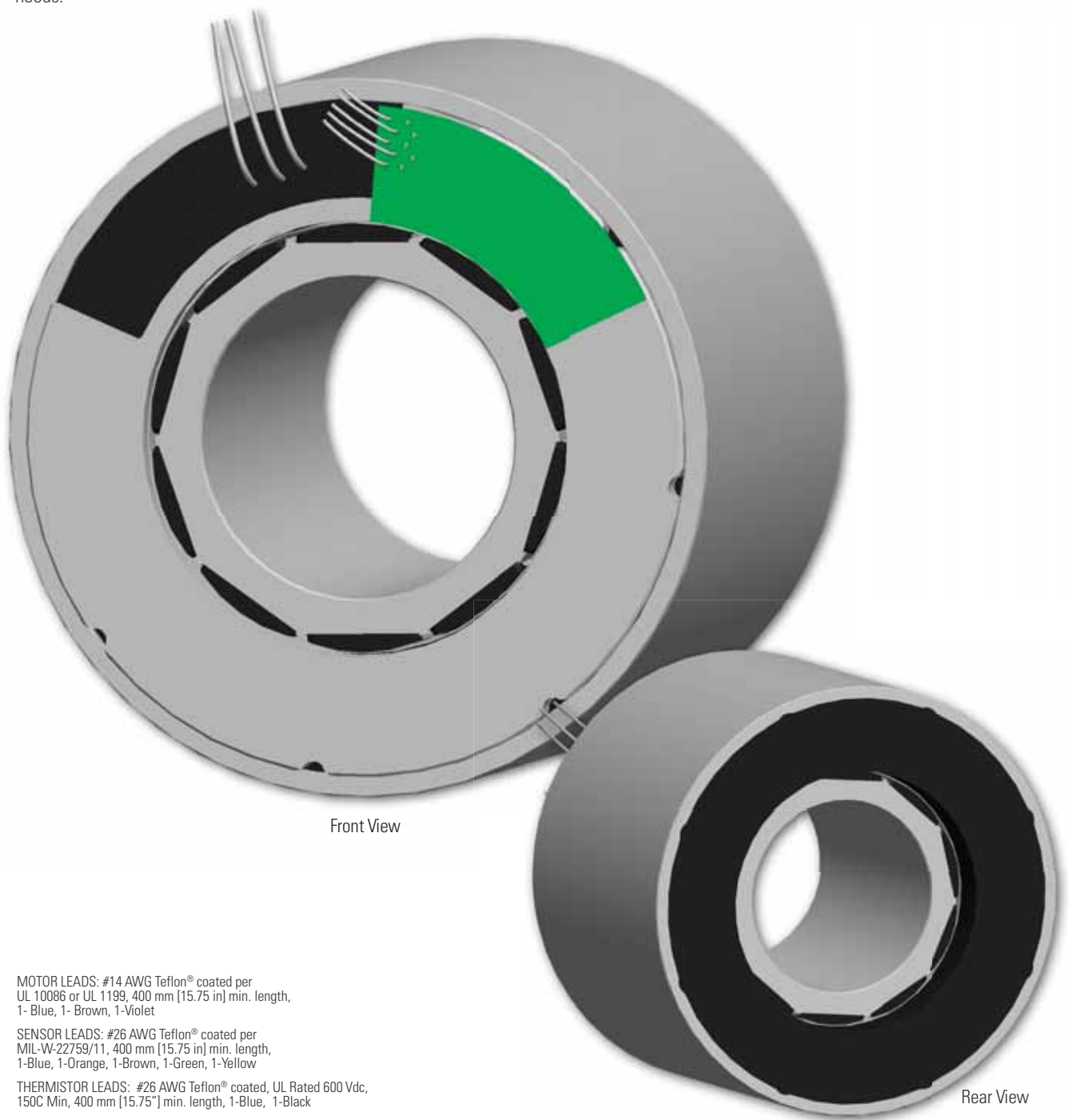


KBM 45 Frameless Motors

K B M 4 5

The KBM(S)-45 series is designed to operate over a broad speed range with high acceleration. Designed for maximum torque density with minimal cogging by using a variable air gap, the KBM(S)-45 is an ideal choice to meet or exceed your compact frameless motor application needs.



