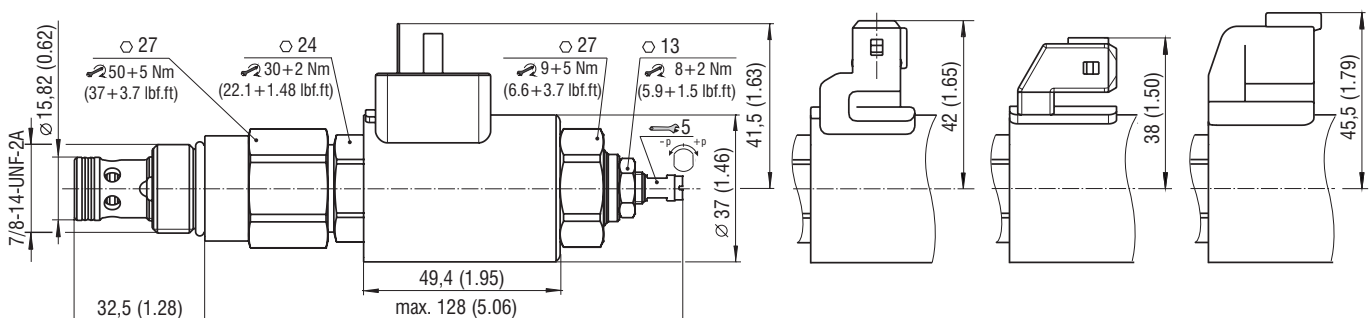
Connector type

E1, E2 - IP65
EN 175301-803-A

E3, E4 - IP67
AMP Junior
Timer - radial

E3A, E4A - IP67
AMP Junior
Timer - axial

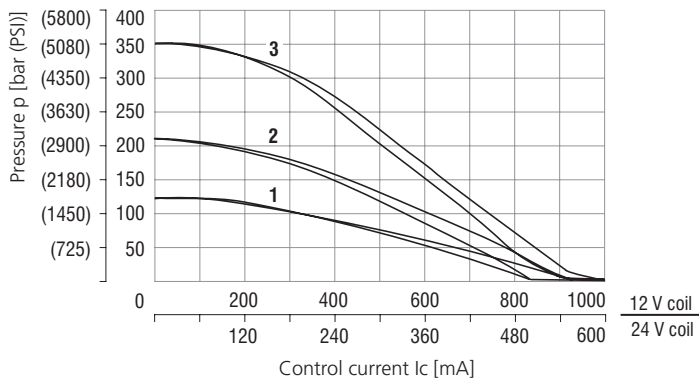
E12A, E13A - IP67 / IP69K
Deutsch DT04-2P



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

Relief pressure related to control signal

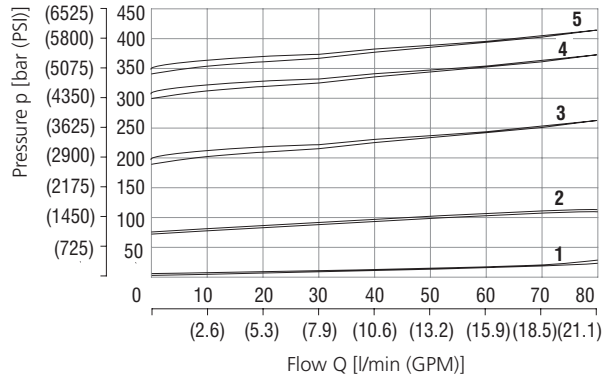
Q=5 l/min (1.32 GPM), pressure in port T=0 bar, PWM 160Hz



Pressure range	12	21	35
	1	2	3

Relief pressure related to flow rate

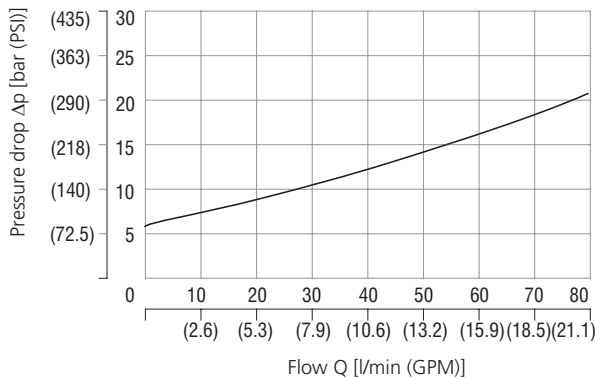
Pressure range 35, various control currents



Control current	1	2	3	4	5
	100%Imax	75%Imax	50%Imax	25%Imax	0%Imax

Pressure drop related to flow rate

100% of control current, P-T direction



Ordering Code

SRN4P1 - B2 / H [] - [] [] [] - []

Proportional pressure control valve, relieving, pilot operated, inverted

Valve cavity
7/8-14 UNF-2A

Model
High performance

Max. regulated pressure
up to 120 bar (1740 PSI) **12**
up to 210 bar (3046 PSI) **21**
up to 350 bar (5076 PSI) **35**

Supply voltage / max. current
12 V DC / 1.0 A **12**
24 V DC / 0.6 A **24**

Main stage ordering key: SR6H-B2/HV

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

Seals
No designation NBR
V FPM (Viton)

Connector type
EN 175301-803-A
E1 E1 with quenching diode
E2 AMP Junior Timer - radial direction (2 pins; male)
E3 E3 with quenchind diode
E4 AMP Junior Timer - axial direction (2 pins; male)
E3A E3A with quenchind diode
E4A Deutsch DT04-2P - axial direction
E12A E12A with quenching diode
E13A

For other solenoid terminals see data sheet No. 8007