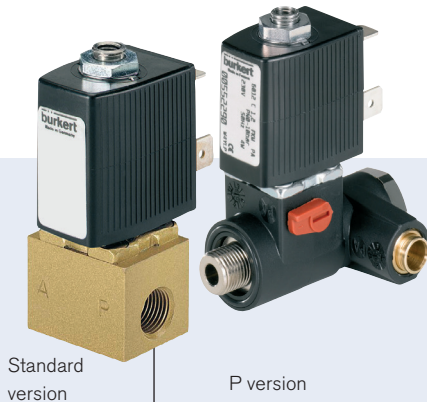


3/2-way Mini Solenoid Valve



Standard version

P version

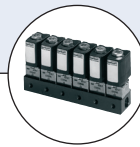
Type 6012 can be combined with...

**Type 2506**




Cable plug
 DIN EN 175301-803*
 form C

**Type 2507**

Cable plug industrial
 standard form B

**Type 6012**

Multiple manifold
 (e.g. 6-fold)

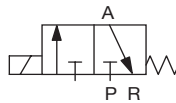
- Direct-acting
- 0 – 145 PSI¹⁾
- DN 1.2 mm ... DN 1.6 mm
- NPT 1/8, NPT 1/4, sub-base, banjo-bolt connection
- Approvals:   

This direct-acting 3/2-way miniature solenoid valve is available in two versions.

Type 6012 (top left) is used for blocking, dosing, filling and ventilating neutral gases and liquids, in particular for the control of single-acting pneumatic actuators or for technical vacuum. The modular valve may be mounted singly or in block assembly on a multiple manifold.

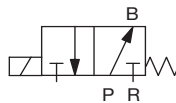
Circuit function C

3/2-way valve,
 P normally closed,
 port A pressureless



Circuit function D

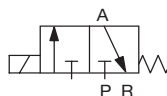
3/2-way valve,
 P normally open,
 port B pressurized



Type 6012P (top right) was developed as a special pilot valve for direct attachment to externally piloted pneumatic actuators. It consists of the solenoid actuator of Type 6012 and a special connection housing with banjo bolts for simple connection to the pilot air port of the actuator. The valve is equipped with manual override as standard.

Circuit function C

3/2-way valve, P normally closed, port A pressureless



Technical data	
Body material	
Type 6012	Brass, stainless steel 1.4305 (on request)
Type 6012P	Polyamide (PA)
Banjo bolt (Type 6012P)	Nickel-plated brass
Seal material	
Type 6012 / 6012P	FKM / NBR
Medium	Neutral gases and liquids (e.g. compressed air, water, hydraulic oil, technical vacuum)
Medium temperature	14°F to 212°F (-10°C to +100°C)
Ambient temperature	max. 131°F (+55°C)
Viscosity	max. 21 cSt
Port connection	
Type 6012	NPT 1/8, sub-base
Type 6012P	NPT 1/8, NPT 1/4 and tube fitting Ø 6 mm
Operating voltages	24 V DC 24 V / 60 Hz 120 / 240 V / 60 Hz
Voltage tolerance	±10%
Duty cycle/single valve	
for block assembly on multiple manifold	100 % continuous rating or with 2 W coil (on request)
Electrical connection	<ul style="list-style-type: none"> ▪ Acc. to DIN EN 175301-803* Form C for cable plug Type 2506 (see ordering chart for accessories) ▪ Acc. to DIN 43650 Form B (Industrial standard) for cable plug Type 2507 (see ordering chart for accessories) ▪ Flying leads on request
Manual override	Optional, as a standard feature (for Type 6012P)
Installation	As required, preferably with actuator upright
Weight: Type 6012 / 6012P	125 g (NPT 1/8) / 135 g (Banjo)
Protection class	IP65 with cable plug

¹⁾ Pressure data [PSI]: Overpressure with respect to atmospheric pressure

* So far DIN 43650

Response times

Type 6012

Orifice [mm]	C _v value water [GPM]	Pressure range [PSI] ¹⁾	Coil power	Power consumption		Response times	
				Pick-up	Operation	Opening [ms]	Closing [ms]
1.2	0.053	0 - 145	4 W AC	9 VA	6 VA (4 W)	7-10	9-12
			or				
1.6	0.07	0 - 87	4 W DC	4 W	4 W	7-12	7-12

