

ASCO™ Proportional Solenoid Valves

2 Way, NC, Direct Operated, 1/8" or 1/4" Thread

2/2
Series
209

Features and Benefits

- The direct acting proportional flow control valves are designed for a wide range of applications to control very precise flow of liquid and gaseous medias
- Internal constructions are designed to operate nearly friction free. This allows a very precise proportional flow control
- All valve coils are UL recognized
- Due to the low internal friction, we also achieve a good repeatability and sensitivity
- Internal design allows quiet operation
- The proportional solenoid valves satisfy all relevant CE and UKCA directives

General

Differential pressure See «SPECIFICATIONS»
Ambient temperature range -10°C to +55°C (14°F to 131°F)
Maximum viscosity 21 cSt (mm²/s)
Response time < 25 ms

Fluids (*)	Temperature range (TS)	Seal materials (*)
air, inert gases or neutral liquids	-10°C to +90°C (14°F to 194°F)	FPM (fluoroelastomer) EPDM (ethylene propylene diene monomer)

Materials in contact with fluid

(*) Ensure that compatibility of materials in contact with fluids is verified.

Body Brass or stainless steel
Core tube Brass or stainless steel
Core and plugnut Stainless steel
Springs Stainless steel
Seal FPM or EPDM
Disc FPM or EPDM

Electrical characteristics

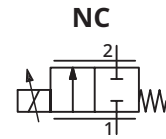
Coil insulation class H
Connector specification DIN EN 175301-803, form A (18 mm)
Electrical enclosure protection Moulded IP65 (EN 60529)
Standard voltages DC (=) : 12 V, 24 V (Other voltages on request)

Voltage (V) =	Control range (mA)	Power ratings	Operator ambient temperature range (TS) °C (°F)	Type ⁽¹⁾
		hot/cold = (W)		
12	200 - 880	10.6 / 8	0 to +55 (32 to 131)	01
24	100 - 440			

Voltage regulation ⁽²⁾ 0-24 V DC or 0-12 V DC
 12 or 24 V DC pulse width modulated (> 500 Hz) ⁽³⁾

Flow regulation characteristics ⁽⁴⁾ Hysteresis < 5%;
 Repeatability ⁽⁵⁾ < 1%;
 Sensitivity < 0.2 %

- ⁽¹⁾ Refer to the dimensional drawings on the following page.
⁽²⁾ For electronic proportional control unit, please contact us.
⁽³⁾ Higher frequencies will cause larger hysteresis but reduce the risk of oscillations. We recommend higher frequencies for applications with liquids.
⁽⁴⁾ Percentage of **max.** value within control range, PWM 500 Hz.
⁽⁵⁾ Repeatability measured under laboratory conditions. The flow values may drift over lifetime depending on conditions and duration of storage and usage.



