Technical Brochure

Solenoid valves 2/2-ways direct operated type EV215B

EV215B is a direct operated 2/2-way solenoid valve for use in steam application.

The design is based on a PTFE valve plate, ensuring high reliable function even in connection with contaminated steam.

Valve body in stainless steel for ensuring a long life even in connection with aggressive steam media.

Features

- 2/2-way
- Specifically designed for steam applications, 160°C or 185°C
- Direct operated
- Ambient temperature: +40°C
- G 1/4"
- Stainless steel valve body
- NC (normally closed)

ISO 228/1 or UL listed version with NPT for North America (EVSIS/UL)

Versions:

- EV215B used with BQ coil
  - ac voltage up to 185°C,
  - dc voltage up to 140°C
- EV215B used with BN coil
  - dc voltage up to 160°C
- EV215B used with BB coil
  - ac voltage up to 160°C
  - dc voltage up to 140°C

Ordering

NC valve body

Connection ISO 228/1	Valve plate material	K_v value (m^3/h)	Media temperature		Type designation		Pressure range (bar)/coil type					Code no. without coil
								Max				
			ac coil max (°C)	dc coil max (°C)	Main type	Specification	Min.	BQ 10 W ac	BN 20 W dc	BB 10 W ac	BB 18 W dc	
G 1/4	PTFE	0.3	185	160	EV215B 3 SS	G14T NC000	0	10	5	5	3.6	**032U3801**

Technical data

Main type	EV215B
Installation	Vertical solenoid system is recommended
Pressure range	Max. 10 bar
Max. test pressure	25 bar
Time to open [1)]	20 ms
Time to close [1)]	20 ms
Ambient temperature	Max. 40°C at a medium temperature of 185°C
Medium temperature	185°C with ac coil / 160°C with dc coil
Viscosity	max. 50 cSt

Materials

Valve body/valve seat	Stainless steel, W. no. 1.4404
Armature/Armature 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
Valve plate	PTFE
External gaskets	O-ring: Aflas

Ordering

Type BQ
Steam coil to 185°C

Coil voltage	Type	Coil output W	Temperature °C	Differential pressure	Appendix	Code No.
24 V 50 Hz	BQ	10	185	10	16	**018F4517**
110 V 60 Hz	BQ	10	185	10	20	**018F4519**
230 V 50 Hz	BQ	10	185	10	31	**018F4511**
220 V 60 Hz	BQ	10	185	10	29	**018F4520**

Technical data type BQ

Voltage tolerances	230 V ac coils: +6%, -15%
	Other ac coils: +10%, -15%
Power consumption, inrush	ac coils: 44 VA
Insulation of coil windings	Class H according to IEC 85
Connection	GDM 2011 (grey) Cable plug according to DIN 43650-A PG11
Coil enclosure, IEC 529	IP 65
Ambient temperature	Max. 40°C
Duty rating	Continuous

Type BN dc
Steam coils to 160°C

Coil voltage	Type	Coil output W	Temperature °C	Differential pressure	Appendix	Code No.
24 V dc	BN	20	160	15	02	**018F6968**

Technical data type BN

Voltage tolerances	±10%
Power consumption, inrush	20 W
Insulation of coil windings	Class H according to IEC 85
Connection	GDM 2011 (grey) Cable plug according to DIN 43650-A PG11
Coil enclosure, IEC 529	IP 65
Ambient temperature	Max. 40°C
Duty rating	Continuous

Type BB ac
Steam coils to 160°C

Coil voltage	Type	Coil output W	Temperature °C	Differential pressure	Appendix	Code No.
24 V 50 Hz	BB	10	160	5	16	**018F7358**
24 V 60 Hz	BB	10	160	5	14	**018F7365**
115 V 50 Hz	BB	10	160	5	22	**018F7361**
110 V 60 Hz	BB	10	160	5	21	**018F7360**
230 V 50 Hz	BB	10	160	5	31	**018F7351**
230 V 60 Hz	BB	10	160	5	32	**018F7363**
240 V 50 Hz	BB	10	160	5	33	**018F7352**
380 V 50 Hz	BB	10	160	5	37	**018F7353**

Type BB dc
Steam coils to 140°C

12 V dc	BB	18	140	3.6	01	**018F7396**
24 V dc	BB	18	140	3.6	02	**018F7397**

Technical data type BB

Voltage tolerances	230 V ac coils: +6%, -15%
	Other ac coils: +10%, -15% / dc: ±10%
Power consumption, inrush	ac coils: 44 VA / dc, 18 W
Insulation of coil windings	Class H according to IEC 85
Connection	GDM 2011 (grey) Cable plug according to DIN 43650-A PG11
Coil enclosure, IEC 529	IP 65
Ambient temperature	Max. 40°C
Duty rating	Continuous

Accessories:
power connector

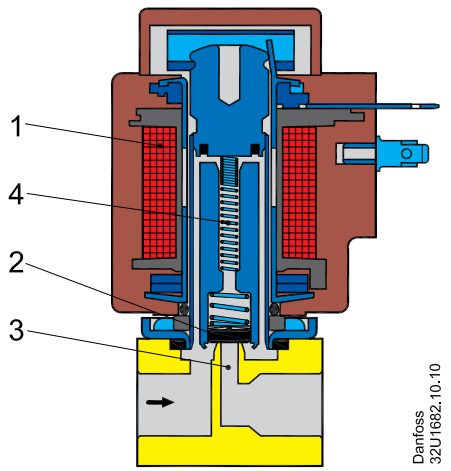
Type	Code No.
GDM 2011 (grey) Cable plug according to DIN 43650-A PG11	**042N0156**

Function

Coil voltage disconnected (closed):
When the voltage is disconnected, the closing spring (4) with the valve plate (2) is pressed down against the pilot orifice (3) by the closing spring (4) and the medium's 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 closing spring (4) with the valve plate (2) is lifted clear of the the orifice (3).
The valve is now open for flow and will be open for as long as there is voltage to the coil.

