0124/0125

Flipper Solenoid Valve with Isolating Diaphragm for Analytical Applications

- 2/2– and 3/2–way; 1/4 NPT and Manifold Mount
- Normally open or closed, Universal function (Mixing and Diverting)
- Hermetic isolation of fluid from the actuator
- Insensitive to abrasive and slightly contaminated fluids
- Long service life, even in dry–run conditions
- Body materials: PP, PVDF
- Lockable manual override standard
- Specific cleaning and testing available
- Options:
  – Impulse, vacuum or low power versions

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This direct-acting 2- or 3-way solenoid valve has a flipper as the switching element. The special design of this device isolates the actuator from the medium, which makes the flipper valve less sensitive to contaminated fluids than the plunger-type valve, and provides a long service life even under dry-run conditions. The valve is available with several circuit functions.

When the valve is energized the armature is pulled against a spring. The solenoid epoxy encapsulation efficiently dissipates the heat generated by the coil.

Applications

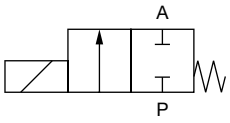
- Aggressive gases and liquids
- Demineralized water
- Pure fluids
- Water– and gas analysis
- Medical technology
- Pharmaceutical industry
- Laboratory technology

Burkert Contromatic USA
2602 McGaw Avenue
Irvine, CA 92614
Tel. 949.223.3100
Fax 949.223.3198
www.burkert-usa.com

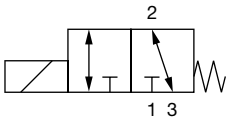
Technical data

Circuit Function

A 2/2–way valve, normally closed



T 3/2–way valve, direct acting, universal function, any flow direction



Operating data (valve)

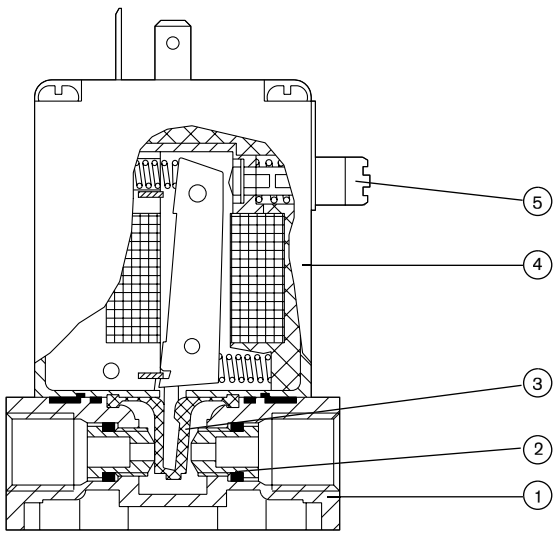
Technical data	
Pressure range max.	0 – 174 PSI (see specifications)
Port connection	Threaded port NPT 1/4
Orifice	5/64 – 3/16 inch (others on request) Sub–base (others on request)
Body material	Polypropylene (PP) Polyvinylidenfluoride (PVDF)
Seal material	FKM, EPDM (FFKM, Chemrez, NBR upon request)
Fluids	EPDM: Alkalis, acids up to a medium concentration, alkaline washing and bleaching lyes. FKM: Oxydizing acids, salt solutions, exhaust gas
Fluid temperature	-22 to 176°F (EPDM) 32 to 176°F (FKM)
Ambient temperature	max. 131°F
Max. viscosity	Approx. 1.45 in²/s

Response Times				
Circuit	**Opening [ms]**		**Closing [ms]**	
Function	**AC**	**DC**	**AC**	**DC**
A and T	Approx. 8	10 – 17	Approx. 15	15 – 20

Operating data (actuator)

Technical data	
Operating voltages	12, 24 VDC, 24, 120, 240 VAC Standard
Voltage tolerance	±10%
Power consumption	AC 30 VA (inrush) 15 VA / 8 W (hold) DC 8 W 5 W (on request)
Duty cycle	intermittent operation 40% 30 min.
Cycling rate	approx 1000 c.p.m.
Protection class	NEMA 4 (IP 65) with cable plug Type 2508
Electrical connection	cable plug Type 2508 (DIN 43650, form A) for 7 mm ø cable (supplied as standard)
Installation	as required

Materials



1	Valve body:	PP, PVDF
2	O–Rings:	FKM, EPDM
3	Isolating diaphragm:	FKM, EPDM
4	Coil body:	Epoxy
5	Manual override:	PA

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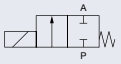
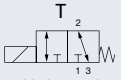
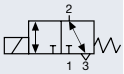
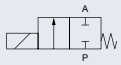
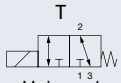
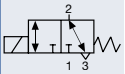
Specifications – ordering chart (other versions on request)

