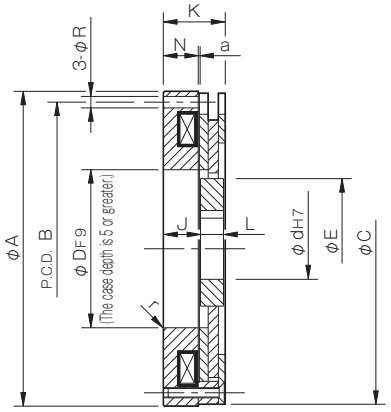
BXR Models Square Hub Type

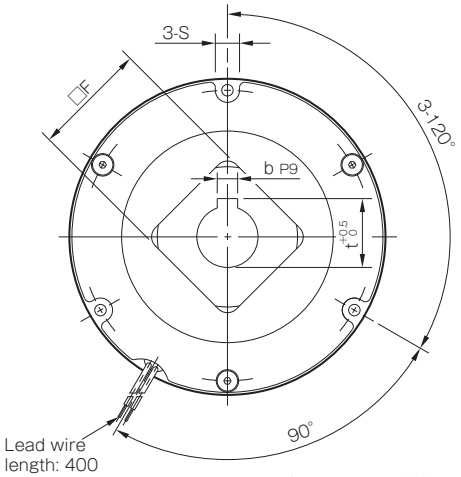
Specifications (BXR-□-10)

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 $E_{ba\ell}$ [J]	Total braking energy E_T [J]	Armature pull-in time t_a [s]	Armature release time t_{ar} [s]	Backlash [°]	Mass [kg]
			Voltage [V]	Wattage [W]	Current [A]	Resistance [Ω]		UL style	Size								
BXR-06-10-005	06	5	24	17.6	0.73	32.7	F	UL1333	AWG20	5000	2.35×10^{-5}	500	2.0×10^{5}	0.050	0.020	1.2	0.9
BXR-08-10-012	08	12	24	19.4	0.81	29.7	F	UL1333	AWG20	5000	3.45×10^{-5}	800	2.0×10^{5}	0.080	0.020	1.2	1.2
BXR-10-10-016	10	16	24	21.5	0.90	26.8	F	UL1333	AWG20	5000	1.12×10^{-4}	1500	2.2×10^{6}	0.110	0.050	0.9	1.3
BXR-12-10-030	12	30	24	23.7	0.99	24.3	F	UL1333	AWG20	5000	1.88×10^{-4}	1500	2.5×10^{6}	0.120	0.030	0.8	2.3
BXR-14-10-038	14	38	24	31.0	1.29	18.6	F	UL1333	AWG20	3600	4.22×10^{-4}	1800	3.0×10^{6}	0.120	0.030	0.5	3.0
BXR-16-10-055	16	55	24	19.0	0.79	30.3	F	UL1333	AWG20	3600	7.10×10^{-4}	2000	3.0×10^{6}	0.220	0.100	0.5	3.6

* The armature pull-in time and armature release time are taken during DC switching.
* Backlash is the value between the rotor and rotor hub.

Dimension (BXR-□-10)





Unit [mm]

Size	Radial direction dimensions									Axial direction dimensions					Bore diameter			
	A	B	C	D	r	E	F	R	S	J	L	N	K	a	d	b	t	d max
06	83.5	76	82	47	R0.5	42	35	4.5	9	17.0	7	14.7	25.0	0.10	20	6	22.5	25
08	93.5	85	92	49	R0.5	42	35	4.5	10	19.0	7	15.7	27.0	0.10	20	6	22.5	25
10	123.5	115	122	62	R0.5	55	45	4.5	9.5	14.6	9	13.7	24.3	0.10	24	8	27	28
12	137.5	130	136	65	R1	62	50	4.5	12	15.4	9	12.5	25.0	0.15	24	8	27	30
14	167.5	158	166	80	R1	74	60	5.5	12	16.0	9	12.0	25.0	0.15	28	8	31	38
16	185	175	184	100	R1	86	65	5.5	12.5	21.3	11.5	19.4	32.8	0.20	28	8	31	45

How to Place an Order

BXR-14-10-038-24V-28DIN

- Size
- Shape fitting 10: Square
- Static friction torque [N·m] (Refer to the Specifications table for details on the three-digit code.)
- Voltage
- Bore diameter (dimensional symbol d)

* Contact Miki Pulley for details on bore diameter d specifications not given in the table.

