



NS211 F,G,H, & J -- Service and Installation --

3/19/19

DESCRIPTION

The NS211 Series Solenoid Valves are 2-way, normally closed, piloted, general purpose valves. Stainless steel or Brass construction with synthetic seating and sealing materials make them suitable for use with a variety of liquids, oils and gases.

Valves should be mounted with the operator in a vertical position

OPERATION

NS211 Valves are normally closed (N.C.) and open when electrically energized.

SPECIFICATIONS

Use NS211 Valves within the specified operating ranges as indicated on the nameplate and in the complete Catalog Number. (min./max. psi, voltage, hz, maximum media temperature at F ambient, Cv factor, etc.).

OPERATING TEMPERATURES

Ambient	Elastomer	Fluid
32° - 125° F	EPR	32° - 295° F

For other applications, consult the factory.

INSTALLATION

Check valve specifications to make sure of proper application.

1. Clear all lines of foreign matter.
2. Valves should be mounted with the operator in a vertical/upright position. Flow must be in direction indicated on the valve body. If sediment is a problem, install a fine mesh strainer having adequate capacity ahead of the valve.
3. Do not use the solenoid housing as a handle. Apply thread seal to the male threads only.
4. Provide a clearance for solenoid coil removal.
5. Wire in accordance with applicable local and national electrical codes.

MAINTENANCE

COIL REPLACEMENT

Turn off the electrical power supply to the solenoid before disconnecting the coil lead wires.

Incorrect coil reassembly can cause coil burnout.

It is not necessary to remove the valve from the pipeline. Follow Steps 1, 2 and 3 under **DISASSEMBLY**. Disassemble solenoid, taking care to note the exact order of placement and quantity parts.

Incorrect reassembly can cause coil burnout. At all times take care not to nick, dent or damage plunger tube.

PARTS

The charts which follow cover replaceable coil part numbers, Repair and Rebuild kits for most NS211 valves.

When ordering parts/kits, specify Catalog Number, Serial Number, and Part Name. If your valve's Catalog Number is not listed, consult the factory.

REBUILD KIT

The Rebuild Kit contains a plunger/seat disc assembly, spring, diaphragm assembly, plunger tube assembly and O-rings.

REPAIR KIT

The Repair Kit contains a seat disc, O-rings and diaphragm assembly.

REBUILD & REPAIR KIT CHART

Valve	Rebuild Kits	Repair Kits
NS211YF02C7FG9	KS211AF02G9-NSF	K211G9-NSF
NS211YF02C7GJ2	KS211AF02J2-NSF	K211J2-NSF
NS211YF02C7HJ2	KS211AF02J2-NSF	K211J2-NSF
NS211YF02C7JJ2	KS211AF02J2-NSF	K211J2-NSF
NS211YF16C7FG9	KS211AF15G9-NSF	K211G9-NSF
NS211YF16C7GJ2	KS211AF15J2-NSF	K211J2-NSF
NS211YF16C7HJ2	KS211AF15J2-NSF	K211J2-NSF
NS211YF16C7JJ2	KS211AF15J2-NSF	K211J2-NSF

COIL CHART

Valve	Voltage	DIN Coil	Conduit Coil
NS211YF02C7FG9	120V 50/60	HS3YN02	HS3GN02A24
NS211YF02C7GJ2	120V 50/60	HS3YN02	HS3GN02A24
NS211YF02C7HJ2	120V 50/60	HS3YN02	HS3GN02A24
NS211YF02C7JJ2	120V 50/60	HS3YN02	HS3GN02A24
NS211YF16C7FG9	24 VDC	HS3YN16	HS3GN16A24
NS211YF16C7GJ2	24 VDC	HS3YN16	HS3GN16A24
NS211YF16C7HJ2	24 VDC	HS3YN16	HS3GN16A24
NS211YF16C7JJ2	24 VDC	HS3YN16	HS3GN16A24

Cleaning

Cleaning fluid must be compatible with all valve components.

It is recommended that NS211 Series Valves be cleaned on a routine basis by qualified personnel. Valves should be cleaned where flow media or service conditions may determine life of valve. Apply correct voltage. If excessive leakage occurs or if the operation is sluggish, the unit must be cleaned.

SERVICE Disassembly

WARNING

Disassembly, reassembly or internal adjustment without factory test may result in hazardous condition. If valve does not operate properly after following the INSTALLATION and MAINTENANCE instructions, complete valve must be replaced by a trained and experienced service-person.

1. Disconnect electrical connections and remove the retaining nut (1). Remove with lockwasher (2).
2. Lift off the coil housing (3) and split washer (4) from the plunger tube (7)
3. Do not damage the solenoid assembly.
4. Use a GC Valves Spanner Nut (106198E) to remove gland nut (5) and plunger tube (7). Do not nick, dent, or damage plunger tube (7) or valve seating surfaces.
5. Carefully hold plunger tube (7) in position when removing from valve bonnet (12) to prevent loss of internal parts.
6. Remove return spring (8) plunger assembly (9),
7. Remove four bonnet bolts (13) and separate the valve bonnet (14) from the valve body (19).
8. Carefully remove seat insert (11) from the bonnet (14) by pressing the seat insert out from the underside of the bonnet (14). This must be done to replace the seat insert O-rings (10 & 12)
9. Check plunger seat disc (9) and diaphragm assembly (16) for damage or wear.
10. Replace O-rings (10, 12, 17, & 18), diaphragm assembly (16), plunger seat disc (9) and other parts as necessary.
11. Re-assemble in reverse order from above taking care to properly re-install all items as removed.
12. Tighten Gland Nut (5) 18 to 24 in/lbs, and bonnet bolts (13) to 40 to 45 in/lbs.
13. Re-connect electrical and test for proper operation.

TROUBLE-SHOOTING

If valve fails to open check voltage against rating on nameplate, check voltage at solenoid lead connections, check control circuit and solenoid coil for burnout. If valve fails to close, check condition of synthetic seat insert. Check for damaged spring. Valve must be free of dirt to insure tight shutoff. If dirt is a problem, install a fine mesh strainer to insure proper closing and trouble-free operation

Buzzing or chattering can be caused by low voltage or dirt or chips between top of plunger and tube head. Check voltage--clean plunger and interior of tube and base assembly.

