

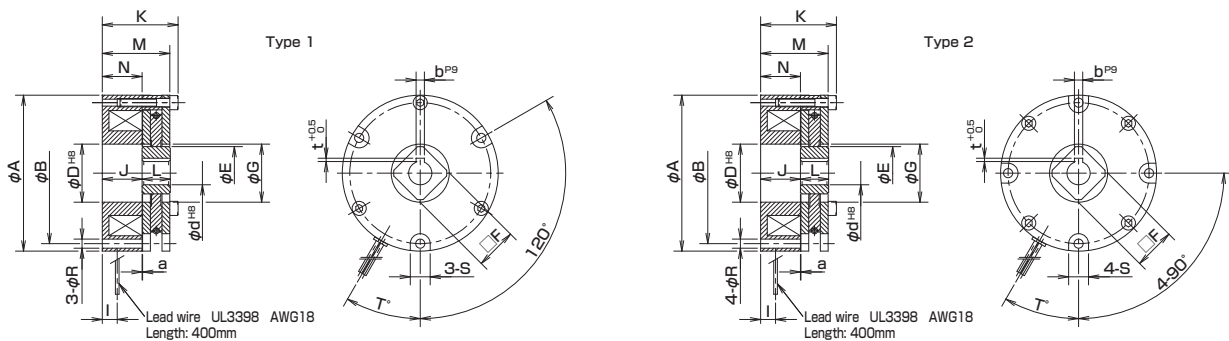
BXL(N) Models

Specifications

| Model | Size | Static friction torque T_s [N·m] | Coil (at 20°C) | | | | Heat resistance class | Max. rotation speed [min ⁻¹] | Rotating part moment of inertia J [kg·m ²] | Allowable braking energy rate Pbal [W] | Total braking energy Et [J] | Armature pull-in time t_{ai} [s] | Armature release time t_{ar} [s] | Applicable motor output (Reference) Four poles [kW] | Mass [kg] |
|----------------|------|------------------------------------|----------------|-------------|-------------|----------------|-----------------------|--|--|--|-----------------------------|------------------------------------|------------------------------------|---|-----------|
| | | | Voltage [V] | Wattage [W] | Current [A] | Resistance [Ω] | | | | | | | | | |
| BXL-08-10N-002 | 08 | 2 | 24 | 19.0 | 0.793 | 30.3 | F | 3600 | 6.3×10^{-5} | 60.0 | 5.0×10^7 | 0.030 | 0.050 | 0.1/0.2 | 1.4 |
| | | | 99 | 19.0 | 0.192 | 515.8 | F | | | | | | | | |
| | | | 171 | 19.0 | 0.111 | 1539 | F | | | | | | | | |
| BXL-08-10N-004 | 08 | 4 | 24 | 19.0 | 0.793 | 30.3 | F | 3600 | 6.3×10^{-5} | 60.0 | 5.0×10^7 | 0.040 | 0.040 | 0.4 | 1.4 |
| | | | 99 | 19.0 | 0.192 | 515.8 | F | | | | | | | | |
| | | | 171 | 19.0 | 0.111 | 1539 | F | | | | | | | | |
| BXL-10-10N-008 | 10 | 8 | 24 | 28.0 | 1.166 | 20.6 | F | 3600 | 13.8×10^{-5} | 70.0 | 8.0×10^7 | 0.050 | 0.050 | 0.75 | 2.7 |
| | | | 99 | 28.0 | 0.283 | 350.0 | F | | | | | | | | |
| | | | 171 | 28.0 | 0.164 | 1044 | F | | | | | | | | |
| BXL-10-10N-015 | 10 | 15 | 24 | 28.0 | 1.166 | 20.6 | F | 3600 | 13.8×10^{-5} | 70.0 | 8.0×10^7 | 0.070 | 0.030 | 1.5 | 2.7 |
| | | | 99 | 28.0 | 0.283 | 350.0 | F | | | | | | | | |
| | | | 171 | 28.0 | 0.164 | 1044 | F | | | | | | | | |
| BXL-12-10N-022 | 12 | 22 | 24 | 35.0 | 1.460 | 16.4 | F | 3600 | 33.8×10^{-5} | 90.0 | 12.0×10^7 | 0.080 | 0.060 | 2.2 | 4.7 |
| | | | 99 | 35.0 | 0.353 | 280.1 | F | | | | | | | | |
| | | | 171 | 35.0 | 0.205 | 835.5 | F | | | | | | | | |
| BXL-12-10N-030 | 12 | 30 | 24 | 35.0 | 1.460 | 16.4 | F | 3600 | 33.8×10^{-5} | 90.0 | 12.0×10^7 | 0.100 | 0.030 | 3.0 | 4.7 |
| | | | 99 | 35.0 | 0.353 | 280.1 | F | | | | | | | | |
| | | | 171 | 35.0 | 0.205 | 835.5 | F | | | | | | | | |
| BXL-16-10N-040 | 16 | 40 | 24 | 42.0 | 1.753 | 13.7 | F | 1800 | 73.5×10^{-5} | 120.0 | 16.0×10^7 | 0.100 | 0.070 | 3.7 | 6.3 |
| | | | 99 | 42.0 | 0.424 | 233.3 | F | | | | | | | | |
| | | | 171 | 42.0 | 0.246 | 696.1 | F | | | | | | | | |
| BXL-16-10N-060 | 16 | 60 | 24 | 55.0 | 2.294 | 10.5 | F | 1800 | 74.6×10^{-5} | 150.0 | 16.0×10^7 | 0.100 | 0.050 | 5.5 | 6.7 |
| | | | 99 | 55.0 | 0.556 | 178.1 | F | | | | | | | | |
| | | | 171 | 55.0 | 0.322 | 531.6 | F | | | | | | | | |
| BXL-16-10N-080 | 16 | 80 | 24 | 55.0 | 2.294 | 10.5 | F | 1800 | 74.6×10^{-5} | 150.0 | 16.0×10^7 | 0.100 | 0.030 | 7.5 | 6.7 |
| | | | 99 | 55.0 | 0.556 | 178.1 | F | | | | | | | | |
| | | | 171 | 55.0 | 0.322 | 531.6 | F | | | | | | | | |