¹⁾ Pressure data [PSI]:
Overpressure with
respect to atmospheric
pressure

- C_v value [m³/h]: Flow rate value for water, measured at 68°F (+20°C), 14.5 PSI¹⁾ Pressure at valve inlet and 14.5 PSI pressure difference

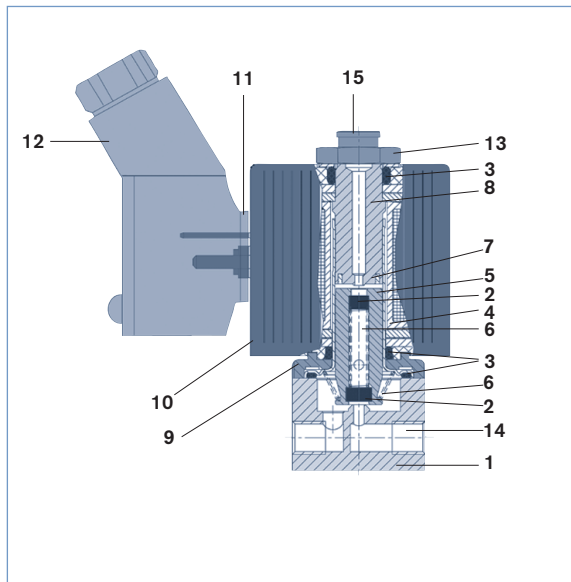
Type 6012P

Orifice [mm]	Q _{Nn} value air [SCFM]	Pressure range [PSI] ¹⁾	Coil power	Power consumption		Response times	
				Pick-up	Operation	Opening [ms]	Closing [ms]
1.2	1.7	0 - 145	4 W AC	9 VA	6 VA (4 W)	7-10	9-12
			or				
			4 W DC	4 W	4 W	7-12	7-12

¹⁾ Pressure data [PSI]:
Overpressure with
respect to atmospheric
pressure

- Q_{Nn} value [l/min]: Flow rate value for air, measured at 68°F (+20°C), 87 PSI¹⁾ Pressure at valve inlet and 14.5 PSI pressure difference
- Response times [ms]: Measures at valve outlet at 87 PSI¹⁾ and 68°F (+20°C) acc. to ISO 12238
Opening: Pressure build up 0 ... 90 %
Closing: Pressure relief 100 ... 10 %

Material



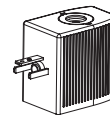
1 Body	Brass, stainless steel 1.4305
2 Armature seal	PA (polyamide)
3 O-Ring	FKM/NBR
4 Guide tube	FKM
5 Core	Stainless steel 1.4303
6 Spring	Stainless steel 1.4105
7 Shading ring	Stainless steel 1.4310
8 Stopper	Copper, silver (St. st. version)
9 sub-base	Stainless steel 1.4105
10 coil	Zn3 gl cC surface (brass version)
	Nickel-plated surface (St. st. version)
	DIN EN 175301-803*
	Form C
	Form B (Industrial standard)
11 flat seal	PA
12 Cable plug	NBR
13 Locknut	PA
14 Pressure inlet P with	9SMnPb28K (surface Zn5glcA)
15 Pressure inlet P with	Circuit function C
	Circuit function D

* previously DIN 43650

Ordering chart

Type 6012: Solenoid valve in threaded port or sub-base version with electrical coil connection acc. to DIN EN 175301-803* Form C for cable plug Type 2506.