UK
CA CE



Specifications

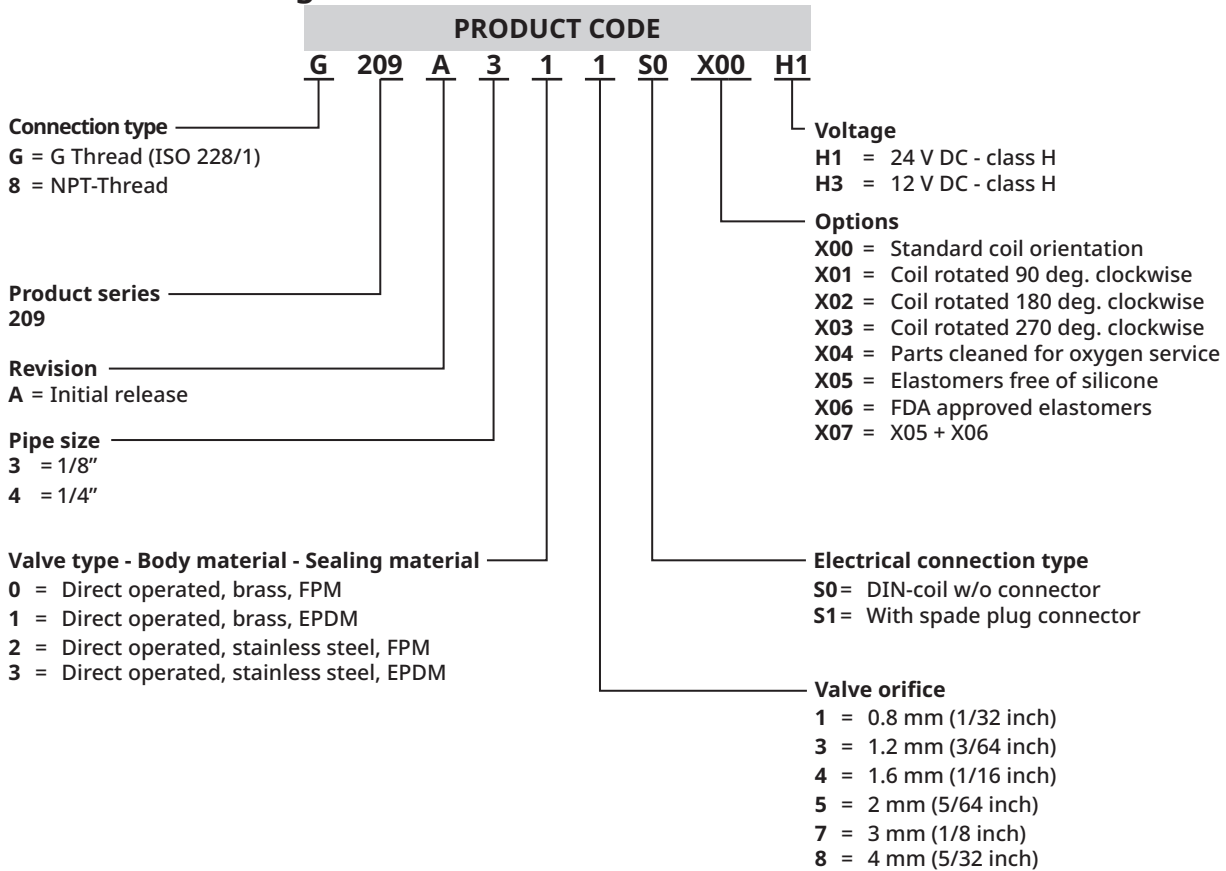
										PRODUCT CODE			
Pipe size	Orifice size	Flow coefficient		Operating pressure differential ⁽¹⁾		Dimensions / Type ⁽²⁾	Thread type	Seal and disc	Brass	Stainless steel	Voltage code		
				bar (psi)							Min.	Vacuum (*)	Air, inert gases or neutral liquids (*)
		Max. (PS)		1 → 2									
		mm (in)	Kv (m³/h)	Kv (l/min)	=						=		
NC - Normally closed, without manual operator													
1/8"	0.8 (1/32)	0.020	0.34	0	1 (14.5)	16 (232)	01	G	FPM	G209A301S0X00	G209A321S0X00	H3 H1	
								EPDM	G209A311S0X00	G209A331S0X00			
								NPT	FPM	8209A301S0X00	8209A321S0X00		
	EPDM	8209A311S0X00	8209A331S0X00										
	G	FPM	G209A303S0X00				G209A323S0X00						
	NPT	FPM	8209A303S0X00				8209A323S0X00						
	EPDM	8209A313S0X00	8209A333S0X00										
	G	FPM	G209A313S0X00			G209A333S0X00							
	NPT	FPM	8209A304S0X00			8209A324S0X00							
	EPDM	8209A314S0X00	8209A334S0X00										
	G	FPM	G209A304S0X00			8209A324S0X00							
	NPT	FPM	8209A304S0X00			8209A324S0X00							
EPDM	8209A314S0X00	8209A334S0X00											
G	FPM	G209A305S0X00	G209A325S0X00										
NPT	FPM	8209A305S0X00	8209A325S0X00										
EPDM	8209A315S0X00	G209A335S0X00											
G	FPM	G209A315S0X00	G209A335S0X00										
NPT	FPM	8209A305S0X00	8209A325S0X00										
EPDM	8209A315S0X00	8209A335S0X00											
G	FPM	G209A405S0X00	G209A425S0X00										
NPT	FPM	8209A405S0X00	8209A425S0X00										
EPDM	8209A415S0X00	G209A435S0X00											
G	FPM	G209A415S0X00	G209A435S0X00										
NPT	FPM	8209A407S0X00	8209A427S0X00										
EPDM	8209A417S0X00	G209A437S0X00											
G	FPM	G209A407S0X00	8209A427S0X00										
NPT	FPM	8209A407S0X00	8209A427S0X00										
EPDM	8209A417S0X00	8209A437S0X00											
G	FPM	G209A408S0X00	G209A428S0X00										
NPT	FPM	8209A408S0X00	8209A428S0X00										
EPDM	8209A418S0X00	G209A438S0X00											
G	FPM	G209A418S0X00	G209A438S0X00										
NPT	FPM	8209A408S0X00	8209A428S0X00										
EPDM	8209A418S0X00	8209A438S0X00											

