

SENSORS

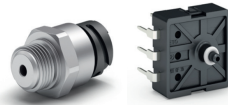
Position

Pressure

Position Switches

LVDTs

Pressure Sensors



Stationary and mobile hydraulics, offshore (pneumatics)

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Pneumatics, stationary and mobile hydraulics

24 ±20% V

15 ±5% V, 24 ±20% V

5 V, 24 V

Up to 40,0 mm

Up to ±16,0 mm

Up to ±16,0 mm

X

X

X

Up to max. 420 bar

Up to max. 420 bar

0,1 - 40 bar

IP65

IP65

IP00 up to IP65, IP67, IP6K9K

X

X

Open collector output up to 400 mA, small hysteresis, long lifetime, high pressure resistance, wide range of operating temperature

Output signal 12 - 3 V / 4 - 20 mA, excellent linearity and gain, long lifetime, high pressure resistance, wide range of operating temperature

Customer specific connectors and variants available, high pressure up to 250 bar possible



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The Heart of Motion

Product Overview

ACTUATORS

Electromagnetic Solenoids

Solenoid Valves

Innovations

Round Solenoids



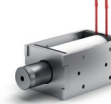
Square Solenoids



C-Frame Solenoids



D-Frame Solenoids



Push/Pull Solenoids Closed Type



Cartridge Valves



Pneumatic Valves



Bistable Actuators



MAGNETOSHAPE® Actuators



Main application	Stationary and mobile hydraulics, offshore (pneumatics)	Stationary and mobile hydraulics, offshore (pneumatics)	Industrial applications, safety equipment, medical engineering	Industrial applications, safety equipment, medical engineering	Industrial applications, medical engineering	Automotive, mobile hydraulics	Commercial vehicles, railway technology	Railway and automation technology, medical engineering, automotive	Medical engineering, industrial applications
Size	NG4, NG6, NG10	NG4, NG6, NG10	10 - 30 x 12 - 35 x 20 - 60 mm	10 - 50 x 10 - 50 x 20 - 100 mm	20 - 100 x 25 - 250 mm	Ø 28 - 45 mm			49 x 56 x 45 - 111 mm
Voltage DC	6 - 230 V	6 - 32 V	6 - 230 V	6 - 230 V	6 - 230 V	6 - 230 V	12, 24 V	12, 24 V	24 V
Nominal power	8 - 54 W	12 - 55 W	0,5 - 150 W	1 - 500 W	3 - 1000 W	8 - 54 W	6,9 W		
Nominal solenoid force	30 - 170 N	45 - 185 N							10 - 20 N
Duty ratio	Up to 100 %	Up to 100 %	Up to 100 %	Up to 100 %	Up to 100 %	Up to 100 %	Up to 100 %		
Stroke Working stroke Total stroke Measured displacement	2,5 - 4,0 mm 5,0 - 8,8 mm	2,8 - 4,0 mm 4,0 - 9,0 mm	0,5 - 15,0 mm 1,0 - 20,0 mm	1,0 - 35,0 mm 2,0 - 40,0 mm	1,0 - 35,0 mm 2,0 - 40,0 mm	2,0 - 4,0 mm 2,0 - 6,0 mm		4,0 mm	0,35 - 0,95 mm
Mode of operation Switching Proportional	X X	X X	X (X)	X (X)	X X	X X	X (X)	X	X X
Operating direction Push Pull Bi-directional	X X X	X X X	X X (X)	X X (X)	X X X	X X X	X	X X X	X X
Pressure resistance dynamic	Up to max. 350 bar	Up to max. 250 bar				Up to max. 350 bar	0 - 21 bar		
Protection class (depending on connector)	IP65, IP67, IP6K9K	IP65, IP67, IP6K9K	IP00 (IP65, IP67, IP6K9K)	IP00 (IP65, IP67, IP6K9K)	IP00 up to IP65 (IP67, IP6K9K)	IP65, IP67, IP6K9K	IP67, IP6K9K	IP6K9K	
Electric connector DIN EN 175301-803 A Deutsch DT04-2P AMP Junior Timer Flying leads M12 Bajonett ISO 15170 Others on request	X X X X X X	X X	X	X	X	X X X X X	X	X	X
Special features	Exchange of coil without opening the hydraulic circuit, small hysteresis, quick response time, available with different versions of manual override, available with sensor unit	Small hysteresis, quick response time, available with different versions of manual override, available with sensor unit	Light and cost-effective design based on stamping and bending parts	Light and cost-effective design based on stamping and bending parts	High magnetic power, long lifetime, maintenance-free bearings	Solenoid valve for oil control, available with sensor unit		Holding force deenergized in start position >20 N / end position > 8 N, fast switching times, long lifetime, wear protected push pin, available with sensor unit	Fast cycle duties, multistable and monostable versions, long lifetime, temperature monitoring