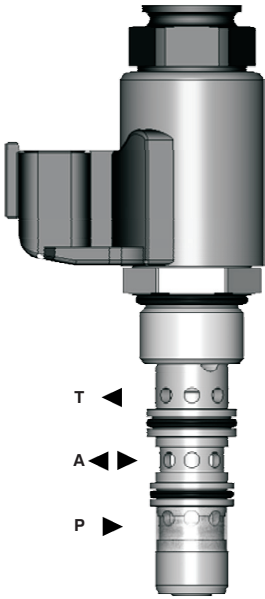


SP4P1-B4

7/8-14 UNF • Q_{max} 40 l/min (11 GPM) • p_{max} 30 bar (435 PSI)



Technical Features

- › Excellent stability throughout flow range with rapid response to proportional current input change
- › Low hysteresis, accurate pressure control and low pressure drop by CFD optimized flow path
- › Precise pressure control vs current and excellent repeatability
- › Integrated relief function for protection against pressure peaks
- › Solenoid electrical terminal option acc. to EN 175301-803-A, AMP Junior Timer and Deutsch DT04-2P
- › 12 and 24 volt DC coils standard
- › Compact design with reduced solenoid dimensions for production cost saving
- › High flow capacity and low coil power consumption
- › Optional mesh screen
- › In the standard version, the valve is zinc coated for 240 h protection acc. to ISO 9227

Functional Description

A Screw In cartridge-style, pilot-operated, spool-type hydraulic pressure reducing valve. Reduced pressure output is proportional to DC current input. This valve is intended for applications as pressure limiting device. Note: Consult factory for special OEM versions of this product.

Model Code	no mesh screen	with mesh screen
Symbol		

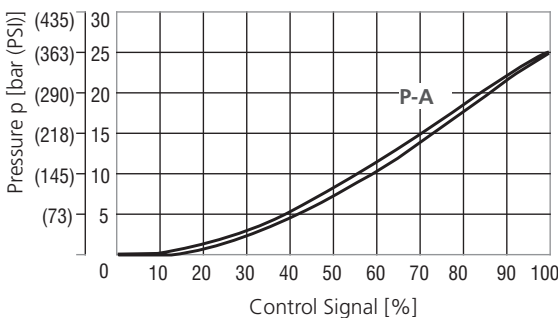
Technical Data

Valve size / Cartridge cavity		7/8-14 UNF-2A / B4	
Max. operating pressure (P port)	bar (PSI)	30 (435)	
Max. regulated pressure (A port)	bar (PSI)	25 (363)	
Max. flow rate P-A	l/min (GPM)	40 (11)	
Fluid temperature range	°C (°F)	-30 ...90 (-22 ...194), +100 (212) short time	
Ambient temperature range	°C (°F)	-30 ...90 (-22 ...194), +100 (212) short time	
Response time at 100% signal	ms	< 50	
Solenoid Data			
Supply voltage	V	12 DC	24 DC
Max. current	A	0,7	0,35
Rated resistance at 20 °C (68 °F)	Ω	7,82+5%	29,5+4,5%
Duty cycle	%	100	
Optimal PWM frequency	Hz	200	
Quenching diode		BZW06-28B	BZW06-33B
Enclosure type acc.to EN 60529**	AMP / Deutsch DT04	(acc.to terminal type) IP 67 / IP 69K	
Weight	kg (lbs)	0,3 (0.66)	
	Data Sheet	Type	
General information	GI_0060	products and operating conditions	
Coil types	C_8007	C14B*	
Bodies for valves	In-line mounted	SB_0018	SB-B4*
	Sandwich mounted	SB-04(06)_0028	SB-*B4*
Cavity details / Form tools	SMT_0019	SMT-B4*	
Spare parts	SP_8010		

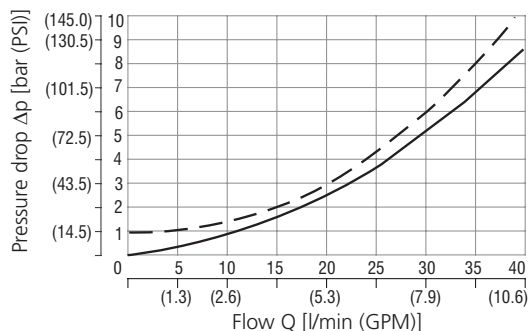
**The indicated IP protection level is valid only in case of properly mounted connector.