⁽¹⁾ Limit value for tightness. If the inlet pressure is more than twice the outlet pressure discontinuities in the flow curve such as steps or oscillations can occur.

⁽²⁾ For dimensions, see drawing(s) for each construction type on the following page(s).

(*) Ensure that compatibility of materials in contact with fluids is verified.

Product selection guide



Options

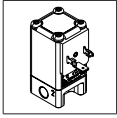
- Digital control unit for all connector coils [catalogue number: **X90850164500100-0200**]
- Electronic proportional control unit for all connector coils [catalogue number: **E908A001**]
- Control device (Control^D) [catalogue numbers: **60300117, 60300118**]
- Special valve adjustments available on request

Installation

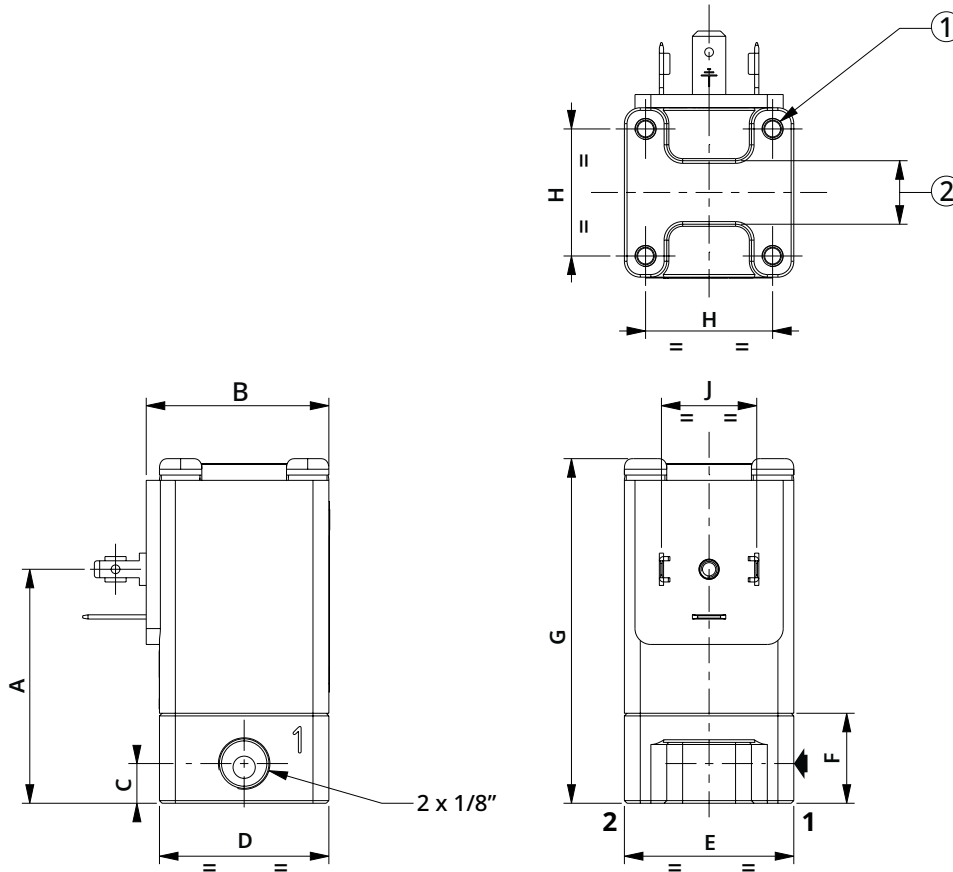
- The proportional solenoid valves can be mounted in any position without affecting operation with gases. For use with liquids non-upright position is recommended
- For use with liquids, it is recommended to flush the valve to evacuate any air
- Thread connection: Pipe connections G type thread according to ISO 228/1 and NPT type according to ANSI B1.20.3
- Installation/maintenance instructions are included with each valve

