

2/2-Way; 1/8" NPT - 1/4" NPT; 0-140 PSI



Advantages/Benefits

- ▶ Coil can easily be changed with valve in place
- ▶ Coil is lockable in 4 x 90° positions or freely movable in between, as required
- ▶ Medium is only in contact with the valve internals and body
- ▶ High-quality seal material FPM (Viton) as standard
- ▶ High temperature option

Design/Function

The Type 6013 valves are based on a modular concept comprising of three basic elements: Valve body, push-over coil and standard cable plug. The valve assembly consists of a body to which the armature guide tube containing the plunger, seals and springs is attached.

The coil is pushed over the guide tube and thus isolated from the medium. The medium is only in contact with the valve internals and body.

A wide selection of port and orifice sizes is offered. The valve body material is brass and stainless steel. All valves have high quality FPM (Viton) seals as standard.

To simplify ordering, a wide selection of standard combinations of valve body, push over coil and standard cable plug can be ordered with one item number.

Cable plug options of the Type 2508 are available to suit special electrical application requirements.

- The modular concept provides flexibility to meet application requirements.
- The valves are interchangeable with the Type 211.

Applications

Fluids

Brass version:

Neutral gases and liquids, e.g. compressed air, natural gas, water, hydraulic oil, petrol.

Stainless steel version:

Difficult and slightly aggressive media

High temperature version:

Steam

Suitable for technical vacuum

Applications

- Pneumatic control
- Shut-off, dosing, filling and venting
- Small-scale instruments, laboratory and measuring technology
- Welding technology

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Fluid Control Systems

Compact Solenoid Valve - General Purpose

Threaded Port 1/8" NPT – 1/4" NPT

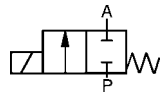
Type 6013

Technical Data Type 6013

Circuit Function

A – 2/2-way valve,
normally closed

Symbol



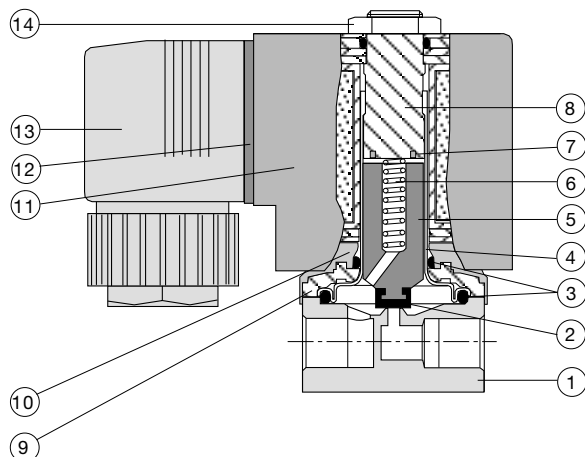
Operating Data (Valve)

Pressure range	0-140 PSI (see specifications)
Port connection	Threaded port 1/8" - 1/4" NPT
Orifice	5/64" - 1/4"
Fluid	Neutral gases and liquids, e.g. compressed air, town gas, natural gas, water, hydraulic oil, petrol. Stainless steel version for difficult and slightly aggressive media. High temperature version for steam. Suitable for technical vacuum.
Medium temperature	
FPM	14°F up to 212°F
PTFE / Graphite	32°F up to 356°F
Max. ambient temperature	130°F
Max. viscosity	21 cSt
Response times	
Opening	AC, DC 20 ms
Closing	AC, DC 30 ms
Installation	As required, but preferably with solenoid system upright

Operating Data (Actuator)

Operating voltages	AC 24, 110, 230 V/50 Hz, 24 V/DC
Voltage tolerance	±10%
Power consumption	See ordering chart
Duty cycle	100% continuously rated
Duty cycle for multiple manifolds	60% periodic duty (30 min) or use 5W-version (on request)
Cycling rate	Up to 1000 c.p.m.
Rating with cable plug	IP 65
Electrical connection	Delivery standard: Cable plug DIN 43 650 A, 0-250 V. (other versions see accessories)

