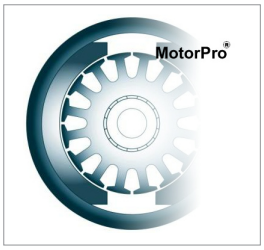

Designed by MotorPro™ software

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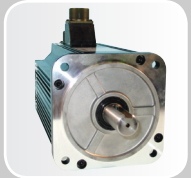
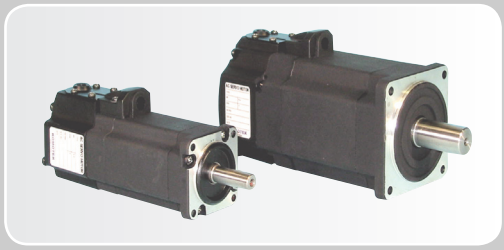
KOMOTEK

AC Servo Motor

Quality, Reliability and Flexibility





KOMOTEK

AC Servo Motor...

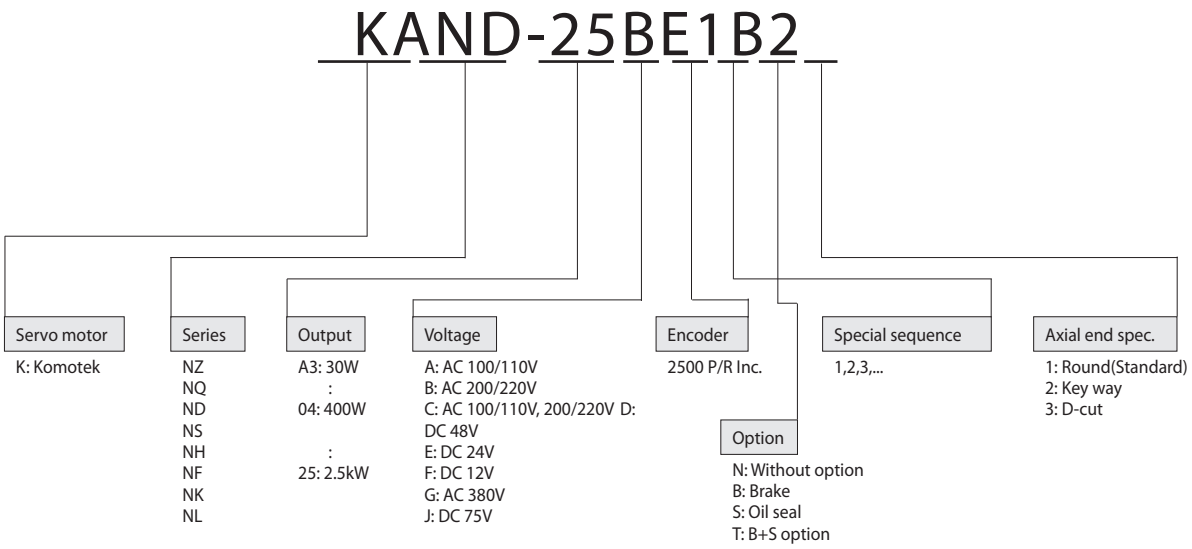
KOMOTEK has reached its leadership position in the mechatronics industries through continuous efforts to innovate.

A top performer in every respect, the KOMOTEK motor is the result of intensive product development.

Designed and manufactured to meet the demands of today's servo motor market, the KOMOTEK motor offers you reliability, easy installation and servicing, and top notch performance against static and transient loads, and complicated system loads.

KOMOTEK motor features provide a real choice in reliable torque control for a wide variety of installations from industrial machines to precise automation robots.

Model configurations



Encoder specifications

Symbol	Spec.	KANZ/Q	KAND	KANS	KANH	KANF	KANK	KANL
A	2000 P/R INC.(9wires)							
B	2000 P/R INC.(15wires)							
C	2048 P/R INC.(9wires)							
D	2048 P/R INC.(15wires)							
E	2500 P/R INC.(9wires)	standard						
F	2500 P/R INC.(15wires)		standard	standard	standard	standard	standard	standard
G	17bit ABS.	standard	standard	standard	standard	standard		
H	11bit ABS.							
K	5000 P/R INC.(15wires)							
L	6000 P/R INC.(15wires)							
Z	1000 P/R INC.(15wires)							
M	10000 P/R INC.(15wires)							
N	3000 P/R INC.(15wires)							

Regarding standards for specially developed products, please inquire about items individually.

Motor Classifications

Motor series		Rated ouput	Rated/ Maximum speed (r/min)	Type	Protection degree	Features	Application examples
KANZ		30W~600W	3000/5000	Cylinder	IP65	Ultra low inertia	Belt drives, Robots, Mounters, Inserters, XY tables
		750W	3000/4500				
		950W	3000/3500				
KANQ		100W~400W	3000/5000	Pan cake	IP65	Low inertia	Robots, XY tables, Mounters, Sewing machines, Food processing machines
KAND		0.75kW~5kW	2000/3000	Cylinder	IP65	Middle inertia	Conveyor machines, Robots, XY tables
KANS		1.0kW~3.5kW	3000/5000	Cylinder	IP65	Low inertia	High frequency positioning equipments
		4.0kW~5.0kW	3000/4500				
KANH		0.5kW~5kW	2000/3000	Cylinder	IP65	Ultra high inertia	Machine tools, Winding machines, Press feeders, Woodworking machines
KANF		0.4kW~4.5kW	2000/3000	Pan cake	IP65	Middle inertia	Robots, Food processing machines
KANK		0.3kW~6.0kW	1000/2000	Cylinder	IP65	Middle inertia	Machine tools, Transfer machines, Woodworking machines
KANL		0.3kW~6.0kW	1000/2000	Cylinder	IP65	High inertia	Machine tools, Transfer machines, Woodworking machines, Spring forming machines

Specifications and Characteristics

KANZ series servo motor specifications

Servo motor series		KANZ											
Flange size (mm)		40			60		40		60		80		
Specifications \ Model		A3	A5	01	02	04	A8	01	02	04	06	08	10
Supply voltage (V_{AC})		100/110, 200/220		100/110			200/220						
Continuous running duty	Rated output (W)	30	50	100	200	400	80	100	200	400	600	750	950
	Rated torque (N·m)	0.095	0.16	0.32	0.64	1.3	0.26	0.32	0.64	1.3	1.9	2.4	3.0
Maximum torque (N·m)		0.28	0.48	0.95	1.91	3.8	0.76	0.95	1.91	3.8	5.73	7.1	9.1
Rated rotation speed (r/min)		3000											
Maximum rotation speed (r/min)		5000				4500	5000					4500	3500
Rated power rate (kW/s)		4.4	8.7	17.2	21.8	48.7	17.0	17.7	21.8	48.7	39.2	48.3	62.2
Rated current (Arms)		1.0	1.0	1.6	2.5	4.4	1.0	1.0	1.6	2.5	4.1	4.3	4.3
Momentary maximum current (Arms)		3.04	3.04	4.87	7.42	13.15	3.04	3.04	4.87	7.42	12.3	12.9	12.9
Rotor inertia ($X10^{-4}Kg·m^2$)	Standard	0.021	0.03	0.06	0.19	0.34	0.039	0.059	0.19	0.34	0.93	1.20	1.47
	With brake	0.025	0.034	0.063	0.21	0.36	0.049	0.061	0.21	0.36	1.05	1.32	1.49
Encoder		2500 P/R Incremental / 17bit Absolute											
Recommended load/motor inertia ratio		Less than 30-times the servo motor's inertia											
Structure		Totally enclosed non ventilated (protection degree:IP65)											
Environment	Ambient temperature	0 to 40℃(32 to 104°F) (non freezing), storage: -15 to 70℃(5 to 158°F) (non freezing)											
	Ambient humidity	85% RH max. (non condensing), storage: 90% RH max.(non condensing)											
	Atmosphere	Indoors (no direct sunligt); no corrosive gas, inflammable gas, oil mist, or dust											
	Elevation/Vibration	1000meters or less above sea level, 49 m/s^2 below											
Weight (kg)	Standard	0.32	0.39	0.66	1.0	1.7	0.50	0.66	1.0	1.7	2.9	3.5	4.1
	With brake	0.54	0.63	0.93	1.5	2.3	0.77	0.93	1.5	2.3	3.5	4.3	4.9

