2-way, 2 stage, solenoid-operated directional poppet valve - flow 2-1

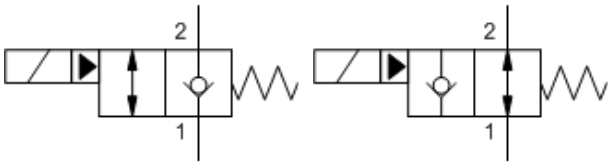
Capacity:
30 gpm (120 L/min.)

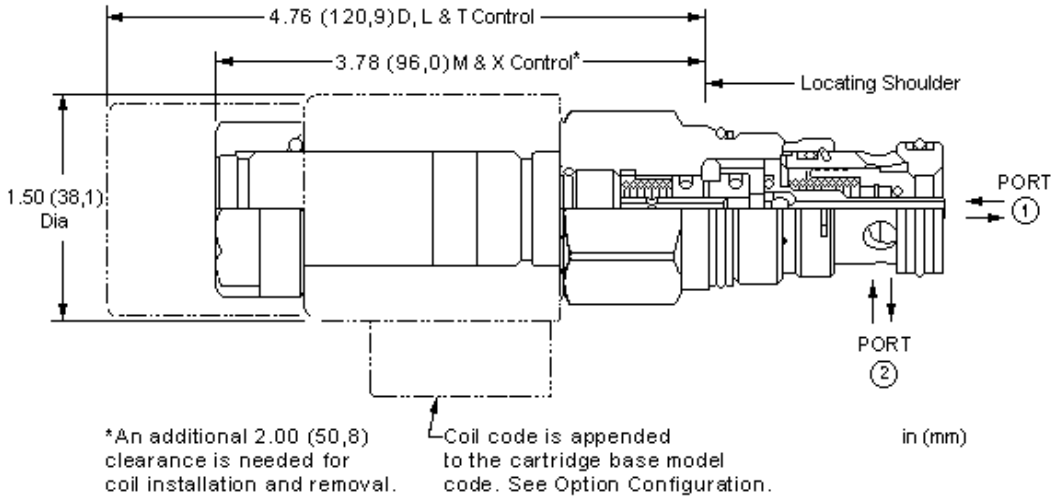
Functional Group:
Products : Cartridges : Solenoid Operated : 2-Way : Poppet, Pilot Operated - Flow 2-1

Model:
DFDB

Product Description

This solenoid controlled, 2-way, 2-position cartridge is a pilot-operated, poppet style directional valve with reverse free flow check. It is available in either a normally open or normally closed configuration. Due to its poppet style construction, it has extremely low leakage.





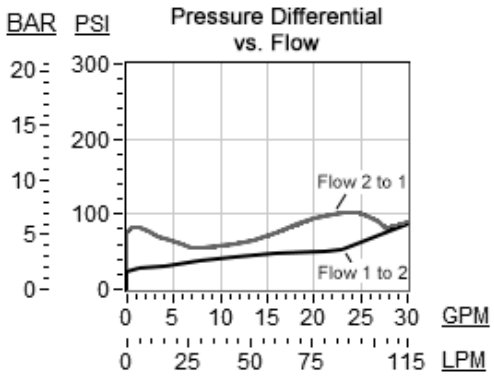
Technical Features

- The solenoid tube assembly is fatigue rated for 5000 psi (350 bar) service.
- This cartridge has several manual override choices, including no manual override. See Option Selection below. Please note: Manual override functionality is not compatible with weatherized coils.
- Valves exhibit extremely low leakage rates; less than 10 drops/min. @ 5000 psi (0,7 cc/min @ 350 bar).
- 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.
- 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.
- 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.

Technical Data

	U.S. Units	Metric Units
Cavity	T-5A	
Capacity	30 gpm	120 L/min.

Check Cracking Pressure	50 psi	3,5 bar
Maximum Operating Pressure	5000 psi	350 bar
Maximum Valve Leakage at 110 SUS (24 cSt)	10 drops/min.@5000 psi	0,7 cc/min.@350 bar
Response Time - Typical	30 ms	
Series (from Cavity)	Series 2	
Switching Frequency	15000 cycles/hr	
Solenoid Tube Diameter	.75 in.	19 mm
Valve Hex Size	1 1/8 in.	28,6 mm
Valve Installation Torque	45 - 50 lbf ft	61 - 68 Nm
Seal Kits - Cartridge	Buna: 990-203-007	
Seal Kits - Cartridge	Viton: 990-203-006	
Model Weight	0.93 lb.	0.42 kg.



