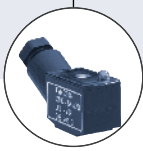


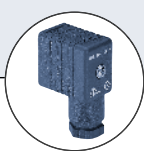
- Direct-acting
- 0 – 145 PSI¹⁾
- DN 1.2 – DN 1.6 mm
- NPT 1/8, NPT 1/4, sub-base, and banjo-bolt connection
- Approvals:   

Type 6012 can be combined with...



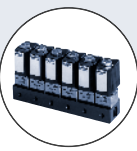
Type 2506

Cable plug to DIN EN 175301-803* form C



Type 2507

Cable plug industrial standard form B

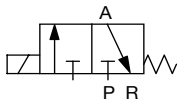


Type 6012

Multiple manifold (e.g. 6-fold)

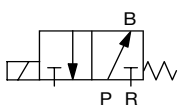
This direct-acting 3/2-way miniature solenoid valve is available in two versions. Type 6012 is used for blocking, dosing, filling and ventilating neutral gases and liquids, in particular for the control of single-acting pneumatic actuators or for technical vacuum. The modular valve may be mounted singly or in block assembly on a multiple manifold.

Circuit function C



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

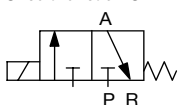
Circuit function D



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

Type 6012P 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

Burkert Contromatic USA

2602 McGaw Avenue
Irvine, CA 92614
Tel. 949.223.3100
Fax 949.223.3198
www.burkert-usa.com

Technical data	
Body material	
Type 6012	brass, polyamide (PA), stainless steel 1.4305 (on request)
Type 6012P	polyamide (PA)
Banjo bolt (Type 6012P)	nickel-plated brass
Sealing material	
Type 6012 / 6012P	FKM / NBR
Media	neutral gases and fluids (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 6 mm
Operating voltage	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 Intermittent operation 60 % (30 min. period or less) or with 2 W coil (on request)
Electrical connection	▪ to DIN EN 175301-803* Form C for cable plug Type 2506 (see Ordering chart for Accessories) ▪ to DIN 43650 Form B (industrial standard) for cable plug Type 2507 (see Ordering chart for Accessories) ▪ Flying leads connection on request
Manual override	optional (Type 6012) standard (Type 6012P)
Installation	as required, preferably with actuator upright
Mass	
Type 6012 / 6012P	125 g (NPT 1/8) / 135g (Banjo)
Protection class	IP 65 with cable plug

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

* Was DIN 43650

- Response times [ms]: measured at valve outlet at 87 PSI¹⁾ and 68°F acc. ISO 12238. Opening: pressure build-up 0 – 90 %, closing: pressure relief 100 – 10 %

Orifice water [mm]	Cv value [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 or	9 VA	6 VA (4 W)	7 – 10	9 – 12
1.6	0.07	0 – 87	4 W DC	4 W	4 W	7 – 12	7 – 12

- C_v value [m^3/h]: Flow rate value for water, measured at 68°F and 14.5 PSI¹⁾ pressure differential over a fully opened valve.

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

- Q_{Nn} value [l/min]: Flow rate value for water, measured at 68°F and 87 PSI¹⁾ pressure at valve inlet and 14.5 PSI pressure difference

Technical drawing of a mechanical assembly in cross-section. The drawing shows a handle (12) connected to a shaft (11) and a complex internal mechanism (15). The mechanism includes a central shaft (15) with various components labeled 1 through 14. The components are arranged in a vertical stack, with the handle (12) at the top and the base (1) at the bottom. The drawing is a detailed cross-section showing the internal structure of the assembly.

- | | | |
|----|------------------------------|---|
| 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 (stainless steel version) |
| 9 | Sub-base | Stainless steel 1.4105 |
| | | Zn3 gl cC surface (brass version) |
| | | nickel-plated surface (stainless steel version) |
| 10 | Coil | |
| | DIN EN 175301-803* fform C | PA |
| | form B (industrial standard) | Epoxy |
| 11 | Flat seal | NBR |
| 12 | Cable plug | PA |
| 13 | Locknut | 95MnPb28K (surface Zn5glcA) |
| 14 | Pressure inlet P with | circuit function C |
| 15 | Pressure inlet P with | circuit function D |

Technical drawing of a mechanical part, showing a front view and a cross-section A-A.

