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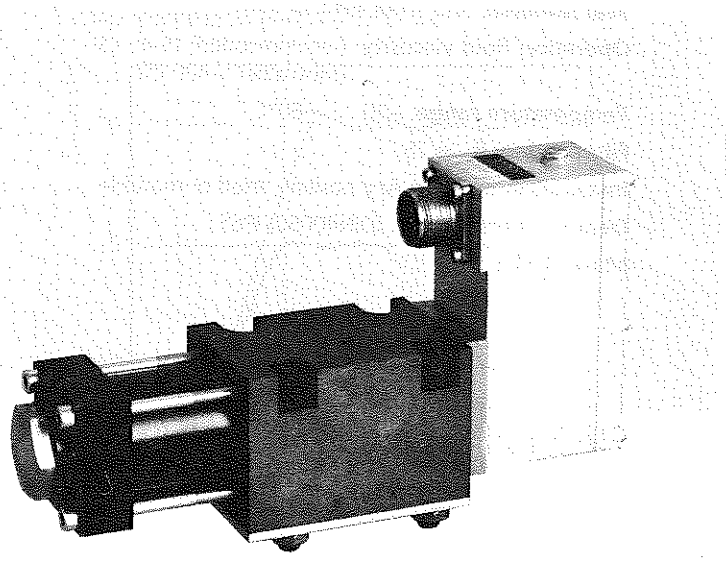
Direct Drive Servovalve to 700 bar operating pressure J634 Series

Description

The series J634 is a direct drive servovalve (DDV) with electronic closed loop control of spool position; suitable for operating pressures up to 700bar. The spool is driven by a permanent magnet linear force motor which can actively stroke the spool from its spring centred position in both directions. This is an advantage over proportional solenoids which can only provide force in one direction and at much lower force levels. This permits control of the valve directly from, for example a machine control without the use of additional interface electronics.



Features

- **rated pressure 700 bar**
- **mounting pattern to DIN 24340/Cetop 5**
- **High force level permanent magnet linear motor**
- **No pilot stage oil flow**
- **At loss of supply voltage, or broken cable, or emergency stop the valve returns to its spring centred, safe null position without an excursion through a *load move* position.**
- **Dynamic performance independent of supply pressure.**
- **IP65 (DIN 40050) degree of protection.**
- **Low hysteresis and high resolution**
- **Improved false polarity protection and over voltage protection**
- **Electronic valve null adjust to compensate for load drift**
- **Standardised spool position monitoring**

Specifications

Mounting pattern to DIN 24340/ISO4401 Cetop 5: Form A10 / Cetop 5 (but mounting bolt is M8)

Valve version: Single Stage, Direct Drive

Bushing – Spool type (Standard): ± 3% overlap, linear flow curve

Rated Flow: (4 way, $\Delta P = 70$ bar) 2.5/5.0/7.5/10 l/min.

Internal Leakage: (@ 140 bar) 0.10/0.10/0.16/0.20 l/min.

Power Supply: +24V dc (1.2A max.)

Rated signal: (Standard) ± 10V
(Special Spec. 1) ± 10mA
(Special Spec. 2) +4 . . . +20mA

Rated Pressure: 700 bar

Operating Pressure range: 0-700 bar

Y Port (External): 0-50 bar

Spool position: (F terminal) +4 . . . +20mA

Frequency response: See characteristic curves

Step Response: See characteristic curves

Null Shift: (with $\Delta T = 55°C$) < 0.5%

Threshold: < 0.2%

Hysteresis: < 0.5%

Seal Material: NBR (FPM, EPR)

Operating fluid viscosity: (recommended) 15-45 cSt
(allowable) 5-400 cSt

Temperature range: –20 . . . +80°C

Filter rating: $\beta_{15} = 75$

Installation options: Any position, fixed or movable

Degree of protection: (DIN40050) IP65

Mass: 3.0 kg

Electrical Specifications

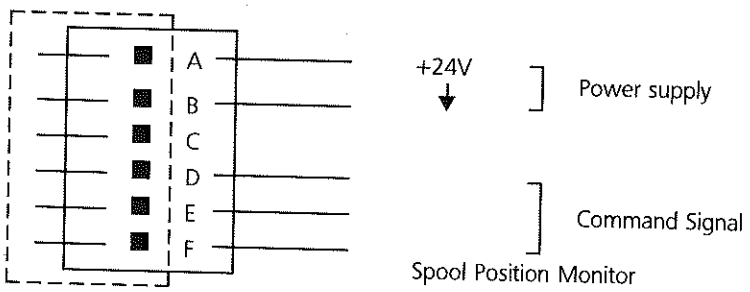
Power supply: +24 V (±1%) (1.2A)

Rated signal: (Standard) ±10V
(Special Spec. 1) ±10mA
(Special Spec. 2) +4 . . . +20mA

