

G 1/4, G 3/8, G 1/2



Advantages/Benefits

- ▶ Normally closed or open
- ▶ Body material: brass
- ▶ High flow rate
- ▶ Compact design

Design/Function

Type 280 is a normally closed or normally open servo-assisted solenoid valve (circuit functions A and B).

For circuit function A, the valve is normally closed by spring action assisted by the fluid pressure. When de-energized, a pressure is built up above the servo diaphragm pressing it down to close the valve. When energized, the space above the servo diaphragm is exhausted via the pilot valve, the diaphragm is lifted by the fluid pressure to open the valve.

Circuit function B, normally open, provides the opposite function. It is important to note that the media is exhausted to atmosphere via the pilot operator when the valve is de-energised.

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

Applications

- Neutral gases and liquids
- Circuit function B for air or gases (consult for use with liquids)
- Sanitary applications
- Fire protection installations
- Irrigation systems
- Laundries
- Varnishing technology
- Machine tools (e.g. cooling water)

burkert
Easy Fluid Control Systems

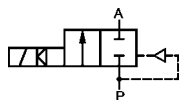
2/2-Way Solenoid Valve, Servo-assisted with Servo Diaphragm

Type 280

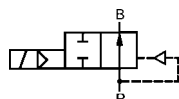
Technical Data

Circuit Function

A 2/2-way valve, normally closed,
with 2-way pilot control



B 2/2-way valve, normally open,
with 2-way pilot control



Body Materials

Body of brass,
Valve internals 1.4104, 1.4571

Specifications

Orifice DN	Kv-Value Water	Q _{Nn} -Value Air	Pressure Range for Circuit Function				Weight
			A AC [bar]	DC [bar]	B AC [bar]	DC [bar]	
[mm]	[m³/h]	[l/min]					kg]
8	0,8	1000	0,2-16	0,2-6	-	0,2-16	0,38
13	4,0	4300	0,2-16	-	0,2-16	0,2-16	0,40

All pressures quoted are gauge pressures with respect to the prevailing atmospheric pressure.
A pressure differential of 0.5 bar is required for valve to open fully.

Operating Data (Valve)

Seal Materials/Fluids Handled/Temp.- Range

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

EPDM Oils and fat-free fluids, e.g. hot water
alkaline washing and bleaching lyes
-40 to +90 °C

FPM Hot air, oxygen, per-solutions, hot oils
oils with additives -10 to +90 °C

For more detailed information please refer to resistance
chart (Leaflet-No. 1896009).

Max. ambient temperature +55 °C

Max. viscosity approx. 21 mm²/s

Response times opening approx. 50 ms
closing approx. 400 ms

The response times have been measured with water at a
working pressure of max. 6 bar. They depend upon
pressure and viscosity of the handled fluid.

Port connection G 1/4, G 3/8, G 1/2

Operating Data (Actuator)

Operating voltages 230, 42, 24 V/ 50 Hz, 24 V/=

Voltage tolerance ±10 %

Power consumption AC 21 VA (inrush)
12 VA/ 8 W (hold)
DC 8 W

Duty cycle 100% continuously rated

Cycling rate up to 100 c.p.m

Rating with cable plug or
cable IP 65

Installation / Accessories

Installation as required, but preferably
with solenoid system
upright

Electrical connection

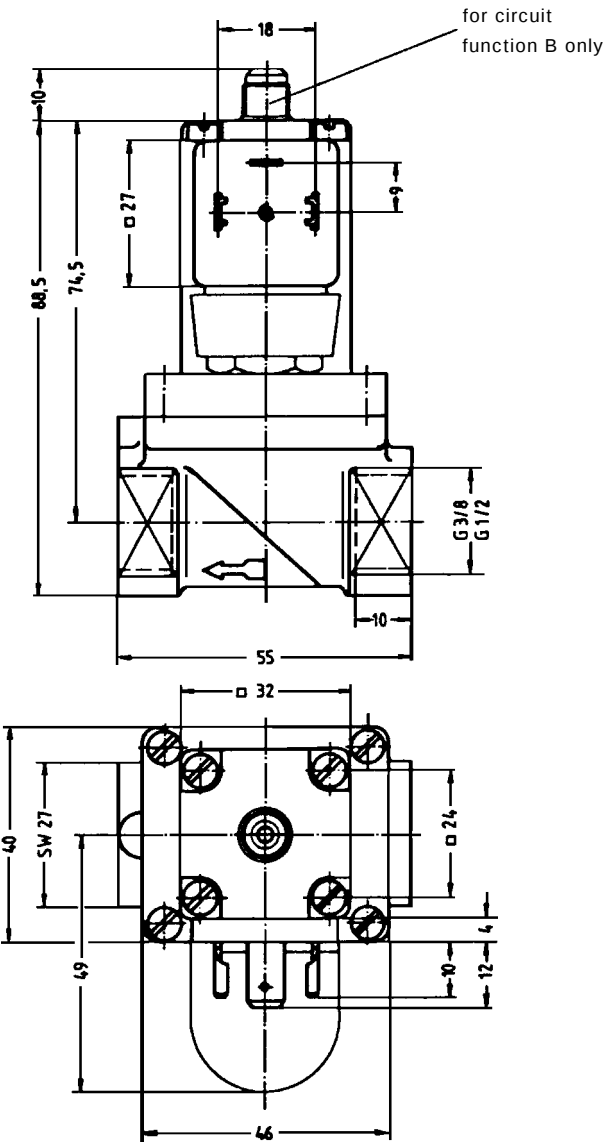
- cable plug for 7 mm ø
cable (supplied as
standard)
- moulded-in cable on
request
- cable plug for 9 mm ø
cable on request

