

2-Phase Hybrid Stepping Motor

1.8°

KH56 series

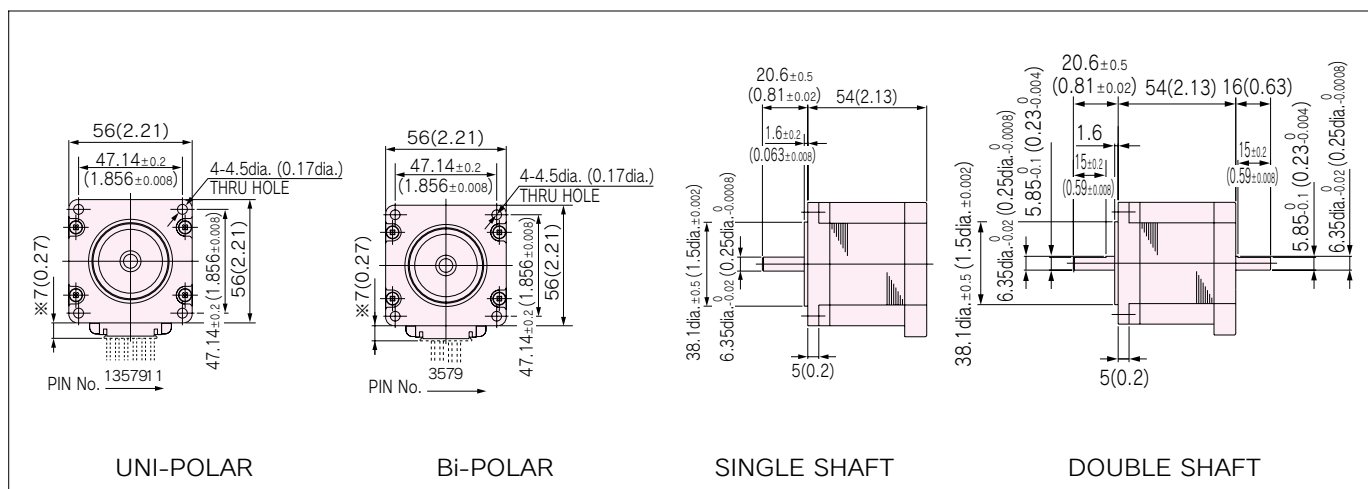
Non-rare earth magnet models

HIGH TORQUE, LOW VIBRATION AND LOW NOISE

STANDARD SPECIFICATIONS

MODEL		KH56KM2				
		SINGLE SHAFT	-906	-907	-908	-956
		DOUBLE SHAFT	-916	-917	-918	-966
DRIVE METHOD	—	UNI-POLAR			BI-POLAR	
NUMBER OF PHASES	—	2			2	
STEP ANGLE	deg./step	1.8			1.8	
VOLTAGE	V	2.31	3.58	6.71	2.64	
CURRENT	A/PHASE	3.0	2.0	1.0	2.0	
WINDING RESISTANCE	Ω/PHASE	0.77	1.79	6.71	1.32	
INDUCTANCE	mH/PHASE	1.4	3.0	11.0	4.00	
HOLDING TORQUE	mN · m	834	834	834	932	
	oz · in	118	118	118	132	
DETENT TORQUE	mN · m	37	37	37	37	
	oz · in	5.2	5.2	5.2	5.2	
ROTOR INERTIA	g · cm ²	188	188	188	188	
	oz · in ²	1.0	1.0	1.0	1.0	
WEIGHTS	g	650	650	650	650	
	lb	1.4	1.4	1.4	1.4	
INSULATION RESISTANCE	—	100MΩmin. At 500V DC (at normal temp.& humidity, between lead and case)				
DIELECTRIC STRENGTH	—	500V AC 50Hz for 1minute (at normal temp.& humidity, between lead and case)				
AMBIENT TEMP. RANGE	°C	-10°C~+50°C				
STORAGE TEMP. RANGE	°C	-20°C~+70°C				
HUMIDITY RANGE IN OPERATION AND STORAGE	%	5%~95% RH(noncondensing)				
ALLOWABLE TEMP. RISE	K	70K max.(By resistance method)				

DIMENSIONS unit = mm (inch)



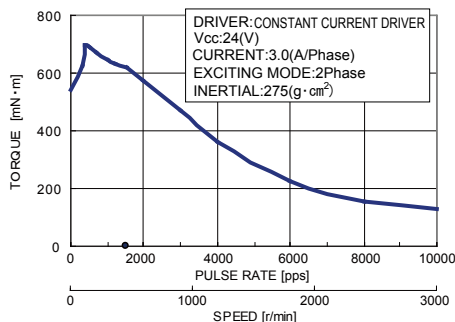


Features

- Stronger torque generated in higher speed zone (KH56KM2-906 generates 1.2 times torque of our previous model at 1200 r/min. speed)
- Lowered Vibration by increasing stiffness of body construction (lowered by 10% than our previous model)
- Improved Efficiency (1.1 times of our previous model, with high grade materials)
- Non-rare earth magnet models

