
3-way, 2-position, direct-acting, solenoid-operated directional poppet valve

Functional Group:

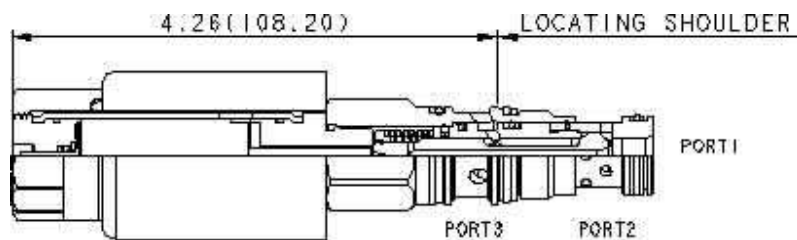
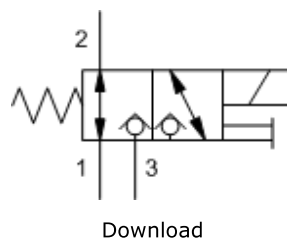
Products : Cartridges : Directional : 3 Way : Solenoid Operated Poppet

Capacity:
**7.5 gpm (30
L/min.)**

Model:
**DWDA-MAN-
224**

Product Description

This solenoid-operated, 2-position, 3-way cartridge is a direct-acting, poppet valve used to control the direction of flow in a hydraulic circuit. The valve is normally open between port 1 and port 2 with port 3 blocked. Energizing the valve connects port 2 to 3 and blocks port 1. All flow paths are bidirectional and blocked paths are blocked in both directions. The poppet style construction makes it well suited for load holding or load blocking applications.



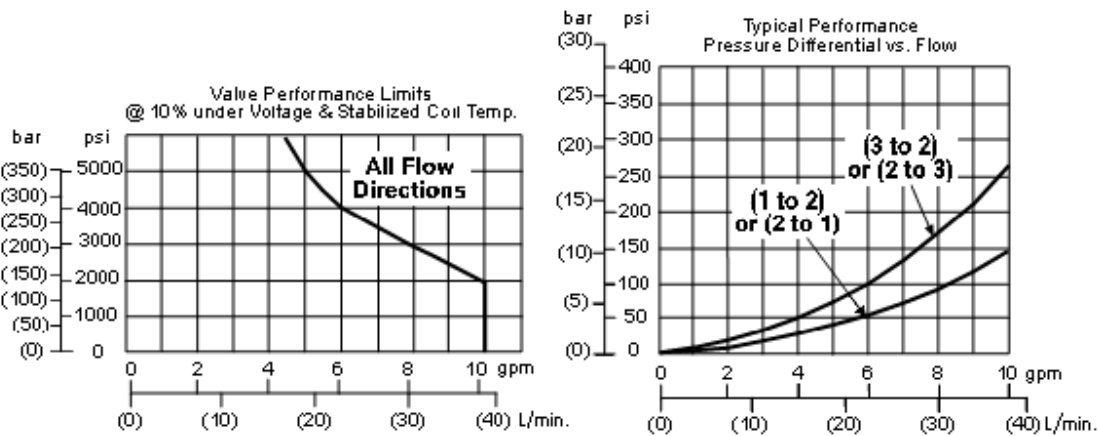
Technical Features

- The solenoid tube assembly is fatigue rated for 5000 psi (350 bar) service.
- This valve is direct actuated and requires no minimum hydraulic pressure for operation.
- Valves exhibit extremely low leakage rates; less than 10 drops/min. @ 5000 psi (350 bar).
- Suitable for load holding applications.
- This cartridge is not equipped with a manual override; a manual override plus additional override options are available. See Option Selection below.
- This valve utilizes a wet armature design. This means that the working fluid surrounds the armature and is exposed to the heat generated by the coil. This can be a factor if the coil is energized
- A wide variety of coil termination and voltage options are available.
- The solenoid's unique magnetic design results in a high efficiency solenoid, yielding high spool actuating force per Watt expended, leading to reliable valve shifting.
- Coils are interchangeable with other Sun Series 1 solenoid products and can be mounted on the tube in either direction.
- Depending on the connector, coils are rated up to IP69 thereby eliminating the need for an additional weatherization kit. See "Coil Technical Information" for more details.
- 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.

for long periods of time. Some fluids, notably water/glycol mixtures, break down at these temperatures over time and form varnishes that will affect the function of the cartridge.

Technical Data

	U.S. Units	Metric Units
Cavity	T-11A	
Capacity	7.5 gpm	30 L/min.
Manual Override Force Requirement	22 lb@5000 psi	10 kg@350 bar
Manual Override Stroke	.10 in.	2,5 mm
Maximum Operating Pressure	5000 psi	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	10 drops/min.@5000 psi	10 drops/min.@350 bar
Response Time - Typical	50 ms	
Series (from Cavity)	Series 1	
Switching Frequency	15000 cycles/hr	
Solenoid Tube Diameter	.75 in.	19 mm
Valve Hex Size	7/8 in.	22,2 mm
Valve Installation Torque	30 - 35 lbf ft	45 - 50 Nm
Seal Kits - Cartridge	Buna: 990-411-007	
Seal Kits - Cartridge	Viton: 990-411-006	
Seal Kits - Coil	Viton: 990-770-006	



DWDA-MAN-224

Control	Spool Configuration	External Material/Seal Material	Coil
Manual M Override (Standard)	Normally Open A 1 to 2, Closed 2 to 3	+0.00 N Buna-N +0.00	DIN 43650 4 pin 224 (Hirschman) +18.00 24 VDC

Stainless material/seal options not available for this model



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