

**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
450	530	530	530

**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
260	310	380	440

Notes: Print or enlarge waveforms for improved clarity.  
For additional specifications see 10000000123

REFERENCES		DESCRIPTION		CAD DOCUMENT			
VERSION / CHANGE NUMBER		HPK-E1815C-MA42BA,ESE		CONFIDENTIAL AND PROPRIETARY INFORMATION			
00	10000004			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.			
				PARTS MUST CONFORM TO APPLICABLE ROCKWELL AUTOMATION MANUFACTURING STANDARDS			
				DR.	VS	DATE	6/15/2006
						SHEET 1 OF 4	
				DOCUMENT NUMBER			
				1000000101			


Specifications:

1. Motor type: 4 pole, 3 phase, asynchronous, ventilated
2. Base speed: 1480 RPM.
3. Maximum speed: 3000 RPM.
4. Continuous stall torque: 360 Nm (3186 lb-in) max at 155C winding temperature in a 40C
5. Peak stall torque: 840 Nm (7434 lb-in) max.
6. Continuous output rating: 55.9 kW ( hp) max at 1480 RPM.      Continuous current @ 1480 RPM 187 Amps 0 to peak max.(132.5 Amps.RMS)
7. Operating voltage: 400 VAC RMS Ref. (Not for direct connection to AC line).
8. Continuous stall current: 187 Amps 0 to peak max.(132 Amps.RMS)
9. Magnetizing current: 64.3 Amps. RMS ref.
10. Peak stall current: 440 Amps 0 to peak max.( 312 Amps. RMS)
11. Insulation class: 180 (H).
12. Housing temperature: 125C max.
13. Winding resistance: .036 Nom. Ohms, phase to phase at 20C to 30C.
14. Winding inductance: 2.15 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: .468 kg-m2 Ref.
17. Rotor balancing: Quality grade G-6.3.
18. Product weight: 474 kg (1045lb) 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 w/lt blower installed..
23. Shock: 10 g peak max, 6 msec duration (18 occurances 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), front mounting surface, and connectors are

Equivalent circuit parameters

- X1: .108 Ohms/phs Ref at 20C to 30C.
- X2: .153 Ohms/phs Ref at 20C to 30C.
- Xm : 2.89 Ohms/phs Ref at 20C to 30C
- R1: .0179 Ohms/phs Ref at 20C to 30C
- R2: .0134 Ohms/phs Ref at 20C to 30C

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.

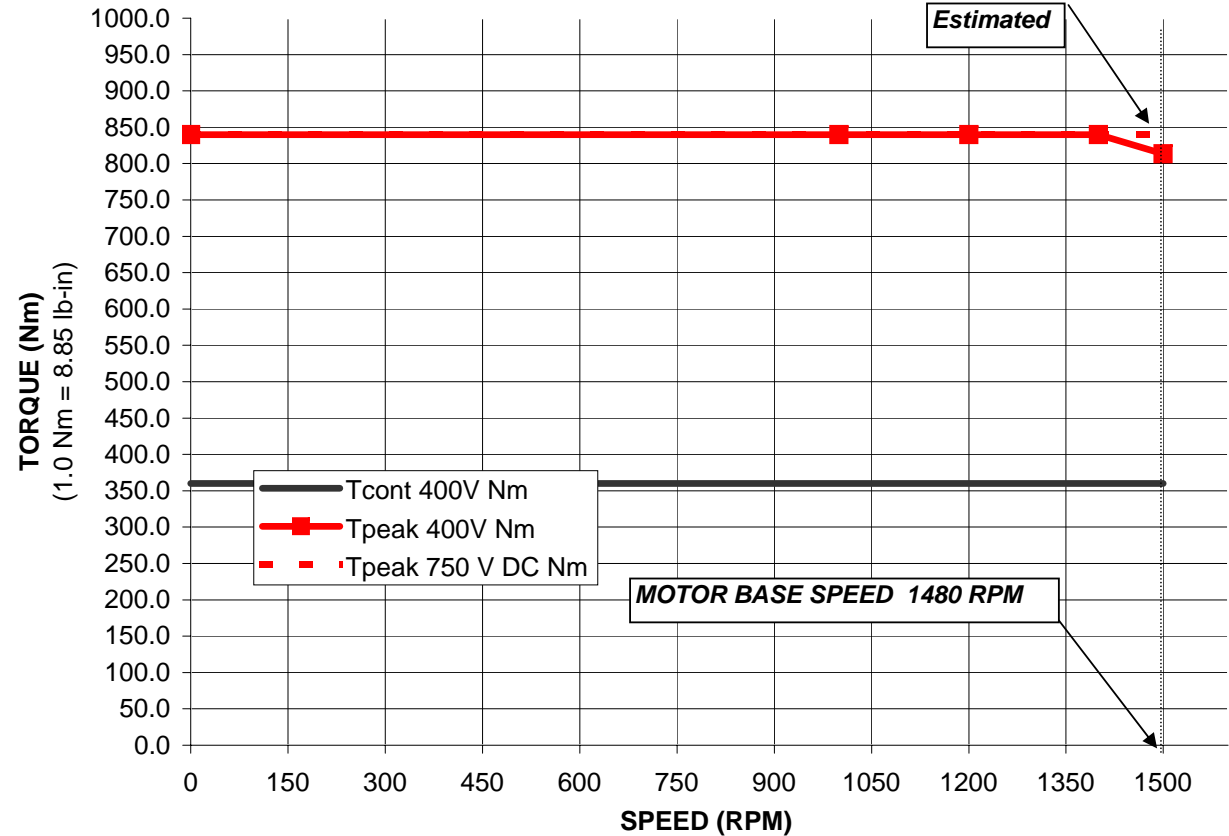
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SPEED RPM	TORQUE		
	Tcont 400V	Tpeak 400V	Tpeak 750 V DC
	Nm	Nm	Nm
0	360.0	840.0	840.0
1000	360.0	840.0	840.0
1200	360.0	840.0	840.0
1400	360.0	840.0	840.0
1500	360.0	813.6	840.0

SPEED RPM	TORQUE		
	Tcont 400V	Tpeak 460V	Tpeak 750 V DC
	lb-in	lb-in	lb-in
0	3186.0	7434	7434
1000	3186.0	7434	7434
1200	3186.0	7434	7434
1400	3186.0	7434	7434
1500	3186.0	7200	7434

**HPK-E1815C-MA42BA Performance with 2099-BM11  
at 400 VAC and 750 V DC Drive Input, 40C Motor Ambient**



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

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