

Solenoid Valves For Deluge And Preaction Systems Electric Release Service

General Description

The Solenoid Valves For Releasing Service are intended for use with Tyco Fire Products Deluge and Preaction Valves which are to be electrically actuated. The Solenoid Valves are used in conjunction with an electric releasing panel that is listed or approved (as appropriate) for fire protection releasing service, and where the releasing panel is operated by listed or approved (as appropriate) electric fire detectors.

WARNING

The Solenoid Valves described herein must be installed and maintained in compliance with this document, as well as with the applicable standards of the National Fire Protection Association, in addition to the standards of any other authorities having jurisdiction. Failure to do so may impair the integrity of this device.

The owner is responsible for maintaining their fire protection system and devices in proper operating condition. The installing contractor or sprinkler manufacturer should be contacted relative to any questions.

Technical Data

Approvals

UL Listed and CSA Certified under the name of Parker Hannifin Corporation, Skinner Valve Division. P/N 52-287-1-024 (175 psi) and P/N 52-287-1-124 (250 psi) are FM Approved for release of Tyco Fire Products Deluge and Preaction Valves.

Working Water Pressure

Refer to Figure 1.

Physical Characteristics

The body is brass, and the seal is Nitrile rubber.

Operation

Operation of an electrical device such as a heat sensitive thermostat, smoke detector, or electric manual pull station signals the releasing panel to energize the releasing circuit. Energizing the releasing circuit opens the normally closed de-energized Solenoid Valve to release water pressure from the differential chamber of the deluge or preaction valve, which in turn permits the deluge or preaction valve to open and allow a flow of water into the system piping.

Installation

The Solenoid Valves For Releasing Service are to be installed in accordance with the following instructions:

Step 1. Check the nameplate for the correct catalog number, NEMA classification, and voltage.

Step 2. The Solenoid Valves are to be installed as part of the deluge or preaction valve trim in accordance with the applicable instructions provided for the deluge valve or preaction valve.

The inlet port of the Solenoid Valve is to be connected to the differential



chamber of the deluge or preaction valve, and the outlet port of the Solenoid Valve is to be piped to an open drain. For best life and optimum performance the Solenoid Valve should be mounted vertically upright, as illustrated in Figure 2, so as to minimize wear and reduce the possibility of accumulating foreign matter.

Step 3. Only apply pipe thread sealant sparingly to the male pipe threads of the connecting pipe nipples.

Step 4. To prevent distortion of the Solenoid Valve body, always wrench on the portion adjacent to the pipe to which it is being connected. Do not use the Solenoid Valve to force a pipeline into position. Doing so may result in distortion of the valve.

Step 5. Conduit and electrical connections are to be made in accordance with the requirements of the authority having jurisdiction and/or the National Electric Code. The coil assembly may be reoriented, as necessary, by first loosening the nut on top of the coil. After repositioning the coil assembly, tighten the nut with a torque of 43 to 53 inch-pounds (4,9 to 6,0 Nm).

NOTE

Turn off electrical power before connecting the Solenoid Valve to the power source.

ENCLOSURE TYPE (NEMA RATINGS)	VOLTAGE	WORKING WATER PRESSURE (PSI (BAR))	WATTS	AC VOLT-AMPS		DC AMPS	CATALOG	P/N
				INRUSH ^(a)	HOLDING ^(b)			
ORDINARY LOCATION (2, 4, and 4X)	120 VAC, 60 Hz 110 VAC, 50 Hz	20-175 (1,4-12,1)	10	31	16	—	73218BN4UNLVN0C111P3	52-287-1-110
	24 VDC	20-175 (1,4-12,1)	10	—	—	0.41	73218BN4UNLVN0C111C2	52-287-1-024
	24 VDC	20-250 (1,4-17,2)	22	—	—	0.83	73212BN4TNLVN0C322C2	52-287-1-124
	48 VDC	20-175 (1,4-12,1)	10	—	—	0.21	73218BN4UNLVN0C111C4	52-287-1-048
	125 VDC	20-175 (1,4-12,1)	11	—	—	0.08	73218BN4UNLVN0C1113N	52-287-1-125
	250 VDC	20-175 (1,4-12,1)	10	—	—	0.04	73218BN4UNLVN0C111N9	52-287-1-015
HAZARDOUS LOCATION (4, 4X, 7, and 9)	110/120 VAC	20-175 (1,4-12,1)	10	31	16	—	73218BN4UNLVN0H111P3	52-287-1-210
	24 VDC	20-175 (1,4-12,1)	10	—	—	0.41	73218BN4UNLVN0H111C2	52-287-1-224
	125 VDC	20-175 (1,4-12,1)	11	—	—	0.08	73218BN4UNLVN0H1113N	52-287-1-225
	250 VDC	20-175 (1,4-12,1)	10	—	—	0.04	73218BN4UNLVN0H111N9	52-287-1-215

