

BXH Models

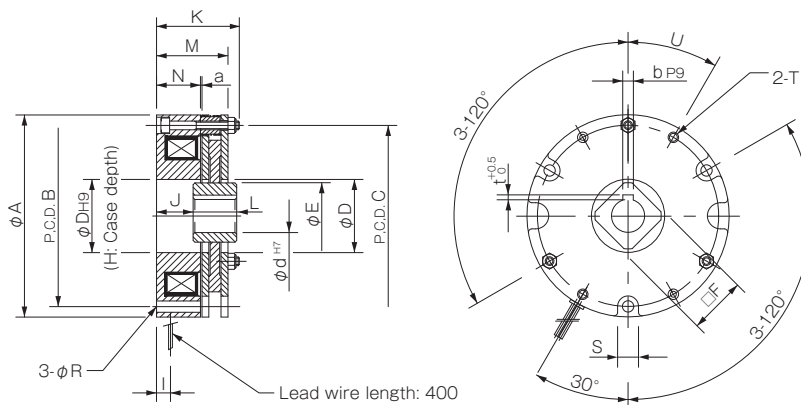
Specifications

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 $E_{ba} \ell$ [J]	Total braking energy E_T [J]	Armature pull-in time t_a [s]	Armature release time t_r [s]	Mass [kg]
			Voltage [V]	Wattage [W]	Current [A]	Resistance [Ω]								
BXH-06-10	06	4	DC24	15	0.63	38.4	F	5000	3.25×10^{-5}	700	2.0×10^6	0.040	0.020	0.9
			DC45	12	0.27	169	F							
			DC90	12	0.13	677	F							
BXH-08-10	08	8	DC24	23	0.94	25.6	F	5000	5.75×10^{-5}	1100	3.5×10^6	0.045	0.020	1.3
			DC45	18	0.41	110	F							
			DC90	18	0.21	440	F							
BXH-10-10	10	16	DC24	27	1.14	21.1	F	4000	1.30×10^{-4}	1300	6.2×10^6	0.070	0.025	2.3
			DC45	25	0.54	83	F							
			DC90	25	0.27	331	F							
BXH-12-10	12	32	DC24	35	1.46	16.2	F	3600	3.20×10^{-4}	1600	9.0×10^6	0.090	0.025	3.4
			DC90	30	0.33	271	F							
BXH-16-10	16	44	DC24	39	1.64	14.6	F	3000	6.93×10^{-4}	2200	11.4×10^6	0.125	0.030	5.4
			DC90	39	0.43	207	F							

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

* See the operating characteristics page for the armature pull-in time and release time during AC-side switching (half-wave rectified).

Dimensions



Unit [mm]

Size	A	B	C	D	E	F	H	I	J	K	L	M	N	R	S	T	U	a	d	b	t
06	83	73	73	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	35	32	25	3	12	20	41	17	35	20.8	5.5	10	2-M5	30°	0.15	14	5	2
10	116	104	104	42	38	30	3	9.5	21	47.5	25	41	25.3	6.5	12	2-M6	30°	0.2	19	6	2.5
12	138	124	124	50	45	35	4	12	19	49.8	30	43.5	23.3	6.5	12	2-M6	30°	0.2	24	8	3
16	158	142	143	59	55	45	4	14	22.5	57.5	35	51	27.7	9	15	2-M8	40°	0.25	28	8	3

How to Place an Order

BXH-06-10G 24V 11DIN

Size ————
 Option number ————
 10: Standard

————— Bore diameter (dimensional symbol d)
 ———— Voltage (Specifications table)

