Direct-acting, G1/4, G3/8, G1/2



Advantages/Benefits

- **Normally closed**
- **Body materials: Brass, stainless steel**
- **Metal seal between coil and body**
- **Push-over coil**
- **Temperature range up to 180 °C**

Design/Function

Type 255 is a 2/2-way normally-closed plunger-type solenoid valve.

In this position, the armature spring, assisted by the pressure of the medium presses the valve seal against the seat. When energized, the armature and seal are drawn into the coil - the valve opens.

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

Applications

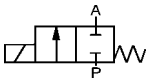
- Neutral gases and liquids
- High temperatures, such as hot water, steam, hot air, thermal oils
- Heating
- Sterilizing
- Impregnating

bürkert
Easy Fluid Control Systems

Technical Data

Circuit Function

A 2/2-way valve, normally closed



Body Materials

Brass body, seat 1.4305
Stainless steel body, seat 1.4410
Valve internals 1.4105, 1.4571

Specifications

Orifice	Kv-Value	QNn-Value	Pressure Range [2]						Weight
	Water	Air [1]	AC			DC			
DN	Liquids	Gases	Liquids	Gases for Seal Material		Liquids and Gases			
				NBR, EPDM FPM, Steel	PTFE	T_{amb} 55 °C 90 °C [4] FluidTemperature	55 °C	55 °C	
						to 90 °C	to 140 °C	to 180 °C	
[mm]	[m³/h]	[l/min]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[kg]
1	0,03	33	-	-	0-100	0-100 [3]	-	-	0,6
2	0,12	130	0- 35	0- 60	0- 40	0 - 20	0 - 14	0 - 10	0,6
3	0,25	270	0- 16	0- 50	0- 25	0 - 10	0 - 6	0 - 4	0,6
4	0,50	540	0- 10	0- 30	0- 12	0 - 4	0 - 2	0 - 0,3	0,6
5	0,65	700	0- 6	0- 16	0- 7	0 - 2	0 - 0,5	-	0,6
6	0,80	860	0- 4	0- 10	0- 5	0- 1	-	-	0,6

[1] Measured with 6 bar upstream pressure and a pressure drop of 1 bar across the valve at +20 °C, [2] also suitable for vacuum, [3] PTFE seal material only, [4] pressure range of 180 °C (255-20S) and 250 °C (255-25S) for max. ambient and fluid temperature (see max. ambient temperature in ordering chart).

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

Operating Data (Valve)

Seal Materials/Fluids Handled/Temp.- Range

NBR Neutral fluids, e.g. compressed air, town gas, water, hydraulic oil, oils and fats without additives -10 to +90 °C

EPDM Oil- and fat-free fluids, e.g. hot water, alkaline washing and bleaching lyes -40 to +130 °C

FPM Hot air, oxygen, per-solutions, hot oils, oils with additives -10 to +130 °C [1]

PTFE Water, steam, alcohol, oils, petrol, hydraulic substances, organic solvents -40 to +180 °C

Steel dto. -40 to +180 °C

[1] Temperatures up to 250 °C on request.
For more detailed information, please refer to resistance chart (Leaflet-No. 1896 009).

Max. viscosity approx. 21 mm²/s

Response times opening AC 10-20 ms, DC 20-80 ms
closing AC 20-30 ms, DC 20-30 ms

Times measured at an operating pressure of 6 bar with water. They depend upon pressure and viscosity of the handled fluid.

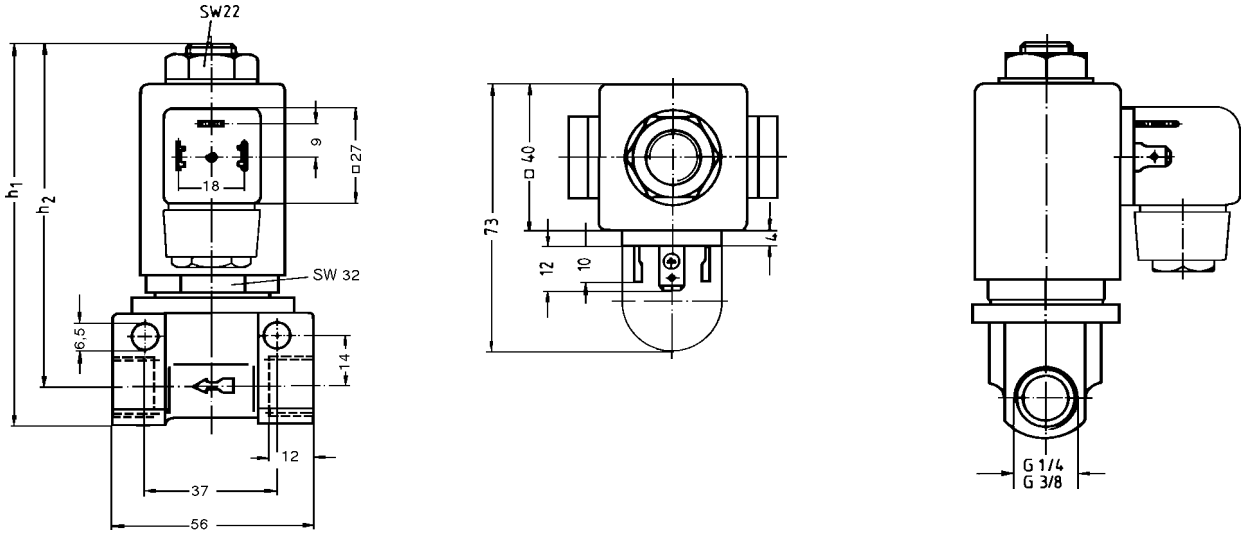
Operating Data (Actuator)

