Electro-proportional relief valve - pilot capacity

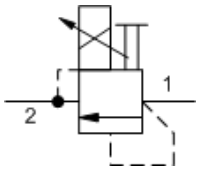
Capacity:
.25 gpm (1 L/min.)

Functional Group:
Products : Cartridges : Electro-Proportional : Relief : 2-Port, Pilot Relief

Model:
RBAP-MWN

Product Description

This 2-port, pilot-stage, direct-acting relief cartridge is an electro-proportionally controlled, normally closed pressure regulating valve. The proportional control allows for infinite, step-less adjustability within the selected pressure range. When the pressure at port 1 (inlet) is sufficient to overcome the solenoid forces, as determined by the analog input signal, the poppet lifts and allows flow from port 1 to port 2 (outlet). This pilot control cartridge utilizes the T-8A cavity so it can be used in conjunction with Sun's main stage, pressure control elements.



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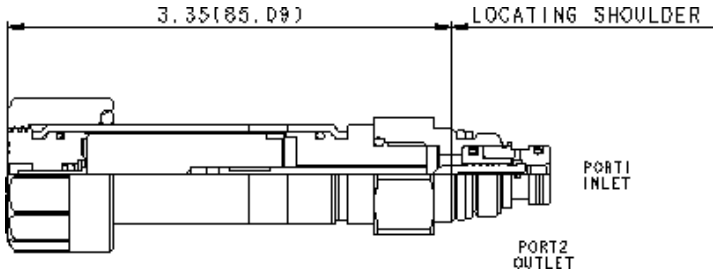


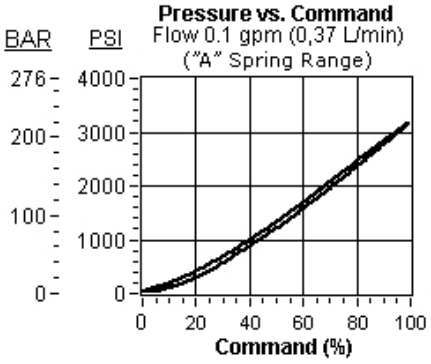
Technical Features

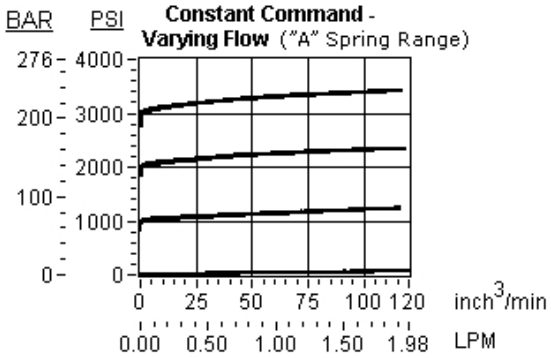
- Varying the analog input signal to the proportional solenoid provides a step-less control of pressure.
- This electro-proportional cartridge utilizes the Sun T-8A, 2-port cavity making it the ideal choice to use in conjunction with Sun's main stage cartridges. Separate pilot lines are eliminated and only one cavity needs to be machined to accommodate both the control and primary function. Note: All 2-port pilot stage control cartridges utilize the same cavity and are physically interchangeable. Functionality is the only consideration.
- All pressure ranges will drop to a setting of 0 with no analog input signal. The pressure ranges indicate the valve's area of acceptable performance.
- The L control (Manual Override - Adjustable) allows one to manually adjust the valve in case of an electrical failure. The L control also allows one to offset the pressure range. For instance, if an A range valve is mechanically offset to a setting of 1500 psi (105 bar), the new maximum will be 4500 psi (310 bar).
- For optimum performance, an amplifier with current sensing and adjustable dither should be used. Dither should be adjustable between 100 - 250 Hz.
- NOTE: There is no upper limit to the pressure setting when using the M control. The more force you exert on the manual override, the higher the resulting pressure.
- High pilot capacity allows for operation of larger size main stage elements.
- Note: The main stage valve should first be installed to the correct torque value followed by the T-8A pilot control section into the main stage valve to its required torque value.
- Capable of operating with pressures up to 5000 psi.
- Damped construction provides stable operation over a wide range of operating conditions.
- Low leakage levels in the closed position. (Reseat occurs at 85% of cracking pressure.)
- Coils are interchangeable with Sun's other full flow, solenoid operated valves and can be mounted on the tube in either direction.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

Technical Data

	U.S. Units	Metric Units

Cavity	T-8A	
Capacity	.25 gpm	1 L/min.
Hysteresis (with dither)	<4%	
Hysteresis with DC input	<8%	
Linearity (with dither)	<2%	
Repeatibility (with dither)	<2%	
Recommended dither frequency	140 Hz	
Maximum Operating Pressure	5000 psi	350 bar
Maximum Valve Leakage at Reseat	1.5 in³/min.	25 cc/min.
Series (from Cavity)	Series P	
Reseat	>85% of Set Pressure	
Solenoid Tube Diameter	.75 in.	19 mm
Valve Hex Size	7/8 in.	22,2 mm
Valve Installation Torque	25 - 30 lbf ft	35 - 40 Nm
Model Weight (with coil)	1.00 lb	0,45 kg
Seal Kits - Cartridge	Buna: 990-208-007	
Seal Kits - Cartridge	Viton: 990-208-006	
Seal Kits - Coil	Viton: 990-770-006	
Seal Kits - Coil, Weatherized	Viton: 991-058	
Model Weight	0.55 lb.	0.25 kg.

