

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: TCA1P53AE251GAA009

Catalog No: R920

TerraMAX® Cast Iron Motor, 2 & 1.50 HP, 3 Ph, 60 & 50 Hz, 230/460 & 200/400 V, 1200 & 1000 RPM,  
100L Frame, TEFC



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**RegalRexnord**

### Nameplate Specifications

Phase	3	Output HP	2 & 1.50 Hp
Output KW	1.5 & 1.1 kW	Voltage	230/460 & 200/400 V
Speed	1175 & 980 rpm	Service Factor	1.15 & 1.15
Frame	100L	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Efficiency	88.5 & 81 %
Ambient Temperature	40 °C	Frequency	60 & 50 Hz
Current	6/3 & 5.4/2.7 A	Power Factor	72
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	6	Rotation	Reversible
Resistance Main	6.5 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	Inverter Load	CONSTANT 2:1/VARIABLE 10:1
Connection Drawing	8442000675	Outline Drawing	SS620949

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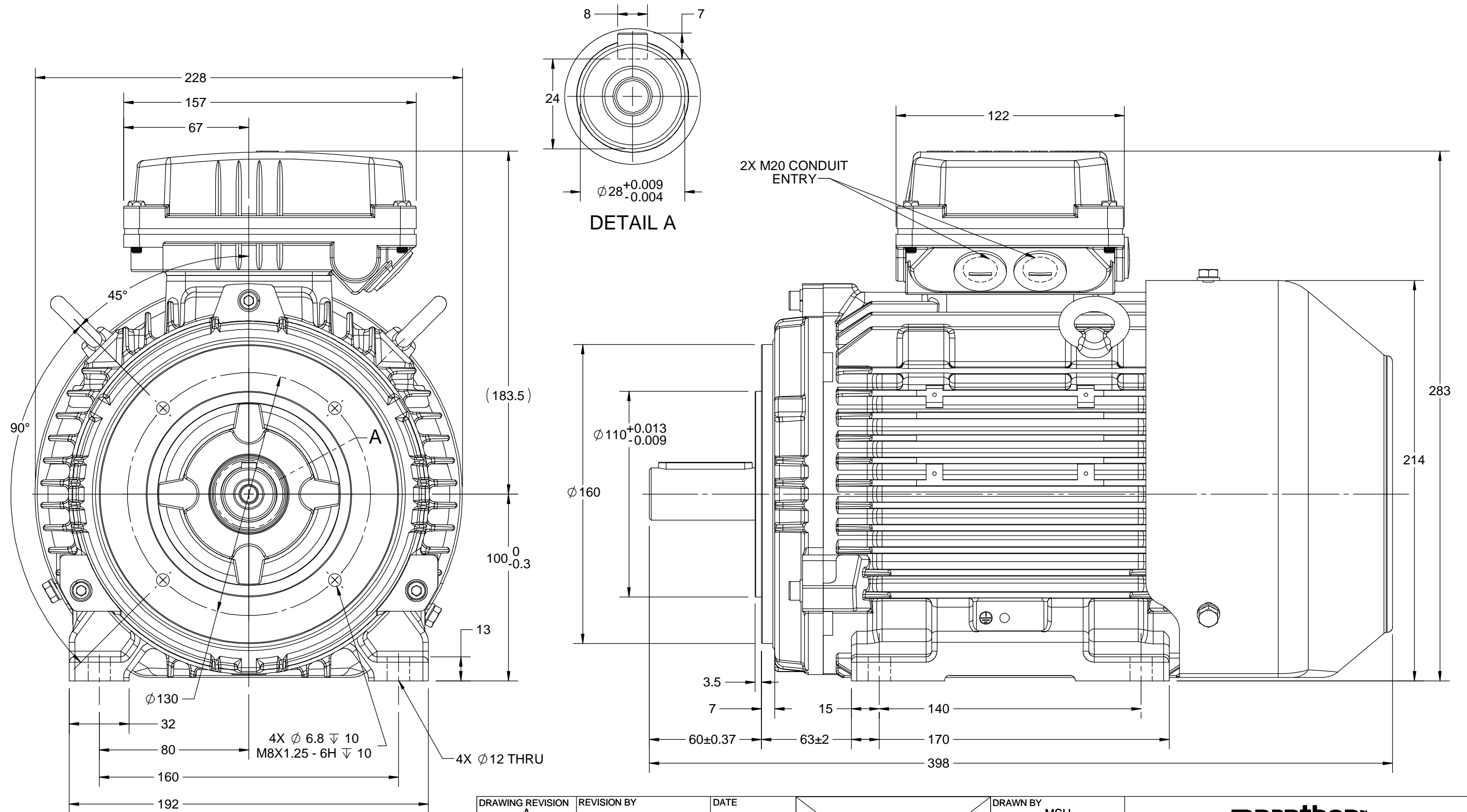
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B