*The armature pull-in time and armature release time are taken during DC switching.

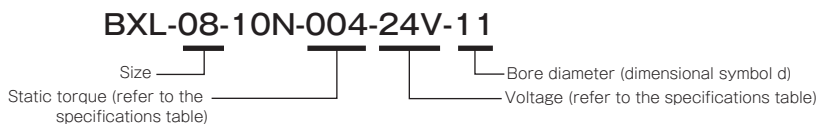
Dimensions



Unit [mm]

| Model | Type | A | B | D | E | F | G | I | J | K | L | M | N | R | S | T | a | d | b | t |
|----------------|------|-----|-----|----|----|----|----|----|----|------|----|------|----|-----|----|----|-----|----|----|-----|
| BXL-08-10N-002 | 1 | 94 | 85 | 35 | 32 | 25 | 35 | 9 | 24 | 45.7 | 17 | 40.7 | 24 | 5.5 | 12 | 30 | 0.3 | 11 | 4 | 1.5 |
| BXL-08-10N-004 | 1 | 94 | 85 | 35 | 32 | 25 | 35 | 9 | 24 | 45.7 | 17 | 40.7 | 24 | 5.5 | 12 | 30 | 0.3 | 14 | 5 | 2 |
| BXL-10-10N-008 | 1 | 124 | 110 | 40 | 38 | 30 | 42 | 10 | 22 | 48.7 | 25 | 42.7 | 26 | 6.5 | 12 | 30 | 0.3 | 18 | 6 | 2.5 |
| BXL-10-10N-015 | 1 | 124 | 110 | 40 | 38 | 30 | 42 | 10 | 22 | 48.7 | 25 | 42.7 | 26 | 6.5 | 12 | 30 | 0.3 | 20 | 6 | 2.5 |
| BXL-12-10N-022 | 1 | 150 | 130 | 49 | 45 | 35 | 50 | 18 | 25 | 57.1 | 30 | 51.1 | 29 | 6.5 | 14 | 30 | 0.3 | 24 | 8 | 3 |
| BXL-12-10N-030 | 1 | 150 | 130 | 49 | 45 | 35 | 50 | 18 | 25 | 57.1 | 30 | 51.1 | 29 | 6.5 | 14 | 30 | 0.3 | 24 | 8 | 3 |
| BXL-16-10N-040 | 1 | 165 | 150 | 62 | 55 | 45 | 62 | 18 | 24 | 63.1 | 35 | 55.1 | 28 | 9 | 15 | 30 | 0.3 | 28 | 8 | 3 |
| BXL-16-10N-060 | 2 | 165 | 150 | 64 | 61 | 50 | 64 | 20 | 29 | 68.1 | 35 | 60.1 | 33 | 9 | 15 | 15 | 0.3 | 37 | 10 | 3.5 |
| BXL-16-10N-080 | 2 | 165 | 150 | 64 | 61 | 50 | 64 | 20 | 29 | 68.1 | 35 | 60.1 | 33 | 9 | 15 | 15 | 0.3 | 37 | 10 | 3.5 |

How to Place an Order



*Contact Miki Pulley for assistance with bore diameters, d, not listed in the Dimensions tables and voltages not listed in the Specifications table.

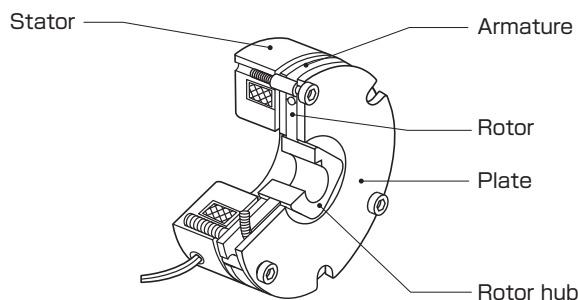
Options

Plate Installation

Standard installation is performed using stator installation, but a plate installation specification is also available as an option. Please contact Miki Pulley for assistance if desiring to use plate installation.

