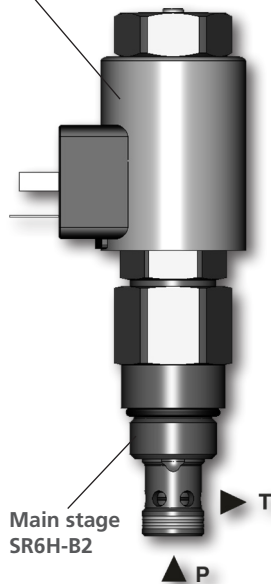


Proportional Pressure Relief Valve, Pilot Operated

SR4P2-B2

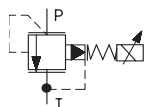
7/8-14 UNF • Q_{max} 80 l/min (21 GPM) • p_{max} 350 bar (5100 PSI)

Pilot stage
SR1P2-A2



Main stage
SR6H-B2

Symbol



Technical Features

- › Pressure in the circuit increases proportional to increasing electric command signal
- › Low hysteresis, accurate pressure control and low pressure drop
- › Wide pressure range up to 350 bar
- › High flow capacity up to 80 l/min
- › Optional electrical terminal of solenoid: EN 175301-803-A, AMP Junior Timer or Deutsch DT04-2P
- › Coil supply voltage 12 or 24 V DC
- › In the standard version, the valve is zinc-coated for 240 h protection acc. to ISO 9227. Enhanced surface protection for mobile sector available for the steel parts (ISO 9227, 520 h salt spray)

Functional Description

Screw-in cartridge proportional pressure relief valve, pilot operated. The complete valve consists of a pilot stage - valve SR1P2-A2 and a main stage with connection thread 7/8-14 UNF. The valve maintains the constant pressure in the circuit proportional to the input command signal. The valve does not have a mechanical stroke limitation and thus cannot be used as a safety 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 maintain oil in the actuator, preventing instability caused by air in the system. If possible, to achieve the best result, mount the valve vertically above the bleed screw and ensure proper air bleeding.

Note: back pressure in T-channel automatically increases the set cracking pressure of the valve in a ratio of 1:1

Technical Data

Valve size / Cartridge cavity		7/8-14 UNF-2A / B2 (C-10-2)	
Max. operating pressure (port P)	bar (PSI)	350 (5100)	
Max. operating pressure (port T)	bar (PSI)	100 (1450)	
Max. flow	l/min (GPM)	80 (21.1)	
Fluid temperature range (NBR)	°C (°F)	-30...+80 (-22...+176)	
Fluid temperature range (FPM)	°C (°F)	-20...+120 (-4...+248)	
Ambient temperature range	°C (°F)	-30...+80 (-22...+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
Limit current	A	1	0.6
Rated resistance at 20 °C (68 °F)	Ω	6.5	20.6
Duty cycle	%	100	
Optimal PWM frequency	Hz	160	
Quenching diode		BZW06-19B	BZW06-33B
Enclosure type acc. to EN 60529		(acc.to terminal type) IP65 / IP67 / IP69K	
The specified IP rating applies only in the case of correctly connected connectors (male + female) with the corresponding IP rating.			
Weight with solenoid	kg (lbs)	0.58 (1.28)	
	Datasheet	Type	
General information		Products and operating conditions	
Coil types		C19B*	
Valve bodies	In-line mounted	SB-B2*	
Cavity details / Form tools		SMT-B2*	
Spare parts		HA 8010	
Compatible control unit		EL7-E*	

Dimensions in millimeters (inches)

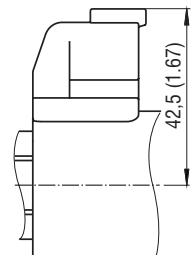
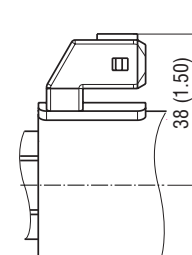
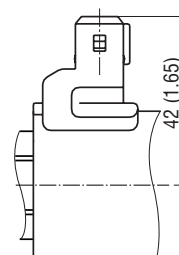
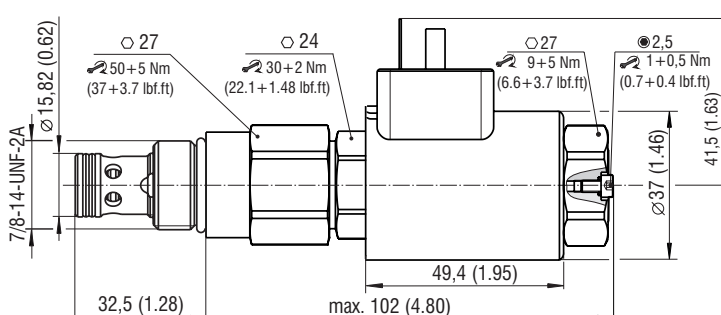
Connector type

