

3/2-Way; Service port: G 1/8, G 1/4, plug-in connector ø6 mm



### Advantages/Benefits

- ▶ Lower cost of ownership
- ▶ Direct and quick mounting on process valves
- ▶ Low power consumption, direct connection to PLC possible
- ▶ Any desired mounting position
- ▶ Coil can be changed easily with valve in place
- ▶ Coil can be locked in 4 x 90° position or move freely between, as required
- ▶ Compact design
- ▶ Wide range of cable plugs and options

### Design/Function

The banjo valve types are pneumatic single pilot valves designed for a quick mounting onto pneumatic actuators e.g. process valves. Simply screwed into the pressure port of the actuator the banjo valve can take up any position as the valve body as well as the pressure inlet are rotatable.

In addition the banjo valve types 6012 and 6014, based on a modular concept, have a push-over coil, which can be locked in any position.

The banjo valve concept provides flexibility to meet any kind of application requirements:

The air flow rate varies from 48 l/min to 120 l/min, the pressure range from 0 bar up to 16 bar.

A selection of pipes and orifice sizes is offered as well as all three standard types of cable plugs, DIN 43 650 forms A, B and C.

The valve parts are made of polyamide, brass, stainless steel or anodized aluminium.

Banjo valve 6014 can be delivered as EEx m II T6 version with moulded cable or with terminal box (see extra data sheet banjo valves Ex).

### Applications

#### Fluids

Neutral gases, compressed air

#### Applications

- Pneumatic control
- Pilot control valve for pneumatic controlled process valves

# Direct Mounting Pilot Valves

for process industry

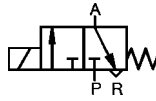
# Banjo Valves

## Technical Data Type 6012

### Circuit function

C 3/2-way valve,  
when de-energized, outlet A  
pressure relieved

### Symbol



### Operating Data (Valve) - Type 300, 6012

Pressure range	0-10 bar max. (see specifications)
Port connection	see specifications
Orifice	DN 1.2 mm
Material:	
Valve body	Polyamide (PA)
Banjo bolt	Brass, nickel plated
Seal material	NBR
Fluid	Neutral gases, e.g. compressed air
Medium temperature	-10 to +100 °C
Max. ambient temperature	+55 °C
Max. viscosity	21 mm <sup>2</sup> /s
Response times	
opening	7-10 ms (AC), 7-12 ms (DC)
closing	9-12 ms (AC), 7-12 ms (DC)

### Operating Data (Actuator) - Type 300, 6012

Operating voltages	AC 24, 110, 230 V/50 Hz, DC 24V/=						
Voltage tolerance	±10 %						
Power consumption	<table border="1"> <thead> <tr> <th>AC inrush</th> <th>AC hold</th> <th>DC</th> </tr> </thead> <tbody> <tr> <td>9 VA</td> <td>6 VA/4 W</td> <td>4 W</td> </tr> </tbody> </table>	AC inrush	AC hold	DC	9 VA	6 VA/4 W	4 W
AC inrush	AC hold	DC					
9 VA	6 VA/4 W	4 W					
Duty cycle	100% continuously rated						
Protection class with cable plug	IP 65						
Electr. connection	Delivery standard Type 300: Cable plug DIN 43 650, Form B Type 6012: Cable plug DIN 43 650, Form C						