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

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

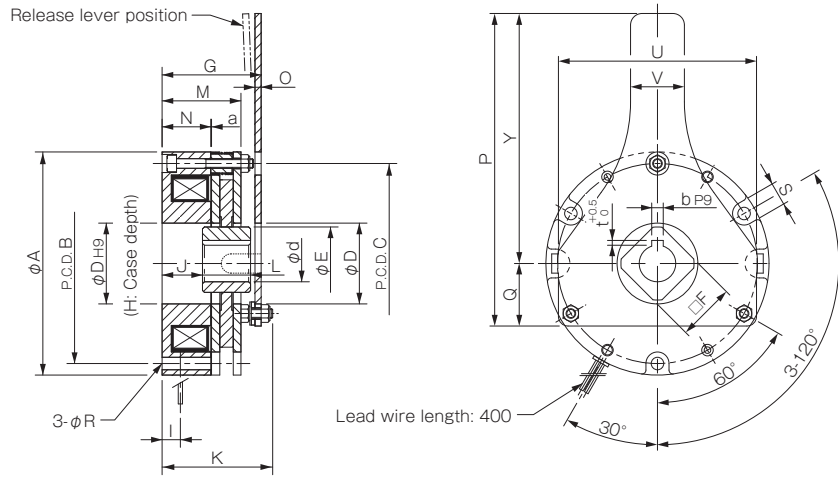
Option

Made to Order

Release Lever

Option No.: 12

In addition to the manual release tap of the standard product, we also offer an optional manual release lever. See the dimensions table below for the dimensions of brakes with release levers. Other specifications are the same as the standard specifications.



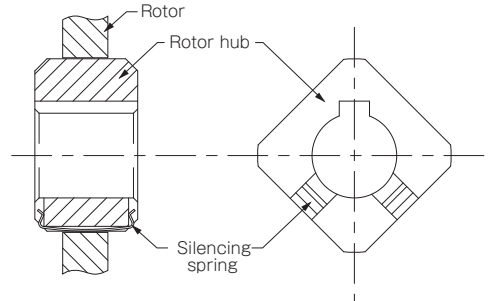
Unit [mm]

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
BXH-06-12	83	73	73	28	26.5	22	42.8	3	10	20.5	49.5	14	33.7	20	2.6	105	24	4.5	81	73	20	9	0.15	11	4	1.5
BXH-08-12	96	86	86	35	32	25	45.4	3	12	20	56	17	35.3	20.8	4	122	27	5.5	95	85	20	10	0.2	14	5	2
BXH-10-12	116	104	104	42	38	30	53.9	3	9.5	21	63	25	42.2	25.3	4.5	162.5	32.5	6.5	130	103	28	12	0.25	19	6	2.5
BXH-12-12	138	124	124	50	45	35	58.3	4	12	19	70	30	45.4	23.3	5	200	40	6.5	160	121	36	12	0.25	24	8	3
BXH-16-12	158	142	143	59	55	45	66.5	4	14	22.5	72.5	35	53.3	27.7	6	230	44	9	186	140	36	15	0.25	28	8	3

Quiet Mechanism (Silencing Spring)

Option No.: S1

There is an 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.



List of Option Numbers

Description of options	No quiet mechanism	With silencing spring
No release lever	10	10S1
Has release lever	12	12S1

* Option 10 uses standard specifications.

BXH-06-12S1G 24V 11DIN

Option no.

BXH Models

Items Checked for Design Purposes

I 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.

I 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.

■ Bolts and Screws

Implement screw-locking measures such as use of an adhesive thread-locking compound to bolts and screws used to install brakes.

■ Shafts

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

■ Accuracy of Brake Attachment Surfaces

Ensure that the concentricity of the centering mark and shaft and the perpendicularity of the brake mounting surface and shaft do not exceed the following allowable values.