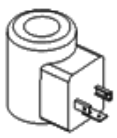
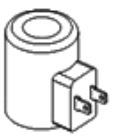
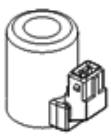
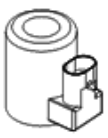
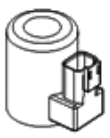




RBAP-MWN

Control		Adjustment Range		External Material/Seal Material	
M*	Manual Override	W 500 - 5000 psi (35 - 350 bar)	+5.00	N Buna-N	+0.00

Standard Coil Options (View All)

					
DIN 43650 4 pin (Hirschman)	SAE J858A	AMP Junior Timer	Twin Lead	Metri-Pack	Deutsch DT04-2P

***	no coil	224V06	DIN 43650 4 pin (Hirschman) 24 VDC 0 to 10V Amplifier (C1V-06A)	724	Twin Lead 24 VDC
212	DIN 43650 4 pin (Hirschman) 12 VDC	524	SAE J858A 24 VDC	812	Metri-Pack 12 VDC

212A12 DIN 43650 4 pin (Hirschman) 12 VDC 0 to 20mA Amplifier (C2A-12A)

212V12 DIN 43650 4 pin (Hirschman) 12 VDC 0 to 10V Amplifier (C1V-12A)

224 DIN 43650 4 pin (Hirschman) 24 VDC

224A06 DIN 43650 4 pin (Hirschman) 24 VDC 0 to 20mA Amplifier (C2A-06A)

612 AMP Junior Timer 12 VDC

624 AMP Junior Timer 24 VDC

712 Twin Lead 12 VDC

824 Metri-Pack 24 VDC

912 Deutsch DT04-2P 12 VDC

924 Deutsch DT04-2P 24 VDC

Embedded Coil Options (Click Here)

2B12A DIN 43650 4 pin (Hirschman) command common on fourth pin 12 VDC 0-20 mA

2B12V DIN 43650 4 pin (Hirschman) command common on fourth pin 12 VDC 0-10V

2B24A DIN 43650 4 pin (Hirschman) command common on fourth pin 24 VDC 0-20 mA

2B24V DIN 43650 4 pin (Hirschman) command common on fourth pin 24 VDC 0-10V

2C12A DIN 43650 4 pin (Hirschman) +5V reference on fourth pin 12 VDC 0-20 mA

2C12V DIN 43650 4 pin (Hirschman) +5V reference on fourth pin 12 VDC 0-10V

2C24A DIN 43650 4 pin (Hirschman) +5V reference on fourth pin 24 VDC 0-20 mA

2C24V DIN 43650 4 pin (Hirschman) +5V reference on fourth pin 24 VDC 0-10V

2D12A DIN 43650 4 pin (Hirschman) enable input on fourth pin 12 VDC 0-20 mA

2D12V DIN 43650 4 pin (Hirschman) enable input on fourth pin 12 VDC 0-10V

2D24A DIN 43650 4 pin (Hirschman) enable input on fourth pin 24 VDC 0-20 mA

2D24V DIN 43650 4 pin (Hirschman) enable input on fourth pin 24 VDC 0-10V

2F12V DIN 43650 4 pin (Hirschman) programmable ramps, separate rise and fall 12 VDC 0-10V

2F24V DIN 43650 4 pin (Hirschman) programmable ramps, separate rise and fall 24 VDC 0-10V

4A12A Deutsch DT04-6P all functions enabled (separate command common, 5 v reference, and an enable) 12 VDC 0-20 mA

4A12V Deutsch DT04-6P all functions enabled (separate command common, 5 v reference, and an enable) 12 VDC 0-10V

4A24A Deutsch DT04-6P all functions enabled (separate command common, 5 v reference, and an enable) 24 VDC 0-20 mA

4A24V Deutsch DT04-6P all functions enabled (separate command common, 5 v reference, and an enable) 24 VDC 0-10V

4F12V Deutsch DT04-6P programmable ramps, separate rise and fall 12 VDC 0-10V

4F24V Deutsch DT04-6P programmable ramps, separate rise and fall 24 VDC 0-10V

Additional Options (Click Here)

Additional Coils

512 SAE J858A 12 VDC

71219 Twin Lead to Delphi Weather-Pack Connector, 9 inch lead length, 12 VDC

71239 Twin Lead to Connector, 9 inch lead length

71299 Twin Lead to Deutsch connector, 9 inch lead length

72419 Twin Lead to Delphi Weather-Pack Connector, 9 inch lead length 24 VDC

72429 Twin Lead to Connector, 9 inch lead length

72439 Twin Lead to Connector, 9 inch lead length

72499 Twin Lead to Deutsch connector, 9 inch lead length

Stainless material/seal options not available for this model

* Special Setting required, specify at time of order

Special Notes

- No Special Notes Available for selected model.

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