

Lightweight, Compact, and High-Performing: Designed to meet the rigorous demands of Formula 1 racing.

Evolution of E024 Series: Builds on the reliability of the E024 Series Motorsport Servo Valve.

Swift-Response, High-Flow Solution: Outperforms traditional solenoid-operated switching valves.

Versatile 4-Way Spool Design: Configurable for both 3 and 4-way operations.

Suitable for Single and Double-Acting Cylinders: Offers flexibility in various applications.

Durable Build: Maintains the robust construction of its predecessor.

7.5 I/min Flow Rate: Consistent with the E024 Series Servo Valve.

Reduced Hydraulic Pilot Flow Requirement: Lowers energy consumption of the hydraulic system.

BENEFITS

- + Ultra light-weight **95gm (3.35 oz)**
- + Compact space envelope
- + High power density
- + Low power input signals (12mA or 12v)
- + Compatible with F1 ECU outputs
- + Fast response to command inputs
- + Excellent energy efficiency
- + High (7.5 l/min) flow capacity

TYPICAL APPLICATIONS

- Formula 1 (DRS Actuation, Turbocharger Controls)
- Medical prosthetics
- Subsea equipment
- Special effects in film and theatre
- Mobile robotics

FIA APPROVED ELECTRONICS

All Moog electro-hydraulic products used in Formula 1 are homologated by the FIA, indicating they are approved for use with the mandated Formula 1 Electronic Control Unit (ECU).





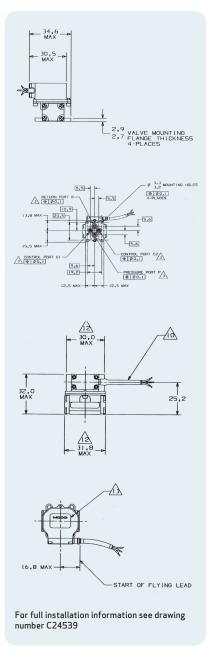
SPECIFICATIONS

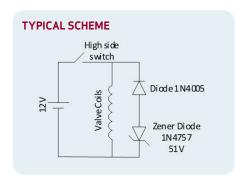
TECHNICAL DATA E024-900 SUB MINIATURE SWITCHING VALVE

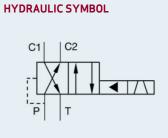
Supply Pressure Range:	140 to 280 Bar (2000 to 4000 PSi)
Valve Function:	3 or 4 Way, 2-position switching valve
Rated Flow: @ 70 Bar (1000 PSi) Valve Pressure Drop	7.5 l/min (Flow Tolerance +/-10%)
Leakage Flow:	Energised pilot flow: < 0.21 l/min De-energised pilot flow: <0.04 l/min
Individual coil characteristic:	Nominal Resistance 720 ohm each coil
100% Flow step response:	Energise time: <10ms De-energise time: <10ms
Current operation:	Can be operated with coils connected in parallel driven by the standard +/-12 mA Moog ECU interface. (Requires 0 & 12mA)
Voltage operation:	Can be operated with coils connected in series, driven by the standard 1A (high-side drive' ECU interface. (Requires 0V & 12V)
Environmental Survivability Limits:	-40°C (-40°F) to +165°C (329°F) & 50G shock in any direction.
Mass:	95g (3.4 oz).

ENVIRONMENTAL OPERATING ENVELOPE FOR ALL E024 SERVO VALVES

Pressure Supply:	140 (2030 PSi) - 280 bar (4061 PSi).
Return Line Pressure:	2 (29 PSi) - 5 Bar (72 PSi).
Temperature Range:	-20°C (-4°F) - 135 °C (0 - 275°F).
Fluids Viscosity:	>4 CSt.
Filtration:	NAS 1638 CLASS 3 / ISO 4406 14/12/9 or better. It may be possible to operate the valve in certain applications outside of these design limits, but this must be checked and validated by the customer.
Operation of Valves in Close Proximity:	Valves mounted in close proximity may experience magnetic interaction. The degree of interaction depends on the installation and may be minimized by the use of external shielding.







Opposite polarity also available: (P connected to C1 when de-energised)

Can be used as a 3-Way Valve with a single control port connection

If a 0-12 v signal is used then a flyback diode is required to limit the drive voltage.

For further information, visit: www.moog.com/miniature

This technical data is based on current available information and is subject to change at anytime by Moog. Performance for specific systems or applications may vary.

Moog is a registered trademark of Moog Inc. and its subsidiaries. All trademarks as indicated herein are the property of Moog Inc. and its subsidiaries. © 09/2024 Moog Inc. All rights reserved. All changes are reserved. E024-900 Datasheet Micro Logic Valve CDL63450



SHAPING THE WAY OUR WORLD MOVES TM

Moog Industrial Group.

Ashchurch Parkway, Tewkesbury, Glos. GL20 8TU UK

Tel: +44 (0)1684 858000