NOTES:
 (a) Current to start plunger moving. (b) Current to hold plunger open.

FIGURE 1
ENCLOSURE AND VOLTAGE RATINGS

Care and Maintenance

The following inspection procedure must be performed as indicated, in addition to any specific requirements of the NFPA, and any impairment must be immediately corrected.

The owner is responsible for the inspection, testing, and maintenance of their fire protection system and devices in compliance with this document, as well as with the applicable standards of the National Fire Protection Association (e.g., NFPA 25), in addition to the standards of any authority having jurisdiction. The installing contractor or product manufacturer should be contacted relative to any questions.

It is recommended that automatic sprinkler systems be inspected, tested, and maintained by a qualified Inspection Service.

NOTES

Before closing a fire protection system control valve for inspection or maintenance work on the fire protection system which it controls, permission to shut down the effected fire protection system must first be obtained from the proper authorities and all personnel who may be affected by this action must be notified.

After placing a fire protection system

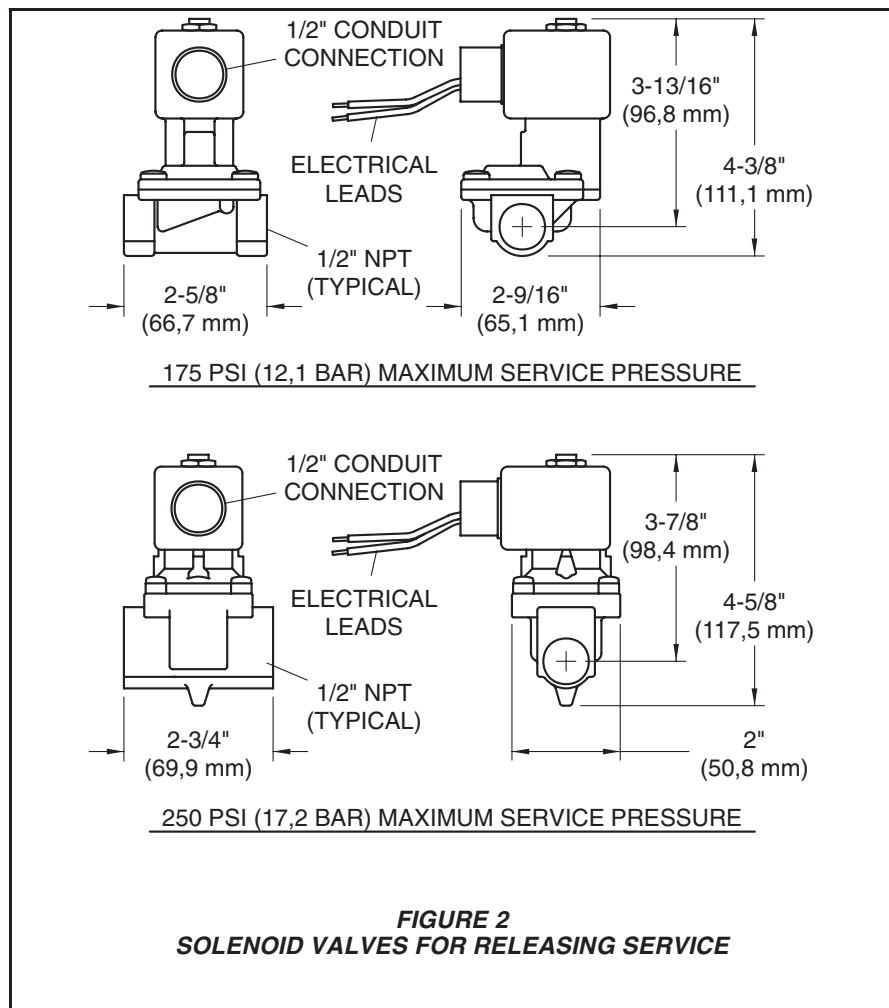


FIGURE 2
SOLENOID VALVES FOR RELEASING SERVICE

in service, notify the proper authorities and advise those responsible for monitoring proprietary and/or central station alarms.

INSPECTION PROCEDURE

The Solenoid Valves must be inspected quarterly in accordance with the following instructions:

Verify operation of the Solenoid Valve following the procedure outlined in the Technical Data Sheet for the Tyco Fire Products Deluge or Preaction Valve.

In general, if the voltage to the coil is correct, sluggish valve operation, excessive leakage, or noise will indicate that cleaning is required. Clean the Solenoid Valve in accordance with the procedures outlined by Honeywell, Inc. Skinner Valve.

Causes of Improper Operation

- **Faulty Control Circuit:** Check the electrical system by energizing the releasing circuit to the Solenoid Valve. A metallic “click” signifies that the solenoid is operating. Absence of the “click” indicates loss of power supply. Check for loose or blown fuses, open-circuited or grounded coil, broken lead wires or broken splice connections.
