

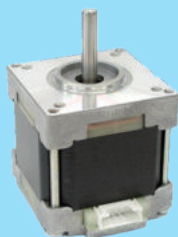
KF42

New

1.8°/step

□42mm

NEMA17



Applications

OA

FA

Money-handling &
Banking equipment
Medical Devices

SINGLE SHAFT

MODEL
KF4234-EN2B801
KF4239-EN2B801
KF4239-EN2B802
KF4242-EN2B801
KF4242-EN2B802

OPTION

KV42LBS300

FEATURES

- A motor size down, achieving the torque of one size up.
※ Expanding the rotor diameter to its maximum limit within a new "flattened" structure allows the □42motor profile to be maintained.
- Large Rotor
- High Torque

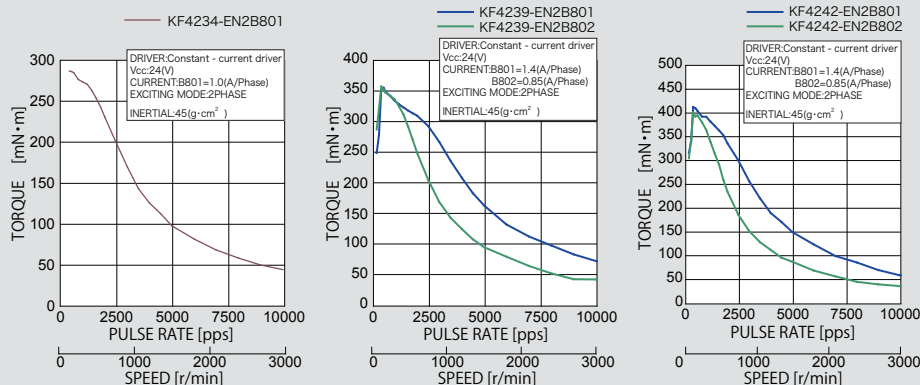
SPECIFICATIONS

STEP ANGLE ° /step	VOLTAGE V	CURRENT A/PHASE	WINDING RESISTANCE Ω/PHASE	INDUCTANCE mH/PHASE	HOLDING TORQUE mN·m	ROTOR INERTIA g·cm ²	MODEL
1.8	4.1	1.0	4.1	5.3	330	70	KF4234-EN2B801
1.8	3.08	1.4	2.2	2.7	400	100	KF4239-EN2B801
1.8	4.85	0.85	5.7	6.9	400	100	KF4239-EN2B802
1.8	3.36	1.4	2.4	4.0	460	145	KF4242-EN2B801
1.8	5.36	0.85	6.3	10.0	460	145	KF4242-EN2B802

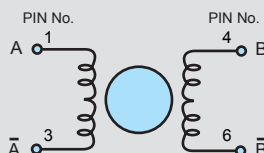
GENERAL SPECIFICATIONS

INSULATION RESISTANCE	500V DC 100MΩ min. (at normal temp.& humidity,between lead and case)
DIELECTRIC STRENGTH	500V AC 50Hz 1min. (at normal temp.& humidity,between lead and case)
AMBIENT TEMP. AND HUMIDITY	-10°C~+50°C, 5%~95%RH (noncondensing)
STORAGE TEMP. AND HUMIDITY	-20°C~+70°C, 5%~95%RH (noncondensing)
TEMPERATURE RISE	80K max (By resistance method)
POSITION ACCURACY	±10%

SPEED-TORQUE CHARACTERISTICS



CONNECTION DIAGRAMS



PHR-6 (PIN NO.)	1	3	4	6
PHASE	A	Ā	B	B̄
COLOR OF LEAD	RED	BLUE	YELLOW	WHITE

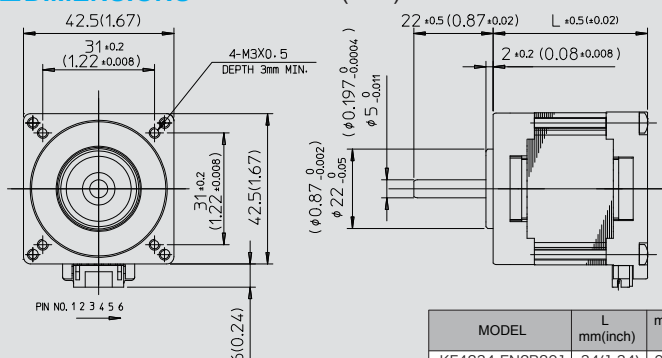
CW viewed from rotor shaft when using the following sequence diagram.

EXCITATION SEQUENCE

PHASE	1	2	3	4
A	-	+	+	-
B	-	-	+	+
Ā	+	-	-	+
B̄	+	+	-	-

DIMENSIONS

Unit = mm(inch)

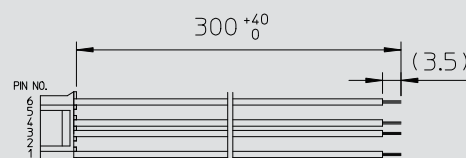


The KF42 motor is supplied without a leadwire assembly.
This must be ordered as a separate part.

MODEL	L mm(inch)	mass kg
KF4234-EN2B801	34(1.34)	0.23
KF4239-EN2B801	39(1.54)	0.29
KF4239-EN2B802	39(1.54)	0.29
KF4242-EN2B801	42(1.66)	0.33
KF4242-EN2B802	42(1.66)	0.33

OPTION (Leadwire Assembly)

MODEL: KV42LBS300



CONNECTOR SPECIFICATIONS

Maker	JST
Applicable Housing	PHR-6
Applicable Terminal	SPH-002T-P0.5S
Lead Wire	UL3266 AWG26

KH42-B900 Series (1.8 degree/step)

Model Code

KH 42 34 – B901 0 1

① ② ③ ④ ⑤ ⑥

①	Series	KH (Hybrid Type 2 Phase Stepping Motor)				
②	Motor Size	□42				
③	Motor Length	34 mm	38 mm	42 mm	48 mm	54 mm
④	Winding Method	Unipolar: B901, B902			Bipolar: B951	
⑤	Shaft Specification	0: Single Shaft			1: Double Shaft	
⑥	Shaft Length	1: 20 mm		2: 24 mm		3: 16 mm



Rare earth magnet models	
KH4234-B90101	⇒
KH4238-B90101	⇒
KH4238-B90201	⇒
KH4242-B90101	⇒
KH4242-B90201	⇒
KH4248-B90101	⇒
KH4254-B90101	⇒
KH4234-B95101	⇒
KH4238-B95101	⇒
KH4242-B95101	⇒
KH4248-B95101	⇒
KH4254-B95101	⇒

Non-rare earth magnet models	
KH4234-B90601	⇒
KH4238-B90601	⇒
KH4238-B90701	⇒
KH4242-B90601	⇒
KH4242-B90701	⇒
KH4248-B90601	⇒
KH4254-B90601	⇒
KH4234-B95601	⇒
KH4238-B95601	⇒
KH4242-B95601	⇒
KH4248-B95601	⇒
KH4254-B95601	⇒

Standard Specifications

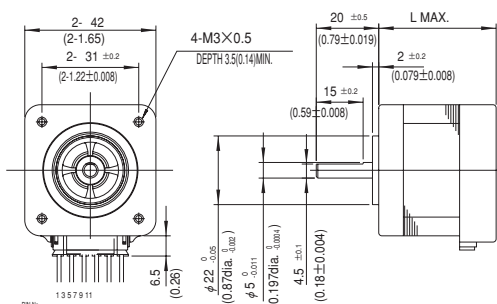
Unipolar

Model	Voltage	Current	Resistance	Inductance	Holding Torque		Detent Torque		Rotor Inertia	
	V/Φ	A/Φ	Ω/Φ	mH/Φ	mN·m	OZ·in	mN·m	OZ·in	g·cm ²	OZ·in ²
KH4234-B90101	2.97	1.1	2.7	2.1	190	27	12	1.7	38	0.2
KH4238-B90101	3.08	1.4	2.2	1.9	260	37	16	2.3	48	0.3
KH4238-B90201	3.60	1.2	3.0	2.8	260	37	16	2.3	48	0.3
KH4242-B90101	3.25	1.3	2.5	2.6	300	42	18	2.5	59	0.3
KH4242-B90201	3.74	1.1	3.4	4.0	300	42	18	2.5	59	0.3
KH4248-B90101	3.60	1.2	3.0	2.6	350	50	24	3.4	78	0.4
KH4254-B90101	4.20	1.2	3.5	4.1	460	65	30	4.2	98	0.5

Bipolar

Model	Voltage	Current	Resistance	Inductance	Holding Torque		Detent Torque		Rotor Inertia	
	V/Φ	A/Φ	Ω/Φ	mH/Φ	mN·m	OZ·in	mN·m	OZ·in	g·cm ²	OZ·in ²
KH4234-B95101	3.41	1.1	3.1	4.4	250	35	12	1.7	38	0.2
KH4238-B95101	3.24	1.2	2.7	4.9	340	48	16	2.3	48	0.3
KH4242-B95101	3.41	1.1	3.1	6.9	380	54	18	2.5	59	0.3
KH4248-B95101	3.00	1.5	2.0	3.6	480	68	24	3.4	78	0.4
KH4254-B95101	3.22	1.4	2.3	5.0	570	81	30	4.2	98	0.5

Dimensions Unit: mm (inch)



Model	L (mm)	L (inch)
KH4234	34	1.34
KH4238	38	1.50
KH4242	42	1.65
KH4248	48	1.89
KH4254	54	2.13

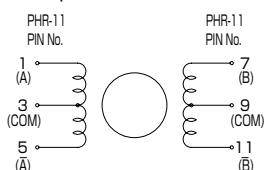
Note
 Conformable Housing: PHR-11 (JST)
 Conformable Contact: SPH-002T-P0.5S (JST)
 The standard B900 motor is supplied without a leadwire assembly.
 This must be ordered as a separate part.

