2/2-way Proportional Valve

G 3/8" and G 1/2", DN2.0-8.0 mm

- Excellent range
- Very good repeatability
- Compact Design



The direct-acting solenoid control valve, Type 2875, (49 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

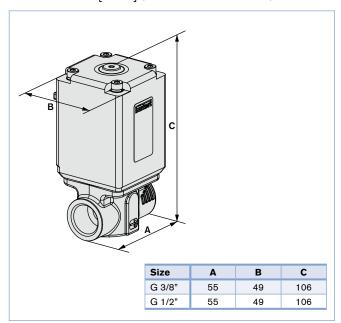
Body material Brass, stainless steel Medium Neutral gases, liquids on request Span 1:200 Response sensitivity 0.25% of full scale Rotation time < 25 ms PWM frequency 900 Hz Medium temperature -10 °C to 90 °C Ambient temperature Max. 55 °C Seal material FKM Operating voltages 24 V DC Power consumption 16 W Max. coil current*) 420 mA Duty cycle 100 % continuously rated Electrical connection Cable Plug Type 2508 acc. to DIN EN 175301-803 Form A (previously DIN 43650) (not included) Typical control data ²) at PWM control Hysteresis Repeatability Posterion class Repeatability Protection class Reference 1:200 Responses 1:200 Respons						
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Ambient temperature Max. 55 °C Seal material FKM Operating voltages 24 V DC Power consumption 16 W Max. coil current¹) 420 mA Duty cycle 100 % continuously rated Electrical connection Cable Plug Type 2508 acc. to DIN EN 175301-803 Form A (previously DIN 43650) (not included) Typical control data ²) at PWM control Hysteresis Repeatability < 5 % Repeatability < 0.5 % F.S. ³)	PWM frequency	900 Hz				
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Power consumption 16 W	Seal material	FKM				
Max. coil current¹¹ 420 mA Duty cycle 100 % continuously rated Electrical connection Cable Plug Type 2508 acc. to DIN EN 175301-803 Form A (previously DIN 43650) (not included) Typical control data ²¹ at PWM control Hysteresis Repeatability < 5 % Repeatability < 0.5 % F.S. ³¹	Operating voltages	24 V DC				
Duty cycle 100 % continuously rated Electrical connection Cable Plug Type 2508 acc. to DIN EN 175301-803 Form A (previously DIN 43650) (not included) Typical control data 2) at PWM control Hysteresis Repeatability < 5 % Repeatability < 0.5 % F.S. 3)	Power consumption	16 W				
Electrical connection Cable Plug Type 2508 acc. to DIN EN 175301-803 Form A (previously DIN 43650) (not included) Typical control data 2 at PWM control Hysteresis Repeatability < 5 % Repeatability Cable Plug Type 2508 acc. to DIN EN 175301-803 Form A (previously DIN 43650) (not included) Typical control data 2 at PWM control 4 % 5 % 5 % 5 % 6 % 7 % 7 % 7 % 7 % 7 % 7 % 7 % 7 % 7 % 7	Max. coil current ¹⁾	420 mA				
Typical control data ²⁾ at PWM control Hysteresis Repeatability 175301-803 Form A (previously DIN 43650) (not included) Typical control data ²⁾ at PWM control 4 S % Repeatability 4 S % Repeatability 4 S % Repeatability	Duty cycle	100 % continuously rated				
At PWM control Hysteresis <5 % Repeatability < 0.5 % F.S. 3)	Electrical connection	175301-803 Form A (previously DIN 43650)				
Protection class IP65 (with Cable Plug)	at PWM control Hysteresis	12 /2				
riotection class in 65 (with Cable Flug)	Protection class	IP65 (with Cable Plug)				

- 1) Maximum value, value depends on operating pressure
- ²⁾ Characteristic data of control behaviour depends on process conditions

Options/Accessories

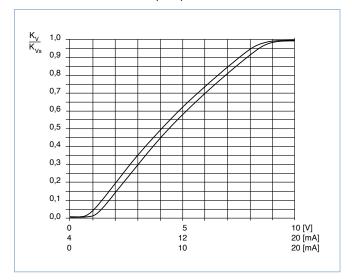
- Seal material EPDM
- 12 V coil
- Oxygen versions
- Parts oil-, fat- and silicon free
- Flange

Dimensions [mm] (see datasheet for further Details)



³⁾ by flow measurement

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: Δp_{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	Orifice	Kv value	Nominal	Max.	Max. coil	Item no.	
[inch]	[mm]	[m³/h]	pressure [bar(ü)]	differential pressure [bar]	current [mA]	Brass	Stainless steel
Type 2875							
G 3/8	2	0.12	25	13	750	236 897	236 899
G 3/8	3	0.25	10	5	750	236 901	236 903
G 3/8	4	0.45	8	4	750	236 905	236 910
G 1/2	6	0.8	4	2	750	236 915	236 919
G 1/2	8	1-Jan	2	1	750	236 922	236 924

Accessories

Description	Item no.
Control electronics Type 8605, DIN-Rail version	
Control electronics Type 8605, cable plug with PG-connection	
Control electronics Type 8605, cable plug with M12-connection	178 355
Cable 5 m for Type 8605, M12-connection	918 038
Cable plug Type 2508	008 376
Cable plug Type 2508 with 3 m cable	783 573