ELECTROMAGNETIC MICRO BRAKES

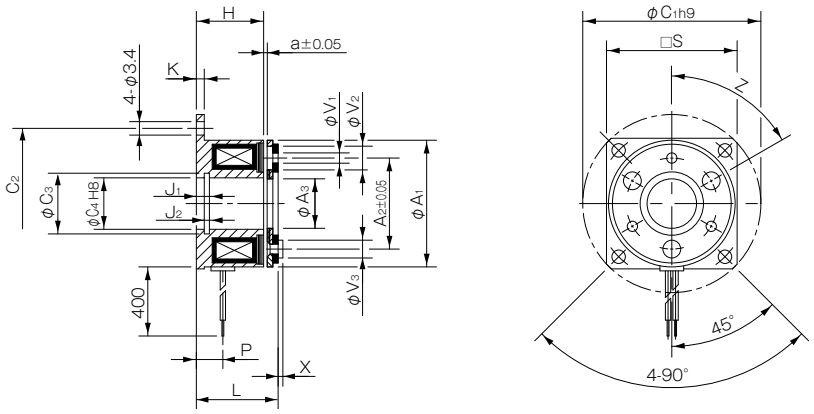
112(13/12/11) - Datasheet

Specifications

Model	Size	Dynamic friction torque T_d [N·m]	Coil [at 20 ℃]				Heat resistance class	Lead wire		Max. rotation speed [min^{-1}]	Armature moment of inertia J [$kg·m^2$]	Allowable braking energy rate $E_{ba\ell}$ [J]	Total work performed until readjustment of the air gap E_T [J]	Armature pull-in time t_a [s]	Torque build-up time t_p [s]	Torque decrease time t_d [s]	Mass [kg]
			Voltage [V]	Wattage [W]	Current [A]	Resistance [Ω]		UL style	Size								
112-02-13											6.75×10^{-7}						0.053
112-02-12	02	0.4	DC24	6	0.25	96	B	UL3398	AWG26	10000	1.00×10^{-6}	1500	2×10^6	0.004	0.010	0.010	0.057
112-02-11											1.00×10^{-6}						0.057
112-03-13											1.30×10^{-6}						0.072
112-03-12	03	0.6	DC24	6	0.25	96	B	UL3398	AWG26	10000	1.95×10^{-6}	2300	3×10^6	0.005	0.012	0.008	0.079
112-03-11											1.95×10^{-6}						0.079
112-04-13											4.38×10^{-6}						0.118
112-04-12	04	1.2	DC24	8	0.33	72	B	UL3398	AWG26	10000	6.15×10^{-6}	4500	6×10^6	0.007	0.016	0.010	0.131
112-04-11											6.15×10^{-6}						0.131
112-05-13											9.08×10^{-6}						0.200
112-05-12	05	2.4	DC24	10	0.42	58	B	UL3398	AWG22	10000	1.38×10^{-5}	9000	9×10^6	0.010	0.023	0.012	0.215
112-05-11											1.38×10^{-5}						0.215

- The dynamic friction torque, T_d, is measured at a relative speed of 100 min^{-1}.
- The moment of inertia of a rotating body and mass are specified for the maximum bore diameter.
- Keep supply voltage fluctuation within 10% of coil voltage. In case of use, the current feed may only be ≤ 80% of the operating time.

Dimensions (112-□-13)



Unit [mm]

Size	Radial directions dimensions												Axial directions dimensions							
	A_1	A_2	A_3	C_1	C_2	C_3	C_4	S	V_1	V_2	V_3	Z	H	K	J_1	J_2	L	P	X	a
02	28	19.5	10.5	39	33.5	11.4	11	–	2-2.1	2-5.3	2-3.7	4-90°	13.7	1.5	2.6	1.3	16.1	5	0.8	0.1
03	32	23	12.5	45	38	13.6	13	33	3-2.6	3-6	3-4.5	6-60°	17	2	3.3	1.3	19.3	6.7	1.2	0.15
04	40	30	18.5	54	47	20	19	41	3-3.1	3-6	3-5	6-60°	20	2	3.3	1.3	22.7	7.2	1.6	0.15
05	50	38	25.8	65	58	27.2	26	51	3-3.1	3-6.5	3-6	6-60°	22	2	3.5	1.5	25.2	8.2	1.6	0.2

- Size 02 is a rounded flange.

How to Place an Order

112-03-13 24V

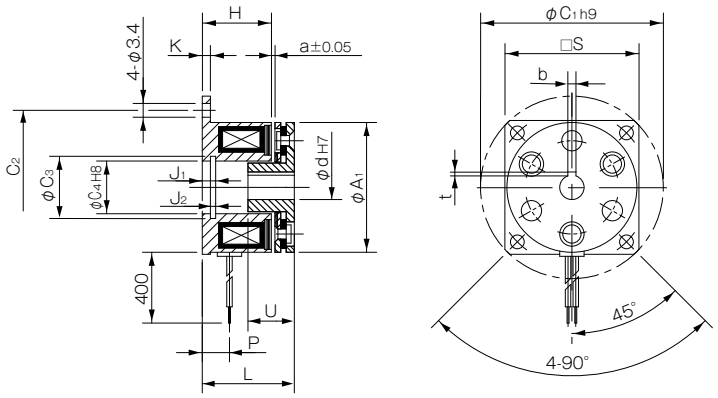
Size

MIKI PULLEY EUROPE AG

www.mikipulley.de

Rheinweg 5, CH-8200 Schaffhausen, Tel: +41 52 625 24 24
Bauhofstraße 12, D-63762 Großostheim, Tel: +49 6026 999 610