Specification

Temperature Rise	70K max. (By resistance method)
Insulation Resistance	100 M Ω min. At 500 V DC (at normal temp. & humidity, between lead and case)
Dielectric Strength	500 V AC 50 Hz for 1 minute (at normal temp. & humidity, between lead and case)
Ambient Temp. Range	-10°C ~ +50°C
Storage Temp. Range	-20°C ~ +70°C
Humidity Range in Operation and Storage	5 % ~ 95 % RH (noncondensing)

Connection Diagrams

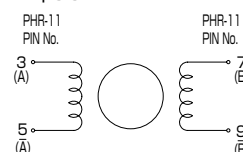
Unipolar



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

PHR-11 Pin No.	PHASE	1	2	3	4
1	A	-	-	-	-
7	B	-	-	-	-
5	A	-	-	-	-
11	B	-	-	-	-
3	A com	+	+	+	+
9	B com	+	+	+	+

Bipolar



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

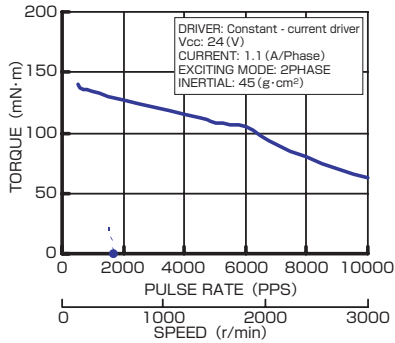
PHR-11 Pin No.	PHASE	1	2	3	4
3	A	-	+	+	-
7	B	-	+	+	-
5	A	+	-	-	+
9	B	+	+	-	-

*** For red-lines product,**
Please contact us from our website .
 HP : <http://www.nidec.com/en/nidec-servo>

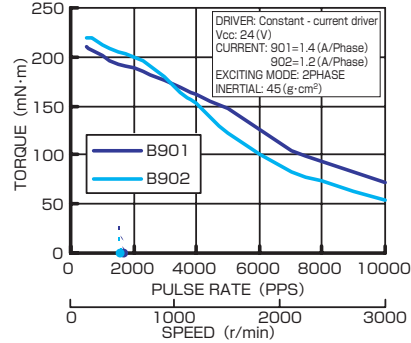
Speed-Torque Characteristics

Unipolar

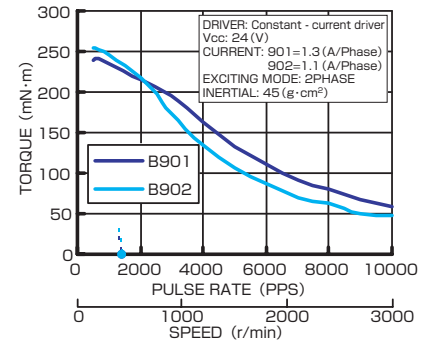
KH4234-B901 □□



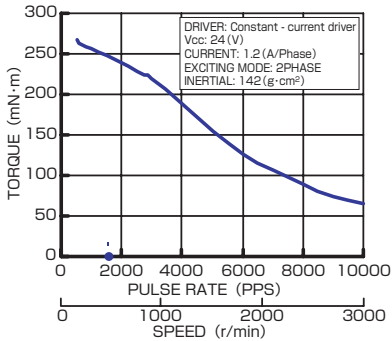
KH4238-B901 □□/B902 □□



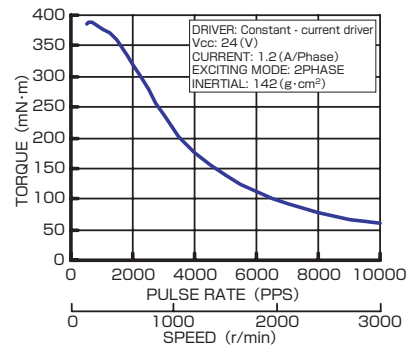
KH4242-B901 □□/B902 □□



KH4248-B901 □□

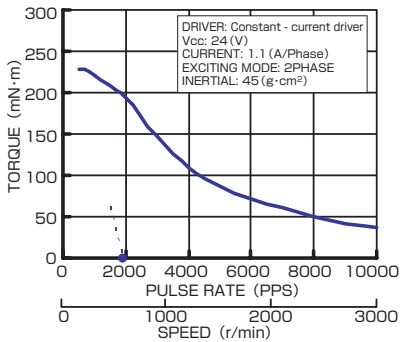


KH4254-B901 □□

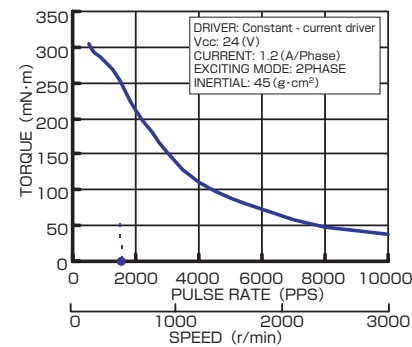


Bipolar

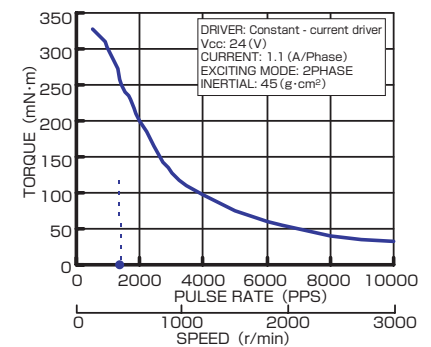
KH4234-B951 □□



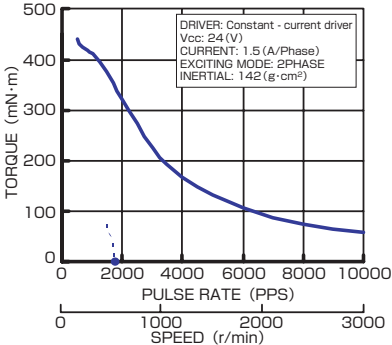
KH4238-B951 □□



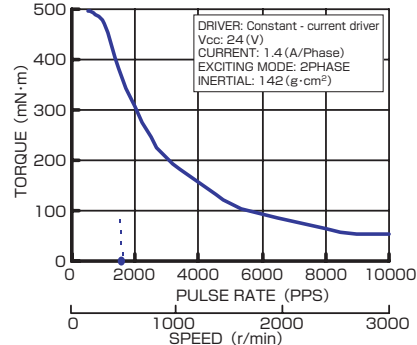
KH4242-B951 □□



KH4248-B951 □□



KH4254-B951 □□



Semi Standard Models

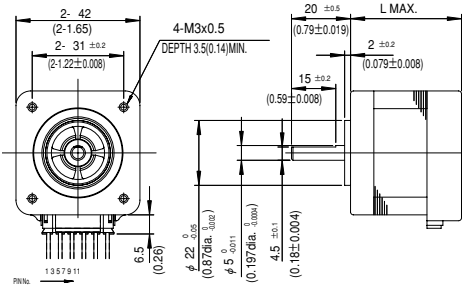
Unipolar

Model	Motor Length L ₁		Shaft Length L ₂		Shaft Specification
	mm	inch	mm	inch	
KH4234-B90102	34	1.34	24	0.95	Single shaft
KH4234-B90103			16	0.63	Single shaft
KH4234-B90111			20	0.79	Double shaft
KH4234-B90112			24	0.95	Double shaft
KH4234-B90113			16	0.63	Double shaft
KH4238-B90102	38	1.50	24	0.95	Single shaft
KH4238-B90103			16	0.63	Single shaft
KH4238-B90111			20	0.79	Double shaft
KH4238-B90112			24	0.95	Double shaft
KH4238-B90113			16	0.63	Double shaft
KH4238-B90202			24	0.95	Single shaft
KH4238-B90203			16	0.63	Single shaft
KH4238-B90211			20	0.79	Double shaft
KH4238-B90212			24	0.95	Double shaft
KH4238-B90213			16	0.63	Double shaft
KH4242-B90102	42	1.65	24	0.95	Single shaft
KH4242-B90103			16	0.63	Single shaft
KH4242-B90111			20	0.79	Double shaft
KH4242-B90112			24	0.95	Double shaft
KH4242-B90113			16	0.63	Double shaft
KH4242-B90202			24	0.95	Single shaft
KH4242-B90203			16	0.63	Single shaft
KH4242-B90211			20	0.79	Double shaft
KH4242-B90212			24	0.95	Double shaft
KH4242-B90213			16	0.63	Double shaft
KH4248-B90102	48	1.89	24	0.95	Single shaft
KH4248-B90103			16	0.63	Single shaft
KH4248-B90111			20	0.79	Double shaft
KH4248-B90112			24	0.95	Double shaft
KH4248-B90113			16	0.63	Double shaft
KH4254-B90102	54	2.13	24	0.95	Single shaft
KH4254-B90103			16	0.63	Single shaft
KH4254-B90111			20	0.79	Double shaft
KH4254-B90112			24	0.95	Double shaft
KH4254-B90113			16	0.63	Double shaft

Bipolar

Model	Motor Length L ₁		Shaft Length L ₂		Shaft Specification
	mm	inch	mm	inch	
KH4234-B95102	34	1.34	24	0.95	Single shaft
KH4234-B95103			16	0.63	Single shaft
KH4234-B95111			20	0.79	Double shaft
KH4234-B95112			24	0.95	Double shaft
KH4234-B95113			16	0.63	Double shaft
KH4238-B95102	38	1.50	24	0.95	Single shaft
KH4238-B95103			16	0.63	Single shaft
KH4238-B95111			20	0.79	Double shaft
KH4238-B95112			24	0.95	Double shaft
KH4238-B95113			16	0.63	Double shaft
KH4242-B95102	42	1.65	24	0.95	Single shaft
KH4242-B95103			16	0.63	Single shaft
KH4242-B95111			20	0.79	Double shaft
KH4242-B95112			24	0.95	Double shaft
KH4242-B95113			16	0.63	Double shaft
KH4248-B95102	48	1.89	24	0.95	Single shaft
KH4248-B95103			16	0.63	Single shaft
KH4248-B95111			20	0.79	Double shaft
KH4248-B95112			24	0.95	Double shaft
KH4248-B95113			16	0.63	Double shaft
KH4254-B95102	54	2.13	24	0.95	Single shaft
KH4254-B95103			16	0.63	Single shaft
KH4254-B95111			20	0.79	Double shaft
KH4254-B95112			24	0.95	Double shaft
KH4254-B95113			16	0.63	Double shaft

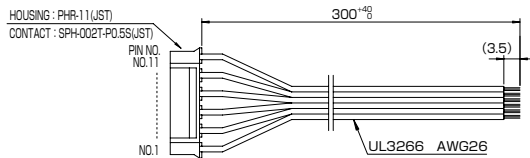
[Semi Standard Model Dimensions Unit: mm (inch)]



Note
 Conformable Housing:
 PHR-11 (JST)
 Conformable Contact:
 SPH-002T-P0.5S (JST)
The standard B900 motor is supplied without a leadwire assembly. This must be ordered as a separate part.

