

111(13G/12G/11G) - Datasheet

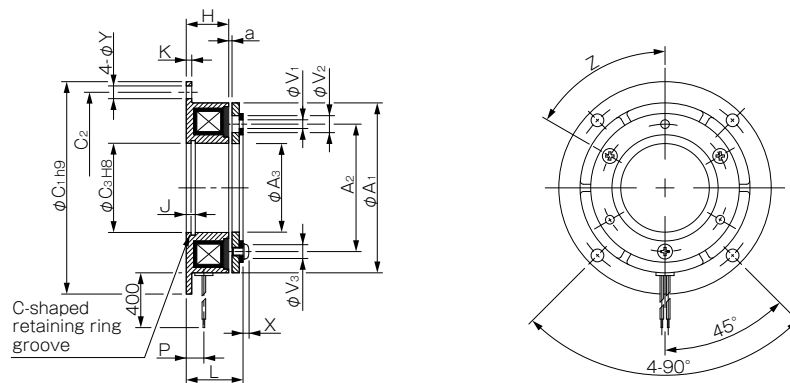
Specifications

Model	Size	Dynamic friction torque T_d [N·m]	Static friction torque T_s [N·m]	Coil [at 20 °C]				Heat resistance class	Lead wire		Max. rotation speed [min ⁻¹]	Armature Moment of inertia J [kg·m ²]	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							
111-06-13G											4.23×10^{-5}						0.28
111-06-12G	06	5	5.5	DC24	11	0.46	52	B	UL3398	AWG22	8000	6.03×10^{-5}	36×10^6	0.015	0.033	0.015	0.32
111-06-11G												6.03×10^{-5}					0.5
111-08-13G												1.18×10^{-4}					0.58
111-08-12G	08	10	11	DC24	15	0.63	38	B	UL3398	AWG18	6000	1.71×10^{-4}	60×10^6	0.016	0.042	0.025	0.58
111-08-11G												1.71×10^{-4}					0.91
111-10-13G												4.78×10^{-4}					1.07
111-10-12G	10	20	22	DC24	20	0.83	29	B	UL3398	AWG18	5000	6.63×10^{-4}	130×10^6	0.018	0.056	0.030	1.07
111-10-11G												6.63×10^{-4}					1.68
111-12-13G												1.31×10^{-3}					1.97
111-12-12G	12	40	45	DC24	25	1.04	23	B	UL3398	AWG18	4000	1.81×10^{-3}	250×10^6	0.027	0.090	0.050	1.97
111-12-11G												1.81×10^{-3}					3.15
111-16-13G												4.80×10^{-3}					3.45
111-16-12G	16	80	90	DC24	35	1.46	16	B	UL3398	AWG18	3000	6.35×10^{-3}	470×10^6	0.035	0.127	0.055	3.45
111-16-11G												6.35×10^{-3}					5.9
111-20-13G												1.37×10^{-2}					7.1
111-20-12G	20	160	175	DC24	45	1.88	13	B	UL3398	AWG16	2500	1.90×10^{-2}	10×10^8	0.065	0.200	0.070	7.1
111-20-11G												1.90×10^{-2}					10.5
111-25-13G												3.58×10^{-2}					12.2
111-25-12G	25	320	350	DC24	60	2.5	9.6	B	UL3398	AWG16	2000	4.83×10^{-2}	20×10^8	0.085	0.275	0.125	12.2
111-25-11G												4.83×10^{-2}					

• 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.

Dimensions (111-□-13G)

For direct mounting



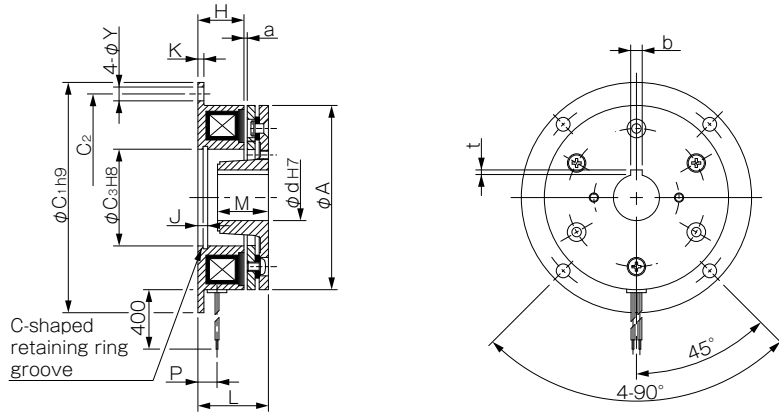
Size	Radial direction dimensions											Axial direction dimensions							Unit [mm]
	A ₁	A ₂	A ₃	C ₁	C ₂	C ₃	V ₁	V ₂	V ₃	Y	Z	H	J	K	L	P	X	a	
06	63	46	34.5	80	72	35	3-3.1	3-6.3	3-5.5	5	6-60°	18	3.5	2.1	22	7.3	2.5	0.2 ±0.05	
08	80	60	41.7	100	90	42	3-4.1	3-8	3-7	6	6-60°	20	4.3	2.6	24.5	8.3	2.85	0.2 ±0.05	
10	100	76	51.5	125	112	52	3-5.1	3-11	3-9	7	6-60°	22	5	3.1	28.1	9	3.3	0.2 ±0.05	
12	125	95	61.5	150	137	62	3-6.1	3-12	3-11	7	6-60°	24	5.5	3.6	31	9.3	3.3	0.3 ±0.05 -0.1	
16	160	120	79.5	190	175	80	3-8.2	3-15	3-14	9.5	6-60°	26	6	4.1	35	11.7	3.5	0.3 ±0.05 -0.1	
20	200	158	99.5	230	215	100	3-10.2	3-18	3-16.2	9.5	6-60°	30	7	5.1	41.5	13.4	4.9	0.5 -0.2	
25	250	210	124.5	290	270	125	4-12.2	4-22	4-20	11.5	8-45°	35	8	6.1	47.9	16	5.5	0.5 -0.2	

