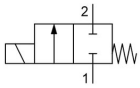
Partnership. With Guarantee.

2/2-Way solenoid valve - direct-acting
Series 21L


21L1


21L1-RL


21L2



de-energized closed

Design type	2/2-way solenoid valve with elastic seal, direct-acting, normally closed
Connection	G1/8"...G1/4" according to ISO228/1
Materials	Body and Guide tube Stainless steel 1.4401, Internal parts Stainless steel 1.4401 or rather 1.4106, Seal FKM or PTFE, Gold-plated shading ring
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. 53mm^2/s (cst)
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 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 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 40bar. The maximum switchable pressure is the differential pressure between valve inlet and outlet. 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

	21L	1	K1	V	25	-	RL	-	BDA	-	230V/50-60Hz
	G1/8"	1									
Connection	G1/4"	2									
Function	de-energized closed		K1								
	PTFE			T							
Seal	FKM			V							
	2,5mm				25						
	3,0mm				30						
Nominal size	5,5mm				55						
	without (Leave blank)										
Flow control	with side flow control						RL				
	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/50-60Hz										230V/50-60Hz
	24V/50-60Hz										24V/50-60Hz
	24VDC										24VDC
	12...380V/50Hz or 60Hz										
Voltage	12...220VDC										

Applications of the individual sealing materials

Material	Medium temperature	Application examples
FKM	-10...140°C	Water,Air,Oils, Gasoline, Diesel, slightly aggressive gases and liquids
PTFE	-40...180°C	aggressive media

Permissible differential pressures in bar and Kv value

Seat seal	Nominal size DN[mm]	de-energized closed NC				Kv value [m^3/h Water]
		Coil BD.		Coil GD.		
		AC	DC	AC	DC	
V, T	2,5	14	9	30	25	0,19
V, T	3	10	6	25	20	0,24
V	5,5	3,5	1	10	5	0,54
T	5,5	3,5	1	7	5	0,54

Solenoid coils

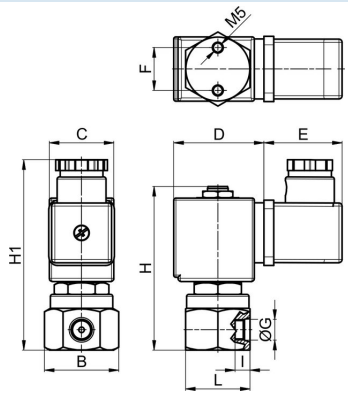
Type	Degree of protection	Insert	Ambient temperature	Approvals
BDA	IP65	Medium temperature up to max. 120°C	-10...+40°C	CE
BDV	IP65	Medium temperature up to max. 160°C, high humidity	-20...+60°C	CE-CSA-UL-VDE
GDV	IP65	Medium temperature up to max. 180°C, high humidity	-20...+60°C	CE-CSA-UL-VDE
GDH	IP65	Medium temperature up to max. 180°C, high humidity	-20...+40°C	CE

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Power consumption of the solenoid coils

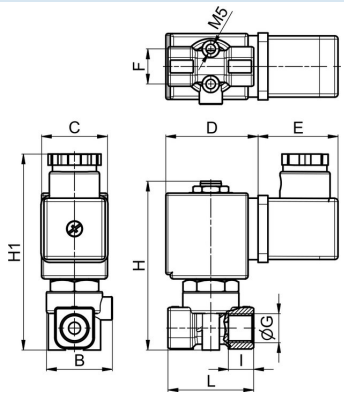
Voltage	Tightening torque (Alternating current) VA	Holding force (Alternating current) VA	Holding force (Direct current) operating temperature W	Type
220-230V/50-60Hz	25	14,5	-	BDA08223DS
24V/50-60Hz	25	14,5	-	BDA08024DS
24VDC	-	-	8	BDA08024CS
380V/50-60Hz	25	14,5	-	BDA08380DS
115V/60Hz	25	14,5	-	BDA08115BS
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

Dimensions



Connection G	B	C	D	E	F	H	H1	I	L	Weight [approx. kg]	Coil	Type
G1/8"	35	30	42	36	20	76	90	7	30	0,32	BD.	21L1K1.25
G1/8"	35	52	55	36	20	76	90	7	30	0,65	GD.	21L1K1.25
G1/8"	35	30	42	36	20	76	90	7	30	0,32	BD.	21L1K1.30-RL
G1/8"	35	52	55	36	20	76	90	7	30	0,65	GD.	21L1K1.30-RL

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Connection G	B	C	D	E	F	H	H1	I	L	Weight [approx. kg]	Coil	Type
G1/4"	28	30	42	36	16	78	92	7	39	0,32	BD.	21L2K1.55
G1/4"	28	52	55	36	16	78	92	7	39	0,65	GD.	21L2K1.55

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