

**SERIES 60**  
NEMA 4 & NEMA 4,7,9

# SOLENOIDS

**4 WAY (SPOOL) CONTROL VALVES**

## FEATURES

Bray Controls offers the highest quality Brayline (Spool Type) Solenoid Valve. The Series 60 is far superior in performance when compared to the commonly used poppet type valve. These units can be used with either spring return or direct acting actuators where on/off electrical operation is required. With rugged reliability and high flow capabilities, the Series 60 Solenoid delivers a long, trouble-free service life.

## MANUAL OVERRIDE

Each unit contains as standard a mechanical manual override lever mounted on the side of the solenoid valve block. In the

event of electrical power failure, overriding is simply a matter of rotating the red lever which will divert the air from one chamber of the pneumatic actuator to the other.

## DIRECT MOUNTING

The compact, modular design allows direct mounting of all Brayline solenoids to the integral porting system of Bray Series 90 & 91 pneumatic actuators. No external piping is required. Bray's direct mounting permits quick and simple field installation.

## SERIES 55 SPEED CONTROL

Speed controls that allow independent control of speed in both directions of actuator travel are available as an option.

# SPECIFICATIONS

## NEMA 4, NEMA 4,7,9 & D.I.N. HOUSINGS

Three standard coil housings are available. The watertight (NEMA 4) housing offers a molded and potted coil. The watertight and explosion proof (NEMA 4,7,9) housings is U.L. listed and C.S.A. certified for hazardous locations Class I: Groups C and D; Class II: Groups E, F, and G. The D.I.N. housing features stainless steel and anodized aluminum internal parts and magnetic components encased in epoxy.

Standard solenoid valves are supplied as single coil units. Double coil units are also available for customers who require actuators to remain in last position during electrical power failures.

## VALVE DESIGN

Pilot Operated Spool

**MEDIA** Dry or lubricated air or inert gases. When used with a spring return actuator, the Series 60 Solenoid Valve fills the spring chamber with supply air rather than drawing air from the surrounding atmosphere. This keeps the spring chamber clean and dry, and improves the performance and service life of the actuator.

## ELECTRICAL CHARACTERISTICS

**COIL VOLTAGE:** Standard voltage is 120 Volts AC Coils can be supplied in many other AC & DC voltages. Please consult Bray factory or representatives.

**FLOW FACTOR:**  $C_v = .6$   
Flow = 45 scfm at 80 psi

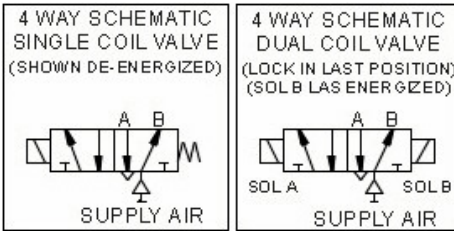
**NOMINAL POWER:** AC – 5.6 VA  
DC – 7.2 Watts

**COIL CONSTRUCTION:** Standard construction is molded and potted coil with 24” leads, Class A Insulation. Other insulation classes available. The D.I.N. unit coil and magnet structure are epoxy encased.

**OPERATING SPEED:** 10 cycles per minute – with more if needed.

**DUTY CYCLE:** Continuous

## FLOW SCHEMATICS



## MECHANICAL CHARACTERISTICS

**MOUNTING POSITION:** Unrestricted

## MANUAL OVERRIDE:

Stainless Steel lever with screwdriver slot

## MATERIALS:

Coil Housing: NEMA Housings – Steel with zinc chromated finish  
D.I.N. Housing – Epoxy  
Valve Body: Anodized aluminum

**PORTING:** 1/4” N.P.T.

## COIL HOUSING:

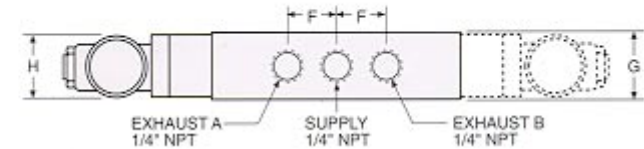
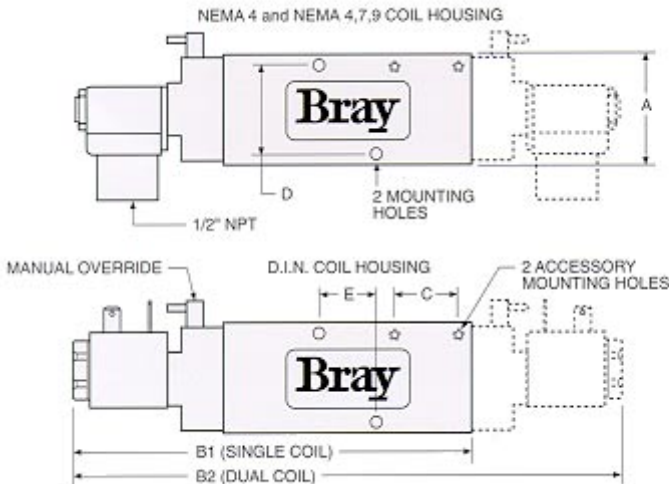
Three types are offered

- #1 – Watertight and Explosion Proof (NEMA 4,7,9) with 1/2” N.P.T. conduit connection and a third wire ground
- #2 – Watertight (NEMA 4) with 1/2” N.P.T. conduit connection
- #3 – D.I.N. (European style) with spade terminal connection.

Molded Cordsets and connectors are available for this coil housing, please consult Bray representative or factory for further information.



**MOUNTING:** NAMUR interface for direct mounting to actuator



Valve Size	Coil Housing	A	B1	B2	C	D	E	F	G	H
1/4"	NEMA 4	1.65	6.18	8.56	0.98	1.26	0.94	0.88	1.00	1.03
1/4"	NEMA 4,7,9	1.65	6.29	8.73	0.98	1.26	0.94	0.88	1.00	1.44
1/4"	DIN	1.65	6.18	8.56	0.98	1.26	0.94	0.88	1.00	-

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