

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	

01	1020346	VS	RELEASED		
REV	ECN	BY	REVISION DESCRIPTION	CHKR	DATE
PREPARED BY		DATE	DESIGN ENGINEER		DATE
VS		1/11/2006			
TITLE					
ES, ELEC, HPK-B1611E-SA42AA					
Allen-Bradley		PART NO.			
		L16M5168ESE			
		A SIZE	SHEET		1 OF 4

Notes: Print or enlarge waveforms for improved clarity.  
For additional specifications see L16M5168ESM.

Specifications:

1. Motor type: 4 pole, 3 phase, asynchronous, ventilated
2. Base speed: 2975 RPM.
3. Maximum speed: 5000 RPM.
4. Continuous stall torque: 183 Nm (1619 lb-in) max at 155C winding temperature in a 40C
5. Peak stall torque: 400 Nm ( 3540 lb-in) max.
6. Continuous output rating: 57 kW ( hp) max at 2970 RPM.                      Continuous current @ 2970 RPM 149 Amps 0 to peak max.(105.7 Amps.RMS)
7. Operating voltage: 460 VAC RMS Ref. (Not for direct connection to AC line).
8. Continuous stall current: 149 Amps 0 to peak max.(105.7 Amps.RMS)
9. Magnetizing current: 47.6 Amps. RMS ref.
10. Peak stall current: 338.4 Amps 0 to peak max.( 240 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: 3.3 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: .177 kg-m<sup>2</sup> Ref.
17. Rotor balancing: Quality grade G-6.3.
18. Product weight: 244 kg (538 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 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), flange mounting surface, and connectors are not painted.

Equivalent circuit parameters

X1: .167 Ohms/phs Ref at 20C to 30C.  
X1: .219 Ohms/phs Ref at 20C to 30C.  
Xm : 4.82 Ohms/phs Ref at 20C to 30C  
R1: .0205 Ohms/phs Ref at 20C to 30C  
R2: .0152 Ohms/phs Ref at 20C to 30C

not painted.

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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	L16M5168ESE	
	A SIZE	SHEET 2 OF 4

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. Absolute position data: Binary, value increases with CW shaft rotation viewing motor mounting face.
5. Data (byte) format: Start bit, 8 data bits, parity bit, stop bit.
6. Memory storage capacity: 128 bytes, EEPROM.
7. Encoder temperature data: Binary value of encoder temperature in degrees C.

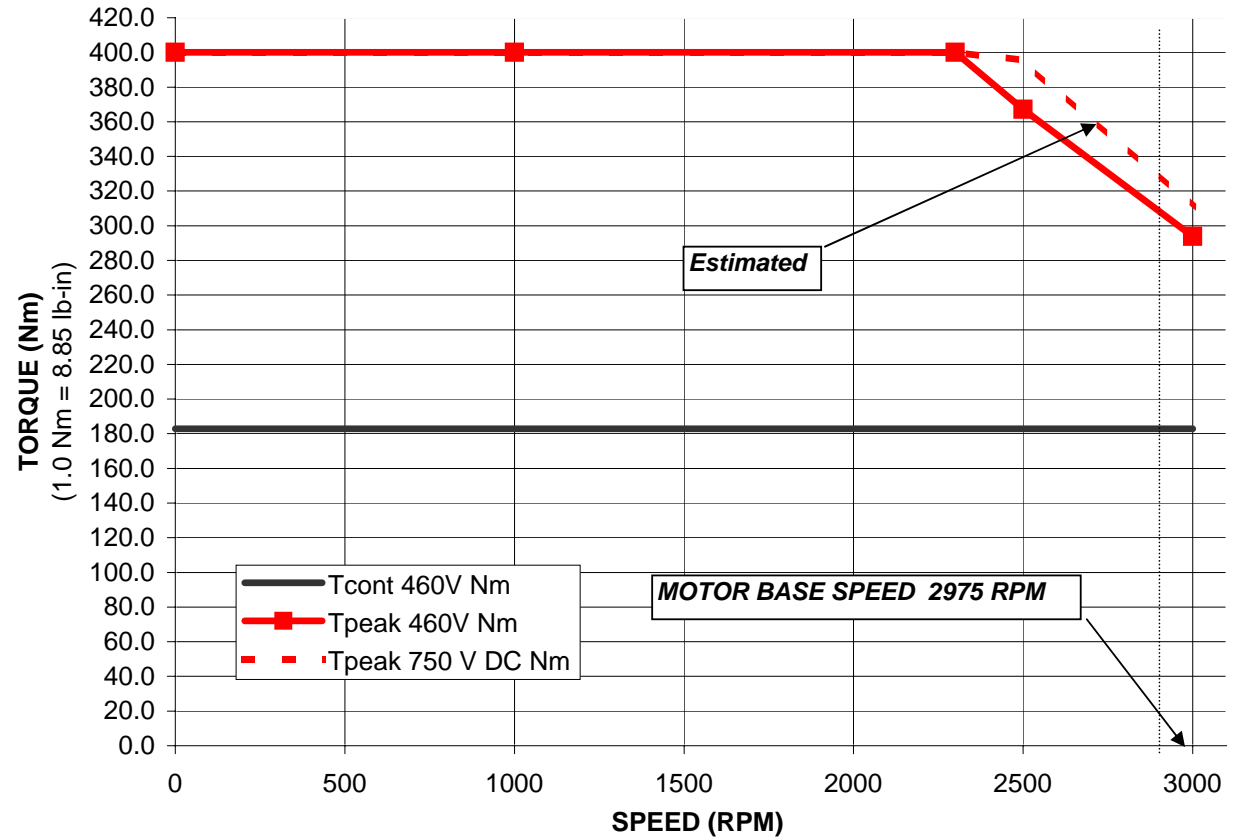
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A SIZE		SHEET 3 OF 4

SPEED RPM	TORQUE		
	Tcont 460V	Tpeak 460V	Tpeak 750 V DC
	Nm	Nm	Nm
0	182.9	400.0	400.0
1000	182.9	400.0	400.0
2300	182.9	400.0	400.0
2500	182.9	367.2	395.5
3000	182.9	293.8	310.7

SPEED RPM	TORQUE		
	Tcont 460V	Tpeak 460V	Tpeak 750 V DC
	lb-in	lb-in	lb-in
0	1619.0	3540	3540
1000	1619.0	3540	3540
2300	1619.0	3540	3540
2500	1619.0	3250	3540
3000	1619.0	2600	2750

**HPK-B1611E-SA42AA Performance with 2099-BM11  
at 460 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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	A SIZE	SHEET 4 OF 4