Electric Shut-off/Flow Regulating Valve

Operation and Maintenance Manual

Catalog: 02-9313ME

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aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
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ENGINEERING YOUR SUCCESS.

Model # _____

Serial # _____

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Section 1.0
Introduction

The Parker Autoclave Engineers Electric Shut-off/Flow Regulating valves are designed to operate up to 60,000 psi depending on the model number. The 4-20 mA models are fail-as-is meaning the valve maintains its last position on signal or power failure. The 0-10 VDC models fail closed on signal loss.

Section 2.0
Meaning of Safety Words

A safety related message is identified by a safety alert symbol and a signal word to indicate the level of risk involved with a particular hazard. The definitions of the three signal words are as follows:

⚠ WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

Special notes intended to bring attention to procedures that must be followed to ensure proper installation and performance will be placed in a box labeled NOTICE.

⚠ CAUTION

Read this manual in its entirety prior to any attempt to install, operate, or perform maintenance on the Electric Shut-off/Flow Regulating Valve.

If you are unsure of how to proceed, please contact Parker Autoclave Engineers Service Department at (814) 860-5700 or fax us at (814) 860-5811.

Section 3.0
Technical Specification

Electrical Power:
- Power Required: 24 VDC/50 Watts Minimum
- Input Impedance: 200 Ohms (4-20 mA input)
  18,000 Ohms (0-10 VDC input)

Environmental:
- Atmosphere: IP 65 type rating
- Operating Temp. (Actuator): -30º to 85º C

Maximum Weight:
See drawing.

Dimensions:
See drawing.

Wiring:
Red (+24 VDC), Black (24 VDC return), Brown (Signal), Green (Case Ground).
The 0-10 VDC or 4-20 mA signal should be applied between the Brown and Black wires. (See Signal Positioning on next page.)

Personnel:
Installation must be carried out by qualified personnel familiar with all pertinent wiring practices, codes, and safety procedures.

Section 4.0
Drawings

Valve Series	Drawing
1/8" 10V	40B-0061
1/4" 10V	40B-0062
3/8" 10V	40B-0063
1/2" 10V	40B-0064
1/4" SW	40B-0065
3/8" SW	40B-0066
1/2" SW	40B-0067
1/4" 20SM	40C-1444
3/8" 20SM	40C-1424
9/16" 20SM	40B-0060
1/4" 30VM	40B-0056
3/8" 30VM	40C-1425
9/16" 30VM	40C-1430
1/4" 60VM	40C-1431
3/8" 60VM	40C-1438
9/16" 60VM	40C-1442

Section 5.0
Installation

Electrical Wiring:

The valve actuator has two different cables provided. One of the cables will be marked for factory use only. This is the programming wire used by Parker technicians to initially setup the valve. This cable will not be used in normal operation.

The second cable will have four leads with terminals attached. The wires will be red, black, brown, and green. This cable will be used to control the position of the valve.

Once the correct cable is located (the four lead cable) the valve can be wired into the control system. A 24 VDC positive power supply will need to be applied to the red wire while the black wire is the power supply common. The brown wire is the incoming 4-20mA or 0-10 VDC signal. The green wire is the case ground.

Signal Positioning:

A 4-20mA or 0-10 VDC signal corresponds to a 0-100% open position. **A 4.1mA/0.1 VDC signal directs the valve to a fully closed seated position.** This is a bubble tight position. When a 20mA/10 VDC signal is given the valve is opened a full 6 turns. The relationship between the signal and the valve position is linear.

High Pressure Plumbing:

Refer to the Manual Valves Operation and Maintenance Manual (Catalog #02-0024ME) Sections 1.0 and 6.0 for instructions to install the high pressure plumbing.

Section 6.0
Service

For valve maintenance or packing leaks refer to the Manual Valves Operation and Maintenance Manual (Catalog #02-0024ME) Section 2.0 packing adjustment instructions.

For all other service, contact the Parker Autoclave Engineers' Representative in your area or phone Parker Autoclave Engineers' Support Services at 1-814-860-5703.

WARNING

FAILURE, IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met. The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

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The items described in this document are available for sale by Parker Hannifin Corporation, its subsidiaries or its authorized distributors. Any sale contract entered by Parker will be governed by the provisions stated in Parker's standard terms and conditions of sale (copy available upon request).

Parker Autoclave Engineers

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