

PRODUCT INFORMATION PACKET

marathon®
Motors

Model No: TCA0153AE231GAA009

Catalog No: R838

TerraMAX® Cast Iron Motor, 20 & 15 HP, 3 Ph, 60 & 50 Hz, 230/460 & 200/400 V, 1200 & 1000 RPM,
180L Frame, TEFC



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RegalRexnord

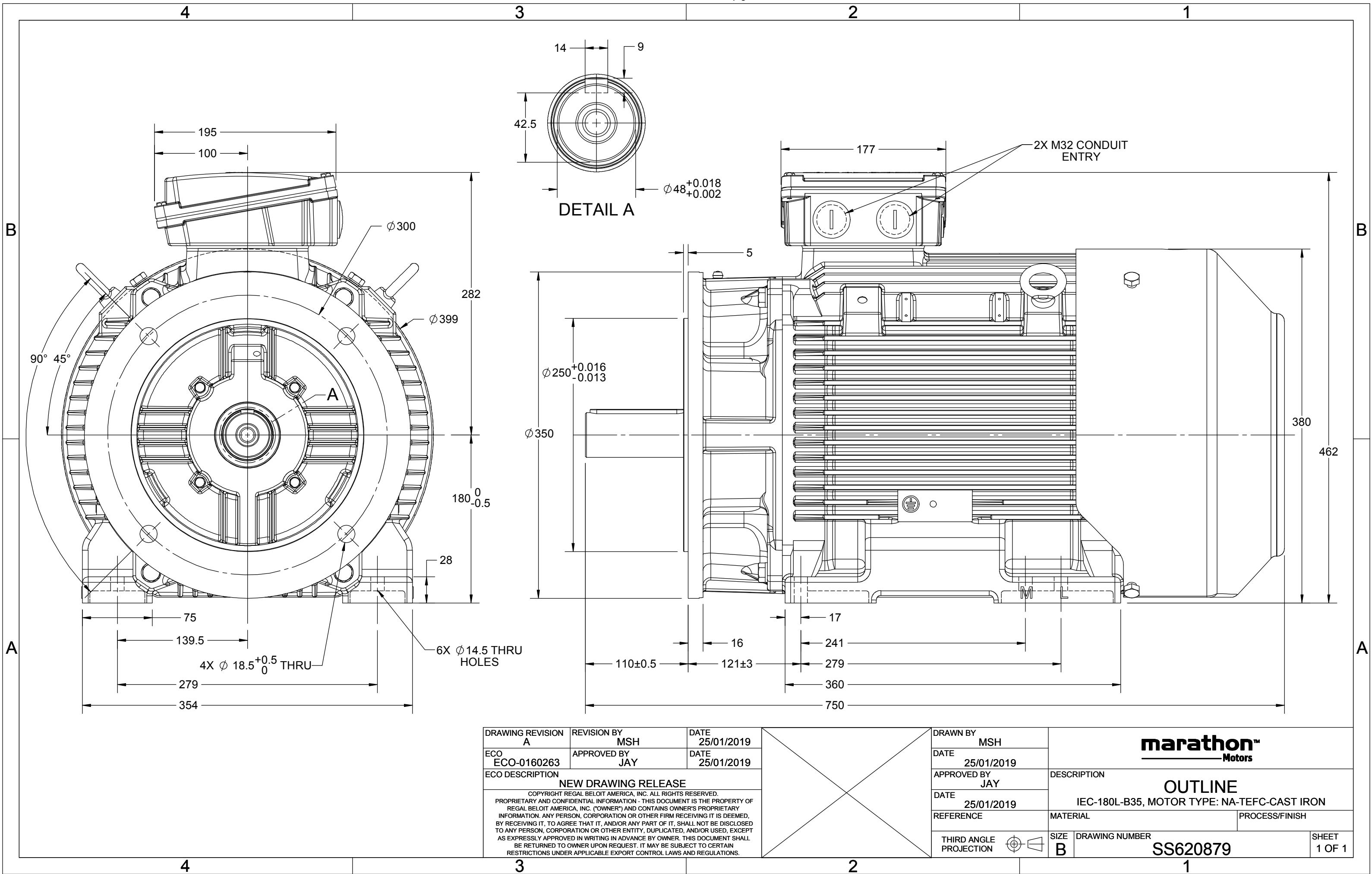
Nameplate Specifications

Phase	3	Output HP	20 & 15 Hp
Output KW	15.0 & 11.0 kW	Voltage	230/460 & 200/400 V
Speed	1180 & 985 rpm	Service Factor	1.15 & 1.15
Frame	180L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Efficiency	91.7 & 90.3 %
Ambient Temperature	40 °C	Frequency	60 & 50 Hz
Current	53.5/26.7 & 48/24.1 A	Power Factor	77
Duty	Continuous	Insulation Class	F
Design Code	N (IEC)	KVA Code	F
Drive End Bearing Size	6311	Opp Drive End Bearing Size	6211
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	6	Rotation	Reversible
Resistance Main	.56 Ohms	Mounting	B3
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	IEC	Shaft Diameter	48.000 in
Assembly/Box Mounting	F3	Inverter Load	CONSTANT 2:1/VARIABLE 10:1
Outline Drawing	SS620879	Connection Drawing	8442000715

