



2-way, soft shift, solenoid-operated directional spool valve - pilot capacity

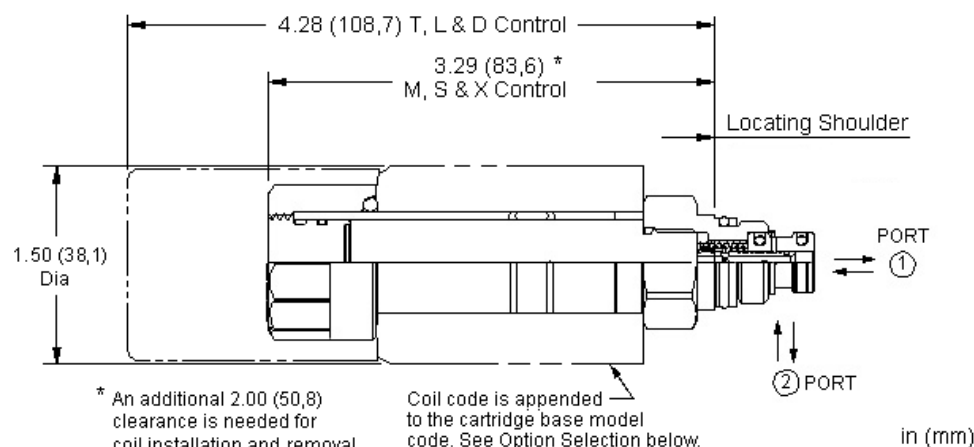
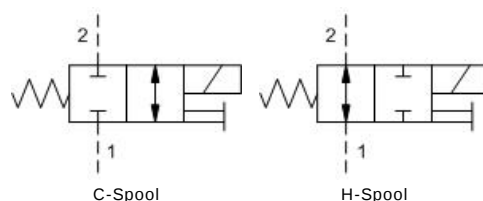
Capacity:
.25 gpm (1 L/min.)

Model:
DAALS

Product Description

This solenoid-operated 2-way, 2-position cartridge is a direct-acting, balanced spool valve with a soft shift feature. The soft shift feature greatly reduces system shock due to valve actuation. The valve is available in either a normally open or normally closed configuration.

This cartridge can be installed directly into a cavity in the end of many of Sun's pilot operated and ventable valves to provide integrated pilot control.

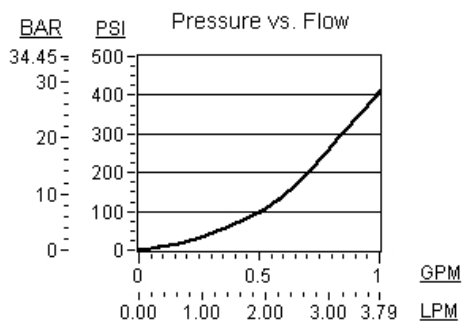


Technical Features

- The soft shift cartridge is interchangeable with the standard cartridge, however, the performance limits are lower.
- The soft shift feature can greatly reduce shock due to valve actuation but should not be counted upon in applications where timing is critical. If you need accurate ramping or timing control, consider Sun's electro-proportional valves.
- The soft shift feature results in significant increase in response time over Sun's standard solenoid. Response time is dependant on flow, pressure, coil voltage, oil viscosity and ambient temperature. Typical response time ranges from 150 ms to 300 ms.
- For consistent soft shift performance, port 1 should be at a positive pressure.
- This valve comes with a manual override control. Other manual control options such as T or D, cannot be ordered with the soft shift control but can be installed easily in the field. See Twist/Lock Manual Override link above for details.
- The solenoid tube assembly is fatigue rated for 5000 psi (350 bar) service.
- 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.
- 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.
- 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-8A	
Capacity	.25 gpm	1 L/min.
Manual Override Force Requirement	10 lbs/1000 psi @ Port 1	6,6 kgs/100 bar @ Port 1
Manual Override Stroke	.10 in.	2,5 mm
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
Series (from Cavity)	Series P	
Solenoid Tube Diameter	.75 in.	19 mm
Valve Hex Size	7/8 in.	22,2 mm
Valve Installation Torque	20 - 25 lbf ft	27 - 33 Nm
Seal Kits - Cartridge	Buna: 990-008-007	
Seal Kits - Cartridge	Viton: 990-008-006	
Model Weight	0.55 lb.	0.25 kg.



DAAL-SCN - * * *

Spool Configuration	Seal Material	Coil
Preferred Options	Preferred Options	*** See Coil Options Below
C Normally Closed	N Buna-N	
H Normally Open	Standard Options	
	V Viton	

Standard Coil Options

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

*** no coil

514	SAE J858A 14 VDC	812	Metri-Pack 12 VDC
211	DIN 43650 4 pin (Hirschman) 115 VAC	814	Metri-Pack 14 VDC
212	DIN 43650 4 pin (Hirschman) 12 VDC	824	Metri-Pack 24 VDC
214	DIN 43650 4 pin (Hirschman) 14 VDC	828	Metri-Pack 28 VDC
223	DIN 43650 4 pin (Hirschman) 230 VAC	836	Metri-Pack 36 VDC
224	DIN 43650 4 pin (Hirschman) 24 VDC	848	Metri-Pack 48 VDC
228	DIN 43650 4 pin (Hirschman) 28 VDC	912	Deutsch DT04-2P 12 VDC
236	DIN 43650 4 pin (Hirschman) 36 VDC	914	Deutsch DT04-2P 14 VDC
524	SAE J858A 24 VDC		
528	SAE J858A 28 VDC		
536	SAE J858A 36 VDC		
612	AMP Junior Timer 12 VDC		
624	AMP Junior Timer 24 VDC		
628	AMP Junior Timer 28 VDC		
636	AMP Junior Timer 36 VDC		

248 DIN 43650 4 pin
(Hirschman) 48 VDC

297 DIN 43650 4 pin
(Hirschman) 24 VAC

298 DIN 43650 4 pin
(Hirschman) 220 VDC

299 DIN 43650 4 pin
(Hirschman) 127 VDC

Embedded Coil Options

2E12V DIN 43650 4 pin
(Hirschman) programmable
via IR link coil/power saver
12 VDC 0-10V

2E24V DIN 43650 4 pin
(Hirschman) programmable
via IR link coil/power saver
24 VDC 0-10V

Additional Options

Additional Coils

512 SAE J858A 12 VDC

548 SAE J858A 48 VDC

648 AMP Junior Timer 48 VDC

712 Twin Lead 12 VDC

724 Twin Lead 24 VDC

728 Twin Lead 28 VDC

736 Twin Lead 36 VDC

4E12V Deutsch DT04-6P
programmable via IR link
coil/power saver 12 VDC 0-
10V

924 Deutsch DT04-2P 24 VDC

928 Deutsch DT04-2P 28 VDC

936 Deutsch DT04-2P 36 VDC

948 Deutsch DT04-2P 48 VDC

4E24V Deutsch DT04-6P
programmable via IR link
coil/power saver 24 VDC 0-
10V

71219 Twin Lead to Delphi
Weather-Pack Connector, 9
inch lead length, 12 VDC

714 Twin Lead 14 VDC

72419 Twin Lead to Delphi
Weather-Pack Connector, 9
inch lead length 24 VDC

748 Twin Lead 48 VDC