Operating voltage	24, 110, 230, 240 V/50 Hz, 24 V/=
Voltage tolerance	±10 %
Power consumption	AC 35 to 40 VA (inrush) DC ca. 12 W (hold)
Duty cycle	100 % continuously rated
Cycling rate	approx. 600 c.p.m.
Rating	with cable plug and cable IP 65

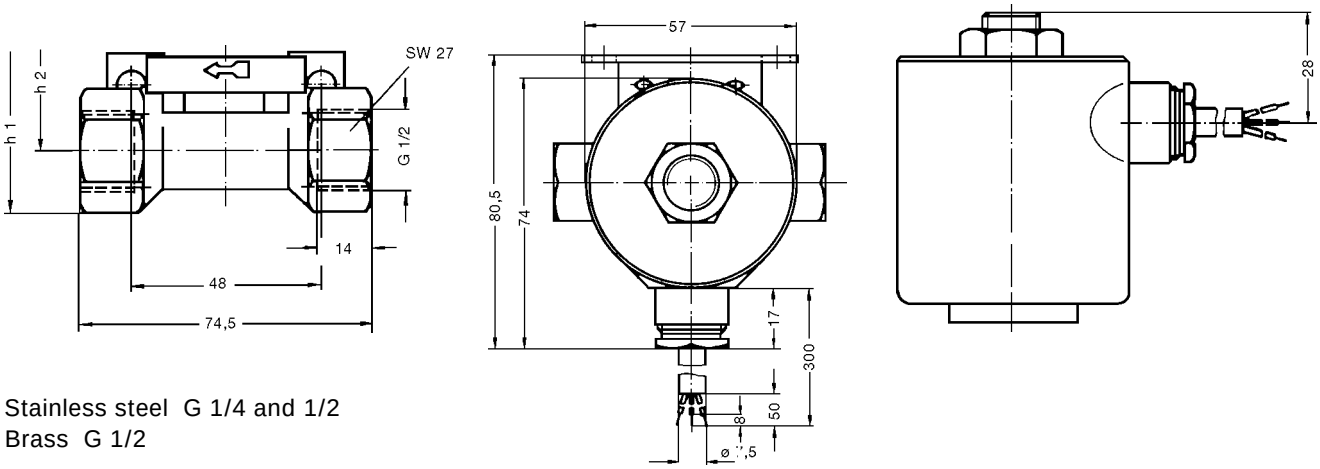
Installation / Accessories

Installation	as required, but preferably with solenoid system upright
Electrical connection	• cable plug (supplied as standard) for 7 mm ø cable • crimped silicone cable • crimped single strands

Dimensions in mm



Brass G 1/4 and 3/8



Stainless steel G 1/4 and 1/2
Brass G 1/2

Body	Connection	h1	h2
Brass	G 1/4	105	94
Brass	G 3/8	105	94
Stainless	G 1/4	105	93
Brass, stainless	G 1/2	108,5	93
Stainless[1)]	G 1/4	116	103,5

[1)] Only valid for Order-No. 017 968 Y[5)]

Ordering Chart (Other Versions on Request)