Option

Leadwire Assembly KH42LUS300 (Unipolar)

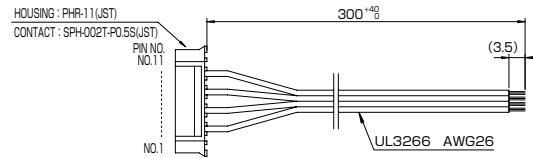


PHR-11 (Pin No.)	1	3	5	7	9	11
Excitation (PHASE)	A	A com	A	B	B com	B
Cable Color	Black	Red	Brown	Yellow	Blue	Orange

Note

The standard B900 motor is supplied without a leadwire assembly.
 This must be ordered as a separate part.

KH42LBS300 (Bipolar)

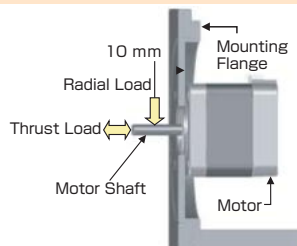


PHR-11 (Pin No.)	3	5	7	9
Excitation (PHASE)	A	A	B	B
Cable Color	Red	Blue	Yellow	White

Max. Allowable Load/Runout For Motor Shaft

Load For Motor Shaft

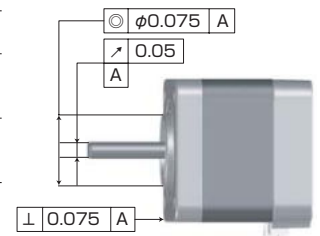
Type	Thrust Load	Radial Load
		Load
KA50	14.7 N (1.5 kgf) (3.3 lb)	19.6 N (2.0 kgf) (4.4 lb)



Shaft Runout

Shaft Runout	0.05 T.I.R. (mm) ※
Concentricity Between Shaft and Mounting Circle	0.075 T.I.R. (mm) ※
Perpendicularity Between Shaft and Mounting Face	0.075 T.I.R. (mm) ※

※ T.I.R. (Total Indicator Reading)



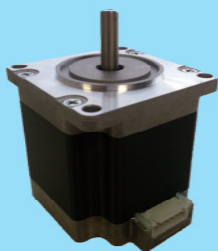
B900Type

KH56

New

1.8°/step

□56mm



SINGLE SHAFT

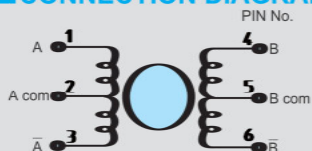
MODEL

KH5640-B90101
KH5640-B90201
KH5652-B90101
KH5652-B90201
KH5674-B90101
KH5674-B90201

OPTION

KH56LUS300_6PIN

CONNECTION DIAGRAMS



XHP-6(PIN NO.)	1	2	3	4	5	6
PHASE	A	A com	$\bar{A}$	B	B com	$\bar{B}$
COLOR OF LEAD	BLACK	RED	BROWN	YELLOW	BLUE	ORANGE

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

EXCITATION SEQUENCE

PHASE	1	2	3	4
A	-	-	-	-
B	-	-	-	-
$\bar{A}$	-	-	-	-
$\bar{B}$	-	-	-	-
A com	+	+	+	+
B com	+	+	+	+

CONNECTOR SPECIFICATIONS

Maker	JST
Applicable Housing	XHP-6
Applicable Terminal	SXH-001T-P0.6
Lead Wire	AWG#22, UL3266

FEATURES

- High Torque (Up at Peak time 15 to 20% higher than our previous products)

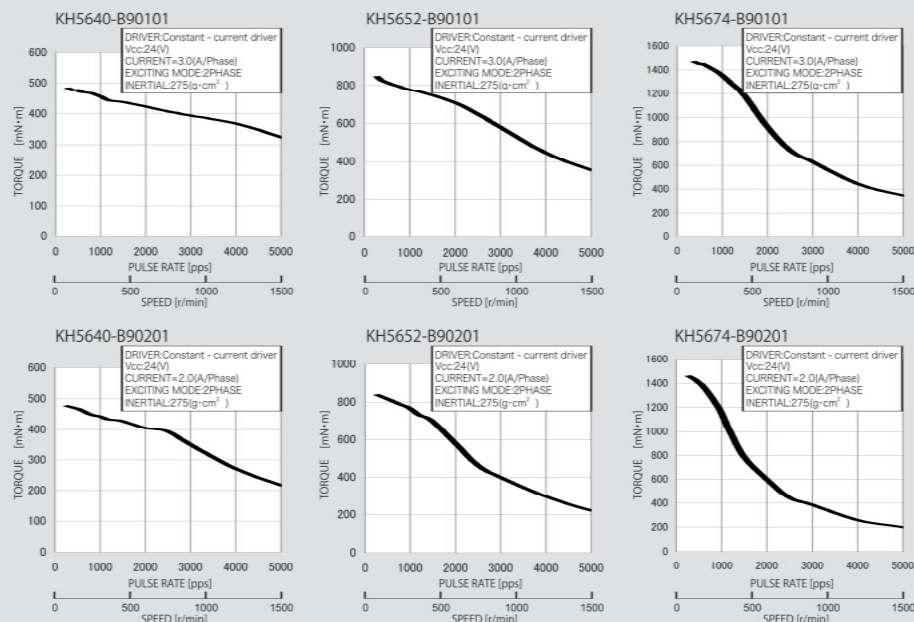
SPECIFICATIONS

STEP ANGLE	VOLTAGE	CURRENT	WINDING RESISTANCE	INDUCTANCE	HOLDING TORQUE	ROTOR INERTIA	MODEL
° /step	V	A/PHASE	Ω /PHASE	mH/PHASE	(Measured value) mN · m	g · cm ²	
1.8	1.75	3.0	0.58	0.92	(680)	170	KH5640-B90101
1.8	2.7	2.0	1.35	2.0	(680)	170	KH5640-B90201
1.8	2.28	3.0	0.76	1.4	(1140)	310	KH5652-B90101
1.8	3.6	2.0	1.8	3.0	(1140)	310	KH5652-B90201
1.8	3.48	3.0	1.16	2.2	(1970)	530	KH5674-B90101
1.8	5.4	2.0	2.7	4.9	(1970)	530	KH5674-B90201

GENERAL SPECIFICATIONS

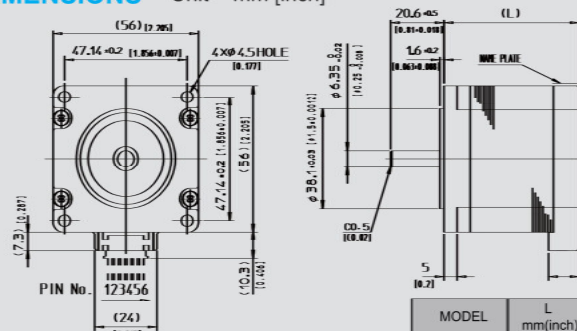
INSULATION RESISTANCE	500V DC	100M Ω	min. (at normal temp. & humidity, between lead and case)
DIELECTRIC STRENGTH	500V AC	50Hz	1min. (at normal temp. & humidity, between lead and case)
AMBIENT TEMP. AND HUMIDITY			-10°C ~ +50°C, 5% ~ 95% RH (noncondensing)
STORAGE TEMP. AND HUMIDITY			-20°C ~ +70°C, 5% ~ 95% RH (noncondensing)
TEMPERATURE RISE			70K max (By resistance method)
POSITION ACCURACY			±10%

SPEED-TORQUE CHARACTERISTICS



DIMENSIONS

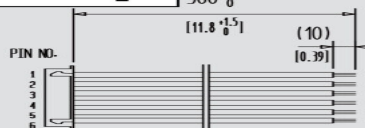
Unit = mm [inch]



The KH56 B900 type motor is supplied without a leadwire assembly. This must be ordered as a separate part.

OPTION (Leadwire Assembly)

MODEL: KH56LUS300_6PIN



MODEL	L mm (inch)	mass kg (oz)
KH5640-□	40 (1.575)	0.46 (16.2)
KH5652-□	52 (2.047)	0.65 (22.9)
KH5674-□	74 (2.913)	1.0 (35.3)

KH60

New

1.8°/step

□ 60mm



SINGLE SHAFT

MODEL

KH6054-B9010□
KH6054-B9020□
KH6065-B9010□
KH6065-B9020□

FEATURES

- High Torque (Up at Peak time 10 to 20% higher than our previous products)

SPECIFICATIONS

STEP ANGLE ° /step	VOLTAGE V	CURRENT A/PHASE	WINDING RESISTANCE Ω/PHASE	INDUCTANCE mH/PHASE	HOLDING TORQUE N · m	ROTOR INERTIA g · cm ²	MODEL
1.8	3.00	3.0	1	1.4	(1.45)	520	KH6054-B9010□
1.8	4.60	2.0	2.3	3.4	(1.45)	520	KH6054-B9020□
1.8	3.30	3.0	1.1	1.5	(1.75)	680	KH6065-B9010□
1.8	5.60	2.0	2.8	3.7	(1.75)	680	KH6065-B9020□

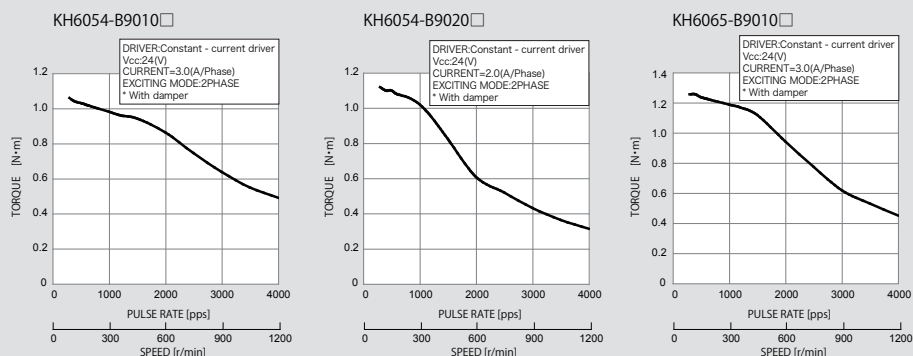
Note : KH60 is ready to two mounting dimensions.

