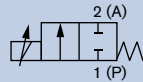


2/2-way Proportional Valve

2871

G 1/8", DN0.3-2.0 mm

- Excellent range
- Very good repeatability
- Compact Design



The direct-acting solenoid control valve, Type 2871 (20 mm installation width), is used as the regulating unit in control loops. Due to an elastomeric seat seal the valve closes tight, up to the DN specific nominal pressure.

The operation lever of the valve is suspended frictionless, which leads to an extraordinary adjustment characteristic. Valve control takes place through a PWM signal (see control electronics, Type 8605).

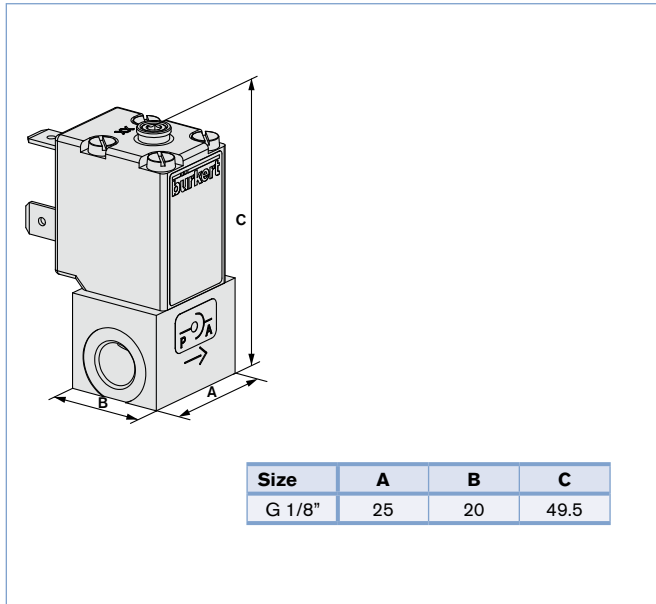
Technical data

Body material	Brass, stainless steel
Medium	Neutral gases, liquids on request
Span	1 : 200 Responsivity 0.25% of full scale
Response sensitivity	0.25% of full scale
PWM frequency	1500 Hz
Max. coil current	220 mA (Maximum value, value depends on the operating pressure)
Medium temperature	-10 °C to 90 °C
Duty cycle	100% continuously rated
Ambient temperature	Max. 55 °C
Seal material	FKM
Operating voltages	24V DC
Power consumption	2 W (to DN0.6), 5 W (from DN0.8)
Electrical connection	Cable Plug Type 2507 acc. to Form B Industrial standard (not included)
Typical control data¹⁾ at PWM control	
Hysteresis	
Repeatability	< 5%
Sensitivity	< 0.25% F.S. ²⁾
Span	< 0.25% F.S. – < 0.1% F.S. with DN < 0.8 mm ²⁾
Response time (10-90%)	1:200 (DN0.8-2), 1:500 (DN0.05-0.6) < 15 ms
Protection class	IP65 (with cable plug)

¹⁾ Characteristic data of control behaviour depends on process conditions

²⁾ by flow measurement

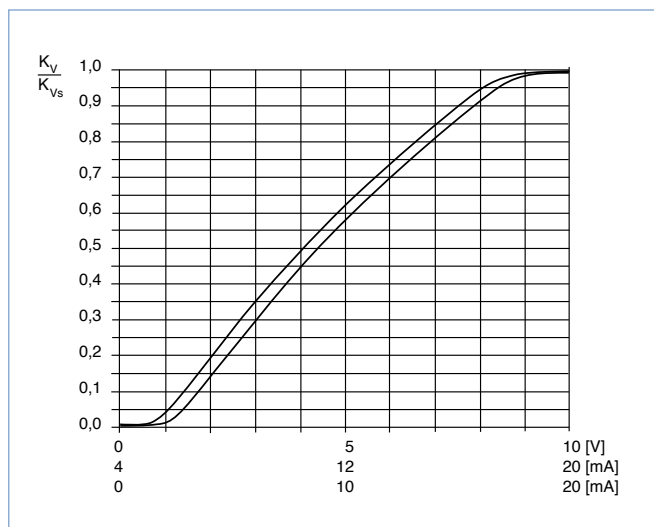
Dimensions [mm] (see datasheet for further Details)



Options/Accessories

- Seal material EPDM
- 12V coil
- Coil with 30 cm flying leads
- Oxygen versions
- Parts oil-, fat- and silicon free
- Flange

Characteristics of a proportional valve



Advice for valve sizing

In continuous flow applications, the choice of an appropriate valve size is much more important than with on/off valves. The optimum size should be selected such that the resulting flow in the system is not unnecessarily reduced by the valve. However, a sufficient part of the pressure drop should be taken across the valve even when it is fully opened.

Recommended value: $\Delta p_{\text{valve}} > 25\%$ of total pressure drop within the system

Otherwise, the ideal, linear valve curve characteristic is changed. If the differential pressure (difference between inlet and outlet pressure) exceeds half the value of the nominal pressure, the characteristics may change.

For that reason take advantage of Bürkert competent engineering services during the planning phase!

Ordering Chart

Port connection [inch]	Orifice [mm]	Kv value [m³/h]	Nominal pressure [bar(ü)]	Max. differential pressure [bar]	Max. coil current [mA]	Item no.	
						Brass	Stainless steel
G 1/8	0.3	0.002	10	10	90	254 451	254 452
G 1/8	0.4	0.004	8	8	90	254 453	254 454
G 1/8	0.6	0.01	6	6	90	254 455	254 457
G 1/8	0.8	0.018	12	6	220	235 994	235 995
G 1/8	1.0	0.027	10	5	220	236 000	236 001
G 1/8	1.2	0.038	8	4	220	236 261	236 262
G 1/8	1.6	0.055	6	3	220	236 267	236 268
G 1/8	2.0	0.09	3	1.5	220	236 273	236 274

Accessories

Description	Item no.
Type 2871	
Control electronics Type 8605, DIN-Rail version	178 362
Type 2507	
Cable plug	423 845