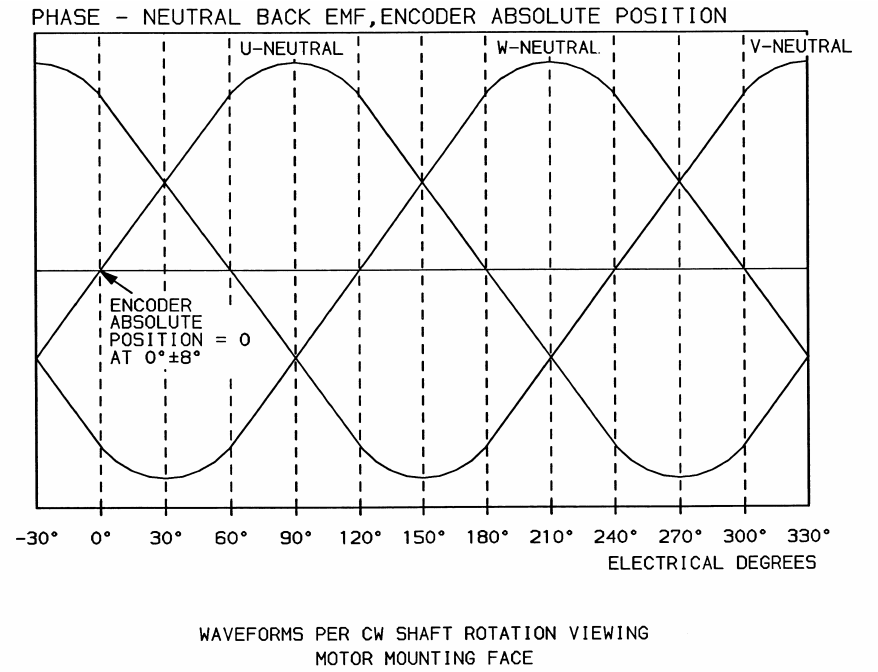
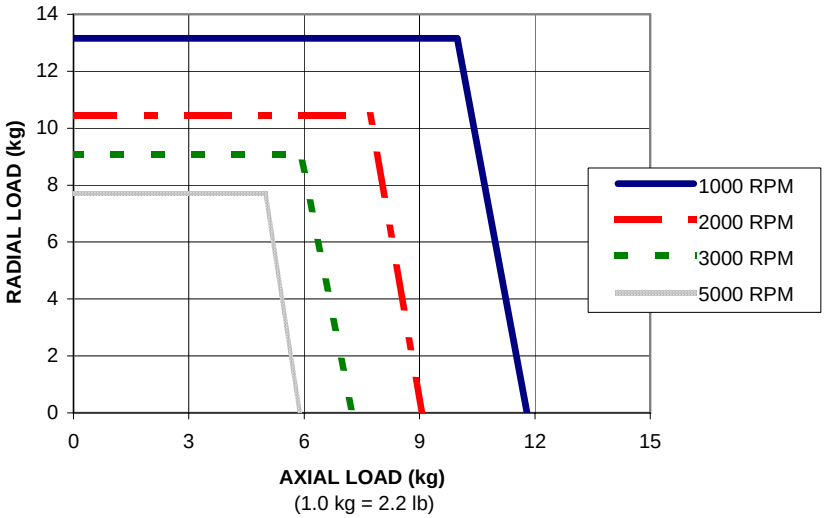


WAVEFORMS PER CW SHAFT ROTATION VIEWING
MOTOR MOUNTING FACE

SHAFT LOAD RATING for 20,000 hour L10 bearing life
and RADIAL LOAD applied mid-way along shaft extension
(move this chart down to see data behind)



REV	ECN	BY	REVISION DESCRIPTION	CHKR	DATE
01	1007016	JH	RELEASED		

PREPARED BY	DATE	DESIGN ENGINEER	DATE
JH	4/15/2004		

TITLE

TL-A130P-BJ32AA, ESE

Allen-Bradley

PART NO. TLA130PBJ32AAESE

A SIZE | SHEET 1 OF 4

Notes: Print or enlarge waveforms for improved clarity.
For additional specifications see TLA130PBJ32AAESM.