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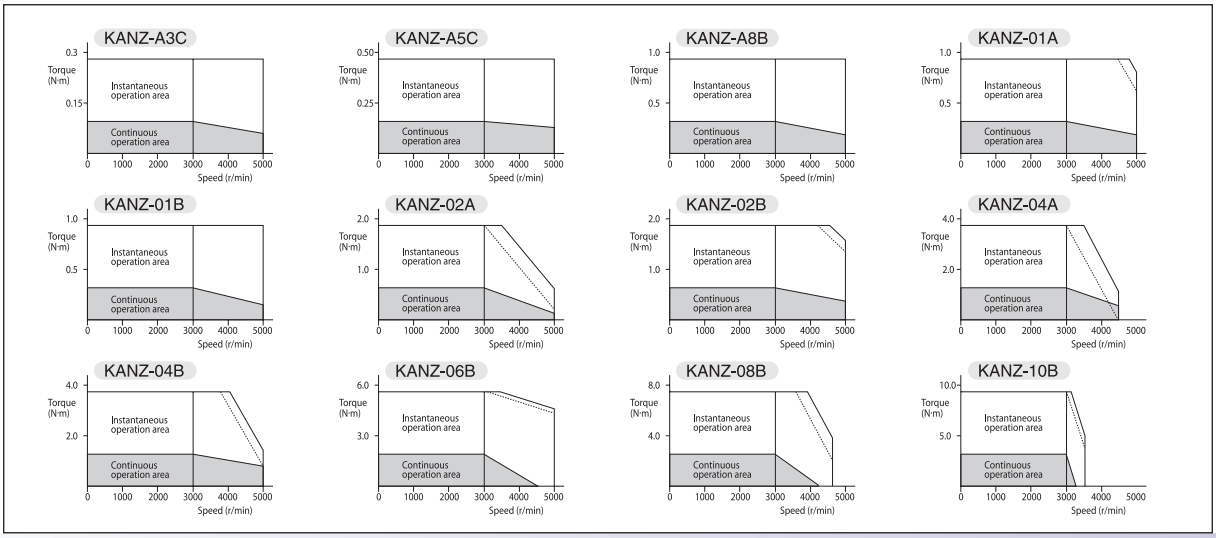
3. All ratings typical and at 20℃ unless otherwise noted.
4. Contact KOMOTEK if the load/motor of inertia moment ratio exceeds the figure in the table

KANZ series servo motor torque characteristics



1. Dotted lines show torque characteristics for 10% derated voltage operation.

Specifications and Characteristics

KANQ series servo motor specifications

Servo motor series		KANQ					
Flange size (mm)		60	80		60	80	
Specifications \ Model		01	02	04	01	02	04
Supply voltage (V_{AC})		100/110			200/220		
Continuous running duty	Rated output (W)	100	200	400	100	200	400
	Rated torque (N·m)	0.32	0.64	1.3	0.32	0.64	1.3
Maximum torque (N·m)		0.95	1.91	3.82	0.95	1.91	3.82
Rated rotation speed (r/min)		3000					
Maximum rotation speed (r/min)		5000		4500	5000		
Rated power rate (kW/s)		9.4	11.5	26.7	9.4	11.5	26.7
Rated current (Arms)		1.6	2.5	4.4	1.0	1.6	2.5
Momentary maximum current (Arms)		4.87	7.42	13.15	3.04	4.88	7.42
Rotor inertia ($X10^{-4}$Kg·m^2)	Standard	0.11	0.36	0.62	0.11	0.36	0.62
	With brake	0.14	0.49	0.74	0.14	0.49	0.74
Encoder		2500 P/R Incremental / 17bit Absolute					
Recommended load/motor inertia ratio		Less than 20-times the servo motor's inertia					
Structure		Totally enclosed non ventilated (protection degree:IP65)					
Environment	Ambient temperature	0 to 40℃(32 to 104°F) (non freezing), storage: -15 to 70℃(5 to 158°F) (non freezing)					
	Ambient humidity	85% RH max. (non condensing), storage: 90% RH max.(non condensing)					
	Atmosphere	Indoors (no direct sunligt); no corrosive gas, inflammable gas, oil mist, or dust					
	Elevation/Vibration	1000meters or less above sea level, 49 m/s^2 below					
Weight (kg)	Standard	0.78	1.5	2.1	0.78	1.5	2.1
	With brake	1.2	2.3	3.0	1.2	2.3	3.0

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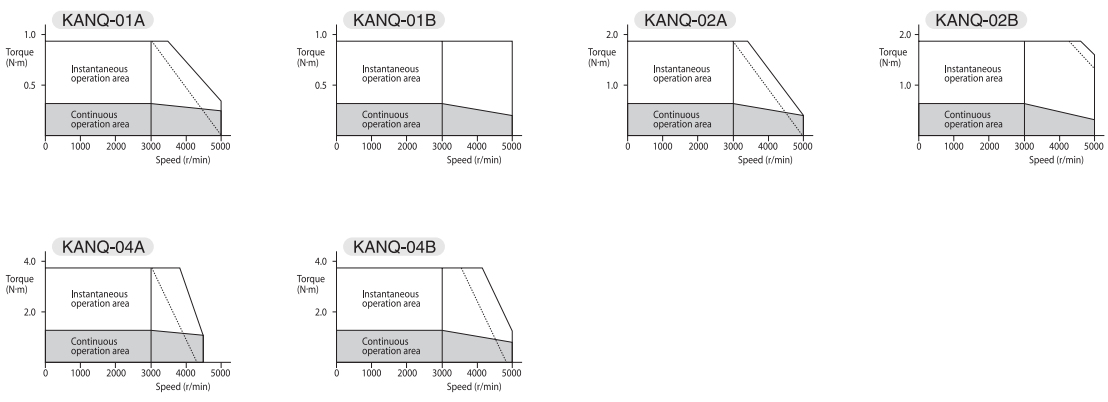
KANQ series servo motor torque characteristics



