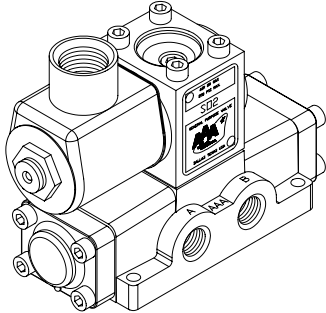


ALTERNATE SOLENOID OPERATORS

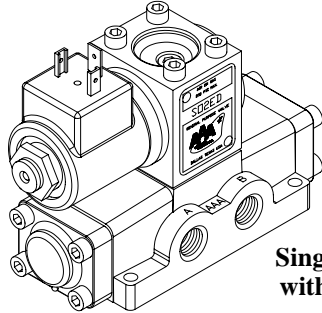
FOR SOLENOID CONTROLLED VALVES

All solenoid valves can be ordered with alternate solenoid operators. The alternate solenoid operator can function at a slightly higher pressure of 160 psi maximum without being externally piloted. For higher pressures, these solenoids may be externally piloted or see option "V" on page 55.

The pictures show only 1/4" or 3/8" side ported models, but all solenoid valves except 1/4 NAMUR style can be ordered with the following alternate solenoid operators.

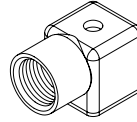


Single Solenoid Model with "1/2 Conduit" Operator

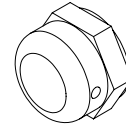


Single Solenoid Model with "DIN" Operator

Optional "DIN" Cap



See Additional Options on page 55

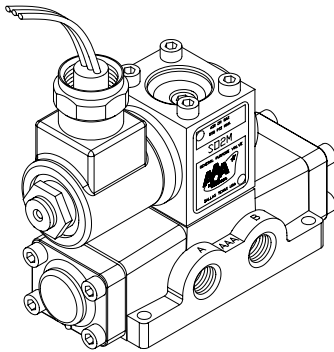


FM-1 Dust Excluder

1/2" CONDUIT SOLENOID. To order solenoid valves with the "1/2 Conduit" operator use just the basic part number with the "ES" changed to "S" (ex. ESO2 converts to SO2). "1/2 Conduit" connections are 1/2-14 NPT conduit type with 18" leads. Environmental rating of NEMA 1.

"EXPLOSION PROOF" SOLENOID. To order solenoid valves with "Explosion Proof" operators, add suffix "X" to the basic part number (ex. SO2X). The connection is 1/2-14 NPT conduit type with 18" leads. All "Explosion Proof" solenoid operators carry the UL label for Class I, Group C and D (gasoline vapors, etc.), Class II, Groups E, F, and G (coal, coke and grain dusts).

Note: The UL and CSA label on an explosion proof solenoid operator covers only the electrical operator and does not cover the complete valve.



Single Solenoid Model with "Moldover" Operator

"MOLDOVER" SOLENOID. To order solenoid valves with new "Moldover" option add suffix "M" to the basic part number (ex. SO2M). Rugged construction and wrench flats on conduit connection prevents mechanical collapse. The connection is 1/2-14 NPT conduit type with 18" leads. Environmental rating of NEMA 4 and 4X.

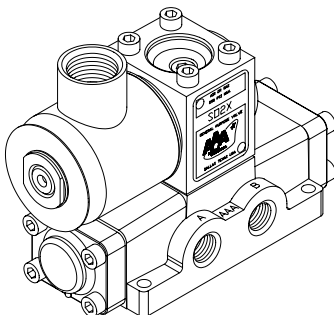
"DIN" SOLENOID. To order solenoid valves with the "DIN" operator add suffix "ED" to the altered part number (ex. SO2ED). "DIN" Solenoids are ISO 4400. Environmental rating of NEMA 4 and 4X when using proper connection cap.

OPTIONAL "DIN" CAPS

EDC- Non-Indicator lamp cap.

EDCL- Indicator lamp cap. Cap is illuminated when solenoid is energized. (specify voltage when ordering)

Consult factory for additional caps which can be obtained.



Single Solenoid Model with "Explosion Proof" Operator

FM-1 MUFFLER AND DUST EXCLUDER. Replaces nut on end of "1/2 Conduit", "Din", and "Moldover" solenoid coil to prevent entry of dust, water, etc., and reduce sound of exhaust air. Not available on "Explosion Proof" solenoids.

