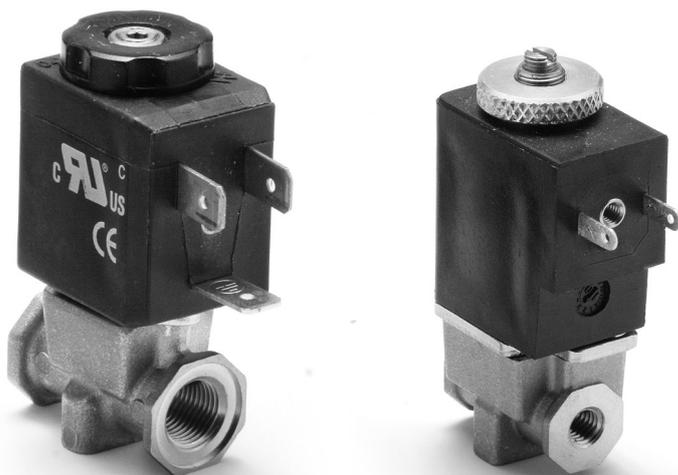


Directly operated proportional valves Series AP

2/2-way proportional valves, NC
Size 16 - 22 mm



- » Available in two sizes:
16 and 22 mm
- » PWM or current operation
- » Open loop flow control

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.

Thanks to the use of standard Camozzi solenoids suitable to for ED at 100%, also the Series AP valves can work according to ED 100%.

The proportional valves Series AP have been manufactured to optimize and reduce friction and stick-slip effects. The output flow is proportional to the PWM or current 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 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 < 5% | 22 mm size < 5% |
| Repeatability | 16 mm size < 2% | 22 mm size < 1% |
| Sensibility | 16 mm size < 2% | 22 mm size < 1% |

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 30% at least between the inlet and the outlet. For example: inlet P 10 bar - optimum outlet P from 7 to 0 bar.

CODING EXAMPLE

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

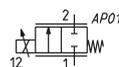
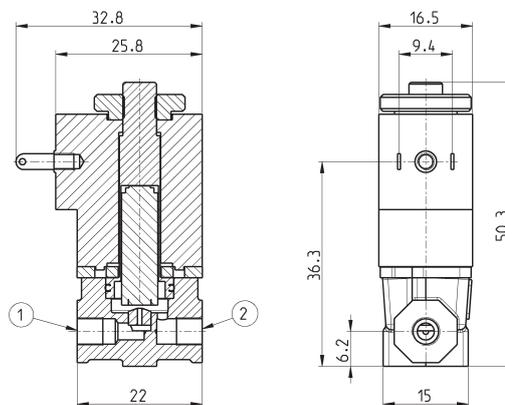
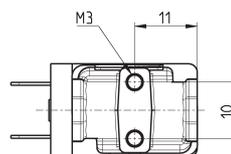
| | |
|-----------|---|
| AP | SERIES |
| 7 | BODY: 6 = Size 16 mm 7 = Size 22 mm |
| 2 | NUMBER OF WAYS: 2 = 2-way |
| 1 | VALVE FUNCTION: 1 = NC |
| 1 | PORTS: 0 = M5 (for size 16 mm only) 1 = G1/8 (for size 22 mm only) L = bar fittings (for technopolymer body only) |
| L | NOMINAL DIAMETER: D = \varnothing 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 = technopolymer (for size 16 mm only) |
| G | ENCAPSULATING MATERIAL: G = PA U = PET (for size 22 mm only) |
| 7 | SOLENOID DIMENSIONS: P = 16x26 DIN EN 175301-803-C 7 = 22x22 DIN 43650 B |
| 11 | SOLENOID VOLTAGE: 2 = 12 V DC 5 W (for size 22 mm only) 3 = 24 V DC 5 W (for size 22 mm only) 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

Proportional valves Series AP - Size 16 mm

For connectors see section 2/1.20.

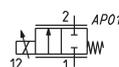
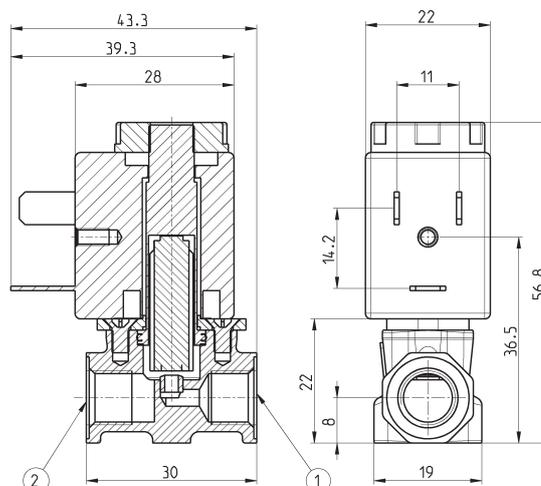
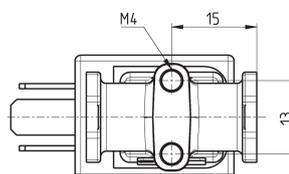
New


| Mod. | Port 1 | Port 2 | Function | Orifice ϕ (mm) | Q (l/min) | Kv (m ³ /h) | P Max (bar) |
|-----------------|--------|--------|----------|---------------------|-----------|------------------------|-------------|
| AP-6210-DR2-GP* | M5 | M5 | 2/2 NC | 0.8 | 26.4 | 0.4 | 10 |
| AP-6210-FR2-GP* | M5 | M5 | 2/2 NC | 1 | 33.0 | 0.5 | 8 |
| AP-6210-HR2-GP* | M5 | M5 | 2/2 NC | 1.2 | 42.9 | 0.65 | 6 |
| AP-6210-LR2-GP* | M5 | M5 | 2/2 NC | 1.6 | 79.2 | 1.2 | 4 |

* choose the desired voltage

Proportional valves Series AP - Size 22 mm

For connectors see section 2/2.35.

New


| Mod. | Port 1 | Port 2 | Function | Orifice ϕ (mm) | Q (l/min) | Kv (m ³ /h) | P Max (bar) |
|-----------------|--------|--------|----------|---------------------|-----------|------------------------|-------------|
| AP-7211-FR2-U7* | G1/8 | G1/8 | 2/2 NC | 1 | 33.0 | 0.5 | 10 |
| AP-7211-HR2-U7* | G1/8 | G1/8 | 2/2 NC | 1.2 | 42.9 | 0.65 | 8 |
| AP-7211-LR2-U7* | G1/8 | G1/8 | 2/2 NC | 1.6 | 66.0 | 1.0 | 6 |
| AP-7211-NR2-U7* | G1/8 | G1/8 | 2/2 NC | 2 | 105.6 | 1.6 | 5 |
| AP-7211-QR2-U7* | G1/8 | G1/8 | 2/2 NC | 2.4 | 132.0 | 2.0 | 4 |

* choose the desired voltage