UR / CSA / CE approved



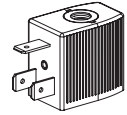
Circuit function	Orifice [mm]	Port connection	C _v value water [GPM]	Pressure range [PSI] ¹⁾	Voltage/frequency [V/Hz]	Item no. Brass body without manual override	Item no. PA body with manual override
C 3/2 way normally closed 	1.2	NPT 1/8	0.053	0 – 145	24/DC	466 823	–
					24/60	461 812	–
					120/60	466 811	–
					240/60	467 049	–
	1.6	NPT 1/8	0.07	0 – 87	24/DC	466 158	467 050
					24/60	467 051	–
					120/60	466 178	467 053
					240/60	466 179	467 054
	1.2	manifold	0.053	0 – 145	24/DC	467 055	–
					24/60	467 056	–
					120/60	466 670	–
					240/60	467 057	–
1.6	manifold	0.07	0 – 87	24/DC	467 058	467 059	
				24/60	467 060	467 061	
				120/60	467 062	466 612	
				240/60	467 063	467 064	
D 3/2 way normally open 	1.2	NPT 1/8	0.053	0 – 145	24/DC	456 832	–
					24/60	456 833	–
					120/60	456 834	–
					240/60	456 835	–
	1.6	NPT 1/8	0.07	0 – 87	24/DC	456 836	–
					24/60	456 837	–
					120/60	456 838	–
					240/60	456 839	–

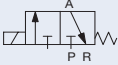
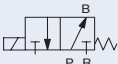
¹⁾ Pressure data [bar]: Overpressure with respect to atmospheric pressure
 * previously DIN 43650

- All valves with FKM seal; without cable plug.
- other versions on request.

Ordering chart

Type 6012: Solenoid Valve with threaded port or sub-base version with electrical coil connection Form B (Industrial standard) for cable plug Type 2507
UR / CSA / CE approved



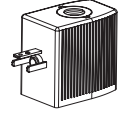
Circuit function	Orifice [mm]	Port Connection	C _v value water [GPM]	Pressure range [PSI] ¹⁾	Voltage/frequency [V/Hz]	Item no. Brass body without manual override	Item no. Stainless steel body
C 3/2 way normally closed 	1.2	NPT 1/8	0.053	0 – 145	24/DC	461 811	92707129
					24/60	461 812	467 036
					120/60	461 813	467 037
					240/60	461 814	467 038
	1.6	NPT 1/8	0.07	0 – 87	24/DC	461 815	467 507
					24/60	461 816	467 039
					120/60	461 817	467 040
					240/60	461 818	467 041
	1.2	manifold	0.053	0 – 145	24/DC	461 819	467 042
					24/60	461 820	467 043
					120/60	461 821	467 044
					240/60	461 822	467 045
1.6	manifold	0.07	0 – 87	24/DC	461 823	467 046	
				24/60	461 824	467 047	
				120/60	461 825	466 565	
				240/60	461 826	467 048	
D 3/2 way normally open 	1.2	NPT 1/8	0.053	0 – 145	24/DC	461 835	–
					24/60	461 836	–
					120/60	461 837	–
					240/60	461 838	–
	1.6	NPT 1/8	0.07	0 – 87	24/DC	461 839	–
					24/60	461 840	–
					120/60	461 841	–
					240/60	461 842	–

¹⁾ Pressure data [PSI]: Overpressure with respect to atmospheric pressure
* previously DIN 43650

- All valves with FKM seal.
- other versions on request.

Ordering chart

Type 6012P: Pilot valve for direct mounting on to pneumatic actuator with coil connection acc. to DIN EN 175301-803* Form C for cable plug Type 2506. Standard 2506 series plug included. CE approved only.

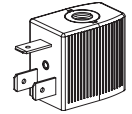


Circuit function	Orifice [mm]	Port Connection	C _v value water [GPM]	Pressure range [PSI] ¹⁾	Voltage/frequency [V/Hz]	Item no.
C 	1.2	NPT 1/4	1.7	0 - 145	24/DC	427 923
					24/60	427 924
					120/60	428 551
					240/60	428 552
					24/DC	428 565
					24/60	428 566
					120/60	428 567
240/60	428 568					

- All valves with PA body, NBR seal and manual override.
- other versions on request

¹⁾ Pressure values [PSI]: Measured as overpressure to the atmospheric pressure * previously DIN 43650

Type 6012P: pilot valve for direct mounting onto pneumatic actuator with electrical coil connection acc. to DIN EN 43650* Form B Industrial standard for cable plug Type 2507. Standard 2507 series plug included. CE approved only.



