Elmo's ExtrIQ Line

Durable Servo Products for Extreme Environments

180 x 142 x 75.2 mm
7.08" x 5.59" x 2.96"

ExtrIQ Eagle 70 A, 700 VDC

The Sturdiest Super Compact Servo Drive – up to 700 VDC

The Eagle is part of Elmo's ExtrIQ line - the only servo drives that are ready for extreme conditions

The Eagle servo drive operates directly from the mains: up to 700 VDC and up to 35 kW of continuous qualitative power

The **Eagle 70/700** is a new member of **Elmo's ExtrIQ** product suite – a full range of intelligent digital servo drives for sinusoidal, trapezoidal and DC motors that are designed to operate in extreme environmental conditions. Yet again Elmo has demonstrated its industry leadership by pushing the boundaries of high power density and intelligence.

Eagle 70/700 Highlights

- Ready to use in extreme conditions
- SimplIQ core motion control technology
- Ultra-high qualitative power density
- Panel mounting
- Top efficiency
- Supports a wide variety of feedbacks
- Vector control sinusoidal commutation
- Advanced filtering and velocity gain scheduling for enhanced dynamic performance

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Motion Control

Motion Control Solutions Made Small, Smart & Simple

ExtrIQ Eagle 70/700

Environmental Conditions

Feature	Operation Conditons	Range	
Ambient temperature range	Non-operating conditions	-50 °C to +100 °C (-58 °F to 212 °F)	
	Operating conditions	-40 °C to +71 °C (-40 °F to 160 °F)	
Temperature shock	Non-operating conditions	-40 °C to +71 °C (-40 °F to 160 °F) within 3 min.	
Altitude	Non-operating conditions	-400 m to 10,000 m (-1,000 ft to 30,000 ft)	
	Operating conditions	Std: -400 m to 10,000 m (-1,000 ft to 30,000 ft) On request: up to 155,000 m (510,000 ft)	
Relative humidity	Non-operating conditions	Up to 95% relative humidity non-condensing at 35 °C (95 °F)	
	Operating conditions	Up to 95% relative humidity non-condensing at 25 °C (77 °F), up to 90% relative humidity non-condensing at 42 °C (108 °F)	
Vibration	Operating conditions	20 Hz - 2000 Hz, 14.6 g	
Mechanical shock	Non-operating conditions	±40 g	Half sine, 11 msec.
	Operating conditions	±20 g	Half sine, 11 msec.

Electrical Power Characteristics

Specification	Details
MIL-STD-1275	Characteristic of 28 VDC electrical systems in military vehicles Note: Compliance to versions A and B
MIL-STD-704	Aircraft electrical power characteristic

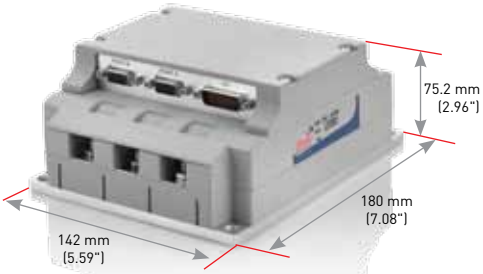
Electrical Specifications

Feature	70/700
Minimum supply voltage	S suffix in P/N*: 100 VDC No S suffix in P/N: 200 VDC
Nominal supply voltage	640 VDC
Maximum supply voltage	690 VDC
Maximum cont. electrical output power from the drive	35 kW
Safe Torque Off (STO) inputs	2
Digital in/Digital out/Analog in	6/4/1
Efficiency at rated conditions	> 98%
Auxiliary power supply voltage (external option)	19 V – 32 V VDC
Auxiliary power supply voltage (internal option)	Derived internally from DC power bus
Auxiliary supply power (external)	≤3 VA without external loading≤7 VA with full external loading
Continuous current limit (Ic) amplitude of sinusoidalor DC trapezoidal commutation.	70 A
Continuous RMS sinusoidal commutation (Ic)	50 A
Weight	1.1 kg
Dimensions	180 x 142 x 75.2 mm (7.08" x 5.59" x 2.96")
Mounting method	Panel mounting

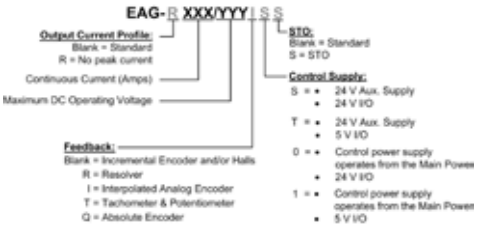
*See the part number to the right of this table. The S suffix appears in models where there is a 24 V control supply.

The Eagle 70/700 has the following characteristics:

- Incorporates extremely high power density, intelligent motion control and rich functionality, all in a super compact and highly efficient package.
- Based on Elmo's advanced SimplIQ core technology, enabling superior motion control performance, flexibility, efficiency and reliability.
- Advanced sinusoidal full vector control, as well as trapezoidal and DC motor commutation methods.



The combination of ultra-high power density, versatile motion functionality and programming flexibility, together with a wide variety of feedbacks and CANopen networking, make the Eagle 70/700 an ideal and effective solution.



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