

Solenoid valves 2/2-way direct- and servo-operated Types EV215B and EV225B

Features



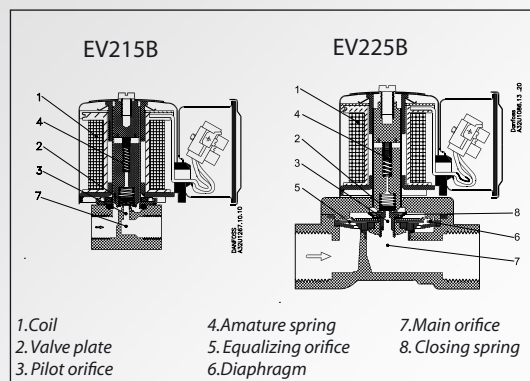
- For robust industrial application.
- For steam with a temperature of up to 185°C.
- EV225B valves are particularly suitable for applications requiring dirt-resistant valves.
- Steam pressure: Up to 10 bar.
- Ambient temperature: Up to 40°C.
- Coil enclosure: IP 43
- Thread connections: From G 1/4 to G 1
- Regarding NPT thread, please contact Danfoss.

Technical data

Type	EV215B	EV225B
Installation	Vertical solenoid system is recommended	
Pressure range	Max. 10 bar	
Max. test pressure	25 bar	
Time to open ¹⁾	Max. 0.2 s	
Time to close ¹⁾	Max. 2.0 s	
Ambient temperature	Max. 40°C at a medium temperature of 185°C	
Medium temperature	185°C with ac coil / 160°C with dc coil	
Materials		
Valve body:	Stainless steel, W. no. 1.4404 / AISI 316L	DZR brass
Armature/ Armeture stop:	Stainless steel, W. no. 1.4105 / AISI 430FR	
Armature tube:	Stainless steel, W. no. 1.4306 / AISI 304L	
Spring:	Stainless steel, W. no. 1.4310 / AISI 301	
Diaphragm:		PTFE
Valve plate:	PTFE	
Valve seat:		Stainless steel, W. no. 1.4305 / AISI 303
External gaskets:	O-ring: AFLAS	

1) The times are maximum values and apply to steam. The exact times will depend on the pressure conditions.

Function



Coil voltage disconnected (closed):

When the voltage is disconnected, the valve plate (2) is pressed down against the pilot orifice (3) by the armature spring (4). The pressure across the diaphragm (6) is built up via the equalizing orifice (5). The diaphragm/piston closes the main orifice (7) as soon as the pressure across the diaphragm/piston is equivalent to the inlet pressure. The valve will be closed for as long as the voltage to the coil is disconnected.

Coil voltage connected (open):

When voltage is applied to the coil (1), the pilot orifice (3) is opened. As the pilot orifice is larger than the equalizing orifice (5), the pressure across the diaphragm (6) drops and therefore it is lifted clear of the main orifice (7). The valve is now open for unimpeded flow and will be open for as long as the minimum differential pressure across the valve is maintained, and for as long as there is voltage to the coil.



Ordering

Conne- ction ISO 228/1	Seal material	k _v - value [m ³ /h]	Media temp		Type designation		Code no. (without coil)	Pressure range (bar)/Coil type		
			ac coil Max. [°C]	dc coil Max. [°C]	Main type	Specification		Min.	Max.	
									10 W ac	17 W dc
G 1/4	PTFE	0.3	185	160	EV215B 3 SS	G14T NC000	032U3001	0	10	10
G 1/4	PTFE	0.9	185	160	EV225B 6 BD	G14T NC000	032U3002	0.2	10	10
G 3/8	PTFE	2.2	185	160	EV225B 10 BD	G38T NC000	032U3003	0.2	10	10
G 1/2	PTFE	2.2	185	160	EV225B 10 BD	G12T NC000	032U3004	0.2	10	10
G 1/2	PTFE	3.0	185	160	EV225B 15 BD	G12T NC000	032U3005	0.2	10	10
G 3/4	PTFE	5.0	185	160	EV225B 20 BD	G34T NC000	032U3006	0.2	10	10
G 1	PTFE	6.0	185	160	EV225B 25 BD	G1T NC000	032U3007	0.2	10	10

1) To order valve body with-
out coil use appendix 99.

