

## 2/2-way Solenoid Valve with servo diaphragm



Type 6228 can be combined with...



### Type 2506

Cable plug to DIN EN 175301-803 Form C <sup>2)</sup>



### Type 2507

Cable plug industrial standard Form B



### Type 2510

ASI cable plug

- servo-assisted
- 0.5 ... 10 bar<sup>1)</sup>
- DN 10 mm, DN 13 mm
- PPE/PA body (Noryl)

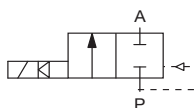
The Type 6228 is a servo-assisted 2/2-way solenoid valve with servo-diaphragm. It is particularly suited for neutral media.

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 0.5 bar 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	
<b>Body material</b>	PPE, PA (Noryl)
<b>Body cover</b>	PPE, PA (Noryl)
<b>Valve internal parts</b>	PPS, Ms
<b>Sealing material</b>	NBR, EPDM, FPM
<b>Media</b>	Neutral media that does not attack the materials (e.g. compressed air, water, hydraulic oil, oils, greases without additives)
<b>Medium temperature</b>	
<b>NBR</b>	0 ... +50 °C
<b>EPDM</b>	-10 ... +50 °C
<b>FPM</b>	0 ... +50 °C
<b>Ambient temperature</b>	0 ... +50 °C
<b>Port connection</b>	Threaded ports G 3/8, G 1/2 (see Ordering charts Accessories)
<b>Operating voltage</b>	24 V DC, 24 / 110 / 230 V / 50-60 Hz
<b>Voltage tolerance</b>	±10%
<b>Duty cycle</b>	100 % continuous rating
<b>Electrical connection</b>	<ul style="list-style-type: none"> <li>▪ Tag connectors sideways</li> <li>▪ To DIN EN 175301-803 C<sup>2</sup> for cable plug Type 2506 / 2510 (see Ordering charts Accessories)</li> </ul>
<b>Installation</b>	As required, preferably with actuator upright
<b>Mass</b>	130 g (DN 10), 180 g (DN 13)
<b>Protection class</b>	IP65 with cable plug

<sup>1)</sup> Pressure data [bar]: Overpressure with respect to atmospheric pressure

<sup>2)</sup> so far DIN 43650

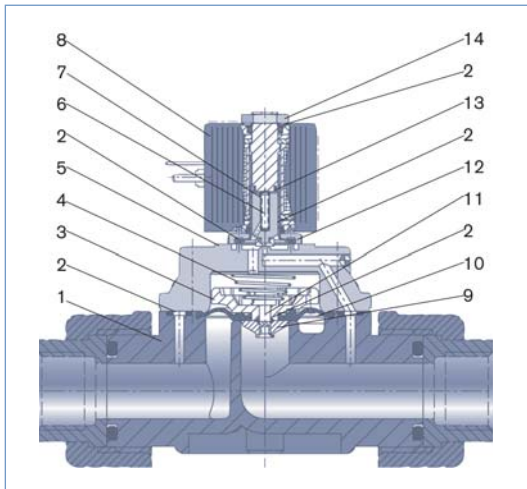
## Response times

Orifice [mm]	Kv value water (m <sup>3</sup> /h)	Port connection	Pressure range	Power consumption				Response times	
				Pick up		Operation		Opening [ms]	Closing [ms]
				AC [VA]	DC [W]	AC [VA]	DC [W]		
10	1.8	G 3/8	0.5 - 10	9	4	6	4	30	150
13	3.2	G 1/2	0.5 - 10	9	4	6	4	to 60	to 300

<sup>1)</sup> Pressure data [bar]: Overpressure with respect to atmospheric pressure

- $k_v$  value [m<sup>3</sup>/h]: Flow rate value for water, measured at +20 °C and 1 bar<sup>1)</sup> pressure differential over a fully opened valve.
- Response times [ms]: measured at valve outlet at 6 bar<sup>1)</sup> and +20 °C  
Opening: pressure build-up 0 ... 90 %, closing: pressure relief 100 ... 10 %

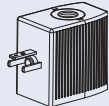
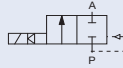
## Material



1	Body	PPE / PA (Noryl)
2	O-ring	NBR, FPM, 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 <sup>2)</sup>	PA
	DIN 43650 B	Epoxy
	(industrial standard)	
9	Diaphragm support	Brass, PPS
10	Diaphragm	NBR, FPM, EPDM
11	Bolts	1.4401
12	Flange	Zn3glcC (surface)
13	Shading ring	Cu
14	Nut	9SMnPb28K (surface Zn5glcA)

## Ordering charts

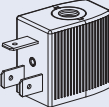
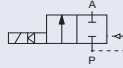
Type 6228 solenoid valve complete with coil according to DIN EN 175301-803 Form C <sup>2)</sup> for Type 2506 appliance plug

	Valve operation	Orifice [mm]	Kv value Water [m <sup>3</sup> /h]	Pressure range [bar] <sup>1)</sup>	Sealing material	Voltage/frequency [V/Hz]	Item no.
	A	10	1.8	0.5 - 10	NBR	24/DC	142 220
						24/50 - 60	142 221
						110/50 - 60	142 222
						230/50 - 60	142 223
					EPDM	24/DC	142 224
						24/50 - 60	142 225
						110/50 - 60	142 226
						230/50 - 60	142 227
					FPM	24/DC	142 228
						24/50 - 60	142 229
						110/50 - 60	142 230
						230/50 - 60	142 231
		13	3.2	0.5 - 10	NBR	24/DC	142 232
						24/50 - 60	142 233
						110/50 - 60	142 234
						230/50 - 60	142 235
					EPDM	24/DC	142 236
						24/50 - 60	142 237
						110/50 - 60	142 238
						230/50 - 60	142 239
					FPM	24/DC	142 240
						24/50 - 60	142 241
						110/50 - 60	142 242
						230/50 - 60	142 243

