760-HP8 Series Servovalves

The 760-HP8 Series is specifically designed for operation with supply pressures between 5000 and 8000 psi. Rated flows from 1 to 10 gpm at 1000 psi valve drop are available. The output stage is a closed center, four-way sliding spool. The pilot stage is a symmetrical double-nozzle and flapper, driven by a double air gap, dry torque motor. Mechanical feedback of spool position is provided by a cantilever spring. The valve design is simple and rugged for dependable, long life operation.

Specifications:

Fluid Supply: 760-HP8 Series Servovalves are intended to operate with constant supply pressure.

Supply Pressure:
Minimum: 5000 psi (345 bar) (consult factory)
Maximum: 8000 psi (550 bar)

Rated Fatigue Pressure:
≥ 8000 psi per NFPA T2.6.1-1974(R1982)

Proof Pressure:
150% of supply pressure at P port
3000 psi max. at R port

Fluid:
Compatible with common hydraulic fluids
Recommended viscosity range:
60-450 SUS @ 100°F
(10-97 cSt @ 38°C)

Cleanliness Level:
ISO DIS 4406 code 16/13 max.
14/11 recommended

Operating Temperature:
Minimum: -40°F (-40°C)
(maximum fluid viscosity: 6000 SUS)
Maximum: +275°F (+135°C)

Model	Response	Rated Flow (1000 psi)		Internal Leakage (1000 psi)		Rated Current (parallel coils)	Coil Nom. Resistance
		gpm	lpm	gpm	lpm	mA	ohms
760-1030A-HP8	Std.	1	3.8	< 0.17	< 0.66	40	80
760-1031A-HP8	Std.	2.5	9.5	< 0.22	< 0.83	40	80
760-1032A-HP8	Std.	5	19	< 0.35	< 1.33	40	80
760-1033A-HP8	Std.	10	38	< 0.35	< 1.33	40	80

Optional designs are available with intrinsically safe coils, and/or special spool/bushing lap configuration. Available seal materials: BUNA (Std.), VITON or EPR.

Rated Flow Tolerance: ±10%

Symmetry: < 10%

Hysteresis: < 3%

Threshold: < 1/2%

Null Shift:
with temperature, 100°F variation: < 2%
with acceleration to 10g: < 2%
with supply pressure 1000 psi change: < 2%
with back pressure 0 to 500 psi: < 2%

Frequency Response: Typical estimated response characteristics for 760-HP8 Series Servovalves are shown in Figures 1 and 2.

Step Response: Typical estimated transient responses of 760-HP8 Series Servovalves are shown in Figure 3.

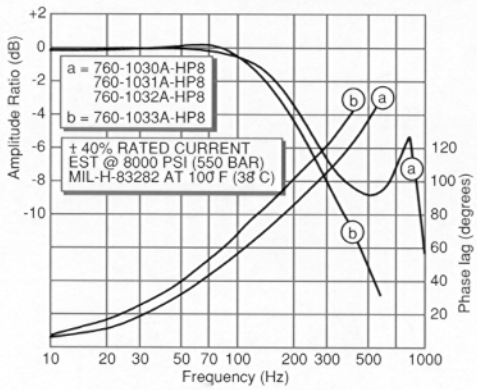


FIGURE 1 - REDUCED AMPLITUDE FREQUENCY RESPONSE

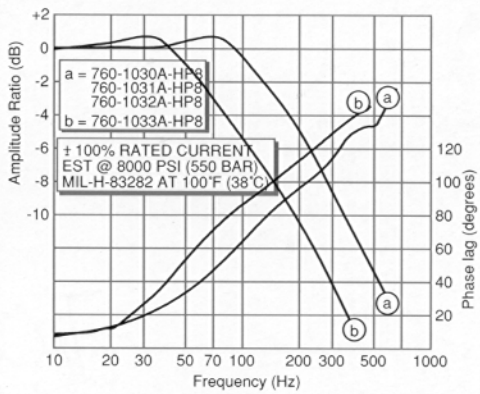


FIGURE 2 - FULL AMPLITUDE FREQUENCY RESPONSE

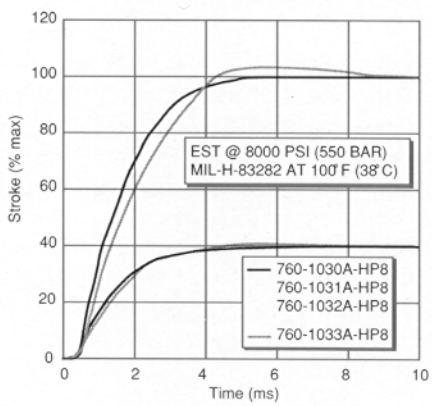
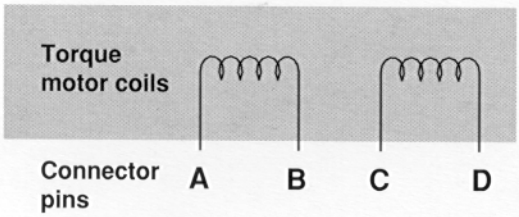
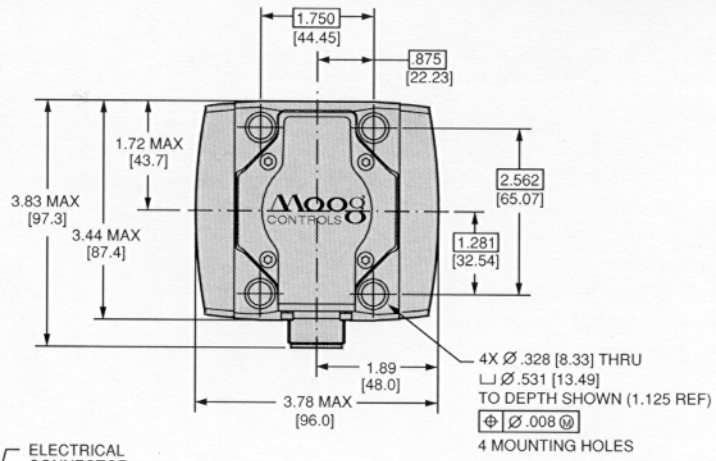


