SPRING-ACTUATED BRAKES

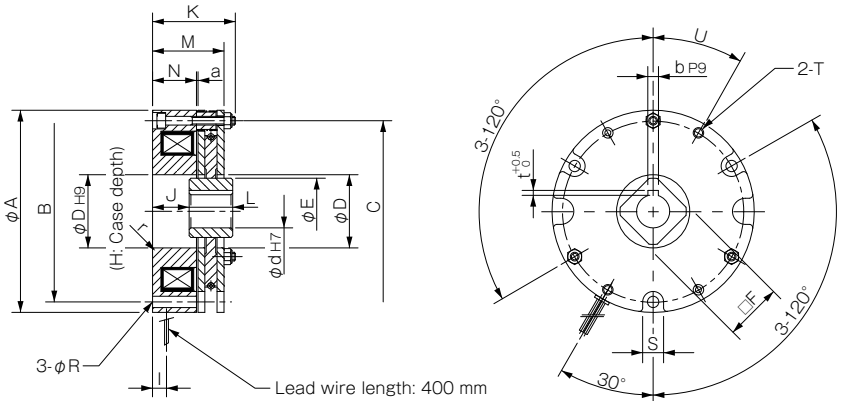
# BXL Safety brakes – Datasheet

## Specifications

| Model | Size | Static friction torque Ts [N·m] | Coil [at 20 ℃] | | | | Heat resistance class | Lead wire | | Max. rotation speed [min⁻¹] | Rotating part moment of inertia J [kg·m²] | Allowable braking energy rate Pbaℓ [W] | Total braking energy Eт [J] | Armature pull-in time ta[s] | Armature release time tar[s] | Mass [kg] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Voltage [V] | Wattage [W] | Current [A] | Resistance [ Ω ] | | UL style | Size | | | | | | | |
| BXL-06-10 | 06 | 2 | DC24 | 15 | 0.63 | 38.4 | F | UL3398 | AWG22 | 5000 | $3.75 \times 10^{-5}$ | 58.3 | $2.0 \times 10^{7}$ | 0.035 | 0.020 | 0.9 |
| | | | DC45 | 12 | 0.27 | 169 | | | | | | | | | | |
| | | | DC90 | 12 | 0.13 | 677 | | | | | | | | | | |
| BXL-08-10 | 08 | 4 | DC24 | 22.5 | 0.94 | 25.6 | F | UL3398 | AWG18 | 5000 | $6.25 \times 10^{-5}$ | 91.7 | $3.5 \times 10^{7}$ | 0.040 | 0.020 | 1.3 |
| | | | DC45 | 19 | 0.41 | 110 | | | | | | | | | | |
| | | | DC90 | 19 | 0.21 | 440 | | | | | | | | | | |
| BXL-10-10 | 10 | 8 | DC24 | 28 | 1.14 | 21.1 | F | UL3398 | AWG18 | 4000 | $13.75 \times 10^{-5}$ | 108.3 | $6.2 \times 10^{7}$ | 0.050 | 0.025 | 2.3 |
| | | | DC45 | 25 | 0.54 | 83.0 | | | | | | | | | | |
| | | | DC90 | 25 | 0.27 | 331 | | | | | | | | | | |
| BXL-12-10 | 12 | 16 | DC24 | 35 | 1.46 | 16.5 | F | UL3398 | AWG18 | 3600 | $33.75 \times 10^{-5}$ | 133.3 | $9.0 \times 10^{7}$ | 0.070 | 0.030 | 3.4 |
| | | | DC90 | 30 | 0.33 | 271 | | | | | | | | | | |
| BXL-16-10 | 16 | 22 | DC24 | 39 | 1.64 | 14.6 | F | UL3398 | AWG18 | 3000 | $7.35 \times 10^{-4}$ | 183.3 | $11.4 \times 10^{7}$ | 0.100 | 0.035 | 5.4 |
| | | | DC90 | 39 | 0.43 | 207 | | | | | | | | | | |

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

## Dimensions




Unit [mm]

| Size | A | B | C | r | D | E | F | H | I | J | K | L | M | N | R | S | T | U | a | d | b | t |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 06 | 83 | 73 | 73 | R1 | 28 | 26.5 | 22 | 3 | 10 | 20.5 | 39.5 | 14 | 33.6 | 20 | 4.5 | 9 | 2-M5 | 30° | 0.15 | 11 | 4 | 1.5 |
| 08 | 96 | 86 | 86 | R1 | 35 | 32 | 25 | 3 | 12 | 20 | 41 | 17 | 35 | 20.8 | 5.5 | 10.5 | 2-M5 | 30° | 0.15 | 14 | 5 | 2 |
| 10 | 116 | 104 | 104 | R1 | 42 | 38 | 30 | 3 | 9.5 | 21 | 47.5 | 25 | 41 | 25.3 | 6.5 | 12.5 | 2-M6 | 30° | 0.2 | 19 | 6 | 2.5 |
| 12 | 138 | 124 | 124 | R1 | 50 | 45 | 35 | 4 | 12 | 19 | 49.8 | 30 | 43.5 | 23.3 | 6.5 | 12.5 | 2-M6 | 30° | 0.2 | 24 | 8 | 3 |
| 16 | 158 | 142 | 143 | R1 | 59 | 55 | 45 | 4 | 14 | 22.5 | 57.5 | 35 | 51 | 27.7 | 9 | 15.0 | 2-M8 | 40° | 0.25 | 28 | 8 | 3 |

