

When One is Enough.

The new EF spring return actuator – the most powerful of its kind.

The EF actuator utilizes rugged components in a pressure cast aluminum housing for added strength and reliability. It offers a high torque output of 270 in-lbs and a NEMA 4 option to meet tough environmental conditions found in many HVAC applications.

The EF actuator was developed to satisfy high torque applications with a single actuator. The EF can take the place of two classic AF actuators in a piggy-back mounted application; simplifying wiring and mounting requirements while reducing material and installation costs. The NEMA 4 protection feature allows complete access to change the direction of rotation and allows locking or manually overriding the actuator.

The EF provides a cost effective and flexible solution that will deliver years of dependable performance over a wide range of operating conditions.

> Take a look inside the EF



BELIMO



Powerful, Rugged, Reliable

Spring Fail-Safe Mechanism

270 in-lb [30 Nm]

Run time 60...150 seconds

Spring Return <20 seconds

The EF offers easy installation, commissioning and connects to high torque applications with a complete line of accessories. Dual EF mounting on a single shaft is possible for higher torque. The EF series spring return actuators are available in basic models offering 24 or 120 VAC and faster run times with MFT models. NEMA 4 versions come with integrated junction box providing faster and easier installation. MFT versions provide the flexibility to program the actuator in the field for various proportional control functions and DC voltage feedback signals.

Custom models provide the option of appliance or plenum cable in various lengths (EFX NEMA 2 models only). MFT models offer many proportional control functions and DC voltage feedback signals that can come programmed from the factory or adjusted in the field.

All standard -S models come with two auxiliary switches: one fixed @ 10°, one adjustable from 10° to 85°. All NEMA 4 -S models come with two fixed switches, one @ 10° and the other @ 85°.

Housing Types



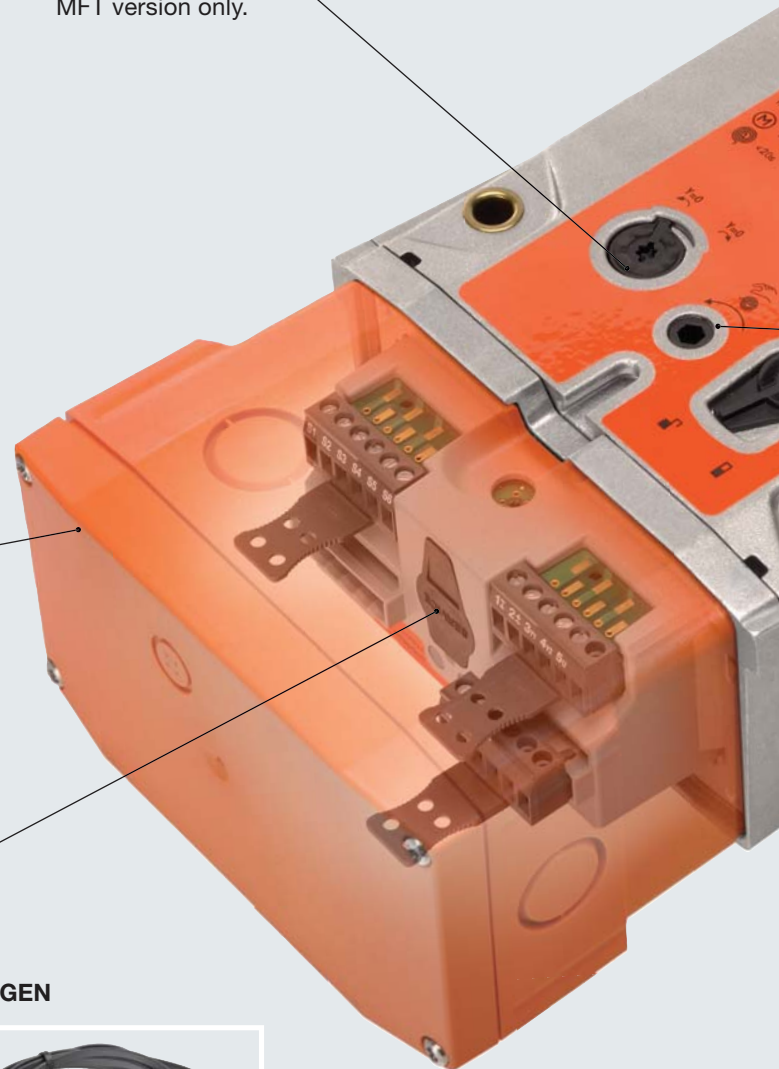
NEMA 4 (UL Type 4)
IP66

NEMA 2 (UL Type 2)
IP54

Clear Position Indication

Directional Switch

Available on SR and MFT version only.