- **Burned-Out Coil:** Check for open-circuited coil. Replace if necessary. Check supply voltage; it must be the same as specified on label or nameplate.
- **Low Voltage:** Check voltage across the coil leads. Voltage must be at least 85% of nameplate rating.

Limited Warranty

Products manufactured by Tyco Fire Products are warranted solely to the original Buyer for ten (10) years against defects in material and workmanship when paid for and properly installed and maintained under normal use and service. This warranty will expire ten (10) years from date of shipment by Tyco Fire Products. No warranty is given for products or components manufactured by companies not affiliated by ownership with Tyco Fire Products or for products and components which have been subject to misuse, improper installation, corrosion, or which have not been installed, maintained, modified or repaired in accordance with applicable Standards of the National Fire Protection Association, and/or the standards of any other Authorities Having Jurisdiction. Materials found by Tyco Fire Products to be defective shall be either repaired or replaced, at Tyco Fire Products' sole option. Tyco Fire Products neither assumes, nor authorizes any person to assume for it, any other obligation in connection with the sale of products or parts of products. Tyco Fire Products shall not be responsible for sprinkler system design errors or inaccurate or incomplete information supplied by Buyer or Buyer's representatives.

IN NO EVENT SHALL TYCO FIRE PRODUCTS BE LIABLE, IN CONTRACT, TORT, STRICT LIABILITY OR UNDER ANY OTHER LEGAL THEORY, FOR INCIDENTAL, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO LABOR CHARGES, REGARDLESS OF WHETHER TYCO FIRE PRODUCTS WAS INFORMED ABOUT THE POSSIBILITY OF SUCH DAMAGES, AND IN NO EVENT SHALL TYCO FIRE PRODUCTS' LIABILITY EXCEED AN AMOUNT EQUAL TO THE SALES PRICE.

THE FOREGOING WARRANTY IS MADE IN LIEU OF ANY AND ALL OTHER WARRANTIES EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Ordering Information

Orders for the Solenoid Valves must include the description and Part Number (P/N).

Solenoid Valves:

Specify: (Specify voltage), (Specify 175 or 250) psi pressure rating, Solenoid Valve with (specify ordinary or hazardous) location enclosure, P/N (specify from Figure 1).

