

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



Advantages/Benefits

- ▶ G 3/8, G 1/2, G 3/4, NPT 1/2, NPT 3/4, solvent joint
- ▶ On/off, mixer or distributor function
- ▶ Body materials: PVC, PVDF
- ▶ No differential pressure required for switching
- ▶ Double seal to valve interior
- ▶ Simple installation and removal
- ▶ Non-metallic valve internals
- ▶ Lockable manual override available as a standard feature

Design/Function

Direct-acting solenoid valve, available in 2- and 3-way versions. A separating diaphragm isolates the actuator from the fluid.

The valve is insensitive to contaminated fluids, except for sharp solid bodies and long fibres.

The flow path through the valve is dependent on the chosen circuit function. The solenoid epoxy encapsulation efficiently dissipates the heat generated by the coil.

Applications

- Aggressive gases and liquids
- Bases and acids up to a medium concentration
- Water treatment
- Chemical cleaning and washing systems
- Food and beverage industry
- Photochemistry
- Electroplating systems
- Chlorine dosage
- Etching technology

bürkert
Easy Fluid Control Systems

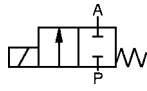
Solenoid Valve for aggressive Fluids, direct acting

Type 131

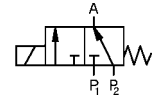
Technical Data

Circuit Function

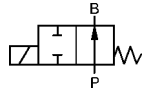
A 2/2-way valve,
normally closed



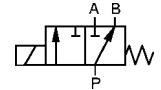
E Mixer valve, when de-energized
pressure port P2 open,
P1 closed



B 2/2-way valve,
normally open



F Distributor valve, when de-energized
pressure port P connected
to outlet B



Body material

Hard-PVC (resistant to DIN 8062 and 8061)
PVDF on request

Specifications

Orifice DN	Kv-Value Water	Qn-Value Air	Pressure Range for Circuit Functions				Weight
			F [bar]	E [bar]	A [bar]	B [bar]	
[mm]	[m ³ /h]	[l/min]					[kg]
10	2,0	2100	0-1	0-0,6	0-3	0-2	1,20
15	4,5 ¹⁾	4800	0-0,5	0-0,3	0-1	0-1	1,20
20	6,0 ¹⁾	6400	0-0,25	0-0,15	0-0,5	0-0,5	1,20

¹⁾ The Kv-values of the orifice DN 15 and 20 are 0.5 or 1 m³/h smaller in the circuit functions E and F.

All pressures quoted are gauge pressures with respect to the prevailing atmospheric pressure.

Operating Data (Valve)

Seal Materials/Fluids Handled/Temp. -Range

	PVC	PVDF
NBR Neutral fluids, e.g. compressed air, town gas, water, hydraulic oil, oils and fats without additives	-10 to +50 °C	-10 to +70 °C
EPDM Alkalis, acids up to medium concentration, alkaline washing and bleaching lyes	-30 to +50 °C	-30 to +70 °C
FPM Oxidizing acids and substances salt solutions, oils with additives	-10 to +50 °C	-30 to +70 °C

For more detailed information see resistance chart (Leaflet-No. 1896009).

Max. ambient temperature	+50 °C
Max. viscosity	approx. 37 mm ² /s
Response times	
opening	10-20 ms
closing	40-60 ms

The response times have been measures at a nominal pressure with air. They depend upon the orifice, pressure and viscosity of the handled fluid.

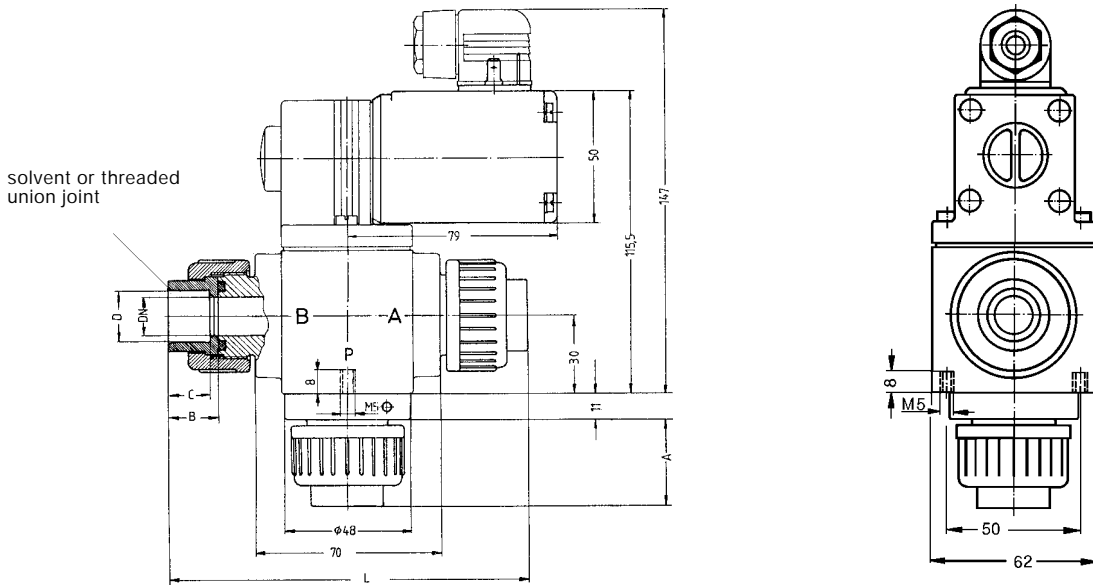
Operating Data (Actuator)

