

Series AP directly operated proportional valves

2/2-way proportional valves, NC
 Sizes: 16 - 22 mm

2

CONTROL



- » Available in two sizes: 16 and 22 mm
- » PWM or current operation
- » Open loop flow control
- » Also suitable for use with vacuum
- » Size 16mm also available with body in PVDF

Series AP directly operated 2/2-way proportional solenoid valves, NC, with nominal diameters range from 0.8 to 2.4 mm, can be used where an open loop flow control is required, with gas mixtures, to control free flows or blows, or emptying chambers using vacuum.

Series AP proportional valves have been manufactured to optimize and reduce friction and stick-slip effects. The output flow is proportional to the control signal. As they can work also in vacuum, a minimum working pressure is not required.

GENERAL DATA

Valve functions	2/2 NC	
Construction	proportional directly operated	
Materials	body = brass / PVDF (for size 16mm only) seals = NBR	
Ports	M5 - G1/8	
Mounting	in every position	
Working temperature	0 ÷ 60°C	
Maximum working pressure	see table	
Nominal flow (Qn - Kv)	see table	
Nominal diameter (ø)	see table	
Fluid	inert gas	
Hysteresis	16 mm size < 7%	22 mm size < 5%
Repeatability	16 mm size < 5%	22 mm size < 3%

While choosing the valve characteristics and in order to reach the highest performances, it is important to know that there must be a pressure difference of 90% at least between the inlet and the outlet. For example: inlet P 10 bar - outlet P max 1 bar up to free flow.

CODING EXAMPLE

AP - 7 2 1 1 - L R 2 - G 7 11

AP	SERIES	
7	BODY: 6 = Size 16 mm 7 = Size 22 mm	
2	NUMBER OF WAYS: 2 = 2-way	
1	VALVE FUNCTION: 1 = NC	
1	PORTS: 0 = M5 (for size 16 mm only) 1 = G1/8 (for size 22 mm only) L = barbed fittings (for body in PVDF only)	
L	NOMINAL DIAMETER: D = \varnothing 0.8 mm (for size 16 mm only) F = \varnothing 1 mm H = \varnothing 1.2 mm L = \varnothing 1.6 mm N = \varnothing 2 mm (for size 22 mm only) Q = \varnothing 2.4 mm (for size 22 mm only)	
R	SEALS MATERIAL: R = NBR	
2	BODY MATERIAL: 2 = brass 3 = PVDF (for size 16 mm only)	
G	ENCAPSULATING MATERIAL: G = PA (for size 16 mm only) U = PET (for size 22 mm only)	
7	SOLENOID DIMENSIONS: P = 16x26 DIN EN 175301-803-C (for size 16 mm only) 7 = 22x22 DIN 43650 B (for size 22 mm only)	
11	SOLENOID VOLTAGE: H = 12 V DC 3 W (for size 16 mm only) 7 = 24 V DC 3 W (for size 16 mm only) 11 = 24 V DC 6.5 W (for size 22 mm only) 12 = 12 V DC 6.5 W (for size 22 mm only)	

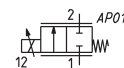
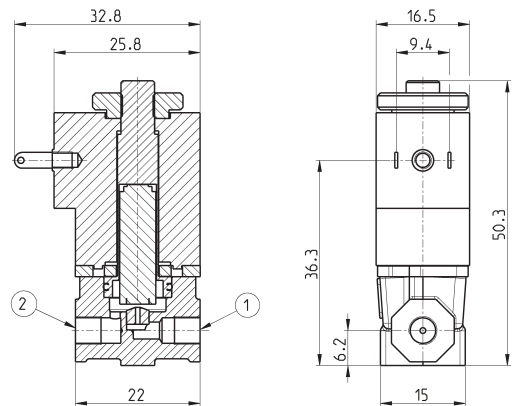
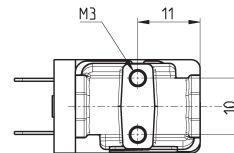
2

CONTROL

Series AP proportional valves - size 16mm

For connectors see section 2/1.20.

For the use with vacuum connect the line to connection 2.