Dimensions (112-□-12)



Size	Shaft bore dimensions				
	d H7	Models compliant with JIS standards		Models compliant with the old JIS standards	
		b P9	t	b E9	t
02	5	–	–	–	–
03	6	2 -0.006 -0.031	0.8 +0.3 0	–	–
04	8	2 -0.006 -0.031	0.8 +0.3 0	–	–
	10	3 -0.006 -0.031	1.2 +0.3 0	4 +0.050 +0.020	1.5 +0.5 0
05	10	3 -0.006 -0.031	1.2 +0.3 0	4 +0.050 +0.020	1.5 +0.5 0
	15	5 -0.012 -0.042	2 +0.5 0	5 +0.050 +0.020	2 +0.5 0

Unit [mm]

Size	Radial directions dimensions						Axial directions dimensions							
	A_1	C_1	C_2	C_3	C_4	S	H	K	J_1	J_2	L	P	U	a
02	28	39	33.5	11.4	11	–	13.7	1.5	2.6	1.3	18.1	5	7	0.1
03	32	45	38	13.6	13	33	17	2	3.3	1.3	21.3	6.7	10	0.15
04	40	54	47	20	19	41	20	2	3.3	1.3	25.4	7.2	12	0.15
05	50	65	58	27.2	26	51	22	2	3.5	1.5	28.2	8.2	12	0.2

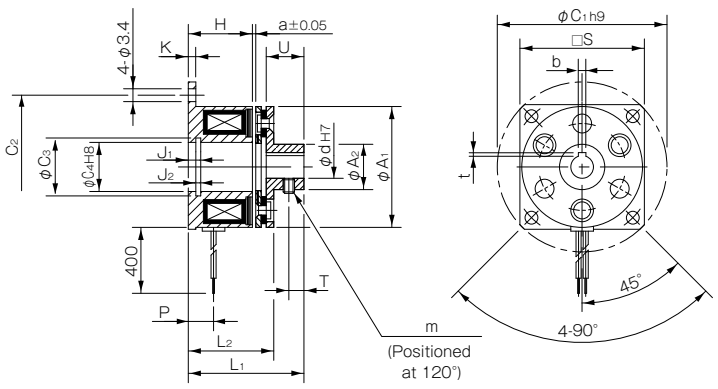
• Size 02 is a rounded flange.
• The armature hub of size 02 has no keyway. Lock it in place by press-fitting it onto the shaft.

How to Place an Order

112-03-12 24V 6DIN

- Size
- Keyway standards: DIN: Compliant with JIS standards P9; JIS: Compliant with the old JIS standards (class 2) E9
- Armature bore diameter (dimensional symbol d)

Dimensions (112-□-11)



Size	Shaft bore dimensions				
	d H7	Models compliant with JIS standards		Models compliant with the old JIS standards	
		b P9	t	b E9	t
02	5	–	–	–	–
03	6	2 -0.006 -0.031	0.8 +0.3 0	–	–
04	8	2 -0.006 -0.031	0.8 +0.3 0	–	–
	10	3 -0.006 -0.031	1.2 +0.3 0	4 +0.050 +0.020	1.5 +0.5 0
05	10	3 -0.006 -0.031	1.2 +0.3 0	4 +0.050 +0.020	1.5 +0.5 0
	15	5 -0.012 -0.042	2 +0.5 0	5 +0.050 +0.020	2 +0.5 0

Unit [mm]

Size	Radial directions dimensions								Axial directions dimensions									
	A_1	A_2	C_1	C_2	C_3	C_4	S	m	H	K	J_1	J_2	L_1	L	P	U	T	a
02	28	9.5	39	33.5	11.4	11	–	M2	13.7	1.5	2.6	1.3	23.1	18.1	5	7	2.5	0.1
03	32	12	45	38	13.6	13	33	2-M3	17	2	3.3	1.3	29.3	21.3	6.7	10	4	0.15
04	40	17	54	47	20	19	41	2-M3	20	2	3.3	1.3	34.7	25.4	7.2	12	5	0.15
05	50	24	65	58	27.2	26	51	2-M4	22	2	3.5	1.5	37.2	28.2	8.2	12	5	0.2

• Size 02 is a rounded flange.

How to Place an Order

112-03-11 24V 6DIN

- Size
- Keyway standards: DIN: Compliant with JIS standards P9; JIS: Compliant with the old JIS standards (class 2) E9
- Armature bore diameter (dimensional symbol d)

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Rheinweg 5, CH-8200 Schaffhausen, Tel: +41 52 625 24 24
Bauhofstraße 12, D-63762 Großostheim, Tel: +49 6026 999 610