Specifications:

1. Motor type: 8 pole, 3 phase, wye winding, permanent magnet rotor, totally enclosed, non-ventilated.
2. Operating speed: 5000 RPM max.
3. Continuous stall torque: 0.325 Nm (2.88 lb-in) max at 125C winding temperature in a 40C ambient, when mounted on an 8 inch sq x 1/4 inch thick aluminum heatsink.
4. Peak stall torque: 0.76 Nm (6.7 lb-in) max.
5. Continuous output rating: 0.14 kW (0.19 hp) max at continuous rated operating point: 5000 RPM, 0.273 Nm (2.42 lb-in), 1.68 Amps 0 to peak max.
6. Operating voltage: 230 VAC RMS Ref. (Not for direct connection to AC line).
7. Continuous stall current: 1.85 Amps 0 to peak max.
8. Peak stall current: 4.90 Amps 0 to peak max.
9. Insulation class: 155C (Class F).
10. Housing temperature: 110C (230F) max.
11. Ke: 24.3 to 29.7 (27 nom) V/kRPM 0 to peak, phase to phase at 20C to 30C.
12. Kt: (sine) 0.223 Nm/Amp 0 to peak (1.97 lb-in/Amp 0 to peak) Ref at 20C to 30C.
13. Winding resistance: 11.7 to 14.3 Ohms, phase to phase at 20C to 30C.
14. Winding inductance: 18 mH, phase to phase Ref.
15. Dielectric rating of motor power connections (U,V,W) to ground: 1800 VAC RMS 50/60 Hz for 1 second.
16. Rotor inertia: 0.000003 kg-m^2 (0.000027 lb-in-sec^2) Ref.
17. Rotor balancing: Quality grade G-6.3.
18. Friction torque: 0.0035 Nm (0.031 lb-in) Ref.
19. Friction torque with shaft seal option installed: 0.0067 Nm (0.059 lb-in) Ref.
20. Cogging torque: 0.0038 Nm (0.034 lb-in) peak to peak Ref.
21. Damping: 0.0027 Nm/kRPM (0.024 lb-in/kRPM) Ref.
22. Thermal resistance, winding to ambient: 1.7 degrees C/watt Ref.
23. Thermal time constant, winding to ambient: 9.4 minutes Ref.
24. Product weight: 0.46 kg (1.0 lb) Ref.
25. Shipping weight: 0.73 kg (1.6 lb) Ref.
26. Operating ambient temperature: 0C to 40C (32F to 104F).
27. Storage ambient temperature: -10C to 85C (14F to 185F).
28. Relative humidity: 20% to 85% non-condensing.
29. Liquid / dust protection: IP65 when optional shaft seal is installed, excluding flying lead connectors (connectors rating: IP30).
30. Shock: 20 g peak max, 6 msec duration (18 occurances tested).
31. Vibration: 2.5 g peak max, 30 to 2000 Hz.
32. Bearing arrangement: Outer diameter of rear bearing is trapped axially.
33. Shaft material: Steel, grade S45C.

Notes: "Ref" denotes untoleranced specifications, provided for reference only.

Speed, torque and current specifications are for motor operation with Allen Bradley drives.

01	TITLE	
REV	TL-A130P-BJ32AA, ESE	
Allen-Bradley	PART NO.	
	TLA130PBJ32AAESE	
	A SIZE	SHEET 2 OF 4

Feedback Specifications:

Encoder Function:
1. 17 bit single turn absolute position data is provided, via serial output, with or without an external battery connected.
2. 16 bit multi-turn absolute position data is provided, along with the 17 bit single turn absolute position data, via serial output, when an external battery is connected.