Materials



1	Valve body:	Brass, SS 303 (1/8" NPT) SS 316 (1/4" NPT)
2	Plunger-seal:	FPM (Viton)
3	O-rings:	FPM (Viton)
4	Plunger guide tube:	308 Stainless steel
5	Plunger:	430F Stainless steel
6	Spring:	301 Stainless steel
7	Shading ring:	Copper (brass version) Silver (Stainless steel version)
8	Stopper:	430F Stainless Steel
9	Flange:	Cadmium plated steel
10	Bonnet:	Durethan BKV30H
11	Coil:	PA (Polyamide)
12	Flat seal:	NBR
13	Cable plug:	PA (Polyamide)
14	Locknut:	Zinc plated steel

Specifications - Ordering Chart (Other Versions on Request)

Standard version

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

Circuit function	Orifice [inch]	Port connection [NPT]	C _v	Power consumption (coil) [W]	Pressure range ²⁾ [PSI]	Voltage/frequency [V/Hz]	Item-No. • Brass body • FPM seal	Item-No. • SS body • FPM seal
A	5/64	1/8	0.14	8	0 – 140 0 – 140 0 – 140 0 – 140	24/DC 24/60 120/60 240/60	456 307 F 456 308 Q 456 309 R 456 310 D	457 302 B 457 303 C 457 304 D 457 305 E
A	7/64	1/8	0.19	8	0 – 87 0 – 87 0 – 87 0 – 87	24/DC 24/60 120/60 240/60	456 311 S 456 312 T 456 313 U 456 314 V	– – – –
A	1/8	1/8	0.27	8	0 – 87 0 – 140 0 – 140 0 – 140	24/DC 24/60 120/60 240/60	456 315 W 456 316 X 456 317 Y 456 318 H	456 331 W 456 332 X 456 333 Y 456 334 Z
A	1/8	1/4	0.27	8	0 – 87 0 – 140 0 – 140 0 – 140	24/DC 24/60 120/60 240/60	456 319 A 456 320 F 456 321 U 456 322 V	456 526 J 456 527 K 456 528 U 456 529 V
A	5/32	1/4	0.35	8	0 – 30 0 – 60 0 – 60 0 – 60	24/DC 24/60 120/60 240/60	456 323 W 456 324 X 456 325 Y 456 326 Z	456 494 K 456 495 L 456 496 M 456 497 N
A	1/4	3/8	0.64	10	0 – 15 0 – 23 0 – 23 0 – 23	24/DC 24/60 120/60 240/60	456 848 D 456 849 E 456 850 B 456 851 Y	– – – –

High temperature version (up to 357°F); PTFE/Graphite sealing

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

Circuit function	Orifice [inch]	Port connection [NPT]	C _v	Materials	Power consumption (coil) [W]	Pressure range ²⁾ [PSI]	Voltage/frequency [V/Hz]	Item-No. • PTFE/Graph. seal
A	5/64	1/4	0.14	Brass body SS seat	8	0 – 170 0 – 355 0 – 355 0 – 355	24/DC 24/60 120/60 240/60	457 376 C 457 377 D 457 378 N 457 379 P
A	1/8	1/4	0.27	Brass body SS seat	10	0 – 115 0 – 200 0 – 200 0 – 200	24/DC 24/60 120/60 240/60	457 380 O 457 381 S 457 382 T 457 383 U

¹⁾ Measured with 87 PSI upstream pressure and 14.5 PSI pressure drop across the valve at 68°F.

²⁾ All pressures quoted are gauge pressures with respect to the prevailing atmospheric pressure.