• Concentricity of centering mark and shaft

BXH-06: 0.4 T.I.R. or below

BXH-08: 0.4 T.I.R. or below

BXH-10: 0.4 T.I.R. or below

BXH-12: 0.6 T.I.R. or below

BXH-16: 0.6 T.I.R. or below

• Perpendicularity of stator mounting surface

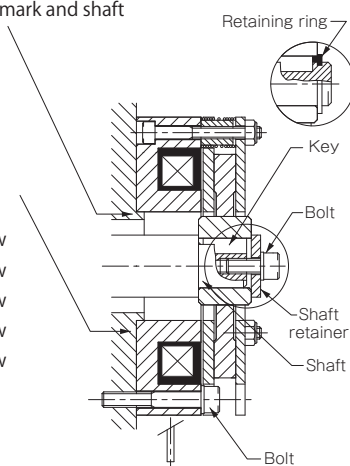
BXH-06: 0.04 T.I.R. or below

BXH-08: 0.05 T.I.R. or below

BXH-10: 0.05 T.I.R. or below

BXH-12: 0.06 T.I.R. or below

BXH-16: 0.07 T.I.R. or below



Precautions for Use

Dedicated for Holding

These brakes are dedicated holding brakes. Do not use them for ordinary braking, except for emergency braking in the event of a power outage or the like.

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. Attach the protective cover when working in areas with oil, moisture, dust, and other particles that could affect the braking system.

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 $\pm 10\%$ of the rated voltage value.

Operating Temperature

The operating temperature is -10°C to 40°C (no freezing or condensation). If you will use the product at other temperatures, consult Miki Pulley.

Manual Release

BXH models can be released manually.

Alternately tighten screws in two or three of the tap holes on the plate to press the armature.

The screw tips will push against the armature and release it with about a 90° rotation. Do not force the screws in more than that.

Air Gap Adjustment

BXH models do not require air gap adjustment. The brake air gap is adjusted when the braking system is shipped from the factory. When first used, no gap adjustment is needed, so do not rotate the nut.

Circuit Protectors

If using a power supply that is not equipped with a circuit protector for DC switching, make sure to connect the recommended circuit protector device in parallel with the brake.

Recommended Power Supplies and Circuit Protectors

Recommended power supplies

Input AC power	Brake voltage	Rectification method	Brake size	Recommended power supply model
AC100V 50/60Hz	DC24V	Single-phase, full-wave	06,08,10	BES-20-71-1
AC100V 50/60Hz	DC24V	Single-phase, full-wave	12,16	BES-20-72-1
AC100V 50/60Hz	DC45V	Single-phase, half-wave	06,08,10	BEW-1R
AC100V 50/60Hz	DC90V	Single-phase, full-wave	06,08,10,12,16	BEW-1R
AC200V 50/60Hz	DC24V	Single-phase, full-wave	06,08,10	BES-20-71
AC200V 50/60Hz	DC24V	Single-phase, full-wave	12,16	BES-20-72
AC200V 50/60Hz	DC90V	Single-phase, half-wave	06,08,10,12,16	BEW-2R
AC200V 50/60Hz	DC90V	Single-phase, half-wave	06,08,10,12,16	BEW-2R

* A DC power supply such as a battery can also be used to supply the 24 V DC required for the brake voltage.

Recommended circuit protectors

Input voltage	Brake voltage	Rectification method	Recommended circuit protector (varistor)
DC24V	DC24V	—	NVD07SCD082 or an equivalent
AC100V 50/60Hz	DC45V	Single-phase, half-wave	NVD07SCD220 or an equivalent
AC100V 50/60Hz	DC90V	Single-phase, full-wave	NVD07SCD220 or an equivalent
AC200V 50/60Hz	DC90V	Single-phase, half-wave	NVD07SCD470 or an equivalent

* NVD □ SCD □ parts are manufactured by KOA Corporation.

* DC24V indicates a product recommended with a stepdown transformer or the like.

Included varistors

Brake voltage	Included varistors
DC24V	NVD07SCD082 or an equivalent
DC45V	No varistor provided
DC90V	No varistor provided

COUPLINGS

ETP BUSHINGS

ELECTROMAGNETIC CLUTCHES & BRAKES

SPEED CHANGERS & REDUCERS

INVERTERS

LINEAR SHAFT DRIVES

TORQUE LIMITERS

ROSTA

SERIES

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