BE270, 2-Way Solenoid Valve

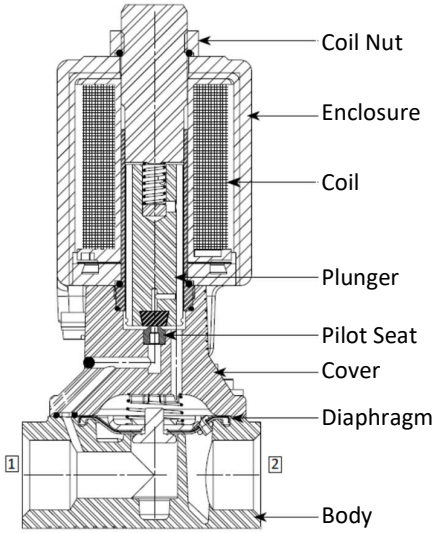
These 2-Way solenoid valves are pilot operated diaphragm type, requiring a minimum differential pressure to operate. They have an integrated pressure operated pilot valve, affording a high flow capacity.

The solenoid valve's design allows a small overall dimension with a relatively high flow-capacity. The solenoid coil is continuous duty design, with an epoxy molded or integral terminal box.

These 2-Way solenoid valves are suitable for activating BERMAD Deluge valves, Pre-action Valves and other Water Control Valves.

Model BE270-A-87

Note: refer to selection table for specific data



Features

- UL-Listed for 25bar/365psi pressure rating
- High flow capacity, 12 mm orifice
- Internal pilot-operated
- Stainless steel 316 body as standard
- Integral terminal box
- Ex d IIC T6 enclosure type 87

Electrical Specifications

- Power: 8 watts or Low Power types of 1 or 3 watts, see Selection Table
- 24V DC, 110-120V DC/AC or 220-240 VAC/50-60 Hz.
- Insulation Class: Class H
- Ingress protection: IP66/67 and US type 3, 3S ,4 ,4X ,6 ,6P (type 87 only)
- Maximum Duty Cycle (ED): 100% (continuous)
- Voltage Tolerance for UL-Listed models: +10% - 35%

Materials

- Body: Stainless steel 316
- Internals: Stainless steel
- Elastomers: HNBR
- Enclosure: Epoxy Coated Aluminum Terminal Box, Optional: SS316

Installation and Maintenance

The Solenoid Valve is the most critical unit in the Deluge system, it should be installed and wired by qualified and trained personnel only.

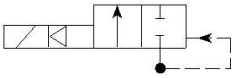
The coil should be wired in accordance with the requirements of the applied norm such as IEC, NEC, NFPA-70 or other code and standards.

Ensure that the voltage supply and frequency correspond with the markings that appear on the enclosure label. A conduit hub on the enclosure side must be supported against torque during the assembly. Use appropriate tools while tightening a fitting into the conduit connector. After installation, the cable or conduit must be well supported to avoid excessive load on the conduit hub.

WARNING: This product shall be installed and wired by an authorize electrician only. The conduit hub on the enclosure must be supported against torque during assembly by using appropriate tools. While tightening a fitting into the conduit hub, attention must be paid that a max. torque of 20 Nm is not exceeded.

Maintenance: Proper operation of the Solenoid Valve should be periodically verified. Testing and Maintenance should be performed according to the IOM (Installation Operation & Maintenance) manual for the specific BERMAD Valve in use. It is recommended that the Solenoid Valve be inspected monthly for proper wiring and for leakage. The Solenoid valve must be tested annually. It must be operated when maximum system working conditions are applied to simulate the extreme conditions. The unit should be replaced if a malfunction occurs.

Circuit Functions



2/2-Way, N.C.

Note: Images, illustrations and icons are for display only

Technical Data

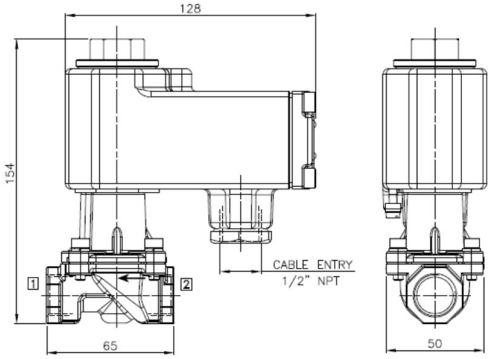
General Purpose, Model BE270-A-17

This solenoid valve is UL Listed in according with UL429A electrically operated valve for fire protection.
It has an epoxy coated aluminum coil construction suitable for normal conditions and non-classified areas. Type 17 coil is equipped with integral terminal box including screw terminals, with ½" NPT cable entry.
This solenoid valve is of continuous duty design with class H coil insulation, complete with 67 and US type 3, 3S, 4 ,4X, 6, 6P rated coil, the solenoid valve body is constructed of stainless steel 316 as standard.
Certifications: UL-Listed to be installed on the selected fire protection deluge valve.