Operating voltage	24, 110, 230, 240 V/50 Hz 24, 48, 110, 120, 220 V/UC (UC=universal current)
Voltage tolerance	±10 %
Power consumption	AC 100-120 VA (inrush), 32 VA/16 W (hold) UC 100 W (inrush), 9 W (hold)
Duty cycle	100% continuously rated
Cycling rate	standard coil: 100-150 c.p.m. UC coil: max. 6 c.p.m.
Rating	IP 65 cable plug
Port connection	G 3/8, 1/2, 3/4, NPT 1/2, 3/4, solvent joint 16, 20 and 25 mm ø

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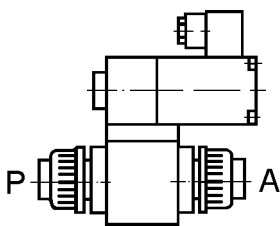
Dimensions in mm



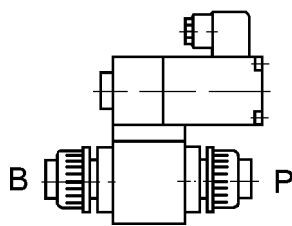
Circuit Function	Connections 3-Way-Valve		
F	B	A	P
E	P ₂	P ₁	A

Orifice DN	A	B	C		D			L
			Threaded Joint	Solvent Joint	Threaded Joint	Solvent Joint		
10	30	17	14	12	ø 16,2	G 3/8	-	130
	33	19	16	14	ø 20,2	G 1/2	NPT 1/2	136
15	33	19	16	14	ø 20,2	G 1/2	NPT 1/2	136
	37	22	19	16	ø 25,2	G 3/4	NPT 3/4	144
20	37	22	19	16	ø 25,2	G 3/4	-	144

Terminals



Circuit function A, N/C version



Circuit function B, N/O version

Installation/Accessories

- | | |
|-----------------------|--|
| Installation | as required |
| Electrical connection | <ul style="list-style-type: none"> • cable plug for 7 mm ø cable (supplied as standard) • moulded-in cable, on request |

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Ordering Chart (Other Versions on Request)

Circuit Function	Orifice DN [mm]	Flow Rate		Port Connection	Pressure Range [bar]	Body Material	Seal Material	Weight [kg]	Voltage/Frequency [V/Hz]	Order-No.						
		Water Kv-Value [m³/h]	Air QNn [l/min]													
A	10,0	2,0	2100	G 1/2	0-3	PVC	EPDM	1,2	024/UC	023 759 C ²⁾						
									230/50	056 795 S						
									024/50	042 477 V						
								¹⁾ 16 mm ø	0-3	PVC	EPDM	1,2	024/UC	046 949 A ²⁾		
												110/50	052 624 S			
												230/50	050 549 R			
												230/50	017 112 E ³⁾			
												240/50	051 549 E			
												230/50	056 791 W			
								NPT 1/2	0-3	PVC	EPDM	1,2	120/UC	053 784 U ²⁾		
								G 1/2	0-3	PVC	FPM	1,2	240/50	046 199 T		
								¹⁾ 16 mm ø	0-3	PVC	FPM	1,2	024/50	052 953 U		
										024/UC	047 915 R ²⁾					
										110/50	052 625 T					
										230/50	050 443 F					
										240/50	051 550 B					
					¹⁾ 20 mm ø	0-3	PVC	FPM	1,2	024/50	055 817 P					
										110/50	055 820 W					
										230/50	056 789 C					
		15,0	4,5	4800	G 1/2	0-1	PVC	EPDM	1,2	024/UC	067 832 J ²⁾					
										¹⁾ 20 mm ø	0-1	PVC	EPDM	1,2	024/50	051 028 X
															024/UC	050 809 P ²⁾
												110/50	051 785 T			
												230/50	055 423 L			
											240/50	051 227 T				
							G 1/2	0-1	PVC	FPM	1,2	230/50	056 663 D			
							¹⁾ 20 mm ø	0-1	PVC	FPM	1,2	024/50	051 641 A			
												024/UC	053 882 P ²⁾			
												110/50	052 036 Q			
												230/50	050 787 G			
												240/50	051 551 Y			
				¹⁾ 25 mm ø	0-1	PVC	FPM	1,2	024/UC	077 411 N ²⁾⁴⁾						
	20,0	6,0	6400	G 3/4	0-0,5	PVC	EPDM	1,2	110/50	058 226 H						
									¹⁾ 25 mm ø	0-0,5	PVC	EPDM	1,2	024/50	053 992 M	
											024/UC	045 225 T ²⁾				
											110/50	052 626 U				
											230/50	051 257 H				
											240/50	052 628 E				
										FPM	1,2	024/50	050 551 B			
											024/UC	056 495 N ²⁾				
								110/50	052 627 V							
								230/50	051 351 F							
								240/50	052 629 F							
B	10,0	2,0	2100	¹⁾ 16 mm ø	0-2	PVC	EPDM	1,2	024/UC	041 272 E ²⁾						
									220/UC	017 113 F ²⁾³⁾						
													NBR	1,2	220/UC	040 241 J ²⁾
													FPM	1,2	220/UC	053 221 X ²⁾

