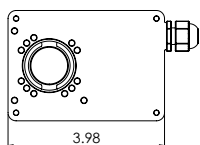
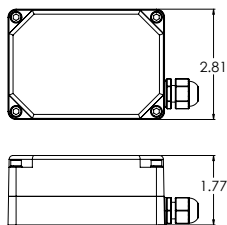
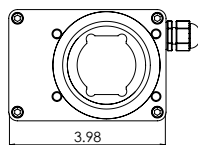
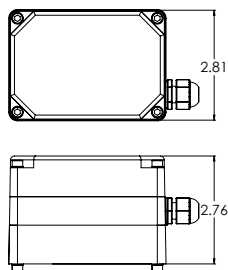


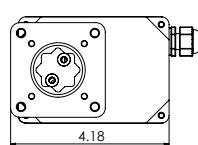
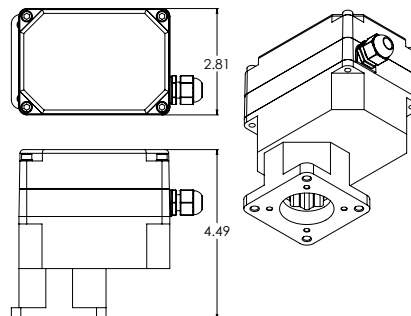
MxJ / MxL / MxM



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 1/4 and 1/2 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:

Enclosure: Aluminum die cast E-coating or stainless IP 66 / NEMA 4X

Temperature range: 0 .. 65 °C internal (derate duty cycle at high temp.)

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

Stall protection: Electronic position and motion detection

Feedback: TTL, 4 - 20 mA, Modbus

Manual Override: Optional

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

External Fasteners: Stainless Steel

Life Expectance: 250,000 cycles in specified conditions

Motor: Brushless DC motor, computer control

Voltages/Current: 12-24 VDC/Max3A
110/220 VAC/Max1.5A @ 50/60 Hz

Positioning resolution: +/- 0.15 deg max. adjusting to electronic signal resolution of 12 bit additional signal filters available

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 g - force no effect, occasional ≤ 150 g - force no effect > 150 g - force not tolerated

Mechanical vibration: Random SAE J1211, Chassis, Exterior

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

Failsafe battery: LiPo rechargeable battery, will position the actuator to predetermined desired position

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

Weight: MxJ, MxL, MxM: 650 g
MxH, MxF: 1300 g

Other Specifications Multi-turn Models:

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

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

Position power loss: 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:

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:

FCC 47 CFR PART 15 SUBPART B
ICES-001 ISSUE 5 July 2020
IEC 61000-6-2:2016, IEC 61000-6-4:2018
EN 61326-1:2013 (GROUP 1, CLASS A: Industrial electromagnetic environment)
IP66 (60529:2013) / NEMA 4X