

PRODUCT INFORMATION PACKET

Model No: TCA2P22AE231GAA009

Catalog No: R822

3 Hp, General Purpose Low Voltage IEC Motor, 3 phase, 1800 RPM, 230/460 V, 100L Frame, TEFC
Cast Iron IE3 Efficiency Motors



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REGAL



Nameplate Specifications

Output HP	3 Hp	Output KW	2.2 kW
Frequency	60 Hz	Voltage	230/460 V
Current	7.8/3.9 A	Speed	1770 rpm
Service Factor	1.15	Phase	3
Efficiency	89.5 %	Power Factor	80
Duty	Continuous	Insulation Class	F
Design Code	N (IEC)	KVA Code	M
Frame	100L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No	Ambient Temperature	40 °C
Drive End Bearing Size	6206	Opp Drive End Bearing Size	6206
UL	Recognized	CSA	N
CE	Y	IP Code	55

Technical Specifications

Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Line Or Inverter
Poles	4	Rotation	Reversible
Resistance Main	3.79 Ohms	Mounting	B3
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	IEC	Shaft Diameter	28.000 in
Assembly/Box Mounting	F3		
Outline Drawing	SS620872	Connection Drawing	8442000675

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P.O. BOX 8003
WAUSAU, WI 54401-8003
PH. 715-675-3311

DATA VOLTS: 460

CERTIFICATION DATA SHEET

CUSTOMER P.O. #:
 CUSTOMER REFERENCE MODEL #: TC2222AE231GA009
 ORDER #: 8442000675
 CONN. DIAGRAM: SS620872
 OUTLINE: SS620872
 WINDING: IE3,1004201 NONE 1
 CUSTOMER PART #: R822
 MOUNTING: F3
 SPEED:
 TYPICAL MOTOR PERFORMANCE DATA

HP	KW	3	2.2	1800	1770	100L	TEFC	TCA 100LA04	M	N							
PH	HZ	3	60/50	230/460/200/400	7.8/3.8&7/3.5	LINE OR INVERTER	CONT	F	1.15	3300							
	F.L. EFF	89.5	80.0	3/4 LD EFF	89.5	1/2 LD EFF	85.3	GTD EFF	87.9	ELECT. TYPE							
	F.L. PF	80.0	80.0	3/4 LD PF	73.0	1/2 LD PF	62.0			SC CAGE INV RATED							
	F.L. TORQUE	8.9	8.9	LR AMPS @ 460 V	39.0	LR TORQUE	33.7	B.D. TORQUE	375%	F.L. RISE (°C)							
	LB-FT	8.9	8.9		26.8	LB-FT	33.7	LB-FT	375%	80							
	SOUND PRESSURE @ 3 FT.	55	64	64	64	64	10	10	2	46							
	DBA	55	64	64	64	64	10	10	2	46							
	DBA	55	64	64	64	64	10	10	2	46							
*** SUPPLEMENTAL INFORMATION ***																	
DE BRACKET TYPE	ODE BRACKET TYPE	STANDARD	STANDARD	MOUNT TYPE	B3	MOTOR ORIENTATION	HORIZONTAL	SEVERE DUTY	NO	HAZARDOUS LOCATION	NONE	DRIP COVER	NO	SCREENS	NONE	PAINT	BLUE (EPAWEL)
BEARINGS	ODE	BALL	6206	GREASE	POLYREX EM	SHAFT TYPE	STANDARD IEC	SPECIAL DE	NONE	SPECIAL ODE	NONE	SHAFT	1045 HOT ROLLED (C-204)	MATERIAL	CAST IRON	FRAME MATERIAL	
THERMOSTATS	PROTECTORS	NONE		WDG RTD's	NONE	BRG RTD's	NONE	THERMISTORS	NONE	CONTROL	FALSE	SPACE HEATERS	NA				
R1 (ohms/ph)	R2 (ohms/ph)	1.418		X1 (ohms/ph)	3.782	X2 (ohms/ph)	7.469	X3 (ohms/ph)	133.090	VIBRATION (in/sec)	0.150	FLOAT	ODE				
* N O T E S * ENCODER: NONE INVERTER TORQUE: CONSTANT 2:1/VARIABLE 10:1 INV. HP SPEED RANGE: NONE FT-LB: NONE VOLTAGE: NONE BRAKE: NONE FT-LB: NONE VOLTAGE: NONE UL: V-LIMEJNS CONST UL REC PREPARED BY: 11/27/2020 DATE: 2/27/06																	





Data Sheet

Date: 4/8/2020

Customer: _____

Attention: _____

Submitted by: _____

TCA2P22AE231GAA009

Submittal

Data @ 460 V

Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	2.00	2.30	2.70	3.3	3.9	4.4	4.8	39.0
Torque (ft-lb)	0.00	2.20	4.4	6.6	8.9	10.3	11.2	26.8
RPM	1800	1792	1784	1776	1770	1,762	1759	0
Efficiency (%)		77.0	85.3	89.5	89.5	88.1	88.0	
P.F. (%)	10.0	39.0	62.0	73.0	80.0	82.0	84.0	63.4

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	600	1468	1770	1800
Current (Amps)	39.0	37.1	21.2	3.9	2.00
Torque (ft-lb)	26.8	25.5	33.7	8.9	0.00

The graph plots Efficiency (%), P.F. (%), and Current (Amps) against Load (%). Efficiency (blue line) peaks at approximately 90% at 80% load. P.F. (red line) increases from 10% at 0% load to 84% at 100% load. Current (black line) increases from 2.00 A at 0% load to 3.9 A at 100% load.

Information Block				
HP	3.0			
Sync. RPM	1800			
Frame	100			
Enclosure	TEFC			
Construction	TCA 100LA04			
Voltage	230/460#200/400 V			
Frequency	60 Hz			
Design	N			
LR Code letter	M			
Service Factor	1.15			
Temp Rise @ FL	80 °C			
Duty	CONT			
Ambient	40 °C			
Elevation	3,300 feet			
Rotor/Shaft wk ²	0.34 Lb-Ft ²			
Ref Wdg	IE3L1004201 NONE			
Sound Pressure @ 1M	55 dBA			
VFD Rating	CONSTANT 2:1/VARIABLE 10:1			
Outline Dwg	SS620872			
Conn. Diag	8442000675			
Additional Specifications:				
0				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
2.3640	1.4180	3.7820	7.4690	133.0300

Speed - Torque Curve

The Speed-Torque Curve shows Torque (ft-lb, blue line) and Amps (red line) versus RPM. Torque starts at 0 ft-lb at 1800 RPM and increases to a peak of approximately 34 ft-lb at 1400 RPM. Amps start at 39.0 A at 1800 RPM and decrease to approximately 2.0 A at 1400 RPM.

