

Flipper Solenoid Valve with Isolating Diaphragm For Analytical Applications

Type 121

2/2-Way Valve, G 1/4 - G 3/8



Advantages/Benefits

- ▶ Teflon diaphragm hermetically isolates the solenoid system from the fluid
- ▶ Resistant to contamination and does not magnetize particles
- ▶ Lockable manual override standard
- ▶ Body material: PTFE, stainless steel
- ▶ G 1/4 - G 3/8 solvent joint, tube connection

Design/Function

The Type 121 is a direct-acting solenoid valve with flipper armature. The special design makes the valve less sensitive to contaminated fluids than plunger-type valves and provides long service life even under dry-run conditions.

The isolation of the solenoid from the fluid is achieved by the use of a teflon diaphragm on the fluid side and a viton diaphragm on the solenoid side.

The solenoid epoxy encapsulation efficiently dissipates the heat generated by the coil.

The valve is available as 2-way normally closed circuit function. Other circuit functions including 3/2-way are available on request.

Applications

- Surface treatment
- Photochemistry
- Dairies
- Breweries
- Food processing industry
- Biochemistry
- Analytical instruments
- Plastic production
- Color chemistry
- Pharmaceutical industry

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Easy Fluid Control Solutions

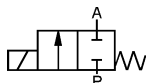
Flipper Solenoid Valve with Isolating Diaphragm For Analytical Applications

Type 121

Technical Data

Circuit Function

A 2/2-way valve,
normally closed



Other functions on request

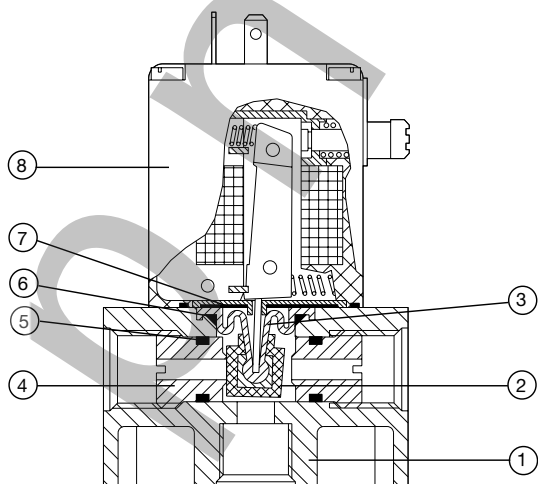
Operating Data (Valve)

Pressure range max.	0 - 58 PSI (see specifications)
Port connection Orifice	Threaded port G 1/4, G 3/8 5/32" - 1/4"
Body material	Teflon (TE), 316 Stainless Steel (PVC, PVDF, PP on request)
Seal material	FPM (Viton), EPDM, FFKM (Simriz)
Fluids	EPDM: Alkalis, acids up to a medium concentration, washing and bleaching lyes. FPM: Oxydizing acids, salt solutions, exhaust gas. FFKM: Flavors, ether, ester kezones
Fluid temperature	14°F to +194°F (FPM) -22°F to +194°F (EPDM) -14°F to +122°F (FFKM)
Ambient temperature	max. +122°F
Max. viscosity	approx. 37 cSt
Response Times	opening: 15 - 25 ms closing: 15 - 25 ms

Operating Data (Actuator)

Operating voltages	110, 240 V/60 Hz 24 VDC 24 VUC
Voltage tolerance	±10 %
Power consumption	AC 40 VA (inrush), 18 VA/7 W (hold) DC 8.5 W UC 40 W (inrush), 3 W (hold)
Duty cycle	100% continuously rated with stainless steel body. intermittent operation: PTFE-body 40% 10 min. AC or DC use: 100% continuously rated
Cycling rate	approx. 600 c.p.m. AC or DC use: approx. 10 c.p.m.
Protection class	NEMA 4 (IP 65) with cable plug Type 2508
Electrical connection	Spade Connector (DIN 43650, form A)
Installation	As required

Materials



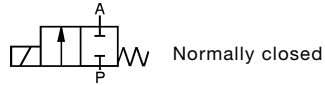
- | | |
|------------------------|---|
| 1 Valve body: | PTFE, 316 Stainless Steel
(PVC, PVDF, PP on request) |
| 2 Seal: | FFKM (Simriz), FPM (Viton),
EPDM |
| 3 Toggle pin: | Hostaflon TF 1502 |
| 4 Seat: | 316 Stainless Steel |
| 5 O-Rings: | FPM, EPDM |
| 6 Seal: | PTFE |
| 7 Isolating diaphragm: | FPM (Viton), EPDM,
FFKM (Simriz) |
| 8 Coil body: | Epoxy |

Schematic drawing shows stainless steel version

Flipper Solenoid Valve with Isolating Diaphragm For Analytical Applications

Type 121

Specifications - Ordering Chart (Other Versions on Request)



Stainless Steel 316 Valve Body

Port Connection	Orifice [inch]	C _v	SCFM (air)	Pressure Range [PSI]	Seal Material	Weight [oz]	ITEM - NO. Voltage / Frequency [V/Hz]		
							24/DC ¹⁾	120/60	240/60
G 1/4"	5/32	0.35	10.6	0 - 58	EPDM	11.3	457 457 W	457 458 F	457 459 G
G 1/4"	5/32	0.35	10.6	0 - 58	FPM	11.3	457 463 U	457 464 V	457 465 V
G 1/4"	1/4	0.71	21.2	0 - 29	EPDM	11.3	457 460 D	457 461 S	457 462 T
G 1/4"	1/4	0.71	21.2	0 - 29	FPM	11.3	457 466 X	457 467 Y	457 468 H

PTFE Valve Body

Port Connection	Orifice [inch]	C _v	SCFM (air)	Pressure Range [PSI]	Seal Material	Weight [oz]	ITEM - NO. Voltage / Frequency [V/Hz]		
							24/DC ¹⁾	120/60	240/60
G 3/8"	5/32	0.35	10.6	0 - 58	FFKM	11.3	457 452 Z	457 453 S	457 454 T
G 3/8"	1/4	0.71	21.2	0 - 29	FFKM	11.3	457 455 U	455 494 J	457 456 V

¹⁾ Universal current 24 VDC, 24 VAC

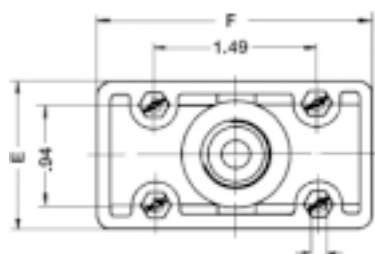
Options

- Vacuum
- Electrical feedback signaller
- Solvent joint, tube connection
- Electrical connection: molded in cable

Flipper Solenoid Valve with Isolating Diaphragm For Analytical Applications

Type 121

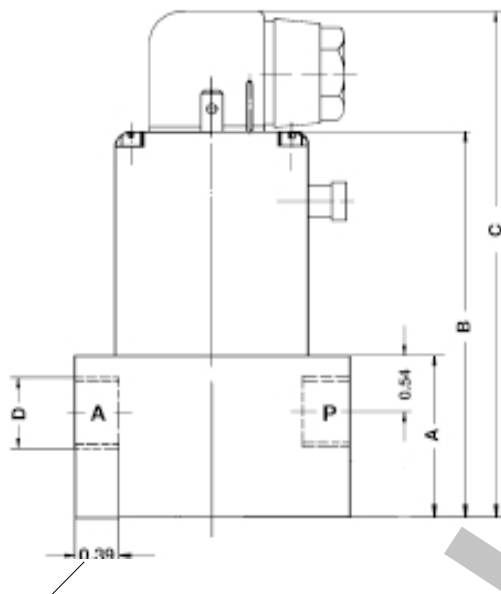
Dimensions [inch]



M4 used depth ≈ 0.19

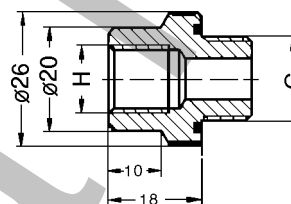
The seats on the valve have been set and must not be adjusted.