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DRAWING REVISION A	REVISION BY MSH	DATE 25/01/2019
ECO ECO-0160263	APPROVED BY JAY	DATE 25/01/2019
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DRAWN BY MSH	marathon™ Motors		
DATE 25/01/2019			
APPROVED BY JAY	DESCRIPTION OUTLINE		
DATE 25/01/2019	IEC-180L-B35, MOTOR TYPE: NA-TEFC-CAST IRON		
REFERENCE	MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION	SIZE B	DRAWING NUMBER SS620879	SHEET 1 OF 1

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DRAWING REVISION

A

REVISION BY

S.MUDDA

DATE

16/11/2020

ECO

ECO-0194685

APPROVED BY

SUMANTA

DATE

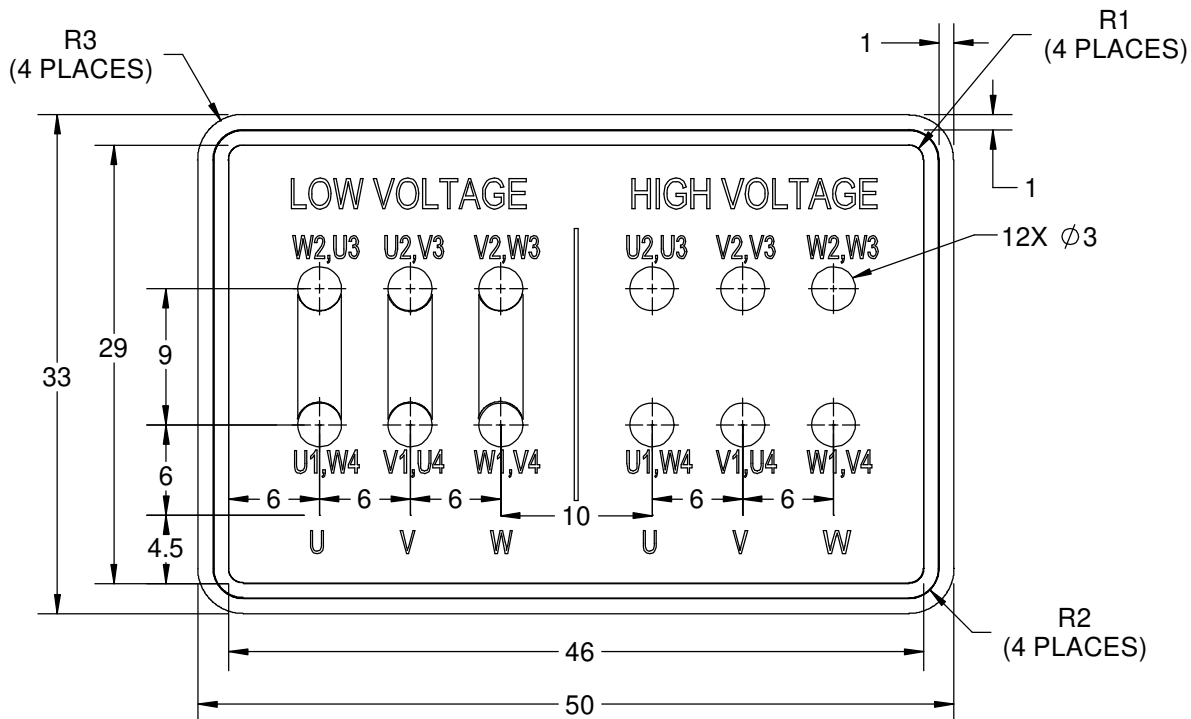
16/11/2020

ECO DESCRIPTION

NEW DRAWING

GEOMETRIC TOLERANCE

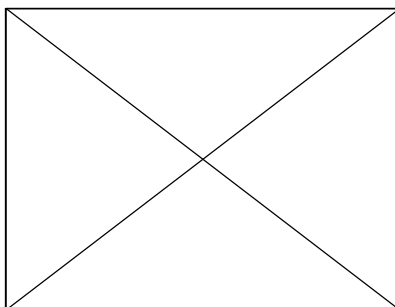
LINEAR DIM	>0~6	±0.1
	>6~30	±0.2
	>30~120	±0.3



NOTES:

1. PRESSURE-SENSITIVE ADHESIVE COATED PAPER ON THE BACK OF SELF-ADHESIVE.
2. AT THE END OF YELLOW, WORDS, SYMBOLS, LETTERS ARE BLACK, BORDER IS 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.

8WD.442.2017



DRAWN BY

S.MUDDA

DATE

16/11/2020

APPROVED BY

SUMANTA

DATE

16/11/2020

REFERENCE

THIRD ANGLE
PROJECTION



Regal Beloit America, Inc.

