



SC311 (AC/DC) -- Service and Installation --

10/27/2023 Rev.1

DESCRIPTION

The SC311 Series Solenoid Valves are 2-way, normally closed, direct acting, general purpose valves. All Nylon bodies with synthetic seating and sealing materials make them suitable for use with a variety of liquids, oils, and gases. Valves may be mounted in any position. A spring-loaded plunger assures positive shutoff.

OPERATION

SC311 Valves are normally closed (N.C.) and open when electrically energized.

SPECIFICATIONS

Use SC311 Valves within the specified operating ranges as indicated on the nameplate and in the complete Catalog Number. (max. psi, voltage, cycle, max. media temperature at F ambient, Cv factor, etc.).

OPERATING TEMPERATURES

Ambient	Elastomer	Fluid
32° - 125° F	EPR	32° - 180° F
32° - 125° F	Nitrile	32° - 180° F
32° - 125° F	FKM	32° - 180° F
32° - 125° F	PTFE	32° - 180° 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 are multi-poised and may be mounted in any position. Media flow must be in the 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 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.

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

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

PARTS

The charts that follow cover replaceable coil part numbers and Repair and Rebuild kits for most SC311 valves.

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

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

REBUILD KIT

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

REPAIR KIT

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

REBUILD & REPAIR KIT CHART

Valve	Rebuild Kits	Repair Kits
SC311YN_C__	KSC3102CDA5	-
SC311YN_N__	KSC3102NDA5	-
SC311YN_V__	KSC3102VDA5	-
SC311YN_T__	KSC3102TDA5	-

COIL CHART

Valve	Voltage	DIN Coil	Lead Wire Coil
SC311YN02__	120V 50/60	C944	C944L
SC311YN24__	24V 50/60	C987	C987L
SC311YN15__	12 VDC	C999	C999L
SC311YN16__	24 VDC	C926	C926L

Cleaning

Cleaning fluid must be compatible with all valve components. It is recommended that S301 Series Valves be cleaned on a routine basis by qualified personnel. Valves should be cleaned where flow media or service conditions may determine the life of the valve. If excessive leakage occurs or if the operation is sluggish, the unit must be cleaned.

SERVICE DISASSEMBLY AND KIT INSTALLATION

WARNING

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

1. Disconnect electrical connections and remove retaining nut (1).
2. Lift off coil (2) from the plunger tube.
3. Do not damage the solenoid assembly.
5. Use a slotted screwdriver to remove plunger tube (3). Do not nick, dent, or damage plunger tube (3) or valve seating surfaces.
6. Hold plunger tube (3) in position when removing from valve body (6) to prevent loss of internal parts.
7. Carefully remove plunger assembly (5),
8. Check seating surfaces on plunger seat disc (5) and valve body (6) for damage or wear.
9. Replace plunger (5), O-ring (4), and other parts as necessary. Consult the "REBUILD & REPAIR KIT CHART" for the correct kit part number.
10. Re-assemble in reverse order from above, taking care to properly install plunger (5), and plunger tube (3).
11. Tighten plunger tube (3) to 20 In/Lbs.
12. Re-connect electrical and test for proper operation.

TROUBLESHOOTING

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

Buzzing can be caused by low voltage or contaminants between the top of the plunger and the tube head. Check voltage--clean the plunger/interior of the tube assembly.

