

PRODUCT INFORMATION PACKET



Model No: TCA0031AE231GAA009

Catalog No: R851

TerraMAX® Cast Iron Motor, 4 & 3 HP, 3 Ph, 60 & 50 Hz, 230/460 & 200/400 V, 3600 & 3000 RPM,
100L Frame, TEFC





Nameplate Specifications

Phase	3	Output HP	4 & 3 Hp
Output KW	3.0 & 2.2 kW	Voltage	230/460 & 200/400 V
Speed	3499 & 2816 r/min	Service Factor	1.15 & 1.15
Frame	100L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Efficiency	88.5 & 85.9 %
Ambient Temperature	40 °C	Frequency	60 & 50 Hz
Current	9.75/4.85 & 8.5/4.25 A	Power Factor	89.3
Duty	Continuous	Insulation Class	F
Design Code	N (IEC)	KVA Code	K
Drive End Bearing Size	6206	Opp Drive End Bearing Size	6206
UL	Recognized	CSA	N
CE	Y	IP Code	55
Number of Speeds	1	Efficiency Class	IE3

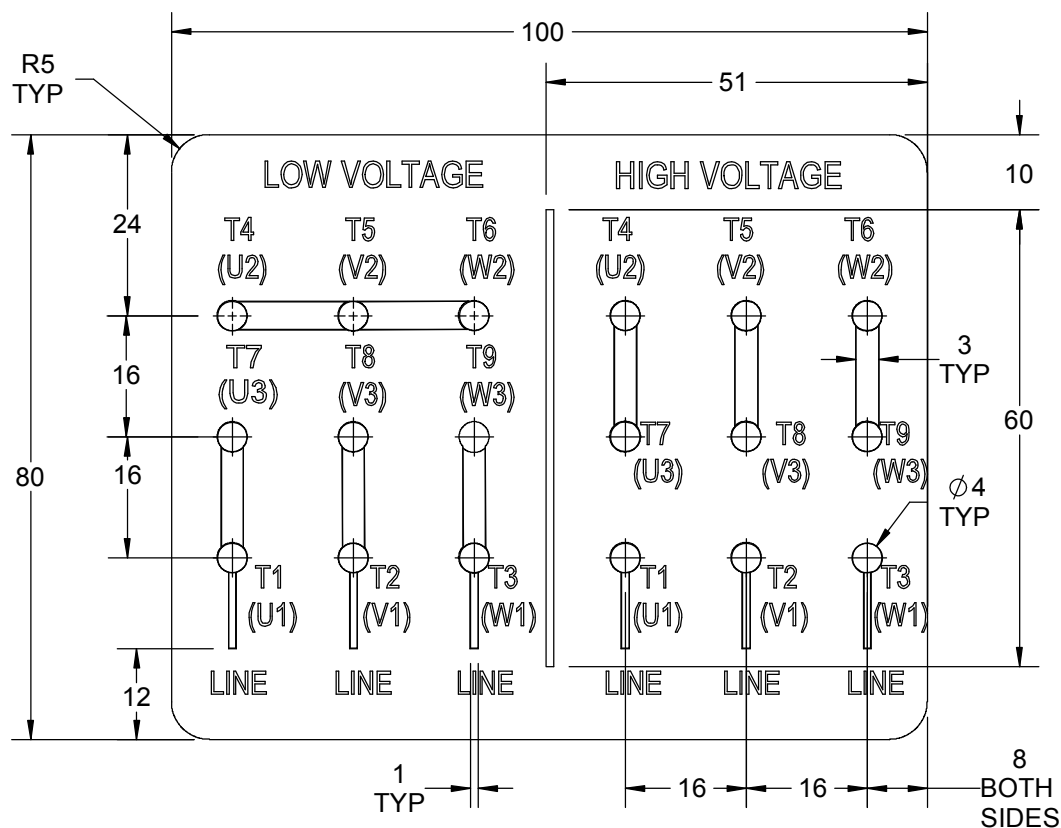
Technical Specifications

Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Line Or Inverter
Poles	2	Rotation	Reversible
Resistance Main	3.74 O	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	Inverter Load	CONSTANT 2:1/VARIABLE 10:1
Connection Drawing	8442000675	Outline Drawing	SS620872

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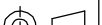


GENERAL TOLERANCE		
LINEAR DIM	>0~6	±0.1
	>6~30	±0.2
	>30~120	±0.3



NOTES:

1. PRESSURE-SENSITIVE ADHESIVE TAPE COATED WITH ANTI-ADHESIVE.
2. YELLOW COLOR BACK GROUND LETTERS WILL BE BLACK.
3. THE TOLERANCE OF THE LINEAR SIZE OF THE TOLERANCE WITHOUT THE TOLERANCE BY THE TABLE.
4. LEAD TERMINAL MARKINGS FONT SIZE : T1-T12 & U1-U4,V1-V4& W1-W4 OF ARIAL WITH 3mm SIZE.
5. OTHER LETTER FONT SIZE SHOULD BE 3.5mm.

