


RADIAL LOAD CAPACITY (Kgs) - NO AXIAL LOAD - FOR L10 LIFE OF 10,000 HOURS				
Radial Load Capacity at the End of the Shaft (Kgs)				
2500 RPM	1750 RPM	1150 RPM	850 RPM	
350	390	450	500	
AXIAL THRUST CAPACITY (Kgs) - NO RADIAL LOAD - FOR L10 LIFE OF 10,000 HOURS				
Horizontal Mounting Load Capacity at the End of the Shaft (Kgs)				
2500 RPM	1750 RPM	1150 RPM	850 RPM	
250	290	330	360	

Notes: Print or enlarge waveforms for improved clarity.  
For additional specifications see 10000000400

REFERENCES		DESCRIPTION	CAD DOCUMENT		
VERSION / CHANGE NUMBER			CONFIDENTIAL AND PROPRIETARY INFORMATION		
00	10000025	<p>HPK-E1609E-MC44AA,ESE</p> 	<small>THIS DOCUMENT CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION OF ROCKWELL AUTOMATION, INC. AND MAY NOT BE USED, COPIED OR DISCLOSED TO OTHERS, EXCEPT WITH THE AUTHORIZED WRITTEN PERMISSION OF ROCKWELL AUTOMATION, INC.</small>		
			PARTS MUST CONFORM TO APPLICABLE ROCKWELL AUTOMATION MANUFACTURING STANDARDS		
			DR.	VS	DATE
					9/22/2006
				SHEET 1 OF 4	
				DOCUMENT NUMBER	
				<b>10000000380</b>	

Specifications:


1. Motor type: 4 pole, 3 phase, asynchronous, ventilated
2. Base speed: 2970 RPM.
3. Maximum speed: 5000 RPM.
4. Continuous stall torque: 156 Nm (1381 lb-in) max at 155C winding temperature in a 40C
5. Peak stall torque: 359 Nm (3176 lb-in) max.
6. Continuous output rating: 48.4 kW ( hp) max at 2970 RPM.      Continuous current @ 2970 RPM 153.7 Amps 0 to peak max.(109 Amps.RMS)
7. Operating voltage: 400 VAC RMS Ref. (Not for direct connection to AC line).
8. Continuous stall current: 153.7 Amps 0 to peak max.(109 Amps.RMS)
9. Magnetizing current: 41 Amps. RMS ref.
10. Peak stall current: 356.7 Amps 0 to peak max.( 253 Amps. RMS)
11. Insulation class: 180 (H).
12. Housing temperature: 125C max.
13. Winding resistance: .041 Nom. Ohms, phase to phase at 20C to 30C.
14. Winding inductance: 3.7 mH, phase to phase Ref.
15. Dielectric rating of motor power connections (U,V,W), and thermostat connections (TS+, TS-) to ground: 2350 VAC RMS 50/60 Hz for 1 second.
16. Rotor inertia: .147 kg-m<sup>2</sup> Ref.
18. Product weight: 213 kg (469 lb) Ref.
19. Operating ambient temperature: 0C to 40C (32F to 104F).
20. Storage ambient temperature: -30C to 70C (-22F to 158F).
21. Relative humidity: 5% to 95% non-condensing.
22. Liquid / dust protection: IP54 with blower installed.
23. Shock: 10 g peak max, 6 msec duration (18 occurrences tested).
24. Vibration: 2.5 g peak max, 30 to 2000 Hz.
25. Shaft material: Steel, grade 1040/1045.
26. Paint: Black. Shaft, key (if provided), flange mounting surface, and connectors are not painted.

Equivalent circuit parameters

X1: .184 Ohms/phs Ref at 20C to 30C.  
X2: .206 Ohms/phs Ref at 20C to 30C.  
Xm : 4.58 Ohms/phs Ref at 20C to 30C  
R1: .0207 Ohms/phs Ref at 20C to 30C  
R2: .0148 Ohms/phs Ref at 20C to 30C

BRAKE: 460VAC 20Nm max. holding torque

Notes: "Ref" denotes untoleranced specifications, provided for reference only.  
Speed, torque and current specifications are for motor operation with Allen Bradley drives.

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Feedback Specifications:


Electrical Hardware:

1. SIN, COS waveform output: 1024 sinusoids/rev.
2. SIN, COS waveform amplitude: 0.9 to 1.1 Volts peak to peak.
3. SIN -, COS - voltage offset with respect to power input common: 2.2 to 2.8 VDC.
4. +5VDC voltage input: 4.5 to 12.0 VDC.
5. +5VDC current input: 125 mA DC max continuous, 1.0 A DC max inrush.
6. TS+, TS- thermostat operating voltage: 250 Volts max.
7. TS+, TS- thermostat operating current: 1.6/2.5 Amps max at 0.6/1.0 power factor.

