

3/2-Way; Sub-Base Connection; 3/64"-1/16"; 0-140 PSI



Advantages/Benefits

- ▶ Coil can be changed easily with valve in place and without depressurizing the system
- ▶ Coil can be locked in 4 x 90° positions or can move freely between, as required
- ▶ High-quality FPM (Viton) seal material standard
- ▶ Type 2506 cable plug offers a wide range of options
- ▶ Compact design
- ▶ Double O-ring seal protects coil and valve assembly from moisture and corrosion for longer life
- ▶  Approval

Design/Functions

The valves are based on a modular design consisting of three basic elements: the pressure or process containing valve assembly, a push-over coil and a standard cable plug. The valve assembly contains: the body, guide tube, plunger, seals and springs. This assembly totally isolates the process from the coil. Once installed, the coil is also sealed at both ends from exposure to the environment.

The valves are available in brass and have high-quality FPM (Viton) seals as standard.

To simplify ordering, different combinations of orifice size, coil voltage and a standard cable plug can be ordered with one Item Number.

Options for the Type 2506 cable plug are available to satisfy special electrical requirements.

- The modular concept provides flexibility to meet application requirements.
- The valve is interchangeable with Type 301.

Applications

Fluids

Compressed air
Suitable for technical vacuum

Applications

- General pneumatic
- Control of process valves
- Pilot control valve for pneumatic directional control valves
- Control of cylinders

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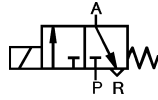
burkert
Easy Fluid Control Solutions

Technical Data Type 6012

Circuit Function

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

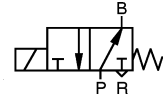
Symbol



Circuit Function

D – 3/2-way valve,
when de-energized, outlet B
pressurized

Symbol



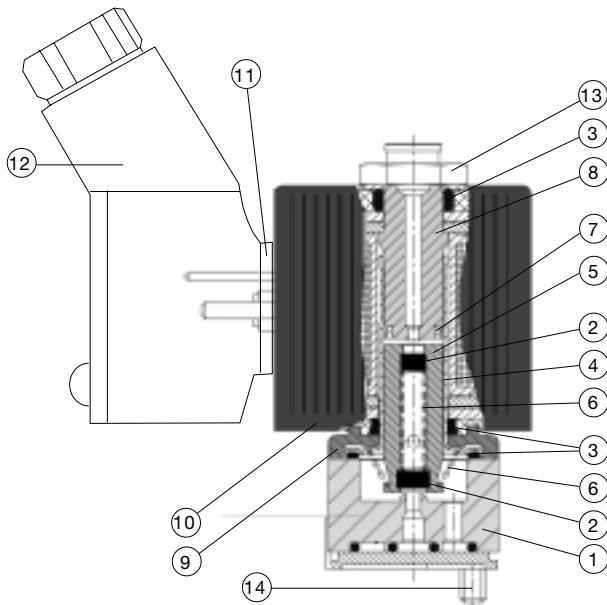
Operating Data (Valve)

Pressure range	0-140 PSI (see specifications)
Port connection	Sub-base connection
Orifice	3/64" - 1/16"
Fluid	Neutral gases and compressed air suitable for technical vacuum.
Medium temperature	+14°F to +212°F
Maximum ambient temperature	+130°F
Maximum viscosity	21 cSt
Response times opening closing	9 ms 10 ms
Installation	As required, but preferably with solenoid system upright

Operating Data (Actuator)

Operating voltages	AC 24, 120, 240 V/60 Hz, DC 24 VDC						
Voltages tolerance	±10%						
Power consumption	<table border="1"> <tr> <th>AC inrush</th> <th>AC hold</th> <th>DC</th> </tr> <tr> <td>9 VA</td> <td>6 VA/4 W</td> <td>4 W</td> </tr> </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						
Duty cycle for multiple manifolds	60% of a 30 minute period or less (i.e. 30 min cycle = 18 min. ON + 12 min. OFF Optional 2W version available for higher duty cycles.						
Cycling rate	up to 1000 c.p.m.						
Protection class with cable plug	NEMA 4 (IP 65)						
Electrical connection	Delivery standard: Cable plug DIN 43 650 C, 0-250 V (Other versions see accessories)						
Approvals	UL Recognized						

Materials



1 Valve body:	Polyamide
2 Plunger-seal:	FPM (Viton)
3 O-rings:	FPM (Viton)
4 Armature guide tube:	305 Stainless Steel
5 Plunger:	430F Stainless Steel
6 Spring:	301 Stainless Steel
7 Shading ring:	Copper
8 Stopper:	430F Stainless Steel
9 Flange:	Cadmium plated
10 Coil:	PA (Polyamide)
11 Flat seal:	NBR
12 Cable plug:	PA (Polyamide)
13 Locknut:	Zinc plated
14 Mounting screw:	DIN 84-4.8 A2L