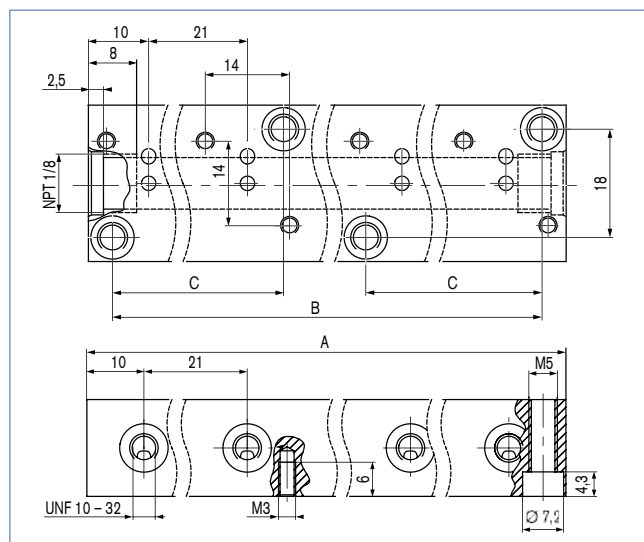
Front View Dimensions:

- Overall width: 18
- Overall height: 20
- Distance from left edge to center of top hole: 12
- Distance from left edge to center of bottom hole: 12
- Distance from center of top hole to center of bottom hole: 14
- Distance from center of bottom hole to right edge: 12
- Overall width including mounting holes: 26
- Mounting hole diameter: $\varnothing 2,4$
- Thread specification: G 1/8
- Section line A-A

Cross-section A-A Dimensions:

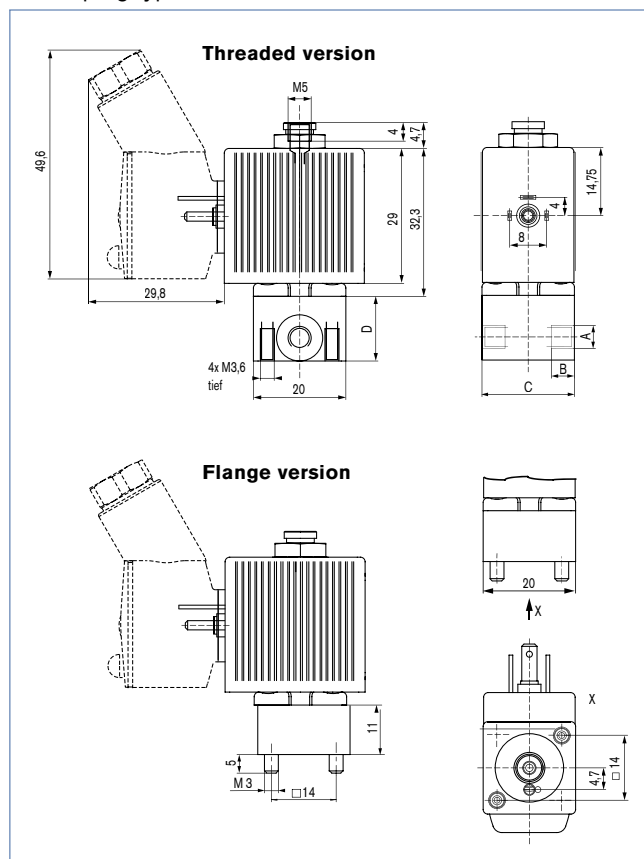
- Overall width: 17
- Overall height: 12
- Distance from top edge to center of hole: 6
- Distance from bottom edge to center of hole: 4,3
- Overall height including mounting holes: 17,2
- Mounting hole diameter: $\varnothing 7,2$
- Thread specification: M5
- Thread specification: M3

Multiple manifold

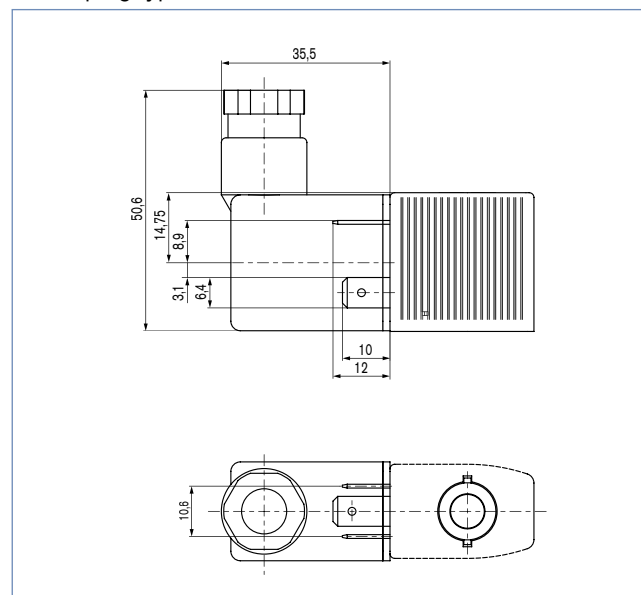


No. of valves	A [mm]	B [mm]	C [mm]
1	20	12	-
2	41	33	-
3	62	54	-
4	83	75	-
5	104	96	-
6	125	117	-
7	146	138	-
8	167	159	54
9	188	180	54
10	209	201	75
11	230	222	75
12	251	243	96