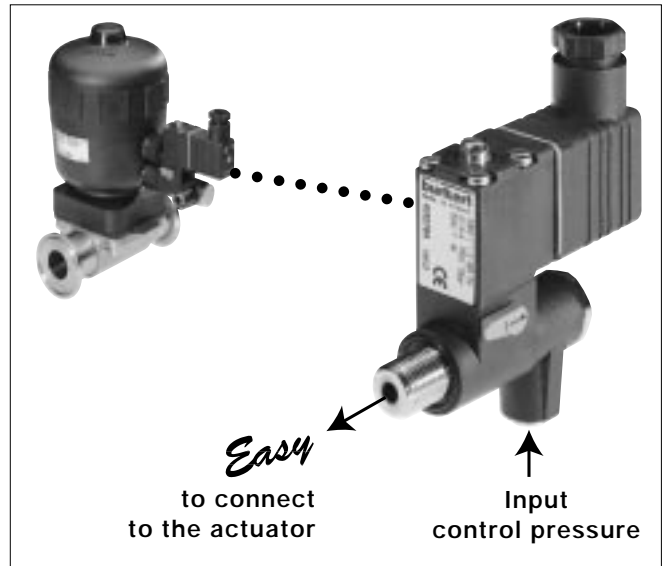
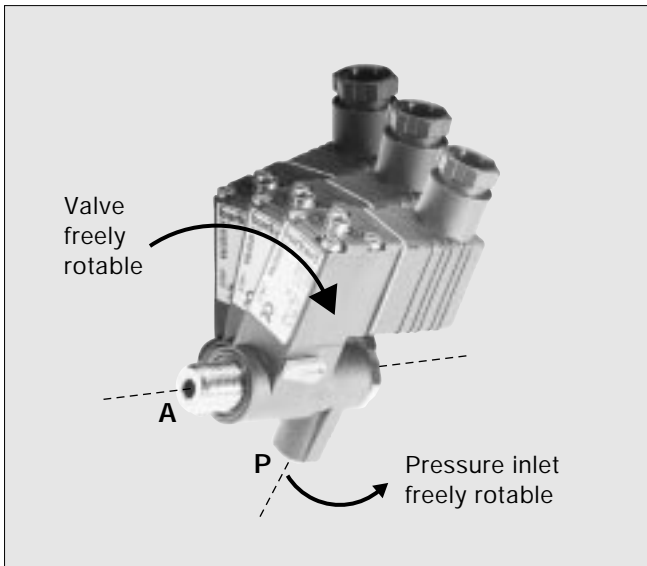
### Operating Data (Valve) - Type 6014

Pressure range	0-16 bar max. (see specifications)
Port connection	see specifications
Orifice	DN 1.5 - DN 2.0 mm
Material:	
Valve body	Polyamide (PA) or brass
Banjo coupler	Aluminium, anodized
Banjo bolt	Brass, nickel plated
Seal material	FPM (Viton)
Fluid	Neutral gases, e.g. compressed air
Medium temperature	-10 to +100 °C
Max. ambient temperature	+55 °C
Max. viscosity	21 mm <sup>2</sup> /s
Response times	
opening	ca. 25 ms (DN 1.5), ca. 18 (DN 2) ms
closing	ca. 35 ms (DN 1.5), ca. 22 (DN 2) ms

### Operating Data (Actuator) - Type 6014

Operating voltages	AC 24, 110, 230 V/50 Hz, DC 24V/=									
Voltage tolerance	±10 %									
Power consumption	<table border="1"> <thead> <tr> <th>AC inrush</th> <th>AC hold</th> <th>DC</th> </tr> </thead> <tbody> <tr> <td>11 VA (0- 6 bar)</td> <td>6 VA/ 2W</td> <td>2W</td> </tr> <tr> <td>24 VA (0-10 bar; 0-16 bar)</td> <td>17VA/ 8W</td> <td>8W</td> </tr> </tbody> </table>	AC inrush	AC hold	DC	11 VA (0- 6 bar)	6 VA/ 2W	2W	24 VA (0-10 bar; 0-16 bar)	17VA/ 8W	8W
AC inrush	AC hold	DC								
11 VA (0- 6 bar)	6 VA/ 2W	2W								
24 VA (0-10 bar; 0-16 bar)	17VA/ 8W	8W								
Duty cycle	100% continuously rated									
Protection class with cable plug	IP 65									
Electr. connection	Delivery standard Type 6014: Cable plug DIN 43 650, Form A									

**Installation**



**Specifications - Ordering Chart (Other Versions on Request)**

**Type 6012, Seal material NBR, cable plug DIN 43 650 form C, manual override standard**



Port connection		Orifice [mm]	Q <sub>Nn</sub> -value (air) [l/min]	Pressure Range [bar]	Body Material	Power cons. [W]	ITEM - NO.			
P	A						Voltage / Frequency [V/Hz]			
						24/=	24/50-60	110/50	230/50	
SL ø6	G 1/8	1.2	48	0-10	PA	4	425 299 Y	425 300 D	428 570 E	425 304 V
SL ø6	G 1/4	1.2	48	0-10	PA	4	425 285 J	425 286 K	428 569 H	425 290 T
G 1/8	G 1/8	1.2	48	0-10	PA	4	429 112 Q	429 113 R	429 115 K	429 117 M
G 1/4	G 1/8	1.2	48	0-10	PA	4	429 126 N	429 127 P	429 128 Y	429 129 Z
G 1/4	G 1/4	1.2	48	0-10	PA	4	427 919 P	427 920 L	427 921 H	427 922 A