## How to Place an Order

BXL-06-10G 24V 11DIN

- Size: 06
- Option number: 10: Standard
- Voltage (Specifications table): 24V
- Bore diameter (dimensional symbol d): 11DIN

• Further bore diameters and voltages possible on request.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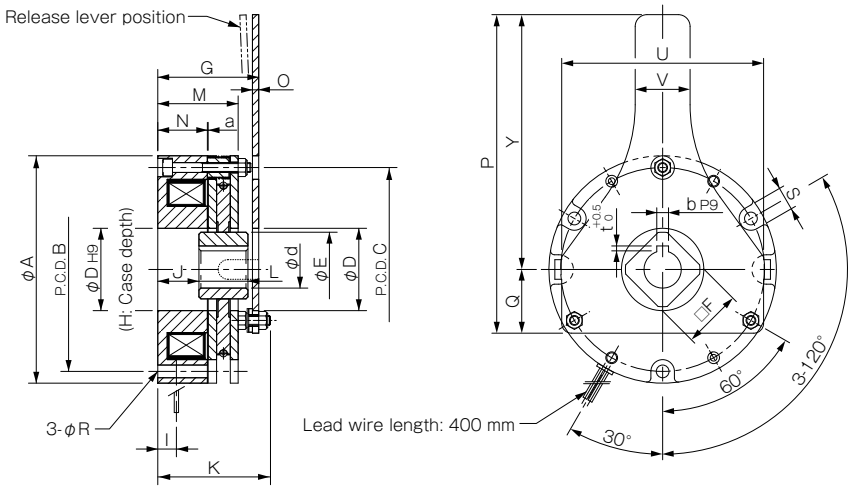
# Options

Made to Order

## Release Lever

**Option No.: 12**

We also offer an option with a manual release lever.
See the dimensions table below for the dimensions of brakes with release levers.
Please contact Miki Pulley for other specification values.



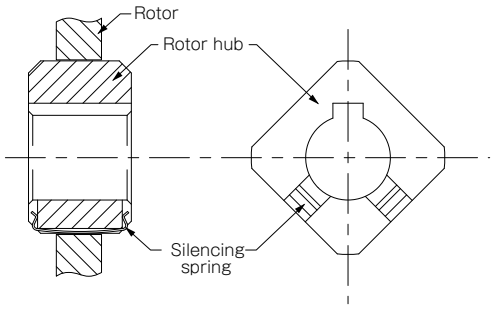

Unit [mm]

| Model | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | Y | U | V | S | a | d | b | t |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BXL-06-12 | 83 | 73 | 73 | 28 | 26.5 | 22 | 42.4 | 3 | 10 | 20.5 | 49.5 | 14 | 33.7 | 20 | 2.6 | 88 | 24 | 4.5 | 64 | 73 | 16 | 9 | 0.15 | 11 | 4 | 1.5 |
| BXL-08-12 | 96 | 86 | 86 | 35 | 32 | 25 | 44 | 3 | 12 | 20 | 51 | 17 | 35 | 20.8 | 2.9 | 122 | 27 | 5.5 | 95 | 85 | 20 | 10.5 | 0.15 | 14 | 5 | 2 |
| BXL-10-12 | 116 | 104 | 104 | 42 | 38 | 30 | 51.2 | 3 | 9.5 | 21 | 57.5 | 25 | 41 | 25.3 | 3.2 | 162.5 | 32.5 | 6.5 | 130 | 103 | 28 | 12.5 | 0.2 | 19 | 6 | 2.5 |
| BXL-12-12 | 138 | 124 | 124 | 50 | 45 | 35 | 56.4 | 4 | 12 | 19 | 64.8 | 30 | 43.5 | 23.3 | 5 | 200 | 40 | 6.5 | 160 | 121 | 36 | 12.5 | 0.2 | 24 | 8 | 3 |
| BXL-16-12 | 158 | 142 | 143 | 59 | 55 | 45 | 64.9 | 4 | 14 | 22.5 | 72.5 | 35 | 51 | 27.7 | 6 | 300 | 44 | 9 | 186 | 140 | 36 | 15.5 | 0.25 | 28 | 8 | 3 |

## Quiet Mechanism (Silencing Spring)

**Option No.: S1**

There is a extremely small structural backlash (see figure on the right) between the rotor and the rotor hub. In applications that are prone to microvibrations of the drive shaft such as single-phase motors, this backlash may produce rattling (banging). The silencing spring for the rotor hub reduces this rattling.




## Quiet Mechanism (Pull-in Noise Reduction Mechanism)

**Option No.: S2**

When the brake is energized, a magnetic circuit is formed, and the armature is pulled to the stator by that magnetic force. At that time, the armature touches the magnetic pole of the stator and a noise is produced. This sound (pull-in noise) is reduced by putting shock absorbing material in the stator's magnetic pole part. In option S2, in addition to the pull-in noise reduction mechanism, the silencing spring (option S1) is also supplemented.

## List of Option Numbers

| Description of options | No quiet mechanism | Silencing spring | Silencing spring + Pull-in noise reduction mechanism |
|---|---|---|---|
| No release lever | 10 | 10S1 | 10S2 |
| With release lever | 12 | 12S1 | 12S2 |

• Option 10 uses standard specifications.

BXL-06-12S1G 24V 11DIN

Option no.

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