□ End of model name	Mounting hole pitch	Mounting inlay diameter
1	47.14	φ38.1
2	50	φ36

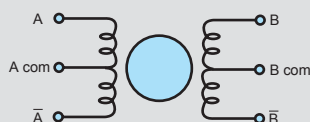
[GENERAL SPECIFICATIONS]

INSULATION RESISTANCE	500V DC 100MΩ min. (at normal temp. & humidity, between lead and case)
DIELECTRIC STRENGTH	500V AC 50Hz 1min. (at normal temp. & humidity, between lead and case)
AMBIENT TEMP. AND HUMIDITY	-10°C~+50°C, 5%~95%RH (noncondensing)
STORAGE TEMP. AND HUMIDITY	-20°C~+70°C, 5%~95%RH (noncondensing)
TEMPERATURE RISE	70K max (By resistance method)
POSITION ACCURACY	±10%

SPEED-TORQUE CHARACTERISTICS



CONNECTION DIAGRAMS

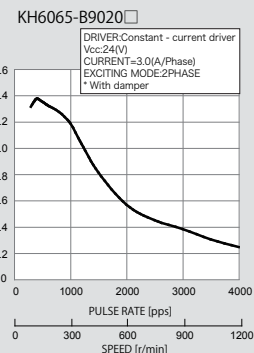


PHASE	A	A com	Ā	B	B com	B̄
COLOR OF LEAD	BLACK	RED	BROWN	YELLOW	BLUE	ORANGE

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

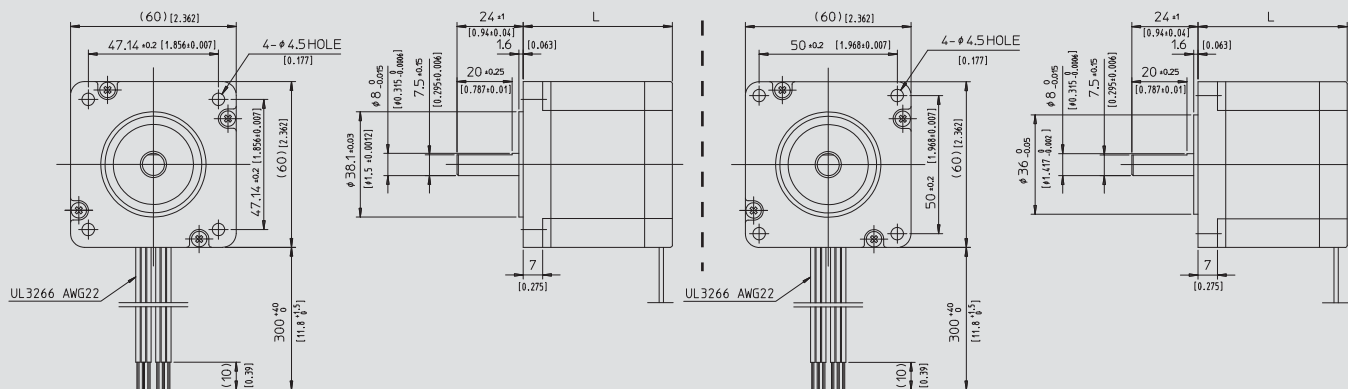
EXCITATION SEQUENCE

PHASE	1	2	3	4
A	—	—	—	—
B	—	—	—	—
Ā	—	—	—	—
B̄	—	—	—	—
A com	+	+	+	+
B com	+	+	+	+



DIMENSIONS

Unit = mm [inch]



□ End of model name 1

MODEL	L mm (inch)	mass kg (oz)
KH6054	54(2.126)	0.83(29.3)
KH6065	65(2.559)	1.02(36.0)

□ End of model name 2

KH86

New

1.8°/step

□86mm



Application

- Large-size printer
- Industrial sewing machine
- Food packaging machine
- Weaving machine

SINGLE SHAFT

MODEL
KH86QM2-901
KH86QM2-902
KH86RM2-901
KH86RM2-902
KH86TM2-901
KH86TM2-902
KH86WM2-901
KH86WM2-902

DOUBLE SHAFT

MODEL
KH86QM2-911
KH86QM2-912
KH86RM2-911
KH86RM2-912
KH86TM2-911
KH86TM2-912
KH86WM2-911
KH86WM2-912

FEATURES

- Non-rare earth magnet models
- High Torque

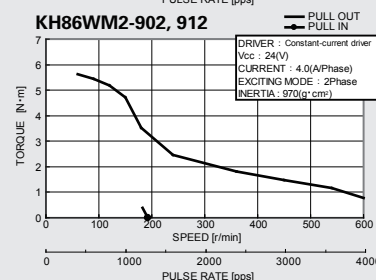
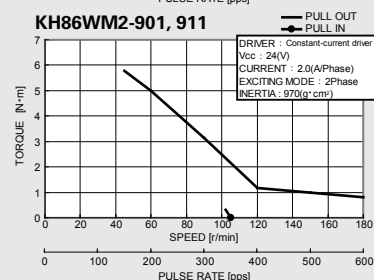
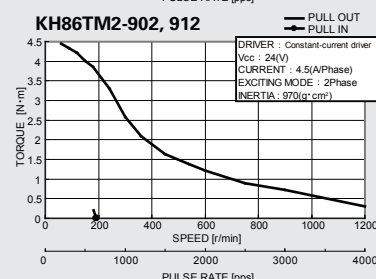
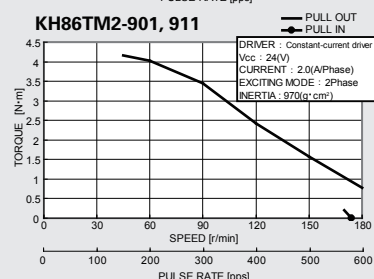
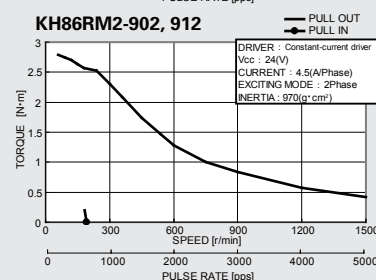
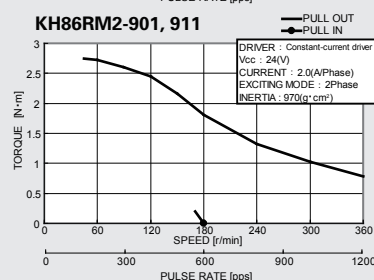
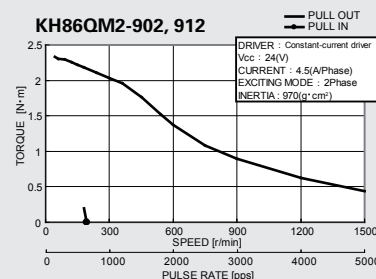
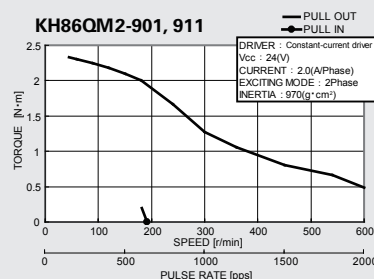
SPECIFICATIONS

STEP ANGLE deg./step	VOLTAGE V	CURRENT A/PHASE	WINDING RESISTANCE Ω/PHASE	INDUCTANCE mH/PHASE	HOLDING TORQUE N·m	kgf·cm	ROTOR INERTIA g·cm ²	MODEL	
								SINGLE SHAFT	DOUBLE SHAFT
1.8	3.60	2.0	1.8	5.6	2.5	25.5	1800	KH86QM2-901	KH86QM2-911
1.8	2.12	4.5	0.47	1.2	2.5	25.5	1800	KH86QM2-902	KH86QM2-912
1.8	4.00	2.0	2.1	7.5	3.0	30.6	2300	KH86RM2-901	KH86RM2-911
1.8	2.20	4.5	0.5	1.5	3.0	30.6	2300	KH86RM2-902	KH86RM2-912
1.8	5.60	2.0	2.8	11.5	4.7	47.9	3700	KH86TM2-901	KH86TM2-911
1.8	2.97	4.5	0.66	2.3	4.7	47.9	3700	KH86TM2-902	KH86TM2-912
1.8	7.60	2.0	3.8	17.0	6.7	68.3	5500	KH86WM2-901	KH86WM2-911
1.8	3.80	4.0	0.95	3.6	6.7	68.3	5500	KH86WM2-902	KH86WM2-912

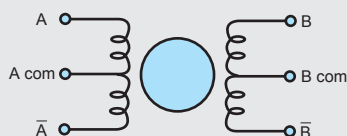
[GENERAL SPECIFICATIONS]

INSULATION RESISTANCE	500V DC 100MΩ min. (at normal temp. & humidity, between lead and case)
DIELECTRIC STRENGTH	500V AC 50Hz 1min.
AMBIENT TEMP. AND HUMIDITY	-10°C~+50°C, 5%~95%RH (noncondensing)
STORAGE TEMP. AND HUMIDITY	-20°C~+70°C, 5%~95%RH (noncondensing)
TEMPERATURE RISE	80K max (By resistance method)
POSITION ACCURACY	±10%

SPEED-TORQUE CHARACTERISTICS



CONNECTION DIAGRAMS



PHASE	A	A com	Ā	B	B com	B̄
COLOR OF LEAD	BLACK	RED	BROWN	YELLOW	BLUE	ORANGE

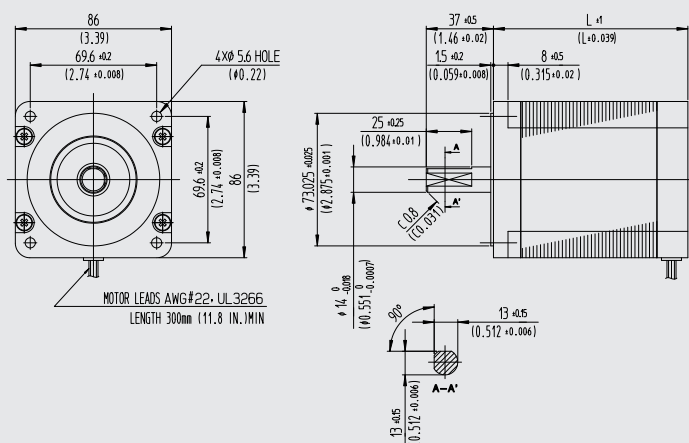
CW viewed from rotor shaft when using the following sequence diagram.