Serial Communication:

1. DATA+, DATA- signal type, rate: RS 485, 9600 baud, asynchronous.
2. Communication hierarchy: Encoder is slave, communication is externally initiated.
3. Single turn absolute position value range: 0 to 32,767 steps (12 bit).
4. Multi-turn absolute shaft revolution value range: 0 to 32,767 revolutions (12bit).
5. Absolute position data: Binary, value increases with CW shaft rotation viewing motor mounting face.
6. Data (byte) format: Start bit, 8 data bits, parity bit, stop bit.
7. Memory storage capacity: 128 bytes, EEPROM.
8. Encoder temperature data: Binary value of encoder temperature in degrees C.

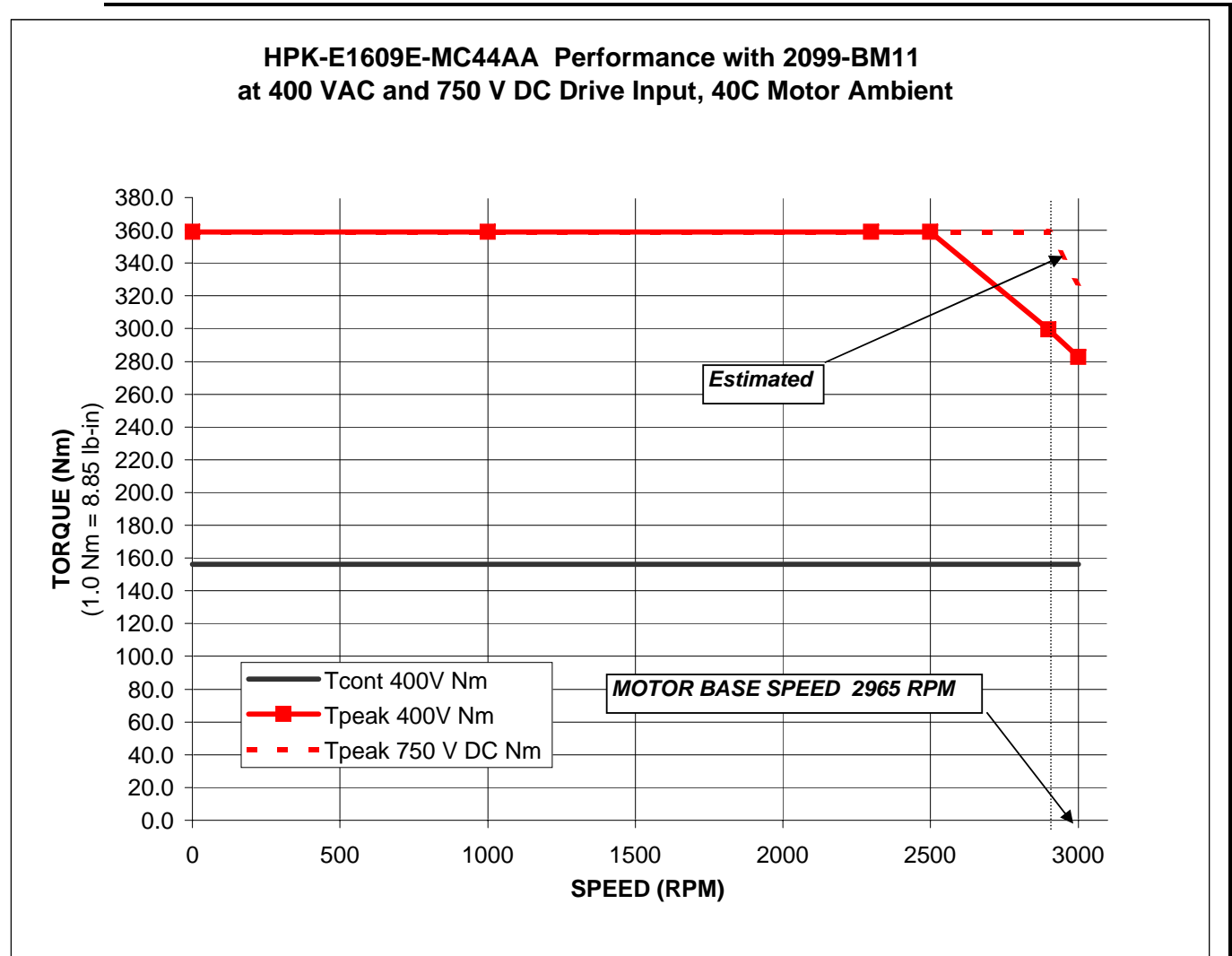
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SPEED RPM	TORQUE		
	Tcont 400V	Tpeak 400V	Tpeak 750 V DC
	Nm	Nm	Nm
0	156.0	359	359
1000	156.0	359	359
2300	156.0	359	359
2500	156.0	359	359
2900	156.0	299	359
3000	156.0	282	328

SPEED RPM	TORQUE		
	Tcont 400V	Tpeak 400V	Tpeak 750 V DC
	lb-in	lb-in	lb-in
0	1381.0	3176	3176
1000	1381.0	3176	3176
2300	1381.0	3176	3176
2500	1381.0	3176	3176
2900	1381.0	2650	3176
3000	1381.0	2500	2900

Note: Nm torque values shown are converted from tested lb-in data.



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