

# Fisher™ easy-Drive™ 200L

The Fisher easy-Drive 200L is a compact, rugged electric actuator designed for throttling or on/off applications. The actuator can be controlled via Modbus RTU, 4-20 mA, or dry contact signals. Set up and calibration is made with the Fisher easy-Drive configurator which provides one button calibration. The actuator is designed to provide dependable on-off or throttling operation of control valves.

## Features

- **Low Temperature**— The easy-Drive 200L design allows use in ambient temperatures as low as -20°C (-4°F) without use of a heater.
- **Easy Installation**—The compact actuator design allows installation where space is a premium. Fisher easy-Drive calibrates by simply opening and closing the valve.
- **Application Flexibility**— Choice of control method including 4-20 mA Positioning and 4-20 mA Level along with configurable Loss of Signal Position and Deadband suits this actuator to many applications.
- **Low Power Consumption**— The Fisher easy-Drive 200L operates with 11 to 30 VDC and less than 0.1 watt hours per operation, using Modbus, 4-20 mA, or dry contact control signals.



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Fisher easy-Drive 200L

- **Optional Loss of Power Positioning**— With the reserve power unit, RPU-100, loss of power position is programmable over Modbus.
- **Remote Monitoring and Configuration**— Loss of signal position is programmable over Modbus.

## Installation

Fisher easy-Drive 200L may be installed in any position, but normally the actuator is vertical above the valve.

Table 1. Specifications

<p><b>Material Temperature Capabilities<sup>(1)</sup></b> Electric Actuator Assembly: -20 to 70°C (-4 to 158°F)</p> <p><b>Available Actuator Configurations</b> Positioning (flow or pressure control)</p> <p><b>Power Requirements</b> 11-30 VDC, minimum 4 amp power supply required (fuse to 5 amps)</p> <p><b>Maximum Current Draw</b> 4 amps</p> <p><b>Idle Current Draw</b> 15 mA at 24 VDC 25 mA at 12 VDC 30 mA at 24 VDC, 50 mA at 12 VDC with RPU-100</p> <p><b>Conduit Connections</b> Two 3/4 NPT connections</p> <p><b>Maximum Stroke Length</b> 19 mm (0.75 inch)</p> <p><b>Maximum Thrust Force</b> 3336 N (750 lbf)</p> <p><b>Average Thrust Force</b> 2446 N (550 lbf)</p> <p><b>Nominal Stroke Speed<sup>(2)</sup></b> 3.9 mm/s (0.15 inch/s) at 24 VDC 2.2 mm/s (0.09 inch/s) at 12 VDC<sup>(3)</sup></p>	<p><b>Control Signals</b> On/Off: Dry contact, Modbus RTU Positioning: 4-20 mA, 4-20 mA level, Modbus RTU Auxiliary Digital Input: Dry contact Auxiliary Digital Output: 10 VDC, 25 mA maximum</p> <p><b>Hazardous Area Approvals</b> CSA (C/US): Explosion-Proof Class I, Division 1, Groups C and D, T6, Ex db IIA T6, Class I, Zone 1, AEx db IIA T6 ATEX Flameproof - Gas: ⊕ II 2 G, Ex db IIA T6 Gb IECEx Flameproof - Gas: Ex db IIA T6 Gb</p> <p><b>Enclosure Rating</b> Type 4X and IP66</p> <p><b>Electromagnetic Compatibility</b> Meets EN 61326-1 (2013) Immunity: Industrial locations per table 2 of EN 61326-1 Standard. Performance is shown in table 2 Emissions: Class A ISM Equipment Rating: Group 1, Class A</p> <p><b>Optional Loss of Power Positioning</b> With the reserve power unit, RPU-100, loss of power positioning is programmable over Modbus.</p> <p><b>Duty Cycle</b> 50% maximum</p> <p><b>Enclosure Material</b> Cast aluminum alloy with powder coat paint</p> <p><b>Approximate Weight:</b> 9.5 kg (21 lbs) 10 kg (22 lbs) with RPU-100</p>
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1. The pressure or temperature limits in the referenced tables and any applicable ASME code limitations should not be exceeded.  
2. 10% variation can be expected, based on temperature and pressure of application.  
3. Stroke speed when RPU-100 is providing power.

**Table 1. Hazardous Area Classifications - CSA (Canada and United States)**

Certification Body	Certification Obtained	Entity Rating	Temperature Code	Conduit Connections	Enclosure Rating
CSA	Class I, Division 1, GPC, D T6	---	T6 (Tamb ≤ 70°C)	Two 3/4 NPT Connections	CSA Type 4X Enclosure