Front View

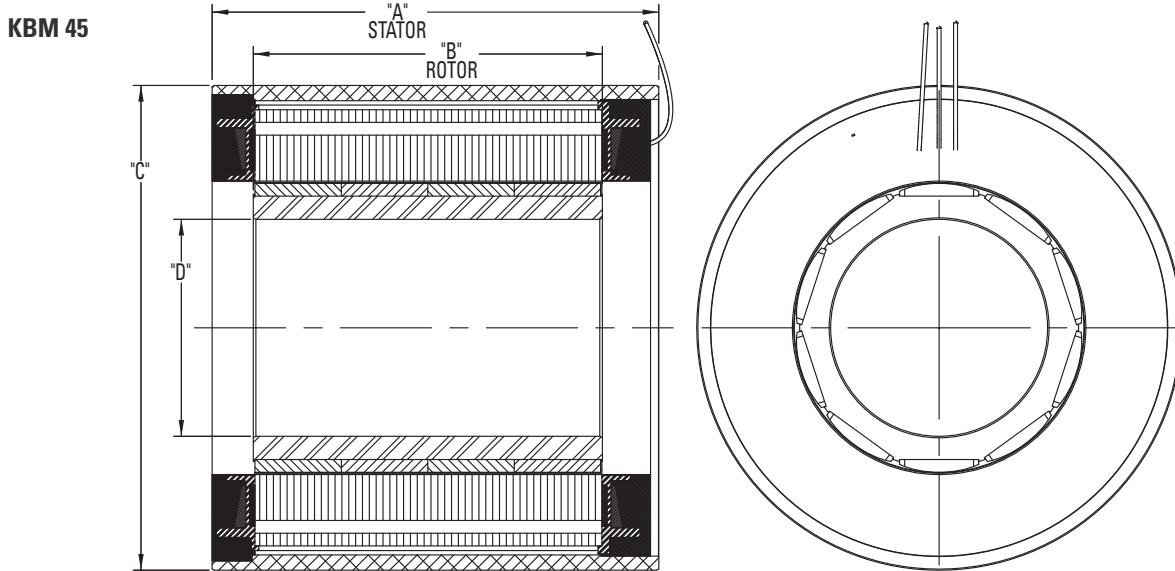
Rear View

MOTOR LEADS: #14 AWG Teflon® coated per UL 10086 or UL 1199, 400 mm [15.75 in] min. length, 1-Blue, 1-Brown, 1-Violet

SENSOR LEADS: #26 AWG Teflon® coated per MIL-W-22759/11, 400 mm [15.75 in] min. length, 1-Blue, 1-Orange, 1-Brown, 1-Green, 1-Yellow