¹⁾ Solvent joint to DIN 8063, ²⁾ UC coil 100 W inrush, 9 W hold (universal current), ³⁾ With electrical feedback Type 1060, ⁴⁾ Without cable plug

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Ordering Chart (Other Versions on Request)

Circuit Function	Orifice DN [mm]	Flow Rate		Port Connection	Pressure Range [bar]	Body Material	Seal Material	Weight [kg]	Voltage/Frequency [V/Hz]	Order-No.				
		Water Kv-Value [m³/h]	Air QNn [l/min]											
B	15,0	4,5	4800	NPT 3/4	0-1	PVC	EPDM	1,2	120/UC	069 629 Q ²⁾				
				G 1/2	0-1	PVC	NBR	1,2	220/UC	058 604 M ²⁾				
				NPT 3/4	0-1	PVC	FPM	1,2	120/UC	025 771 S ²⁾				
	20,0	6,0	6400	G 3/4	0-0,5	PVC	EPDM	1,2	024/UC	086 043 J ²⁾				
				¹⁾ 25 mm ø	0-0,5	PVC	EPDM	1,2	220/UC	051 748 M ²⁾				
							FPM	1,2	048/UC	044 646 G ²⁾				
E	20,0	5,0	5330	¹⁾ 25 mm ø	0-0,15	PVC	FPM	1,2	110/UC	043 395 U ²⁾				
F	10,0	2,0	2100	¹⁾ 16 mm ø	0-1	PVC	EPDM	1,2	024/50	064 266 F				
									024/UC	055 770 K ²⁾				
									110/50	024 948 T				
												230/50	052 546 U	
												240/50	067 061 Y	
								G 3/8	0-1	PVC	FPM	1,2	024/UC	065 194 R ²⁾
												230/50	052 183 R	
								¹⁾ 16 mm ø	0-1	PVC	FPM	1,2	024/50	048 365 J
												024/UC	058 362 R ²⁾	
												110/50	024 934 D	
												230/50	052 619 D	
												240/50	051 326 W	
								NPT 1/2	0-1	PVC	FPM	1,2	120/UC	041 218 G ²⁾
					15,0	4,0	4270	¹⁾ 20 mm ø	0-0,5	PVC	EPDM	1,2	024/50	058 279 W
												024/UC	049 883 U ²⁾	
								110/50	051 259 K					
								230/50	052 071 T					
								240/50	067 068 F					
							FPM	1,2	024/50	057 305 G				
								024/UC	058 710 J ²⁾					
								110/50	056 617 X					
								230/50	050 904 E					
								240/50	022 767 T					
								220/UC	020 687 W ²⁾					
	20,0	5,0	5330	¹⁾ 25 mm ø	0-0,25	PVC	EPDM	1,2	024/50	040 921 U				
									024/UC	067 076 X ²⁾				
									110/50	056 619 H				
									230/50	054 564 Y				
									240/50	053 542 Z				
										FPM	1,2	024/50	068 352 R	
				024/UC	058 363 J ²⁾									
								110/50	056 618 G					
								230/50	066 280 C					
								240/50	040 595 W					

¹⁾ Solvent joint to DIN 8063, ²⁾ UC coil 100 W inrush, 9 W hold (universal current), ³⁾ With electrical feedback Type 1060, ⁴⁾ Without cable plug

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