

2/2-way Solenoid Valve with servo diaphragm



- Servo-assisted
- 7 – 145 PSI
- DN 10 mm, DN 13 mm
- PPE/PA body (Noryl)
- UR/CSA/CE

Type 6228 can be combined with...



Type 2506

Cable plug to
DIN EN 175301-
803 Form C¹⁾



Type 2507

Cable plug
industrial standard
Form B



Type 2510

ASI-
cable plug

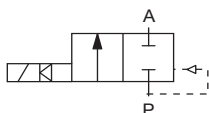
The Type 6228 is a servo-assisted 2/2-way solenoid valve with servo-diaphragm. It is particularly suited for neutral media.

Without electrical power, this solenoid valve is closed. Pressure builds up through the servo-diaphragm, which pushes the latter downwards and thereby keeps the valve closed. On switching, the space above the servo-diaphragm will be relieved via the pilot valve.

As a result, the pressure of the medium lifts the servo-diaphragm, and the main valve opens. A minimum differential pressure of 7 PSI is required for complete opening and closing. The special design and geometry of the internal parts of the valve produce a soft closing function with very low pressure peaks only.

It is very simple to extend the valve radially.

Circuit function A



2/2-way valve,
servo-assisted,
normally closed,
with 2-way pilot valve

Technical data	
Body material	PPE, PA (Noryl)
Body cover	PPE, PA (Noryl)
Valve internal parts	PPS, Ms
Sealing material	NBR, EPDM, FKM
Media	Neutral media that does not attack the materials (e.g. compressed air, water, hydraulik oil, oils, greases without additives)
Medium temperature	
NBR	32°F to 158°F
EPDM	14°F to 158°F
FKM	32°F to 158°F
Ambient temperature	32°F to 131°F
Port connection	Threaded ports NPT 3/8, 1/2 (see <i>Ordering charts Accessories</i>)
Operating voltage	24 V DC, 24/120/240/60HZ
Voltage tolerance	±10%
Duty cycle	100 % continuous rating
Electrical connection	<ul style="list-style-type: none"> ▪ Tag connectors sideways ▪ to DIN EN 175301-803 C¹⁾ for cable plug Type 2506 / 2510 (see <i>Ordering charts Accessories</i>)
Installation	as required, preferably with actuator upright
Mass	130 g (DN 10), 180 g (DN 13)
Protection class	IP65 with cable plug

¹⁾ Pressure data [PSI]: Overpressure with respect to atmospheric pressure
²⁾ so far DIN 43650

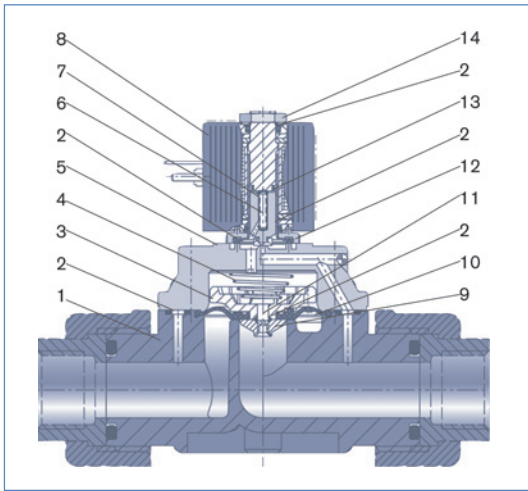
Response times

Orifice [mm]	C _v value water [GPM]	Port connection [NPT]	Pressure range [PSI]	Power consumption				Response times	
				Pick-up		Operation		Opening	Closing
				AC [VA]	DC [W]	AC [VA]	DC [W]	[ms]	[ms]
10	2.11	3/8	7 - 145	9	4	6	4	30	150
13	3.76	1/2	7 - 145	9	4	6	4	to 60	to 300

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

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

Material



- | | | |
|----|-----------------------------------|--------------------------------|
| 1 | Body | PPE / PA (Noryl) |
| 2 | O-ring | NBR, FKM, EPDM |
| 3 | Diaphragm support | PPS |
| 4 | Spring | 1.4310 |
| 5 | Body cover | PPE / PA (Noryl) |
| 6 | Core | 1.4105 |
| 7 | Spring | 1.4310 |
| 8 | Coil | |
| | DIN EN 175301-803 C ²⁾ | PA |
| | DIN EN 175301-803 B ²⁾ | Epoxy |
| | (industrial standard) | |
| 9 | Diaphragm support | Brass, PPS |
| 10 | Diaphragm | NBR, FKM, EPDM |
| 11 | Bolts | 1.4401 |
| 12 | Flange | Zn3glcC (surface) |
| 13 | Shading ring | Cu |
| 14 | Nut | 9SMnPb28K
(surface Zn5glcA) |