**Coil connection acc. DIN EN 175301-803*
form C**
(cable plug type 2506)



Coil connection Form B
industrial standard
(cable plug type 2507)

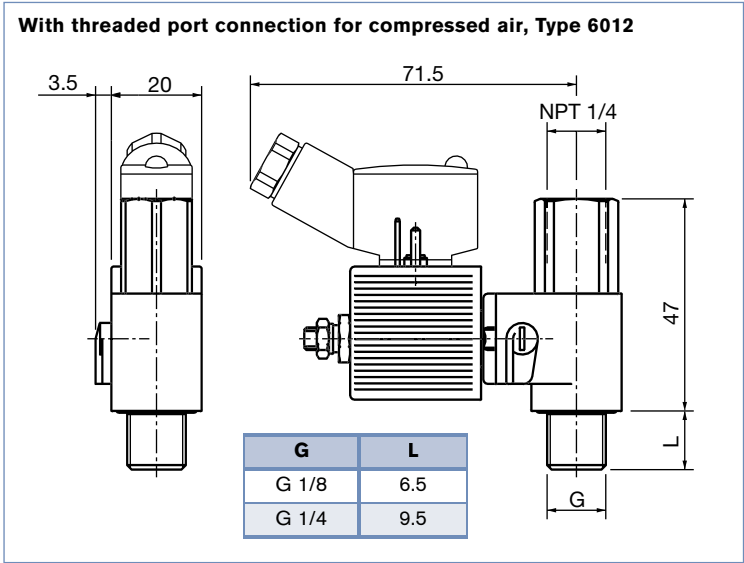


Port connection	A	B	C	D
sleeve	NPT 1/8	8	25	19.5
sub-base	–	–	20	11

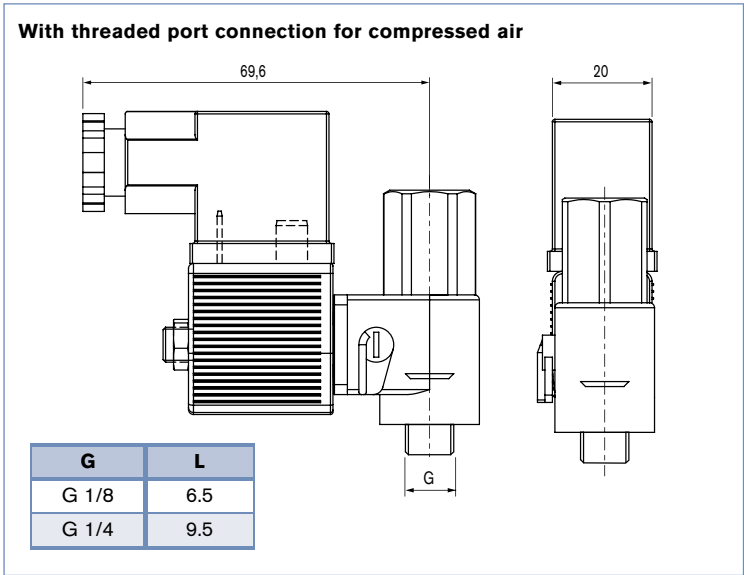
* Was DIN 43650

Dimensions [mm] – Type 6012P

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



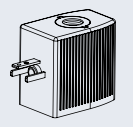
Version with coil connection Form B industrial standard (cable plug Type 2507)



* Was DIN 43650

Ordering charts

Type 6012



Solenoid valve in threaded port or sub-base version with electrical coil connection
acc. 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
	1.2	NPT 1/8	0.053	0 – 145	24/DC	456 808 E	–
					24/60	456 809 F	–
					120/60	456 810 T	–
					240/60	456 811 Q	–
	1.6	NPT 1/8	0.07	0 – 87	24/DC	456 812 R	–
					24/60	456 813 J	–
					120/60	456 814 K	–
					240/60	456 815 L	–
	1.2	sub-base	0.053	0 – 145	24/DC	456 816 M	456 824 M
					24/60	456 817 N	456 825 N
					120/60	456 818 X	456 826 P
					240/60	456 819 Y	456 827 Q
	1.6	sub-base	0.07	0 – 87	24/DC	456 820 V	456 828 Z
					24/60	456 821 J	456 829 S
					120/60	456 822 K	456 830 X
					240/60	456 823 L	456 831 L
	1.2	NPT 1/8	0.053	0 – 145	24/DC	456 832 M	–
					24/60	456 833 N	–
					120/60	456 834 P	–
					240/60	456 835 Q	–
	1.6	NPT 1/8	0.07	0 – 87	24/DC	456 836 R	–
					24/60	456 837 J	–
					120/60	456 838 T	–
					240/60	456 839 U	–

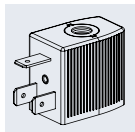
¹⁾ Pressure data [PSI]: Overpressure with respect to atmospheric pressure

* Was DIN 43650

• Stainless steel versions available on request.