How to Place an Order

111-06-13G 24V
 Size

■ Dimensions (111-□-12G)

■ For through-shafts



Size	Shaft bore dimensions				
	d H7	Models compliant with JIS standards		Models compliant with the old JIS standards	
		b P9	t	b E9	t
06	12	4 ^{-0.012} _{-0.042}	1.5 ^{+0.5} 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
08	15	5 ^{-0.012} _{-0.042}	2 ^{+0.5} ₀	5 ^{+0.050} _{+0.020}	2 ^{+0.5} ₀
	20	6 ^{-0.012} _{-0.042}	2.5 ^{+0.5} ₀	5 ^{+0.050} _{+0.020}	2 ^{+0.5} ₀
10	20	6 ^{-0.012} _{-0.042}	2.5 ^{+0.5} ₀	5 ^{+0.050} _{+0.020}	2 ^{+0.5} ₀
	25	8 ^{-0.015} _{-0.051}	3 ^{+0.5} ₀	7 ^{+0.061} _{+0.025}	3 ^{+0.5} ₀
12	25	8 ^{-0.015} _{-0.051}	3 ^{+0.5} ₀	7 ^{+0.061} _{+0.025}	3 ^{+0.5} ₀
	30	8 ^{-0.015} _{-0.051}	3 ^{+0.5} ₀	7 ^{+0.061} _{+0.025}	3 ^{+0.5} ₀
16	30	8 ^{-0.015} _{-0.051}	3 ^{+0.5} ₀	7 ^{+0.061} _{+0.025}	3 ^{+0.5} ₀
	40	12 ^{-0.018} _{-0.061}	3 ^{+0.5} ₀	10 ^{+0.061} _{+0.025}	3.5 ^{+0.5} ₀
20	40	12 ^{-0.018} _{-0.061}	3 ^{+0.5} ₀	10 ^{+0.061} _{+0.025}	3.5 ^{+0.5} ₀
	50	14 ^{-0.018} _{-0.061}	3.5 ^{+0.5} ₀	12 ^{+0.075} _{+0.032}	3.5 ^{+0.5} ₀
25	50	14 ^{-0.018} _{-0.061}	3.5 ^{+0.5} ₀	12 ^{+0.075} _{+0.032}	3.5 ^{+0.5} ₀
	60	18 ^{-0.018} _{-0.061}	4 ^{+0.5} ₀	15 ^{+0.075} _{+0.032}	5 ^{+0.5} ₀

Size	Radial direction dimensions						Axial direction dimensions						
	A	C ₁	C ₂	C ₃	Y	H	J	K	L	M	P	a	
06	63	80	72	35	5	18	3.5	2.1	25.5	15	7.3	0.2 ± 0.05	
08	80	100	90	42	6	20	4.3	2.6	28.5	20	8.3	0.2 ± 0.05	
10	100	125	112	52	7	22	5	3.1	33.1	25	9	0.2 ± 0.05	
12	125	150	137	62	7	24	5.5	3.6	37	30	9.3	0.3 ^{+0.05} _{-0.1}	
16	160	190	175	80	9.5	26	6	4.1	42	38	11.7	0.3 ^{+0.05} _{-0.1}	
20	200	230	215	100	9.5	30	7	5.1	50.4	45	13.4	0.5 ⁰ _{-0.2}	
25	250	290	270	125	11.5	35	8	6.1	58.9	54	16	0.5 ⁰ _{-0.2}	