Body Material	Dimensions [inch]						
	A	B	C	D	E	F	G
PTFE	1.49	3.58	4.72	G 3/8	1.37	2.99	0.57
Stainless	1.41	3.50	4.64	G 1/4	1.25	2.99	0.51



Max. screw-in depth for thread connection with plastic
Max. screw-in depth for stainless steel .051"

Reducing Fitting



Dimension G: G 3/8"

Dimension H: G 1/4" or ø0.48"

Reducing Fitting	Material	O-Ring	Item No. Single Part
G 3/8 - G 1/4	PTFE	FPM	005 580 V
G 3/8 - G 1/4	PTFE	EPDM	005 646 A

2/2- or 3/2-Way, NPT 1/4



Advantages/Benefits

- ▶ **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**
- ▶ **Normally closed (2/2-way), Universal function (3/2-way)**
- ▶ **Lockable manual override standard**
- ▶ **Specific cleaning and testing available**
- ▶ **Options:**
Ex-proof, impulse, vacuum or low power versions

Design/Function

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

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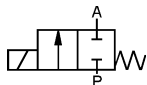
Flipper Solenoid Valve with Isolating Diaphragm For Analytical Applications

Type 124

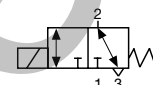
Technical Data

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.	0 - 174 PSI (see specifications)
Port connection	Threaded port NPT 1/4
Orifice	5/64 - 1/8 inch (others on request) Sub-base (others on request)
Body material	Polypropylene (PP) Polyvinylidenefluoride (PVDF)
Seal material	FPM (Viton), EPDM
Fluids	EPDM: Alkalis, acids up to a medium concentration, alkaline washing and bleaching lyes. FPM (Viton): Oxydizing acids, salt solutions, exhaust gas
Fluid temperature	-22 to 176°F (EPDM) 32 to 176°F (FPM)
Ambient temperature	max. 131°F
Max. viscosity	Approx. 1.45 in ² /s

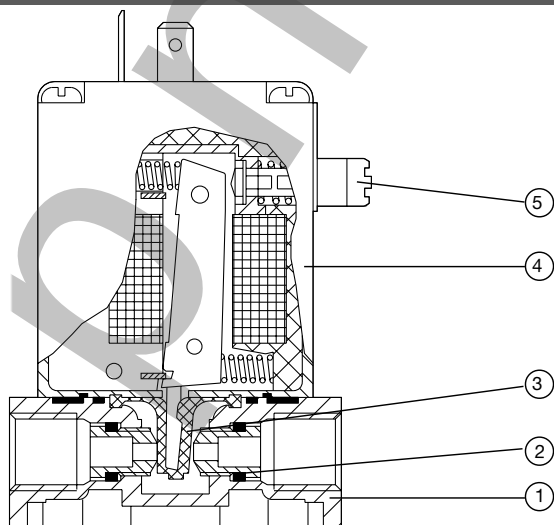
Response Times

Circuit Function	Opening [ms]		Closing [ms]	
	AC	DC	AC	DC
A and T	Approx. 8	10 - 17	Approx. 15	15 - 20

Operating Data (Actuator)

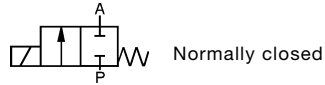
Operating voltages	110, 230 V/50 Hz, 24 VDC
Voltage tolerance	±10 %
Power consumption	AC 30 VA (inrush) 15 VA / 8 W (hold) DC 8 W 5 W (on request)
Duty cycle	intermittent operation 40 % 30 min.
Cycling rate	approx 1000 c.p.m.
Protection class	NEMA 4 (IP 65) with cable plug Type 2508
Electrical connection	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: | FPM (Viton), EPDM |
| 3 Isolating diaphragm: | FPM (Viton), EPDM |
| 4 Coil body: | Epoxy |
| 5 Manual override: | PA |

Specifications - Ordering Chart (Other Versions on Request)

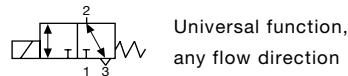


PP valve body

Port connection	Orifice [inch]	C _v	Q _{Nt} -Value (air) [l/min]	Pressure range [PSI]	Seal material	Weight [lb]	ITEM - No. Voltage / Frequency [V/Hz]		
							24/DC	120/60	240/60
NPT 1/4	5/64	0.15	120	0-174	EPDM	0.88	457 472 W	457 473 W	457 474 X
NPT 1/4	5/64	0.15	120	0-174	FPM	0.88	457 469 A	457 470 F	457 471 U
NPT 1/4	1/8	0.29	250	0-145	EPDM	0.88	454 952 T	453 648 R	457 476 Z
NPT 1/4	1/8	0.29	250	0-145	FPM	0.88	451 963 T	454 841 U	457 475 Y

PVDF valve body

Port connection	Orifice [mm]	C _v	Q _{Nt} -Value (air) [l/min]	Pressure range [PSI]	Seal material	Weight [lb]	ITEM - No. Voltage / Frequency [V/Hz]		
							24/DC	120/60	240/60
NPT 1/4	5/64	0.15	120	0-174	EPDM	0.88	457 492 J	457 493 K	457 494 L
NPT 1/4	5/64	0.15	120	0-174	FPM	0.88	457 489 X	457 490 U	457 491 R
NPT 1/4	1/8	0.29	250	0-145	EPDM	0.88	450 922 V	450 924 X	457 497 P
NPT 1/4	1/8	0.29	250	0-145	FPM	0.88	454 200 N	457 495 M	457 496 N



PP valve body

Port connection	Orifice [inch]	C _v	Q _{Nt} -Value (air) [l/min]	Pressure range [PSI]	Seal material	Weight [lb]	ITEM - No. Voltage / Frequency [V/Hz]		
							24/DC	120/60	240/60
NPT 1/4	5/64	0.15	120	0-174	EPDM	0.88	457 480 S	457 481 P	457 482 Q
NPT 1/4	5/64	0.15	120	0-174	FPM	0.88	—	—	457 479 C
NPT 1/4	1/8	0.29	250	0-116	EPDM	0.88	457 486 L	457 487 M	457 488 W
NPT 1/4	1/8	0.29	250	0-116	FPM	0.88	—	—	457 485 K

PVDF valve body

Port connection	Orifice [inch]	C _v	Q _{Nt} -Value (air) [l/min]	Pressure range [PSI]	Seal material	Weight [lb]	ITEM - No. Voltage / Frequency [V/Hz]		
							24/DC	120/60	240/60
NPT 1/4	5/64	0.15	120	0-174	EPDM	0.88	457 501 T	457 502 U	457 503 V
NPT 1/4	5/64	0.15	120	0-174	FPM	0.88	457 498 Y	457 499 Z	457 500 E
NPT 1/4	1/8	0.29	250	0-116	EPDM	0.88	457 507 Z	457 508 A	457 509 B
NPT 1/4	1/8	0.29	250	0-116	FPM	0.88	457 504 W	457 505 X	457 506 Y