B

A

A



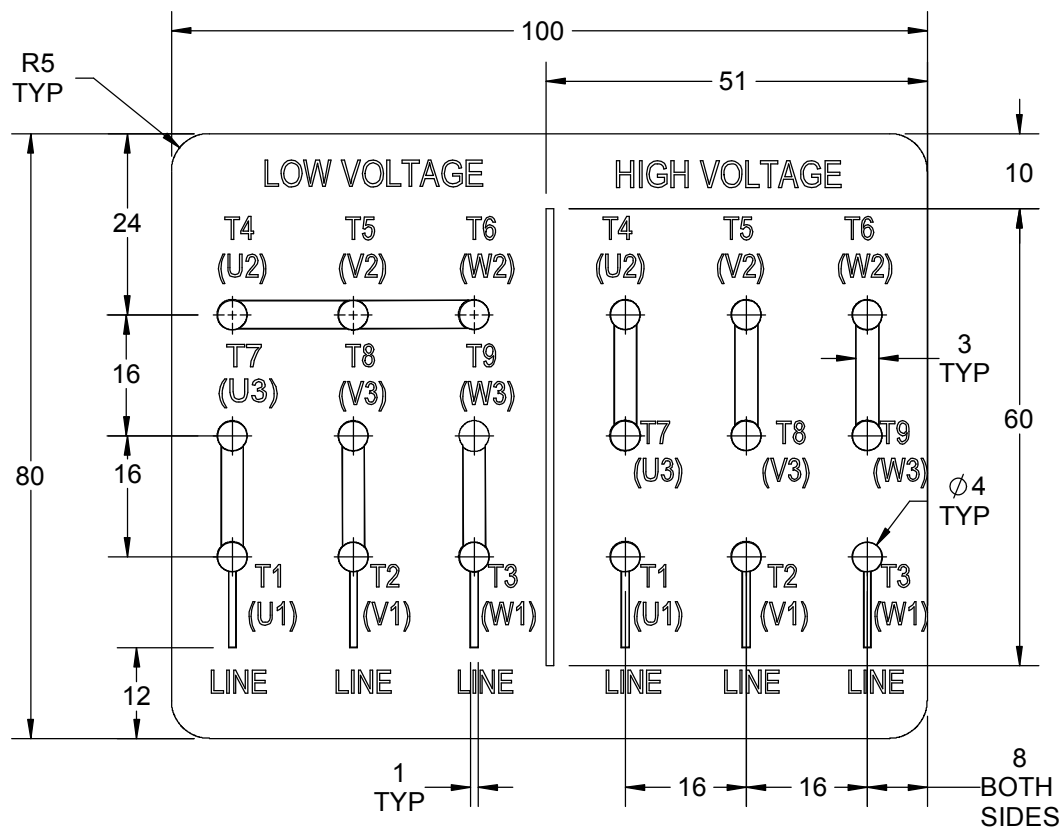
DRAWING REVISION A	REVISION BY	DATE		DRAWN BY MSH				
ECO ECO-0176075	APPROVED BY	DATE		DATE 31/10/2019				
ECO DESCRIPTION				APPROVED BY VJ	DESCRIPTION			
NEW DRAWING RELEASE				DATE 31/10/2019	OUTLINE			
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				THIRD ANGLE PROJECTION		SIZE B	DRAWING NUMBER SS620949	

