

HANBAY
Electric Actuators

EXPLOSION-PROOF VALVE ACTUATORS

Automate any *Swagelok* valve series



Spring Return



Needle Valve



Ball Valve



Metering Valve

We can automate anything

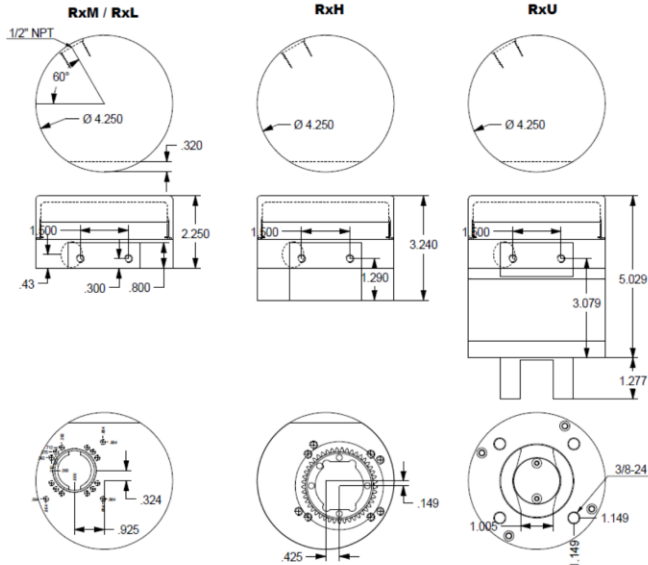
R-Series
Valve Actuators



www.hanbayinc.com | 1 800 315 4461

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

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
 - 1/4 - 1/2 turn TTL

External Gear Stages: Metal Gears for additional reduction:

RxH 3.75 additional gear ratio
 RxU 15 additional gear ratio

General Specifications:

Enclosure:	NEMA 6 / IP67 IP68 40PSI / 40 deg cel
Enclosure Rex Model:	Class I, Div 1 Groups B, C, D / T6 Class II Groups E, F, G / T6 (85 deg cel.)
Temperature range:	0 .. 70 deg Cel (derate duty cycle at high temp.)
Extended temp. range:	-40 .. 85 deg Cel [w. Heater option on cold side]
Finish:	Anodized white, Stainless
Stall protection:	by electronic position and motion detection
Feedback:	TTL, 4.20mA
Life Expectance:	250,000 cycles or equivalent under specified conditions
Motor:	BLDC brushless DC motor.
Voltages:	12-24 VDC
Stall protection:	by electronic position and motion detection
Positioning precision:	+/- 3 deg for 1/4 – 1/2 turn models +/- 0.25 deg for multi turn
Positioning resolution:	+/- 0.15 deg max. adjusting to electronic signal resolution of 12 bit additional signal filters available
Range setting:	dip switches inside enclosure
Speed setting:	dip switches inside enclosure
End of travel detection:	for needle valve closing, by motion detection
Power setting:	adjustable to protect delicate needle valves on closing operation
Position detection:	Hall detectors
Motor control:	Electronic, full computer control
Mechanical shock:	1 m drop test no damage to function Random SAE J1211, Chassis, Exterior
Mechanical vibration:	Random SAE J1211, Chassis, Exterior
Thermal Shock:	-20 deg cel to + 70 deg cel 10 min

Performance: Rxx Multi-turn models:

Model	Torque Range [in-lbs]	Speed range [time for 1 turn]
RCL	2 .. 32	1 .. 5 sec
RCM	6 .. 90	3 .. 9 sec
RCH	22 .. 300	15 .. 60 sec
RCU	110 .. 1200	75 .. 300 sec

Performance: Rxx 1/4 and 1/2 turn models:

Model	Torque Range [in-lbs]	Speed range [time for 1 turn]
RDM	6 .. 90	0.75..2.5 sec
RDH	22 .. 300	3..9 sec
RD6	110 .. 1200	11..38 sec
RD7	330.. 2500	33 .. 80 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:

Isolated Signals: optical isolation 1000V min.
[AI and AF models only]

Feedback 4..20mA: for sensing resistor of max. 250 ohms. Floats +6VDC / -2VDC from power Gnd
[AF model only]

Position on power loss:
 - Standard, "remembers" the position it was in before shut down.
 - will reset the valve based on torque setting when the signal is between 3 and 4 mA

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

TTL Signals in: internal pull up, <1mA required to pull down

TTL signals out (Feedback): will drive max 2.5mA