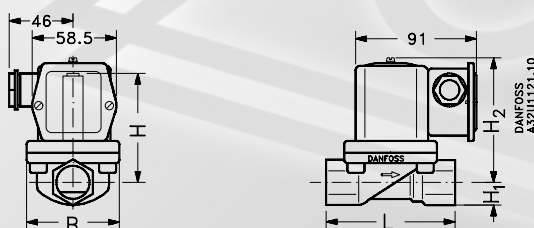
Coil voltage	Coil output	Appendix ¹⁾
24 V, 50Hz	10 W a.c.	82
48 V, 50Hz	10 W a.c.	87
110V, 50Hz	10 W a.c.	83
220-230 V, 50Hz	10 W a.c.	84
240 V, 50Hz	10 W a.c.	85
380-400 V, 50Hz	10 W a.c.	86
220 V, 60Hz	10 W a.c.	90
24 V dc	17 W d.c.	02

Example: Code no. for EV225B 15BD valve with 230 V 50 Hz coil is **032U3005.84**

Technical data, coil

Voltage tolerances	230 V and 400 V ac coils: +6%, -15%. Other a.c.coils: +10%, -15%. d.c.coils: ±10%
Power consumption, pulling	ac coil: 50 VA
Power consumption, holding	ac coil: 20VA, 10W ac / dc coil: 17 W
Insulation of coil windings	Class H according to IEC 85
Connection	Terminal box; Pg 13.5
Coil enclosure, IEC 529	IP 43
Ambient temperature	Max. 40°C
Duty rating	Continuous.

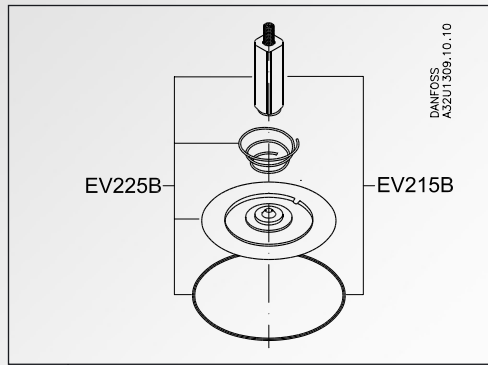
Dimensions and weight



Valve type	L [mm]	B [mm]	H [mm]	H ₁ [mm]	H ₂ ¹⁾ [mm]	Weight with coil [kg]
EV215B SS	38	34	65.5	11.5	76.5	0.56
EV225B 6 BD	62	46	75	13	87	0.78
EV225B 10 BD	62	46	75	13	87	0.82
EV225B 15 BD	81	56	77	15	88.5	0.96
EV225B 20 BD	98	72	84	18	95	1.4
EV225B 25 BD	106	72	90	21	103	1.8

1) In the case of dc coils 5 mm is added to the H₂ measurement.

Spare parts kits



Spare parts kit for EV215B

The spare parts kit comprises an armature with valve plate, spring and O-ring.

Spare parts kit for EV225B

The spare parts kit comprises an armature with valve plate and spring, closing spring, diaphragm and O-ring.

Type	Code no.
EV215B	032U3170
EV225B DN 6-10	032U3171
EV225B DN15	032U3172
EV225B DN 20-25	032U3173

Spare coils



Coil voltages	Code no.
24 V, 50 Hz (10 W ac)	032K1436.82
48 V, 50 Hz (10 W ac)	032K1436.87
110 V, 50 Hz (10 W ac)	032K1436.83
220-230 V, 50 Hz (10 W ac)	032K1436.84
240 V, 50 Hz (10 W ac)	032K1436.85
380-400 V, 50 Hz (10 W ac)	032K1436.86
110 V, 60 Hz (10 W ac)	032K1436.91
220 V, 60 Hz (10 W ac)	032K1436.90
24 V dc (17 W dc)	032K1409.02

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