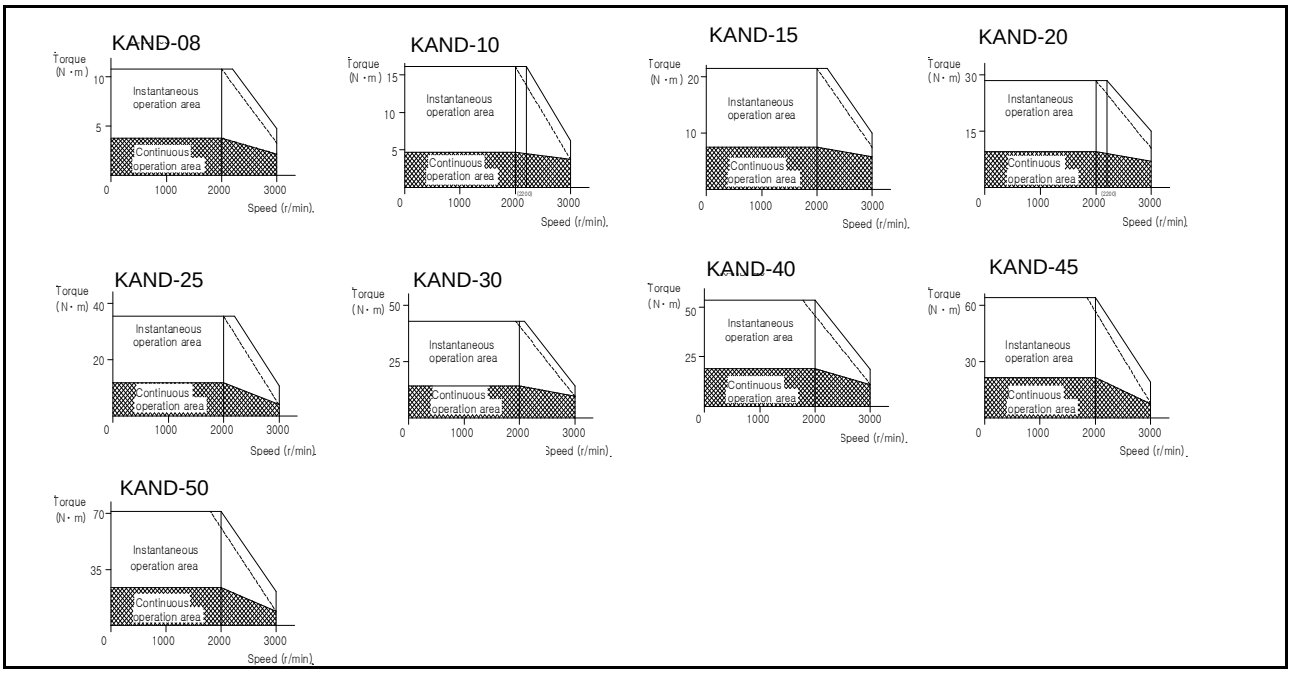
KAND Series - Specifications and Characteristics

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)	3.57	4.77	7.15	9.55	11.90	14.30	19.10	21.50	23.90
Maximum torque (N·m)		10.7	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)		45.1	48.8	74.7	100.0	124.9	151.2	111.0	124.8	128.3
Rated current (Arms)		5.0	5.6	9.8	12.3	14.0	17.8	24.3	26.2	28.0
Momentary maximum current (Arms)		15	16.8	28.3	36.9	42.4	53.4	72.8	78.5	84.9
Rotor inertia ($kg·m^2×10^{-4}$)	Standard	2.82	4.82	7.0	9.3	11.5	13.8	33.5	37.7	45.5
	With brake	3.13	6.10	8.3	10.5	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	6.5	8.7	10.1	12.5	14.7	16.5	23.3	25.0	28.5

