MICRO-METERING ELECTRIC FLOW CONTROL ACTUATOR

Parker Autoclave Brand: **VRMM Needle Valve**

OPERATION AND MAINTENANCE MANUAL

Manual 02-9295ME | September 2025

Series Model: **Micro-Metering Electric Flow Control Actuator for VRMM Needle Valve**

Part Number: _____

Date of Purchase: _____

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Section 1.0
Introduction

The Parker Autoclave Engineers Electric Flow Control valves are designed to operate up to 60,000 psi depending on the model number. It is **not to be used as a shut-off valve**, but if a bubble tight shut off is required this can be accomplished by placing it in series with an appropriate air operated valve. 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.

The Electric Flow Control valve is not user serviceable and must be sent back to the factory for any repairs. (See Service Section 6.0).

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 signal words are as follows:

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

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

⚠ CAUTION

Read this manual in its entirety prior to any attempt to install, operate, or perform maintenance on the Electric Flow Control 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.

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Section 3.0
Technical Specifications

Electrical Power:

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

Environmental:

Atmosphere: IP 65 type rating
Operating Temperature (Actuator): -30° to 85° C

Dimensions:

10VRMM2812-XX
High - 12.13" (308 mm)
Width - 3.5" (89 mm)
Depth - 3.5" (89 mm)
Weight - 3.5 lbs. (1.59 kg)

30VRMM4812-XX
High - 11.71" (297 mm)
Width - 3.5" (89 mm)
Depth - 3.5" (89 mm)
Weight - 4.5 lbs. (2.05 kg)

60VRMM4812-XX
High - 16.25" (413 mm)
Width - 4.1" (105 mm)
Depth - 4.1" (105 mm)
Weight - 8.0 lbs. (3.64 kg)

60VRMM6812-XX
High - 16.75" (426 mm)
Width - 4.1" (105 mm)
Depth - 4.1" (105 mm)
Weight - 8.0 lbs. (3.64 kg)

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 / Wiring Schematic

VALVE SERIES	DRAWING #
10VRMM2812-C4	40B-0040
10VRMM2812-C10	40B-0035
30VRMM4812-C4	40B-0037
30VRMM4812-C10	40B-0038
60VRMM4812-C4	40B-0041
60VRMM4812-C10	40B-0034
60VRMM6812-C4	40B-0031
60VRMM6812-C10	40B-0042

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 4.0mA/0 VDC signal directs the valve to a fully closed position. This is not 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 Tools and Installation section of the Parker Autoclave Engineers VFT product catalog.

Section 6.0
Service

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

Maintenance Notes:

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Extra care is taken in the preparation of this literature, but Parker is not responsible for any inadvertent typographical errors or omissions. Information in this catalog is only accurate as of the date of publication. For a more current information base, please consult the brand landing page at autoclave.com.

Additional Resources…

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