Quiet Mechanism

There is a slight backlash between the rotor and the rotor hub. The armature may also strike the surface of the magnetic poles on the stator when electricity flows, generating a noise. There is a quiet mechanism available that works to suppress such clattering noises as well as operating noise. Please contact Miki Pulley for details.



Items Checked for Design Purposes

Precautions for Handling

Brakes

Most electromagnetic braking systems are made using flexible materials. Be careful when handling such parts and materials as striking or dropping them or applying excessive force could cause them to become damaged or deformed.

Lead Wires

Be careful not to pull excessively on the brake lead wires, bend them at sharp angles, or allow them to hang too low.

Precautions for Use

Environment

These brake units are dry braking systems, meaning that the torque will drop if oil residue, moisture, or other liquids get onto friction surfaces. Lead wires are not oil resistant. Consider using a cover or other protection when using in an environment exposed to oil, cutting oil, etc.

Operating Temperature

The operating temperature is from 0°C to 40°C (no freezing or condensation). If you will use the product at other temperatures, consult Miki Pulley.

Power Supplies

BXL-N models use commercial AC 220 V or 380 V single phase, half-wave rectified. Select as appropriate for your application.

Power Supply Voltage Fluctuations

Full braking performance may not be guaranteed with extreme changes in power supply voltage. Make sure to keep power supply voltage to within ± 10% of the rated voltage value.

Air Gap Adjustment

BXL-N models do not require air gap adjustment. The brake air gap is adjusted when the braking system is shipped from the factory.

Circuit Protectors

If using a power supply for separate DC switching, make sure to connect the recommended circuit protector device in parallel with the brake.

Precautions for Mounting

Affixing the Rotor Hub

Affix the rotor hub to the shaft with bolts, snap rings, or the like such that the rotor hub does not touch the armature or stator.

Mounting the Brake

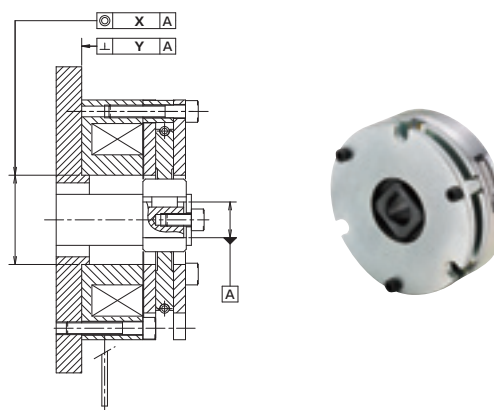
Implement screw-locking measures such as use of an adhesive thread-locking compound to bolts and screws used to install brakes. If using a spring washer to prevent loosening, use a conical spring washer, and ensure that it does not contact the armature.

Shafts

The shaft tolerance should be h6 or js6 class (JIS B 0401).

Accuracy of Brake Attachment Surfaces

Ensure that the concentricity (X) of the centering mark and shaft and the perpendicularity (Y) of the brake mounting surface and shaft do not exceed allowable values.



Allowable concentricity and perpendicularity values for the BXL-N Models

| Size | Concentricity (X) | Perpendicularity (Y) |
|------|-------------------|----------------------|
| | T.I.R. [mm] | T.I.R. [mm] |
| 08 | 0.4 | 0.05 |
| 10 | 0.4 | 0.05 |
| 12 | 0.6 | 0.05 |
| 16 | 0.6 | 0.05 |

Recommended Power Supplies and Circuit Protectors

| Model | Rectification method | Frequency [Hz] | Input AC voltage [V] | DC output voltage *1 [V] | Recommended circuit protectors *2 (Varistor) |
|--------|-------------------------|----------------|----------------------|--------------------------|--|
| BEM-2T | Single-phase, half-wave | 50/60 | AC220 | DC99 | TND07V-221KB00AAA0 or an equivalent |
| BEM-4T | Single-phase, half-wave | 50/60 | AC380 | DC171 | TND14V-821KB00AAA0 or an equivalent |

*1 The values given are for when there is electricity flowing to the brake coil.

*2 The above-model varistors are manufactured by Nippon Chemi-Con Corporation.

COUPLINGS

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SPEED CHANGERS & REDUCERS

INVERTERS

LINEAR SHAFT DRIVES

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SERIES

ELECTROMAGNETIC-ACTUATED MICRO CLUTCHES & BRAKES

ELECTROMAGNETIC-ACTUATED CLUTCHES & BRAKES

ELECTROMAGNETIC CLUTCH & BRAKE UNITS

SPRING-ACTUATED BRAKE

ELECTROMAGNETIC TOOTH CLUTCHES

BRAKE MOTORS

POWER SUPPLIES

MODELS

BXW

BXR

BXL

BXH

BXL(N)