DESCRIPTION

CONN DIAGRAM-NAMEPLATE

MATERIAL

PROCESS/FINISH

SIZE
A

DRAWING NUMBER

8442000715

SHEET
1 OF 1



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

DATA VOLTS: 460

CERTIFICATION DATA SHEET

CUSTOMER:
ORDER #:
CONN. DIAGRAM: 8442000677
OUTLINE: SS620879
WINDING: IE3L1806201 NONE 1
SPEED:

CUSTOMER P.O. #:
REFERENCE MODEL #: TCA0153AE231GAA009
CAT #: R838
CUSTOMER PART #:
MOUNTING: F3

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
20	15.00	1200	1180	180L	TEFC	TCA 180LA06	F	N

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB (* C)	ELEV.(Ft.)
3	60/50	230/460#200/400	53.5/26.7&48/24.1	LINE OR INVERTER	CONT	F	1.15	40	3300

F.L. EFF	91.7	3/4 LD EFF	91.7	1/2 LD EFF	91.9	GTD EFF	ELECT. TYPE
F.L. PF	77.0	3/4 LD PF	70.0	1/2 LD PF	59.0	90.5	SQ CAGE INV RATED

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (* C)
89.0 LB-FT	139	152 LB-FT 171%	207 LB-FT 233%	80

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK ²	MAX. LOAD WK ²	SAFE STALL TIME	STARTS/HOUR	APROX.	MOTOR WGT
56 dBA	65 dBA	6.2 LB-FT ²	6.2 LB-FT ²	15 SEC.	2	226	KG.

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	MOTOR ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
FF-FLANGE-300	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
6311 6211						

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
0.355	0.184	0.993	1.475	20.408	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:	DATE: 11/27/2020	BRAKE: NONE NONE NONE	FT-LB: NA VOLTAGE: NONE	HZ:
FORM: 3531 REV_4	2/27/06	UL: V - LI,ME-INS,CONST UL REC		

REGAL®

Data Sheet									
Date: 4/8/2020		TCA0153AE231GAA009							
Customer: _____		Submittal							
Attention: _____		Data @ 460 V							
Submitted by: _____									
Motor Load Data									
Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	13.0	15.2	17.3	21.7	26.7	30.0	32.4	139	
Torque (ft-lb)	0.00	22.0	44.1	66.5	89.0	103	112	152	
RPM	1200	1195	1191	1186	1180	1,177	1174	0	
Efficiency (%)		87.9	91.9	91.7	91.7	91.2	90.7		
P.F. (%)	4.0	35.0	59.0	70.0	77.0	79.0	80.0	63.4	
Motor Speed Data									
	LR	Pull-Up	BD	Rated	Idle				
Speed (RPM)	0	400	1094	1180	1200				
Current (Amps)	139	132	80.8	26.7	13.0				
Torque (ft-lb)	152	145	207	89.0	0.00				
						Information Block			
HP						20.0			
Sync. RPM						1200			
Frame						180			
Enclosure						TEFC			
Construction						TCA 180LA06			
Voltage						230/460#200/400 V			
Frequency						60 Hz			
Design						N			
LR Code letter						F			
Service Factor						1.15			
Temp Rise @ FL						80 °C			
Duty						CONT			
Ambient						40 °C			
Elevation						3,300 feet			
Rotor/Shaft wk ²						6.2 Lb-Ft ²			
Ref Wdg						IE3L1806201 NONE			
Sound Pressure @ 1M						66 dBA			
VFD Rating						CONSTANT 2:1/VARIABLE 10:1			
Outline Dwg						SS620879			
Conn. Diag						8442000677			
Additional Specifications:									
0									
0									
EQUIV CKT (OHMS / PHASE)									
R1		R2		X1		X2		Xm	
0.3550		0.1840		0.9930		1.4750		20.4080	

LOAD

IEC

0

0

EQUIV CKT (OHMS / PHASE)

R1	R2	X1	X2	Xm
0.3550	0.1840	0.9930	1.4750	20.4080

Speed -Torque Curve

RPM

EC Declaration of Conformity

The undersigned representing
the manufacturer:

Regal Beloit America
100 East Randolph St.
Wausau, WI 54401

and the authorized representative
established within the Community:

Marathon Electric UK
6F Thistleton Road Ind. Estate
Market Overton
Oakham, Rutland LE15 7PP UK

are committed to providing customers with products that comply with applicable regulations and international protocols to which they are subject, including the requirements of the European Parliament Directive on the Harmonization of the laws relating to electrical equipment designed for use within certain voltage limits (2014/35/EU).

Regal Beloit America declares that the following product(s), to which this declaration relates, are in conformity with the relevant sections of the EC standards listed below.

This statement supersedes any statements previously issued pertaining to the product(s) listed below and is subject to change without notice.

Model No : TCA0153AE231GAA009

(Model No. may contain prefix and/or suffix characters)

Catalog No : R838

Rework No : N/A

Directives :

Low Voltage Directive 2014/35/EU

Harmonized Standards Used :

EN 60034-1: 2010 (IEC 60034-1: 2010)

EN 60034-5: 2001/A1:2007 (IEC 60034-5: 2000/A1:2006)

Authorized Representative:



Michael A. Logsdon
Vice President, Technology

Authorized Representative in the Community:



Julian Clark
Marketing Engineer

Created on 09/01/2022

CE 22