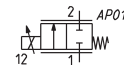
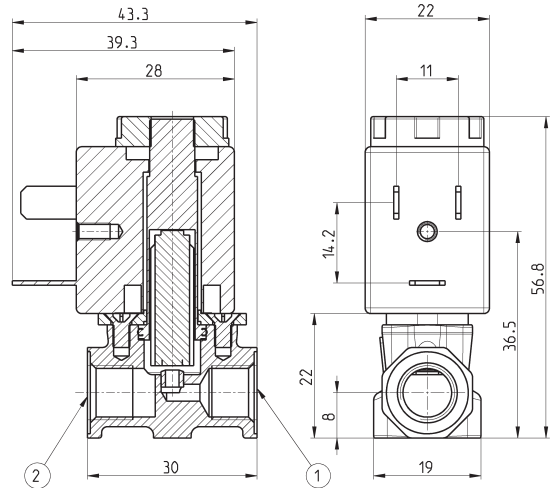
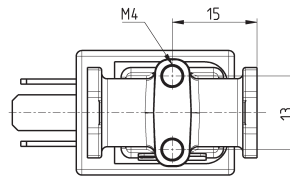
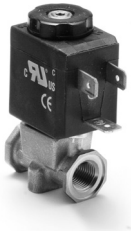
Mod.	Port 1	Port 2	Function	Orifice \varnothing (mm)	Kv (l/min)	P Max (bar)
AP-6210-DR2-GP*	M5	M5	2/2 H.3.	0.8	0.4	10
AP-6210-FR2-GP*	M5	M5	2/2 H.3.	1	0.5	8
AP-6210-HR2-GP*	M5	M5	2/2 H.3.	1.2	0.65	6
AP-6210-LR2-GP*	M5	M5	2/2 H.3.	1.6	1.2	4

* choose the desired voltage

Series AP proportional valves - size 22mm

For connectors see section 2/2.35.

For the use with vacuum connect the line to connection 2.



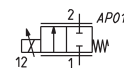
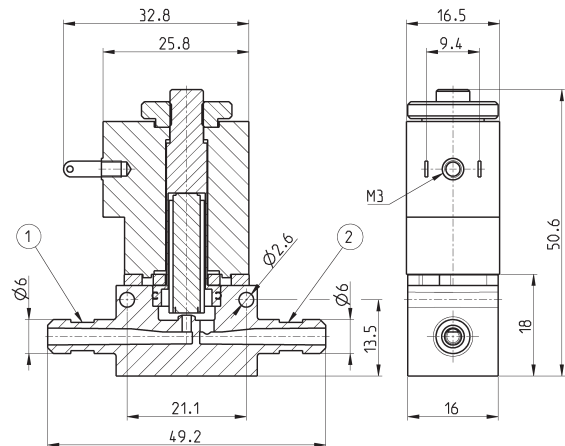
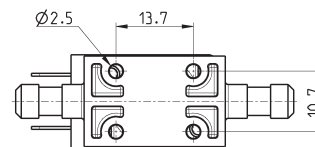
* choose the desired voltage

Mod.	Port 1	Port 2	Function	Orifice ϕ (mm)	Kv (l/min)	P Max (bar)
AP-7211-FR2-U7*	G1/8	G1/8	2/2 H.3.	1	0.5	10
AP-7211-HR2-U7*	G1/8	G1/8	2/2 H.3.	1.2	0.65	8
AP-7211-LR2-U7*	G1/8	G1/8	2/2 H.3.	1.6	1.0	6
AP-7211-NR2-U7*	G1/8	G1/8	2/2 H.3.	2	1.6	5
AP-7211-QR2-U7*	G1/8	G1/8	2/2 H.3.	2.4	2.0	4

Series AP proportional valves, size 16mm - body in PVDF
New

For connectors see section 2/1.20.

For the use with vacuum connect the line to connection 2.


 * choose the desired voltage
 ** pneumatic connection with tube and clamps

Mod.	Port 1	Port 2	Function	Orifice ϕ (mm)	Kv (l/min)	P Max (bar)
AP-621L-DR3-GP*	Ø6 **	Ø6 **	2/2 H.3.	0.8	0.4	10
AP-621L-FR3-GP*	Ø6 **	Ø6 **	2/2 H.3.	1	0.5	8
AP-621L-HR3-GP*	Ø6 **	Ø6 **	2/2 H.3.	1.2	0.65	6
AP-621L-LR3-GP*	Ø6 **	Ø6 **	2/2 H.3.	1.6	1.2	4