

Features

- Same Red-Hat II molded epoxy solenoid operators used on General Purpose ASCO valves.
- Available in 4 standard wattages, AC or DC.
- Mountable in any position.

Construction

Parts in Contact with Fluids	
Core Tube	305 Stainless Steel
Core and Plugnut	430F Stainless Steel
Seal	NBR
Shading Coil	Copper (AC only)
Additional Parts	
Disc	NBR and PA (3 way upper disc)
Spring	302 Stainless Steel

Electrical

Standard Coil and Class of Insulation	Watt Rating and Power Consumption				Spare Coil Part No.			
	DC Watts	AC			General Purpose		Explosionproof	
		Watts	VA Holding	VA ① Inrush	AC	DC	AC	DC
F	10.6	6.1	16	30	238210	238310	238214	238314
F	--	9.1	25	40	238210	--	238214	--
F	11.6	10.1	25	50	238610	238710	238614	238714
F	--	17.1	40	70	238610	--	238614	--
F	--	15.4	27	70	99257	--	99257	--
F	--	20	43	90	99257	--	99257	--

Standard Voltages: 24, 120, 240, 480 volts AC 60 Hz (or 110, 220 volts AC 50 Hz).
6, 12, 24, 120, 240 volts, DC. Must be specified when ordering. Other voltages available when required.

Note: ① Core Stroke 1/16".



Solenoid Enclosures

Standard: Red-Hat II - Watertight, Types 1, 2, 3, 3S, 4, and 4X. Red-Hat - Type 1.

Optional: Red-Hat II - Explosionproof and Watertight, Types 3, 3S, 4, 4X, 6, 6P, 7, and 9; Red-Hat - Explosionproof and Raintight, Types 3, 7, and 9. (To order, add prefix "EF" to catalog number.) See *Optional Features Section* for further details on Open Frame Solenoids, Junction Box Enclosures, and Panel Mount Constructions.

Nominal Ambient Temperature Ranges:

AC: 32°F to 125°F (0°C to 52°C)

DC: 32°F to 104°F (0°C to 40°C)

Refer to Engineering Section for details.

Approvals:

CSA certified.

Refer to Engineering Section for details.

Specifications (English units)

Orifice Size (ins.)	Cv Flow Factor	Operating Pressure Differential (psi)						Maximum Fluid Temp. °F		Catalog Number	Constr. Ref. No.	Watt Rating/ Class of Coil Insulation ⑥		Optional Inserted Seat
		Maximum AC			Maximum DC			AC	DC			AC	DC	Part Number
		Air-Inert Gas	Water	Lt. Oil @ 300 SSU ⑤	Air-Inert Gas	Water	Lt. Oil @ 300 SSU ⑤							
2 WAY SOLENOID OPERATORS, ① NORMALLY CLOSED (Closed when de-energized)														
3/64	.06	750	600	400	325	225	300	180	120	8200G1	4	6.1/F	10.6/F	096-429-4 ②
3/32	.17	275	200	130	110	100	100	180	120	8200G1	4	6.1/F	10.6/F	180-222-5D ③
1/8	.35	135	115	90	50	50	50	180	120	8200G1	4	6.1/F	10.6/F	180-222-1D ③
3 WAY SOLENOID OPERATORS, ① NORMALLY CLOSED (Closed when de-energized)														
3/64	.04	230	230	230	120	140	125	200	150	8329G1	5	10.1/F	11.6/F	096-429-4 ②
3/32	.15	125	100	100	60	70	30	200	150	8329G2	5	10.1/F	11.6/F	096-429-3 ②
1/8	.25	75	60	60	30	40	25	200	150	8329G3	5	10.1/F	11.6/F	180-222-1D ③
3 WAY SOLENOID OPERATORS, ① NORMALLY OPEN (Open when de-energized)														
3/64	.04	300	300	300	200	300	120	200	150	8329G7	5	10.1/F	11.6/F	096-429-4 ②
3/32	.15	175	175	175	70	90	45	200	150	8329G8	5	10.1/F	11.6/F	096-429-3 ②
1/8	.25	90	90	90	40	40	25	200	150	8329G9	5	10.1/F	11.6/F	180-222-1D ③

Notes: ① Larger operators, orifice sizes, and higher pressure ratings are available. Consult your local ASCO sales office.
② Inserted seat has 1/4-32 thread for threading.
③ Inserted seat has 3/8-32 thread for threading.
④ Cv will depend upon size and location of connecting passages.
⑤ Maximum viscosity for 3 way solenoid operator is 45 SSU.
⑥ On 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts.