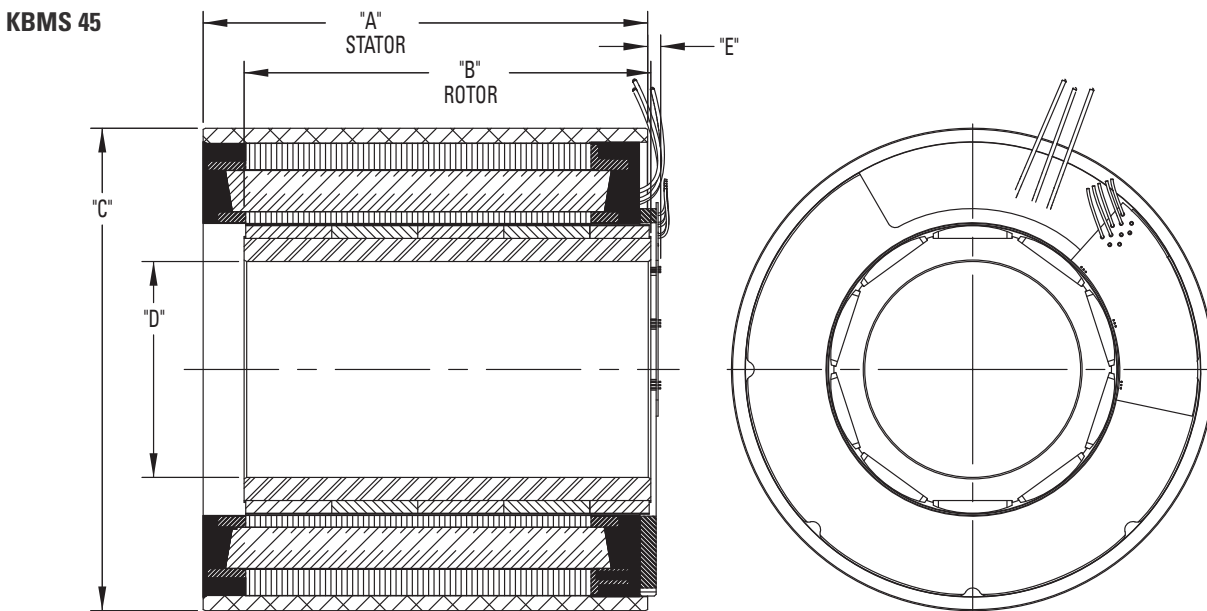
THERMISTOR LEADS: #26 AWG Teflon® coated, UL Rated 600 Vdc, 150C Min, 400 mm [15.75"] min. length, 1-Blue, 1-Black

KBM 45 Outline Drawings



Model Number	"A" mm[inch]	"B" mm[inch]	Ø "C" mm[inch]	Ø "D" mm[inch]
KBM-45X01	107.06 [4.215]	69.04 [2.718]	189.956 [7.4786]	85.018 [3.3471]
KBM-45X02	141.06 [5.554]			
KBM-45X03	175.05 [6.892]			

All dimensions are nominal. For more detailed and interactive 3D models with 2D product views, visit www.kollmorgen.com/kbm



Model Number	"A" mm[inch]	"B" mm[inch]	Ø "C" mm[inch]	Ø "D" mm[inch]	"E" MAX mm[inch]
KBMS-45X01	107.06 [4.215]	92.41 [3.638]	189.956 [7.4786]	85.018 [3.3471]	5.75 [.226]
KBMS-45X02	141.06 [5.554]	126.29 [4.972]			
KBMS-45X03	175.05 [6.892]	160.17 [6.306]			

All dimensions are nominal. For more detailed and interactive 3D models with 2D product views, visit www.kollmorgen.com/kbm

