

## 2-way, direct-acting, solenoid-operated directional poppet valve

Capacity:  
10 gpm (40  
L/min.)

Functional Group:

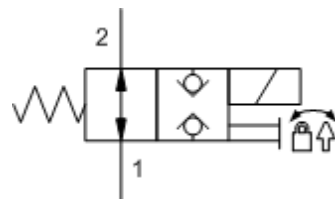
Products : Cartridges : Directional : 2 Way : Poppet, Solenoid Operated

Model:

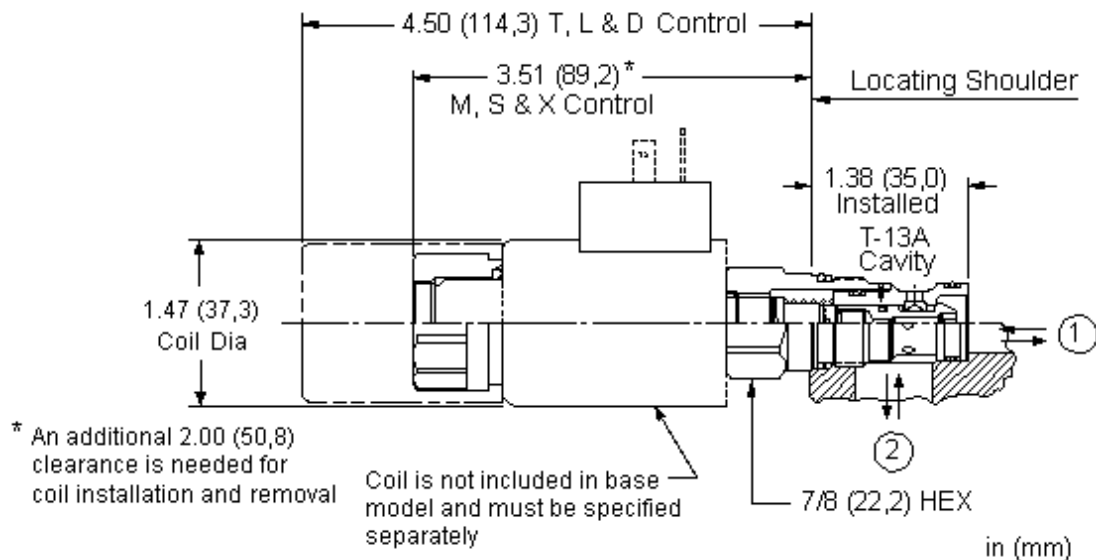
DTDA-DHV-224

### Product Description

This solenoid-operated, 2-position, 2-way cartridge is a direct-acting, poppet-style valve used to control the direction of flow in a hydraulic circuit. The valve is available in either a normally open or normally closed configuration and is well suited for load holding or load blocking applications where low leakage is a requirement.



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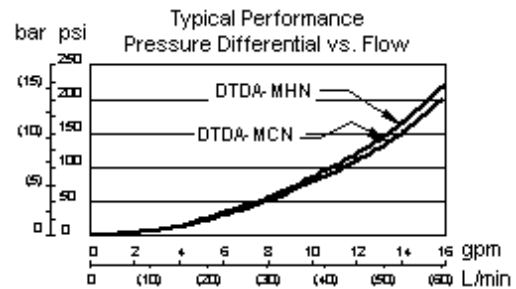
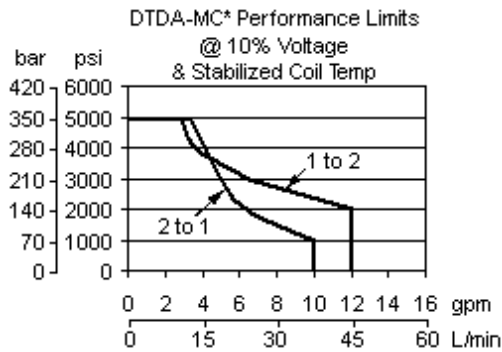
### Technical Features

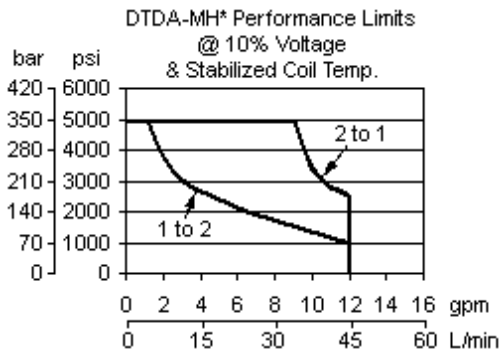
- The solenoid tube assembly is fatigue rated for 5000 psi (350 bar) service.
- This valve is direct actuated and requires no minimum hydraulic pressure for operation.
- Valves exhibit extremely low leakage rates; less than 10 drops/min. @ 5000 psi (350 bar).
- A wide variety of coil termination and 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.