EXCITATION SEQUENCE

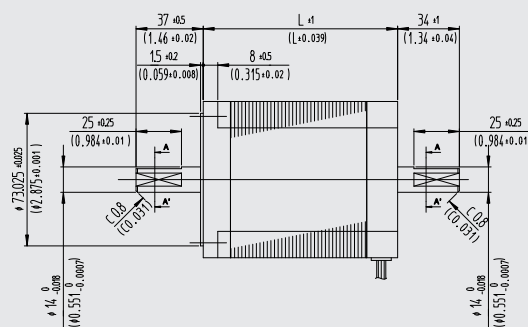
PHASE	1	2	3	4
A	—			—
B	—	—		
Ā		—	—	
B̄			—	—
A com	+	+	+	+
B com	+	+	+	+

DIMENSIONS Unit = mm(inch)

[SINGLE SHAFT]



[DOUBLE SHAFT]



MODEL	L (mm)	L (inch)	mass (kg)	weight (lb)
KH86QM2	66	2.60	2.0	4.4
KH86RM2	74	2.91	2.5	5.5
KH86TM2	96	3.78	3.0	6.6
KH86WM2	127	5.00	4.5	9.9

2-Phase Hybrid Stepping Motor

1.8°

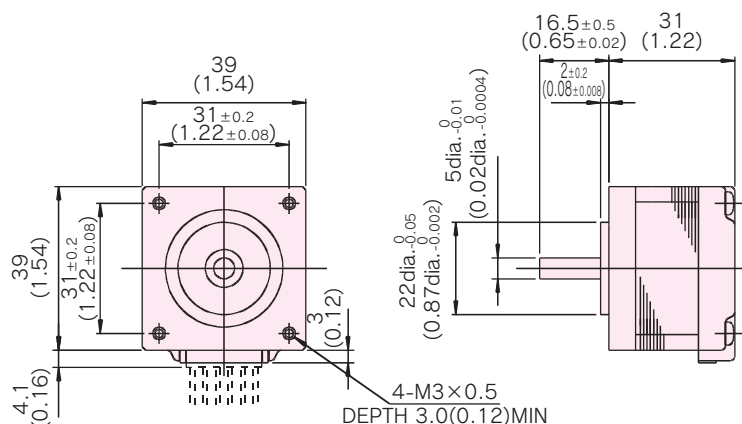
KH39 series

HIGH TORQUE, LOW VIBRATION AND LOW NOISE

STANDARD SPECIFICATIONS

M O D E L	U N I T	KH39GM2	
		-801	-851
DRIVE METHOD	—	UNI-POLAR	BI-POLAR
NUMBER OF PHASES	—	2	2
STEP ANGLE	deg./step	1.8	1.8
VOLTAGE	V	6.4	4.6
CURRENT	A/PHASE	0.47	0.65
RESISTANCE	Ω/PHASE	13.6	7.0
INDUCTANCE	mH/PHASE	9.8	9.8
HOLDING TORQUE	mN·m	127	157
	oz · in	18	22
DETENT TORQUE	mN·m	11.8	11.8
	oz · in	1.7	1.7
ROTOR INERTIA	g · cm ²	27	27
	oz · in ²	0.15	0.15
WEIGHT	g	240	240
	lb	0.53	0.53
INSULATION RESISTANCE	—	500VDC 100MΩmin.	
DIELECTRIC STRENGTH	—	500VAC 50HZ 1min.	
OPERATING TEMP.RANGE	℃	0 to 50	
ALLOWABLE TEMP.RISE	K	70	

DIMENSIONS unit = mm (inch)

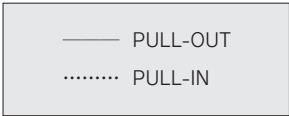
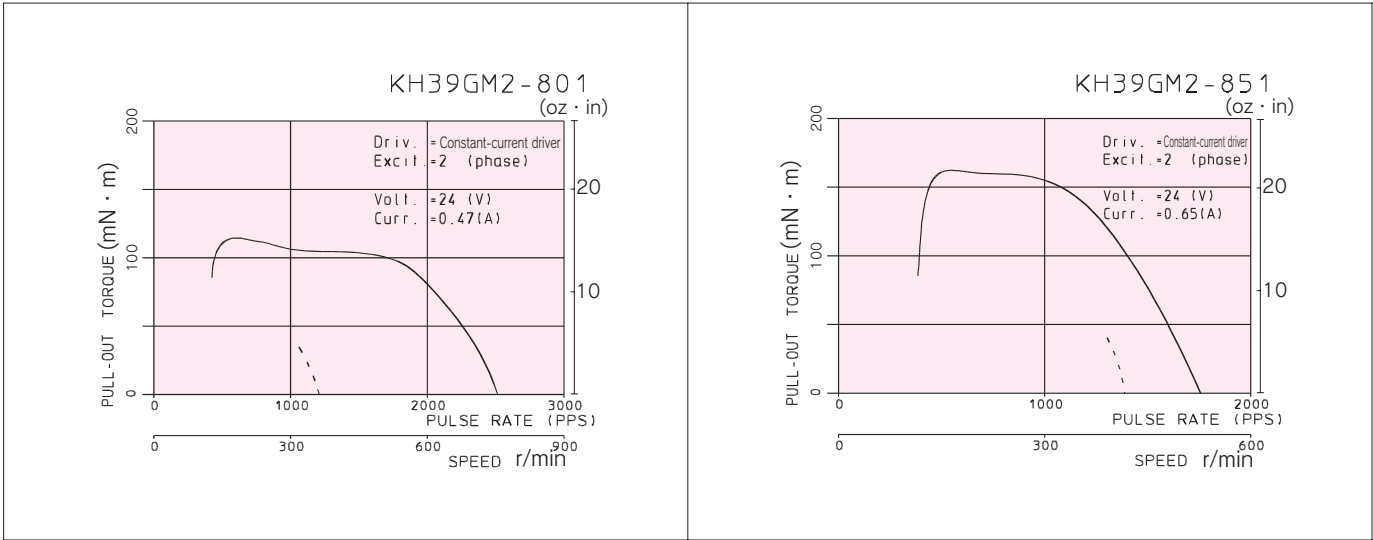




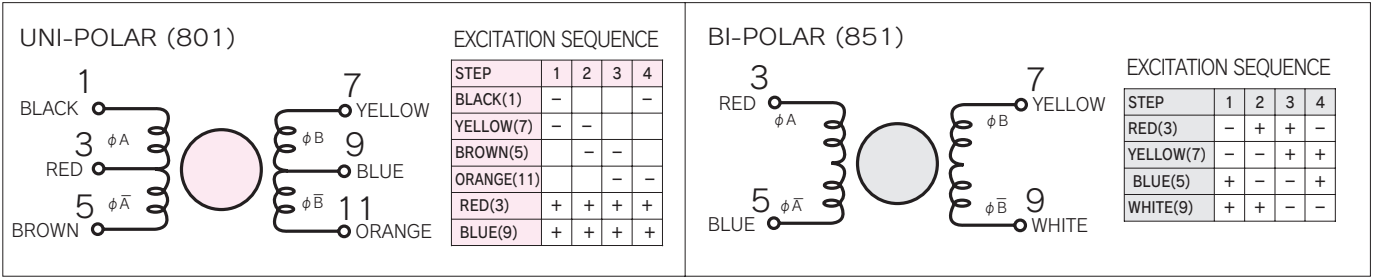
Features

1. High torque
Output is 1.3 times as high as conventional products.
2. Low noise -7dB(A) quieter than conventional products.

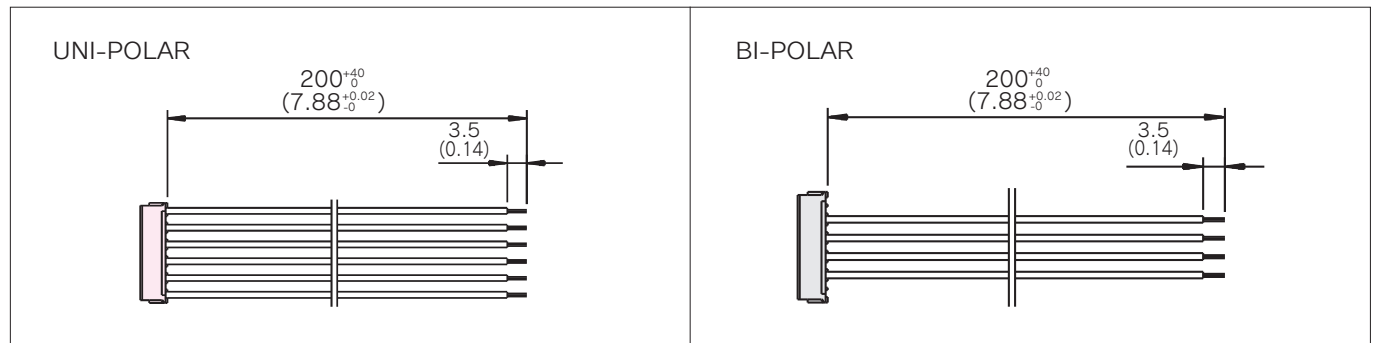
TORQUE CHARACTERISTICS vs. PULSE RATE



CONNECTION DIAGRAMS



CONNECTION CABLE TO MOTOR unit = mm (inch)



3-Phase Hybrid Stepping Motor

1.2°

KT35 series *TRISYN*

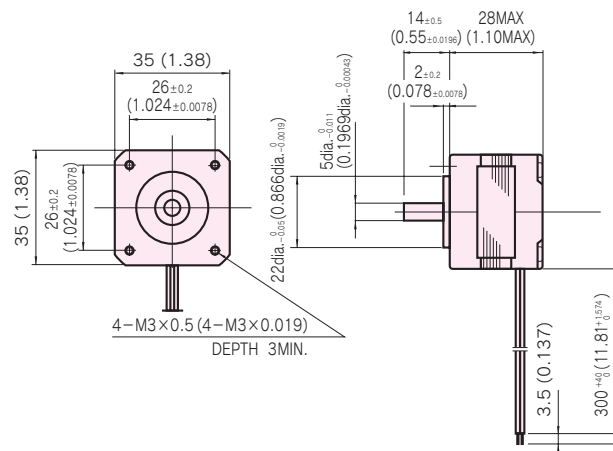
HIGH TORQUE, SILENT ROTATION

STANDARD SPECIFICATIONS

M O D E L	U N I T	KT35FM1
		-552
DRIVE METHOD	————	BI-POLAR
NUMBER OF PHASES	————	3
STEP ANGLE	deg./step	1.2
VOLTAGE	V	10.8
CURRENT	A/2-PHASE	0.3
WINDING RESISTANCE	Ω/2-PHASE	36
INDUCTANCE	mH/2-PHASE	26
HOLDING TORQUE	mN · m	58.9
	oz · in	8.3
DETENT TORQUE	mN · m	9.8
	oz · in	1.4
ROTOR INERTIA	g · cm ²	8
	oz · in ²	0.044
WEIGHTS	g	110
	lb	0.24
INSULATION RESISTANCE	————	500VDC 100MΩmin.
DIELECTRIC STRENGTH	————	500VAC 50HZ 1min.
OPERATING TEMP. RANGE	℃	0 to 50
ALLOWABLE TEMP. RISE	K	70

