Tritex Overview

Our premier process control solution, The Tritex™ Series linear and rotary actuators, integrate a motor, actuator and digital positioner into one complete compact package. Rugged and reliable, the Tritex is a high speed, high accuracy actuator that is suited for a wide range of demanding process control applications.

Tritex Linear Actuators

Fully programmable to follow an analog signal representing either position or force, the Tritex linear actuator is perfectly designed for sliding stem valve applications with thrust requirements up to 3685 lbs. Highly accurate position feedback allows the Tritex to achieve combined repeatability and hysteresis as low as 0.25%. The Tritex Series linear actuators can be mounted on any valve from any manufacturer.

Tritex Linear Actuator Features

Tritex Linear Actuator

• Custom Valve Seat
Exlar actuators stroke the valve based on position, but can switch to torque mode when seating the valve. This allows a tight cut-off. It also helps with retrofitting valves that may have some wear. For new valves, it makes sure damage isn't done due to over-forcing the stroke.

• High Stiffness
Similar to hydraulic actuators, but without the cost or maintenance issues, Exlar actuators are extremely stiff, so dynamic flow problems such as negative gradients are never a problem.

• Fast Stroke Speeds
Most other electric actuators are known for being slow – a major disadvantage. Exlar actuators can close a valve in milliseconds if needed.

• 100% Torque Available All the Time
Full torque means almost zero deadband; and friction (stiction) in the valve stem is no problem for the Exlar actuator. Current is always available to the actuator - so it will hold its position - no matter what! This provides excellent process loop control.

Tritex Linear Servo Valve Actuator Specifications

Model	TLM20	TLM30	T2M090	T2M115
Input Signal	4-20mA or 0-10VDC	4-20mA or 0-10 VDC	4-20mA or 0-10 VDC	4-20mA or 0-10 VDC
Input Impedence	500 Ohm	500 Ohm	500 Ohm	500 Ohm
Power Requirements	24-48 VDC, 10 Amp	24-48 VDC, 10 Amp	115-220 VAC, 50/60 Hz, single phase	115-220 VAC, 50/60 Hz, single phase
Connections	M23 style connectors or embedded leads	M23 style connectors or embedded leads	Terminal strip with NPSM ports	Terminal strip with NPSM ports
Stroke Length	0 - 12 inches	0 to 24 inches	0 to 24 inches	0 to 24 inches
Maximum Thrust	500 lbf	1250 lbf	1500 lbf	3685 lbf
Maximum Speed	33 in/sec	17 in/sec	33 in/sec	25 in/sec
Resolution	<0.025% of span	<0.025% of span	<0.025% of span	<0.025% of span
Positioning Accuracy	<1% of span	<1% of span	<1% of span	<1% of span
Response/Sensitivity	Adjustable	Adjustable	Adjustable	Adjustable
Loss of Signal Action	Open, Close, Mid Stroke, Disengage or Hold Position	Open, Close, Mid Stroke, Disengage or Hold Position	Open, Close, Mid Sroke, Disengage or Hold Position	Open, Close, Mid Stroke, Disengage or Hold Position
Loss of Power Action	Hold Position, Disengage	Hold Position, Disengage	Hold Position, Disengage	Hold Position, Disengage
Certifications & Hazardous Location Ratings	CE	CE	UL, CSA CI Div.2 (available in 2009)	UL, CSA CI Div.2 (available in 2009)
Environmental Ratings	IP54/65	IP54/65	IP54/65	IP54/65
Temperature Range	0° - 55° C	0° - 55° C	-20° - 65° C (optional -40° - 65° C)	-20° - 65° C (optional -40° - 65° C)

Tritex Rotary Actuators

The Tritex™ Series rotary actuators are ideal for operating quarter-turn, full-turn or multi-turn valves or shaft driven dampers. Its unique design integrates a high power density, electrically rated brushless motor with a feedback device, planetary gear reducer and controller into one compact package. Rotary Tritex actuators can be set up representing torque, velocity or position.

In shaft driven applications, the rotary Tritex actuators are directly coupled shaft-to-shaft. This eliminates the ungainly mechanisms usually necessary to convert the linear motion of pneumatic and hydraulic cylinders to rotational motion. Gear ratios of 4:1 to 100:1 allow the power of Tritex to be applied to a broad range of applications.

Tritex Rotary Actuator Features

• 100% Torque Available All the Time

Unlike standard duty cycle electric actuators, the Tritex is based on servo technology which gives you full torque capability all of the time. Full torque means almost zero deadband; and no problems with starting friction.

• High Accuracy

Tritex actuators have a built-in position feedback sensor, providing much higher accuracy over potentiometer based actuators.

Tritex Rotary Actuator

• Speed of Response

Typical electric actuators are slow, but the Tritex response rate is measured in milliseconds. This provides excellent modulating control of both ball valves and butterfly valves.

Tritex Rotary Servo Valve Actuator Specifications

Model	RTG060	RTG090	R2G090	R2G115
Input Signal	4-20mA or 0-10VDC	4-20mA or 0-10 VDC	4-20mA or 0-10 VDC	4-20mA or 0-10 VDC
Input Impedence	500 Ohm	500 Ohm	500 Ohm	500 Ohm
Power Requirements	24-48 VDC, 10 Amp	24-48 VDC, 10 Amp	115-220 VAC, 50/60 Hz, single phase	115-220 VAC, 50/60 Hz, single phase
Connections	M23 style connectors or embedded leads	M23 style connectors or embedded leads	Terminal strip with NPSM ports	Terminal strip with NPSM ports
Gearbox Ratios	4:1 to 50:1	4:1 to 50:1	4:1 to 50:1	4:1 to 50:1
Maximum Torque	10 lbf-in	45 lbf-in	53 lbf-in	97 lbf-in
Maximum Speed	1250 rpm	425 rpm	1000 rpm	750 rpm
Resolution	<0.025% of span	<0.025% of span	<0.025% of span	<0.025% of span
Positioning Accuracy	<1% of span	<1% of span	<1% of span	<1% of span
Response/Sensitivity	Adjustable	Adjustable	Adjustable	Adjustable
Loss of Signal Action	Open, Close, Mid Stroke, Disengage or Hold Position	Open, Close, Mid Stroke, Disengage or Hold Position	Open, Close, Mid Sroke, Disengage or Hold Position	Open, Close, Mid Stroke, Disengage or Hold Position
Loss of Power Action	Hold Position, Disengage	Hold Position, Disengage	Hold Position, Disengage	Hold Position, Disengage
Certifications & Hazardous Location Ratings	CE	CE	UL, CSA CI Div.2 (available in 2009)	UL, CSA CI Div.2 (available in 2009)
Environmental Ratings	IP65	IP65	IP65	IP65
Temperature Range	0^{o} - 55^{o} C	0^{o} - 55^{o} C	-20^{o} - 65^{o} C (optional -40^{o} - 65^{o} C)	-20^{o} - 65^{o} C (optional -40^{o} - 65^{o} C)

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