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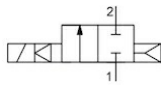
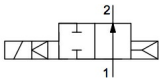
2/2-Way solenoid valve - pilot-operated
Series 21PW



de-energized closed



de-energized open

Design type	2/2-way solenoid valve with piston seal, pilot-operated, de-energized closed or de-energized open
Connection	G3/8"...G1/2" according to ISO228/1
Materials	Body Brass, Internal parts Stainless steel similar 1.4101, Seat seal PTFE, Piston seal FKM
Mounting type	Installation in rigid piping system
Mounting position	any
Application range	NC: gaseous and liquid media, that do not attack the materials used NO: only as a relief valve for compressors. The valve is installed in a bypass line for this purpose.
Viscosity	max. 12 mm^2/s (cst)
Switching time	depending on operating pressure and medium
Medium temperature	depending on solenoid coil
Ambient temperature	see table "Solenoid coils"

Electrical data:

Coil type	Type BDA, Connector width 32mm (Standard coil) Type BDV, Connector width 32mm (Coil for humid environment) Type GDH/GDV, Connector width 32mm (Coil for higher pressures, Coil for humid environment)
Electrical connection	connector according to EN175301-803 form A (see separate data sheet)
Voltage type	AC and DC voltage
Standard voltage	230V/50-60Hz, 24V/50-60Hz, 24VDC
Special voltages	12...380V/50Hz or 60Hz, 12...220VDC
Permissible voltage fluctuation	AC +10%/-15% DC +10%/-5%
Power consumption	see table "Power consumption of the solenoid coils"
Duty cycle	100% Duty cycle (continuous operation)
Degree of protection	IP65 according to EN 60529 with properly mounted device connector (protection against dust ingress and water jets)
Application note	When ordering, please specify voltage and type of current. We recommend always installing a strainer upstream to prevent malfunctions in the event of contamination of the medium. These valves can also be used for rough vacuum if the minimum differential pressure of 0.5 bar is present.

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Type code

		21PW	3	K	0	T	120	-	BDA	-	230V/50-60Hz
		G3/8"	3								
	Connection	G1/2"	4								
		de-energized closed		K							
	Function	de-energized open		F							
	Seal	PTFE				T					
	Nominal size	12mm					120				
		BDA Standard coil - Approval CE							BDA		
		BDV Coil for humid environment - Approval CE-CSA-UL-VDE							BDV		
		GDV Coil for higher pressures - Coil for humid environment - Approval CE-CSA-UL-VDE							GDV		
	Coil	GDH Coil for higher pressures - Coil for humid environment - Approval CE							GDH		
		230V/50Hz									230V/50-60Hz
		24V/50-60Hz									24V/50-60Hz
		24VDC									24VDC
		12...110V/50Hz or 60Hz									
	Voltage	12...220VDC									

Applications of the individual sealing materials

Material	Medium temperature	Application examples
PTFE/FKM*	-10...140°C	Air, Water, neutral gases and liquids

Solenoid coils

Type	Degree of protection	Insert	Ambient temperature	Approvals
BDA	IP65	Medium temperature up to max. 120°C	-10...+40°C	CE
BDV	IP65	Medium temperature up to max. 180°C, high humidity	-20...+60°C	CE-CSA-UL-VDE
GDV	IP65	Medium temperature up to max. 180°C, high humidity	-20...+60°C	CE-CSA-UL-VDE
GDH	IP65	Medium temperature up to max. 180°C, high humidity	-20...+40°C	CE

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Power consumption of the solenoid coils

Voltage	Tightening torque (Alternating current) VA	Holding force (Alternating current) VA	Holding force (Direct current) operating temperature W	Type
220-230V/50-60Hz	25	14,5	-	BDA08223DS
24V/50-60Hz	25	14,5	-	BDA08024DS
24VDC	-	-	8	BDA08024CS
380V/50-60Hz	25	14,5	-	BDA08380DS
115V/60Hz	25	14,5	-	BDA08115BS
110V/50-60Hz	25	14,5	-	BDA08110DS
48V/50Hz	25	14,5	-	BDA08048AS
42V/50Hz	25	14,5	-	BDA08042AS
110VDC	-	-	8	BDA08110CS
12VDC	-	-	8	BDA08012CS
230V/50Hz 240V/60Hz	25	16	-	BDV08230AY
24V/50-60Hz	25	17	-	BDV08024DY
24VDC	-	-	11	BDV08024CY
110V/50Hz 120V/60Hz	25	15	-	BDV08110AY
12VDC	-	-	14	GDH14012CS
48VDC	-	-	14	GDH14048CS
220VDC	-	-	14	GDH14220CS
230V/50Hz 240V/60Hz	43	27	-	GDV14230AY
24V/50-60Hz	43	26	-	GDV14024DY
24VDC	-	-	14	GDV14024CY
110V/50Hz 120V/60Hz	43	23	-	GDV14110AY

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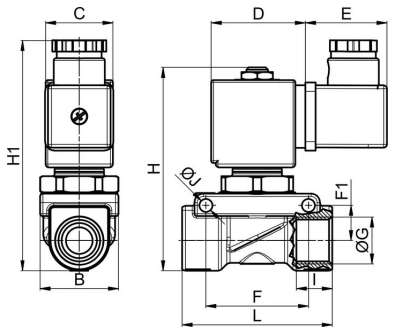
Dimensions



Connection G	Nominal size DN[mm]	Pressure range [bar]		B	C	D	E	F	F1	H	H1	I	J	L	Kv value [m³/h Water]	Weight [approx. kg]	Coil	Type
		AC	DC															
G3/8"	12	0,5 - 18	-	35	30	42	36	45,8	16	91	104	12	5,7	67	1,9	0,8	BD.	21PW3K0T120
G3/8"	12	0,5 - 20	0,5 - 15	35	52	55	36	45,8	16	91	104	12	5,7	67	1,9	1,1	GD.	21PW3K0T120
G1/2"	12	0,5 - 18	-	35	30	42	36	45,8	16	91	104	14	5,7	67	2,3	0,8	BD.	21PW4K0T120
G1/2"	12	0,5 - 20	0,5 - 15	35	52	55	36	45,8	16	91	104	14	5,7	67	2,3	1,1	GD.	21PW4K0T120
G3/8"	12	0,5 - 18	0,5 - 18	35	30	42	36	45,8	16	100	104	12	5,7	67	1,9	0,8	BD.	21PW3F0T120
G1/2"	12	0,5 - 18	0,5 - 18	35	30	42	36	45,8	16	100	104	14	5,7	67	2,3	0,8	BD.	21PW4F0T120

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