Output of spool position (pin F): +4 . . . +20mA

Polarity: Flow out port A with D(+) E(–)

Electrical Schematic



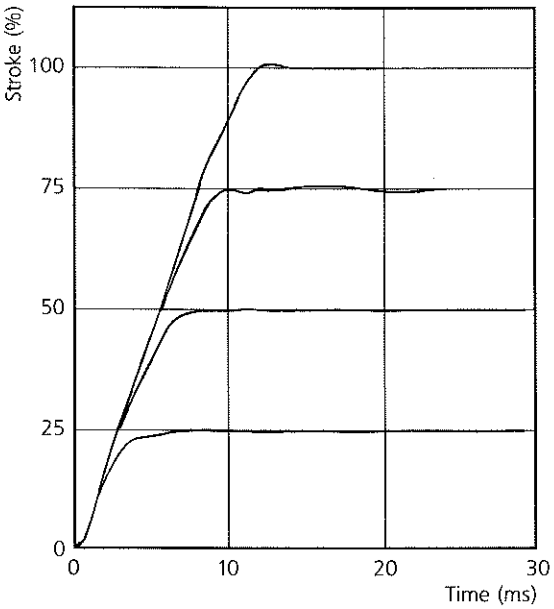
Port O-ring (P, A, B, T, Y): Moog P/N A95513-009 (JIS B2401 1-B P9)

Mating electrical connector: Moog P/N 49054F-14S-6S (MS3106F-14S-2S)

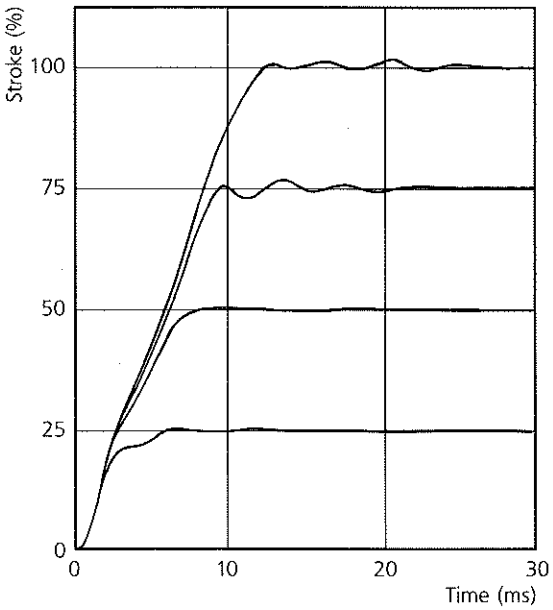
Mounting bolts: Moog P/N A04001-008-055 (JIS B1176 M8x55)