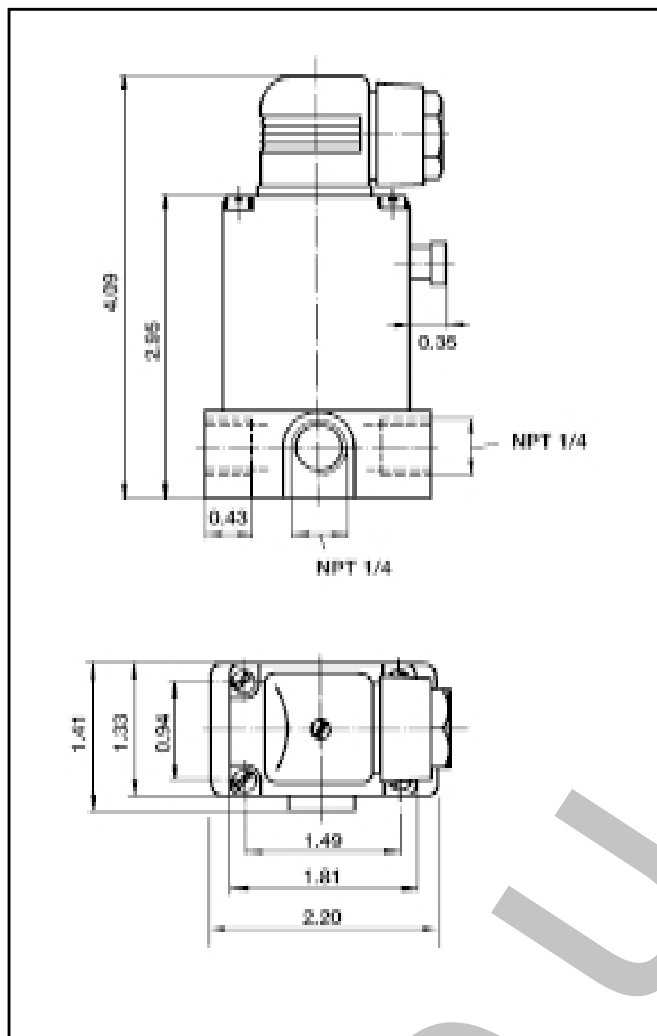
Options

- Diagnosis: Electrical feedback signaller
- Specific clean and testing
- Vacuum version
- Impulse coil
- DN 4 mm

Flipper Solenoid Valve with Isolating Diaphragm For Analytical Applications

Type 124

Dimensions [inch]



Easy ON/OFF Control



-60%



10 mm Micro Flipper Solenoid Valve with Isolating Diaphragm for Technical Applications

Type 6124

2/2- and 3/2-Way; Orifice 0.024 in.



Advantages/Benefits

- ▶ Compact size
- ▶ Hermetic isolation of fluid from the actuator
- ▶ High back-pressure rating
- ▶ Low internal volume
- ▶ Impulse version
- ▶ Zero pumping effect to media
- ▶ Impulse (latching) coil available standard

The Type 6124 solenoid valves combine the highly reliable flipper technology with isolating diaphragm and compact sizes. The valves are designed to handle a wide range of difficult and slightly aggressive media in technical applications.

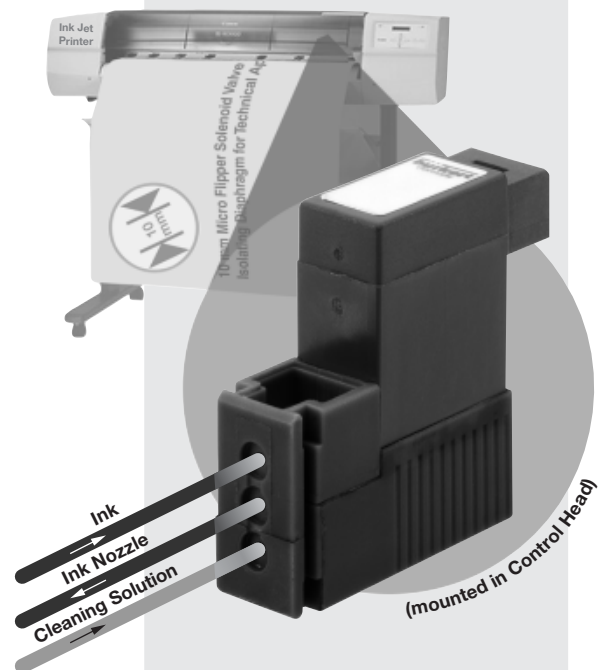
Applications

Target markets:

- Ink Jet
- Analytical Instruments
- Handling of slightly aggressive or contaminated media

Process Specification

Nominal voltage	6, 12, 24 V/DC
Voltage tolerance	± 10%
Power consumption	1.5 W
Electrical connection	• Rectangular plug or • 2 Flying leads, 12 in.
Switching function	• Standard (Monostable) • Impulse (Bistable)
Duty cycle	100% continuously rated
Single valve	If temperature of fluid or ambient
Multiple valves on manifold	>104°F intermittent operation 40% (10 min.)
Cycling rate	Approx. 1000 c.p.m.
Protection class	• NEMA 4 (IP 65) with leads • IP 40 with rectangular plug
Pressure range max.	Vacuum to 43 PSI (see specifications)
Materials	PPS
Body	FPM (VITON)
Seal	(EPDM on request)
Fluids	Ink, difficult and slightly aggressive media
Temperatures	32°F to 122°F
Fluid	Max. 131°F
Ambient	
Max. viscosity	Approx. 21 mm ² /s
Response time	Approx. 20 ms
Internal volume	• Fluid volume: approx. 15 µl • 2/2-way version: approx. 35 µl • 3/2-way version: approx. 45 µl



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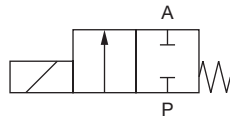
10 mm Micro Flipper Solenoid Valve with Isolating Diaphragm for Technical Applications

Type 6124

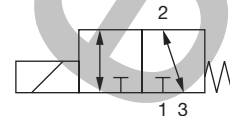
Technical Data

Circuit Function

A 2/2-way valve, normally closed



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



Port connection	Orifice [inch]	C _v -Value (water) [GPM]	Pressure range [PSI]	Back- pressure [PSI]	Response Times		Weight [oz.]
					Opening [ms]	Closing [ms]	
Manifold	0.024	0.006 ²⁾	Vac. - 43	28	<10	<20	0.46

²⁾Flow rate: C_v-value water [GPM]

Measured at 68°F, 14.5 PSI pressure to atmosphere

Pressure ranges [PSI]

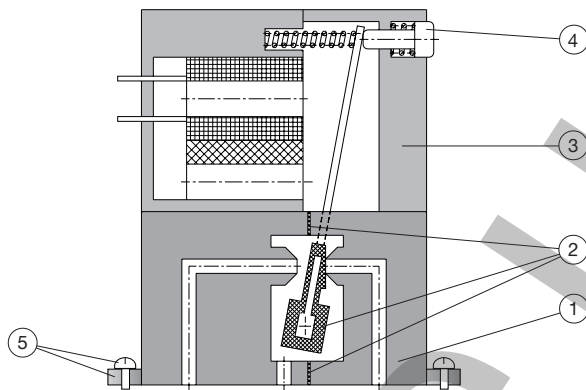
Measured as overpressure to the atmospheric pressure

Response times [ms]

Measured at valve outlet at 43 PSI and 68°F

Opening Pressure rise from 0 to 90%
Closing Pressure drop from 100 to 10%

Materials



- 1 Valve body:
- 2 Seals:
- 3 Coil body:
- 4 Manual override:
- 5 Mounting clip:

PPS
FPM (Viton)- EPDM on request
PA (Polyamide)
PPS
PA with stainless steel screw

Ordering-Information Accessories

Accessory	Description	Item-No.
Rectangular plug 0.2 in.	118 in. cable jacketed [3m]	133 486 F
	12 in. leads [300mm]	644 068 N
	78 in. leads [2m]	148 578 R
	single contacts for manifold mounting	644 067 D
Single manifold PEEK	3 x UNF-1/4-28-connection	645 754 K
Single manifold SS	3 x M3-connection	644 684 D
3-Station manifold, PEEK	2-Way Function, Single Common Port, Drawing Available Upon Request	US61379
6-Station manifold, PEEK	2-Way Function, Single Common Port, Drawing Available Upon Request	US61380
3-Station manifold, PEEK	3-Way Function, Single Common Port, Drawing Available Upon Request	US61383
6-Station manifold, PEEK	3-Way Function, Single Common Port, Drawing Available Upon Request	US61384
Blanking plate PEEK	To cover unused stations	US61378

Additional Accessories on request:

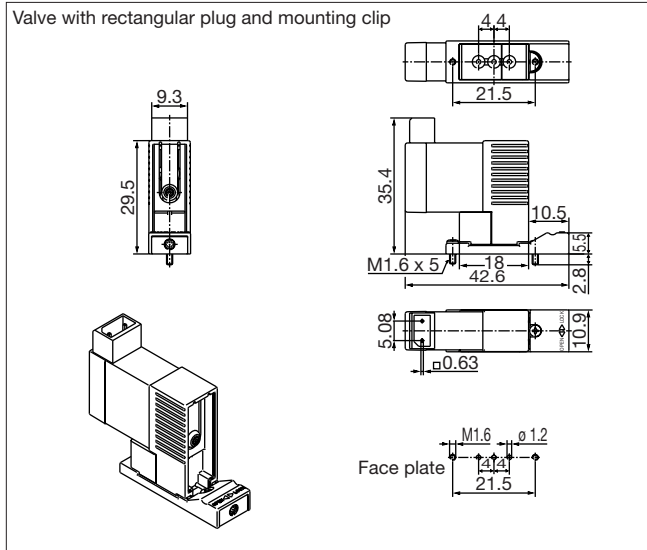
- Multi-valve manifolds
- Flow diagnostics
- Fittings and tubing

10 mm Micro Flipper Solenoid Valve with Isolating Diaphragm for Technical Applications

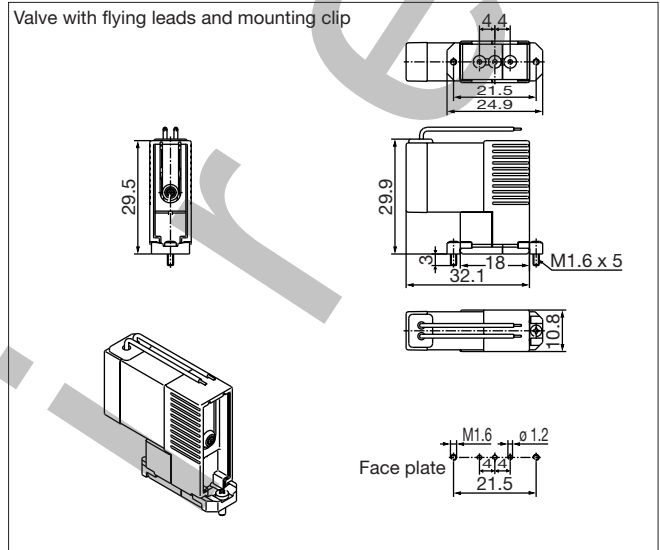
Type 6124

Dimensions [mm]

Valve with rectangular plug and mounting clip



Valve with flying leads and mounting clip



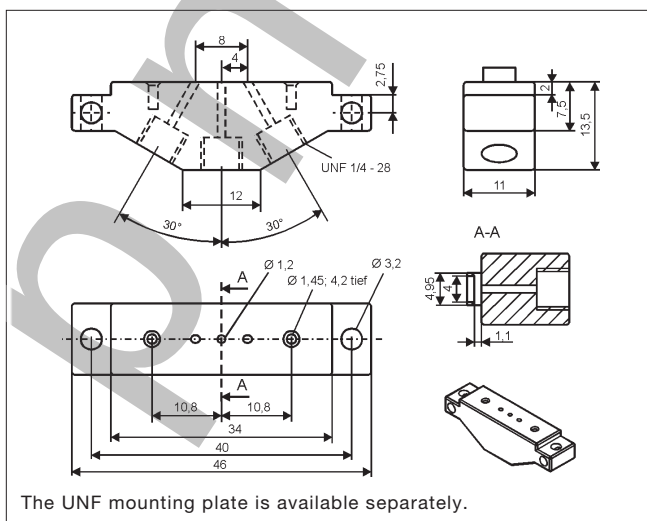
Ordering Information - Valves for manifold mounting (other versions on request)

All valves with PPS housing and FPM seals; rectangular plug versions delivered without plug connectors (see accessories)

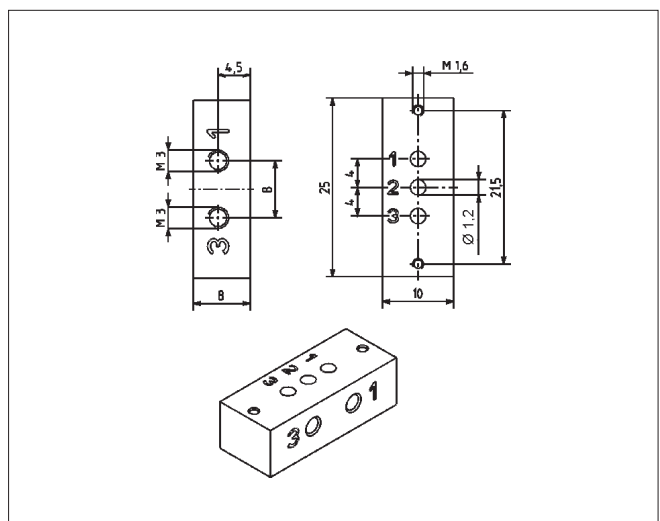
All valves delivered with mounting clips with screws M 1.6 x 5

Circuit Function	Orifice [inch]	C _v -Value (water) [GPM]	Q _{Nn} -Value (air) [l/min]	Pressure range [PSI]	Electrical connection	Switching function	Voltage/frequency [V/Hz]	Item-No.
A (2/2-way)	0.024	0.006	5	Vac.-43	rectangular plug	standard	006/VDC	148 841 H
	0.024	0.006	5	Vac.-43	leads, 2x12in.	standard	012/DC	144 122 L
	0.024	0.006	5	Vac.-43	rectangular plug	standard	012/DC	144 120 W
	0.024	0.006	5	Vac.-43	leads, 2x31.5in.	standard	024/VDC	154 370 J
	0.024	0.006	5	Vac.-43	rectangular plug	standard	024/DC	144 121 K
	0.024	0.006	5	Vac.-43	leads, 2x12in.	standard	024/DC	144 123 M
	0.024	0.006	5	Vac.-43	rectangular plug	impulse	006/DC	142 261 D
	0.024	0.006	5	Vac.-43	leads, 2x12in.	impulse	006/DC	146 175 T
	0.024	0.006	5	Vac.-43	rectangular plug	impulse	012/DC	143 376 H
T (3/2-way)	0.024	0.006	5	Vac.-43	leads, 2x12in.	impulse	012/DC	146 176 U
	0.024	0.006	5	Vac.-43	rectangular plug	standard	012/DC	140 457 C
	0.024	0.006	5	Vac.-43	leads, 2x12in.	standard	012/DC	140 459 N
	0.024	0.006	5	Vac.-43	rectangular plug	standard	024/DC	140 458 M
	0.024	0.006	5	Vac.-43	leads, 2x12in.	standard	024/DC	140 460 K
	0.024	0.006	5	Vac.-43	rectangular plug	impulse	006/DC	140 461 G
	0.024	0.006	5	Vac.-43	leads, 2x12in.	impulse	006/DC	140 462 H
	0.024	0.006	5	Vac.-43	rectangular plug	impulse	012/DC	142 089 V
	0.024	0.006	5	Vac.-43	leads, 2x12in.	impulse	012/DC	143 171 U

Single Manifold PEEK with UNF-Connection



Single Manifold Stainless Steel with M3 Conn.