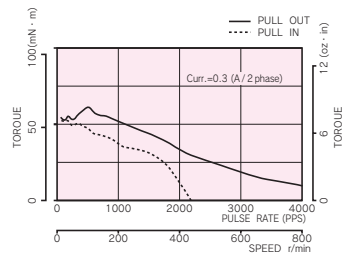


DIMENSIONS unit = mm (inch)

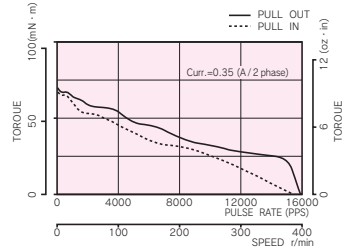


KT35FM1

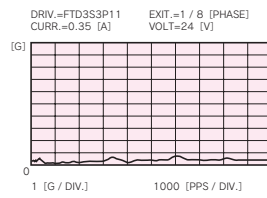
**TORQUE
CHARACTERISTICS
vs.
PULSE RATE
(FULL STEP)
24V
2 PHASE**



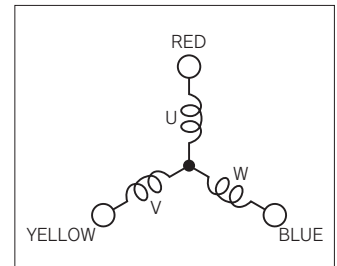
**TORQUE
CHARACTERISTICS
vs.
PULSE RATE
(MICRO-STEP)
24V
1/8 DIVISIONS**



**VIBRATION
CHARACTERISTICS
(MICRO-STEP
DRIVEN)**



Connection Diagram



[EXCITATION SEQUENCE]

STEP	1	2	3	4	5	6
PHASE						
U相 (U PHASE)	+	-	-		+	
V相 (V PHASE)	-	-		+	+	
W相 (W PHASE)		+	+		-	-

3-Phase Hybrid Stepping Motor

1.2°

KT42 series *TRISYN*

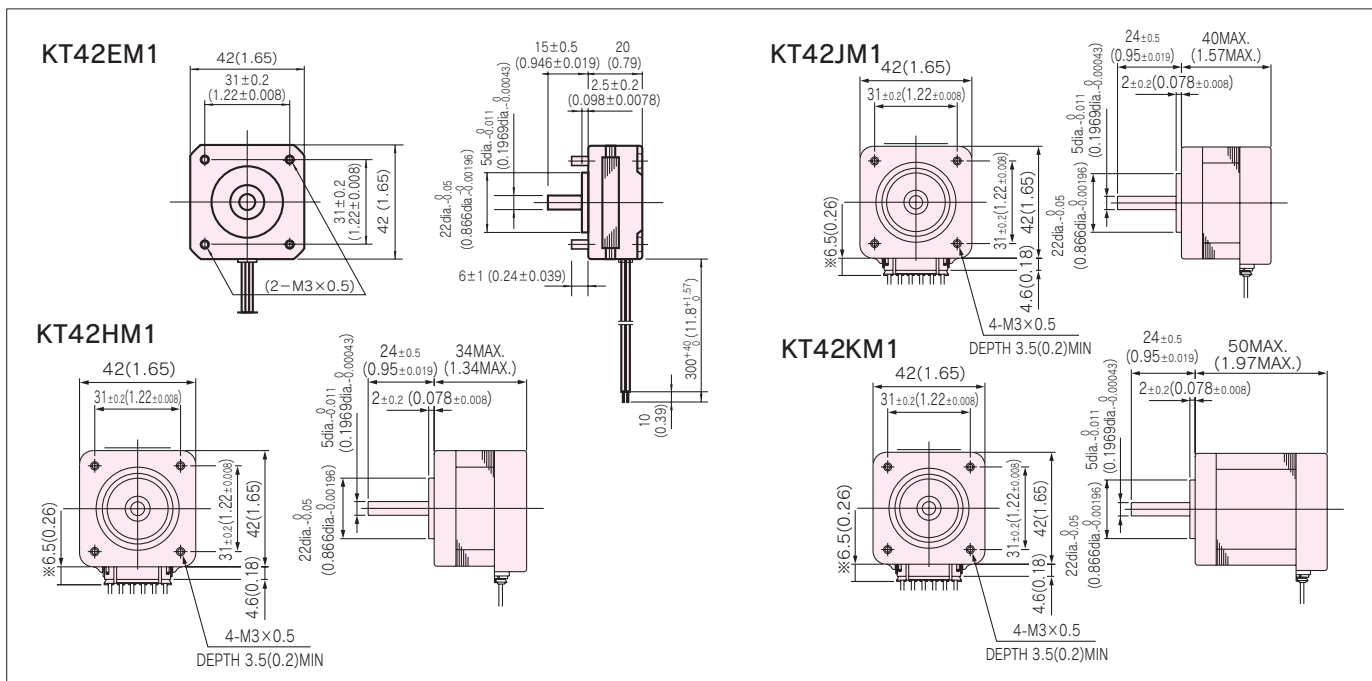
HIGH TORQUE, SILENT ROTATION

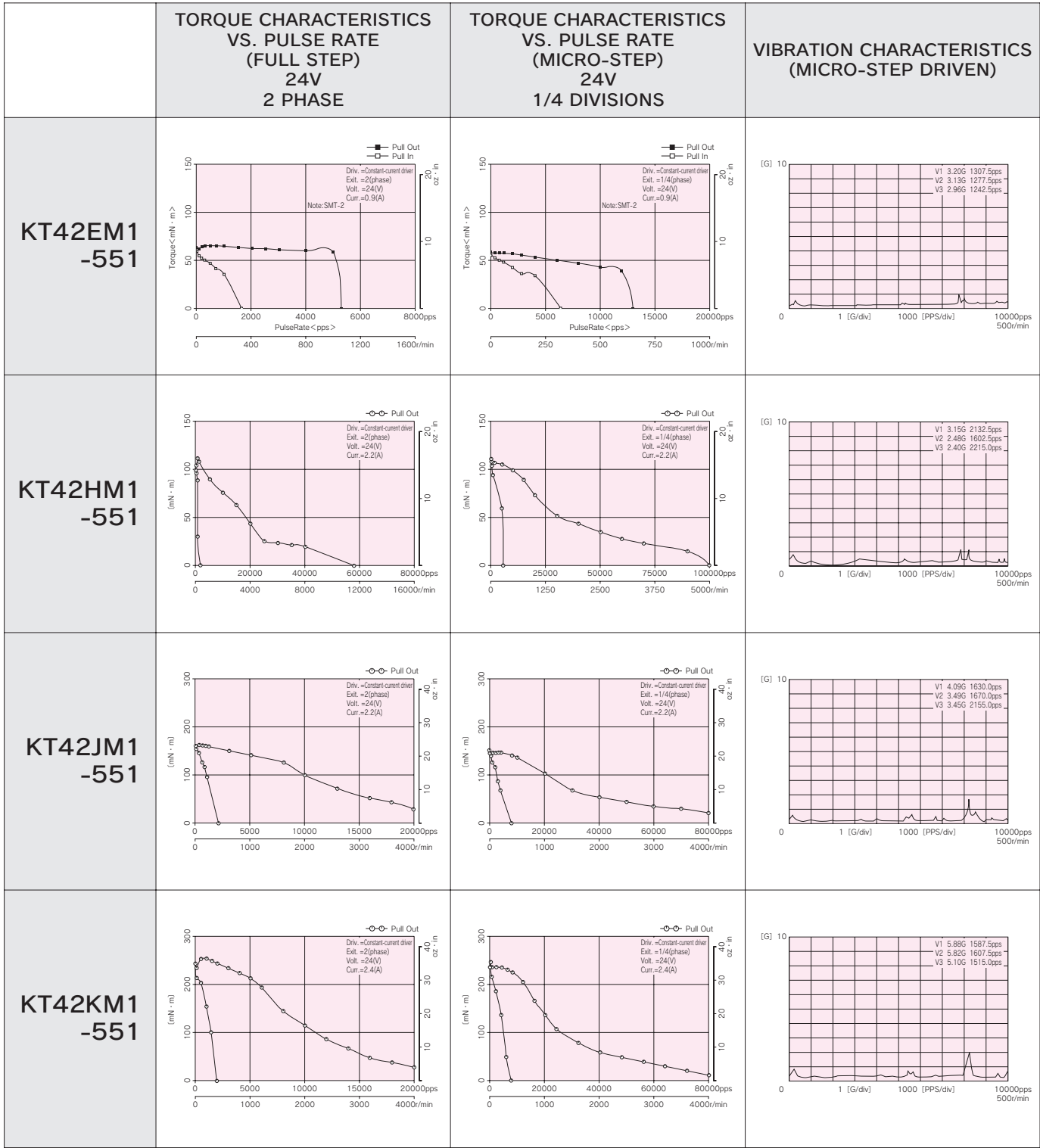
STANDARD SPECIFICATIONS

MODEL	UNIT	KT42EM1	KT42HM1	KT42JM1	KT42KM1
		-551	-551	-551	-551
DRIVE METHOD	—	BI-POLAR			
NUMBER OF PHASES	—	3			
STEP ANGLE	deg./step	1.2			
VOLTAGE	V	5.3	2.64	2.88	3.6
CURRENT	A/2-PHASE	0.9	2.4	2.4	2.4
WINDING RESISTANCE	Ω/2-PHASE	5.9	1.1	1.2	1.5
INDUCTANCE	mH/2-PHASE	2.6	0.5	0.8	1.0
HOLDING TORQUE	mN · m	70	140	210	280
	oz · in	9.9	19.8	29.7	39.6
DETENT TORQUE	mN · m	10	10	12	16
	oz · in	1.4	1.4	1.7	2.3
ROTOR INERTIA	g · cm ²	20	42	60	85
	oz · in ²	0.11	0.23	0.33	0.46
WEIGHTS	g	140	210	310	360
	lb	0.31	0.46	0.68	0.79
INSULATION RESISTANCE	—	500VDC 100MΩmin.			
DIELECTRIC STRENGTH	—	500VAC 50HZ 1 min.			
OPERATING TEMP. RANGE	℃	-10 to 50			
ALLOWABLE TEMP. RISE	K	70			