E1, E2 - IP65
EN 175301-803-A

E3, E4 - IP65 / IP67
AMP Junior
Timer - radial

E3A, E4A - IP65 / IP67
AMP Junior
Timer - axial

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



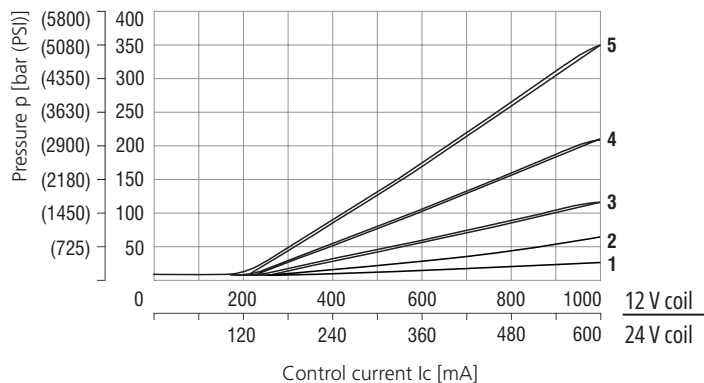
Elektronic control unit EL7

An electronic control unit (ECU) EL7 is used for the valve control. The ECU converts the input command signal into an output current control PWM signal for solenoid coils. The ECU EL7 is available as external for connection to the DIN rail (EL7-E, see datasheet HA 9152) or integrated on the valve in the form of connector plug (EL7-I, see datasheet HA 9151).

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

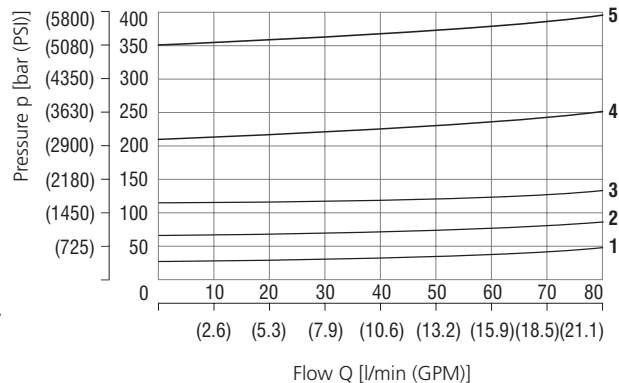
Relief pressure related to control signal

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



Pressure range	3	6	12	21	35
	1	2	3	4	5

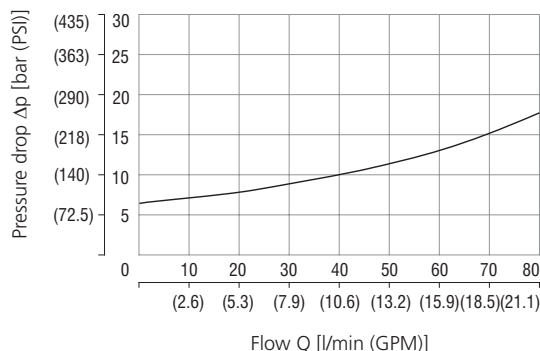
Relief pressure related to flow rate



Pressure range	3	6	12	21	35
	1	2	3	4	5

Pressure drop related to flow rate

0% of control current, P-T direction



Attention:

The proportional pressure relief valve is not mechanically protected and it does not perform the relief valve function.

Ordering Code

SR4P2 - B2 / H - -

Proportional pressure relief valve,
pilot operated

Valve cavity
7/8-14 UNF-2A (C-10-2)

Model
High performance

Max. reduced pressure
up to 30 bar (435 PSI) **3**
up to 60 bar (870 PSI) **6**
up to 120 bar (1740 PSI) **12**
up to 210 bar (3046 PSI) **21**
up to 350 bar (5076 PSI) **35**

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

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

Seals
No designation **V**
NBR
FPM (Viton)

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

Main stage ordering key: SR6H-B2/HV

For other solenoid terminals see datasheet HA 8007.