- Suitable for load holding applications.
- This cartridge has several manual override choices, including no manual override. 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 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.
- 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.

Technical Data

	U.S. Units	Metric Units
Cavity	T-13A	
Capacity	10 gpm	40 L/min.
Manual Override Force Requirement	22 lb@5000 psi	10 kg@350 bar
Manual Override Stroke	.10 in.	2,5 mm
Maximum Cartridge LS Depth	.625	
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
Model Weight	1.38 lb.	0.63 kg.
Seal Kits - Cartridge	Buna: 990-413-007	
Seal Kits - Cartridge	Viton: 990-413-006	
Seal Kits - Coil	Viton: 990-770-006	

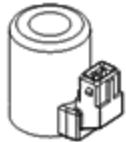
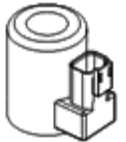
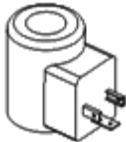
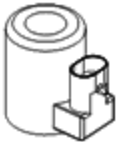
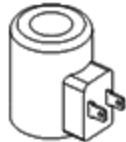





## DTDA-DHV-224

Control	Spool Configuration	External Material/Seal Material	Coil
D Twist/Lock (Dual) Manual Override	H Normally Open +0.00	V Viton +3.50	DIN 43650 4 pin (Hirschman) 24 VDC +18.00

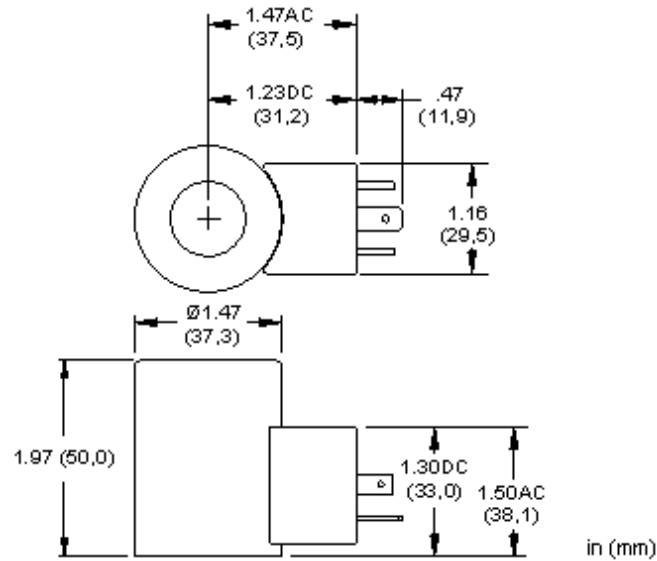
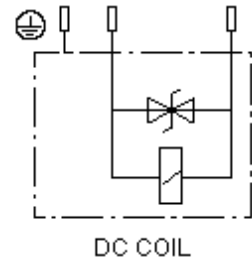
Standard Coil Options ( View All)

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

Stainless material/seal options not available for this model

## 770-224

24 VDC coil with ISO/DIN 43650, Form A connector



#### Technical Features

- Coil windings utilize Class N, (392° F [200 °C] rated) magnet wire.
- The external steel shell is zinc plated with black dicromate.
- A TVS surge suppression diode is built into DC coils. Nominal breakdown voltage: 68V. Model code 1.5 KE68CA Steady state power dissipation @ 75°C is 6.5 W and peak pulse dissipation is 1500 W for 1 ms, nonrepetitive.
- RoHS compliant lead (Pb) and hexavalent chromium (Cr+6) free.
- For optimum proportional performance, an amplifier with current sensing and adjustable dither should be used. Dither should be adjustable between 100 - 250 Hz.

#### Technical Data

	U.S. Units	Metric Units
Model Weight	0.51 lb.	0.23 kg.
Arc Suppression	Standard	
Maximum Ambient Temperature	122°F (50°C) °F	
Maximum Coil Temperature at 68°F (20°C) Ambient	218°F (105°C)	
Operating Voltage Range	+/- 10% nominal	
Power Consumption (cold) - at rated voltage	22 watts	
Voltage/Frequency	24 VDC	
Environment Rating	IP65	
Duty cycle Rating	100 %	
Connector	ISO/DIN 43650A, Form A	
Solenoid Tube Diameter	.75 in.	19 mm
Coil Nut Torque	4.5 lbf in.	0,5 Nm

Proportional Performance Data

	U.S. Units	Metric Units
Maximum Current		590 mA
Nominal Coil Resistance at 122°F (50°C) Stabilized		37.2 ±5% ohms
Nominal Coil Resistance at 68°F (20°C) Cold		26.2 ±5% ohms

Related Models

DTDAS



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