1. Dotted lines show torque characteristics for 10% derated voltage operation.

Specifications and Characteristics

KAND series servo motor specifications

Servo motor series		KAND								
Flange size (mm)		120	130					180		
Specifications \ Model		08	10	15	20	25	30	40	45	50
Supply voltage (V_{AC})		200/220V								
Continuous running duty	Rated output (kW)	0.75	1.0	1.5	2.0	2.5	3.0	4.0	4.5	5.0
	Rated torque (N·m)	3.58	4.77	7.15	9.55	11.9	14.3	19.1	21.5	23.9
Maximum torque (N·m)		10.85	14.4	21.5	28.5	35.5	42.9	56.4	64.3	71.4
Rated rotation speed (r/min)		2000								
Maximum rotation speed (r/min)		3000								
Rated power rate (kW/s)		49.1	48.8	74.6	100.0	124.9	151.2	111.0	124.8	128.3
Rated current (Arms)		5.0	5.8	9.4	12.3	14.0	17.8	24.3	26.2	28.0
Momentary maximum current (Arms)		15.0	16.8	28.3	36.7	42.4	53.7	70.7	78.5	84.9
Rotor inertia ($X10^{-4}Kg·m^2$)	Standard	2.67	4.82	7.0	9.5	11.5	13.8	33.5	37.7	45.5
	With brake	3.12	6.10	8.3	10.7	12.8	15.0	38.7	42.9	50.7
Encoder		2500 P/R Incremental / 17bit Absolute								
Recommended load/motor inertia ratio		Less than 10-times the servo motor's inertia								
Structure		Totally enclosed non ventilated (protection degree:IP65)								
Environment	Ambient temperature	0 to 40℃(32 to 104°F) (non freezing), storage: -15 to 70℃(5 to 158°F) (non freezing)								
	Ambient humidity	85% RH max. (non condensing), storage: 90% RH max.(non condensing)								
	Atmosphere	Indoors (no direct sunligt); no corrosive gas, inflammable gas, oil mist, or dust								
	Elevation/Vibration	1000meters or less above sea level, 49 m/s^2 below								
Weight (kg)	Standard	4.8	6.8	8.5	10.6	12.8	14.6	19.8	21.5	25.0
	With brake	6.1	8.7	10.1	12.5	14.7	16.5	23.3	25.0	28.5

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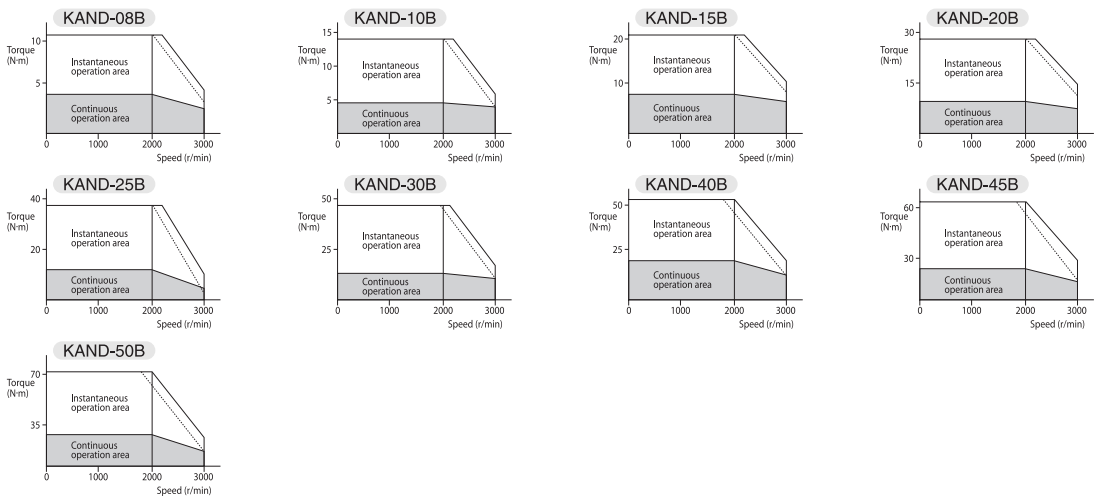
4. Contact KOMOTEK if the load/motor of inertia moment ratio exceeds the figure in the table

KAND series servo motor torque characteristics



1. Dotted lines show torque characteristics for 10% derated voltage operation.

Specifications and Characteristics

KANS series servo motor specifications

Servo motor series		KANS								
Flange size (mm)		100				120		130		
Specifications \ Model		10	15	20	25	30	35	40	45	50
Supply voltage (V_{AC})		200/220V								
Continuous running duty	Rated output (kW)	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
	Rated torque (N·m)	3.18	4.77	6.37	7.96	9.54	11.14	12.7	14.3	15.9
Maximum torque (N·m)		9.5	14.5	19.24	23.8	28.59	33.3	37.9	42.9	47.6
Rated rotation speed (r/min)		3000								
Maximum rotation speed (r/min)		5000						4500		
Rated power rate (kW/s)		50.08	97.21	136.29	171.16	155.1	183.0	134	154	161
Rated current (Arms)		7.2	9.4	13.0	15.9	20.0	21.6	24.7	29.0	28.5
Momentary maximum current (Arms)		21.0	28.3	39.6	48.1	56.3	61.0	74.2	83.4	84.9
Rotor inertia ($X10^{-4}Kg·m^2$)	Standard	2.06	2.39	3.04	3.78	5.99	6.93	12.4	13.6	16.3
	With brake	2.5	2.84	3.49	4.23	6.44	7.38	13.7	14.9	17.7
Encoder		2500 P/R Incremental / 17bit Absolute								
Recommended load/motor inertia ratio		Less than 15-times the servo motor's inertia								
Structure		Totally enclosed non ventilated (protection degree:IP65)								
Environment	Ambient temperature	0 to 40℃(32 to 104°F) (non freezing), storage: -15 to 70℃(5 to 158°F) (non freezing)								
	Ambient humidity	85% RH max. (non condensing), storage: 90% RH max.(non condensing)								
	Atmosphere	Indoors (no direct sunligt); no corrosive gas, inflammable gas, oil mist, or dust								
	Elevation/Vibration	1000meters or less above sea level, 49 m/s^2 below								
Weight (kg)	Standard	4.5	5.1	6.5	7.5	9.3	10.9	12.9	15.1	17.3
	With brake	5.1	6.4	7.8	8.8	10.6	12.2	14.8	17.0	19.2

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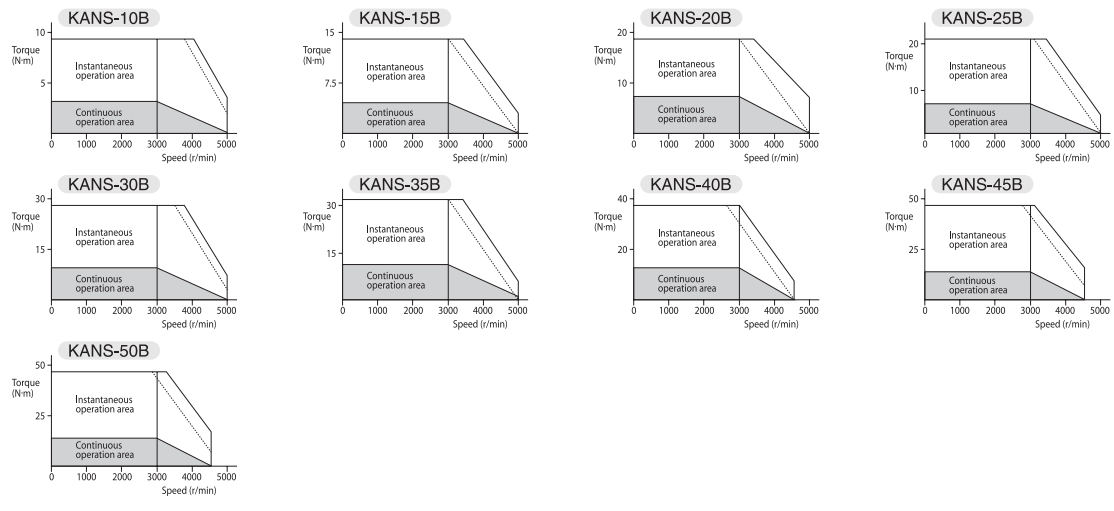
3. All ratings typical and at 20℃ unless otherwise noted.
4. Contact KOMOTEK if the load/motor of inertia moment ratio exceeds the figure in the table