How to Place an Order

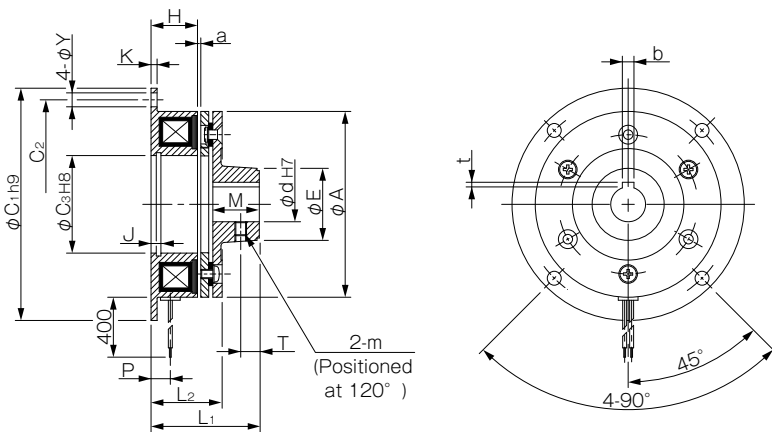
111-06-12G 24V 12DIN

Size Keyway standards
Armature bore diameter (dimensional symbol d)

DIN: Compliant with JIS standards P9
JIS: Compliant with the old JIS standards (class 2) E9

■ Dimensions (111-□-11G)

■ For butt shafts



Size	Shaft bore dimensions				
	d H7	Models compliant with JIS standards		Models compliant with the old JIS standards	
		b P9	t	b E9	t
06	12	4 ^{-0.012} _{-0.042}	1.5 ^{+0.5} 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
08	15	5 ^{-0.012} _{-0.042}	2 ^{+0.5} ₀	5 ^{+0.050} _{+0.020}	2 ^{+0.5} ₀
	20	6 ^{-0.012} _{-0.042}	2.5 ^{+0.5} ₀	5 ^{+0.050} _{+0.020}	2 ^{+0.5} ₀
10	20	6 ^{-0.012} _{-0.042}	2.5 ^{+0.5} ₀	5 ^{+0.050} _{+0.020}	2 ^{+0.5} ₀
	25	8 ^{-0.015} _{-0.051}	3 ^{+0.5} ₀	7 ^{+0.061} _{+0.025}	3 ^{+0.5} ₀
12	25	8 ^{-0.015} _{-0.051}	3 ^{+0.5} ₀	7 ^{+0.061} _{+0.025}	3 ^{+0.5} ₀
	30	8 ^{-0.015} _{-0.051}	3 ^{+0.5} ₀	7 ^{+0.061} _{+0.025}	3 ^{+0.5} ₀
16	30	8 ^{-0.015} _{-0.051}	3 ^{+0.5} ₀	7 ^{+0.061} _{+0.025}	3 ^{+0.5} ₀
	40	12 ^{-0.018} _{-0.061}	3 ^{+0.5} ₀	10 ^{+0.061} _{+0.025}	3.5 ^{+0.5} ₀
20	40	12 ^{-0.018} _{-0.061}	3 ^{+0.5} ₀	10 ^{+0.061} _{+0.025}	3.5 ^{+0.5} ₀
	50	14 ^{-0.018} _{-0.061}	3.5 ^{+0.5} ₀	12 ^{+0.075} _{+0.032}	3.5 ^{+0.5} ₀
25	50	14 ^{-0.018} _{-0.061}	3.5 ^{+0.5} ₀	12 ^{+0.075} _{+0.032}	3.5 ^{+0.5} ₀
	60	18 ^{-0.018} _{-0.061}	4 ^{+0.5} ₀	15 ^{+0.075} _{+0.032}	5 ^{+0.5} ₀

Size	Radial direction dimensions							Axial direction dimensions								
	A	C ₁	C ₂	C ₃	E	Y	m	H	J	K	L ₁	L ₂	M	P	T	a
06	63	80	72	35	26	5	M4	18	3.5	2.1	37	25.5	15	7.3	6	0.2 ± 0.05
08	80	100	90	42	31	6	M5	20	4.3	2.6	44.5	28.5	20	8.3	8	0.2 ± 0.05
10	100	125	112	52	41	7	M5	22	5	3.1	53.1	33.1	25	9	10	0.2 ± 0.05
12	125	150	137	62	49	7	M6	24	5.5	3.6	61	37	30	9.3	12	0.3 ^{+0.05} _{-0.1}
16	160	190	175	80	65	9.5	M8	26	6	4.1	73	42	38	11.7	15	0.3 ^{+0.05} _{-0.1}
20	200	230	215	100	83	9.5	M8	30	7	5.1	86.4	50.4	45	13.4	18	0.5 ⁰ _{-0.2}
25	250	290	270	125	105	11.5	M10	35	8	6.1	101.9	58.9	54	16	22	0.5 ⁰ _{-0.2}

How to Place an Order

111-06-11G 24V 12DIN

Size Keyway standards
Armature bore diameter (dimensional symbol d)

DIN: Compliant with JIS standards P9
JIS: Compliant with the old JIS standards (class 2) E9

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