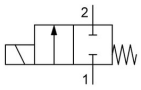
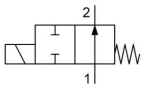
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2/2-Way solenoid valve - direct-acting
Series 21A with flow control unit





de-energized closed



de-energized open

Design type	2/2-way solenoid valve with elastic seal, direct-acting, normally closed or de-energized open
Connection	G1/4" according to ISO228/1
Materials	Body Brass, Guide tube Stainless steel, Internal parts Stainless steel similar 1.4104, Seal Ruby or FKM
Mounting type	Installation in rigid piping system
Mounting position	any
Application range	gaseous and liquid media that do not attack the materials used
Viscosity	max. 53mm²/s (cst)
Leakage	With hard sealing materials such as ruby, a normal, slight leakage of 2 cm³/min at a pressure of 1 bar may occur.
Switching time	10...30ms
Switching frequency	max. 1500/min
Medium temperature	depending on the sealing material and Solenoid coil
Ambient temperature	see table "Solenoid coils"

Electrical Data:	
Coil type	Type BDV, Connector width 32mm (Standard coil, 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/50Hz, 24V/50-60Hz, 24VDC
Special voltages	12...240V/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 correctly 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 so that no malfunctions occur if the medium is contaminated. These valves can also be used for rough vacuum. The maximum rated housing pressure can be 25bar. The maximum switchable pressure is the differential pressure between valve inlet and outlet. The valves are also suitable for rough vacuum. For DC voltage, the specified differential pressure values apply for a medium temperature of max. 80°C and an ambient temperature of 40°C. At higher media temperatures, the permissible differential pressure decreases by 0.4% per °Celsius.

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Type code

	21A	16	K	V	25	-	BDA	-	230V/50Hz
Connection	G1/4"	16							
	de-energized closed		K						
Function	de-energized open		Z						
	FKM			V					
Seal	Ruby			R					
Nominal size	2,5mm				25				
	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/50Hz
	24V/50-60Hz								24V/50-60Hz
	24VDC								24VDC
	12...240V/50Hz or 60Hz								
Voltage	12...220VDC								

Applications of the individual sealing materials

Material	Medium temperature	Application examples
FKM	-10...140°C	Gasoline, Diesel, Air, Oils, Water
Ruby	-40...180°C	Steam, Heavy fuel oil, aggressive media

Solenoid coil

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

Power consumption of the solenoid coils

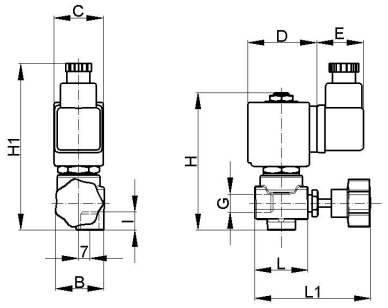
Voltage	Tightening torque (Alternating current) VA	Holding force (Alternating current) VA	Holding force (Alternating current) W	Holding force (Direct current) operating temperature W	Type
24VDC	-	-	-	11	BDV08024CY
24V/50-60Hz	25	17	8	-	BDV08024DY
110V/50Hz 115V/60Hz	25	15	8	-	BDV080110AY
230V/50Hz 240V/60Hz	25	16	8	-	BDV08230AY
12VDC	-	-	-	14	GDH14012CS
48VDC	-	-	-	14	GDH14048CS
24VDC	-	-	-	14	GDV14024CY
24V/50-60Hz	43	27	14	-	GDV14024DY
230V/50Hz 240V/60Hz	43	27	14	-	GDV14230AY
110V/50Hz 120V/60Hz	43	27	14	-	GDV14110AY
220VDC	-	-	-	14	GDV14220CS

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Permissible differential pressures in bar and Kv value

Seat seal	Nominal size DN[mm]	de-energized closed NC				de-energized open NO		Kv value [m^3/h Water]	Type
		Coil BDV		Coil GD.		Coil BDV	Coil GD.		
		AC	DC	AC	DC	AC and DC	AC and DC		
V	2,5	14	9	25	25	14	17	0,19	21A16KV25
R	2,5	14	5	25	20	16	17	0,19	21A16KR25

Dimensions



Connection G	B	C	D	E	H	H1	L	L1	Weight [approx. kg]	Coil	Type
G1/4"	29	30	42	36	83	97	32,5	66-72	0,32	BDV	21A16
G1/4"	29	52	55	36	83	97	32,5	66-72	0,60	GDH/GDV	21A16

Illustrations non-binding
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