KANS series servo motor torque characteristics



1. Dotted lines show torque characteristics for 10% derated voltage operation.

Specifications and Characteristics

KANH series servo motor specifications

Servo motor series		KANH						
Flange size (mm)		130			180			
Specifications \ Model		05	10	15	20	30	40	50
Supply voltage (V_{AC})		200/220V						
Continuous running duty	Rated output (kW)	0.5	1.0	1.5	2.0	3.0	4.0	5.0
	Rated torque (N·m)	2.39	4.77	7.15	9.55	14.32	19.1	23.87
Maximum torque (N·m)		6.0	14.4	21.5	28.5	42.9	56.4	71.4
Rated rotation speed (r/min)		2000						
Maximum rotation speed (r/min)		3000						
Rated power rate (kW/s)		4.1	8.9	12.2	15.0	22.2	31.1	34.1
Rated current (Arms)		3.2	5.6	9.4	12.3	17.8	23.4	28.0
Momentary maximum current (Arms)		8.1	16.8	28.3	36.7	53.6	70.7	84.9
Rotor inertia ($X10^{-4}Kg·m^2$)	Standard	14.0	26.0	42.9	62.0	94.1	120.0	170.0
	With brake	15.2	27.2	44.1	67.9	100.0	126.0	176.0
Encoder		2500 P/R Incremental / 17bit Absolute						
Recommended load/motor inertia ratio		Less than 5-times the servo motor's inertia						
Structure		Totally enclosed non ventilated (protection degree:IP65)						
Environment	Ambient temperature	0 to 40℃(32 to 104°F) (non freezing), storage: -15 to 70℃(5 to 158°F) (non freezing)						
	Ambient humidity	85% RH max. (non condensing), storage: 90% RH max.(non condensing)						
	Atmosphere	Indoors (no direct sunligt); no corrosive gas, inflammable gas, oil mist, or dust						
	Elevation/Vibration	1000meters or less above sea level, 49 m/s^2 below						
Weight (kg)	Standard	5.3	8.5	10.0	16.0	18.2	22.0	26.7
	With brake	6.9	9.5	11.6	19.5	21.7	25.5	30.2

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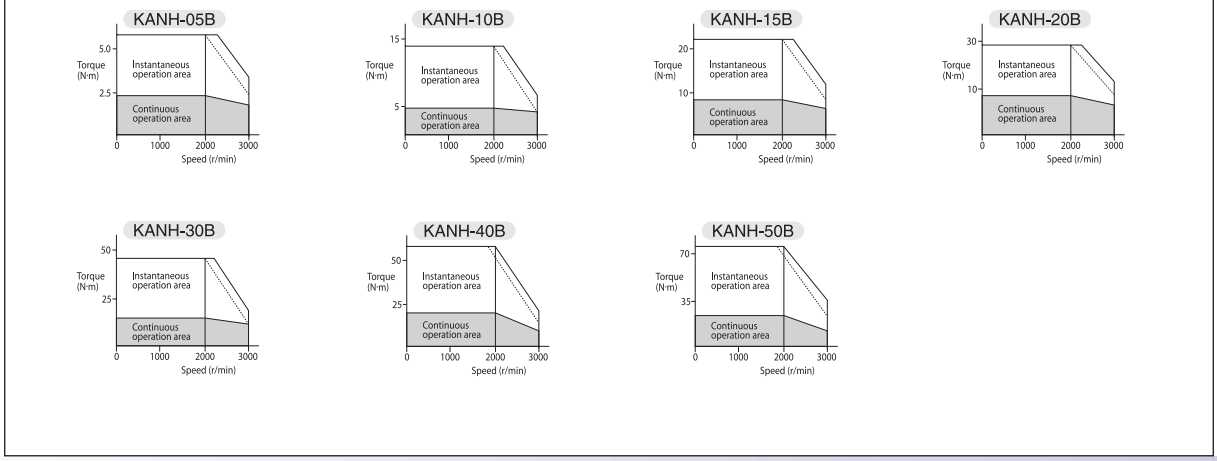
3. All ratings typical and at 20℃ unless otherwise noted.
4. Contact KOMOTEK if the load/motor of inertia moment ratio exceeds the figure in the table

KANH series servo motor torque characteristics



1. Dotted lines show torque characteristics for 10% derated voltage operation.

Specifications and Characteristics

KANF series servo motor specifications

Servo motor series		KANF					
Flange size (mm)		130	180		220		
Specifications \ Model		04	08	15	25	35	45
Supply voltage (V_{AC})		200/220V					
Continuous running duty	Rated output (kW)	0.4	0.75	1.5	2.5	3.5	4.5
	Rated torque (N·m)	1.91	3.58	7.16	11.9	16.7	21.5
Maximum torque (N·m)		5.3	10.7	21.5	30.4	44.1	54.9
Rated rotation speed (r/min)		2000					
Maximum rotation speed (r/min)		3000					
Rated power rate (kW/s)		17.5	13.6	29.0	42.6	66.5	80.1
Rated current (Arms)		2.8	5.0	9.5	13.4	20.0	23.5
Momentary maximum current (Arms)		8.4	15.0	28.5	40.2	59.4	70.5
Rotor inertia ($X10^{-4}$Kg·m^2)	Standard	2.13	9.6	18.0	33.7	42.6	58.7
	With brake	3.42	14.8	23.2	45.3	54.3	70.3
Encoder		2500 P/R Incremental / 17bit Absolute					
Recommended load/motor inertia ratio		Less than 10-times the servo motor's inertia					
Structure		Totally enclosed non ventilated (protection degree:IP65)					
Environment	Ambient temperature	0 to 40℃(32 to 104°F) (non freezing), storage: -15 to 70℃(5 to 158°F) (non freezing)					
	Ambient humidity	85% RH max. (non condensing), storage: 90% RH max.(non condensing)					
	Atmosphere	Indoors (no direct sunligt); no corrosive gas, inflammable gas, oil mist, or dust					
	Elevation/Vibration	1000meters or less above sea level, 49 m/s^2 below					
Weight (kg)	Standard	4.7	8.6	11.0	14.8	15.5	19.9
	With brake	6.7	10.6	14.0	17.5	19.2	24.3

