

Electric Actuator Type BN

Non Spring Return 5/10/15/20 Nm, IP55/66

ELODRIVE-Actuators are intended to be used for the operation of dampers, valves and other process control elements. The **BN-Series** of actuators remain in position in case of a power supply interruption. 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
- Innovative Solution for 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

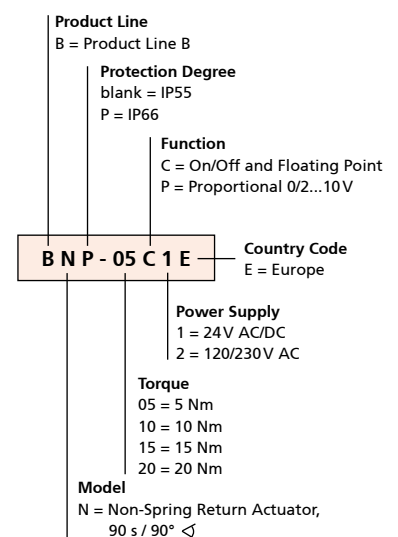
Housing Design

- 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-BN-05C1E | E-BNP-05C1E | 3,0 VA / 1,5 W | 1,0 W |
| 5 Nm | 120/230V AC | E-BN-05C2E | E-BNP-05C2E | 5,0 VA | 2,0 VA |
| 10 Nm | 24V AC/DC | E-BN-10C1E | E-BNP-10C1E | 4,0 VA / 2,0 W | 1,0 W |
| 10 Nm | 120/230V AC | E-BN-10C2E | E-BNP-10C2E | 7,0 VA | 2,0 VA |
| 15 Nm | 24V AC/DC | E-BN-15C1E | E-BNP-15C1E | 5,5 VA / 3,0 W | 1,0 W |
| 15 Nm | 120/230V AC | E-BN-15C2E | E-BNP-15C2E | 9,0 VA | 2,0 VA |
| 20 Nm | 24V AC/DC | E-BN-20C1E | E-BNP-20C1E | 7,0 VA / 4,0 W | 1,0 W |
| 20 Nm | 120/230V AC | E-BN-20C2E | E-BNP-20C2E | 11,0 VA | 2,0 VA |
| Proportional 0/2...10V | | | | | |
| 5 Nm | 24V AC/DC | E-BN-05P1E | E-BNP-05P1E | 3,0 VA / 1,5 W | 1,0 W |
| 5 Nm | 120/230V AC | E-BN-05P2E | E-BNP-05P2E | 5,0 VA | 2,0 VA |
| 10 Nm | 24V AC/DC | E-BN-10P1E | E-BNP-10P1E | 4,0 VA / 2,0 W | 1,0 W |
| 10 Nm | 120/230V AC | E-BN-10P2E | E-BNP-10P2E | 6,0 VA | 2,0 VA |
| 15 Nm | 24V AC/DC | E-BN-15P1E | E-BNP-15P1E | 5,5 VA / 3,0 W | 1,0 W |
| 15 Nm | 120/230V AC | E-BN-15P2E | E-BNP-15P2E | 8,0 VA | 2,0 VA |
| 20 Nm | 24V AC/DC | E-BN-20P1E | E-BNP-20P1E | 7,0 VA / 4,0 W | 1,0 W |
| 20 Nm | 120/230V AC | E-BN-20P2E | E-BNP-20P2E | 10,0 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 BN | | |
|--|---|---------------------------------------|
| 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, 5/10/15 Nm, (6A 20Nm) | |
| 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 | 90 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. 850 g - 1200 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 | | |
| Wiring Schematics Integr. Potentiometer | | |
| 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