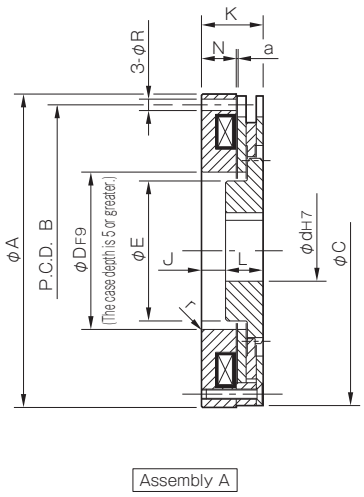
BXR Models Spline Hub Type

Specifications (BXR-□-20)

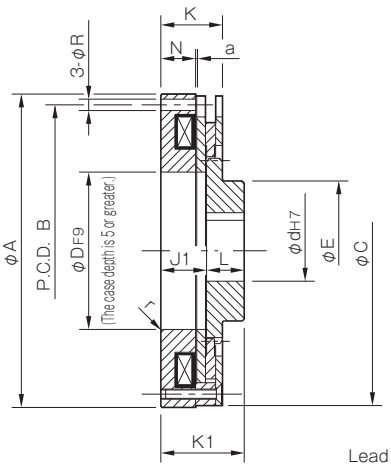
Model	Size	Static friction torque Ts [N·m]	Coil (at 20℃) Voltage [V]	Wattage [W]	Current [A]	Resistance [Ω]	Heat resistance class	Lead wire UL style	Lead wire Size	Max. rotation speed [min⁻¹]	Rotating part moment of inertia J [kg·m²]	Allowable braking energy $E_{ba\ell}$ [J]	Total braking energy Er[J]	Armature pull-in time t_a [s]	Armature release time t_{ar} [s]	Backlash [°]	Mass [kg]
BXR-06-20-005	06	5	24	17.6	0.73	32.7	F	UL1333	AWG20	5000	3.39×10^{-5}	500	2.0×10^{5}	0.050	0.020	0.5	1.1
BXR-08-20-012	08	12	24	19.4	0.81	29.7	F	UL1333	AWG20	5000	7.56×10^{-5}	800	2.0×10^{5}	0.080	0.020	0.4	1.4
BXR-10-20-016	10	16	24	21.5	0.90	26.8	F	UL1333	AWG20	5000	3.02×10^{-4}	1500	2.2×10^{6}	0.110	0.050	0.3	1.6
BXR-12-20-030	12	30	24	23.7	0.99	24.3	F	UL1333	AWG20	5000	4.77×10^{-4}	1500	2.5×10^{6}	0.120	0.030	0.3	2.6
BXR-14-20-038	14	38	24	31.0	1.29	18.6	F	UL1333	AWG20	3600	11.3×10^{-4}	1800	3.0×10^{6}	0.120	0.030	0.2	3.5
BXR-16-20-055	16	55	24	19.0	0.79	30.3	F	UL1333	AWG20	3600	19.1×10^{-4}	2000	3.0×10^{6}	0.220	0.100	0.2	4.1

* The armature pull-in time and armature release time are taken during DC switching.
* Backlash is the value between the rotor and rotor hub.