Specifications - Ordering Chart (Other Versions on Request)

Type 6012: Polyamide Body, FPM (Viton) Seal

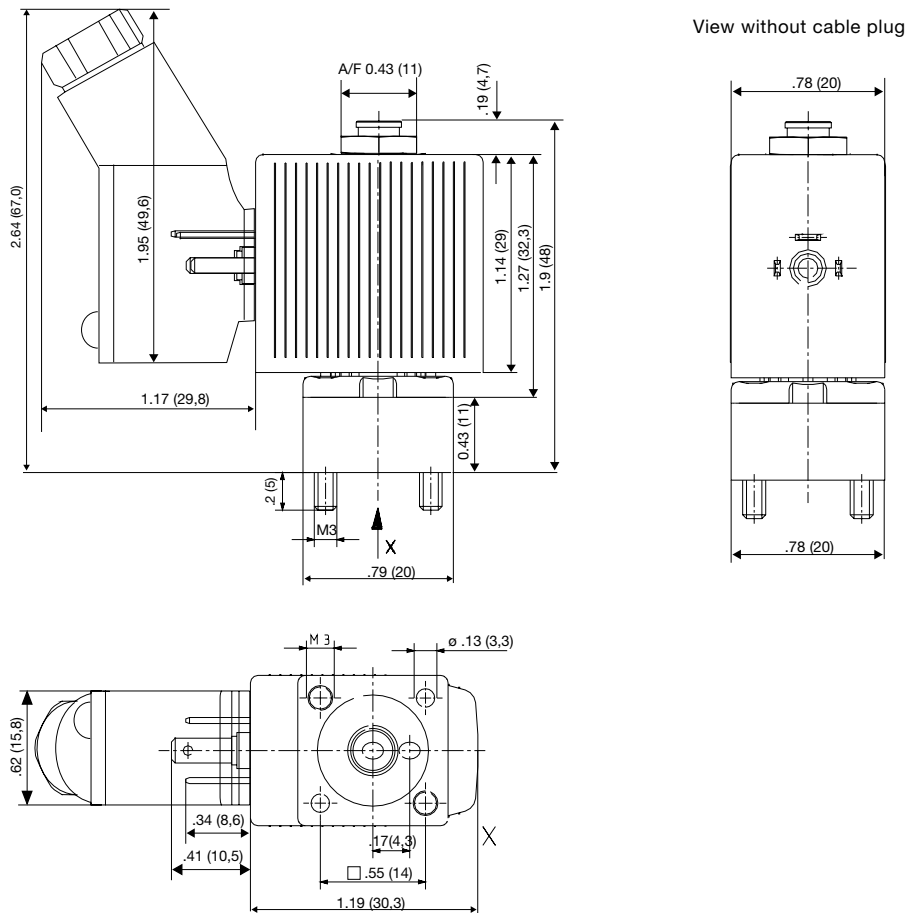
(With standard-cable plug 0-250 V AC/DC)

Circuit Function	Orifice [Inch]	Cv-Rating	SCFM Air ¹⁾	Pressure Range ²⁾ [PSI]	Voltage/Frequency [V/Hz]	Weight [Oz.]	Item No. (Without Manual Override)	Item No. (With Manual Override)
C	3/64	0.053	1.69	0-140	24 VDC	2.64	on request	456 824 M
				0-140	24/60		456 825 N	
				0-140	110/60		456 826 P	
				0-140	230/60		456 827 Q	
	1/16	0.07	2.29	0- 85	24 VDC	2.64	on request	456 828 Z
				0- 85	24/60		456 829 S	
				0- 85	110/60		456 830 X	
				0- 85	230/60		456 831 L	

¹⁾ Measured with 85 PSI upstream pressure and 14 PSI pressure drop across the valve at +68°F.