Options on request:

- Rc and NPT threads
- Other voltages and 60 Hz
- EEx, UL and CSA approvals
- Sub-base
- EPDM seals for -22°F up to 248°F

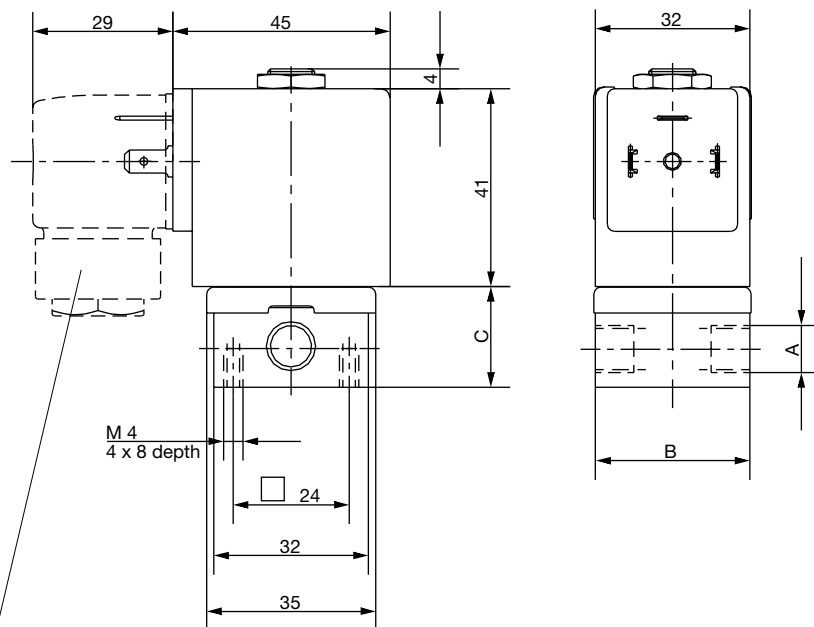
Compact Solenoid Valve - General Purpose

Threaded Port 1/8" NPT – 1/4" NPT

Type 6013

Dimensions [mm]

Threaded port version

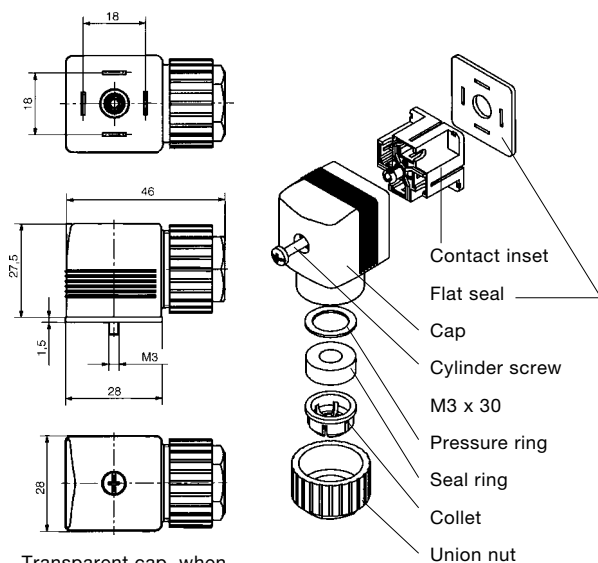


Cable plug DIN 43650, form A,
(0-250 V AC/DC) delivery standard.

Variable dimensions [mm]

	A	B	C
Threaded port G	1/8	32	20.8
Threaded port G	1/4	46	26.8
Threaded port G	3/8	50	39.8

Dimensions Accessories [mm]



Transparent cap, when
wired with LED.

Ordering Chart for Accessories

Device/ Accessory	Features	Item-No.
Cable plugs ¹⁾ Type 2508	Standard cable plug, 0-250 V AC/DC (standard-delivery) ¹⁾	008 376 N
	with LED, 12-24 V AC/DC	008 360 S
	with LED, 100-120 V AC/DC	008 361 P
	with LED + varistor, 12-24 V AC/DC	008 367 M
	with LED + varistor, 100-120 V AC/DC	008 368 W
	with LED + varistor, 200-240 V AC/DC	008 369 X
	(optional wirings and connection specifications see data sheet Type 2508)	

¹⁾ The standard cable plug (0-250 V AC/DC), Order-No. 008 376 N
is part of the standard delivery.
Ordering of optional cable plugs with separate item number.

A wide selection of further cable plugs is available
(see datasheet Type 2508)