Dimensions [mm]

electrical coil connection acc. to DIN EN 175301-803 Form C²⁾ cable plug Type 2506

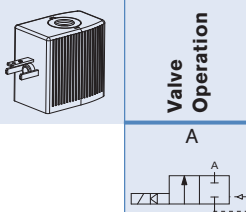
electrical coil connection acc. to DIN EN 175301-803 Form C²⁾ (industrial standard) cable plug Type 2507

DN	A	B	C	D	E	F
10	73	83	32	NPT 3/4	17	13
13	85	93.5	43	NPT 1	19	13

DN	G	I	L
10	NPT 3/8	73	107
13	NPT 1/2	85	123

²⁾ so far DIN 43650

Ordering charts

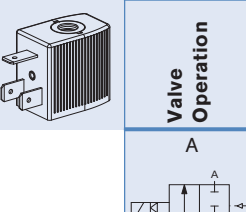
Type 6228 solenoid valve complete with coil according to DIN EN 175301-803 Form C¹⁾ for Type 2506 appliance plug


Valve Operation	Orifice [mm]	C _v value Water [GPM]	Pressure range [PSI]	Sealing material	Voltage/frequency [V/Hz]	Item no.
A	10	2.11	7 - 145	NBR	24/DC	459 139
					24 - 60	459 140
					120 - 60	459 141
					240 - 60	459 142
				EPDM	24/DC	459 143
					24 - 60	459 144
					120 - 60	459 145
					240 - 60	459 146
				FKM	24/DC	459 147
					24 - 60	459 148
					120 - 60	459 149
					240 - 60	459 150
	13	3.76	7 - 145	NBR	24/DC	459 151
					24 - 60	459 152
					120 - 60	459 153
					240 - 60	459 154
				EPDM	24/DC	459 155
					24 - 60	459 156
					120 - 60	459 157
					240 - 60	459 158
				FKM	24/DC	459 159
					24 - 60	459 160
					120 - 60	459 161
					240 - 60	459 162

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

²⁾ Was DIN 43650

Type 6228 solenoid valve complete with Form B coil (industrial standard) for Type 2507 cable plug




Valve Operation	Orifice [mm]	C _v value Water [GPM]	Pressure range [PSI]	Sealing material	Voltage/frequency [V/Hz]	Item no.				
A	10	2.11	7 - 145	NBR	24/DC	461 851				
					24 - 60	461 852				
					120 - 60	461 853				
					240 - 60	461 854				
					EPDM	24/DC	461 855			
						24 - 60	461 856			
				120 - 60		461 857				
				FKM	24/DC	461 858				
					24 - 60	461 859				
					120 - 60	461 860				
				13	3.76	7 - 145	7 - 145	NBR	240 - 60	461 861
									240 - 60	461 862
									240 - 60	461 863
								EPDM	24/DC	461 864
									24 - 60	461 865
									120 - 60	461 866
				FKM	24/DC	461 867				
					24 - 60	461 868				
	120 - 60	461 869								
	240 - 60	461 870								
	FKM	24/DC	461 871							
		24 - 60	461 872							
		120 - 60	461 873							
	240 - 60	461 874								

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

- All valves in PPE/PA body, without appliance plug and without connector set (see *Accessory Ordering charts*)
- Other Versions on request.

Accessory ordering charts


Three-part connector set from PPE/PA (Noryl)



Orifice [mm]	Port connection	Sealing material (O-ring)	Item no.
10	NPT 3/8	NBR	144 433
		FKM	142 415
		EPDM	142 418
13	NPT 1/2	NBR	144 439
		FKM	142 421
		EPDM	142 424

- You require two connector sets for one valve.
- The connector set is not included in the standard delivery. It must be ordered separately.


Cable plug type 2506 to DIN EN 175301-803 form C^{?)}



Circuitry	Features	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).


Cable plug type 2507 to DIN EN 175301-803 form B^{?)} (industrial standard)



Circuitry	Features	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 to DIN EN 175301-803 Form B^{?)} (industrial standard) (see Datasheet Type 2507).

ASI appliance plug Type 2510 according to DIN EN 175301-803 C^{?)}



Voltage	Repeat back signal	Item no.
bus supplied	without	142 693
	with	142 692
external supply	without	142 689
	with	142 688

^{?)} so far DIN 43650