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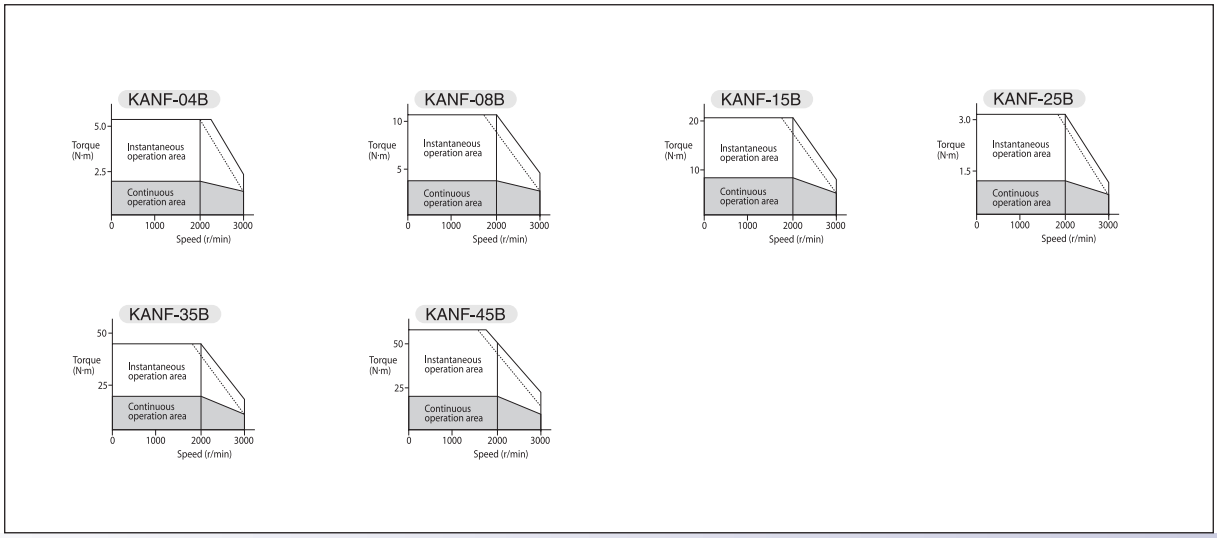
3. All ratings typical and at 20℃ unless otherwise noted.
4. Contact KOMOTEK if the load/motor of inertia moment ratio exceeds the figure in the table

KANF series servo motor torque characteristics



1. Dotted lines show torque characteristics for 10% derated voltage operation.

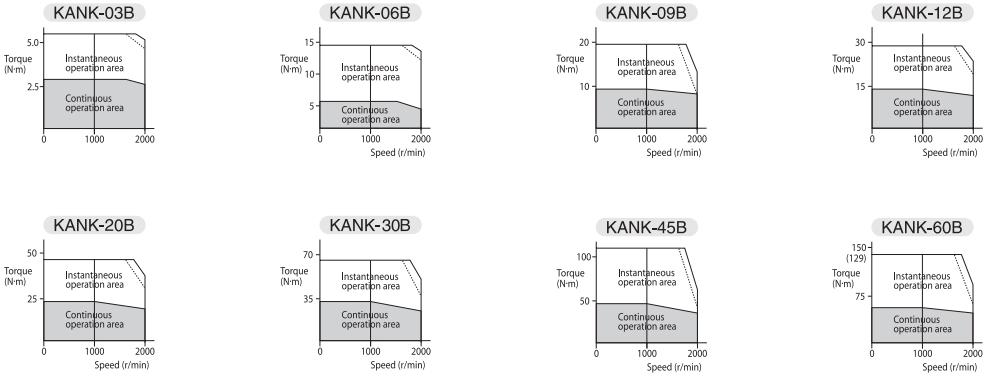
Specifications and Characteristics

KANK series servo motor specifications

Servo motor series		KANK							
Flange size (mm)		130			180				
Specifications \ Model		03	06	09	12	20	30	45	60
Supply voltage (V_{AC})		200/220V							
Continuous running duty	Rated output (kW)	0.3	0.6	0.9	1.2	2.0	3.0	4.5	6.0
	Rated torque (N·m)	2.84	5.70	8.62	11.5	19.1	28.4	42.9	57.2
Maximum torque (N·m)		6.3	14.4	19.3	28.0	44.0	63.7	107.0	129.0
Rated rotation speed (r/min)		1000							
Maximum rotation speed (r/min)		2000							
Rated power rate (kW/s)		31.2	67.0	108.0	44.0	104.0	148.0	232.0	337.0
Rated current (Arms)		3.5	6.2	7.6	11.6	18.5	24.0	33.0	47.0
Momentary maximum current (Arms)		7.8	15.6	17.0	28.3	42.4	56.6	83.4	109.6
Rotor inertia ($X10^{-4}Kg·m^2$)	Standard	2.64	4.9	7.0	30.4	35.5	55.7	80.9	99.0
	With brake	3.84	6.20	8.3	36.2	41.4	61.7	86.9	108.0
Encoder		2500 P/R Incremental / 17bit Absolute							
Recommended load/motor inertia ratio		Less than 10-times the servo motor's inertia							
Structure		Totally enclosed non ventilated (protection degree:IP65)							
Environment	Ambient temperature	0 to 40℃(32 to 104°F) (non freezing), storage: -15 to 70℃(5 to 158°F) (non freezing)							
	Ambient humidity	85% RH max. (non condensing), storage: 90% RH max.(non condensing)							
	Atmosphere	Indoors (no direct sunligt); no corrosive gas, inflammable gas, oil mist, or dust							
	Elevation/Vibration	1000meters or less above sea level, 49 m/s^2 below							
Weight (kg)	Standard	4.8	6.2	8.6	15.5	17.5	25.0	34.0	41.0
	With brake	6.3	8.0	10.1	19.0	21.0	29.0	39.5	47.0

1. If used in location such as actual site of machinery where oil or water may influence the product, special specifications apply, contact KOMOTEK. 2. This specification is guaranted after combining and adjusting with the driver.
3. All ratings typical and at 20℃ unless otherwise noted.
4. Contact KOMOTEK if the load/motor of inertia moment ratio exceeds the figure in the table

KANK series servo motor torque characteristics



1. Dotted lines show torque characteristics for 10% derated voltage operation.

Specifications and Characteristics

KANL series servo motor specifications

Servo motor series		KANL							
Flange size (mm)		130			180				
Specifications \ Model		03	06	09	12	20	30	45	60
Supply voltage (V_{AC})		200/220V							
Continuous running duty	Rated output (kW)	0.3	0.6	0.9	1.2	2.0	3.0	4.5	6.0
	Rated torque (N·m)	2.84	5.70	8.62	11.5	19.1	28.4	42.9	57.2
Maximum torque (N·m)		6.3	14.4	19.3	28.0	44.0	63.7	107.0	129.0
Rated rotation speed (r/min)		1000							
Maximum rotation speed (r/min)		2000							
Rated power rate (kW/s)		5.7	14.0	19.1	21.3	38.8	63.9	94.0	133.0
Rated current (Arms)		3.5	6.2	7.6	11.6	18.5	24.0	33.0	47.0
Momentary maximum current (Arms)		7.8	14.8	17.0	28.3	42.4	56.6	83.4	109.6
Rotor inertia ($X10^{-4}$Kg·m^2)	Standard	14.5	23.7	39.7	63.3	96.1	131.1	200.6	250.0
	With brake	15.7	25.0	40.8	69.1	102.0	137.1	206.6	256.0
Encoder		2500 P/R Incremental / 17bit Absolute							
Recommended load/motor inertia ratio		Less than 10-times the servo motor's inertia							
Structure		Totally enclosed non ventilated (protection degree:IP65)							
Environment	Ambient temperature	0 to 40℃(32 to 104°F) (non freezing), storage: -15 to 70℃(5 to 158°F) (non freezing)							
	Ambient humidity	85% RH max. (non condensing), storage: 90% RH max.(non condensing)							
	Atmosphere	Indoors (no direct sunligt); no corrosive gas, inflammable gas, oil mist, or dust							
	Elevation/Vibration	1000meters or less above sea level, 49 m/s^2 below							
Weight (kg)	Standard	6.0	8.0	10.2	16.8	19.4	27.2	37.5	45.0
	With brake	7.5	9.6	11.7	20.3	22.9	31.2	43.0	51.0