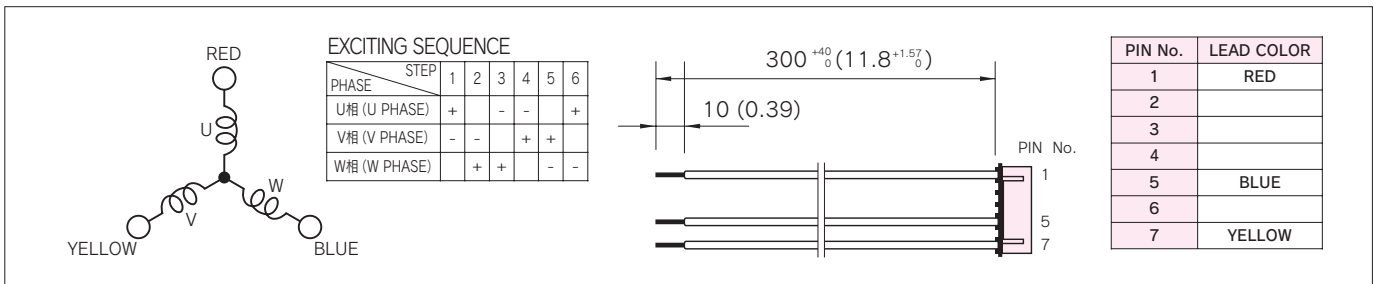


DIMENSIONS unit = mm (inch)





■ CONNECTION CABLE TO MOTOR unit = mm (inch) (Except for KT42EM1-551)



3-Phase Hybrid Stepping Motor

1.2°

KT60 series *TRISYN*

HIGH TORQUE, SILENT ROTATION

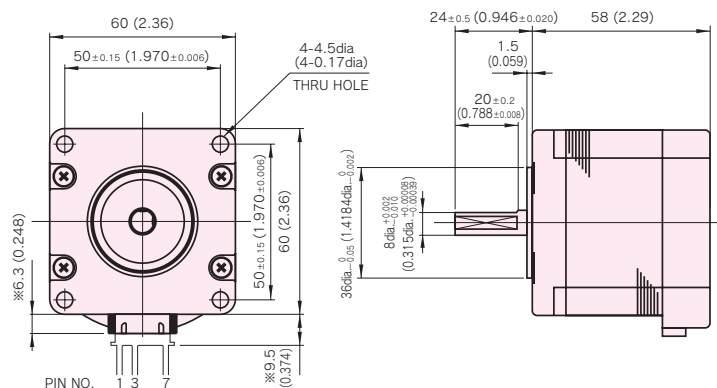
STANDARD SPECIFICATIONS

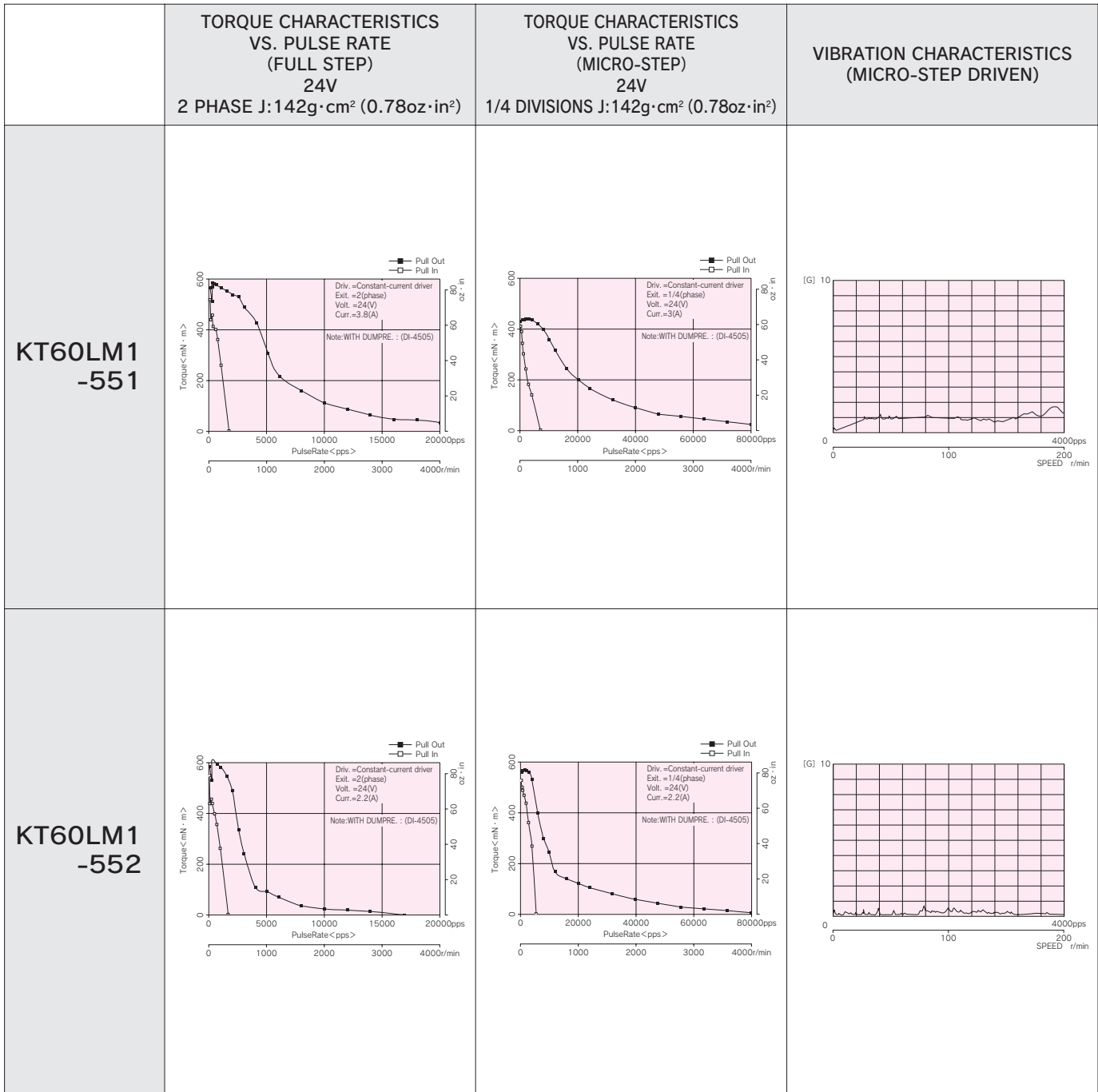
M O D E L	U N I T	KT60LM1	
		-551	-552
DRIVE METHOD	————	BI-POLAR	
NUMBER OF PHASES	————	3	
STEP ANGLE	deg./step	1.2	
VOLTAGE	V	2.77	4.84
CURRENT	A/2-PHASE	3.8	2.2
WINDING RESISTANCE	Ω/2-PHASE	0.73	2.2
INDUCTANCE	mH/2-PHASE	1.0	3.3
HOLDING TORQUE	mN · m	600	600
	oz · in	85	85
DETENT TORQUE	mN · m	35	35
	oz · in	5	5
ROTOR INERTIA	g · cm ²	265	265
	oz · in ²	1.45	1.45
WEIGHTS	g	720	720
	lb	1.6	1.6
INSULATION RESISTANCE	————	500VDC 100MΩmin.	
DIELECTRIC STRENGTH	————	500VAC 50HZ 1min.	
OPERATING TEMP. RANGE	°C	0 to 50	
ALLOWABLE TEMP. RISE	K	70	



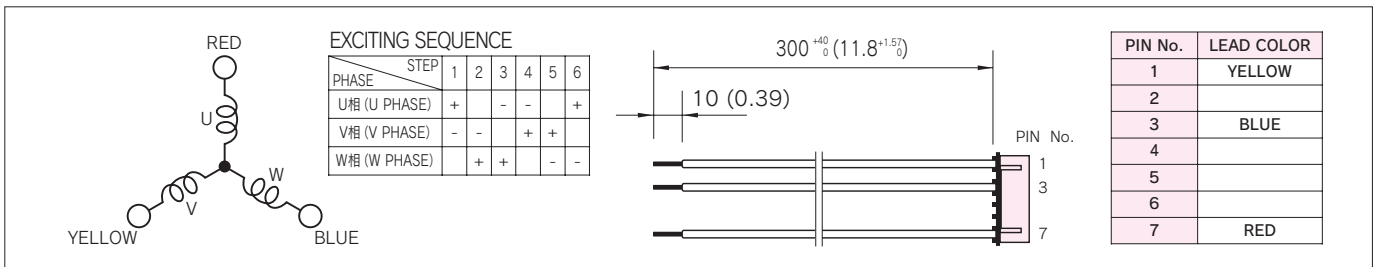
KT60LM1

DIMENSIONS unit = mm (inch)





■ CONNECTION CABLE TO MOTOR unit = mm (inch)



