



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

Capacity:
30 gpm (120 L/min.)

Functional Group:

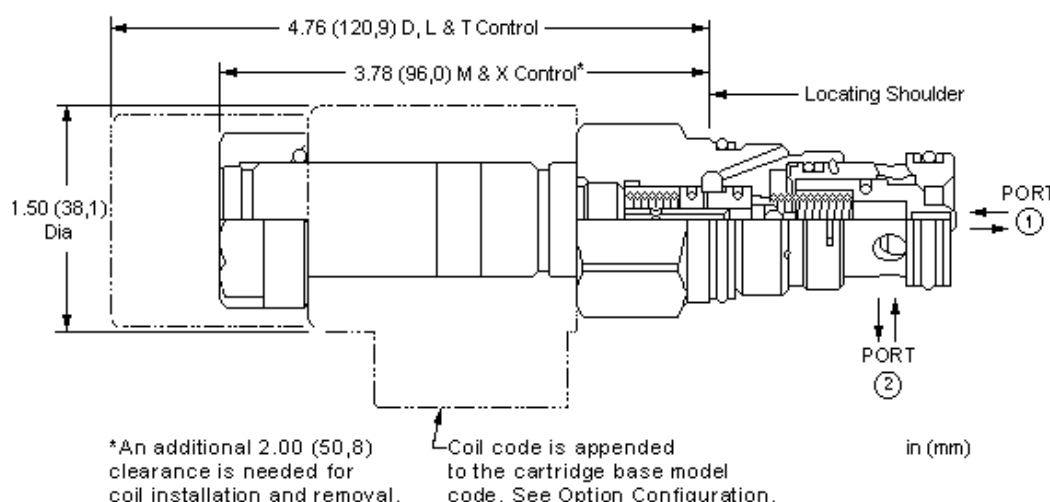
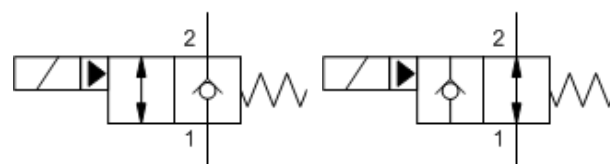
Products : Cartridges : Solenoid Operated : 2-Way : Poppet, Pilot Operated - Flow 1-2

Model:

DFDA

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.



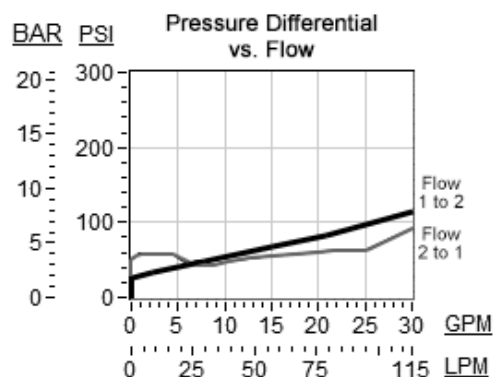
Technical Features

- 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.



DFDA-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

211 DIN 43650 3 pin (Hirschman), 115 VAC

212 DIN 43650 3 pin (Hirschman), 12 VDC

528 SAE J858A, 28 VDC

536 SAE J858A, 36 VDC

612 AMP Junior Timer, 12 VDC

814 Metri-Pack, 14 VDC

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

824 Metri-Pack, 24 VDC

212N	DIN 43650 3 pin (Hirschman), 12 VDC, no transient voltage suppression (TVS) diodes	612N	AMP Junior Timer, 12 VDC, no transient voltage suppression (TVS) diodes	828	Metri-Pack, 28 VDC
214	DIN 43650 3 pin (Hirschman), 14 VDC	614	AMP Junior Timer, 14 VDC	836	Metri-Pack, 36 VDC
214N	DIN 43650 3 pin (Hirschman), 14 VDC, no transient voltage suppression (TVS) diodes	624	AMP Junior Timer, 24 VDC	848	Metri-Pack, 48 VDC
223	DIN 43650 3 pin (Hirschman), 230 VAC	624N	AMP Junior Timer, 24 VDC, no transient voltage suppression (TVS) diodes	912	Deutsch DT04-2P, 12 VDC
224	DIN 43650 3 pin (Hirschman), 24 VDC	628	AMP Junior Timer, 28 VDC	912N	Deutsch DT04-2P, 12 VDC, no transient voltage suppression (TVS) diodes
224N	DIN 43650 3 pin (Hirschman), 24 VDC, no transient voltage suppression (TVS) diodes	636	AMP Junior Timer, 36 VDC	914	Deutsch DT04-2P, 14 VDC
228	DIN 43650 3 pin (Hirschman), 28 VDC	712	Twin Lead, 12 VDC	914N	Deutsch DT04-2P, 14 VDC, no transient voltage suppression (TVS) diodes
236	DIN 43650 3 pin (Hirschman), 36 VDC	712N	Twin Lead, 12 VDC, no transient voltage suppression (TVS) diodes	924	Deutsch DT04-2P, 24 VDC
248	DIN 43650 3 pin (Hirschman), 48 VDC	724	Twin Lead, 24 VDC	924N	Deutsch DT04-2P, 24 VDC, no transient voltage suppression (TVS) diodes
297	DIN 43650 3 pin (Hirschman), 24 VAC	724N	Twin Lead, 24 VDC, no transient voltage suppression (TVS) diodes	928	Deutsch DT04-2P, 28 VDC
298	DIN 43650 3 pin (Hirschman), 220 VDC	728	Twin Lead, 28 VDC	936	Deutsch DT04-2P, 36 VDC
299	DIN 43650 3 pin (Hirschman), 127 VDC	736	Twin Lead, 36 VDC	948	Deutsch DT04-2P, 48 VDC
514	SAE J858A, 14 VDC	812	Metri-Pack, 12 VDC	HN24AA	Hazardous environment duty, 1/2 inch MPT mechanical conduit, 24 VDC, 10 feet twin lead, ATEX Certification Ex mb IIC T3 Gb.
524	SAE J858A, 24 VDC	812N	Metri-Pack, 12 VDC, no transient voltage suppression (TVS) diodes	HN24AB	Hazardous environment duty, 1/2 inch MPT mechanical conduit, 24 VDC, 10 feet twin lead, CSA Certification
Embedded Coil Options					
2E12V	DIN 43650 3 pin (Hirschman), programmable via IR link coil/power saver, 12 VDC	4E12V	Deutsch DT04-6P, programmable via IR link coil/power saver, 12 VDC	4E24V	Deutsch DT04-6P, programmable via IR link coil/power saver, 24 VDC
2E24V	DIN 43650 3 pin (Hirschman), programmable via IR link coil/power saver, 24 VDC				
Additional Options					
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