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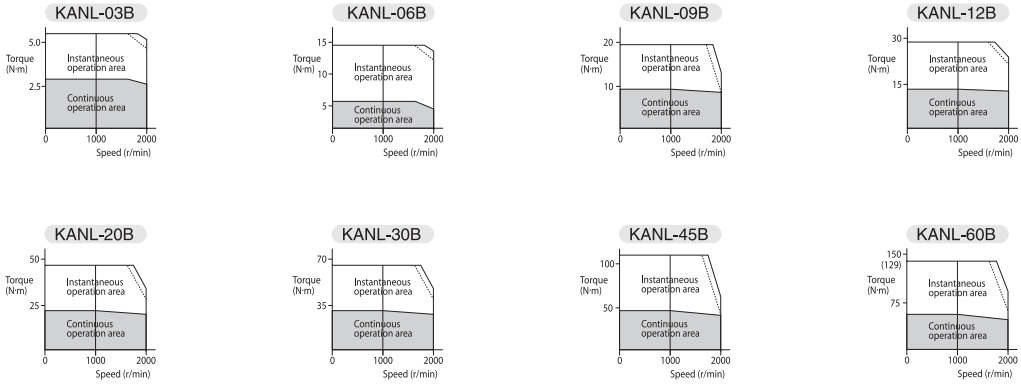
3. All ratings typical and at 20℃ unless otherwise noted.
4. Contact KOMOTEK if the load/motor of inertia moment ratio exceeds the figure in the table

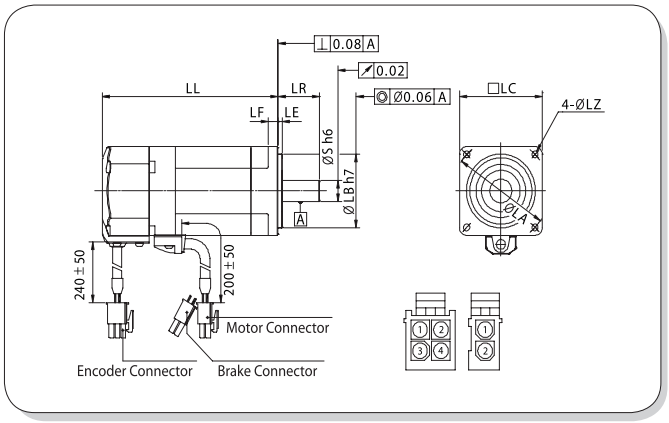
KANL series servo motor torque characteristics



1. Dotted lines show torque characteristics for 10% derated voltage operation.

Motor Dimension

KANZ/Q series



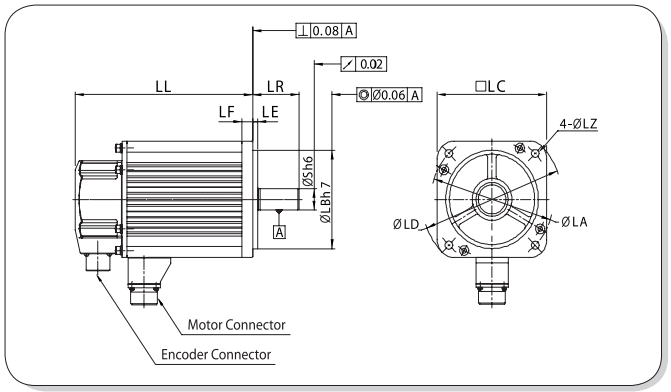
Specifications of motor/brake connector

Brake	Standard		with Brake	
Part no.	AMP/ 172167-1		AMP/ 172167-1 AMP/ 172165-1	
Pin spec.	Pin no.	Signal	Pin no.	Signal
	1	U	1	U
	2	V	2	V
	3	W	3	W
	4	FG	4	FG
			1	BR
			2	BR

Series		KANZ									KANQ		
Model		A3	A5	A8	01	02	04	06	08	10	01	02	04
LL	Standard	74	82	102	112	98.5	128	129	147	165	86	97	112
	With brake	106	114	134	144	131	160.5	164	182	200	118.5	132	147
LR		25	25	25	25	30	30	35	35	35	25	30	30
S		7	8	8	8	11	14	16	19	19	8	11	14
LA		45	45	45	45	70	70	90	90	90	70	90	90
LB		30	30	30	30	50	50	70	70	70	50	70	70
LC		40	40	40	40	60	60	80	80	80	60	80	80
LE		3	3	3	3	3	3	3	3	3	3	3	3
LF		6	6	6	6	7	7	8	8	8	7	8	8
LZ		3.6	3.6	3.6	3.6	5.5	5.5	6.6	6.6	6.6	5.5	6.6	6.6

Motor Dimension

KAND/S/H/F series



Specifications of motor/brake connector

Brake	Standard				with Brake		
Part no.	MS3102A 20-4P MS3102A 22-22P	MS3102A 20-18P	MS3102A 24-11P		MS3102A 20-18P	MS3102A 24-11P	
Pin spec.	Pin no.			Signal	Pin no.		Signal
		G	A		G	A	BR
		H	B		H	B	BR
		A	C		A	C	
	A	F	D	U	F	D	U
	B	I	E	V	I	E	V
	C	B	F	W	B	F	W
	D	E	G	FG	E	G	FG
		D	H	FG	D	H	FG
		C	I		C	I	
Outline	MS 3102A 20-4P, 22-22P	MS 3102A 20-18P	MS 3102A 24-11P		MS 3102A 20-18P	MS 3102A 24-11P	

Motor connector (MS 3102A)

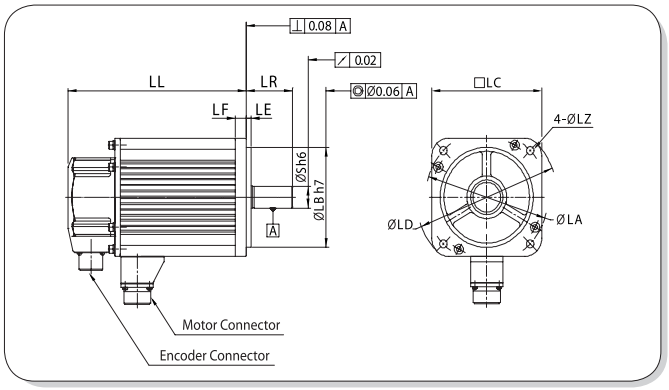
Series	KAND		KANS		KANH		KANF	
Model	08~25	30~50	10~25	30~50	05~15	20~50	04~15	25~45
Standard	20-4P	22-22P	20-4P	22-22P	20-4P	22-22P	20-18P	24-11P
With brake	20-18P	24-11P	20-18P	24-11P	20-18P	24-11P	20-18P	24-11P