ALTERNATE SOLENOID COIL VOLTAGES.

This chart shows voltages immediately available. Consult the AAA factory for other voltages which may be available. Power consumption is approximately 11 watts on D-C, 24 VA on A-C.

Coil Voltage and Frequency	Inrush Current	Holding Current
24 volts, 60 Hz*	1.72 amps	1.10 amps
120 volts, 60 Hz	0.36 amps	0.23 amps
240 volts, 60 Hz	0.18 amps	0.12 amps
6 volts D-C*	2.30 amps	2.30 amps
12 volts D-C	1.20 amps	1.20 amps
24 volts D-C	0.58 amps	0.58 amps

*“1/2 Conduit” and “Explosion Proof” coils only

ALTERNATE SOLENOID VARIATIONS

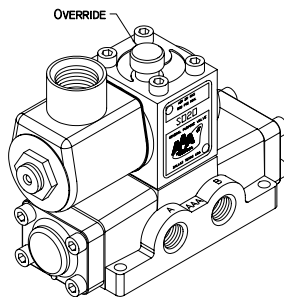
The following variations are available when using one of the alternate solenoids on page 54.

EXTERNAL PILOT OPERATION — OPTION “Z”. Unless otherwise specified, all standard air valves are furnished for internal pilot operation. To order connected for operation on an external source of compressed air, 50 to 160 psi, add suffix “Z” following regular valve model number. Example: SY3Z.

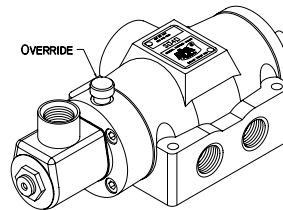
MANUAL OVERRIDE

Manual override is available on any solenoid operator but is not included unless specified. In case of electrical failure in the control circuit, the valve can be shifted without electricity.

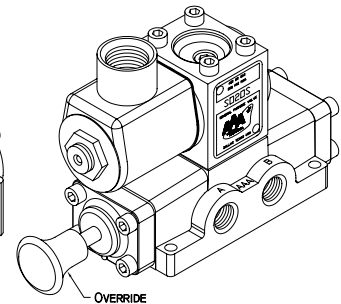
Suffix “O” designates the standard override as normally used on all air valves. A knurled knob, operated by hand, physically lifts the poppet off its seat. The knob can be rotated over center and will remain either in the ON or OFF position.



Option “O”
on 1/4" Valve



Option “O”
on 1/2" Valve



Option “OS”
on 1/4" Valve

Suffix “ON” is the same override as “O” except the knob will spring back to the “OFF” position when released.

Suffix “OP” designates a push style non-locking override. When the knob is pushed in, the poppet is lifted off its seat. This shifts the internal spool and causes a change in air flow through the ports.

Suffix “OS” designates an alternate method for 1/4" and 3/8" valves. The override knob is attached to the end of the main spool. This type override is most useful on 2-position, no spring models. On valves having springs on the spool, the knob would have to be continuously held. Minimum operating pressure of 70 psi for reliable valve operation.

HIGH PRESSURE SOLENOID VALVES — OPTION “V”. Standard valves must be limited to 160 psi maximum pressure. However, they can be reconnected for external pilot operation and can operate up to 250 psi on the main ports provided the external pilot pressure is below 160 psi. See individual models for details. High pressure solenoids can be furnished for operation on 300 psi without using external pilot pressure. To order, add suffix “V” following standard valve model number. However, shifting response is slightly slower because of the smaller orifice in the operator. Example: SO2V

LOW PRESSURE SOLENOID VALVES — PREFIX “L”. Standard 1/4" and 3/8" valves must use a minimum of 25 psi on non-spring return models and a minimum of 50 psi on spring return models. However, they can be ordered to operate at lower pressures, 15 psi minimum on non-spring return models and 25 psi minimum on spring return models. However, shifting response is slightly slower because of the larger volume required to shift the valve. Example: LSO2.

SOLENOID PIPED EXHAUST — OPTION “T”. Standard solenoid operators vent pilot exhaust to atmosphere through a small unthreaded hole. A 1/8" NPTF threaded connection can be provided for those applications where the exhaust air or gas must be piped to another area. Sometimes it can be piped into the main exhaust port. To order, add suffix “T” to regular valve model number. (Example: SO4T)

