

Reliable®

Solenoid Valves

For use in Systems with an Electric Release

Features

- Multiple Coil Voltage Options available
- Easily cleaned / Straight Body Style
- Explosion Proof Models available
- Brass Body & Rubber Seals

Product Description

Solenoid Valves indicated on this bulletin are listed/approved releasing devices for Reliable deluge and preaction systems. These valves are used in conjunction with a listed/approved releasing control panel operated by listed/approved detectors to activate the deluge or preaction system water control valve. The releasing control panel must have a supervised releasing circuit and back up power.

Note: Cross-listing and/or compatibility of solenoid valves with releasing control panels is not within the scope of this document. Please refer to releasing control panel manufacturer.

Operation

Normally closed solenoid valves are the primary releasing device located in the trim of electric release deluge water control valves. The actuation of the system is initiated by detectors or manual release stations used in conjunction with a releasing control panel. When electrical current is provided from the panel, the solenoid valve opens and relieves water pressure from the deluge valve push rod chamber or diaphragm control chamber. The loss of water pressure allows the deluge control valve to open and release water into the system.

Returning the solenoid valve to its normal, closed state will depend on the type of solenoid used. For all Parker Hannifin and ASCO two-way solenoid valves, the valve will return to the normal, closed state when electrical current is removed from the solenoid coil. For the Bürkert impulse solenoid, a secondary pulse of power to the solenoid from the panel is required to reverse the state of the solenoid.

For Model DDV Remote Resetting and Remote Resetting Pressure Regulating trims, closing the solenoid valve will result in re-pressurization of the diaphragm control chamber and subsequent closing of the Model DDV deluge valve.

Note: When using a normally closed solenoid valve, the system will not operate on total loss of power. The releasing panel used with the solenoid must have battery backup in order to operate the solenoid if the main power supply is lost.



Representative sample; actual product may vary.

Installation

1. Check nameplate for the correct voltage and the installation and maintenance instructions enclosed with the valve.
2. Remove the plastic plugs, if the unit is not installed in the trim by the factory.
3. Solenoids may be installed in any position but the recommended installation is vertical, with the coil upright.
4. The solenoid must be wired in accordance with local and national electrical codes. Units located in hazardous areas are to be wired with the appropriate electrical fittings.
5. Verify presence of strainer on supply side of solenoid valve. (Standard on Reliable valve trims utilizing solenoid valves.)
6. Apply pipe joint compound sparingly to the male threads of the pipe only. Use PTFE tape carefully to prevent any tape from getting into the solenoid valve. PTFE tape can become lodged in the valve and cause it to malfunction.
7. Only wrench flats provided on the body should be used when tightening the valve. Never use the sleeve or enclosure as a lever.
8. The solenoid valve is normally installed on a powered circuit. Never jumper or short the solenoid circuit terminals.

Solenoid Valves for Use in Ordinary Locations

Table A

Reliable Part Number	Approvals	Manufacturer Part Number	Pressure Rating psi (bar)	Voltage	Watts	Threads	Cv Factor	NEMA Rating	FM Release Panel Group	Notes (pg. 3)
6871020000	UL, FM	Parker Hannifin 73218BN4UNLVNOC111C2	175 (12.1)	24 VDC	10	1/2"	4.0	1, 2, 3, 3S, 4, & 4X	1 or higher	1
6871030000	UL	Parker Hannifin 73218BN4UNLVNOC111C4	175 (12.1)	48 VDC	10	1/2"	4.0	1, 2, 3, 3S, 4, & 4X	NA	2, 3
6871090000	UL	Parker Hannifin 73218BN4UNLVNOC111P3	175 (12.1)	120 VAC	10	1/2"	4.0	1, 2, 3, 3S, 4, & 4X	NA	2, 3
6871040000	UL	Parker Hannifin 73218BN4UNLVNOC1113N	175 (12.1)	125 VDC	10	1/2"	4.0	1, 2, 3, 3S, 4, & 4X	NA	2, 3
6871020020	UL, FM	Parker Hannifin 73212BN4TNLVNOC322C2	300 (20.7)	24 VDC	22	1/2"	4.0	1, 2, 3, 3S, 4, & 4X	3 or higher	1
6871020040	UL	Parker Hannifin 73212BN4UNLVNOC322C4	300 (20.7)	48 VDC	22	1/2"	4.0	1, 2, 3, 3S, 4, & 4X	NA	2, 3
Upon Request	UL	Parker Hannifin 73212BN4TNLVNOC322P3	300 (20.7)	120 VAC	22	1/2"	4.0	1, 2, 3, 3S, 4, & 4X	NA	2, 3
Upon Request	UL	Parker Hannifin 73212BN4TNLVNOC3223N	300 (20.7)	125 VDC	22	1/2"	4.0	1, 2, 3, 3S, 4, & 4X	NA	2, 3