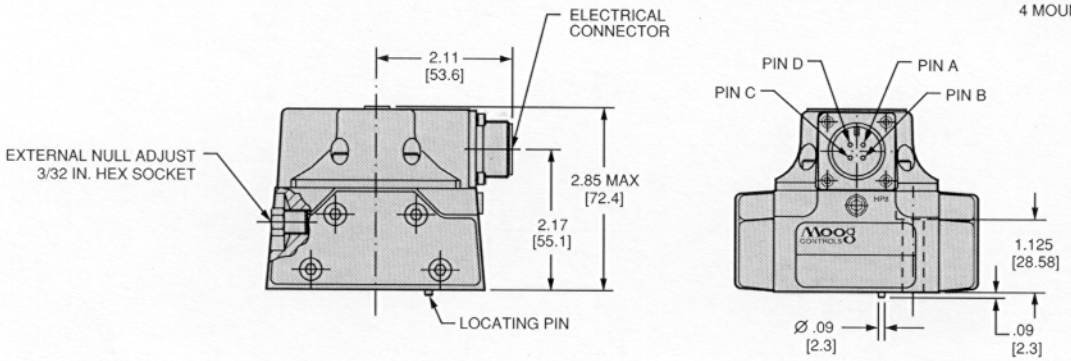
FIGURE 3 - STEP RESPONSE

Standard Electrical Configuration



External connections and electrical polarity for flow out control port No. 2 are:
- single coil: A+, B-; or C+, D-
- series coils: tie B to C; A+, D-
- parallel coils: tie A to C and B to D; A & C+, B & D-

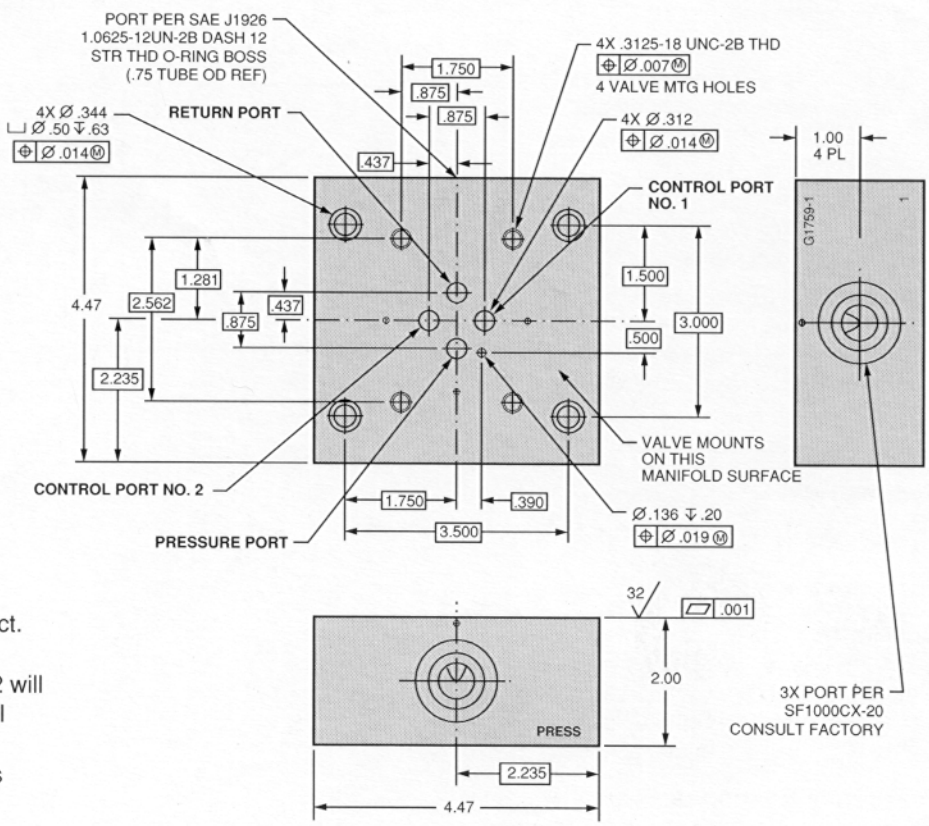




Accessories:

Flushing Block: PN 23718-1K1
Mating Electrical Connector:
PN 49054F14S2S (MS3106F14S-2S)
Suggested Mounting Bolts:
PN A31324-228B
5/16 - 18NC x 1-3/4 long
Socket Head Cap Screw
Subplate:
4 port PN G1759-1

System filters available. Call factory for details or see brochure #605.



Typical Subplate Manifold

Notes:

Valve Weight: 3.98 lb (1.81 kg)
Subplate O-Ring Size: 0.070 [1.78] sect. x 0.426 [10.82] I.D. (universal size -013)
Null Adjust: Flow out of control port No. 2 will increase with clockwise rotation of the null adjust screw (3/32 hex key).
Surface Finish: Surface to which valve is mounted requires 32 finish, flat within 0.001 [0.03] TIR.