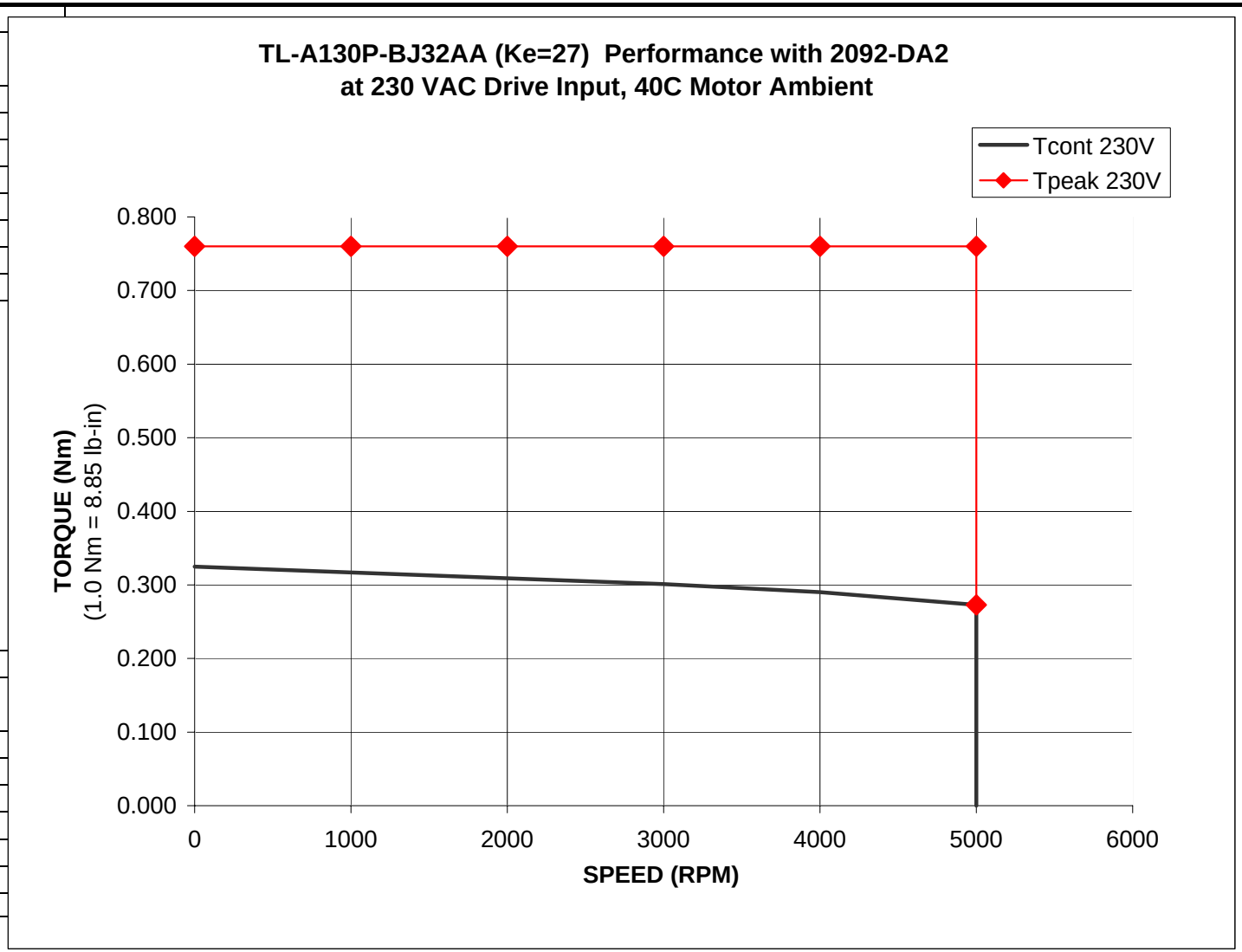
Electrical Hardware:
1. SD+, SD- (serial data) output / input: RS 485 differential line driver / receiver.
2. EPWR (encoder power) voltage input: 4.75 to 5.25 VDC.
3. EPWR current input: 60 mADC nominal, 110 mADC max continuous. 1.3 ADC max inrush.
4. BAT+ (battery) voltage input: 3.6 VDC nominal.
5. BAT+ current input, with +5VDC applied to EPWR input: 3.6 uA nominal.
6. BAT+ current input, with no EPWR input applied: 110 uA max.
7. Battery alarm fault (battery change required) voltage level: 3.1 VDC Ref.
8. Battery error fault (absolute multi-turn position not saved at power loss) voltage level: 2.5 VDC Ref.

Serial Communication:
1. SD+, SD- serial data rate: 2.5 Mbps, asynchronous.
2. Communication hierarchy: Encoder is slave, communication is externally initiated.
3. Single turn absolute position value range: 0 to 131,071 (17 bit).
4. Multi-turn absolute shaft revolution value range: 0 to 65,535 revolutions (16 bit).
5. Absolute position data: Binary, value increases with CCW shaft rotation viewing motor mounting face.
6. Memory storage capacity: 80 bytes, EEPROM.

Note: "Ref" denotes untoleranced specifications, provided for reference only.

01	TITLE	
REV	TL-A130P-BJ32AA, ESE	
Allen-Bradley	PART NO.	
	TLA130PBJ32AAESE	
	A SIZE	SHEET 3 OF 4

SPEED RPM	TORQUE		
	Tcont 230V	Tpeak 230V	
	Nm	Nm	
0	0.325	0.760	
1000	0.317	0.760	
2000	0.309	0.760	
3000	0.301	0.760	
4000	0.290	0.760	
5000	0.273	0.760	
5000	0	0.273	



SPEED RPM	TORQUE		
	Tcont 230V	Tpeak 230V	
	lb-in	lb-in	
0	2.88	6.7	
1000	2.81	6.7	
2000	2.74	6.7	
3000	2.67	6.7	
4000	2.57	6.7	
5000	2.42	6.7	

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

01	TITLE
REV	TL-A130P-BJ32AA, ESE
Allen-Bradley	PART NO. TLA130PBJ32AAESE
	A SIZE / SHEET 4 OF 4