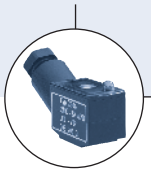
burkert
FLUID CONTROL SYSTEMS

2/2-way Miniature Solenoid Valve

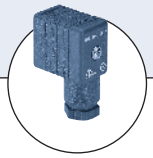


- Direct-acting
- 0 to 304 PSI [1)]
- DN 1.2 to 2.4 mm
- UNF 10 – 32, NPT 1/8 and sub-base
- Approvals:

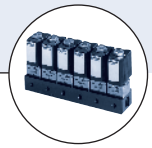
Type 6011 can be combined with…



Type 2506
Cable plug to DIN EN 175301-803* form C



Type 2507
Cable plug industrial standard form B



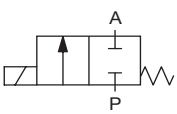
Type 6012
Multiple manifold (e.g. 6-fold)

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

Standard version:
Type 6011 is a miniature solenoid valve used for shut-off, dosing, filling, ventilating and for technical vacuum. It is of modular design and may be mounted individually or as a block on a multiple manifold.

Analysis and vacuum technology:
Type 6011 A is a high-quality miniature solenoid valve for analysis and vaccum technology. It is manufactured under clean-room conditions. This includes thorough cleaning of all parts in contact with media from organic and inorganic substances. The limit for residual hydrocarbons is below 0.2 mg/dm². 100 % of the valves are subjected to a special leakage test with regard to tight seating and tightness to the exterior. The permissible leakage rate is 10^{-4} mbar l/s. The valve is used for shut-off, dosing, filling, ventilating and particularly for analysis technology.

Circuit function A



2/2-way valve, normally closed by spring force

Technical data	
Body material	
Type 6011	brass, polyamide (PA)
Type 6011 A	brass, stainless steel 1.4305
Sealing material	FKM
Analytical version (Typ 6011 A)	version free from silicones, oil and grease leaktightness better than 10^{-4} mbar l/s
Limit value for remainder carbon (Type 6011 A)	<0,2 mg/dm²
Medium	
Type 6011	▪ technical vacuum ▪ neutral gases and fluids (e.g. compressed air)
Type 6011 A	▪ neutral/aggressive media that do not attack the body and seal materials
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 6011	UNF 10 – 32, NPT 1/8, sub-base
Type 6011 A	G1/8, sub-base
Operating voltage	
Type 6011	24 V DC, 24 V/60 Hz, 120 / 240 V / 60 Hz
Type 6011 A	24 V DC, 230 V / 50 Hz
Voltage tolerance	± 10%
Duty cycle/single valve when mounted as a block on a manifold	100% continuous rating Intermittent operation 60% (30 min) 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) ▪ Form B (industrial standard) for Type 2507 (see Ordering chart for Accessories)
Installation	as required, preferably with actuator upright
Installation	no oil, grease or silicones to be used as installation aids
Mass	ca. 125 g
Protection class	IP65 with cable plug

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

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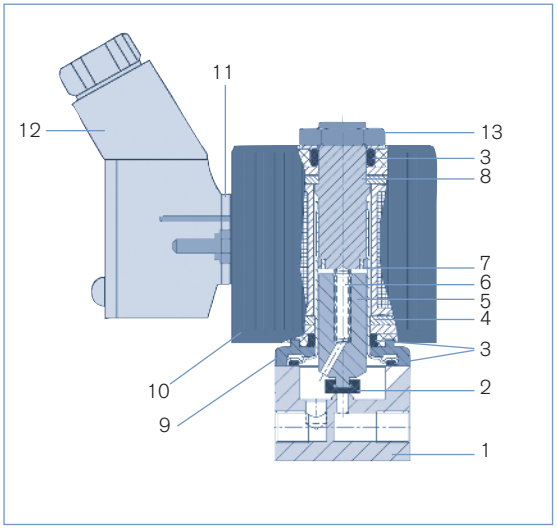
Response times