DFDB-XCN-***

Control

Preferred Options

X No Manual Override

Standard Options

D Twist/Lock (Dual) Manual Override

L Twist/Lock (Detent) Manual Override

M Manual Override

T Twist (Momentary) Manual Override

Poppet Configuration

Preferred Options

C Normally Closed

H Normally Open

Seal Material

Preferred Options

N Buna-N

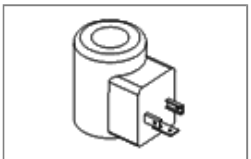
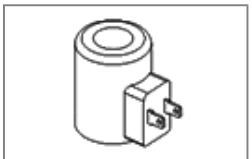
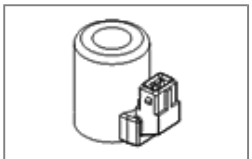
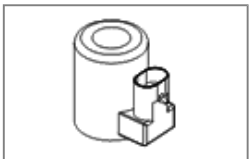
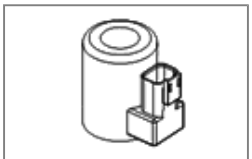
Standard Options

V Viton

Coil

*** See Coil Options Below

Standard Coil Options

					
DIN 43650 3 pin (Hirschman)	SAE J858A	AMP Junior Timer	Twin Lead	Metri-Pack	Deutsch DT04-2P

*** no coil

211 DIN 43650 3 pin (Hirschman), 115 VAC

212 DIN 43650 3 pin (Hirschman), 12 VDC

536 SAE J858A, 36 VDC

612 AMP Junior Timer, 12 VDC

612N AMP Junior Timer, 12 VDC, no transient voltage

814N Metri-Pack, 14 VDC, no transient voltage suppression (TVS) diodes

824 Metri-Pack, 24 VDC

824N Metri-Pack, 24 VDC, no transient voltage

	suppression (TVS) diodes
212N	DIN 43650 3 pin (Hirschman), 12 VDC, no transient voltage suppression (TVS) diodes
214	DIN 43650 3 pin (Hirschman), 14 VDC
214N	DIN 43650 3 pin (Hirschman), 14 VDC, no transient voltage suppression (TVS) diodes
223	DIN 43650 3 pin (Hirschman), 230 VAC
224	DIN 43650 3 pin (Hirschman), 24 VDC
224N	DIN 43650 3 pin (Hirschman), 24 VDC, no transient voltage suppression (TVS) diodes
228	DIN 43650 3 pin (Hirschman), 28 VDC
236	DIN 43650 3 pin (Hirschman), 36 VDC
248	DIN 43650 3 pin (Hirschman), 48 VDC
297	DIN 43650 3 pin (Hirschman), 24 VAC
298	DIN 43650 3 pin (Hirschman), 220 VDC
299	DIN 43650 3 pin (Hirschman), 127 VDC
514	SAE J858A, 14 VDC
524	SAE J858A, 24 VDC
528	SAE J858A, 28 VDC

614	AMP Junior Timer, 14 VDC
624	AMP Junior Timer, 24 VDC
624N	AMP Junior Timer, 24 VDC, no transient voltage suppression (TVS) diodes
628	AMP Junior Timer, 28 VDC
636	AMP Junior Timer, 36 VDC
712	Twin Lead, 12 VDC
712N	Twin Lead, 12 VDC, no transient voltage suppression (TVS) diodes
724	Twin Lead, 24 VDC
724N	Twin Lead, 24 VDC, no transient voltage suppression (TVS) diodes
728	Twin Lead, 28 VDC
736	Twin Lead, 36 VDC
812	Metri-Pack, 12 VDC
812N	Metri-Pack, 12 VDC, no transient voltage suppression (TVS) diodes
814	Metri-Pack, 14 VDC

	suppression (TVS) diodes
828	Metri-Pack, 28 VDC
836	Metri-Pack, 36 VDC
848	Metri-Pack, 48 VDC
912	Deutsch DT04-2P, 12 VDC
912N	Deutsch DT04-2P, 12 VDC, no transient voltage suppression (TVS) diodes
914	Deutsch DT04-2P, 14 VDC
914N	Deutsch DT04-2P, 14 VDC, no transient voltage suppression (TVS) diodes
924	Deutsch DT04-2P, 24 VDC
924N	Deutsch DT04-2P, 24 VDC, no transient voltage suppression (TVS) diodes
928	Deutsch DT04-2P, 28 VDC
936	Deutsch DT04-2P, 36 VDC
948	Deutsch DT04-2P, 48 VDC
HN24AA	Hazardous environment duty, 1/2 inch MPT mechanical conduit, 24 VDC, 10 feet twin lead, ATEX Certification Ex mb IIC T3 Gb.
HN24AB	Hazardous environment duty, 1/2 inch MPT mechanical conduit, 24 VDC, 10 feet twin lead, CSA Certification

Additional Options

Additional Coils

512	SAE J858A, 12 VDC
548	SAE J858A, 48 VDC
648	AMP Junior Timer, 48 VDC

71219	Twin Lead, to Delphi Weather-Pack Connector, 9 inch lead length, 12 VDC
71299	Twin Lead, to Deutsch connector, 9 inch lead length
714	Twin Lead, 14 VDC

72419	Twin Lead, to Delphi Weather-Pack Connector, 9 inch lead length 24 VDC
72499	Twin Lead, to Deutsch connector, 9 inch lead length
748	Twin Lead, 48 VDC

If the coil is HN24AA, the control must be M or X
If the coil is HN24AB, the control must be M or X