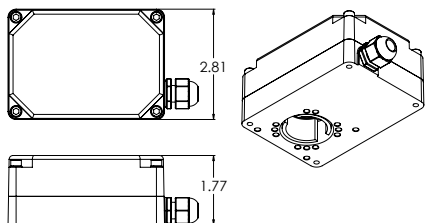
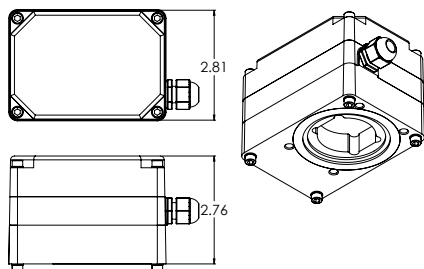


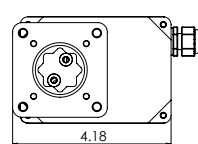
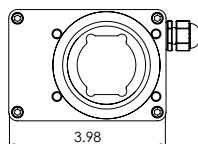
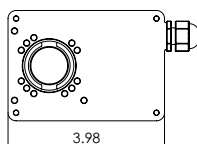
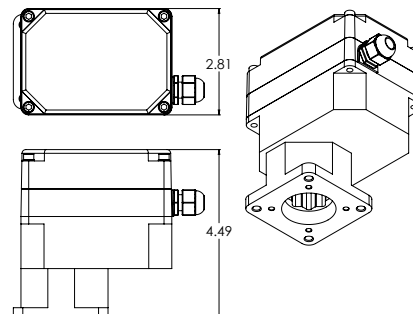
## MxJ / MxL / MxM



## MxH



## MxF



## MCx Multi-turn models

Model	Torque range [in-lbs]	Speed range [1 turn in sec]
MCJ	4 .. 16	1 .. 7 *
MCL	12 .. 48	1 .. 7
MCM	35 .. 145	4 .. 23
MCH	120 .. 497	18 .. 90
MCF	230 .. 915	38 .. 186

## MDx ¼ and ½ turn models [1/4 turn in sec]

MDM	212 .. 247	1 .. 3
MDH	430 .. 532	3 .. 9
MDF	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.

## Description and Specifications:

<b>Enclosure:</b>	Aluminum die cast E-coating, stainless NEMA 4 / IP56
<b>Temperature range:</b>	0 .. 65 °C internal (derate duty cycle at high temp.)
<b>Ext. temp. range:</b>	-40 .. 60 °C (option Heater)
<b>Stall protection:</b>	Electronic position and motion detection
<b>Feedback:</b>	TTL, 4 - 20 mA
<b>Manual Override:</b>	Optional
<b>Gears &amp; Bearings:</b>	Metal and bronze, oiled/greased for life
<b>External Fasteners:</b>	Stainless Steel
<b>Life Expectance:</b>	250,000 cycles in specified conditions
<b>Motor:</b>	Brushless DC motor, computer control
<b>Voltages/Current:</b>	12-24 VDC/Max3A @ 24 VDC 110/220 VAC/Max1.5A @ 110/220 VAC
<b>Positioning precision:</b>	+/- 3 deg for 1/4 – 1/2 turn +/- 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/ Speed setting:</b>	Dip switches inside enclosure
<b>Control options:</b>	Analog (4 - 20 mA, 1 - 5 V, 1 - 10 V), Modbus, TTL (on/off)
<b>End travel detection:</b>	For needle valve, by motion detection
<b>Power setting:</b>	Adjustable
<b>Mechanical shock:</b>	Repeated ≤ 130 g - force no effect, occasional ≤ 150 g - force no effect > 150 g - force not tolerated
<b>Mechanical vibration:</b>	Random SAE J1211, Chassis, Exterior
<b>Thermal Shock:</b>	-20 °C to + 60 °C 10 min
<b>Failsafe battery:</b>	LiPo rechargeable battery, will position the actuator to predetermined desired position
<b>Weight:</b>	MxJ, MxL, MxM: 650 g MxH, MxF: 1300 g

## Other Specifications Multi-turn Models:

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

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

<b>TTL Signals in:</b>	Internal pull up, <1 mA required to pull down
<b>TTL signals out: (Feedback)</b>	Standard: 5 V at 2.5 mA max Option: 24 V at 1 A max

## Certifications:

**FCC 47 CFR PART 15 SUBPART B**  
**ICES-001 ISSUE 4 JUNE 2006**  
**EN 61362-1:2013**  
 (GROUP 1, CLASS A; Industrial electromagnetic environment)