KBM 45 Performance Data

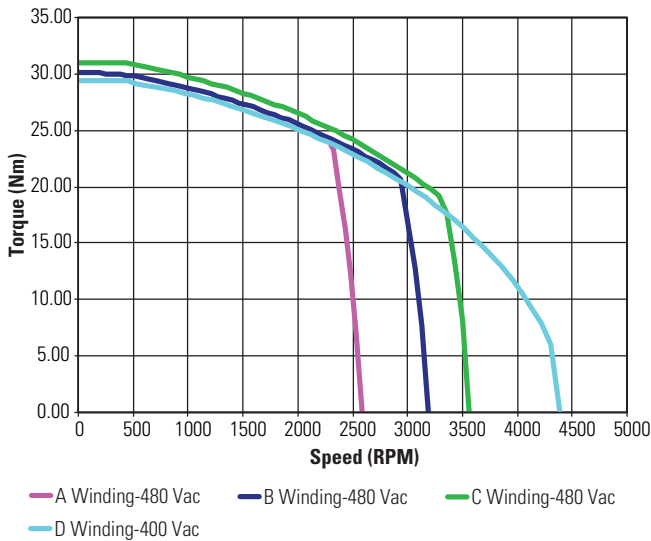
KBM(S)-45XXX PERFORMANCE DATA & MOTOR PARAMETERS														
Motor Parameter	Symbol	Units	TOL	KBM(S)-45X01-X				KBM(S)-45X02-X				KBM(S)-45X03-X		
				A	B	C	D	A	B	C	A	B		
Continuous Stall Torque at 25°C Amb. (1)	Tc	Nm	NOM	30.7	30.2	31.3	29.7	43.7	43.5	41.9	54.6	53.0		
		lb-ft		22.6	22.3	23.1	21.9	32.3	32.1	30.9	40.3	39.1		
Continuous Current	Ic	Arms	NOM	10.2	12.5	14.3	20.2	13.3	14.9	21.1	14.1	19.9		
Peak Stall Torque (25°C winding temp)	Tp	Nm	NOM	119	119	119	118	170	171	168	218	215		
		lb-ft		87.6	87.6	88.0	86.7	126	126	124	161	159		
Peak Current	Ip	Arms	NOM	46.5	57.5	65.0	93.5	60.5	68.0	97.2	64.5	92.5		
Rated Continuous Output Power at 25°C Amb. (1)	P Rated	Watts		5200	5750	6045	4930	6655	7200	4525	6500	7270	7580	7670
	HP Rated	HP		6.97	7.71	8.10	6.61	8.92	9.65	6.07	8.71	9.75	10.2	10.3
Speed at Rated Power	N Rated	RPM		2100	2650	3100	3700	1950	2350	3500	2830	1700	2600	2050
Torque Sensitivity (2)	Kt	Nm / Arms	+/-10%	3.08	2.48	2.24	1.51	3.35	2.98	2.03	3.96	2.72		
		lb-ft / Arms		2.27	1.83	1.65	1.12	2.47	2.20	1.50	2.92	2.01		
Back EMF Constant (3)	Kb	Vpk / kRPM		264	212	191	129	286	255	174	339	233		
Back EMF Constant	Kb	Vrms/kRPM	+/- 10%	186	150	135	91	202	180	123	240	165		
Motor Constant	Km	Nm/√watt	+/-10%	2.16	2.11	2.20	2.09	2.80	2.79	2.69	3.36	3.24		
		lb-ft /√watt		1.59	1.56	1.62	1.54	2.07	2.06	1.99	2.48	2.39		
Resistance (line to line)	Rm	Ohms	+/- 10%	1.36	0.920	0.690	0.350	0.950	0.760	0.380	0.930	0.470		
Inductance	Lm	mH		21	14	11	5.0	16	12	5.9	16	7.7		
Inertia (KBM)	Jm	Kg-m ²		6.10E-3				9.22E-3				1.22E-2		
		lb-ft-s ²		4.50E-3				6.80E-3				9.00E-3		
Weight (KBM)	Wt	Kg		12.2				17.5				23.1		
		lb		26.9				38.6				51.0		
Inertia (KBMS)	Jm	Kg-m ²		8.35E-3				1.15E-2				1.45E-2		
		lb-ft-s ²		6.16E-3				8.47E-3				1.07E-2		
Weight (KBMS)	Wt	Kg		13.2				18.5				24.2		
		lb		29.0				40.7				53.3		
Max Static Friction	Tf	Nm		0.750				0.850				1.09		
		lb-ft		0.553				0.627				0.806		
Cogging Friction (peak-to-peak)	Tcog	Nm		0.630				0.671				0.846		
		lb-ft		0.465				0.495				0.624		
Viscous Damping	Fi	Nm/ kRPM		5.64E-2				0.122				0.188		
		lb-ft / kRPM		4.16E-2				9.01E-2				0.139		
Thermal Resistance (3)	TPR	°C / watt		0.390				0.330				0.300		
Number of Poles	P	-		10				10				10		
Recommended AKD Drive				01207	02407	02407	02407	02407	02407	02407	02407	02407	02407	
Voltage Req'd at Rated Output	Vac Input	Vac		480	480	480	400	480	480	480	400	480	480	400
Peak Stall Torque (4) (Motor with Drive)	Tp Drive	Nm	+/-10%	83.3	103	96.3	67.0	140	129	91.0	91.0	169	121	121
		lb-ft		61.4	76.0	71.0	49.4	103	95.1	67.1	67.1	125	89.2	89.2
Cont. Stall Torque (4) (Motor with Drive)	Tc Drive	Nm	+/-10%	30.7	30.2	31.3	29.7	43.7	43.5	41.9	41.9	54.6	53.0	53.0
		lb-ft		22.6	22.3	23.1	21.9	32.2	32.1	30.9	30.9	40.3	39.1	39.1

