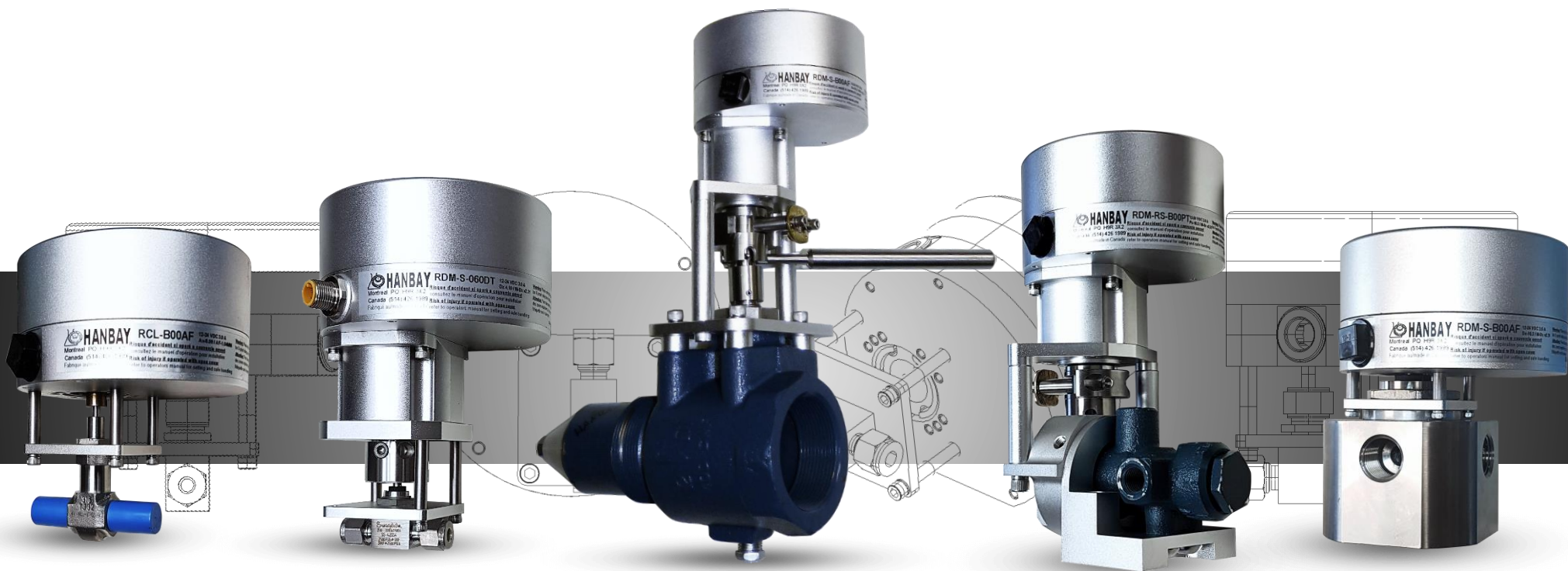


**HANBAY**  
Electric Actuators

# EX-PROOF VALVE ACTUATORS

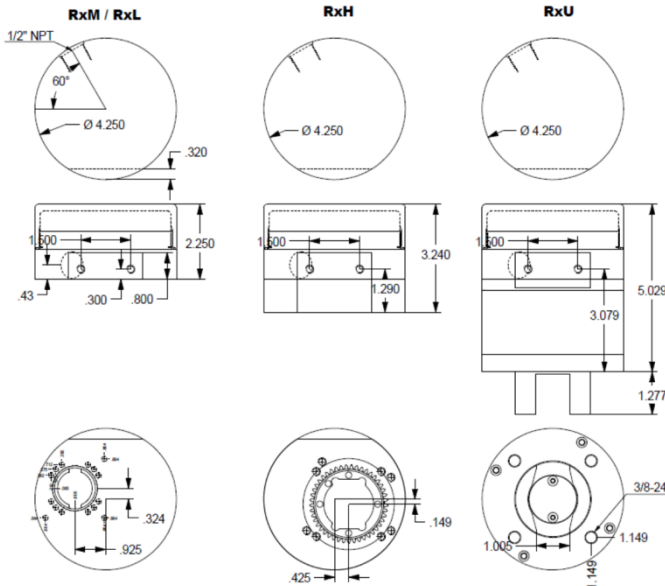
Valve and process automation since 2004



**CSA/UL** | Class I, Div I,  
Group B, C, D

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## Main Dimensions



## General Description:

Type Rxx electric / electronic actuator are used to precisely position small valves and devices