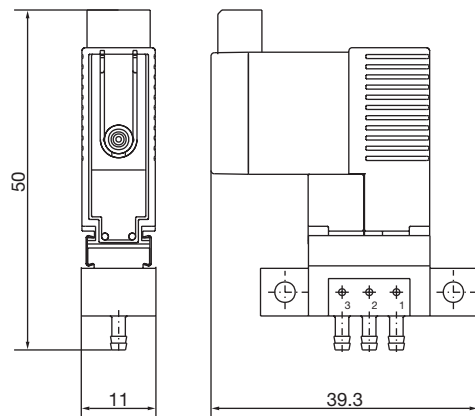


10 mm Micro Flipper Solenoid Valve with Isolating Diaphragm for Technical Applications

Type 6124

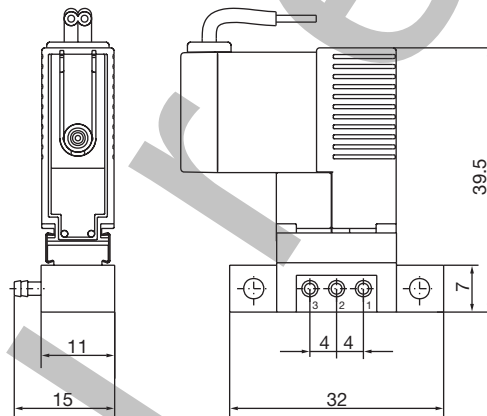
Dimensions [mm] for Valves with Tube Connections (on request)

Valve with rectangular plug and downwards tube connection



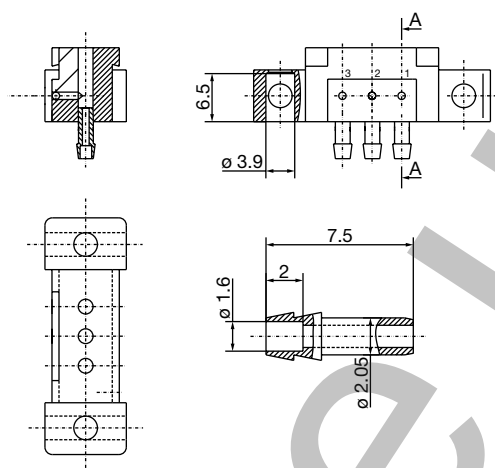
2/2-way valves are being delivered with output 3 closed

Valve with flying leads and sideways tube connection



2/2-way valves are being delivered with output 3 closed

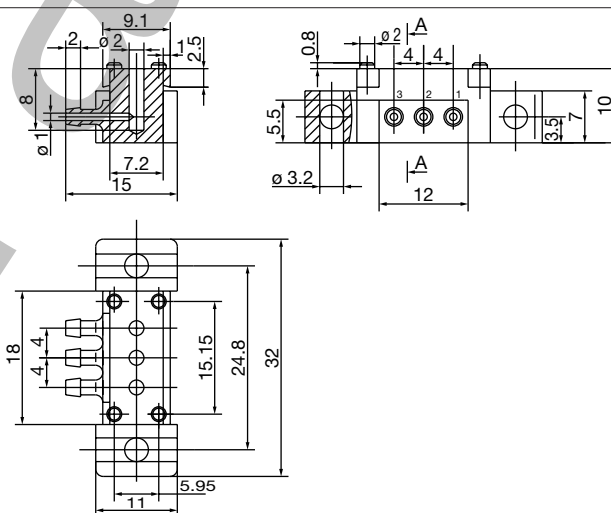
Single Manifold PA with Downwards Tube Conn.



Note:

The tube connection plates are only available as part of a complete valve

Single Manifold PA with Sideways Tube Conn.



Note:

The tube connection plates are only available as part of a complete valve

Rectangular Cable Plug Type 2505

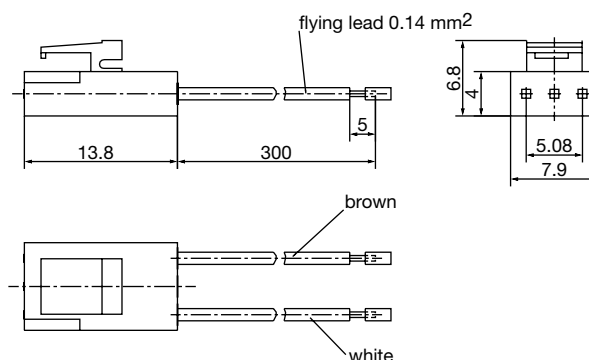
Technical Data

Protection class	IP 20
Operating voltage	24 V
Power consumption	3 W
Operating temperature	32°F - 122°F

Ordering¹⁾

	Item-No.
Cable length 300 mm	644 068 N
Cable length 3 m	133 486 F
Cable length 500 mm	148 578 R

¹⁾ Please order separately (no standard delivery)



In case of special requirements please consult for advice.

We reserve the right to make technical changes without notice.

US_6124_12/03

22 mm Flipper Solenoid Valve with Isolating Diaphragm for Technical Applications

Type 6128
ON/OFF Control

2/2- and 3/2-Way; Orifice 5/64" and 1/8", 140 PSI



Advantages/Benefits

- ▶ Compact size
- ▶ Hermetic isolation of fluid from the actuator
- ▶ Manual override as standard
- ▶ Low internal volume
- ▶ Pressure range up to 140 PSI

The Type 6128 solenoid valves combine all state of the art features in a compact design. With high reliability, virtually no heat transfer between fluid and coil, low internal volume and Burkert's expertise in supplying customized solutions, these valves are a perfect fit even for the most demanding applications.

Process Specification

Nominal voltage	24 V/DC (other voltages on request)
Voltage tolerance	± 10%
Power consumption	5 W
Duty cycle	100% continuously rated
Protection class	• IP 65 with leads • IP 40 with rectangular plug
Pressure range max.	Vacuum to 140 PSI (see specifications)
Materials	
Body	PPS
Seal	EPDM or FPM (other materials, see datasheet Type 6608)
Fluids	Aromatics, ethers, esters, ketones, solvents
Temperatures	
Fluid	32°F up to 158°F
Ambient	32°F up to 140°F
Max. viscosity	Approx. 21 mm²/s
Response times	Opening: 15 ms Closing: 40 ms
Standard cable plug	Type 2507, form B

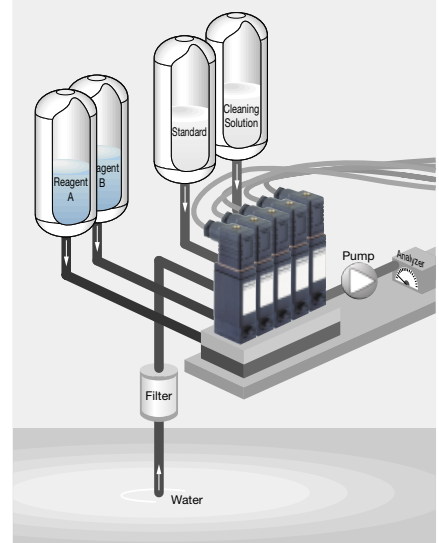
Applications

Ink Jet

Analytical instruments

Handling of slightly aggressive
or contaminated media

Water Sampling and Analyzing System



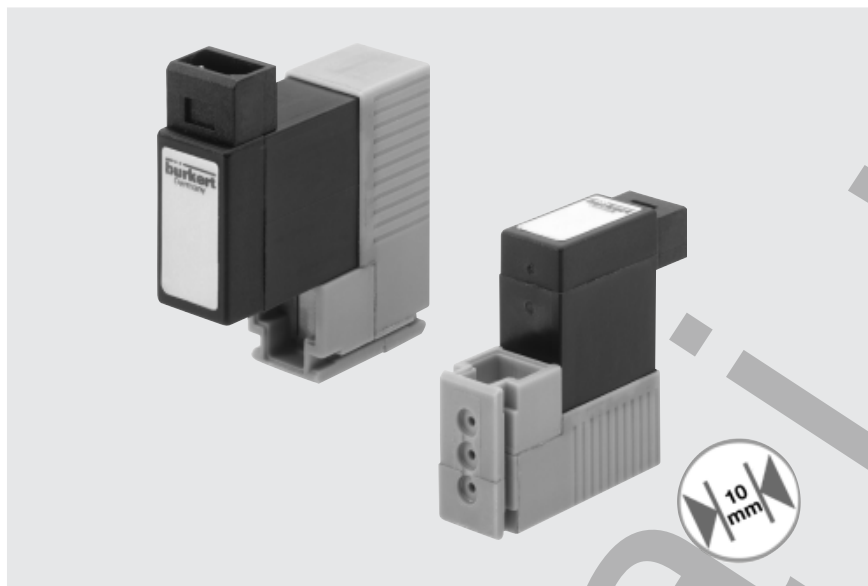
bürkert
Fluid Control Systems

bürkert

10mm Micro Flipper Solenoid Valve with Isolating Diaphragm for Analytical Applications

Type 6604

2/2- and 3/2-Way; Orifice 0.024 in.



