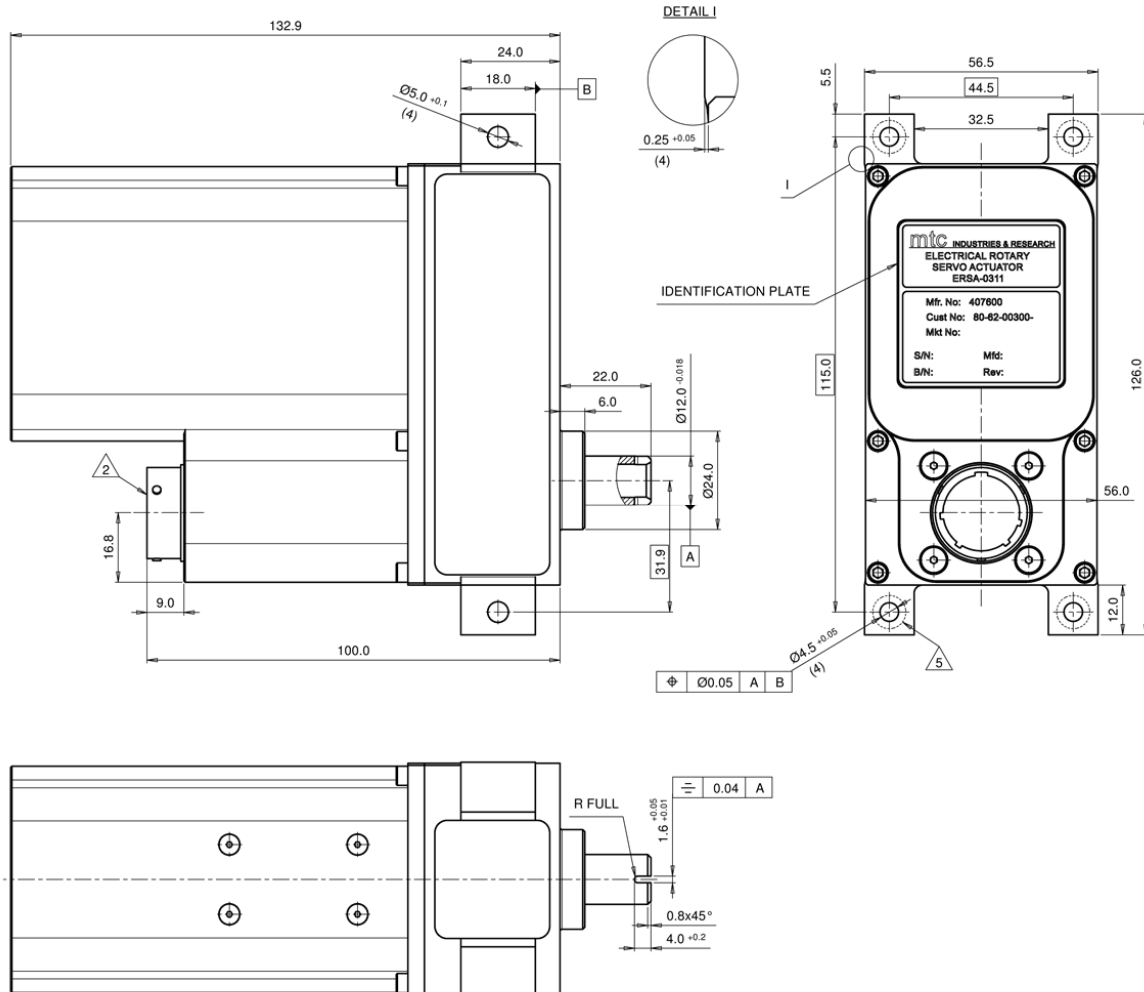
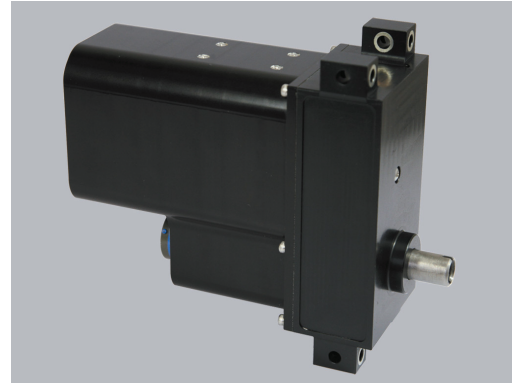


# mtc ERSA-0311

## Redundant Electrical Rotary Servo Actuator

The ERSA-0311 is a high quality & accurate product, optimized for UAV requirements, such as temperature range from  $-40^{\circ}\text{C}$  to  $71^{\circ}\text{C}$ , EMI RFI shielding and high reliability. The ERSA-0311 is a 28 VDC based **redundant** electro-mechanical rotary servo actuator with redundant electronics, dual DC brushless motor, 3-ganged potentiometer and high efficiency gearbox. It is characterized by high torque and light weight and is available with digital and/or analog status feedback.



## Specification

Parameter	Unit	Value	Tolerance
Nominal voltage	VDC	28	-
Normal operating voltage range	VDC	24 - 32	-
Current @ 28 VDC, 20°C, 5 Nm load	A	1.1	max
Stall current @ 28 VDC, 20°C	A	4.5	max
Nominal load			
- Inertia .....	kg*m <sup>2</sup>	0.015	-
- Torque: spring type, 0 Nm in mid position, scale.....	Nm/deg	0.2	-
Continuous load @ 28 V, 71 °C			
- Unbalanced torque, 2 Hz sinusoidal 5° command .....	Nm	4 (unlimited time) 8 (15 minutes)	min min
Max torque @ 28 VDC, 20°C	Nm	25	-
Slew rate @ 28 VDC, 20°C			
No load	deg/sec	160	min
For torque 5Nm		130	min
Useful angular stroke CW, CCW	deg	45	-
Angular backlash	deg	0.5	max
Bandwidth with nominal load and command amplitude ± 4°	Hz	3	min
Positioning accuracy in range ± 45°	deg	±0.6	-
Friction torque	Nm	1.5	-
Stiffness, with resistance 3 Nm	deg	1.2	max
Operating temperature	°C	-40 to + 71	-
Operating life @ 28V, 25 °C	hours	6000	-
Altitude operating limits, above sea level	feet	1,500 – 35,000	-
Weight	kg.	0.875	±0.015
Isolated reference and separated ground	V	5	
Communication:			
- for 16 actuators	- RS-485		
- for 12 actuators (self-selected)	- HIS (PWM)		
EMI	MIL-STD-461F,		
ESD	IEC61000-4-2 standard to 25 KV levels		