

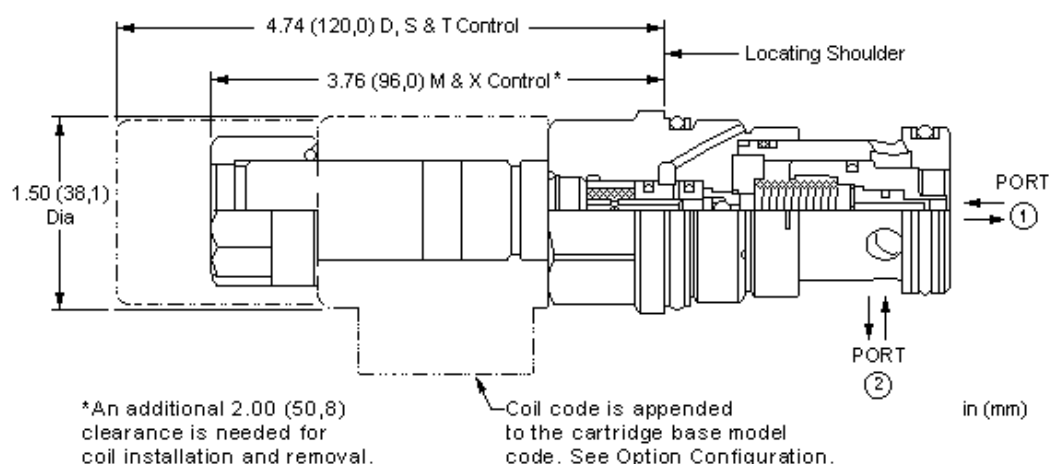
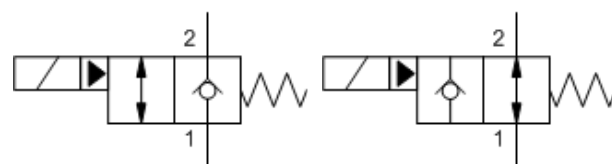
2-way, 2 stage, solenoid-operated directional poppet valve - flow 1-2

Capacity:
60 gpm (240 L/min.)

Model:
DFA

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.



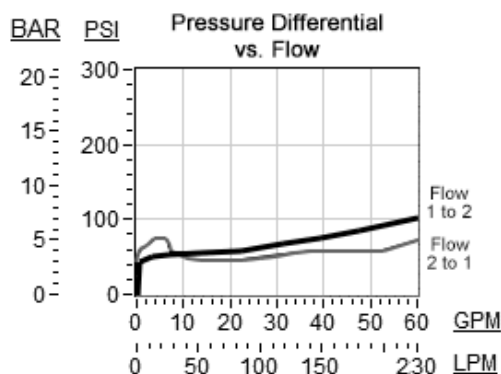
Technical Features

- 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.

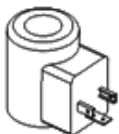
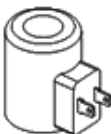
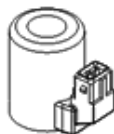
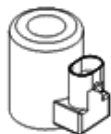
Technical Data

	U.S. Units	Metric Units
Cavity	T-16A	
Capacity	60 gpm	240 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 3	
Switching Frequency	15000 cycles/hr	
Solenoid Tube Diameter	.75 in.	19 mm
Valve Hex Size	1 1/4 in.	31,8 mm
Valve Installation Torque	150 - 160 lbf ft	203 - 217 Nm
Seal Kits - Cartridge	Buna: 990-016-007	
Seal Kits - Cartridge	Viton: 990-016-006	
Model Weight	1.45 lb.	0.66 kg.



DFEA-XCN-***

Control	Spool 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		528 SAE J858A, 28 VDC	814 Metri-Pack, 14 VDC		
211 DIN 43650 3 pin (Hirschman), 115 VAC	536 SAE J858A, 36 VDC		814N Metri-Pack, 14 VDC, no transient voltage suppression (TVS) diodes		
212 DIN 43650 3 pin (Hirschman), 12 VDC	612 AMP Junior Timer, 12 VDC		824 Metri-Pack, 24 VDC		
212N DIN 43650 3 pin	612N AMP Junior Timer, 12 VDC,		828 Metri-Pack, 28 VDC		

	(Hirschman), 12 VDC, no transient voltage suppression (TVS) diodes		no transient voltage suppression (TVS) diodes		
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

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