Circuit function	Orifice [mm]	Port Connection	C _v value water [GPM]	Pressure range [PSI] ¹⁾	Voltage/frequency [V/Hz]	Item no.
C 	1.2	NPT 1/8	1.7	0 - 145	24/DC	552 275
					24/60	552 276
					120/60	552 277
					240/60	522 278
		NPT 1/4			24/DC	522 279
					24/60	522 280
					120/60	522 281
					240/60	522 282

- All valves with PA body, NBR seal and manual override.
- other versions on request

¹⁾ Pressure values [PSI]: Overpressure with respect to atmospheric pressure

Ordering chart for accessories

Manifolds for Type 6012

Material	No. of valves	Item no.
Aluminium	1	613 984
	2	006 113
	3	613 838
	4	006 114
	5	613 839
	6	613 840
	7	613 841
	8	613 842

Manifold accessories for Type 6012

Accessory	Features	Item no.
Covering plate	for unused valves	005 100

- only available with circuit function C (normally closed).

Cable plug Type 2506 acc. to DIN EN 175301-803* Form C



Accessories	Features	Item no.
None (Standard)	0 - 260 V AC/DC	008 353
with LED	12 - 24 V AC/DC	008 402
with LED and varistor	12 - 24 V AC/DC	008 408
with rectifier, LED and varistor	12 - 24 V AC/DC	008 354

- Supplied with cable plug, flat seal and fixing screw.
- Further versions of cable plug with circuitry acc. to DIN EN 175301-803* Form C (see datasheet for Type 2506).

* previously DIN 43650

Cable plug Type 2507 acc. to DIN 43650 Form B (Industrial standard)

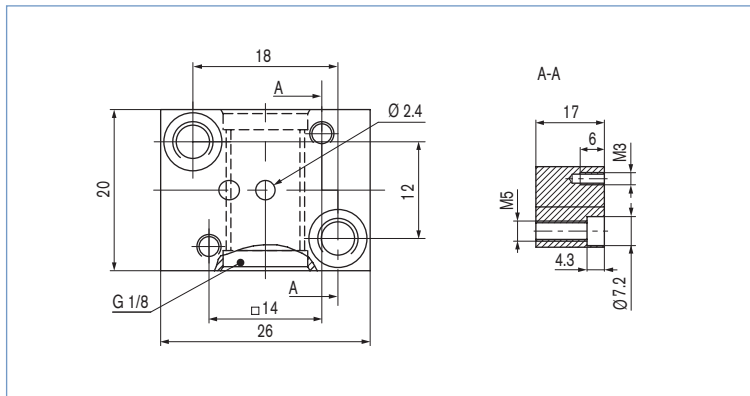


Accessories	Features	Item no.
None (Standard)	0 - 260 V AC/DC	423 845
with LED	24 V AC/DC	423 849
with LED and freewheeling diode	12 - 24 V AC/DC	423 851
with rectifier, LED and varistor	12 - 24 V AC/DC	423 853

- Supplied with cable plug, flat seal and fixing screw.
- Further versions of cable plug with circuitry acc. to DIN EN 43650* Form B (Industrial standard), see datasheet for Type 2507.