Characteristics measured at v = 32 mm²/s (156 SUS)

Reduced pressure related to control signal
 Port A of range 0-25 bar (363 PSI), Q = 0 lpm (GPM)
 Port P inlet pressure 30 bar (435 PSI)
 Measured without mesh screen



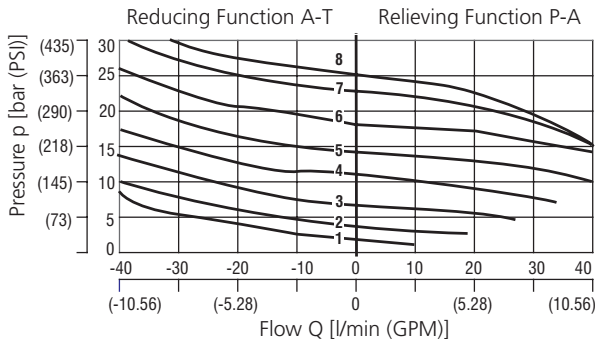
Pressure drop related to flow rate
 — A-T Valve coil De-energized (Reducing function)
 - - P-A Valve coil energized (Relieving function)
 Measured without mesh screen



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

Reducing - Relieving pressure related to flow rate

Regulated pressure range 0-25 bar (0-363 PSI), input 30 bar (435 PSI)
 Various control currents
 Measured without mesh screen

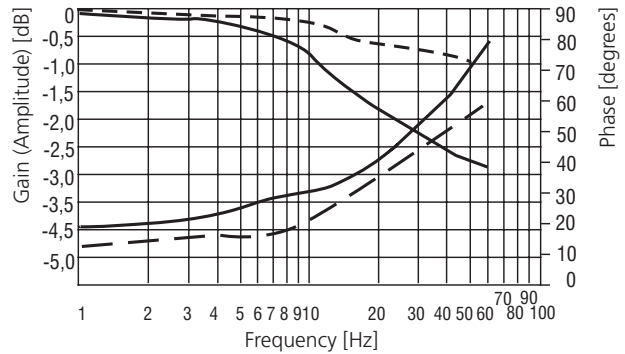


1	2	3	4	5	6	7	8
24%	35%	47%	59%	70%	82%	94%	100%

Frequency response characteristics

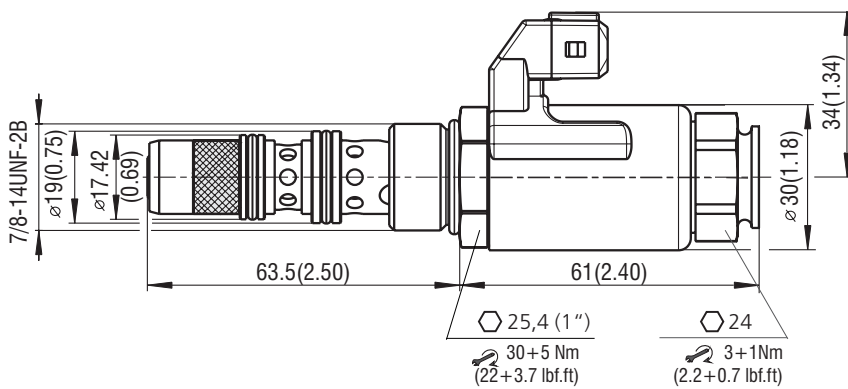
Inlet pressure at port P - 30 bar (435 PSI), flow = 0 lpm (GPM)

----- signal 70±25%
 ——— signal 55±40%

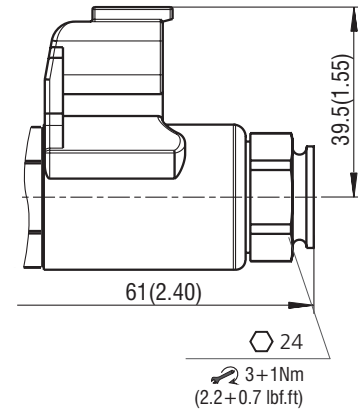


Dimensions in millimeters (inches)

Electrical Connector
 AMP Junior-Timer E3A, E4A - IP 67



Electrical Connector
 Deutsch DT 04 - E12, E13 - IP69K



Ordering Code

SP4P1-B4 / [] - [] [] [] - [] []

Proportional Pressure Control Valve,
 Reducing - Relieving, Pilot Operated,
 Screw-In Style

Valve cavity
 7/8-14 UNF

Max. regulated pressure
 20 bar (290 PSI) 20
 25 bar (363 PSI) 25

Supply voltage
 12 V DC / 0,7 A 12
 24 V DC / 0,35 A 24

No designation
 SP-125

Mesh screen option
 without mesh screen
 port P, 125 Microns

Surface treatment
 240 h salt spray test (ISO 9227)
 520 h salt spray test (ISO 9227)

A
 B

No designation
 V

Seals
 NBR
 FPM (Viton)

E3A
 E4A
 E12A
 E13A

Connector type
 axial AMP Junior Timer (2 pins; male)
 E3 with quenching diode
 Deutsch DT04-2P
 E12 with quenching diode