Solenoid Valves for Use in Hazardous Locations

Table B

Reliable Part Number	Approvals	Manufacturer Part Number	Pressure Rating psi (bar)	Voltage	Watts	Threads	Cv Factor	NEMA Rating	FM Release Panel Group	Notes (pg. 3)
6999990322	UL, FM	Parker Hannifin 73218BN4UNLVNOH111C2	175 (12.1)	24 VDC	10	1/2"	4.0	1, 2, 3, 3S, 4, 4X, 7, & 9	1 or higher	2
Upon Request	UL	Parker Hannifin 73218BN4UNLVNOH111P3	175 (12.1)	120 VAC	10	1/2"	4.0	1, 2, 3, 3S, 4, 4X, 7, & 9	NA	2, 3
Upon Request	UL	Parker Hannifin 73218BN4UNLVNOH1113N	175 (12.1)	125 VDC	10	1/2"	4.0	1, 2, 3, 3S, 4, 4X, 7, & 9	NA	2, 3
6871020033	UL, FM	Parker Hannifin 73212BN4TNLVNOH322C2	300 (20.7)	24 VDC	22	1/2"	4.0	1, 2, 3, 3S, 4, 4X, 7, & 9	3 or higher	2
Upon Request	UL	Parker Hannifin 73212BN4TNLVNOH322C3	300 (20.7)	120 VAC	22	1/2"	4.0	1, 2, 3, 3S, 4, 4X, 7, & 9	NA	2, 3
Upon Request	UL	Parker Hannifin 73212BN4TNLVNOH3223N	300 (20.7)	125 VDC	22	1/2"	4.0	1, 2, 3, 3S, 4, 4X, 7, & 9	NA	2, 3

Alternate Solenoid Valves

Table C

Reliable Part Number	Approvals	Manufacturer Part Number	Pressure Rating psi (bar)	Voltage	Watts	Threads	Cv Factor	NEMA Rating	FM Release Panel Group	Notes (pg. 3)
6871020010	UL, FM	ASCO 8210G207	175 (12.1)	24 VDC	10.6	1/2"	3.4	1, 2, 3, 3S, 4, & 4X	3 or higher	2
6871060000	UL	ASCO 8210G107	175 (12.1)	120 VAC	16.7	1/2"	3.4	1, 2, 3, 3S, 4, & 4X	NA	2
6871040000	UL	ASCO 8210A107	175 (12.1)	125 VDC	16.7	1/2"	3.4	1, 2, 3, 3S, 4, & 4X	NA	2
Upon Request	UL, FM	ASCO 8210G227	300 (20.7)	24 VDC	17.1	1/2"	3.4	1, 2, 3, 3S, 4, & 4X	3 or higher	2
6871020250	FM	Bürkert 5282	300 (20.7)	24 VDC	11	1/2"	4.0	4X	1 or higher	4
6871020143	LPCB, CE	Parker Hannifin 73212BN4TNLVNOH211C2	300 (20.7)	24 VDC	22	1/2"	4.0	ATEX	3 or higher	5

Table A, B, and C Notes:

1. Reliable standard solenoid valve for (a) Model DDX deluge and preaction systems, (b) Model DDV Electric Release deluge system, and (c) Model DDV UL Listed Remote Resetting deluge system.
2. Non-standard, special order solenoid valves. Allow additional lead time (contact Reliable sales).
3. FM does not approve solenoid voltages other than 24 VDC.
4. Reliable standard solenoid valve for (a) Model DDV FM Approved Remote Resetting trim and (b) Model DDV Remote Resetting Pressure Regulating deluge system.
5. International approvals and applications only.

Maintenance

The owner is responsible for maintaining all parts of the fire protection system in proper operating condition. Any system maintenance or testing that involves placing a system component out of service may eliminate the fire protection that is provided by the fire protection system.

Solenoid valves shall periodically be given a thorough inspection and test. NFPA 25, "Inspection, Testing, and Maintenance of Water Based Fire Protection Systems," provides minimum requirements.

The frequency of the testing may vary due to contaminated water supplies, corrosive water supplies, or corrosive atmospheres. Solenoid valves should be operated at least once a month and checked for cracks, corrosion, and leakage. Immediately replace any valve found to be inoperable or impaired.

Before closing a fire protection system control valve for inspection and/or maintenance, permission to take the system out of service must be obtained from the proper authorities and all persons who might be affected by the outage. Particular care must be taken to notify those responsible for monitoring the system and the fire service organization responsible for the response in the event of a fire. After putting the system back in service, notify the proper authorities and all persons who were affected by the outage.

Replacement of a solenoid valve should only be done by trained and experienced personnel. A damaged or improperly repaired solenoid could cause the fire protection system to be impaired or inoperable. This impairment could result in the loss of life or property. A fire patrol or fire watch may be required to ensure that there is not a loss of life or property. The owner is responsible to ensure that all maintenance and repair is done properly and that prudent measures are taken to protect life and property.

Prior to taking the system out of service, ensure that the control valve for the system is closed. Before the system is placed back in service, the solenoid valve should be tested to ensure that it is functioning properly.

Causes of Improper Operation

1. Review the distance from the releasing panel and check the available voltage at the connection to the solenoid. The voltage should be at least 85% of the nameplate rating.
2. Check the electrical system by energizing the releasing circuit to the solenoid valve. A metallic "click" that signals that the solenoid valve is working. If you do not hear the click check for loose wires, connections, blown fuses, open circuits or grounded coil. Check for broken lead wires or bad splice connections.
3. Check for open-circuited (burned out) coil and replace if necessary. Confirm supply voltage does not exceed the coil name plate rating.

Service

Non-operational solenoid valves, or solenoid valves showing signs of sluggish response, leakage, or other unusual operation **MUST BE IMMEDIATELY REPLACED.**

Guarantee

For Reliable Automatic Sprinkler Co., Inc. guarantee, terms, and conditions, visit www.reliablesprinkler.com.

Ordering Information

Provide description and part number from Table A, B, or C.