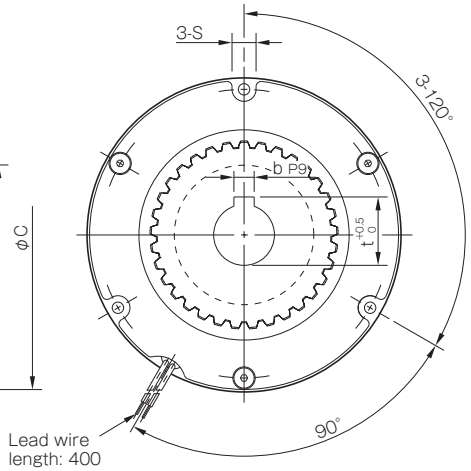
Dimension (BXR-□-20)



Assembly A



Assembly B



Lead wire length: 400
*The lead wire extraction position for size 14 is 60° .

Unit [mm]

Size	Radial direction dimensions A	B	C	D	r	E	R	S	Axial direction dimensions J	J1	L	N	K	K1	a	Bore diameter d	b	t	d max
06	83.5	76	82	47	R0.5	36	4.5	9	10.5	18	12.5	14.7	25.0	30.5	0.10	20	6	22.5	25
08	93.5	85	92	49	R0.5	42	4.5	10	11.5	20	13.5	15.7	27.0	33.5	0.10	20	6	22.5	30
10	123.5	115	122	62	R0.5	56	4.5	9.5	9	18	15	13.7	24.3	33	0.10	24	8	27	40
12	137.5	130	136	65	R1	61	4.5	12	8.7	17.7	15	12.5	25.0	32.7	0.15	24	8	27	45
14	167.5	158	166	80	R1	75	5.5	12	7.2	17.2	16	12.0	25.0	33.2	0.15	28	8	31	55
16	185	175	184	100	R1	82	5.5	12.5	13.6	24.6	18	19.4	32.8	42.6	0.20	28	8	31	65

How to Place an Order

BXR-14-20-038-24V-28DIN

- Size
- Shape fitting 20: Spline
- Static friction torque [N·m] (Refer to the Specifications table for details on the three-digit code.)
- Voltage
- Bore diameter (dimensional symbol d)

* Contact Miki Pulley for details on bore diameter d specifications not given in the table.

BXR Models

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.

■ Frictional Surface

Since these are dry brakes, they must be used with the frictional surface dry. Keep water and oil off of the frictional surfaces when handling the brakes.

Precautions for Use

■ Holding use

These brakes are 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. 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 range is -10° C to 40° C. If you will use the product at other temperatures, consult Miki Pulley.

■ Power Supplies

BXR models use commercial AC 100 V or 200 V single phase, full-wave rectified. Select as appropriate for your application. See the table, "Recommended power supplies and circuit protectors," for the power supply devices we recommend.

■ 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

BXR 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 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.

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. Leave at least dimension J/J1on spline hub types, since the rotor hub may contact the armature.

■ 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.

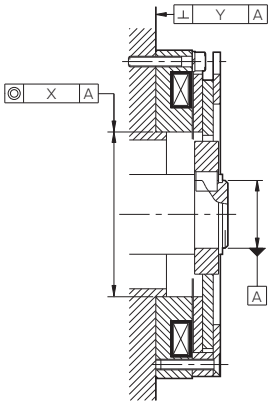
■ Shafts

The shaft tolerance should be h7 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.

Size	Concentricity (X) T.I.R. [mm]	Perpendicularity (Y) T.I.R. [mm]
06	0.3	0.04
08	0.3	0.05
10	0.4	0.05
12	0.4	0.06
14	0.6	0.06
16	0.6	0.07



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	12,14,16	BES-20-72-1
AC200V 50/60Hz	DC24V	Single-phase, full-wave	06,08,10	BES-20-71
AC200V 50/60Hz	DC24V	Single-phase, full-wave	12,14,16	BES-20-72

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

Circuit protector

Brake voltage	Included varistors
DC24V	TND07V-820KB00AAA0 or an equivalent

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