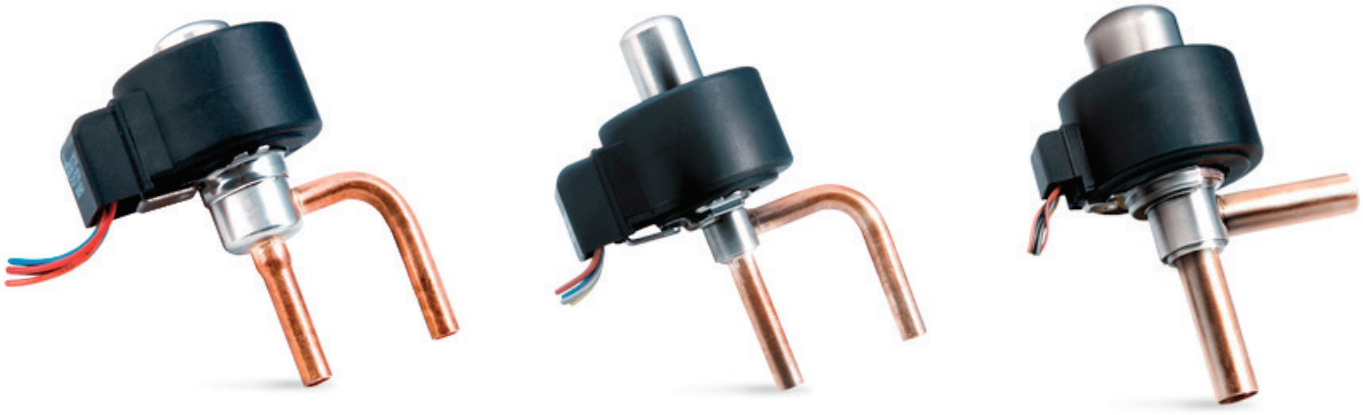
DPF (T/S) SERIES | ***Electronic Expansion Valve***



The DPF(T/S) series electronic expansion valves are designed for use in air conditioning/heat pumps and refrigeration systems. With the appropriate controller, the valve controls refrigerant flow rate, allowing the system to operateunder optimal conditions. The valve can also be used for small capacity suction line pressure control. These valves provide bidirectional operation for heat pump systems.

FEATURES

- APPLICABLE FOR OIL-FREE SYSTEM (T-SERIES)
- SMALLER INSTALLATION SPACE: LOW HEIGHT, SMALL VOLUME, LIGHT WEIGHT
- OPTIMIZED FLOW PATH DESIGN FOR NOISE REDUCTION
- FAST OPERATION, LOW ENERGY USAGE
- BIDIRECTIONAL FLOW

GENERAL SPECIFICATION

- Applicable for all common HCFC and HFC refrigerants such as: R-22, R-134a, R-404A, R-407C, R-410A, R-507
- Cooling capacity: 1.3 to 36 tons (R-410A nominal capacity)
- 500 steps (full stroke): 32 ± 20 opening steps
- Medium temperature TS min./max.: -22°F / +158°F (duty cycle rate below 50%)
- Ambient temperature min./max.: -22°F / +140°F (duty cycle rate below 50%)
- Maximum Operating Pressure: 650 psig
- Relative humidity: 0 to 95% RH
- Installation position:
  - Coil installed in the upwards position, valve rotor central axis within ±15° of vertical axis
  - Inlet connection preferably sidewise, outlet preferably downwards
- Certifications: UL/CSA and declaration according to LVD or PED

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ELECTRICAL PARAMETERS

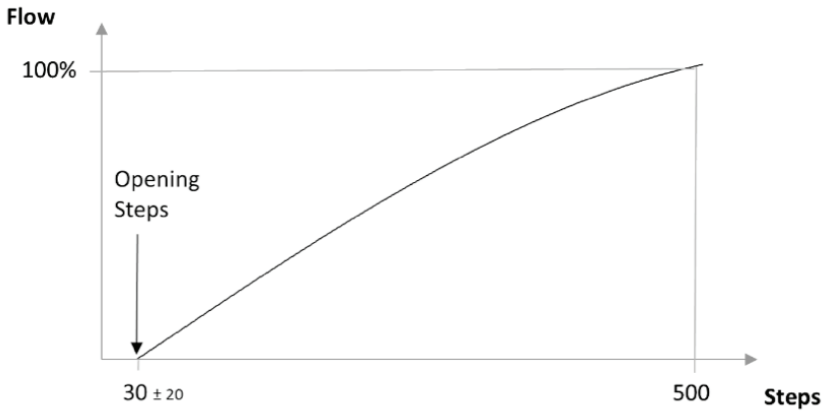
- Rated voltage: 12V DC (± 10%), rectangular wave
- Actuating mode: 4-phase 8-step permanent magnet stepping motor – direct acting type
- Excitation mode: 1 ~ 2 phase excitation, monopole actuation
- Excitation rate: - Port Ø 1.0 to 3.2 mm: 30 to 90 pps
  - Port Ø 4.0 to 6.5 mm: 30 to 40 pps
- Activation of self-holding mechanism: Maintain excitation in stop position min. 0.1 ~ 1.0 sec.
- Min. motion time from completely open to completely closed:
  - Port Ø 1.0 to 3.2 mm: 6 sec. @ 90 pps
  - Port Ø 4.0 to 6.5 mm: 13 sec. @ 40 pps
- Coil current:
  - Port Ø 1.0 to 3.2 mm: 260 mA/phase (68°F)
  - Port Ø 4.0 to 6.5 mm: 375 mA/phase (68°F)
- Coil resistance:
  - Port Ø 1.0 to 3.2 mm: 46 ± 3.7 Ω/phase (68°F)
  - Port Ø 4.0 to 6.5 mm: 32 ± 3.2 Ω/phase (68°F)
- Insulation class of coil: E
- Protection class: IP 66