Dimensions [mm] - Manifolds for Type 6012

Single manifold



Multiple manifold

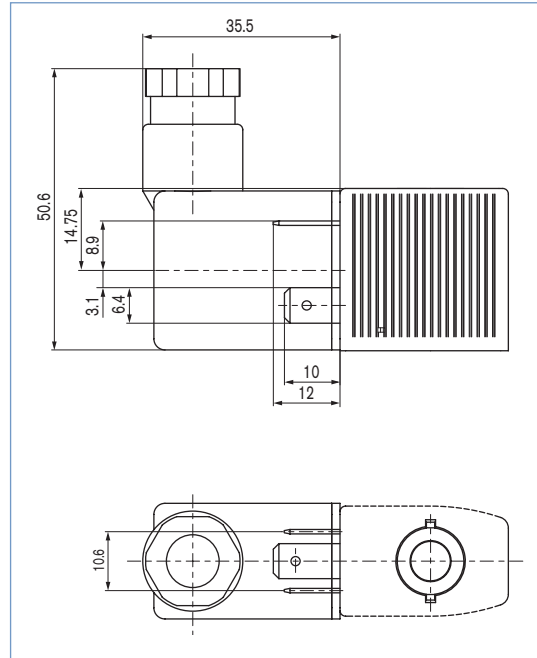
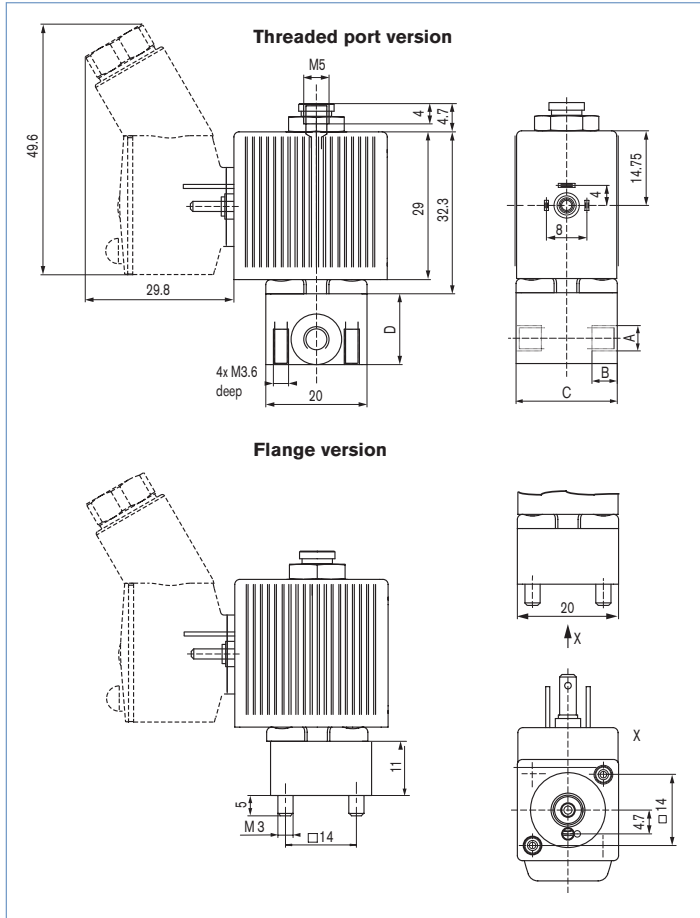
Technical drawing of a multiple manifold. The front view shows a long cylindrical component with a total length 'A' and a diameter of 18 mm. It has 12 ports arranged in two rows of six. The top row ports are spaced 10 mm apart, and the bottom row ports are spaced 14 mm apart. The distance between the two rows is 8 mm. The total length 'A' is the sum of 10 mm, 21 mm, and another 10 mm. The distance between the center of the first and last port in a row is 'B'. The distance between the center of two adjacent ports in a row is 'C'. The connection on the left is labeled G 1/8. The cross-sectional view shows a total length of 21 mm and a diameter of 18 mm. It includes an M5 thread on the right and an M3 thread on the left. A central hole with a diameter of 4.3 mm is shown. A distance of 6 mm is shown from the top edge to the center of the M3 thread.

No. of valves	A [mm]	B [mm]	C [mm]
1	20	12	-
2	41	33	-
3	62	54	-
4	83	75	-
5	104	96	-
6	125	117	-
7	146	138	-
8	167	159	54
9	188	180	54
10	209	201	75
11	230	222	75
12	251	243	96

Dimensions [mm] - Type 6012

Coil connection acc. to DIN EN 175301-803* Form C
(Cable Plug Type 2506)

Coil connection acc. to DIN EN 43650 Form B
Industrial standard (cable plug 2507)



Port connection	A	B	C	D
Sleeve	NPT 1/8	8	25	19.5
sub-base	-	-	20	11

* previously DIN 43650

Dimensions [mm] - Type 6012P

Version with coil connection acc. to DIN EN 175301-803* Form C (cable plug Type 2506)

Threaded port for compressed air

G	L
G1/8	6.5
G1/4	9.5

Push-in connection for compressed air

Pressure inlet P can be rotated through 360°.

Version with coil connection acc. to DIN 43650 Form B Industrial standard (cable plug Type 2507)

Threaded port for compressed air

G	L
G1/8	6.5
G1/4	9.5

Push-in connection for compressed air

* previously DIN 43650

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