Orifice	C_V value water [GPM]	Pressure range for AC [m³/h]	Pressure range for DC [PSI]	Coil Power [bar]	Power consumption Inrush	Power consumption Hold	Response times Opening [ms]	Response times Closing [ms]
1.2	0.05	0 – 304	0 – 174	4 W AC oder 4 W DC	9 VA	6 VA	7-10	10-15
1.6	0.07	0 – 174	0 – 87					
2.0	0.13	0 – 116	0 – 65		4 W	4 W	7-12	7-12
2.4	0.15	0 – 87	0 – 43					

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

- C_V value [GPM]: Flow rate value for water, measured at 68°F (+20°C) and 1 PSI[1] pressure differential over a fully opened valve.
- Response times [ms]: measured at valve outlet at 87 PSI[1] and 68°F (+20°C)
  Opening: pressure build-up 0 ... 90 %, closing: pressure relief 100 ... 10 %

Material

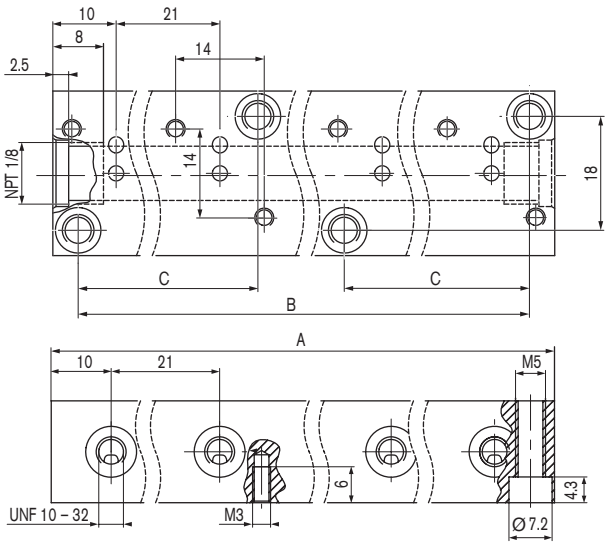


1	Body	Brass, stainless steel 1.4305 PA (polyamide)
2	Armature seal	FKM
3	O-ring	FKM
4	Guide tube	Stainless steel 1.4303
5	Core	Stainless steel 1.4105
6	Spring	Stainless steel 1.4310
7	Shading ring	Copper, Silver
8	Stopper	Stainless steel 1.4105
9	Sub-base	Zn3 gl cC surface (brass version) nickel-plated surface (stainless steel version)
10	Coil	
	DIN EN 175301-803* form C	PA
	Form B (industr. standard)	Epoxy
11	Flat seal	NBR
12	Cable plug	PA
13	Locknut	9SMnPb28K (surface Zn5glcA)

*) bisher DIN 43650

Dimensions [mm]

Multiple manifold



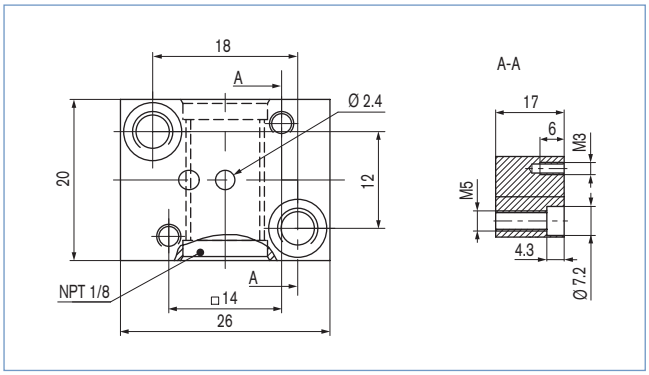
No. of valves	A [mm]	B [mm]	C [mm]
1	20	12	-
2	41	33	-
3	62	54	-
4	83	75	-
5	104	96	-
6	125	117	-
7	146	138	-
8	167	159	54

