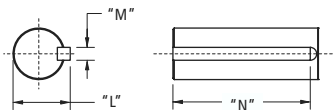


MOUNTING CODE	"C"	"D"	"E"	"F"	"H"	"J"	"K"	"L"	"M"	"N"
AK	4.30 [.169]	30 ⁰ _{-0.021} [1.1811 +.0009 -.0008] h7	46 [1.811]	-	-	8 ⁰ _{-0.015} [.3150 +.0009 -.0006] h7	25.0 [.984]	9.20 ⁰ _{-0.13} [.362 +.009 -.005]	3 ⁰ _{-0.025} [.1811 +.0009 -.0016]	14 ⁰ _{-0.2} [.551 +.009 -.008]
AN	4.30 [.169]	30 ⁰ _{-0.021} [1.1811 +.0009 -.0008] h7	46 [1.811]	-	-	8 ⁰ _{-0.015} [.3150 +.0009 -.0006] h7	25 [.984]	-	-	-
BN	3.56 [.140]	20.02 ± 0.02 [.788 ± .001]	46.69 [1.838]	-	-	6.350 ⁰ _{-0.012} [.2500 +.0009 -.0005]	25 [.984]	-	-	-
CK	3.40 [.134]	30 ⁰ _{-0.021} [1.1811 +.0009 -.0008] h7	45 [1.772]	-	-	8 ⁰ _{-0.015} [.3150 +.0009 -.0006] h7	25 [.984]	9.20 ⁰ _{-0.13} [.362 +.009 -.005]	3 ⁰ _{-0.025} [.1811 +.0009 -.0016]	14 ⁰ _{-0.2} [.551 +.009 -.008]
CN	3.40 [.134]	30 ⁰ _{-0.021} [1.1811 +.0009 -.0008] h7	45 [1.772]	-	-	8 ⁰ _{-0.015} [.3150 +.0009 -.0006] h7	25 [.984]	-	-	-



Dimensions are in mm [inches].
Product designed in metric.
English conversions provided for reference only.

(X)	Y MAX. (W/ RESOLVER)	Z MAX. (W/ SFD OR ENCODER)	MODEL
56.1 [2.21]	69.6 [2.74]	79.0 [3.11]	AKM11
75.1 [2.96]	88.6 [3.49]	98.0 [3.86]	AKM12
94.1 [3.70]	107.6 [4.24]	117.0 [4.61]	AKM13

AKM1x - Up to 320 VDC

See system data beginning on page 7 for typical torque/speed performance.