The Type 6604 solenoid valves combine the highly reliable flipper technology with an isolating diaphragm and compact sizes. The valves are designed to handle a wide range of aggressive fluids, disinfectants and pure media in analytical applications.

Specifications

Nominal voltage	6, 12 and 24 V/DC
Voltage tolerance	± 10%
Power consumption	1.5 W
Duty cycle	
Single valve	100% continuously rated
Multiple valve on manifold	If temperature of fluid or ambient >104°F intermittent operation 40% (10 min.)
Cycling rate	Approx. 1000 c.p.m.
Protection class	• NEMA 4 (IP 65) with leads • IP 40 with rectangular plug
Pressure range max.	Vacuum to 43 PSI (see specifications)
Materials	
Body	PEEK
Seal	FFKM (SIMRIZ Perfluorelastomer)
Fluids	Aromatics, ethers, esters, ketones, solvents
Temperatures	
Fluid	32°F up to 122°F
Ambient	32°F up to 122°F
Max. viscosity	Approx. 21 cSt
Response time	Approx. 20 ms
Internal volume	Approx. 15 µl

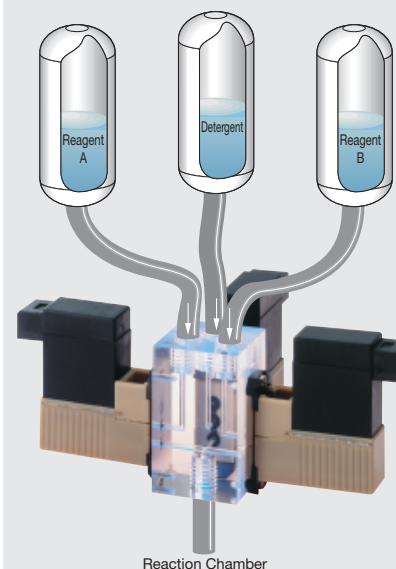
Advantages/Benefits

- Compact size
- Hermetic isolation of fluid from the actuator
- High back-pressure rating
- Low internal volume
- Zero pumping effect to media
- Impulse (latching) coils available standard

Applications

- Medical technology
- Biotechnology
- Analytical instruments
- Disinfectants and solvents
- Strong acid and bases, oxidizing solutions

Mixing and flushing station for reagent dosage



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Fluid Control Systems

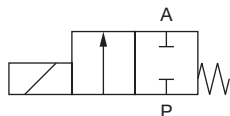
10mm Micro Flipper Solenoid Valve with Isolating Diaphragm for Analytical Applications

Type 6604

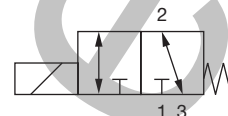
Technical Data

Circuit Function

A 2/2-way valve normally closed (on request)



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



Port connection	Orifice [inch]	C _v -Value (water) [GPM]	Pressure range [PSI]	Back-pressure [PSI]	Response Times [ms]		Weight [oz.]
Manifold	.024	.006 ²⁾	Vac. - 43	28	Opening [ms]	Closing [ms]	.46
					<10	<20	

²⁾ Flow rate: C_v-value water [GPM]

Measured at 68°F, 15 PSI pressure to atmosphere

Pressure ranges [PSI]

Measured as overpressure to the atmospheric pressure

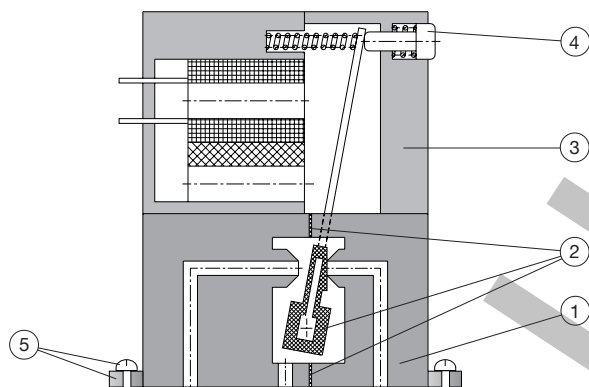
Response times [ms]

Measured at valve outlet at 87 PSI and 68°F

Opening Pressure rise from 0 to 90%

Closing Pressure drop from 100 to 10%

Materials



- | | |
|--------------------|-------------------------------|
| 1 Valve body: | PEEK |
| 2 Diaphragm: | FFKM (SIMRIZ) |
| 3 Coil body: | PA (Polyamide) |
| 4 Manual override: | PEEK |
| 5 Mounting clip: | PA with stainless steel screw |

Ordering-Information Accessories

Accessory	Description	Item-No.
Rectangular plug 0.2 in.	10 ft. cable jacketed [3m] 12 in. leads [300mm] 78 in. leads [2m]	133 486 F 644 068 N 148 578 R
	single contacts for manifold mounting	644 067 D
Single manifold PEEK	3 x UNF-1/4-28-connection	645 754 K
Single manifold SS	3 x M3-connection	644 684 D
3-Station manifold, PEEK	2-Way Function, Single Common Port, Drawing Available Upon Request	US61379
6-Station manifold, PEEK	2-Way Function, Single Common Port, Drawing Available Upon Request	US61380
3-Station manifold, PEEK	3-Way Function, Single Common Port, Drawing Available Upon Request	US61383
6-Station manifold, PEEK	3-Way Function, Single Common Port, Drawing Available Upon Request	US61384
Blanking plate PEEK	To cover unused stations	US61378

Additional Accessories on request:

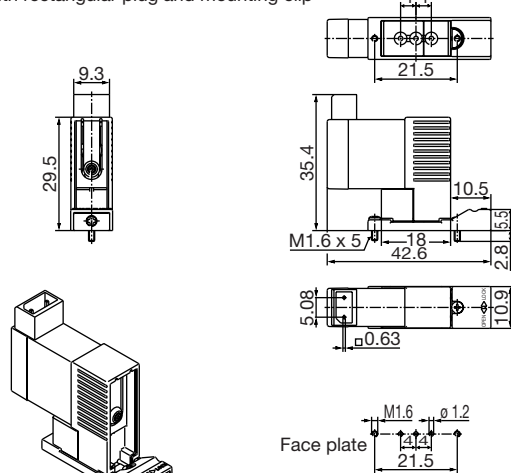
- Multivalve manifolds
- Flow diagnostics
- Fittings and tubing

10mm Micro Flipper Solenoid Valve with Isolating Diaphragm for Analytical Applications

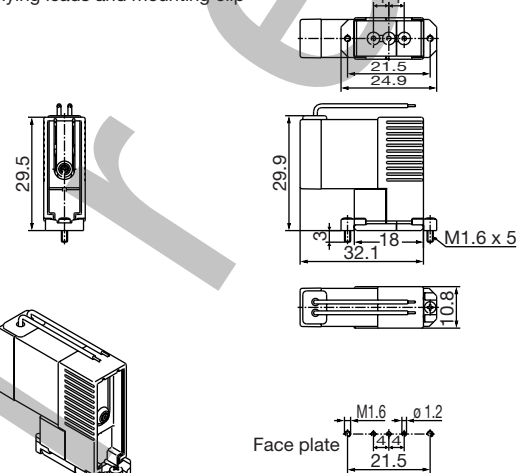
Type 6604

Dimensions [mm]

Valve with rectangular plug and mounting clip



Valve with flying leads and mounting clip



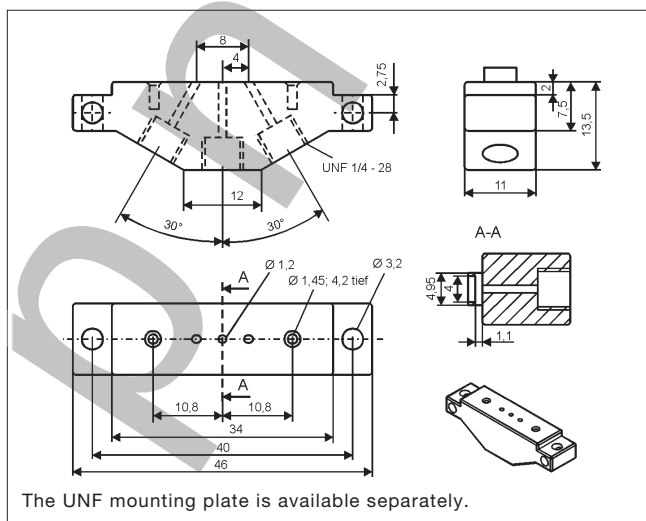
Ordering Information - Valves for manifold mounting (other versions on request)