2/2-Way Solenoid Valve, Servo-assisted with Servo Diaphragm

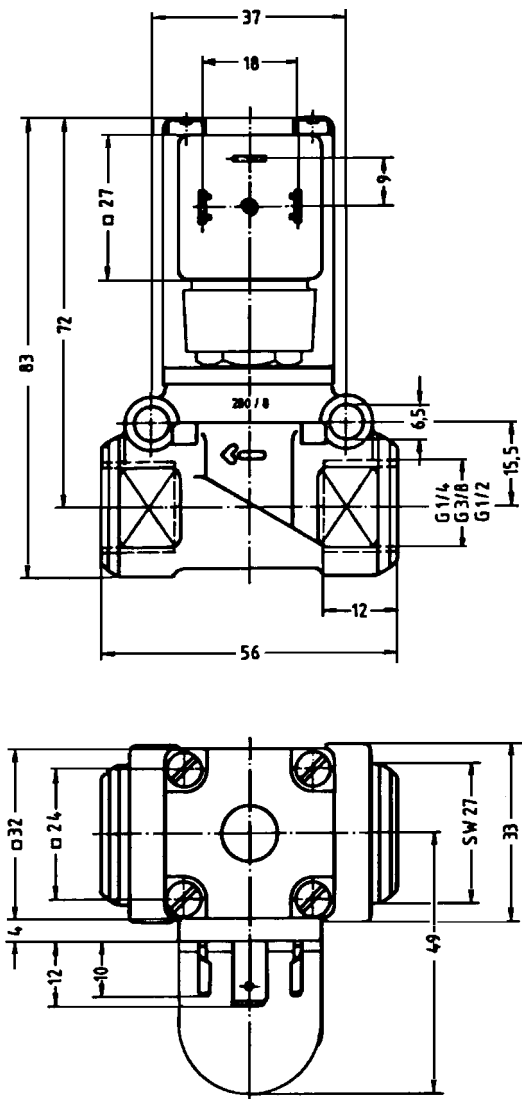
Type 280

Dimensions in mm

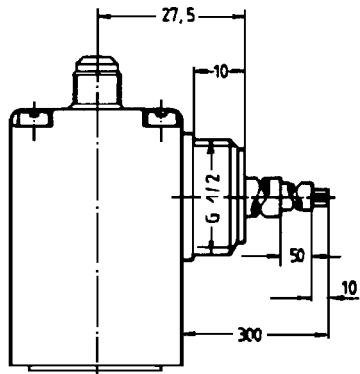
Body DN 13



Body DN 8



Electrical Connection C, D:



2/2-Way Solenoid Valve, Servo-assisted
with Servo Diaphragm

Type 280

Ordering Chart (Other Versions on Request)

Circuit Function	Orifice	Flow Rate		Port Connection	Pressure Range	Body Material	Seal Material	Weight	Voltage/ Frequency	Order-No.
	DN [mm]	Water Kv-Value [m³/h]	Air QNn [l/min]							
A	08,0	1,0	1000	G 1/2	0,2-16	Brass	NBR	0,38	024/50	025 867 K
					0,2- 6	Brass	NBR	0,38	024/=	018 981 P
					0,2-16	Brass	NBR	0,38	110/50	066 402 T
									230/50	024 519 M
									240/50	066 433 R
				G 1/4	0,2-16	Brass	NBR	0,38	024/50	022 201 V
					0,2- 6	Brass	NBR	0,38	024/=	019 184 R
					0,2-16	Brass	NBR	0,38	110/50	056 747 H
									230/50	020 780 F
									240/50	025 077 N
				G 3/8	0,2-16	Brass	NBR	0,38	024/50	018 792 Z
					0,2- 6	Brass	NBR	0,38	024/=	069 787 F
					0,2-16	Brass	NBR	0,38	110/50	022 238 Z
									230/50	069 809 N
									240/50	069 786 E
	13,0	4,0	4300	G 1/2	0,2-16	Brass	EPDM	0,40	230/50	059 675 L
									012/50	064 840 B
									024/50	063 940 E
									042/50	069 416 T
									110/50	066 357 C
									230/50	064 107 Z
				G 3/8					240/50	064 454 U
									380/50	059 681 B
					0,2-16	Brass	NBR	0,40	024/50	069 916 Y
									230/50	064 208 N
				G 1/2	0,2-16	Brass	FPM	0,40	110/50	055 281 W
									230/50	065 963 T
B	08,0	1,0	1000	G 3/8	0,2-16	Brass	NBR	0,38	024/=	088 406 W
	13,0	4,0	4300	G 1/2	0,2-16	Brass	NBR	0,40	024/=	019 994 M
									230/50	064 932 K
									380/50	019 853 X
							FPM	0,40	230/50	066 735 X

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