Typical Characteristic Curves

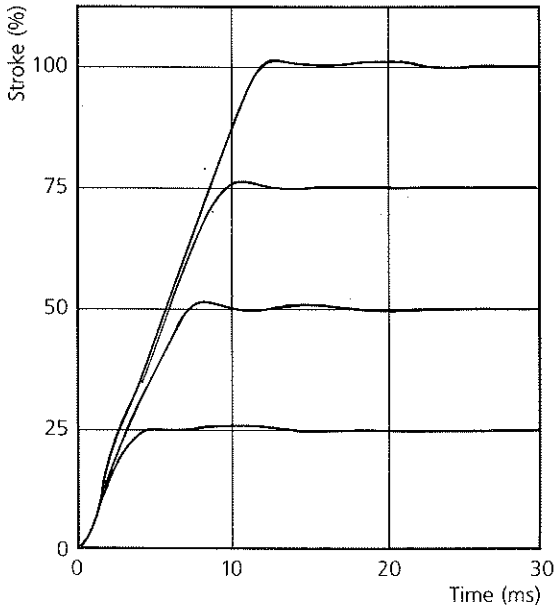
Step response J634-010 at 70 bar



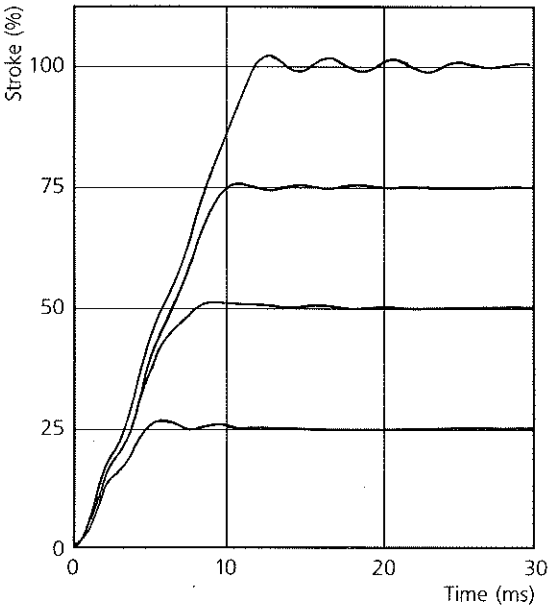
Step response J634-010 at 650 bar



Step response J634-013 at 70 bar



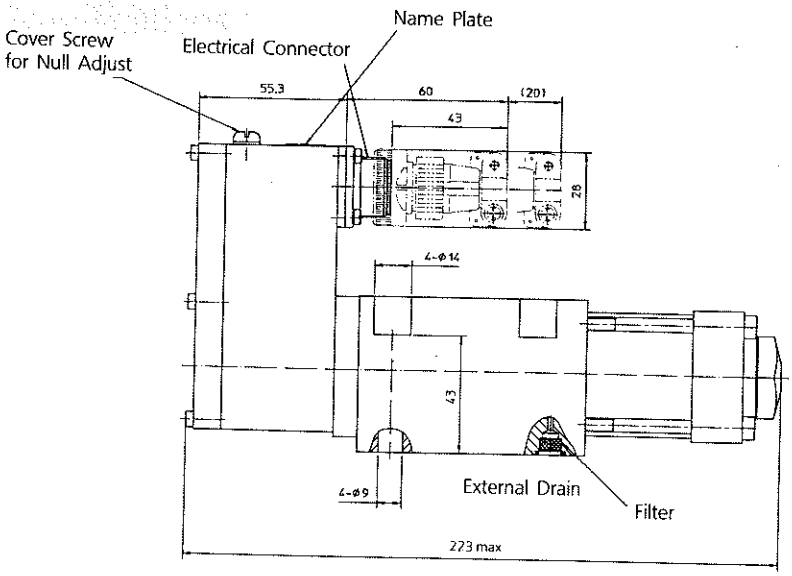
Step response J634-013 at 650 bar

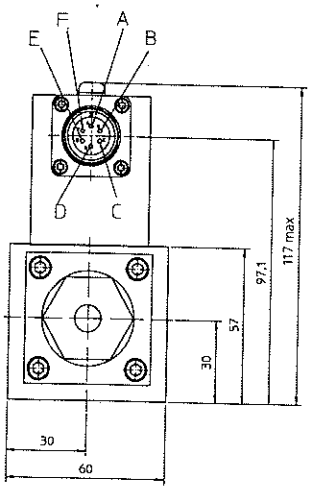


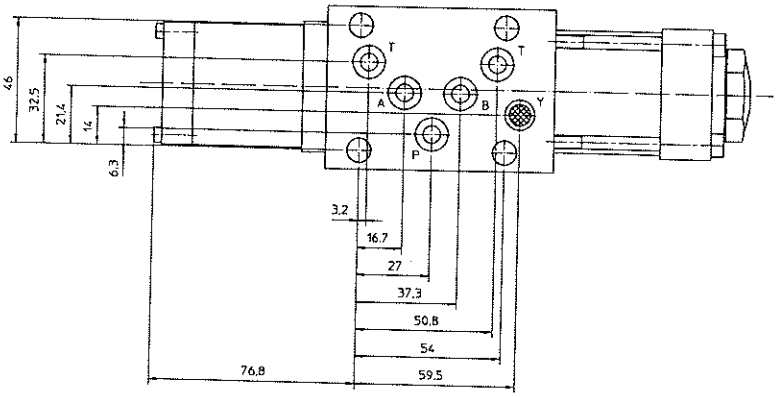
Standard Models*

Rated Signal		±10V	±10mA	+4 . . . +20mA
Output of Spool Position		+4 . . . +20mA	+4 . . . +20mA	+4 . . . +20mA
Rate flow l/min (△P = 70 bar)	2.5	J634-010	J634-014	J634-018
	5	J634-011	J634-015	J634-019
	7.5	J634-012	J634-016	J634-020
	10	J634-013	J634-017	J634-021

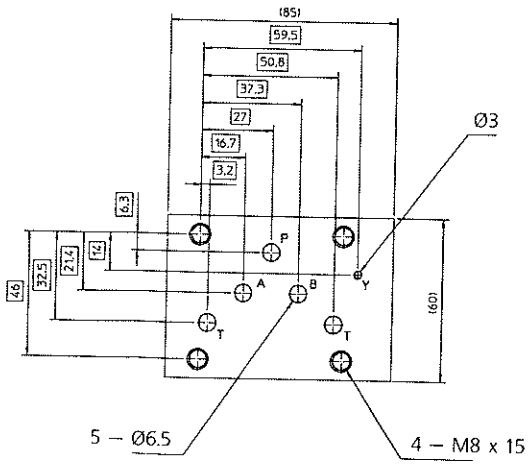
*Note: This table is for NBR seals. We can provide FPM or EPR seals. Please contact factory for model numbers.







Mounting Surface



J634-000 E 4.95

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