Series		KAND									KANS								
Model		08	10	15	20	25	30	40	45	50	10	15	20	25	30	35	40	45	50
LL	Standard	139.5	158	183	208	233	258	203	213	233	147.5	172.5	195.5	220.5	209.5	229.5	248	268	288
	With brake	164.5	183	208	233	258	283	228	238	258	167.5	192.5	215.5	240.5	234.5	254.5	273	293	313
LR		55	55	55	55	65	65	65	70	70	55	55	55	55	55	55	65	65	65
S		19	22	22	22	24	24	28	35	35	19	19	19	19	22	22	24	24	24
LA		130/145	145	145	145	145	145	200	200	200	115	115	115	115	130/145	130/145	145	145	145
LB		110	110	110	110	110	110	114.3	114.3	114.3	95	95	95	95	110	110	110	110	110
LC		120	130	130	130	130	130	180	180	180	100	100	100	100	120	120	130	130	130
LD		162	165	165	165	165	165	230	230	230	135	135	135	135	162	162	165	165	165
LE		3	6	6	6	6	6	3.2	3.2	3.2	3	3	3	3	3	3	6	6	6
LF		12	12	12	12	12	12	18	18	18	10	10	10	10	12	12	12	12	12
LZ		9	9	9	9	9	9	13.5	13.5	13.5	9	9	9	9	9	9	9	9	9

Series		KANH							KANF					
Model		05	10	15	20	30	40	50	04	08	15	25	35	45
LL	Standard	158.0	183.0	208.0	200.0	215.0	230.0	260.0	128.0	133.0	153.0	146.0	155.0	171.0
	With brake	183.0	208.0	233.0	225.0	240.0	255.0	285.0	153.0	158.0	178.0	177.0	186.0	202.0
LR		70.0	70.0	70.0	80.0	80.0	80.0	80.0	55.0	55.0	65.0	65.0	65.0	70.0
S		22.0	22.0	22.0	35.0	35.0	35.0	35.0	19.0	22.0	35.0	35.0	35.0	35.0
LA		145.0	145.0	145.0	200.0	200.0	200.0	200.0	145.0	200.0	200.0	235.0	235.0	235.0
LB		110.0	110.0	110.0	114.3	114.3	114.3	114.3	110.0	114.3	114.3	200.0	200.0	200.0
LC		130.0	130.0	130.0	180.0	180.0	180.0	180.0	130.0	180.0	180.0	220.0	220.0	220.0
LD		165.0	165.0	165.0	230.0	230.0	230.0	230.0	165.0	230.0	230.0	268.0	268.0	268.0
LE		6.0	6.0	6.0	3.2	3.2	3.2	3.2	6.0	3.2	3.2	4.0	4.0	4.0
LF		12.0	12.0	12.0	18.0	18.0	18.0	18.0	12.0	18.0	18.0	16.0	16.0	16.0
LZ		9.0	9.0	9.0	13.5	13.5	13.5	13.5	9.0	13.5	13.5	13.5	13.5	13.5

Motor Dimension

KANK/L series



Motor connector (MS 3102A)

Series	KANK		KANL	
Model	03~09	12~60	03~09	12~60
Standard	20-4P	22-22P	20-4P	22-22P

Specifications of motor/brake connector

Brake	Standard		with Brake		
Part no.	MS 3102A 20-4P MS 3102A 22-22P		MS 3102A 20-18P	MS 3102A 24-11P	
Pin spec.	Pin no.	Signal	Pin no.		Signal
	A	U	G	A	BR
	B	V	H	B	BR
	C	W	A	C	
	D	FG	F	D	U
			I	E	V
			B	F	W
			E	G	FG
			D	H	FG
			C	I	
Outlines	MS 3102A 20-4P, 22-22P		MS 3102A 20-18P	MS 3102A 24-11P	

Series		KANK							
Model		03	06	09	12	20	30	45	60
LL	Standard	133	158	183	183	203	243	309.2	354.2
	With brake	158	183	208	208	228	268	334.2	379.2
LR									
S		70	70	70	80	80	80	113	113
LA		22	22	22	35	35	35	42	42
LB		145	145	145	200	200	200	200	200
LC		110	110	110	114.3	114.3	114.3	114.3	114.3
LD		130	130	130	180	180	180	180	180
LE		165	165	165	230	230	230	230	230
LF		6	6	6	3.2	3.2	3.2	3.2	3.2
LZ		12	12	12	18	18	18	20	20

Series		KANL							
Model		03	06	09	12	20	30	45	60
LL	Standard	158	183	208	200	220	260	334.6	379.6
	With brake	183	208	233	225	245	285	359.6	404.6
LR									
S		55	55	55	80	80	80	113	113
LA		22	22	22	35	35	35	42	42
LB		145	145	145	200	200	200	200	200
LC		110	110	110	114.3	114.3	114.3	114.3	114.3
LD		130	130	130	180	180	180	180	180
LE		165	165	165	230	230	230	230	230
LF		6	6	6	3.2	3.2	3.2	3.2	3.2
LZ		12	12	12	18	18	18	20	20

Special Specifications

Electromagnetic brake specifications

KANZ/Q series

Series		KANZ									KANQ		
Model		A3	A5	A8	01	02	04	06	08	10	01	02	04
Static friction torque	Nm	0.29	0.29	0.29	0.29	1.27	1.27	2.45	2.45	2.45	1.27	2.45	2.45
Response time	ms	25	25	25	25	50	50	60	60	60	50	60	60
Release time	ms	20	20	20	20	15	15	15	15	15	15	15	15
Rated voltage	V_{DC}	24	24	24	24	24	24	24	24	24	24	24	24
Rated current	A(at 20℃)	0.26	0.26	0.26	0.26	0.36	0.36	0.43	0.43	0.43	0.36	0.43	0.43

KAND/S series

Series		KAND									KANS								
Model		08	10	15	20	25	30	40	45	50	10	15	20	25	30	35	40	45	50
Static friction torque	Nm	12	16.5	16.5	16.5	16.5	16.5	25	25	25	12	12	12	12	12	12	16.5	16.5	16.5
Response time	ms	100	110	110	110	110	110	160	160	160	100	100	100	100	100	100	110	110	110
Release time	ms	20	50	50	50	50	50	75	75	75	20	20	20	20	20	20	50	50	50
Rated voltage	V_{DC}	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	2 4
Rated current	A(at 20℃)	0.81	0.9	0.9	0.9	0.9	0.9	1.3	1.3	1.3	0.81	0.81	0.81	0.81	0.81	0.81	0.9	0.9	0.9

KANH series

Series		KANH						
Model		05	10	15	20	30	40	50
Static friction torque	Nm	16.5	16.5	16.5	25	25	25	25
Response time	ms	110	110	110	160	160	160	160
Release time	ms	50	50	50	75	75	75	75
Rated voltage	V_{DC}	24	24	24	24	24	24	24
Rated current	A(at 20℃)	0.9	0.9	0.9	1.3	1.3	1.3	1.3

KANF series

Series		KANF					
Model		04	08	15	25	35	45
Static friction torque	Nm	16.5	25	25	45	45	45
Response time	ms	110	160	160	220	220	220
Release time	ms						
Rated voltage	V_{DC}	50	75	75	100	100	100
Rated current	A(at 20℃)	24	24	24	24	24	24

KANK series

Series		KANK							
Model		03	06	09	12	20	30	45	60
Static friction torque	Nm	16.5	16.5	16.5	25	25	25	25	25
Response time	ms	110	110	110	160	160	160	160	160
Release time	ms	50	50	50	75	75	75	75	75
Rated voltage	V_{DC}	24	24	24	24	24	24	24	24
Rated current	A(at 20℃)	0.9	0.9	0.9	1.3	1.3	1.3	1.3	1.3

KANL series

Series		KANL							
Model		03	06	09	12	20	30	45	60
Static friction torque	Nm	16.5	16.5	16.5	25	25	25	25	25
Response time	ms	110	110	110	160	160	160	160	160
Release time	ms	50	50	50	75	75	75	75	75
Rated voltage	V_{DC}	24	24	24	24	24	24	24	24
Rated current	A(at 20℃)	0.9	0.9	0.9	1.3	1.3	1.3	1.3	1.3

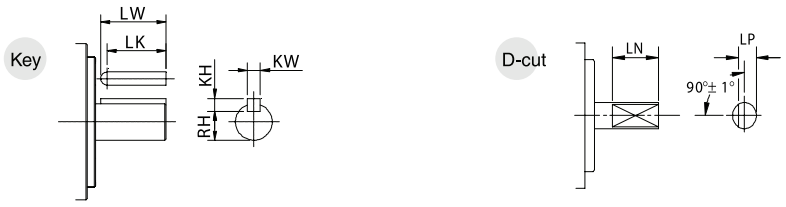
The electromagnetic brake is for holding. It cannot be used for braking applications.

