

Electric Actuator Type BF

Fast Running Non-Spring Return 5 Nm, IP55/66

ELODRIVE-Actuators are intended to be used for the operation of dampers, valves and other process control elements. The BF-Series of fast running actuators remain in position in case of a power supply interruption. Nominal running time is 30 s for 90°. Direct mounting of the actuators onto the damper shafts is achieved via the centric clamping adapter. An enclosed anti-rotation strap ensures that the actuator remains in a defined position. The maximum rotation angle is 95°.

The following applies for all models of the product line B:

General Conception

- One size for all types
- Identical accessories for all models
- Identical control functionality for all models
- Homogeneous control and voltage variants for all models
- Universal wiring schematics

Operational Functionality

- Simple one-handed manual positioning
 - no disengaging of gears required
- Direction of rotation (CW or CCW) and also signal 0...10V and 2...10V selectable via switch

Motor and Gear Concept

- Brushless DC-Motor – no wear and tear
- Constant running time, independent of load
- Constant torque throughout the entire operating range
- Synchronized parallel operation
- Very quiet operating
- 100% self-locking

Control Concept

- On/Off and Floating Point control combined in one system
- Wide supply voltage range (120/230V AC)
- Automatic shutoff either when reaching programmed hard-stop or when reaching mechanical end-stop
- No return voltage

Adaptation possibilities

- Centric clamping adapter as a standard feature
- Form fit adapter available in different sizes
- Special solutions for aggressive environments available upon request

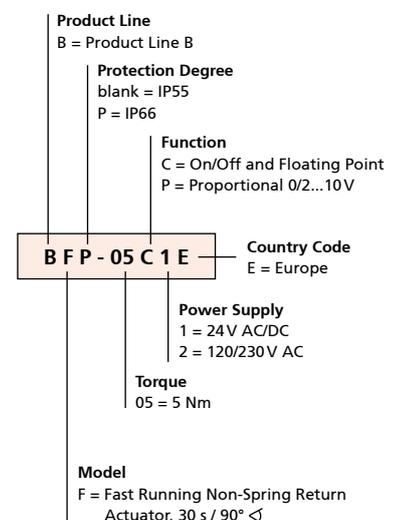
Housing Design

- Protection degree IP55 and IP66 without additional encasement
- Direct mounting even in limited spaces
- Positioning of the actuator can be achieved either via the enclosed anti-rotation strap or by using additional screws

Torque	Supply voltage	Type / Order-No.		Power consumption	
		Protection Degree IP55	Protection Degree IP66	Operation	Stop
On/Off and Floating Point control					
5 Nm	24V AC/DC	E-BF-05C1E	E-BFP-05C1E	4,5 VA / 2,5 W	1,0 W
5 Nm	120/230V AC	E-BF-05C2E	E-BFP-05C2E	8,0 VA	2,0 VA
Proportional 0/2...10V					
5 Nm	24V AC/DC	E-BF-05P1E	E-BFP-05P1E	4,5 VA / 2,5 W	1,0 W
5 Nm	120/230V AC	E-BF-05P2E	E-BFP-05P2E	6,0 VA	2,0 VA




Nomenclature



Scope of delivery

- Centric clamp adapter
- Position indicator
- Mounting set for external limit stops (only 5 and 10 Nm)
- Anti rotation strap
- Allen key
- Operation manual
- Actuators with:
 - running time of 30 sec.
 - 15 Nm and 20 Nm torque
 are delivered without mounting kit for external limit stops

Available accessories

Crank arm



Foot mounting bracket



Crank arm sets



Form fit adapter



Anti rotation strap



Auxilliary switches and Potentiometers



Technical Data Electric Actuator Type BF		
Characteristic	24V	120/230V
Nominal voltage	AC 24V +/- 20%, 50/60 Hz, DC 24 to 36V +/- 10%	AC 90 to 264V, 50/60 Hz
Protection class	III (SELV, safety low voltage)	II protective insulation
Starting current	max. 3 A at impulse width 5 ms	
Actuator features at 24V and 120/230V Connection voltage		
Synchronization	+/- 5%	
Rotation direction	Selectable via switch L/R (CCW/CW) or by L/R mounting	
Angle of rotation	Max. 95°	
Manual adjustment	One-handed positioning - without disengaging of gears	
Shaft mounting	Centered, $\varnothing 8 - 20$ mm	
Running time	30 s (+/- 5%), independent of load	
Position indicator	Mechanical	
Noise emission level	< 35 dB (A)	
Ambient temperature	-30 to +50°C	
Storage temperature	-40 to +80°C	
Ambient humidity	5 to 95% rH	
Function	Type 1 (EN 60730-1)	
Norm Conformity	EN60730-1, EN60730-2, EN55022 Class B, EN55014, EN61000	
Weight	approx. 700 g - 900 g (depends on version)	
Maintenance	maintenance free	
On/Off and Floating Point control		
Connection Cable	3x0,75 mm ² , 0,9 m length	
Wiring Schematics On/Off		
Wiring Schematics Floating Point		
Proportional 0/2...10V		
Working area	0...10 V or 2...10 V selectable via switch or 24 V override function (on/off)	
Input resistance	>100 kΩ	
Output signal	DC 0/2...10V for 0...100%	
Connection Cable	4x0,75 mm ² , 0,9 m length	5x0,75 mm ² , 0,9 m length
Wiring Schematics Proportional 0/2...10V (Input till 24 V)		

All dimensions in mm