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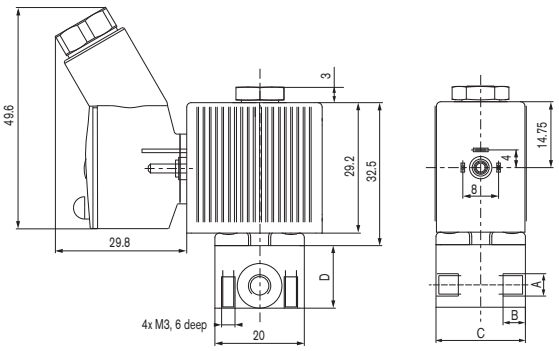
Dimensions [mm]

Single manifold

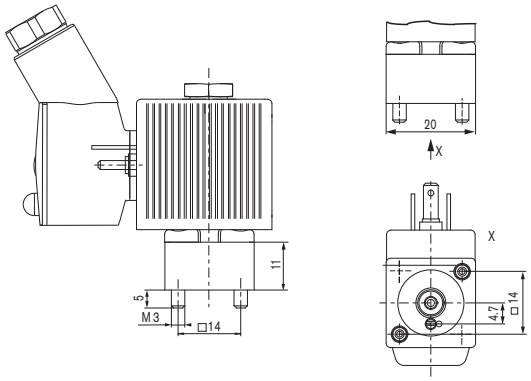


Type 6011 / 6011 A
Version with electrical coil connection to DIN EN 175301-803* form C (cable plug type 2506)

Threaded version



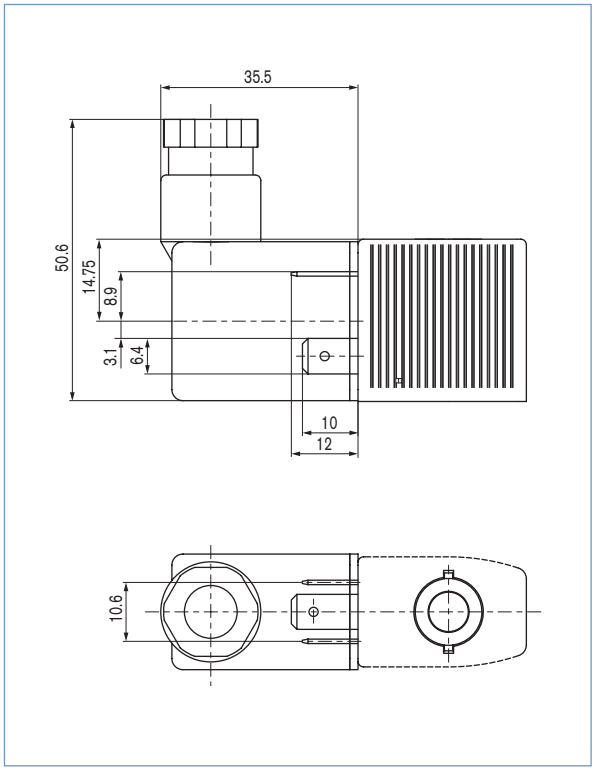
Flange version



Port connection	A	B	C	D
Threaded	UNF 10 – 32	5	20	10
Threaded	NPT 1/8	8	25	15
Sub-base	–	–	20	11

*) previously DIN 43650

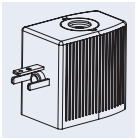
Type 6011 / 6011 A
Version with electrical coil connection Form B industrial standard (cable plug type 2507)



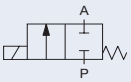
Ordering chart

Type 6011

Solenoid valve complete in ported or flanged version with electrical coil connection to DIN EN 175301-803* Form C for cable plug Type 2506, cable plug included



- All valves complete with coil and FKM seal material; without cable plug
- Other versions on request.