**Table 2. EMC Summary Results - Immunity**

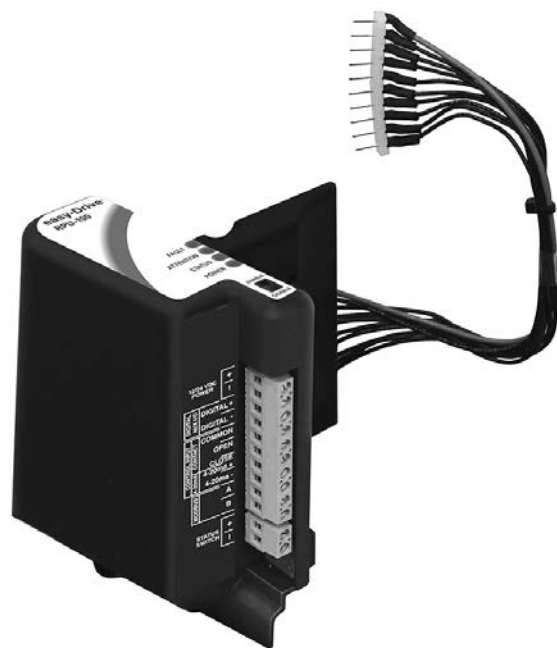
Port	Phenomenon	Basic Standard	Test Level	Performance Criteria <sup>(1)</sup>
Enclosure	Electrostatic discharge (ESD)	IEC 61000-4-2	4kV Contact 8kV Air	A
	Radiated EM field	IEC 61000-4-3	80 to 1000 MHz @ 10V/m 1kHz AM at 80% 1400 to 2000 MHz @ 3V/m 1kHz AM at 80% 2000 to 2700 MHz @ 1V/m 1kHz AM at 80%	A
	Rated power frequency magnetic field	IEC 61000-4-8	30 A/m @ 50 and 60 Hz	A
I/O signal/ control	Burst	IEC 61000-4-4	1kV	B
	Surge	IEC 61000-4-5	1kV cable shield, and line to ground	B
	Conducted RF	IEC 61000-4-6	3V 150 kHz to 80 MHz at 3 Vrms	A

Performance criteria is +/- 5% stem position  
1. A = No degradation during testing. B = Temporary degradation during testing, but is self recovering.

## easy-Drive RPU-100

Designed for use in Fisher easy-Drive actuators, the RPU-100 provides energy for positioning the actuator to the user-defined location on loss of incoming power.

**Figure 1. Fisher RPU-100 with Wiring Harness**



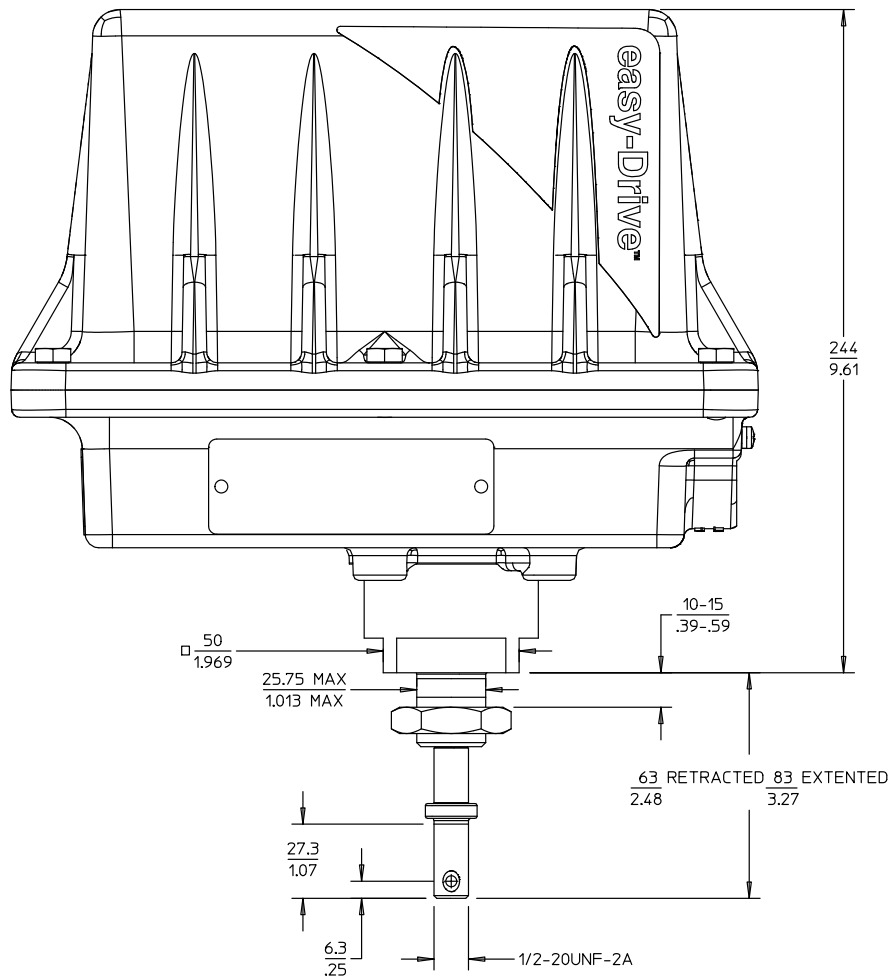
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**Figure 2. Fisher easy-Drive Actuator with RPU-100**



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Figure 3. Fisher easy-Drive 200L Electric Actuator



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