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Dimensions mm (inches), Weight kg (lbs) 



TYPE 01
Electrical interface "S0"
1/8" thread

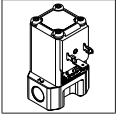


- ① 4 x M4 holes, depth 8 mm (0.315 inch)
- ② Wrench size 13 (1/2 inch)

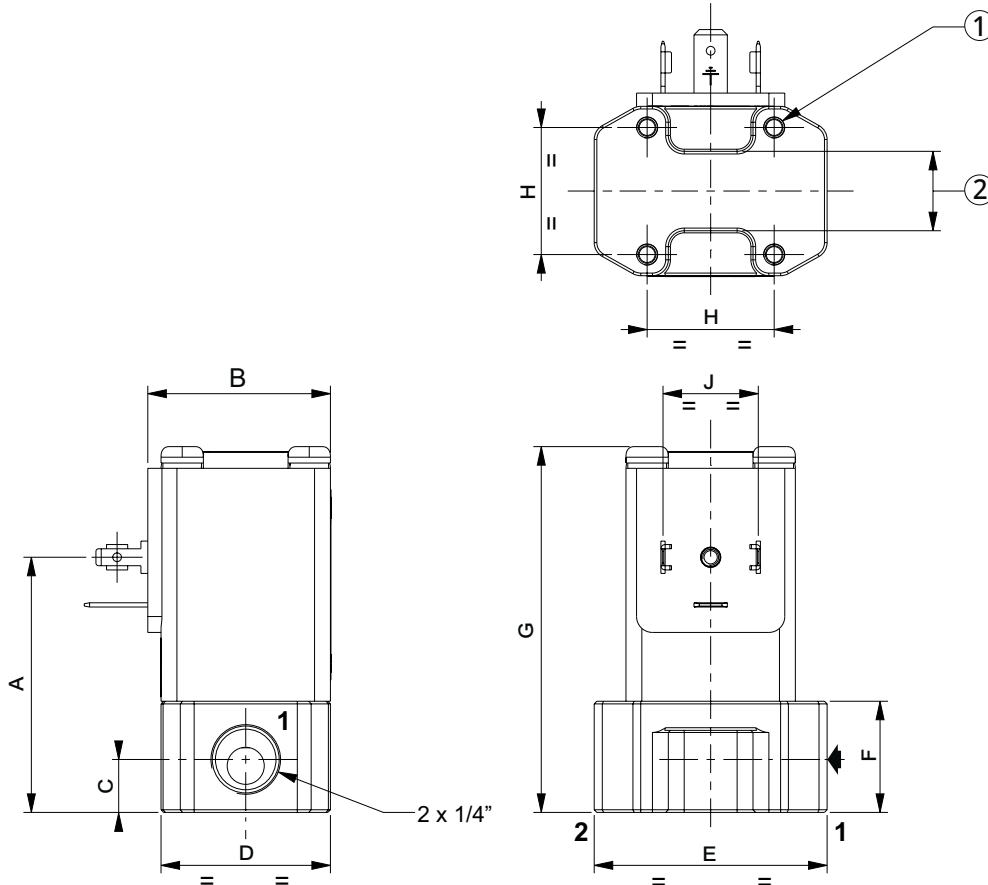
		A	B	C	D	E	F	G	H	J	Weight			
											Brass		St steel	
G209A3xxS0X00Hx	mm	44.2	34.5	7.5	32	32	17	65	24	18	0.28	kg	0.28	kg
8209A3xxS0X00Hx	(in)	1.74	1.36	0.295	1.26	1.26	0.67	2.56	0.945	0.71	0.62	(lbs)	0.62	(Lbs)

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Dimensions mm (inches), Weight kg (lbs)



TYPE 02
Electrical interface "S0"
1/4" thread



- ① 4 x M4 holes, depth 8 mm (0.315 inch)
- ② Wrench size 16 (5/8 inch)

		A	B	C	D	E	F	G	H	J	Weight			
											Brass		St. steel	
G209A4xxS0X00Hx	mm	48.2	34.5	10	32	44	21	69	24	18	0.34	kg	0.34	kg
8209A4xxS0X00Hx	(in)	1.19	1.36	0.394	1.26	1.73	0.827	2.72	0.945	0.71	0.75	(lbs)	0.75	(lbs)

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