Circuit function	Orifice [mm]	Port connection	C_v value Water [GPM]	Pressure range [PSI][1)]	Voltage/ frequency [V/Hz]	Item no. Brass body	Item no. Stainless steel body
A 	2.0	UNF 10 – 32	0.12	0 – 65	24/DC	456 776	–
				0 – 116	24/60	456 777	–
				0 – 116	120/60	456 778	–
				0 – 116	240/60	456 779	–
	1.6	NPT 1/8	0.07	0 – 87	24/DC	456 780	457 151
				0 – 174	24/60	456 781	457 152
				0 – 174	120/60	456 782	457 153
				0 – 174	240/60	456 783	457 154
	2.0	NPT 1/8	0.13	0 – 65	24/DC	456 784	457 155
				0 – 116	24/60	456 785	457 156
				0 – 116	120/60	456 786	457 157
				0 – 116	240/60	456 787	457 158
	2.4	NPT 1/8	0.15	0 – 43	24/DC	456 788	457 159
				0 – 87	24/60	456 789	457 160
				0 – 87	120/60	456 790	457 161
				0 – 87	240/60	456 791	457 162
	1.2	sub-base	0.05	0 – 174	24/DC	456 792	–
				0 – 304	24/60	456 793	–
				0 – 304	120/60	456 794	–
				0 – 304	240/60	456 795	–
	1.6	sub-base	0.07	0 – 87	24/DC	456 796	–
				0 – 174	24/60	456 797	–
				0 – 174	120/60	456 798	–
				0 – 174	240/60	456 799	–
	2.0	sub-base	0.13	0 – 65	24/DC	456 800	–
				0 – 116	24/60	456 801	–
				0 – 116	120/60	456 802	–
				0 – 116	240/60	456 803	–
	2.4	sub-base	0.15	0 – 43	24/DC	456 804	–
				0 – 87	24/60	456 805	–
				0 – 87	120/60	456 806	–
				0 – 87	240/60	456 807	–

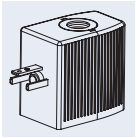
[1)] Pressure data [PSI]: Overpressure with respect to atmospheric pressure
*) previously DIN 43650

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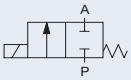
Ordering chart

Type 6011 A

Solenoid valve complete in threaded or flanged version with electrical coil connection to DIN EN 175301-803* Form C for cable plug Type 2506, cable plug included



- All valves complete with coil (4 W) and FKM seal material; without cable plug
- Other versions on request.

Circuit function	Orifice [mm]	Port connection[1]	C_V value water [GPM]	Pressure range [PSI][2]	Voltage/ Frequency [V/Hz]	Item no. Brass body	Item no. Stainless steel body
A 	1.6	G1/8	0.07	0 – 87	24/DC	137 794	137 800
				0 – 174	230/50	137 795	137 801
	2.0	G1/8	0.13	0 – 65.25	24/DC	137 796	137 802
				0 – 116	230/50	137 797	137 803
	2.4	G1/8	0.15	0 – 43.5	24/DC	137 798	137 804
				0 – 87	230/50	137 799	137 805
	1.2	sub-base	0.05	0 – 174	24/DC	137 806	137 812
				0 – 304.5	230/50	137 807	137 813
	1.6	sub-base	0.07	0 – 87	24/DC	137 808	137 814
				0 – 174	230/50	137 809	137 815
	2.0	sub-base	0.13	0 – 65.25	24/DC	137 810	137 816
				0 – 116	230/50	137 811	137 817

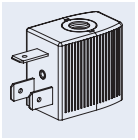
[1] NPT available on request
[2] Pressure data [PSI]: Overpressure with respect to atmospheric pressure
*) previously DIN 43650

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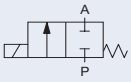
Ordering chart

Type 6011

Solenoid valve complete in ported or flanged version with electrical coil connection Form B (industrial standard) for cable plug Type 2507, cable plug included



- All valves complete with coil and FKM seal material; without cable plug
- Other versions on request.