KV28

1.8°/step

□ 28mm



■ Applications

FA , Medical Devices
Security equipment

SINGLE SHAFT

MODEL
KV2832-N2U901
KV2841-N2U901
KV2851-N2U901

OPTION

KV28LUS300

■ FEATURES

- Space saving

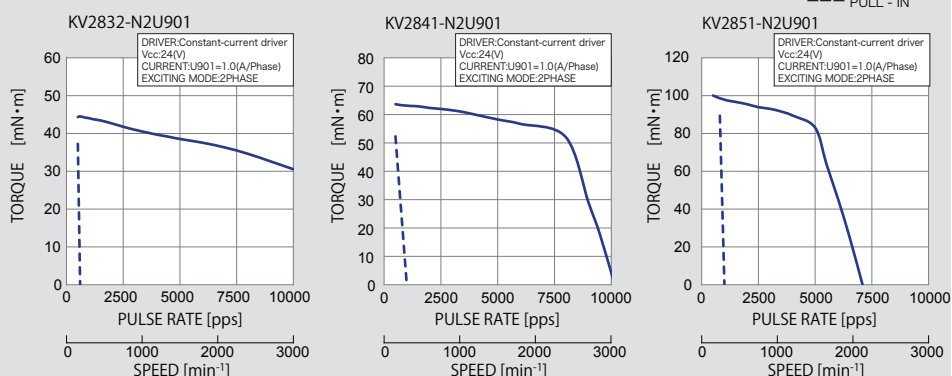
■ SPECIFICATIONS

STEP ANGLE ° /step	VOLTAGE V	CURRENT A/PHASE	WINDING RESISTANCE Ω/PHASE	INDUCTANCE mH/PHASE	HOLDING TORQUE mN · m	ROTOR INERTIA g · cm ²	MODEL
1.8	3.00	1.0	3.0	1.0	65	9.2	KV2832-N2U901
1.8	3.60	1.0	3.8	1.2	85	15	KV2841-N2U901
1.8	3.80	1.0	4.3	1.7	120	22	KV2851-N2U901

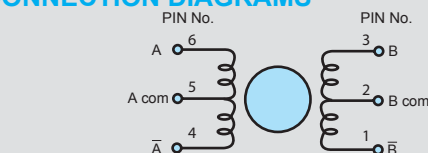
[GENERAL SPECIFICATIONS]

INSULATION RESISTANCE	500V DC 100MΩ min. (at normal temp.& humidity,between lead and case)
DIELECTRIC STRENGTH	500V AC 50Hz 1min. (at normal temp.& humidity,between lead and case)
AMBIENT TEMP. AND HUMIDITY	-10°C~+50°C, 5%~95%RH (noncondensing)
STORAGE TEMP.AND HUMIDITY	-20°C~+70°C, 5%~95%RH (noncondensing)
TEMPERATURE. RISE	80K max (By resistance method)
POSITION ACCURACY	±10%

■ SPEED-TORQUE CHARACTERISTICS



■ CONNECTION DIAGRAMS

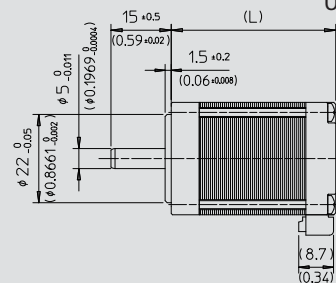
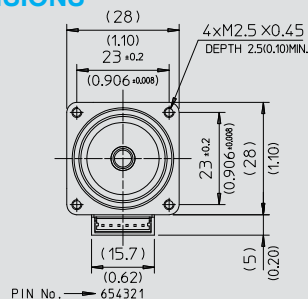


51065-0600(PIN NO.)	6	5	4	3	2	1
PHASE	A	A com	$\bar{A}$	B	B com	$\bar{B}$
COLOR OF LEAD	BLACK	RED	BROWN	YELLOW	BLUE	ORANGE

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

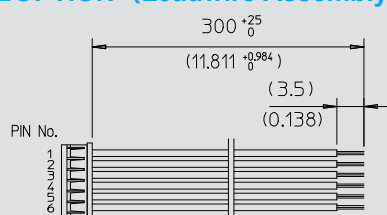
PHASE	1	2	3	4
A	—			—
B	—	—		
$\overline{A}$		—	—	
$\overline{B}$			—	—
A com	+	+	+	+
B com	+	+	+	+

■ DIMENSIONS



Unit = mm(inch)

■ OPTION (Leadwire Assembly)



The KV28 motor is supplied without a leadwire assembly. This must be ordered as a separate part.

MODEL	L mm(inch)	mass g
KV2832-N2U901	32(1.26)	110
KV2841-N2U901	41(1.61)	140
KV2851-N2U901	51(2.01)	190

CONNECTOR SPECIFICATIONS

Maker	MOLEX
Applicable Housing	51065-0600
Applicable Terminal	50372-8000
Lead Wire	UL3266 AWG26

KV42

4.09°/step

□42mm

NEMA17



Applications

OA, FA, Medical Devices
Money-handling &
Banking equipment

SINGLE SHAFT

MODEL

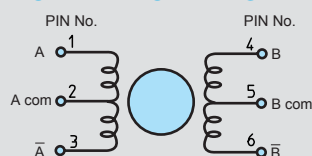
KV4234-N4U801
KV4239-T4U801
KV4239-N4U801
KV4242-N4U801
KV4248-N4U801

*Low Vibration Type

OPTION

KV42LUS300

CONNECTION DIAGRAMS



Warning

Unlike other series, this series will rotate in reverse.

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

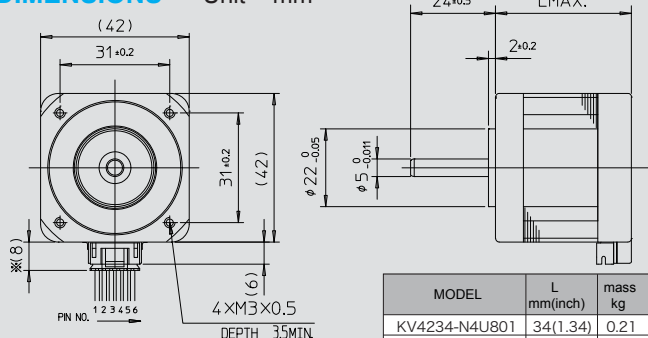
EXCITATION SEQUENCE

PHASE	1	2	3	4
A	-	-	-	-
B	-	-	-	-
Ā	-	-	-	-
B̄	-	-	-	-
A com	+	+	+	+
B com	+	+	+	+

PHR-6(PIN NO.)	1	2	3	4	5	6
PHASE	A	A com	Ā	B	B com	B̄
COLOR OF LEAD	BLACK	RED	BROWN	YELLOW	BLUE	ORANGE

DIMENSIONS

Unit = mm



The KV42 motor is supplied without a leadwire assembly. This must be ordered as a separate part.

MODEL	L mm(inch)	mass kg
KV4234-N4U801	34(1.34)	0.21
KV4239-T4U801	39(1.54)	0.26
KV4239-N4U801	39(1.54)	0.26
KV4242-N4U801	42(1.65)	0.32
KV4248-N4U801	48(1.89)	0.37

FEATURES

- High Speed · High Torque,
- KH42-B900 Successor Model

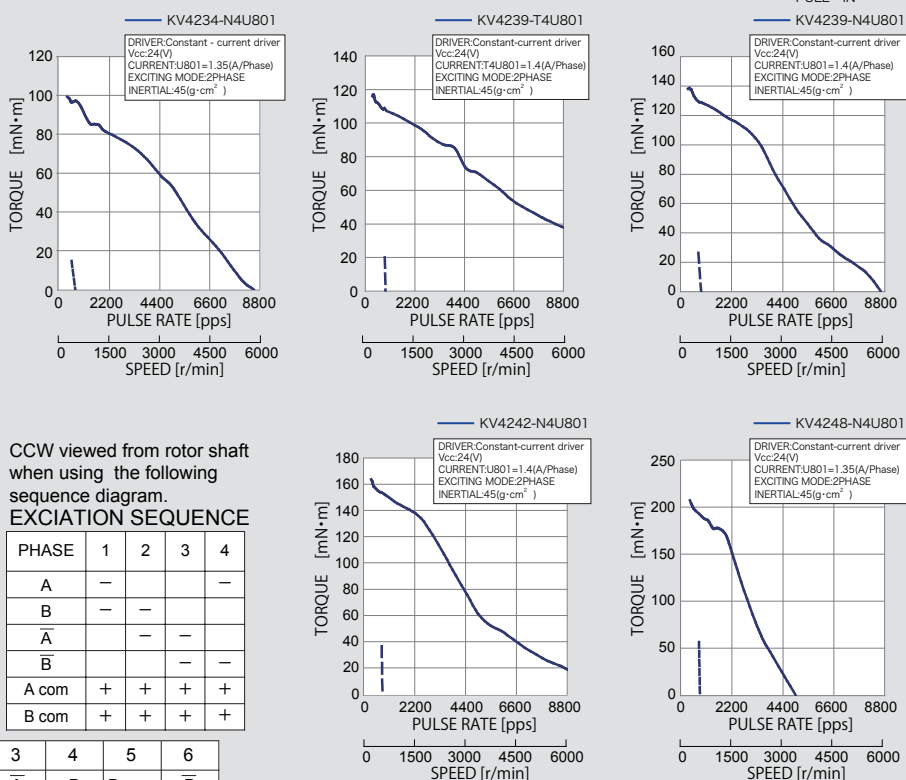
SPECIFICATIONS

STEP ANGLE	VOLTAGE	CURRENT	WINDING RESISTANCE	INDUCTANCE	HOLDING TORQUE	ROTOR INERTIA	MODEL
°/step	V	A/PHASE	Ω/PHASE	mH/PHASE	mN·m	g·cm ²	
4.09	2.57	1.35	1.9	1.4	150	42	KV4234-N4U801
4.09	3.08	1.4	2.2	2.1	160	59	KV4239-T4U801
4.09	3.08	1.4	2.2	1.9	200	59	KV4239-N4U801
4.09	3.50	1.4	2.5	2.4	230	69	KV4242-N4U801
4.09	4.05	1.35	3.0	2.7	280	79	KV4248-N4U801

GENERAL SPECIFICATIONS

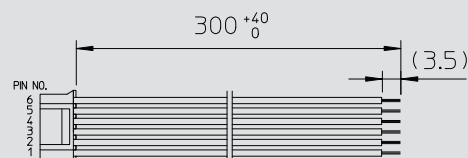
INSULATION RESISTANCE	500V DC 100MΩ min. (at normal temp. & humidity, between lead and case)
DIELECTRIC STRENGTH	500V AC 50Hz 1min. (at normal temp. & humidity, between lead and case)
AMBIENT TEMP. AND HUMIDITY	-10°C~+50°C, 5%~95%RH (noncondensing)
STORAGE TEMP. AND HUMIDITY	-20°C~+70°C, 5%~95%RH (noncondensing)
TEMPERATURE RISE	80K max (By resistance method)
POSITION ACCURACY	±10%

SPEED-TORQUE CHARACTERISTICS



OPTION (Leadwire Assembly)

MODEL : KV42LUS300



CONNECTOR SPECIFICATIONS

Maker	JST
Applicable Housing	PHR-6
Applicable Terminal	SPH-002T-P0.5S
Lead Wire	UL3266 AWG26