PP valve body

Circuit function	Port connection	Orifice [inch]	C_v	QNn _ Value (air) [l/min]	Pressure range [PSI]	Seal material	Weight [lb]	Item No. Voltage / Frequency [V/Hz] 24/DC[1]	120/60	240/60
A  Normally closed	NPT 1/4	5/64	0.15	120	0 – 174	EPDM	0.88	457 472 W	457 473 W	457 474 X
						FKM	0.88	457 469 A	457 470 F	457 471 U
		1/8	0.29	250	0 – 145	EPDM	0.88	454 952 T	453 648 R	457 476 Z
						FKM	0.88	451 963 T	454 841 U	457 475 Y
		5/32	0.33	325	0 – 72	EPDM	0.88	452 810 X	452 799 G	454 089 W
						FKM	0.88	455 220 A	453 577 S	454 726 Y
		3/16	0.47	440	0 – 65	EPDM	0.88	454 376 H	450826 V	–
						FKM	0.88	455 558 H	455 369 R	–
T  Universal function, any flow direction	NPT 1/4	5/64	0.15	120	0 – 174	EPDM	0.88	457 480 W	457 481 P	457 482 Q
						FKM	0.88	–	–	457 479 C
		1/8	0.29	250	0 – 116	EPDM	0.88	457 486 L	457 487 M	457 488 W
						FKM	0.88	–	–	457 485 K
		5/32	0.33	325	0 – 72	EPDM	0.88	–	–	–
				440	0 – 72	FKM	0.88	–	459 365 K	459 364 J
F  Diverting	NPT 1/4	5/64	0.11	120	0 – 232	EPDM	0.88	–	–	–
						FKM	0.88	–	–	–
		1/8	0.29	250	0 – 145	EPDM	0.88	–	–	–
						FKM	0.88	455 594 N	454 300 J	–
		5/32	0.33	325	0 – 72	EPDM	0.88	453 581 P	452 714 S	454 721 T
						FKM	0.88	456 174 Z	454 192 J	454 248 R
		3/16	0.47	440	0 – 65	EPDM	0.88	461 261 D	–	450 531 V
						FKM	0.88	–	–	–

PVDF valve body

Circuit function	Port connection	Orifice [inch]	C_v	QNn _ Value (air) [l/min]	Pressure range [PSI]	Seal material	Weight [lb]	Item No. Voltage / Frequency [V/Hz] 24/DC[1]	120/60	240/60
A  Normally closed	NPT 1/4	5/64	0.15	120	0 – 174	EPDM	0.88	457 492 J	457 493 K	457 494 L
						FKM	0.88	457 489 X	457 490 U	457 491 R
		1/8	0.29	250	0 – 145	EPDM	0.88	450 922 V	450 924 X	457 497 P
						FKM	0.88	454 200 N	457 495 M	457 496 N
		5/32	0.33	325	0 – 72	EPDM	0.88	–	–	–
						FKM	0.88	089 611 T	454 285 X	–
		3/16	0.47	440	0 – 65	EPDM	0.88	–	450 895 S	–
						FKM	0.88	454 488 T	456 021 K	–
T  Universal function, any flow direction	NPT 1/4	5/64	0.15	120	0 – 174	EPDM	0.88	457 501 T	457 502 U	457 503 V
						FKM	0.88	457 498 Y	457 499 Z	457 500 E
		1/8	0.29	250	0 – 116	EPDM	0.88	457 507 Z	457 508 A	457 509 B
						FKM	0.88	457 504 W	457 505 X	457 506 Y
F  Diverting	NPT 1/4	5/64	0.11	120	0 – 232	EPDM	0.88	–	–	–
						FKM	0.88	–	–	–
		1/8	0.29	250	0 – 145	EPDM	0.88	452 704 H	472 706 B	–
						FKM	0.88	139 225 W	–	–
		5/32	0.33	325	0 – 72	EPDM	0.88	452 712 Y	–	–
						FKM	0.88	–	–	–
		3/16	0.47	440	0 – 65	EPDM	0.88	462 471 Z	–	–
						FKM	0.88	–	–	–

[1] Maximum pressure and C_v may be reduced for DC voltage

Options

- Diagnosis: Electrical feedback signaller
- Specific clean and testing
- Vacuum version
- Impulse coil

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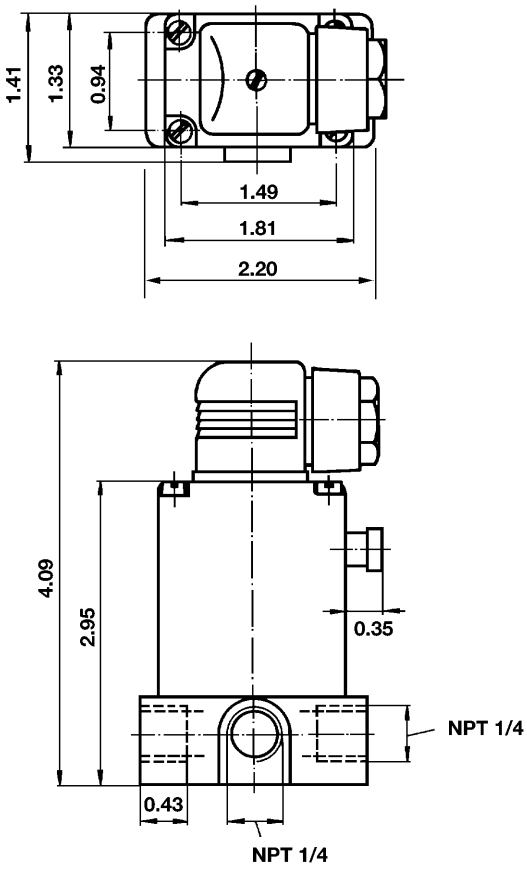
Dimensions [mm]



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