



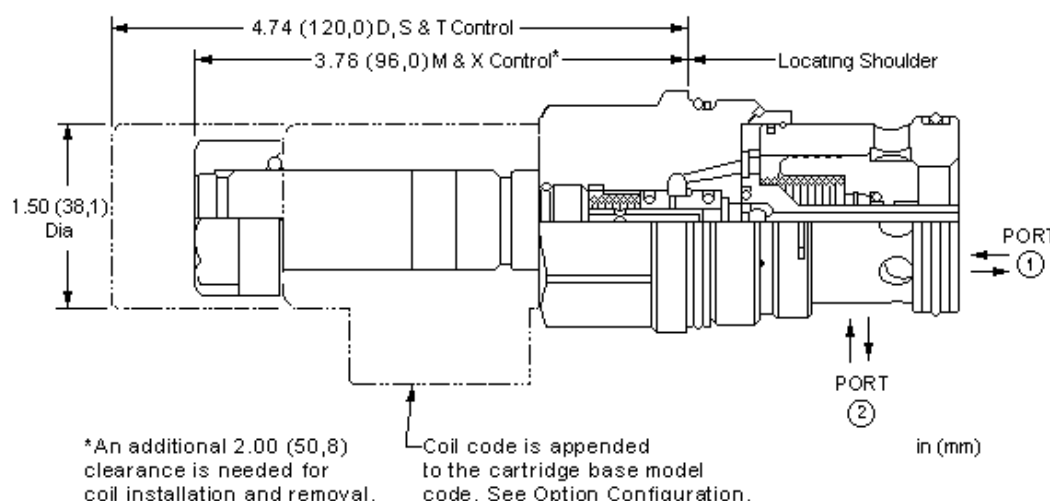
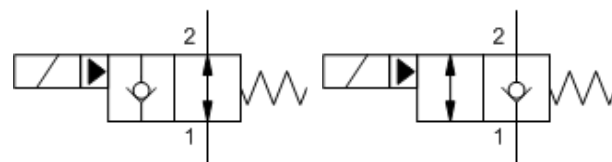
2-way, 2 stage, solenoid-operated directional poppet valve - control 2-1

Capacity:
120 gpm (480 L/min.)

Model:
DFFB

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.



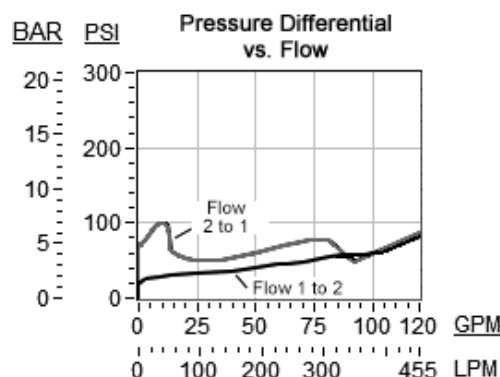
Technical Features

- 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.

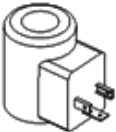
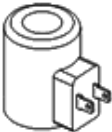
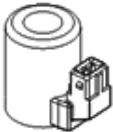
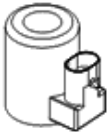
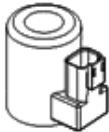
Technical Data

	U.S. Units	Metric Units
Cavity	T-18A	
Capacity	120 gpm	480 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 4	
Switching Frequency	15000 cycles/hr	
Solenoid Tube Diameter	.75 in.	19 mm
Valve Hex Size	1 5/8 in.	41,3 mm
Valve Installation Torque	350 - 375 lbf ft	475 - 508 Nm
Model Weight	1.10 lb	0,50 kg
Seal Kits - Cartridge	Buna: 990-018-007	
Seal Kits - Cartridge	Viton: 990-018-006	



DFFB-XCN-***

Control	Poppet Configuration	Seal Material	Coil		
Preferred Options	Preferred Options	Preferred Options	*** See Coil Options Below		
X No Manual Override	C Normally Closed	N Buna-N			
Standard Options	H Normally Open	Standard Options			
D Twist/Lock (Dual) Manual Override		V Viton			
L Twist/Lock (Detent) Manual Override					
M Manual Override					
T Twist (Momentary) Manual Override					
Standard Coil Options					
					
DIN 43650 3 pin (Hirschman)	SAE J858A	AMP Junior Timer	Twin Lead	Metri-Pack	Deutsch DT04-2P
*** no coil		536 SAE J858A, 36 VDC	814N Metri-Pack, 14 VDC, no transient voltage suppression (TVS) diodes		
211 DIN 43650 3 pin (Hirschman), 115 VAC	612 AMP Junior Timer, 12 VDC	824 Metri-Pack, 24 VDC			
212 DIN 43650 3 pin (Hirschman), 12 VDC	612N AMP Junior Timer, 12 VDC, no transient voltage	824N Metri-Pack, 24 VDC, no transient voltage			

		suppression (TVS) diodes	suppression (TVS) diodes
212N	DIN 43650 3 pin (Hirschman), 12 VDC, no transient voltage suppression (TVS) diodes	614	AMP Junior Timer, 14 VDC
214	DIN 43650 3 pin (Hirschman), 14 VDC	624	AMP Junior Timer, 24 VDC
214N	DIN 43650 3 pin (Hirschman), 14 VDC, no transient voltage suppression (TVS) diodes	624N	AMP Junior Timer, 24 VDC, no transient voltage suppression (TVS) diodes
223	DIN 43650 3 pin (Hirschman), 230 VAC	628	AMP Junior Timer, 28 VDC
224	DIN 43650 3 pin (Hirschman), 24 VDC	636	AMP Junior Timer, 36 VDC
224N	DIN 43650 3 pin (Hirschman), 24 VDC, no transient voltage suppression (TVS) diodes	712	Twin Lead, 12 VDC
228	DIN 43650 3 pin (Hirschman), 28 VDC	712N	Twin Lead, 12 VDC, no transient voltage suppression (TVS) diodes
236	DIN 43650 3 pin (Hirschman), 36 VDC	724	Twin Lead, 24 VDC
248	DIN 43650 3 pin (Hirschman), 48 VDC	724N	Twin Lead, 24 VDC, no transient voltage suppression (TVS) diodes
297	DIN 43650 3 pin (Hirschman), 24 VAC	728	Twin Lead, 28 VDC
298	DIN 43650 3 pin (Hirschman), 220 VDC	736	Twin Lead, 36 VDC
299	DIN 43650 3 pin (Hirschman), 127 VDC	812	Metri-Pack, 12 VDC
514	SAE J858A, 14 VDC	812N	Metri-Pack, 12 VDC, no transient voltage suppression (TVS) diodes
524	SAE J858A, 24 VDC	814	Metri-Pack, 14 VDC
528	SAE J858A, 28 VDC		

Additional Options

Additional Coils

512	SAE J858A, 12 VDC	71219	Twin Lead, to Delphi Weather-Pack Connector, 9 inch lead length, 12 VDC	72419	Twin Lead, to Delphi Weather-Pack Connector, 9 inch lead length 24 VDC
548	SAE J858A, 48 VDC	71299	Twin Lead, to Deutsch connector, 9 inch lead length	72499	Twin Lead, to Deutsch connector, 9 inch lead length
648	AMP Junior Timer, 48 VDC	714	Twin Lead, 14 VDC	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