<sup>1)</sup> Pressure data [bar]:  
Overpressure with respect to atmospheric pressure

<sup>2)</sup> so far DIN 43650

Type 6228 solenoid valve complete with Form B coil (industrial standard) for Type 2506 cable plug


	Valve operation	Orifice [mm]	Kv value Water [m <sup>3</sup> /h]	Pressure range [bar] <sup>1)</sup>	Sealing material	Voltage/frequency [V/Hz]	Item no.
	A	10	1.8	0.5 - 10	NBR	24/DC	163 660
						24/50 - 60	163 671
						110/50 - 60	163 672
						230/50 - 60	163 673
					EPDM	24/DC	163 674
						24/50 - 60	163 675
						110/50 - 60	163 676
						230/50 - 60	163 677
					FPM	24/DC	163 678
						24/50 - 60	163 679
						110/50 - 60	163 680
						230/50 - 60	163 681
		13	3.2	0.5 - 10	NBR	24/DC	163 682
						24/50 - 60	163 683
						110/50 - 60	163 684
						230/50 - 60	163 685
					EPDM	24/DC	163 686
						24/50 - 60	163 687
						110/50 - 60	163 688
						230/50 - 60	163 689
					FPM	24/DC	163 690
						24/50 - 60	163 691
						110/50 - 60	163 692
						230/50 - 60	163 693

<sup>1)</sup> Pressure data [bar]:  
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	G 3/8	NBR	142 425
			FPM	142 426
			EPDM	142 427
	13	G 1/2	NBR	142 428
			FPM	142 429
EPDM			142 430	


- 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 43650 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

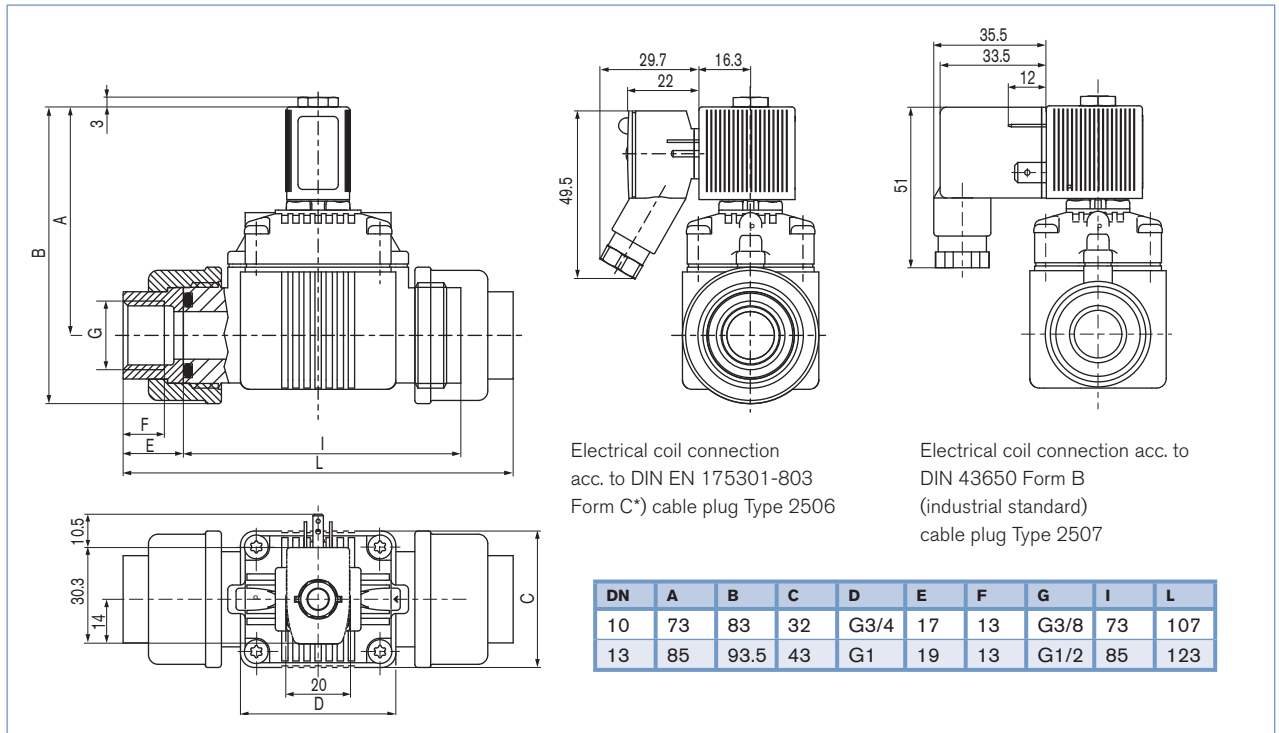
- Supplied with cable plug: flat seal and fixing screw.
- Other versions of cable plug with circuitry to DIN 43650 Form B (industrial standard) (see Datasheet Type 2507).

### ASI appliance plug Type 2510 according to DIN EN 175301-803 C\*)

	Voltage	Current rating	Item no.
	bus supplied	without	142 693
		with	142 692
	external supply	without	142 689
		with	142 688

\*) so far DIN 43650

## Dimensions [mm]



\*) so far DIN 43650

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