Special Specifications

Special shaft end specifications

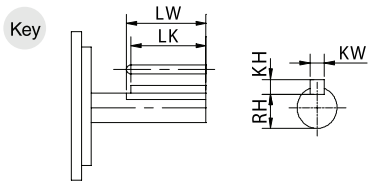
KANZ, KANQ series(With key & D-cut)

Series	KANZ									KANQ		
Model	A3	A5	A8	01	02	04	06	08	10	01	02	04
LW/LN(D-cut)	13/20	14/20	14/20	14/20	20/22	25/22	25/25	25/25	25/25	14/20	20/22	25/22
LK	12	12.5	12.5	12.5	18	22.5	22	22	22	12.5	18	22.5
KW	2 h9	3 h9	3 h9	3 h9	4 h9	5 h9	6 h9	6 h9	6 h9	3 h9	4 h9	5 h9
KH	2	3	3	3	4	5	6	6	6	3	4	5
RH/LP(D-cut)	5.8/6.5	6.2/7.5	6.2/7.5	6.2/7.5	8.5/10	11/12.5	12.5/14.5	15.5/17.5	15.5/17.5	6.2/7.5	8.5/10	11/12.5



KAND, KANS, KANH, KANF ,KANK,KANL series(With key)

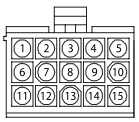
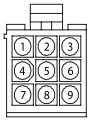
Series	KAND					KANS			KANH		KANF			KANK			KANL		
Model	08	10~20	25~30	40	45~50	10~25	30~35	40~50	05~15	20~50	04	08	15~45	03~09	12~30	45~60	03~09	12~30	45~60
LW	45	45	55	55	55	45	45	55	45	55	45	45	55	45	55	96	45	55	96
LK	42	41	51	51	50	42	41	51	41	50	42	41	50	41	50	90	41	50	90
KW	6h9	8h9	8h9	8h9	10h9	6h9	8h9	8h9	8h9	10h9	6h9	8h9	10h9	8h9	10h9	12h9	8h9	10h9	12h9
KH	6	7	7	7	8	6	7	7	7	8	6	7	8	7	8	8	7	8	8
RH	15.5	18	20	24	30	15.5	18	20	18	30	15.5	18	30	18	30	37	18	30	37



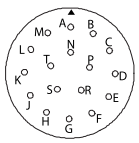
Connector pin Arrangement

Encoder connectors

KANZ/Q series

Model		Wires	Part no.	Pin specification										Outlines
KANZ-A3~10 KANQ-01~04	Inc.	15	AMP/ 172171-1	Pin	1	2	3	4	5	6	7	8	9	
				Signal	A	$\overline{A}$	B	$\overline{B}$	Z	$\overline{Z}$	U	$\overline{U}$	V	
				Pin	$\overline{10}$	11	$\overline{12}$	13	14	15				
		9	AMP/ 172169-1	Pin	1	2	3	4	5	6	7	8	9	
				Signal	A	$\overline{A}$	B	$\overline{B}$	Z	$\overline{Z}$	+5V	0V	FG	
	Abs. (17bit)	9	AMP/ 172169-1	Pin	1	2	3	4	5	6	7	8	9	
				Signal	BAT +	BAT -	FG	SD	$\overline{SD}$		+5V	0V		

KAND/S/H/F series

Model		Part no.	Pin specification										Outlines
KAND-08~50 KANS-10~50 KANH-05~50 KANF-04~45 KANK-03~60 KANL-03~60	Inc.	MS 3102A 20-29P	Pin	A	B	C	D	E	F	G	H	J	
			Signal	A	$\overline{A}$	B	$\overline{B}$	Z	$\overline{Z}$	0V	+5V	FG	
			Pin	K	L	M	N	P	R	S	T		
			Signal	U	$\overline{U}$	V	$\overline{V}$	W	$\overline{W}$				
	Abs. (17bit)		Pin	A	B	C	D	E	F	G	H	J	
			Signal							0V	+5V	FG	
			Pin	K	$\overline{L}$	M	N	P	R	S	T		
	Abs. (11bit)		Signal	SD	SD					BAT -	BAT +		
					—		—		—				
			Pin	A	B	C	D	E	F	G	H	J	
			Signal	A	$\overline{A}$	B	B	Z	Z	0V	+5V	FG	

Glossary

Power	1. The rate at which work is done. In motion control, power is equal to torque multiplied by speed. 2. The rate of doing work or expending energy. It may be written as: Power (watts)=force x distance/time. Expressed in electrical terms it is voltage x current=power (watts)
Speed	Describes the linear or rotational velocity of a motor or other object in motion.
Torque	A measure of angular force which produces rotational motion. This force is defined by a linear force multiplied by a radius e.g. N·m. Torque is an important parameter of an motion control system.
Cogging torque	A term used to describe non-uniform angular velocity. Cogging appears as a jerkiness especially at low speeds.
Inductance	The electrical equivalent to mechanical inertia; that is, the property of a circuit, which when no current flows has a tendency to resist current flow, and when current is flowing has a tendency to maintain that current flow. KOMOTEK measures inductance(line to line) with a bridge at 1000Hz and with an average value of several points where the rotor appears as a jerkiness.
Inertia	The property of an object to resist change in velocity unless acted upon by an outside force. Higher inertia objects require larger torques to accelerate and decelerate. Inertia is dependent upon the mass and shape of the object.
Back EMF	The voltage generated when a permanent magnet motor is rotated. This voltage is proportional to motor speed and is present regardless of whether the motor windings are enegized or unenergized.
Torque-to-inertia ratio	Defined as the motor's holding torque divided by the inertia of its rotor. The higher the ratio, the higher a motor's maximum acceleration capability will be.
Back EMF constant	When a motor is operated, it generates a voltage proportional to speed but opposing the applied voltage. It describes the ratio of generated voltage to rotation speed at no load. The shape of the voltage waveform depends upon the specific motor design. For example, in a brushless motor the waveshape may be trapezoidal, or sinusoidal in nature. All KOMOTEK brushless motor designs have a sinusoidal voltage.
Torque constant	An expression of the relationship between input current and output torque. For each amperes of current, a fixed amount of torque is produced.
Brushless servo motor	A class of servo motors which operates using electronic commutation of phase currents rather than electromechanical(brushes) commutation. Commutation is a function of rotor position. These motors typically have a permanent magnet rotor and wound stator.
Class B insulation	A NEMA insulation specification. Class B insulation is rated to an operating(internal) temperature of 130℃