All valves with PEEK housing and FFKM seals; rectangular plug versions delivered without plug connectors (see accessories)

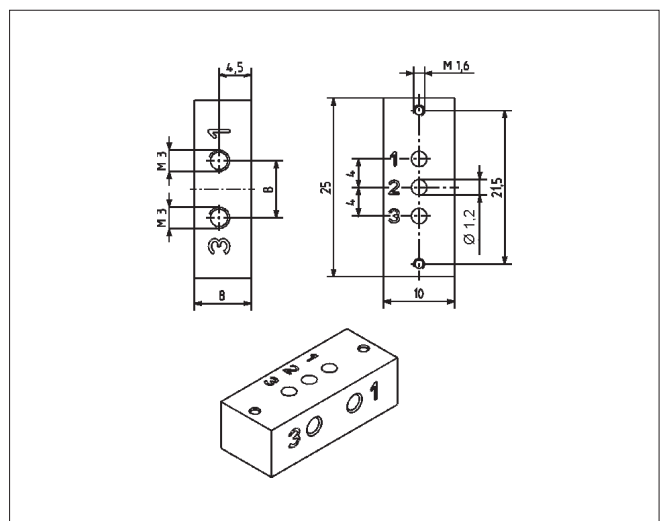
All valves delivered with mouting clips with screws M 1.6 x 5

Circuit function	Orifice [inch]	C _v -Value (water) [GPM]	Q _{Nn} -Value (air) [l/min]	Pressure range [PSI]	Electrical connection	Switching function	Voltage/frequency [V/Hz]	Item-No.
A (2/2-way)	0.024	0.006	5	Vac. - 43	rectangular plug 5.08mm	monostable	12/DC	140 463 A
	0.024	0.006	5	Vac. - 43	leads, 300mm	monostable	12/DC	140 465 C
	0.024	0.006	5	Vac. - 43	rectangular plug 5.08mm	monostable	24/DC	140 464 B
	0.024	0.006	5	Vac. - 43	leads, 300mm	monostable	24/DC	140 466 D
	0.024	0.006	5	Vac. - 43	rectangular plug 5.08mm	bistable (impulse)	06/DC	140 467 E
	0.024	0.006	5	Vac. - 43	leads, 300mm	bistable (impulse)	06/DC	140 468 P
	0.024	0.006	5	Vac. - 43	rectangular plug 5.08mm	bistable (impulse)	12/DC	143 169 A
	0.024	0.006	5	Vac. - 43	leads, 300mm	bistable (impulse)	12/DC	143 170 F
T (3/2-way)	0.024	0.006	5	Vac. - 43	rectangular plug 5.08mm	monostable	12/DC	140 469 Q
	0.024	0.006	5	Vac. - 43	leads, 300mm	monostable	12/DC	140 471 A
	0.024	0.006	5	Vac. - 43	rectangular plug 5.08mm	monostable	24/DC	140 470 M
	0.024	0.006	5	Vac. - 43	leads, 300mm	monostable	24/DC	140 472 B
	0.024	0.006	5	Vac. - 43	rectangular plug 5.08mm	bistable (impulse)	06/DC	140 473 C
	0.024	0.006	5	Vac. - 43	leads, 300mm	bistable (impulse)	06/DC	140 474 D
	0.024	0.006	5	Vac. - 43	rectangular plug 5.08mm	bistable (impulse)	12/DC	141 388 C
	0.024	0.006	5	Vac. - 43	leads, 300mm	bistable (impulse)	12/DC	145 470 E

Single Manifold PEEK with UNF-Connection



Single Manifold Stainless Steel with M3 Conn.

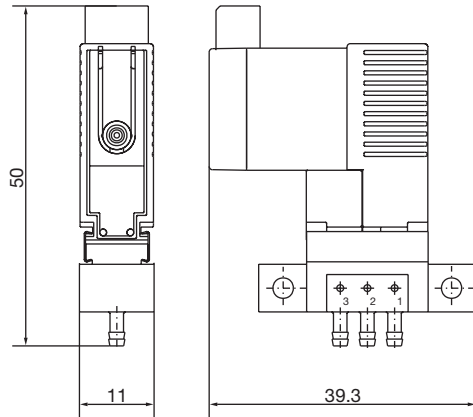


10mm Micro Flipper Solenoid Valve with Isolating Diaphragm for Analytical Applications

Type 6604

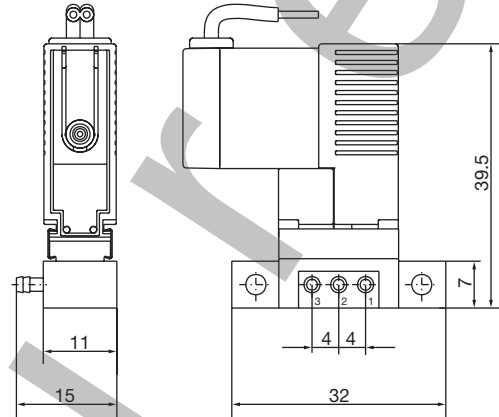
Dimensions [mm] for Valves with Tube Connections (on request)

Valve with rectangular plug and downwards tube connection



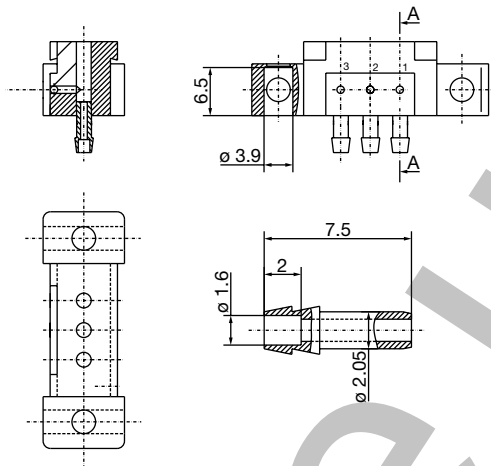
2/2-way valves are being delivered with output 3 closed

Valve with flying leads and sideways tube connection



2/2-way valves are being delivered with output 3 closed

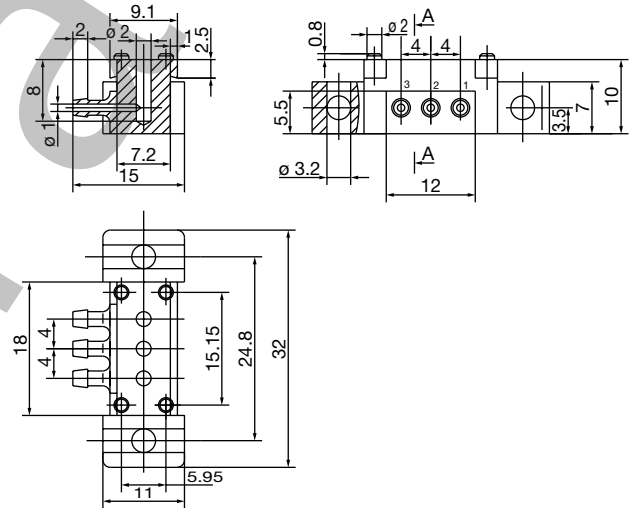
Single Manifold PA with Downwards Tube Conn.



Note:

The tube connection plates are only available as part of a complete valve

Single Manifold PA with Sideways Tube Conn.