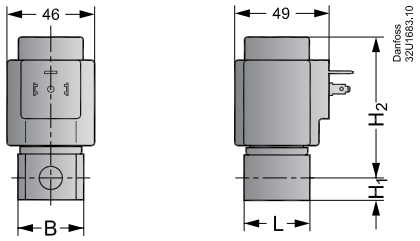
EV215B



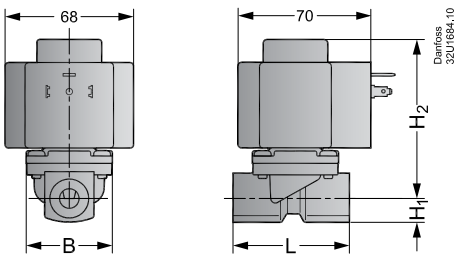
1. Coil
2. Valve plate
3. Pilot orifice
4. Closing spring

Dimensions and weight

Coil type BQ, BB



Coil type BN



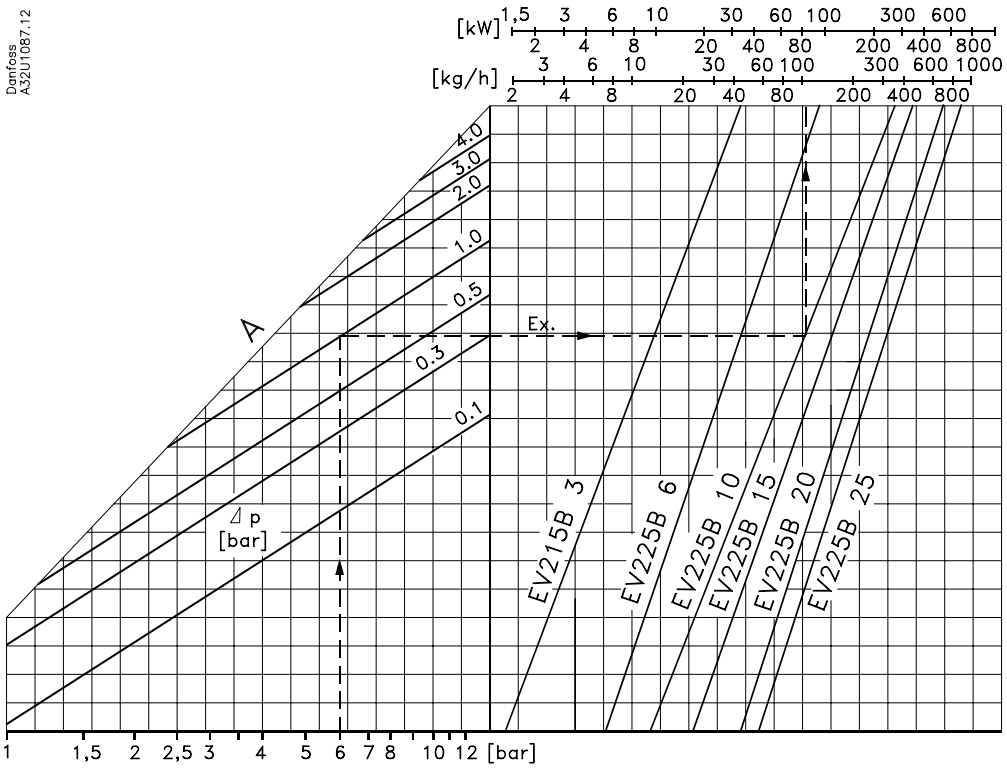
Type	L [mm]	B [mm]	H [mm]	H1 [mm]	H2 [mm]	Weight with coil BQ, BB [Kg]	Weight with coil BN [Kg]
EV215B 3	35	35	87	12.5	74.5	0.51	0.79

Spare part kit

Spare parts kit for EV215B
The spare parts kit comprises an armature with valve plate, spring and O-ring,

Type	Code No.
EV215B	**032U3170**

Steam capacity diagrams



Example
Capacity for EV225 10 BD @ inlet pressure (p_1) of 6 bar absolute; differential pressure at 1 bar:
Approx. 100 kg/h / 80 kW

Spare part coils for earlier steam valve versions with only screw to fasten coil to armature tube.

Type BR

Old coil Voltage	Type	Power consumption	Temperature °C	Differential pressure	Code No.
24 V 50 Hz	BR 024A	10	185	10	**032K143682**
24 V 60 Hz	BR 024B	10	185	10	**032K143693**
110 el. 115 V 50 Hz	BR 115A	10	185	10	**032K143683**
110 V 60 Hz	BR 110B	10	185	10	**032K143691**
230 V 50 Hz	BR 250A	10	185	10	**032K143684**
230 V 60 Hz	BR 230B	10	185	10	**032K143694**
240 V 50 Hz	BR 240A	10	185	10	**032K143685**
24 V dc	BR 024D	17	160	5	**032K140902**
220 V 60 Hz	BR 220B	10	185	10	**032K143690**

Technical data

Voltage tolerances	230 V ac coils: +6%, -15%
	Other ac coils: +10%, -15%
Power consumption, inrush	ac coils: 50 VA
Power consumption, holding	ac coils: 20 VA, 10 W ac
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