**Type 300, Seal material NBR, cable plug DIN 43 650 form B, manual override standard**



Port connection		Orifice [mm]	Q <sub>Nn</sub> -value (air) [l/min]	Pressure Range [bar]	Body Material	Power cons. [W]	ITEM - NO.			
P	A						Voltage / Frequency [V/Hz]			
						24/=	24/50-60	110/50	230/50	
SL ø6	G 1/8	1.2	48	0-10	PA	4	425 292 R	425 293 J	428 575 X	425 297 N
SL ø6	G 1/4	1.2	48	0-10	PA	4	425 278 A	425 279 B	428 574 W	425 283 Q
G 1/8	G 1/8	1.2	48	0-10	PA	4	429 104 Z	429 105 S	429 107 U	429 109 E
G 1/4	G 1/8	1.2	48	0-10	PA	4	429 110 S	429 111 P	429 114 J	429 116 L
G 1/4	G 1/4	1.2	48	0-10	PA	4	429 102 X	429 103 Y	429 106 T	429 108 D

**Type 6014, Seal material FPM, cable plug DIN 43 650 form A, manual override standard**



Port connection		Orifice [mm]	Q <sub>Nn</sub> -value (air) [l/min]	Pressure Range [bar]	Body Material	Power cons. [W]	ITEM - NO.			
P	A						Voltage / Frequency [V/Hz]			
						24/=	24/50	110/50	230/50	
G 1/4	G 1/8	1.5	75	0- 6	PA	2	424 123 E	424 124 F	424 126 H	424 127 A
G 1/4	G 1/8	1.5	75	0- 16	Ms	8	424 108 Y	424 109 Z	424 111 A	424 112 B
G 1/4	G 1/4	1.5	75	0- 6	PA	2	424 118 R	424 119 J	424 121 C	424 122 D
G 1/4	G 1/4	1.5	75	0- 16	Ms	8	424 098 R	424 099 J	424 101 R	424 102 J
G 1/4	G 1/8	2.0	120	0- 10	Ms	8	424 113 C	424 114 D	424 116 F	424 117 P
G 1/4	G 1/4	2.0	120	0- 10	Ms	8	424 103 K	424 104 L	424 106 N	424 107 P

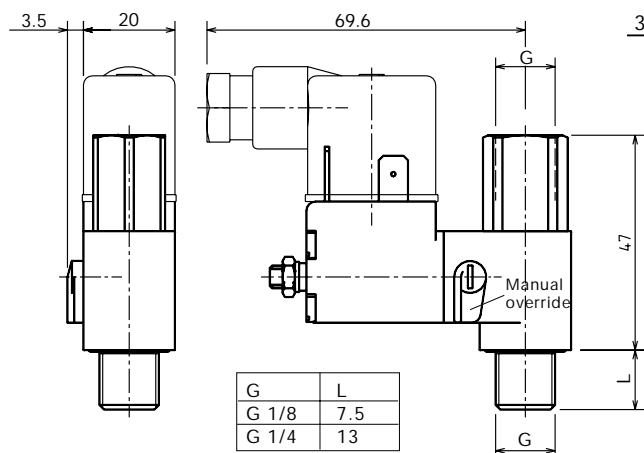
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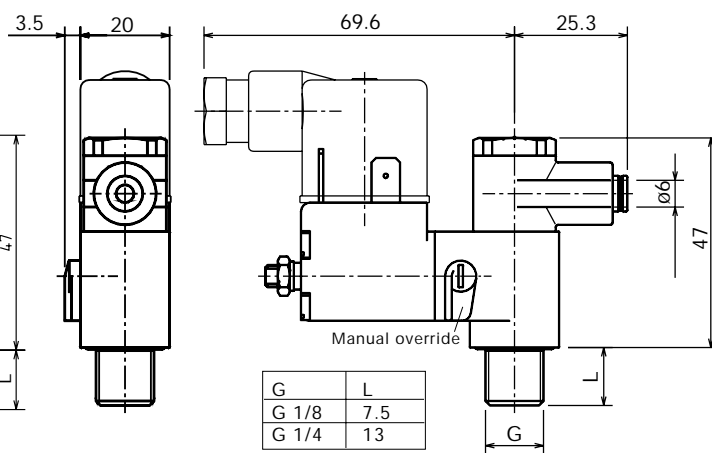
# Banjo Valves