Note:

The tube connection plates are only available as part of a complete valve

Rectangular Cable Plug Type 2505

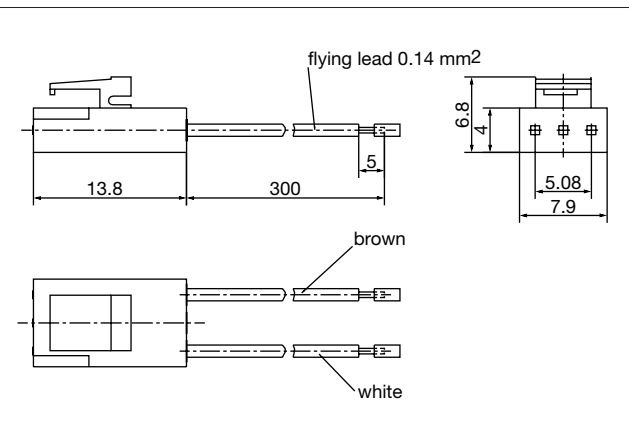
Technical Data

Protection class	IP 20
Operating voltage	24 V
Power consumption	3 W
Operating temperature	32 - 122°F

Ordering¹⁾

Item-No.	
Cable length 300 mm	644 068 N
Cable length 3 m	133 486 F
Cable length 500 mm	148 578 R

¹⁾ Please order separately (no standard delivery)



22 mm Flipper Solenoid Valve with Isolating Diaphragm for Analytical Applications

Type 6608
Analytical Control

2/2- and 3/2-Way; Orifice 0.118" in.



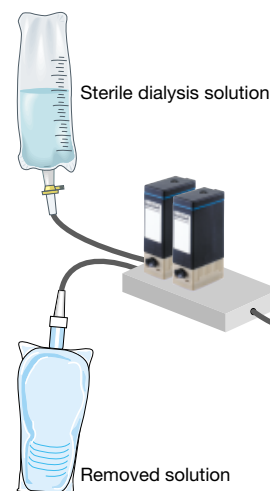
Advantages/Benefits

- ▶ Compact size
- ▶ Hermetic isolation of fluid from the actuator
- ▶ Low internal volume
- ▶ Quality certifications
- ▶ Gap free

The Type 6608 analytical solenoid valves combine all state of the art features in a compact design. With high reliability, virtually no heat transfer between fluid and coil, low internal volume and Burkert's expertise in supplying customized solutions, these valves are a perfect fit even for the most demanding applications.

Specifications

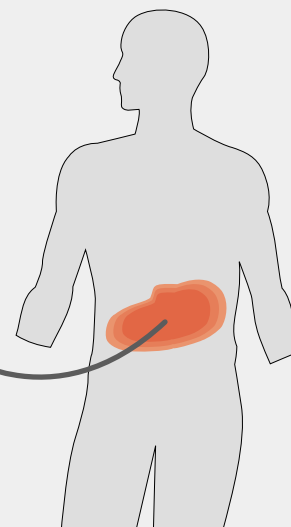
Nominal voltage	24 V/DC
Voltage tolerance	± 10%
Power consumption	5 W
Duty cycle	100% continuously rated
Protection class	• NEMA 4 (IP 65) with leads • IP 40 with rectangular plug
Pressure range max.	Vacuum to 42 PSI (see specifications)
Materials	
Body	PEEK
Seal	FFKM (Perfluorelastomer)
Fluids	Aromatics, ethers, esters, ketones, solvents
Temperatures	
Fluid	32°F up to 158°F
Ambient	32°F up to 140°F
Max. viscosity	Approx. 21 cSt
Response times	Opening: 15 ms Closing: 40 ms



Applications

Medical technology
Biotechnology
Analytical instruments
Disinfectants and solvents
Strong acids and bases,
oxidizing solutions

Peritoneal dialysis (PD)

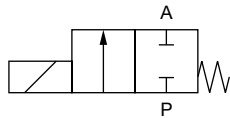


burkert
Fluid Control Systems

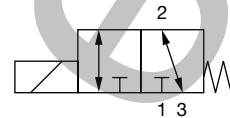
Technical Data

Circuit Function

A 2/2-way valve normally closed
(on request)



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



Circuit function	Port connection	Orifice	C _v -Value (water)	Q _{Nn} -Value (air)	Pressure range [PSI]	Response Times		Weight [lb.]
		[inch]	[gpm]	[l/min]		Opening [ms]	Closing [ms]	
A	Manifold Mount	1/8	0.19 ¹⁾	170	Vac. - 42	15	40	0.28
T	Manifold Mount	1/8	0.21 ¹⁾	195	Vac. - 28	15	40	0.28

Flow rate: C_v -value water [gpm]

Measured at 68°F, 14.5 PSI pressure to atmosphere

Pressure ranges [PSI]

Measured as overpressure to the atmospheric pressure

Response times [ms]

Measured at valve outlet at 28 PSI and 68°F

Opening Pressure rise from 0 to 90%

Opening	Pressure rise from 0 to 55%
Closing	Pressure drop from 100 to 10%

¹⁾ This C_V -Value water equals a Q_{Nn} -Value air of 5 l/min

Ordering Information

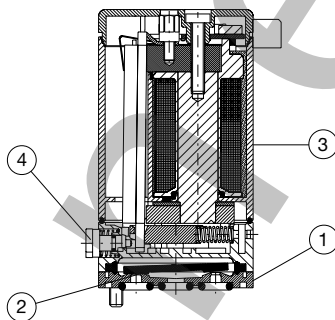
Circuit function	Port connection	Orifice [inch]	Housing material	Seal material	Voltage/ frequency [V/Hz]	Power consumption [W]	Electrical connection	Item-No.
A	Manifold Mount	1/8	PEEK	FFKM	24 V/DC	5	leads, 20 in.	150 826 Y
A	Manifold Mount	1/8	PEEK	FFKM	24 V/DC	5	rectangular plug	150 825 X
T	Manifold Mount	1/8	PEEK	FFKM	24 V/DC	5	leads, 20 in.	149 485 W
T	Manifold Mount	1/8	PEEK	FFKM	24 V/DC	5	rectangular plug	150 797 B

Accessory	Description	Item-No.
Rectangular plug 0.2 in.	118 in. cable	133 486 F
	12 in. leads	644 068 N
	single contacts for manifold mounting	644 067 D

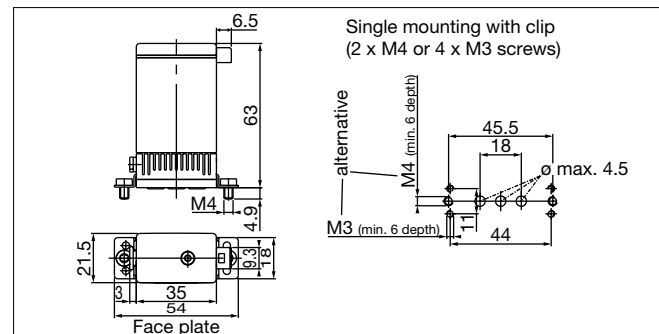
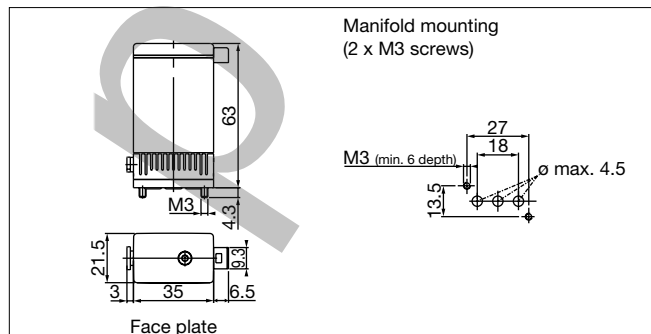
Additional accessories on request:

- Multi-valve manifolds
- Mounting accessories
- Fittings and tubes

Materials and Dimensions



- | | |
|--------------------|------|
| 1 Valve body: | PEEK |
| 2 Diaphragm: | FFKM |
| 3 Coil body: | PA |
| 4 Manual override: | PPS |



In case of special requirements
please consult for advice.

We reserve the right to make technical changes without notice.

US 6608 07/02