

2/2- 3/2-Way; NPT 1/4, Universal Function



Advantages / Benefits

- ▶ Universal function
- ▶ Separating diaphragm isolates solenoid system from operating fluid
- ▶ Long service life, even in non-lube conditions
- ▶ Insensitive to contaminated fluids
- ▶ Specific clean and testing available
- ▶ Lockable manual override standard
- ▶ With electrical feedback signaller (optional)
- ▶ On request: explosion proof-, impulse-, vacuum- or low power versions

Design/Function

The direct-acting 2- way and 3-way solenoid valve has a flipper as the switching method.

This unique valve hermetically isolates the actuator from the fluid. Making it less sensitive to contaminated fluids than a plunger-type system and provides a long service life, even in unlubricated applications.

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 fluid.

- Direct-acting
- Body materials: stainless steel
- Fast-acting
- Insensitive to abrasive, slightly contaminated fluids

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Applications

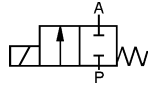
- Neutral gases and liquids
- Aggressive fluids
- Demineralized water
- Vacuum
- Unlubricated compressed air
- Water and gas analysis
- Dryer systems
- Pharmaceutical industry
- Food processing
- Steam traps
- Pilot valve for process valves



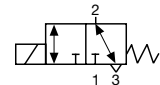
Technical Data

Circuit Function

A- 2/2-way valve,
normally closed



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



Operating Data (Valve)

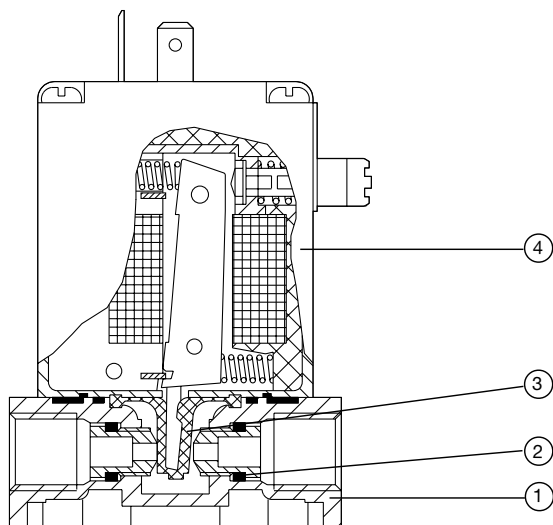
Pressure range max.	232 PSI (see specifications)
Port connection	Threaded port NPT 1/4"
Orifice	5/64" to 5/32" Sub-base (on request)
Body material	316L Stainless steel
Seal material	FPM (Viton), EPDM
Fluids	EPDM: Alkalis, acids up to a medium concentration, alkaline washing and bleaching lyes. FPM: Oxydizing acids, salt solutions, exhaust gas
Fluid temperature	-22°F to 194°F (EPDM) -10°F to 176°F (FPM)
Ambient temperature	max. 131°F
Max. viscosity	approx. 37 mm ² /s
Response Times	

Circuit Function	Opening [ms]		Closing [ms]	
	AC	DC	AC	DC
A and T	8 - 15	10 - 20	8 - 15	10 - 20

Operating Data (Actuator)

Operating voltages	AC: 110, 230 V/50 Hz, DC: 24 V
Voltage tolerance	±10%
Power consumption	AC 30 VA (inrush) 15 VA / 8 W (hold) DC 8 W 5 W (on request)
Duty cycle	100% continuous rated
Cycling rate	approx 1000 c.p.m.
Protection class	NEMA 4 (IP65) 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: | 316L Stainless Steel |
| 2 O-Rings: | FPM (Viton), EPDM |
| 3 Isolating diaphragm: | FPM (Viton), EPDM |
| 4 Coil: | Epoxy |

Ordering Chart for Standard Versions (Other Versions on Request)