**Gears:** Rxx actuators use sintered, greased for life metal gearing only

**Housing:** all housing parts are aluminum die cast and are protected by an electrophoresis paint

**Bearings:** oiled for life porous bronze bearings

**External Fasteners:** Stainless Steel

**Manual Override:** optional, mounted directly on the output shaft

**Rxx actuators** offer a full range of control options:

- Multiturn Analog, Partial Turn Analog
- ¼ - ½ turn TTL

**External Gear Stages:** Metal Gears for additional reduction:

- RxH 3.75 additional gear ratio
- RxU 15 additional gear ratio

## General Specifications:

<b>Rating:</b>	NEMA 6 / IP67 IP68 40PSI / 40 deg cel
<b>Enclosure Rex Model:</b>	Class I, Div 1 Groups B, C, D / T6 Class II Groups E, F, G / T6 (85 deg cel.)
<b>Temperature range:</b>	0 .. 70 deg Cel (derate duty cycle at high temp.)
<b>Extended temp. range:</b>	-40 .. 85 deg Cel [ w. Heater option on cold side]
<b>Finish:</b>	Anodized white, Stainless
<b>Stall protection:</b>	by electronic position and motion detection
<b>Feedback:</b>	TTL, 4.20mA
<b>Life Expectance:</b>	250,000 cycles or equivalent under specified conditions
<b>Motor:</b>	BLDC brushless DC motor.
<b>Voltages:</b>	12-24 VDC
<b>Positioning precision:</b>	+/- 3 deg for 1/4 – ½ turn models +/- 0.25 deg for multi turn
<b>Positioning resolution:</b>	+/- 0.15 deg max. adjusting to electronic signal resolution of 12 bit additional signal filters available
<b>Range setting:</b>	dip switches inside enclosure
<b>Speed setting:</b>	dip switches inside enclosure
<b>End of travel detection:</b>	for needle valve closing, by motion detection
<b>Power setting:</b>	adjustable to protect delicate needle valves on closing operation
<b>Position detection:</b>	Hall detectors
<b>Motor control:</b>	Electronic, full computer control
<b>Mechanical shock:</b>	1 m drop test no damage to function Random SAE J1211, Chassis, Exterior
<b>Mechanical vibration:</b>	Random SAE J1211, Chassis, Exterior
<b>Thermal Shock:</b>	-20 deg cel to + 70 deg cel 10 min
<b>Failsafe spring return:</b>	Available for specific internal propane valves and other selected applications
<b>Failsafe battery:</b>	LiPo rechargeable battery, will position the actuator, including multi turn versions to predetermined open or closed or any other desired position. This is an emergency failsafe function only. DO NOT USE to position valve by design.

## Performance: Rxx Multi-turn models:

Model	Torque Range [in-lbs]	Speed range [time for 1 turn]
RCJ	2 .. 20	1 .. 5 sec
RCL	18.. 60	1 .. 5 sec
RCM	44 .. 132	3 .. 9 sec
RCH	88.5 .. 400	15.. 60 sec

## Performance: Rxx ¼ and ½ turn models:

Model	Torque Range [in-lbs]	Speed range [time for ¼ turn]
RDM	44 .. 132	0.75 .. 2.5 sec
RDH	88.5.. 400	3 .. 9 sec
RDU	110 .. 1200	11 .. 38 sec

**Note:** the speed and torque depend on the settings by dip switch of the actuator, selectable by user. Consult user manuals of individual units.

\* De-rate the duty cycle to 25% for the highest torque values

## Other Specifications Multi-turn Models:

<b>Isolated Signals:</b> [AI and AF models only]	optical isolation 1000V min.
<b>Feedback 4..20mA:</b> [AF model only]	for sensing resistor of max. 250 ohms. Floats +6VDC / -2VDC from power Gnd
<b>Position on power loss:</b>	- Standard, "remembers" the position it was in before shut n down. - will reset the valve based on torque setting when the signal is between 3 and 4 mA

## Other Specifications ¼ and ½ turn Models:

<b>TTL Signals in:</b>	internal pull up, <1mA required to pull down
<b>TTL signals out (Feedback):</b>	will drive max 2.5mA