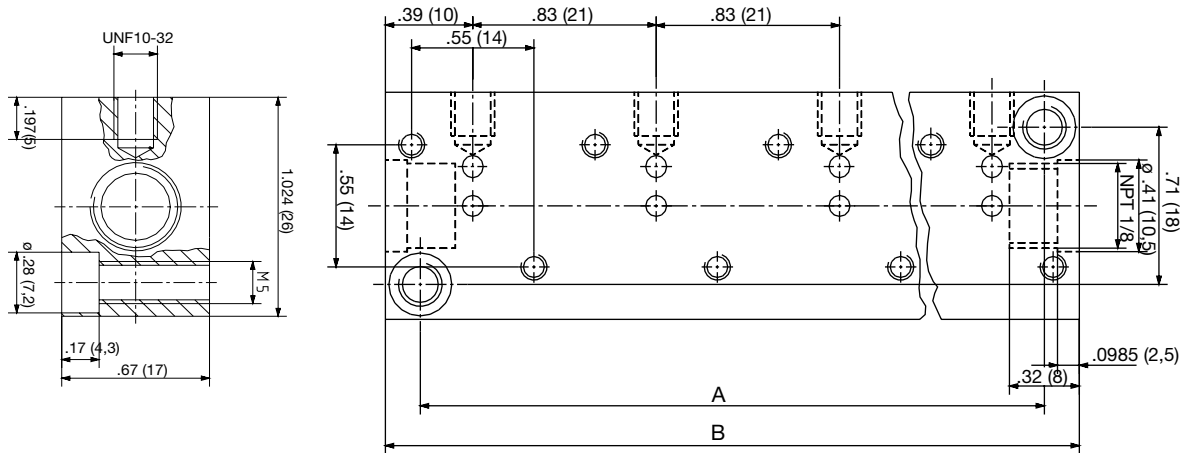
²⁾ All pressures quoted are gauge pressures.

Dimensions [inch (mm)]



Dimensions Accessories [inch (mm)]

Manifolds



Manifold Mounting

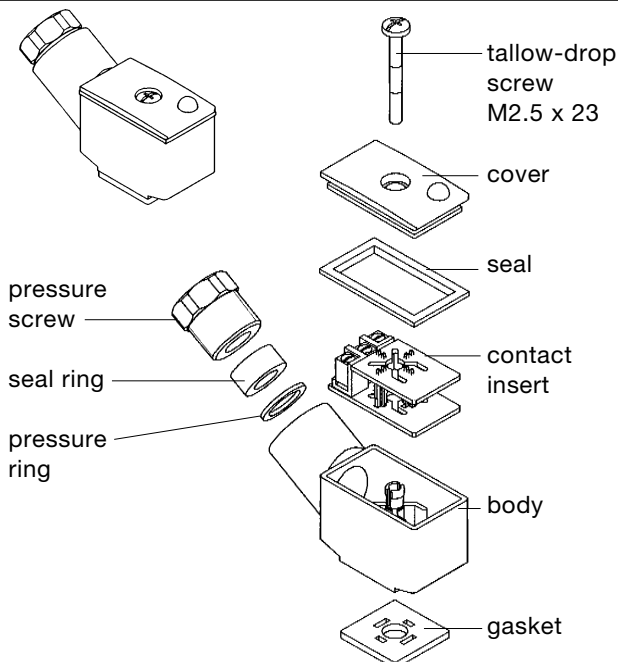
The manifolds for 1 to 12 valves have a common pressure inlet P (R) for the pressure connection of Type 6012-C or the exhaust connection of Type 6012-D and an individual lateral outlet A (B) for each valve. Type 6012-C may also be mounted together with Type 6011 2-way valves. They cannot however be mounted with normally open Type 6012-D valves. The electrical connection can be either on the right or left side of the manifold.

Manifolds may be coupled together using special push-fit connecting nipples for linking the pressure inlets P (R). Manifolds joined together in this way should be securely mounted.

Ordering Chart for Manifolds/Accessories

Device/Accessory	Features		Item No.
Single Manifold	Aluminum		613 984 K
Multiple Manifold (Aluminum)	Hole Spacing A	Overall Length B	
2 valves	1.30	1.61	006 113 M
3 valves	2.13	2.44	613 838 Y
4 valves	3.00	3.27	006 114 N
5 valves	3.78	3.98	613 839 Z
6 valves	4.61	4.92	613 840 E
7 valves	5.44	5.75	613 841 T
8 valves	6.26	6.58	613 842 U
Connecting nipple with O-rings			005 040 A

Cable Plug to DIN 43650, Form C



Ordering Chart for Accessories

Device/Accessory	Features	Item No.
Cable-plugs¹⁾	Standard cable plug, 0-250 V AC/DC (standard-delivery) ¹⁾	008 353 P
Type 2506	with LED, 12-24 V AC/DC	008 402 A
	with LED, 100-120 V AC/DC	008 403 B
	with LED, 200-240 V AC/DC	008 404 C
	with LED + varistor, 12-24 V AC/DC	008 408 Q
	with LED + varistor, 100-120 V AC/DC	008 409 R
	with LED + varistor, 200-240 V AC/DC (optional wiring and connection specifications see datasheet Type 2506)	008 410 D

¹⁾ The standard cable plug (0-250 V AC/DC), Item No. 008 353 P is part of the standard delivery. Order optional cable plugs with separate Item number as shown.

A wide selection of other cable plugs is available (see special datasheet Type 2506)