Ordering charts

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. PA body with manual override
C 	1.2	NPT 1/8	0.053	0 – 145	24/DC	461 811 M	–
					24/60	461 812 N	–
					120/60	461 813 P	–
					240/60	461 814 Q	–
	1.6	NPT 1/8	0.07	0 – 87	24/DC	461 815 R	–
					24/60	461 816 J	–
					120/60	461 817 K	–
					240/60	461 818 U	–
	1.2	sub-base	0.053	0 – 145	24/DC	461 819 V	461 827 M
					24/60	461 820 S	461 828 W
					120/60	461 821 P	461 829 X
					240/60	461 822 Q	461 830 U
	1.6	sub-base	0.07	0 – 87	24/DC	461 823 R	461 831 R
					24/60	461 824 J	461 832 J
					120/60	461 825 K	461 833 K
					240/60	461 826 L	461 834 L
D 	1.2	NPT 1/8	0.053	0 – 145	24/DC	461 835 M	–
					24/60	461 836 N	–
					120/60	461 837 P	–
					240/60	461 838 Y	–
	1.6	NPT 1/8	0.07	0 – 87	24/DC	461 839 Z	–
					24/60	461 840 E	–
					120/60	461 841 T	–
					240/60	461 842 U	–

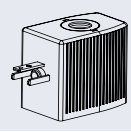
¹⁾ Pressure data [PSI]: Overpressure with respect to atmospheric pressure

* Was DIN 43650

• Other versions on request.

Ordering charts

Type 6012P



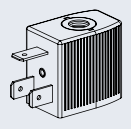
Pilot valve for direct mounting onto pneumatic actuator with electrical coil connection
acc. to DIN EN 175301-803*
Form C for cable plug Type 2506
CE approved only

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 B
					24/60	427 924 C
					120/60	428 551 X
					240/60	428 552 Y
					24/DC	428 565 V
					24/60	428 566 W
					120/60	428 567 X
					240/60	428 568 G

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

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

Type 6012P



Pilot valve for direct mounting onto pneumatic actuators with electrical coil connection
Form B (industrial standard) for cable plug Type 2507
CE approved only

Circuit function	Orifice [mm]	C _v value Water [GPM]	Pressure range [PSI] ¹⁾	Port connection	Voltage/frequency [V/Hz]	Item no.
C 	1.2	1.7	0 – 145	NPT 1/8	24/DC	552 275 E
					24/60	552 276 F
					120/60	552 277 G
					240/60	522 278 R
				NPT 1/4	24/DC	522 279 J
					24/60	522 280 G
					120/60	522 281 V
					240/60	522 282 W

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

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

Ordering charts for accessories

Manifold for Type 6012

Material	No. of valves	Item no.
Aluminium	1	613 984 K
	2	006 113 M
	3	613 838 Y
	4	006 114 N
	5	613 839 Z
	6	613 840 E
	7	613 841 T
	8	613 842 U

Accessories for manifolds

	Features	Item no.
	for unused valves	005 100 C

- Only available with circuit function C (normally open).

Cable plug type 2506 to DIN EN 175301–803* form C

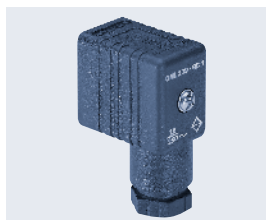


Accessories	Features	Item no.
None (standard)	0 – 260 V AC/DC	008 353 P
with LED	12 – 24 V AC/DC	008 402 A
with LED and varistor	12 – 24 V AC/DC	008 408 Q
with rectifier, LED and varistor	12 – 24 V AC/DC	008 354 Q

- Supplied with cable plug: flat seal and fixing screw.
- Other versions of cable plug with circuitry to DIN EN 175301–803* Form C (see *Datasheet Type 2506*).

*1) was DIN 43650

Cable plug type 2507 Form B (industrial standard)



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

- Supplied with cable plug: flat seal and fixing screw.
- Other versions of cable plug with circuitry Form B (industrial standard) (see *Datasheet Type 2507*).