## Dimensions [mm]

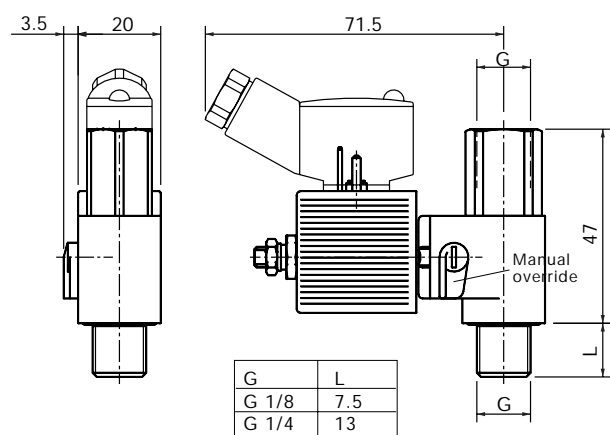
**Type 300, G-Port connection**



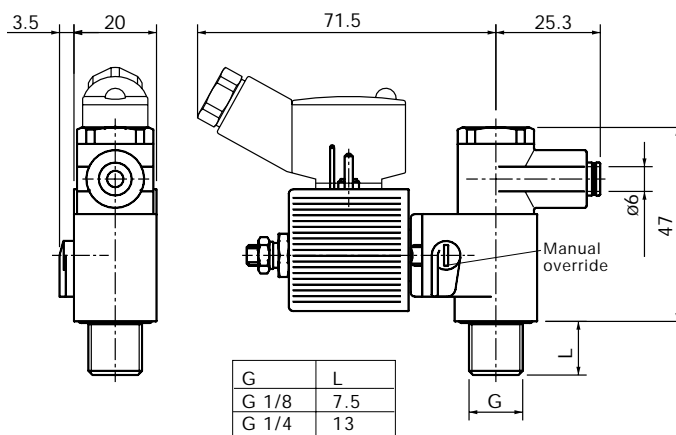
**Type 300, Tube push-in connection**



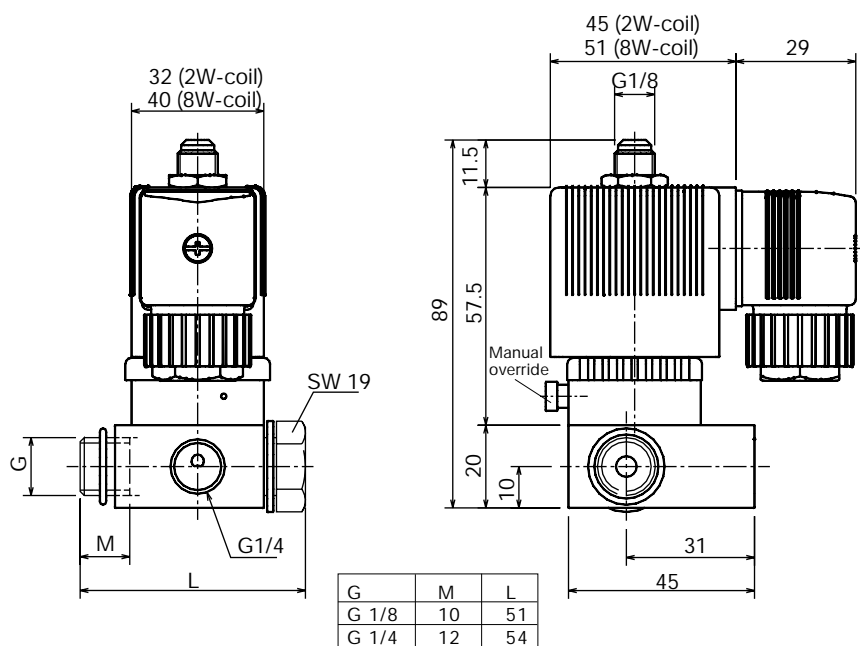
**Type 6012, G-Port connection**



**Type 6012, Tube push-in connection**



**Type 6014, G-Port connection**



In case of special requirements please consult for advice.

We reserve the right to make technical changes without notice.

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