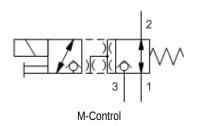


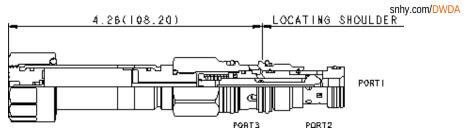
MODEL

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

SERIES 1 / CAPACITY: 7.5 gpm / CAVITY: T-11A







CONFIGURATION

М	Control	Manual Override (Standard)
Α	Poppet Configuration	Normally Open 1 to 2, Closed 2 to 3
N	Seal Material	Buna-N
(none) Coil		No coil

This solenoid-operated 3-way, 2-position cartridge is a direct-acting, poppet-style directional valve. 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. Due to the poppet style construction, this valve has extremely low leakage.

TECHNICAL DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-11A
Series	1
Capacity	7.5 gpm
Maximum Operating Pressure	5000 psi
Response Time - Typical	50 ms
Maximum Valve Leakage at 110 SUS (24 cSt)	10 drops/min.@5000 psi
Manual Override Force Requirement	5 lbs/1000 psi @ Port 1
Manual Override Stroke	.10 in.
Switching Frequency	15000 cycles/hr
Solenoid Tube Diameter	.75 in.
Valve Hex Size	7/8 in.
Valve Installation Torque	30 - 35 lbf ft
Seal kit - Cartridge	Buna: 990411007
Seal kit - Cartridge	Viton: 990411006
Seal and nut kit - Coil	Viton: 990770006
Model Weight	0.62 lb.

NOTES

- Please verify cartridge clearance requirements when choosing a Sun manifold. Different valve controls and coils require different clearances.
- An additional 2.00 inches (50,8 mm) beyond the valve extension is needed for coil installation and removal.

CONFIGURATION OPTIONS

Model Code Example: DWDAMAN

CONTROL (M) POPPET CONFIGURATION (A) SEAL MATERIAL (N) COIL *

M Manual Override (Standard)

A Normally Open 1 to 2, Closed 2 to 3

N Buna-N

No coil

X No Manual Override

D Twist/Lock (Dual) Manual Override

L Twist/Lock (Detent) Manual Override

T Twist (Momentary) Manual Override

E EPDM

V Viton

212 DIN 43650-Form A, 12 VDC 224 DIN 43650-Form A, 24 VDC

712 Twin Lead, 12 VDC

724 Twin Lead, 24 VDC

912 Deutsch DT04-2P, 12 VDC 924 Deutsch DT04-2P, 24 VDC

* Additional coil options are available

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 (0,7 cc/min @ 350 bar).
- This valve is suitable for load holding applications on port 3 only. In the event of power failure, the valve would spring closed.
- On models equipped with the D or L control, the detent mechanism in the manual override is meant for temporary actuation. The D, L and T manual control assembly has a mechanical life expectancy of approximately 7,000 cycles.
- Cartridges configured with EPDM seals are for use in systems with phosphate ester fluids. Exposure to petroleum based fluids, greases and lubricants will damage the seals.
- This cartridge has several manual override choices, including no manual override. See the CONFIGURATION section. Please note: Manual override functionality is not compatible with weatherized coils.
- 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 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.
- A wide variety of coil termination and voltage options are available, with and without surge protection. See the CONFIGURATION section.
- 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.
- Coil connector options offer ratings up to IP69K. See individual coil product pages for details. Additional weatherized coils and kits are available for more complete
 environmental protection.
- 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.

PERFORMANCE CURVES