Parameter	Tol	Symbol	Units	AKM11			AKM12		AKM13	
				B	C	E	C	E	C	D
Max Rated DC Bus Voltage	Max	V _{bus}	Vdc	320	160	75	320	160	320	160
Continuous Torque (Stall) for ΔT winding = 100°C ①②⑦⑧	Nom	T _{cs}	N-m lb-in	0.183 1.62	0.185 1.64	0.185 1.64	0.310 2.74	0.310 2.74	0.409 3.62	0.401 3.55
Continuous Current (Stall) for ΔT winding = 100°C ①②⑦⑧	Nom	I _{cs}	A _{rms}	1.16	1.45	2.91	1.51	2.72	1.48	2.40
Continuous Torque (Stall) for ΔT winding = 60°C ②	Nom	T _{cs}	N-m lb-in	0.146 1.29	0.148 1.31	0.148 1.31	0.248 2.19	0.248 2.19	0.327 2.89	0.320 2.83
Max Mechanical Speed ⑤	Nom	N _{max}	rpm	8000	8000	8000	8000	8000	8000	8000
Peak Torque ①②	Nom	T _p	N-m lb-in	0.609 5.39	0.614 5.43	0.611 5.41	1.08 9.6	1.08 9.6	1.46 12.9	1.44 12.7
Peak Current	Nom	I _p	A _{rms}	4.65	5.79	11.6	6.06	10.9	5.93	9.6
75VDC	Rated Torque (speed) ①②⑦⑧⑨	T _{rtd}	N-m lb-in	-	-	0.176 1.56	-	0.309 2.73	-	0.401 3.55
	Rated Speed	N _{rtd}	rpm	-	-	6000	-	3000	-	2000
	Rated Power (speed) ①②⑦⑧	P _{rtd}	kW Hp	-	-	0.11 0.15	-	0.10 0.13	-	0.08 0.11
160VDC	Rated Torque (speed) ①②⑦⑧⑨	T _{rtd}	N-m lb-in	0.180 1.59	0.176 1.56	-	0.304 2.69	0.279 2.47	0.407 3.60	0.365 3.23
	Rated Speed	N _{rtd}	rpm	4000	6000	-	4000	8000	3000	7000
	Rated Power (speed) ①②⑦⑧	P _{rtd}	kW Hp	0.08 0.10	0.11 0.15	-	0.13 0.17	0.23 0.31	0.13 0.17	0.27 0.36
320VDC	Rated Torque (speed) ①②⑦⑧⑨	T _{rtd}	N-m lb-in	0.167 1.48	-	-	0.279 2.47	-	0.364 3.22	-
	Rated Speed	N _{rtd}	rpm	8000	-	-	8000	-	8000	-
	Rated Power (speed) ①②⑦⑧	P _{rtd}	kW Hp	0.14 0.19	-	-	0.23 0.31	-	0.30 0.41	-
560VDC	Rated Torque (speed) ①②⑦⑧⑨	T _{rtd}	N-m lb-in	x x	x x	x x	x x	x x	x x	x x
	Rated Speed	N _{rtd}	rpm	x	x	x	x	x	x	x
	Rated Power (speed) ①②⑦⑧	P _{rtd}	kW Hp	x x	x x	x x	x x	x x	x x	x x
640VDC	Rated Torque (speed) ①②⑦⑧	T _{rtd}	N-m lb-in	x x	x x	x x	x x	x x	x x	x x
	Rated Speed	N _{rtd}	rpm	x	x	x	x	x	x	x
	Rated Power (speed) ①②⑦⑧	P _{rtd}	kW Hp	x x	x x	x x	x x	x x	x x	x x
Torque Constant ①	±10%	K _t	N-m/A _{rms} lb-in/A _{rms}	0.158 1.40	0.129 1.14	0.064 0.57	0.207 1.83	0.112 0.99	0.278 2.46	0.169 1.50
Back EMF constant ⑥	±10%	K _e	V/k _r rpm	10.2	8.3	4.1	13.3	7.2	17.9	10.9
Resistance (line-line) ⑥	±10%	R _m		20.2	13.1	3.3	12.4	3.9	13.5	5.21
Inductance (line-line)		L	mH	12.5	8.3	2.04	9.1	2.7	10.3	3.8
Inertia (includes Resolver feedback) ③		J _m	kg-cm ² lb-in-s ²		0.017 1.5E-05		0.031 2.7E-05		0.045 4.0E-05	
Optional Brake Inertia (additional)		J _m	kg-cm ² lb-in-s ²		x x		x x		x x	
Weight		W	kg lb		0.35 0.8		0.49 1.1		0.63 1.4	
Static Friction ①⑨		T _f	N-m lb-in		0.0011 0.01		0.0021 0.02		0.0031 0.03	
Viscous Damping ①		K _{dv}	N-m/k _r rpm lb-in/k _r rpm		0.0005 0.004		0.001 0.009		0.0015 0.013	
Thermal Time Constant		TCT	minutes		4		6		7	
Thermal Resistance		R _{thw-a}	°C/W		1.75		1.69		1.62	
Pole Pairs					3		3		3	
Heatsink Size					10"x10"x1/4" Alum. Plate		10"x10"x1/4" Alum. Plate		10"x10"x1/4" Alum. Plate	

Notes:

- Motor winding temperature rise, ΔT=100°C, at 40°C ambient.
- All data referenced to sinusoidal commutation.
- Add parking brake if applicable for total inertia.
- Motor with standard heatsink.
- May be limited at some values of V_{bus}.
- Measured at 25°C.

- No brake motor option on AKM1.
- Commutating encoder/SFD option : no continuous torque reduction.
- For motors with optional shaft seal, reduce torque shown by 0.021 N-m (0.19lb-in), and increase T_f by the same amount.

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