Circuit Functions	Orifice	C _v ¹⁾	Port Connection [NPT]	Pressure Range [PSI]	Body Material	Seal Material	Voltage ²⁾	Electrical Classifications ³⁾	Item Number
A	1/8"	.27	1/4"	0-145	Stainless Steel	EPDM	24 DC	—	454 768 J
	1/8"	.27	1/4"	0-145	Stainless Steel	EPDM	120/60	—	US 01957
	1/8"	.27	1/4"	0-145	Stainless Steel	EPDM	120/60	UL/FM	US 03207
	1/8"	.27	1/4"	0-145	Stainless Steel	FPM	120/60	—	454 676 E
	1/8"	.27	1/4"	0-145	Brass	FPM	120/60	UL/FM	US 04159
	5/32"	.33	1/4"	0-70	Stainless Steel	FPM	24 DC	—	US 03936
C	5/64"	.13	1/4"	0-170	Brass	FPM	120/60	UL/FM	453 226 S
	5/64"	.13	1/4"	0-170	Brass	FPM	120/60	Haz-Ex	455 111 R
	1/8"	.27	1/4"	0-145	Brass	FPM	24 DC	UL/FM	453 020 T
	1/8"	.27	1/4"	0-145	Brass	FPM	24 DC	Haz-Ex	453 302 H
	1/8"	.27	1/4"	0-145	Brass	FPM	24/60	UL/FM	453 019 W
	1/8"	.27	1/4"	0-145	Brass	FPM	24/60	Haz-Ex	US 02961
	1/8"	.27	1/4"	0-145	Brass	FPM	120/60	UL/FM	453 018V
	1/8"	.27	1/4"	0-145	Brass	FPM	120/60	Haz-Ex	455 303 A
	1/8"	.27	1/4"	0-145	Stainless Steel	FPM	120/60	UL/FM	453 232 Y
	1/8"	.27	1/4"	0-145	Stainless Steel	FPM	120/60	Haz-Ex	455 304 B
	5/32"	.33	1/4"	0-70	Brass	FPM	24 DC	UL/FM	453 235 T
	5/32"	.33	1/4"	0-70	Brass	FPM	24 DC	Haz-Ex	455 305 C
	5/32"	.33	1/4"	0-70	Brass	FPM	120/60	UL/FM	452 863 Y
	5/32"	.33	1/4"	0-70	Brass	FPM	120/60	Haz-Ex	US 03705
T	5/64"	.13	1/4"	0-170	Brass	FPM	24 DC	UL/FM	454 762 C
	5/64"	.13	1/4"	0-170	Brass	FPM	120/60	UL/FM	454 490 Z
	5/64"	.13	1/4"	0-170	Brass	FPM	120/56	Haz-Ex	US 03253
	5/64"	.13	1/4"	0-170	Stainless Steel	FPM	24 DC	UL/FM	US 03365
	5/64"	.13	1/4"	0-170	Stainless Steel	FPM	120/60	UL/FM	454 126 P
	5/64"	.13	1/4"	0-170	Stainless Steel	FPM	120/56	Haz-Ex	US 02822
	1/8"	.27	1/4"	0-85	Brass	FPM	24 DC	UL/FM	453 026 M
	1/8"	.27	1/4"	0-85	Brass	FPM	120/60	UL/FM	453 024 K
	1/8"	.27	1/4"	0-85	Stainless Steel	FPM	24 DC	UL/FM	US 03061
	1/8"	.27	1/4"	0-85	Stainless Steel	FPM	120/60	UL/FM	453 558 F
	5/32"	.33	1/4"	0-58	Brass	FPM	24 DC	UL/FM	455 055 U
	5/32"	.33	1/4"	0-58	Brass	FPM	120/60	UL/FM	US 03075
	5/32"	.33	1/4"	0-58	Brass	FPM	120/56	Haz-Ex	455 114 L
	5/32"	.33	1/4"	0-58	Stainless Steel	FPM	—	—	—
	5/32"	.33	1/4"	0-58	Stainless Steel	FPM	120/60	UL/FM	453 634 T
	5/32"	.33	1/4"	0-58	Stainless Steel	FPM	120/56	Haz-Ex	455 115 M

Notes:

- 1) C_v reduced 20% with DC current operation.
- 2) 120/56 suitable for 50Hz or 60 Hz power.
- 3)
 - U.L. is a U.L. listed valve per U.L. Standard Groups a, B, C, and D.
 - FM is FM approved for Haz Location, CL I Div 2, Groups A, B, C, and D.
 - Valve comes with electrical plug if no electrical class is given.
- 4) Vacuum versions available on request.

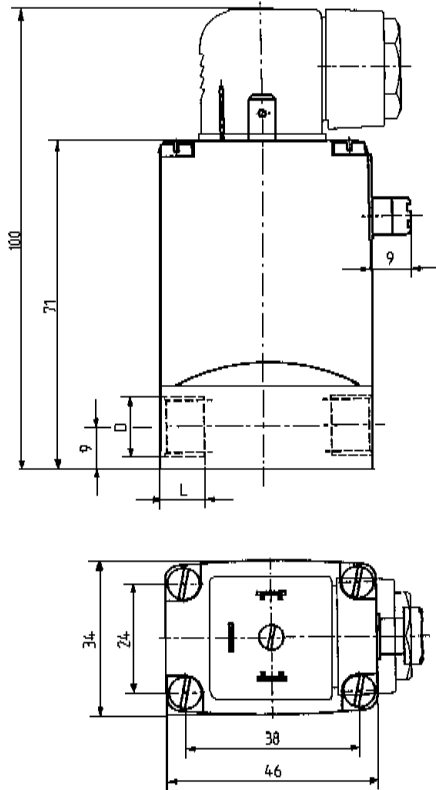
Options

- Diagnosis: Electrical feedback signaller
- Impulse coil
- Specific clean and testing
- Vacuum version
- Brass valve body
- Sub-base version Type 331
- Explosion-proof version