Circuit function	Orifice [mm]	Port connection	C_v value Water [GPM]	Pressure range [PSI][1]	Voltage/ frequency [V/Hz]	Item no. Brass body	Item no. Stainless steel body
A 	2.0	UNF 10 – 32	0.05	0 – 65	24/DC	461 763	–
				0 – 116	24/60	461 764	–
				0 – 116	120/60	461 765	–
				0 – 116	240/60	461 766	–
	1.6	NPT 1/8	0.07	0 – 87	24/DC	461 767	461 779
				0 – 174	24/60	461 768	461 780
				0 – 174	120/60	461 769	461 781
				0 – 174	240/60	461 770	461 782
	2.0	NPT 1/8	0.13	0 – 65	24/DC	461 771	461 783
				0 – 116	24/60	461 772	461 784
				0 – 116	120/60	461 773	461 785
				0 – 116	240/60	461 774	461 786
	2.4	NPT 1/8	0.15	0 – 43	24/DC	461 775	461 787
				0 – 87	24/60	461 776	461 788
				0 – 87	120/60	461 777	461 789
				0 – 87	240/60	461 778	461 790
	1.2	sub–base	0.05	0 – 174	24/DC	461 791	–
				0 – 304	24/60	461 792	–
				0 – 304	120/60	461 793	–
				0 – 304	240/60	461 794	–
	1.6	sub–base	0.07	0 – 87	24/DC	461 795	–
				0 – 174	24/60	461 796	–
				0 – 174	120/60	461 797	–
				0 – 174	240/60	461 798	–
	2.0	sub–base	0.13	0 – 65	24/DC	461 799	–
				0 – 116	24/60	461 800	–
				0 – 116	120/60	461 801	–
				0 – 116	240/60	461 802	–
	2.4	sub–base	0.15	0 – 43	24/DC	461 803	–
				0 – 87	24/60	461 804	–
				0 – 87	120/60	461 805	–
				0 – 87	240/60	461 806	–

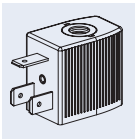
[1] Pressure data [PSI]: Overpressure with respect to atmospheric pressure

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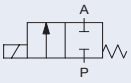
Ordering chart

Type 6011 A

Solenoid valve complete in threaded or flanged version with electrical coil connection Form B (industrial standard) for cable plug Type 2507



- All valves complete with coil (4 W) and FKM seal material; without cable plug
- Other versions on request.

Circuit function	Orifice [mm]	Port connection[1]	C_v value water [GPM]	Pressure range [PSI][2]	Voltage/ Frequency [V/Hz]	Item no. Brass body	Item no. Stainless steeel body
A 	1.6	G1/8	0.07	0 – 87	24/DC	163 545	163 551
				0 – 174	230/50	163 546	163 552
	2.0	G1/8	0.13	0 – 65.25	24/DC	163 547	163 553
				0 – 116	230/50	163 548	163 554
	2.4	G1/8	0.15	0 – 43.5	24/DC	163 549	163 555
				0 – 87	230/50	163 550	163 556
	1.2	sub-base	0.05	0 – 174	24/DC	163 557	163 563
				0 – 304.5	230/50	163 558	163 564
	1.6	sub-base	0.07	0 – 87	24/DC	163 559	163 565
				0 – 174	230/50	163 560	163 566
	2.0	sub-base	0.13	0 – 65.25	24/DC	163 561	163 567
				0 – 116	230/50	163 562	163 568

[1] NPT available on request

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

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Ordering chart for accessories

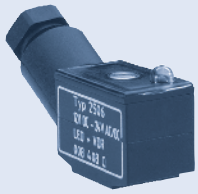
Manifolds

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

Accessories for manifolds

Accessory	Features	Item no.
Blanking plug	with seal ring, G1/8	005 041
Cover plate	for unused valves	005 100

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



Circuitry	Voltage	Item no.
None (standard)	0 - 250 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.
- Other versions of cable plug with circuitry to DIN EN 175301-803* Form C (see Datasheet Type 2506).

*) previously DIN 43650

Cable plug type 2507 Form B (industrial standard)



Circuitry	Voltage	Item no.
None (standard)	2 - 250 V AC/DC	423 845
with LED	24 V AC/DC	423 849
with LED and freewheeling diode	12 - 24 V DC	423 851
with rectifier, LED and varistor	12 - 24 V AC/DC	423 853

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

To find your nearest Burkert facility, click on the orange box ⟶

In case of special application conditions, please consult for advice.

We reserve the right to make technical changes without notice.
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