General Characteristics

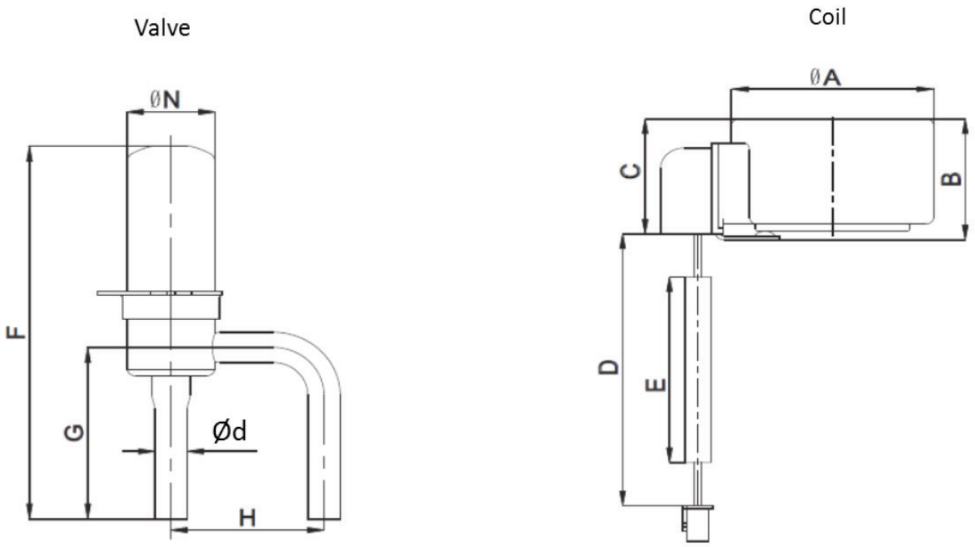
Valve Model	Product Number[1]	Seat (mm)	Cv	Nominal Cooling Capacity[2] (tons)				
				R-410A 40°F Evap. 160ΔP	**R-407C**[3] 40°F Evap. 100ΔP	**R-134a** 25°F Evap. 80ΔP	**R-404A** 25°F Evap. 125ΔP	**R-507** -10°F Evap. 150ΔP
DPF(TS1)1.0C		1.0		1.30	1.26	1.16	0.88	0.79
DPF(TS1)1.3C	DPF-09001	1.3	0.06	1.76	1.70	1.57	1.18	1.07
DPF(TS1)1.65C	DPF-09002	1.65	0.09	3.00	2.89	2.68	2.02	1.82
DPF(TS1)1.8C	DPF-09003	1.8	0.12	3.58	3.45	3.19	2.41	2.17
DPF(TS1)2.0C	DPF-09004	2.0	0.18	4.41	4.26	3.94	2.97	2.68
DPF(TS1)2.2C	DPF-09005	2.2	0.23	4.76	4.59	4.25	3.20	2.89
DPF(TS1)2.4C	DPF-09006	2.4	0.27	5.60	5.40	4.99	3.76	3.40
DPF(TS1)3.0C	DPF-09007	3.0	0.45	9.38	9.05	8.37	6.31	5.70
DPF(TS1)3.2C	DPF-09008	3.2	0.5	10.2	9.88	9.14	6.89	6.22
DPF(TS1)4.0C	DPF-09010	4.0	0.58	17.0	16.4	15.2	11.4	10.3
DPF(TS1)4.5C	DPF-09011	4.5	0.81	22.9	22.1	20.4	15.4	13.9
DPF(TS1)5.5C	DPF-09012	5.5	1.04	26.4	25.5	23.6	17.8	16.0
DPF(TS1)6.5C	DPF-09013	6.5	1.27	32.3	31.1	28.8	21.7	19.6

Note:
1. Supplied less coil
2. Liquid temperature 98°F
3. R-407C data based on dew point conditions

FLOW CHARACTERISTIC



DIMENSIONS



Valve Model	Coil Series	Valve Dimensions (in)				
		F	G	H	Ød	ØN
DPF(TS1)**1.0** to DPF(T01)**2.4**	PQ-M10	3.07	1.42	1.18	1/4	0.68
DPF(TS1)**3.0** to DPF(TS1)**3.2**		3.23	1.57	1.18	5/16	0.68
DPF(S03)**4.0** to DPF(S03)**6.5**	PQ-M03	5.83	2.55	2.50	5/8	1.39

Valve Model	Coil Series	Valve Dimensions (in)					Coil Product Number
		ØA	B	C	D	E	
DPF(TS1)**1.0** to DPF(TS1)**3.2**	PQ-M10 012-000001	1.52	1.04	1.01	27.6	23.6	DPF-58001
DPF(S03)**4.0**to DPF(S03)**6.5**	PQ-M03 012-000001	2.66	1.67	1.30	27.6	23.6	DPF-58002

c UL us File No. MH29234