MFT Interface



MFT interface socket with LED indicators.

ZTH-GEN



ZTH-GEN US is a handheld interface that allows field programming of running time, control signal, feedback and access to actuator error messages via the MFT interface socket. (Sold separately)



Reversible Universal Clamp

Reversible universal clamp with 'V' bolt with integrated torque stabilization rings.



5° Damper Pre-Tension

Manual Override

Overload protection free wheel clutch. Crank will not turn when actuator runs.



IP66 / NEMA 4 Protection



Internal Switches

Standard versions
1 fixed and 1 adjustable
(2 fixed for NEMA 4 versions).

Heater Option

Internal heater for -40°C operation of NEMA 4 versions.



No Other Direct Coupled Spring Return Damper Actuator Like it on the Market!

- Higher torque offering (270 in-lbs) in a single, direct coupled actuator can take the place of two classic AFs.
- NEMA 4 (UL Type 4, IP 66) option to meet tough environmental conditions without having an additional housing.
- Effectively operates a 66 sq-ft damper.*



Product Range				
Technical Data	EFB24(-S)(N4)	EFB120(-S)(N4)	EFB24-SR(-S)(N4)	EFB24-MFT(-S)(N4)
Power Supply	24 VAC ±20% 50/60 Hz, 24 VDC, +20/-10%	100-240 VAC -20/+10% 50/60 Hz, 100-125 VDC ±10%	24 VAC ±20% 50/60 Hz, 24 VDC, +20/-10%	
Transformer Sizing	16 VA	21 VA @ 100 VAC 29 VA @ 240 VAC	14 VA	16 VA @ 60s run time 12 VA @ 150s run time
Power Consumption (Running / Holding)	9.5 W / 4.5 W	9.5 W / 4.5 W	8 W / 4.5 W	9.5 W / 4.5 W @ 60s run time 7 W / 4.5 W @ 150s run time
Angle of Rotation	Max. 95°, limited with built-in mechanical stop, 35° to 95° Electronically variable with MFT only			
Torque / Force	270 in-lbs (30 Nm)			
Running Time	75 seconds		95 seconds	150 seconds (default) 60-150 seconds (variable)
Spring Return Time	<20 seconds @ -4°F to +122°F (-20°C to +50°C); <60 seconds @ -22°F (-30°C)			
spring (with heater)	<20 seconds @ -22°F to +122°F (-30°C to +50°C); <60 seconds @ -40°F (-40°C)			
Auxiliary Switches (-S models)	Two SPDT 3A (0.5A inductive) @ 250V UL approved, one set at + 10°, one adjustable 10° to 85° NEMA 4: Two SPDT 3A (0.5A inductive) @ 250V UL approved, one set at 10° and the other at 85°			
Noise Level	Spring return: 72 dB(A) max			
Operating Temperature	-22°F to 122°F (-30 to 50°C) NEMA 4 with Heater (N4H): -40°F to +122°F (-40°C to 50°C)			
Agency Listing	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC & 2006/95/EC			
Weight	9.8 lbs (NEMA 2 version), 10.1 lbs (-S version), 10 lbs (NEMA 4 version), 10.1 lbs (NEMA 4 with heater)			

*Parallel blade without edge seals and 1000 FPM air velocity.

- Manual override standard on all models for high torque actuation applications.
- Built-in junction box on NEMA 4 models for complete installation of NEMA 4 rated conduit and connectors.
- 3, 10 and 16 ft cable options (not available on NEMA 4 models).
- NEMA 4 -S models come with two fixed auxiliary switches.

Belimo worldwide: www.belimo.com

BELIMO Americas

USA Locations, 43 Old Ridgebury Road, Danbury, CT 06810
Tel. 800-543-9038, Fax 800-228-8283, marketing@us.belimo.com

1049 Fortunato Loop, Sparks, NV 89436
Tel: (800) 987-9042, Tel: (775) 857-4243, Fax: (800) 987-8875

Canada Locations, 14/16 – 5716 Coopers Avenue, Mississauga, Ontario L4Z 2E8
Tel. 866-805-7089, Fax 905-712-3124, marketing@us.belimo.com

Latin America and the Caribbean Customer Service, Tel. 203-791-8396, Fax 203-791-9139, marketing@us.belimo.com