Circuit Function	Orifice DN [mm]	Flow Rate Water Kv-Value [m³/h]	Flow Rate Air [1] QNn [l/min]	Port Connection [ISO 228]	Pressure Range [2] ⚠ [bar]	Body Material	Seal Material	Max. Ambient. temp. [°C]	Voltage/ Frequency [V/Hz]	Order-No.
A	01,0	0,03	33	G 1/4	0-100	Brass	PTFE	55	024/=	058 360 T
									110/50	019 544 Z
						Stainless	PTFE	55	024/50	078 420 C
	02,0	0,12	130	G 1/4	0-60	Brass	FPM	55	024/50	020 033 R
					0-20	Brass	FPM	55	024/=	089 888 S
					0-60	Brass	FPM	55	110/50	020 101 T
									230/50	077 680 G
									240/50	069 193 U
	03,0	0,25	270	G 1/4	0-10	Brass	PTFE	55	024/=	052 872 T
					0-25	Brass	PTFE	55	110/50	058 888 A
									230/50	046 865 W
									240/50	086 456 M
				G 1/2	0-25	Stainless	PTFE	55	024/50	059 254 N
				G 1/4	0-10	Stainless	PTFE	55	024/=	021 554 M
	04,0	0,50	540	G 3/8	0- 4	Brass	EPDM	55	024/=	050 018 G
				G 1/2	0- 4	Brass	PTFE	55	024/=	089 404 V
					0-12	Brass	PTFE	55	110/50	089 403 U
									240/50	089 405 W
				G 1/4	0-12	Brass	PTFE	55	024/50	065 454 V
					0- 4	Brass	PTFE	55	024/=	058 796 D
					0-12	Brass	PTFE	55	110/50	023 897 G
					0-12				230/50	053 188 X
									240/50	066 396 U
				G 3/8	0-12	Brass	PTFE	55	024/50	059 100 R
					0- 4	Brass	PTFE	55	024/=	065 438 V
					0-12	Brass	PTFE	55	110/50	046 886 L
									230/50	051 143 X
								90	230/50	049 546 H
								55	240/50	052 783 S
				G 1/4	0-12	Brass	PTFE	55	024/50	079 104 D
									230/50	053 889 W
				G 1/2	0- 4	Stainless	PTFE	55	024/=	065 684 U
						Stainless	PTFE	180	024/=	020 734 U [3]
				G 1/4	0- 4	Stainless	PTFE	55	024/=	021 251 V
						Stainless	PTFE	180	024/=	017 968 Y [5]
						Stainless	STEEL	250	024/=	045 776 B [4]
	05,0	0,65	700	G 3/8	0-16	Brass	NBR	55	240/50	085 271 S
				G 1/4	0- 7	Brass	PTFE	55	024/50	049 194 Z
					0- 2	Brass	PTFE	55	024/=	020 164 Z
					0- 7	Brass	PTFE	55	110/50	049 830 A
									230/50	050 879 L
				G 3/8	0- 7	Brass	PTFE	55	024/50	057 644 B
					0- 2	Brass	PTFE	55	024/=	020 664 E
					0- 7	Brass	PTFE	55	110/50	023 581 B
									230/50	050 880 A
									240/50	024 410 L
				G 1/4	0-16	Brass	FPM	55	230/50	052 424 J

[1] Measured with 6 bar upstream pressure and a pressure drop of 1 bar across the valve at +20 °C, [2] also suitable for vacuum, [3] Electrical connection: Crimped silicone cable (3 x 1mm²), [4] Electrical connection: 3 crimped HT-single strands, [5] Electrical connection: terminals.

⚠ Limited pressure range for liquid fluids (see chart on page 2)

Ordering Chart (Other Versions on Request)

Circuit Function	Orifice DN [mm]	Flow Rate Water Kv-Value [m³/h]	Air [1] QNn [l/min]	Port Connection [ISO 228]	Pressure Range [2] ⚠ [bar]	Body Material	Seal Material	Max. Ambient. temp. [°C]	Voltage/ Frequency [V/Hz]	Order-No.
A	05,0	0,65	700	G 3/8	0-16	Brass	FPM	55	024/50	022 551 K
				G 1/2	0-16	Stainless	STEEL	55	230/50	062 838 T
				G 1/4	0- 2	Stainless	STEEL	250	024/=	022 483 G [4]
	06,0	0,80	860	G 3/8	0-10	Brass	EPDM	55	024/50	050 257 L
									230/50	048 509 L
				G 1/2	0- 1	Stainless	EPDM	55	024/=	048 371 Q
				G 1/4	0-10	Stainless	EPDM	55	230/50	050 276 P
					0- 5	Brass	PTFE	55	230/50	052 754 C
				G 3/8	0- 5	Brass	PTFE	55	024/50	050 389 R
					0- 1	Brass	PTFE	55	024/=	053 764 F
					0- 5	Brass	PTFE	55	110/50	066 222 V
									230/50	051 324 U
									240/50	046 376 B
				G 1/2	0- 5	Stainless	PTFE	55	230/50	054 811 Q
				G 1/4	0- 5	Stainless	PTFE	55	230/50	021 708 G
				G 3/8	0-10	Brass	STEEL	55	024/50	048 649 X
									230/50	058 628 L
									240/50	046 885 K
				G 1/4	0- 1	Stainless	STEEL	250	024/=	019 863 Z [4]

[1] Measured with 6 bar upstream pressure and a pressure drop of 1 bar across the valve at +20 °C, [2] also suitable for vacuum, [3] Electrical connection: Crimped silicone cable (3 x 1mm²), [4] Electrical connection: 3 crimped HT-single strands, [5] Electrical connection: terminals.

⚠ Limited pressure range for liquid fluids (see chart on page 2)