Specifications (Metric units)

Orifice Size (mm)	Kv Flow Factor (m ³ /h)	Operating Pressure Differential (bar)						Maximum Fluid Temp. °C		Catalog Number	Constr. Ref. No.	Watt Rating/ Class of Coil Insulation ⑥		Optional Inserted Seat
		Maximum AC			Maximum DC			AC	DC			AC	DC	Part Number
		Air-Inert Gas	Water	Lt. Oil @ 300 SSU ⑤	Air-Inert Gas	Water	Lt. Oil @ 300 SSU ⑤							
2 WAY SOLENOID OPERATORS, ① NORMALLY CLOSED (Closed when de-energized)														
1.2	.05	52	41.4	34.5	22.4	15.5	20.7	82	49	8200G1	4	6.1/F	10.6/F	096-429-4 ②
2.4	.15	19	13.8	9.0	7.6	6.9	6.9	82	49	8200G1	4	6.1/F	10.6/F	180-222-5D ③
3.2	.30	9	7.9	6.2	3.4	3.4	3.4	82	49	8200G1	4	6.1/F	10.6/F	180-222-1D ③
3 WAY SOLENOID OPERATORS, ① NORMALLY CLOSED (Closed when de-energized)														
1.2	.03	16	15.9	15.9	8.3	9.7	8.6	93	66	8329G1	5	10.1/F	11.6/F	096-429-4 ②
2.4	.13	9	6.9	6.9	4.1	4.8	2.1	93	66	8329G2	5	10.1/F	11.6/F	096-429-3 ②
3.2	.21	5	4.1	4.1	2.1	2.8	1.7	93	66	8329G3	5	10.1/F	11.6/F	180-222-1D ③
3 WAY SOLENOID OPERATORS, ① NORMALLY OPEN (Open when de-energized)														
1.2	.03	21	20.7	20.7	13.8	20.7	8.3	93	66	8329G7	5	10.1/F	11.6/F	096-429-4 ②
2.4	.13	12	12.1	12.1	4.8	6.2	3.1	93	66	8329G8	5	10.1/F	11.6/F	096-429-3 ②
3.2	.21	6	6.2	6.2	2.8	2.8	1.7	93	66	8329G9	5	10.1/F	11.6/F	180-222-1D ③

Notes: ① Larger operators, orifice sizes, and higher pressure ratings are available. Consult your local ASCO sales office. ② Inserted seat has 1/4-32 thread for threading. ③ Inserted seat has 3/8-32 thread for threading. ④ Cv will depend upon size and location of connecting passages. ⑤ Maximum viscosity for 3 way solenoid operator is 45 SSU. ⑥ On 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts.

Specifications - Solenoids

Catalog Number	8016G1	8016G2	8003G1	8003G2	80171	80172
Constr. Ref. No. and Fig. No.	1A	1B	2A	2B	3A	3B
Watt Rating/ ③ Class of Coil Insulation	6.1/F	9.1/F	10.1/F	17.1/F	15.4/F	20/F
VA Holding	16	25	25	40	27	43
VA Inrush ①	30	40	50	70	70	90
Min. Return Spring Force or Load Value ②	11 oz.	11 oz.	1.3 lb.	1.3 lb.	1.75 lb.	1.75 lb.

Notes: ① Core Stroke 1/16". ② Customer to supply return spring, required in solenoid sealed position for proper operation, in accordance with value given. ③ On 50 hertz service, the watt rating for the 6.1/F solenoid is 8.1 watts; the watt rating for the 9.1/F solenoid is 11.1 watts.

Dimensions: inches (mm)

SOLENOIDS AND SOLENOID OPERATORS			
Constr. Ref. No.	A	B	C
1A & 1B	ins. 2.76	1.82	0.3
	mm 70	46	8
2A & 2B	ins. 3.03	2.00	1.13
	mm 77	51	29
3A & 3B	ins. 2.67	2.28	0.23
	mm 68	58	6
4	ins. 2.76	1.82	0.32
	mm 70	46	8
5	ins. 3.03	3.03	0.3
	mm 77	77	8

Pull Curves (AC Only)

Constr. Ref. No. 1A, 1B, 2A, 2B

Constr. Ref. No. 3A, 3B

Constr. Ref. No. 4

Constr. Ref. No. 5