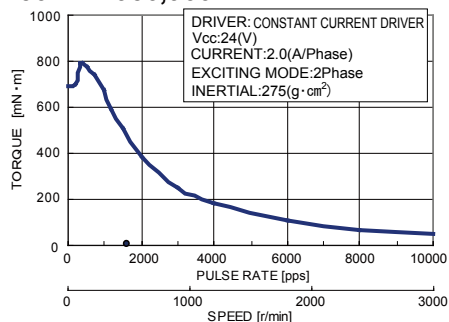
■ TORQUE CHARACTERISTICS vs. PULSE RATE [UNI-POLAR]

KH56KM2-906,916

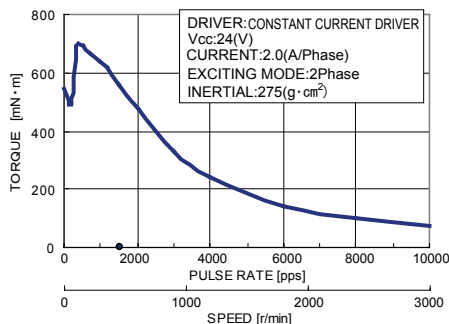


[BI-POLAR]

KH56KM2-956,966

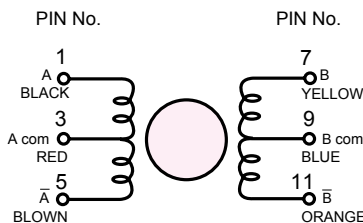


KH56KM2-907,917



■ CONNECTION DIAGRAMS

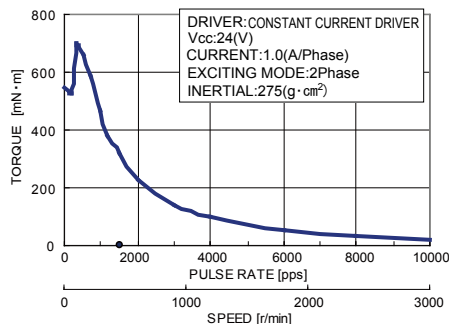
[UNI-POLAR]



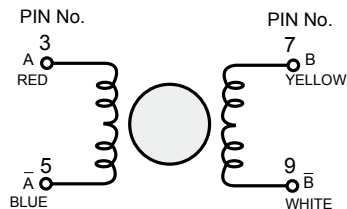
CW viewed from rotor shaft when using the following sequence diagram.

55381 PIN NO.	51004-1100 PIN NO.	PHASE	1	2	3	4
1	1	A	-	-	-	-
4	7	B	-	-	-	-
3	5	A-bar	-	-	-	-
6	11	B-bar	-	-	-	-
2	3	A com	+	+	+	+
5	9	B com	+	+	+	+

KH56KM2-908,918



[BI-POLAR]

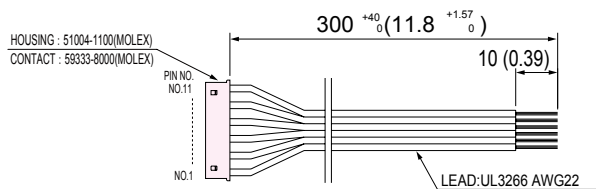


CW viewed from rotor shaft when using the following sequence diagram.

55381 PIN NO.	51004-1100 PIN NO.	PHASE	1	2	3	4
2	3	A	-	+	+	-
4	7	B	-	-	+	+
3	5	A-bar	+	-	-	+
5	9	B-bar	+	+	-	-

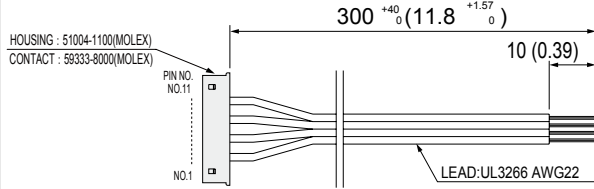
■ CONNECTION CABLE TO MOTOR unit = mm (inch)

[UNI-POLAR]



51004-1100(PIN NO.)	1	3	5	7	9	11
EXCITATION (PHASE)	A	A com	A-bar	B	B com	B-bar
COLOR OF LEAD	BLACK	RED	BROWN	YELLOW	BLUE	ORANGE

[BI-POLAR]



51004-1100(PIN NO.)	3	5	7	9
EXCITATION (PHASE)	A	A-bar	B	B-bar
COLOR OF LEAD	RED	BLUE	YELLOW	WHITE