

EXPLOSION PROOF ACTUATORS

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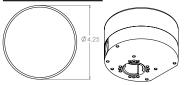


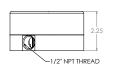




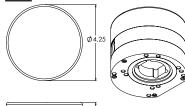
R-SERIES ACTUATOR DIMENSIONS AND SPECS

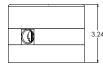
RxJ / RxL / RxM



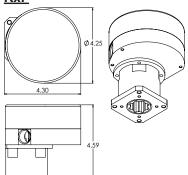


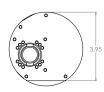
RxH

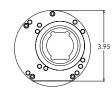


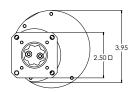


RxF









Description and Specifications:

Enclosure:

(SP) IECEX

Aluminum die cast anodized or stainless Class I, Div 1 Groups B, C, D/ T6 Class II Groups E, F, G/T6 (85°C)

Temperature range: 0 .. 65 °C internal

(derate duty cycle at high temp.)

Ext. temp. range: -40 .. 60 °C (w. Heater option)

Electronic position and motion detection Stall protection:

Feedback: TTL. 4 - 20 mA. Modbus

Manual Override: Optional

Gears & Bearings: Metal and bronze, oiled/greased for life

External Fasteners: Stainless Steel

250,000 cycles in specified conditions Life Expectance:

Motor: Brushless DC motor, computer control

Voltages/Current: 12-24 VDC/Max3A

110/220 VAC/Max1.5A @ 50/60 Hz

Positioning precision: +/- 3 deg for 1/4 & 1/2 turn +/- 0.25 deg for multi turn

Positioning resolution: +/- 0.15 deg max.

Range/ Speed setting: Dip switches inside enclosure

Control options: Analog (4 - 20 mA, 1 - 5 V, 1 - 10 V),

Modbus, TTL (on/off)

End travel detection: For needle valve, by motion detection

Power setting: Adjustable

Mechanical shock: Repeated ≤ 130 a - force no effect.

occasional ≤ 150 g - force no effect

> 150 g - force not tolerated

Random SAE J1211, Chassis, Exterior Mechanical vibration:

-20 °C to + 60 °C 10 min Thermal Shock:

Failsafe battery: LiPo rechargeable battery

Failsafe spring return: For specific selected applications

RxJ, RxL, RxM: 980 g Weight: RxH, RxF: 1700 g

RCx Multi-turn models

Model	Torque range [in-lbs]	Speed range [1 turn in sec]
RCJ	4 16	1 7 *
RCL	12 48	17
RCM	35 145	4 23
RCH	120 497	18 90
RCF	230 915	38 186

RDx 1/4 and 1/2 turn models [1/4 turn in sec]

RDM	212 247	1 3
RDH	430 532	3 9
RDF	710 1050	5 15

* De-rate the duty cycle to 25% for the highest torque values Note: speed and torque depend on settings by dip switch of actuator Consult user manuals of individual units. Actuators are set for optimum speed.

Other Specifications Multi-turn Models:

Isolated Signals: Optical isolation 1000V min

[Al and AF models only]

Feedback 4..20mA: For sensing resistor of max. 250 ohms.

Floats +6VDC / -2VDC from power [AF model only]

Gnd

Position power loss: Standard: "remembers" position before

> shut down, will reseat valve based on torque setting when the signal is be-

tween 3 and 4 mA

Other Specifications 1/4 and 1/2 turn Models:

MDx-xxxDx5

TTL Signal in (Control): Float at 5 V, < 1 mA to pull down

TTL Signal out (Feedback): 5 V at 2.5 mA max.

MDx-xxxDx24

TTL Signal in (Control): Float at 0 V, < 1 mA to pull to 24 V

TTL Signal out (Feedback): 24 V at 0.5 A max.

Certifications:

IP 68 (60529:2013)

CSA & IECEX Certfied Enclosure ICES-001 ISSUE 5 July 2020

IEC 61000-6-2:2016, IEC 61000-6-4:2018

FCC 47 CFR PART 15 SUBPART B

EN 61326-1:2013 (GROUP 1, CLASS A; Industrial electromagnetic environment)