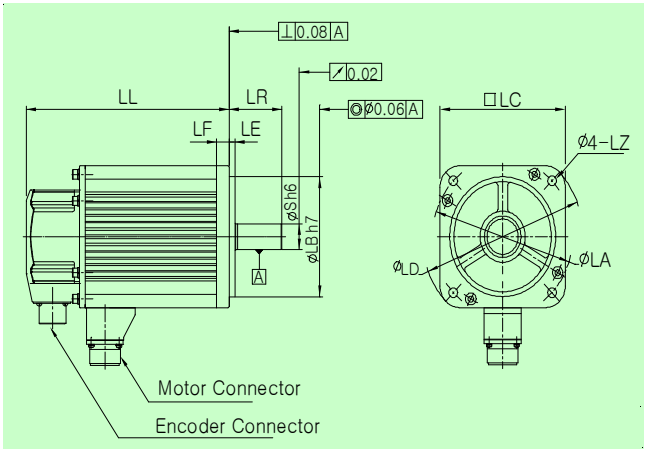
1. If used in location such as actual site of machinery where oil or water may influence the product, special specifications apply, contact KOMOTEK.
2. This specification is guaranted after combining and adjusting with the driver.
3. All ratings typical and at 20℃ unless otherwise noted.
4. Contact KOMOTEK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

Servo motor torque characteristics



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

Motor dimensions



Specifications of motor/brake connector

Brake	Standard				With brake		
Part no.	MS 3102A 20-4P, 22-22P	MS 3102A 20-18P	MS 3102A 24-11P		MS 3102A 20-18P	MS 3102A 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	
Outlines	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	
Rated power [kW]	0.8~2.5	3.0~5.0
Standard	20-4P	22-22P
With brake	20-18P	24-11P

Series		KAND								
Rated power [kW]		0.8	1.0	1.5	2.0	2.5	3.0	4.0	4.5	5.0
LL	Standard	139.5	158	183	208	233	258	203	213	233
	With brake	164.5	183	208	233	258	283	228	238	258
LR		55	55	55	55	65	65	65	70	70
S		19	22	22	22	24	24	28	35	35
LA		130/145	145	145	145	145	145	200	200	200
LB		110	110	110	110	110	110	114.3	114.3	114.3
LC		120	130	130	130	130	130	180	180	180
LD		162	165	165	165	165	165	230	230	230
LE		3	6	6	6	6	6	3.2	3.2	3.2
LF		12	12	12	12	12	12	18	18	18
LZ		9	9	9	9	9	9	13.5	13.5	13.5

Special specifications

Electromagnetic brake specifications

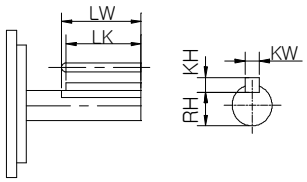
Series		KAND								
Rated power [kW]		0.8	1.0	1.5	2.0	2.5	3.0	4.0	4.5	5.0
Static friction torque	Nm	12	16.1	16.1	16.1	16.1	16.1	24.5	24.5	24.5
Response time	ms	100	110	110	110	110	110	80	80	80
Release time	ms	20	50	50	50	50	50	25	25	25
Rated voltage	VDC	24	24	24	24	24	24	24	24	24
Rated current (A) at 20℃		0.81	0.9	0.9	0.9	0.9	0.9	1.3	1.3	1.3

Special shaft end specifications

key

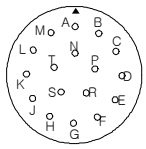
Series	KAND				
Rated power (W)	0.8	1.0~2.0	2.5~3.0	4.0	4.5~5.0
LW/LN(D-cut)	45	45	55	55	55
LK	42	41	51	51	50
KW	6h9	8h9	8h9	8h9	10h9
KH	6	7	7	7	8
RH/LP(D-cut)	15.5	18	20	24	30

Key



Connector pin arrangement

Encoder connectors

Model		Part no.	Pin specifications										Outlines
KAND-10~50	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)	MS 3102A 20-29P	Pin	A	B	C	D	E	F	G	H	J	
			Signal							0V	+5V	FG	
			Pin	K	L	M	N	P	R	S	T		
			Signal	SD	$\overline{SD}$					BAT -	BAT +		
	Abs.(11bit)		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	RX	$\overline{RX}$				RST	BAT -	BAT +		