- Notes 1) Winding temperature = 155°C at continuous stall, at rated output, and for performance curves.
 2) To calculate no-load Kt and Kb at 25°C, multiply by 1.064.
 3) TPR assumes motor is housed and mounted to a 18" x 18" x 1/2" heat sink or equivalent.
 4) Peak & Continuous Torques may be limited by drive current, see www.kollmorgen.com for complete drive ratings.

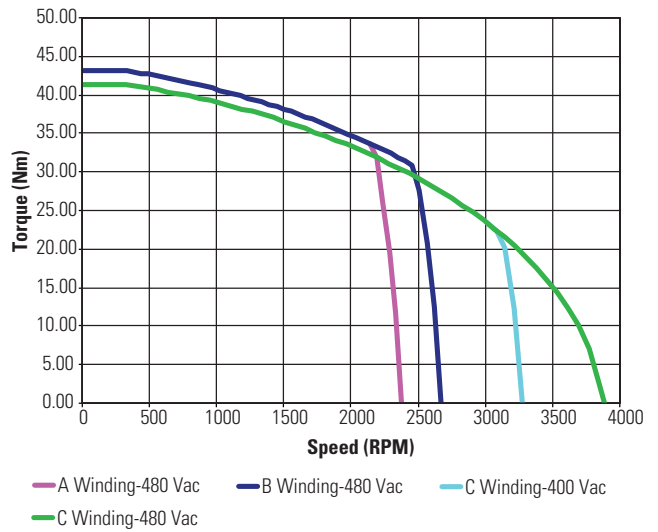
KBM 45 Performance Curves

Continuous duty capability for 130°C rise in a 25°C ambient using recommended AKD servo drive and sinusoidal commutation.

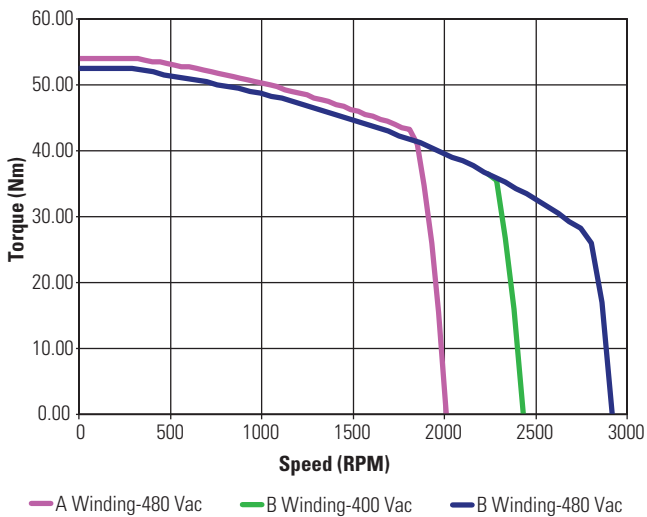
**KBM(S)-45X01
ContinuousTorque**



**KBM(S)-45X02
ContinuousTorque**



**KBM(S)-45X03
ContinuousTorque**



Low Voltage optimized windings available.