Electronics designed by

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Electromechanical Linear Actuators

for aeronautical and defence applications

COMPACT TECHNOLOGY

- Direct drive EMA (ElectroMechanical Actuator) design
- Hardened and integrated control electronics
- High torque brushless motor

PERFORMANCES

- Reduced dimensions and mass
- Higher efficiency and power
- Compatibility with DO-160 and MIL-STD-810 environments
- Positioning controlled by integrated control electronics

technology in **motion**

ELECTROMECHANICAL LINEAR ACTUATOR

The range of linear electromechanical actuator has been designed to meet resistance to severe climatic and mechanical environments which are described in the DO-160 and MIL-STD-810 standards.

The actuator architecture has been designed to meet the requirements of the applications in terms of:

- High load capacity with reduced dimensions
- Reduced mass actuator
- Sealed actuator
- Controlled displacement speed
- Low friction torque at low temperature
- Résistance to vibration and shock environment
- Operating range temperature for aeronautical and defence applications
- Modifiable interfaces upon request
- Diversified stops: electronic and mechanical
- Reduced clearance guide system in translation
- Included anti-rotation device

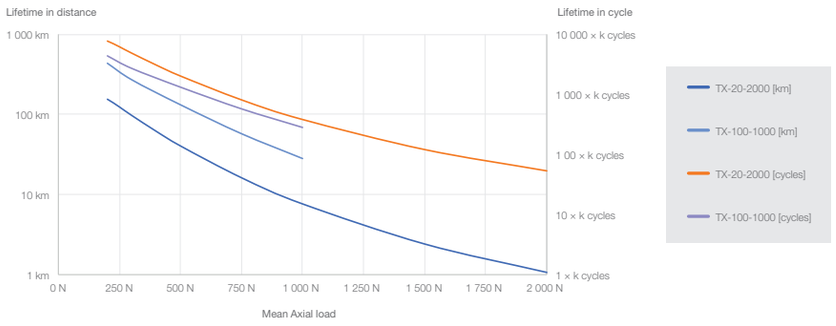
PERFORMANCES

The actuator is equipped with a brushless motor for the start of rotation, associated with a ball screw system to ensure the translation displacement with high efficiency. The chosen architecture is equipped with a pair of preloaded bearings to resume efforts, ensure good stiffness and optimize the dimensions.

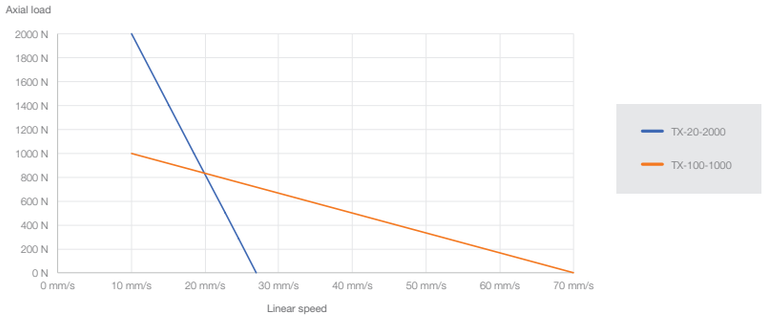
This actuator is also equipped with electronic limit-switch sensors (retracted position/ extended position).

The command-control (field-oriented control as an option) manages the power of the actuator and the detection of the sensors via two distinct connectors meeting the applicable standards.

LIFE CHARACTERISTICS AS A FUNCTION OF MEAN AXIAL LOAD



LOAD AS A FUNCTION OF LINEAR SPEED (Tension 24V)



TECHNICAL CHARACTERISTICS

TX-20-2000 Reference

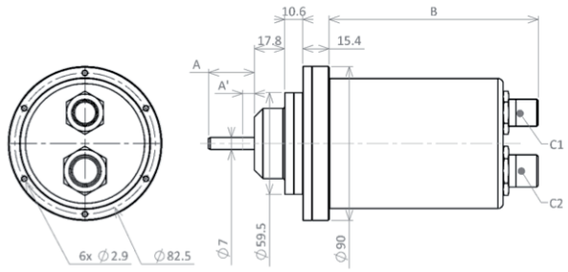
Maximal stroke	20 mm
Travel time total stroke	1.5 second under 1000 N axial load
Maximal Thrust load	2000 N in axis
Tension nominal	28 Volts DC
Maximum current	7 A
Actuator mass	1150 g
Mechanical stop	Yes
Electric stop	Yes
Controller BRUSHLESS motor included	Yes
Range of temperature	–40°C à +70°C
Connectors	MIL 38999 STD

TX-50-1500 Reference

Maximal stroke	50 mm
Travel time total stroke	1.5 second under 750 N axial load
Maximal Thrust load	1500 N in axis
Tension nominal	28 Volts DC
Maximum current	7 A
Actuator mass	1200 g
Mechanical stop	Yes
Electric stop	Yes
Controller BRUSHLESS motor included	Yes
Range of temperature	-40°C à +70°C
Connectors	MIL 38999 STD

TX-100-1000 Reference

Maximal stroke	100 mm
Travel time total stroke	2 second under 500 N axial load
Maximal Thrust load	1000 N in axis
Tension nominal	28 Volts DC
Maximum current	7 A
Actuator mass	1350 g
Mechanical stop	Yes
Electric stop	Yes
Controller BRUSHLESS motor included	Yes
Range of temperature	-40°C à +70°C
Connectors	MIL 38999 STD



Configuration	A maxi	A' mini	B maxi	Connector C1	Connector C2
TX-20-2000	27 mm	6.5 mm	123 mm	Type 24 : 9-35	Type 24 : 11-20
TX-50-1500	57 mm	6.5 mm	153 mm	Type 24 : 9-35	Type 24 : 11-20
TX-100-1000	107 mm	6.5 mm	203 mm	Type 24 : 9-35	Type 24 : 11-20