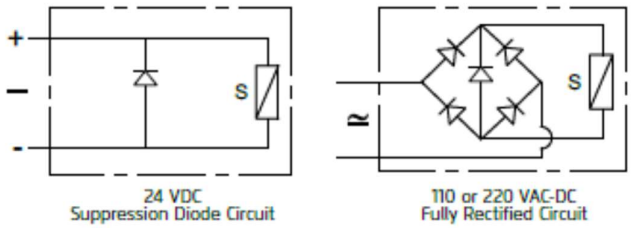
Ex d IIC T4-T6, Model BE270-A-87

This solenoid valve is UL Listed according to UL429A electrically operated valve for fire protection, complete with an Ex d flameproof enclosure suited for zones 1 group IIC hazardous locations and IEC-Ex and ATEX certified, including 8 Watts power consumption with safety factor of 65% of the rated voltage.
The solenoid valve rated working pressure shall be certified to 365 psi / 25 bar, brass or stainless steel 316 body material with epoxy coated aluminum or stainless steel 316 enclosure.
The electrical enclosure shall be Ex d with class H high temperature insulation, continuous duty rated and shall include an integrated terminal box with suppression diode and terminal blocks, IP66, 67 and US type 3, 3S, 4, 4X, 6, 6P rated.
Certifications: IEC-Ex, CE, ATEX, UL/FM approved to be installed on the selected fire protection deluge valve.
This solenoid valve body is constructed of stainless steel 316 as standard.

Dimensions



Wiring Circuit Diagrams



Solenoid Valve Selection Table

Model	Normally	Body Material	Enclosure Type / Class (color)	Code	Cable Entry	Port	Orifice	bar	Power	Certifications		
						Size"	mm		Watts	UL-429A(1)	IECEx(2), ATEX	NEC(5)
BE270-A-17	N.C.	SS316	IP67, NEMA 4X (blue)	-	½" NPT	½	12	0.5-25	8	✓	✓	-
BE270-A-87		SS316	Ex d, IP66/67 (red)	9	½" NPT	½	12	0.5-25	8	✓	✓	-
BE270-A-87N		SS316	Ex d, IP66/67 (SST)	9Jn	½" NPT	½	12	0.5-25	8	✓	✓	-
BE270-A-88		SS316	Class I Division 1 (red)	7	½" NPT	½	12	0.5-25	8	✓	-	✓
BE270-A-87-LP		SS316	LP(6) Ex d, IP66/67, Red	9	½" NPT	½	12	0.5-25	1~2	-	✓	-
BE270-A-17-LC2		SS316	LC2(3) Latch (blue)	H2	½" NPT	½	12	0.5-25	3	✓	✓	-
BE270-A-87-LC2		SS316	LC2(3) Latch Ex d, IP66/67 (red)	9H2	½" NPT	½	12	0.5-25	3	✓	✓	-
BE270-A-37-LC3		SS316	LC3(4) Ex d, 67 (yellow)	9H3	½" NPT	½	12	0.5-25	3	-	✓	-
BE270-B-17	N.O.	SS316	IP67, NEMA 4X (blue)	9	½" NPT	½	12	0.5-20	8	-	✓	-
BE270-B-87		SS316	Ex d, IP66/67 (red)	9	½" NPT	½	12	0.5-20	8	-	✓	-
BE270-B-87N		SS316	Ex d, IP66/67 (SST)	9Jn	½" NPT	½	12	0.5-20	8	-	✓	-
BE270-A-88		SS316	Class I Division 1 (red)	7	½" NPT	½	12	0.5-25	8	-	-	✓

NOTES:
(1) UL-Listed in accordance with UL429A for Electrically Operated Valves for Fire Protection Service. IP67 and US Type 3, 3S, 4 ,4X.
(2) IEC-Ex, ATEX and INMETRO certified for hazardous locations II 2 G Ex d IIC (gas group A, B, C) T4 - T6 IP66/67 Ingress Protection and US type 3, 3S, 4 ,4X.
(3) Magna-Latch, 2-Wires Last Position Change Over type, 24VDC only, UL-Listed in accordance with UL429A for Electrically Operated Valves for Fire Protection Service. IP67 and US type 3, 3S, 4 ,4X.
(4) Magna-Latch, 3-Wires Last Position internal double coils type, ATEX and INMETRO II 2 G Ex d IIC (gas group A, B, C) T4 - T6 IP67.
(5) National Electrical Code® (NEC®): UL Certified for Ex-Proof Class I Division 1, Groups B, C and D, and Class II, Groups E, F and G, Class III, Classification per NFPA 70 National Electrical Code®
(6) 87LP: Low Power 1W rated with no inrush value, 24VDC only, IEC-Ex, ATEX II 2 G Ex d IIC (gas group A, B, C) T4 - T6 IP66/67 Ingress Protection