DRAWING REVISION B		REVISION BY NIV		DATE 05/03/2019			DRAWN BY NIV		 Regal Beloit America, Inc.						
ECO ECO-0162986		APPROVED BY JAY		DATE 05/03/2019			DATE 29/01/2019								
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							DATE 29/01/2019								
							REFERENCE		MATERIAL		PROCESS/FINISH				
						THIRD ANGLE PROJECTION				SIZE A		DRAWING NUMBER 8442000675		SHEET 1 OF 1	

Data Sheet									
Date: 4/8/2020		TCA0031AE231GAA009							
Customer: _____		Submittal							
Attention: _____		Data @ 460 V							
Submitted by: _____									
Motor Load Data									
Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	1.83	2.26	2.90	3.8	4.9	5.5	5.9	45.0	
Torque (ft-lb)	0.00	1.47	2.96	4.5	6.0	6.9	7.6	19.1	
RPM	3600	3574	3551	3526	3499	3482	3470	0	
Efficiency (%)		79.0	86.0	86.5	86.5	86.6	86.1		
P.F. (%)	12.5	52.5	75.2	84.5	89.3	91.0	91.8	63.4	
Motor Speed Data									
	LR	Pull-Up	BD	Rated	Idle				
Speed (RPM)	0	1200	2623	3499	3600				
Current (Amps)	45.0	42.8	27.1	4.9	1.83				
Torque (ft-lb)	19.1	18.1	22.1	6.0	0.00				
Information Block									
HP	4.0								
Sync. RPM	3600								
Frame	100								
Enclosure	TEFC								
Construction	TCA 100LA02								
Voltage	230/460#200/400 V								
Frequency	60 Hz								
Design	N (IEC)								
LR Code letter	K								
Service Factor	1.15								
Temp Rise @ FL	0 °C								
Duty	CONT								
Ambient	40 °C								
Elevation	3,300 feet								
Rotor/Shaft wk²	0.11 Lb-Ft²								
Ref Wdg	IE3L1002201 R1								
Sound Pressure @ 1M	50 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					
2.3400	1.5600	3.9710	1.3470	143.4550					

Efficiency (%) P.F. (%) Current (Amps)

IEC

Speed -Torque Curve

Torque Amps

TORQUE AMP S

RPM



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

DATA VOLTS: 460

CERTIFICATION DATA SHEET

CUSTOMER: _____
ORDER #: _____
CONN. DIAGRAM: 8442000675
OUTLINE: SS620872
WINDING: IE3L1002201 R1 1
SPEED: _____

CUSTOMER P.O. #: _____
REFERENCE MODEL #: TCA0031AE231GAA009
CAT #: R851
CUSTOMER PART #: _____
MOUNTING: F3

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
4	3.0	3600	3499	100L	TEFC	TCA 100LA02	K	N

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB (* C)	ELEV.(Ft.)
3	60/50	230/460#200/400	9.75/4.85&8.5/4.25	LINE OR INVERTER	CONT	F	1.15	40	3300

F.L. EFF	88.5	3/4 LD EFF	86.5	1/2 LD EFF	86.0	GTD EFF	ELECT. TYPE
F.L. PF	89.3	3/4 LD PF	84.5	1/2 LD PF	75.2	84.5	SQ CAGE INV RATED

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (* C)
6.0 LB-FT	45.0	19.1 LB-FT 318%	22.1 LB-FT 368%	0

SOUND PRESSURE @ 3 FT.	SOUND	POWER	ROTOR WK ²	MAX. LOAD WK ²	SAFE STALL TIME	STARTS/HOUR	APROX.	MOTOR WGT
63 dBA	72 dBA		0.11 LB-FT ²	0.11 LB-FT ²	7 SEC.	2	43	KG.

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	MOTOR ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAIN
FF-FLANGE-215	STANDARD	B3	HORIZONTAL	NO	NONE	NO	NONE	BLUE (ENAMEL)

BEARINGS	GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT	MATERIAL	FRAME MATERIAL
DE ODE							
BALL BALL	POLYREX EM	STANDARD IEC	NONE	NONE	1045 HOT ROLLED (C-204)		CAST IRON
6206 6206							

THERMOSTATS	PROTECTORS	WDG RTD's	BRG RTD's	THERMISTORS	CONTROL	SPACE	HEATERS
NONE	NOT	NONE	NONE	NONE	FALSE		NA

R1 (ohms/ph)	R2 (ohms/ph)	X1 (ohms/ph)	X2 (ohms/ph)	Xm (ohms/ph)	VIBRATION (in/sec)	FLOAT
2.340	1.560	3.971	1.347	143.455	0.150	ODE

* N O T E S *					INVERTER TORQUE: CONSTANT 2:1/VARIABLE 10:1 INV. HP SPEED RANGE: NONE			
					ENCODER: NONE			
					NONE			
					NONE PPR			

PREPARED BY: _____	BRAKE: NONE	
DATE: 11/27/2020	NONE	NONE
	FT-LB: NA	
	VOLTAGE: NONE	HZ:
FORM: 3531 REV_4 2/27/06	UL: V - LI,ME-INS,CONST UL REC	

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