Dimensions [mm]

2/2-Way

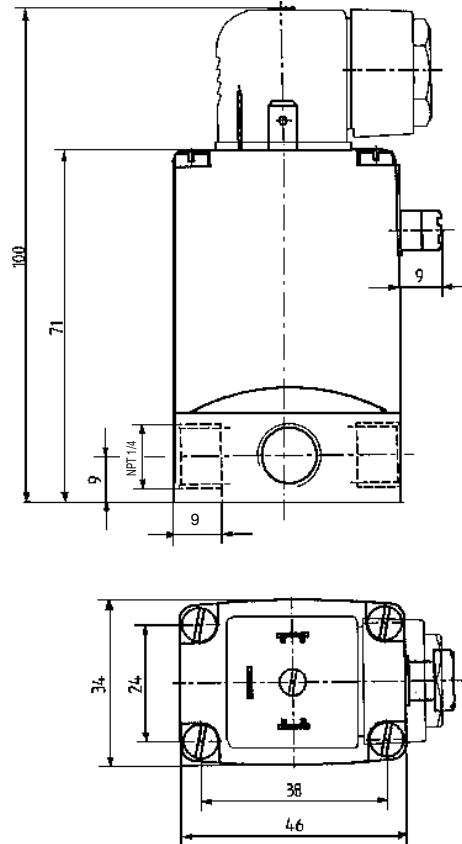
Standard Version



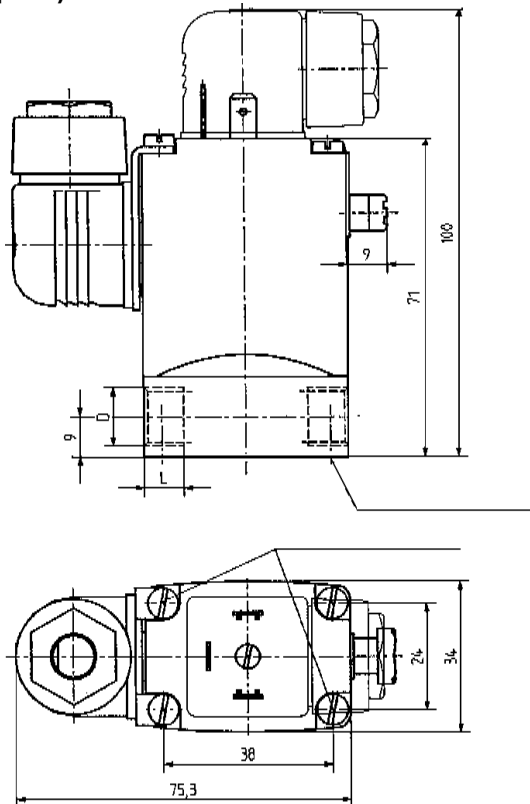
Dimensions [mm]

3/2-Way

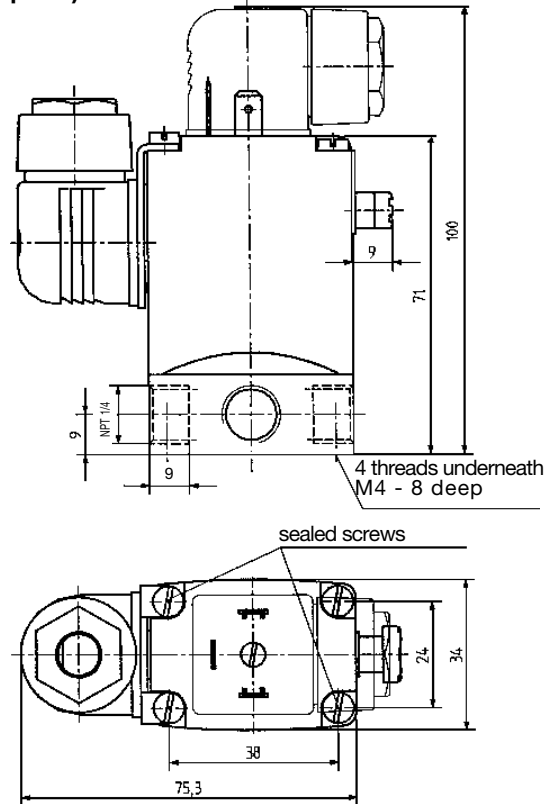
Standard Version



Valve with Electrical Feedback Signaller Type 1060 (on request)



Valve with Electrical Feedback Signaller Type 1060 (on request)



In case of special requirements, please consult for advice.

We reserve the right to make technical changes without notice.
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