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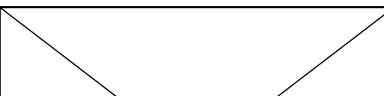


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1



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								
ECO DESCRIPTION							APPROVED BY JAY		DESCRIPTION  <b>CONNECTION DIAGRAM</b> 9 LEADS- STAR CONNECTON						
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							REFERENCE						MATERIAL		PROCESS/FINISH
							THIRD ANGLE PROJECTION				SIZE A		DRAWING NUMBER 8442000675		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: 8442000675  
OUTLINE: SS620949  
WINDING: IE3L1006202 NONE 1  
SPEED:

CUSTOMER P.O. #:  
REFERENCE MODEL #: TCA1P53AE251GAA009  
CAT #: R920  
CUSTOMER PART #:  
MOUNTING: F3

### TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
2	1.5	1200	1175	100L	TEFC	TCA 100LA06	K	N

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB (* C)	ELEV.(Ft.)
3	60/50	230/460#200/400	6/3&5.4/2.7	LINE OR INVERTER	CONT	F	1.15	40	3300

F.L. EFF	88.5	3/4 LD EFF	88.5	1/2 LD EFF	84.9	GTD EFF	ELECT. TYPE
F.L. PF	72.0	3/4 LD PF	63.0	1/2 LD PF	50.0	86.8	SQ CAGE INV RATED

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (* C)
9.0 LB-FT	22.3	21.6 LB-FT	30.8 LB-FT	80

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK <sup>2</sup>	MAX. LOAD WK <sup>2</sup>	SAFE STALL TIME	STARTS/HOUR	APROX.	MOTOR WGT
55 dBA	64 dBA	0.45 LB-FT <sup>2</sup>	0.45 LB-FT <sup>2</sup>	15 SEC.	2	44	KG.

### \*\*\* SUPPLEMENTAL INFORMATION \*\*\*

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	MOTOR ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
FT-FLANGE-130	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
3.829	2.411	7.091	9.218	144.801	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: 4/13/2020		TCA1P53AE251GAA009							
Customer: _____		Submittal							
Attention: _____									
Submitted by: _____		Data @ 460 V							
Motor Load Data									
Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	1.80	2.10	2.20	2.60	3.0	3.3	3.5	22.3	
Torque (ft-lb)	0.00	2.20	4.4	6.7	9.0	10.3	11.3	21.6	
RPM	1200	1193	1187	1181	1175	1,169	1166	0	
Efficiency (%)		76.4	84.9	88.5	88.5	87.4	87.1		
P.F. (%)	8.0	30.0	50.0	63.0	72.0	75.0	77.0	63.4	
Motor Speed Data									
	LR	Pull-Up	BD	Rated	Idle	Information Block			
Speed (RPM)	0	400	977	1175	1200				
Current (Amps)	22.3	21.2	12.5	3.0	1.80				
Torque (ft-lb)	21.6	20.5	30.8	9.0	0.00				
<p>Efficiency (%) P.F. (%) Current (Amps)</p> <p>Graph showing Efficiency (%), P.F. (%), and Current (Amps) vs Load (0% to 140%).</p>						IEC			
						HP	2.0		
						Sync. RPM	1200		
						Frame	100		
						Enclosure	TEFC		
						Construction	TCA 100L06		
						Voltage	230/460#200/400 V		
						Frequency	60 Hz		
						Design	N		
						LR Code letter	K		
						Service Factor	1.15		
						Temp Rise @ FL	80 °C		
						Duty	CONT		
						Ambient	40 °C		
						Elevation	3,300 feet		
Rotor/Shaft wk²	0.45 Lb-Ft²								
Ref Wdg	IE3L1006202 NONE								
Sound Pressure @ 1M	55 dBA								
VFD Rating	CONSTANT 2:1/VARIABLE 10:1								
Outline Dwg	SS620949								
Conn. Diag	8442000675								
Additional Specifications:									
0									
0									
EQUIV CKT (OHMS / PHASE)									
R1	R2	X1	X2	Xm					
3.8290	2.4110	7.0910	9.2180	144.8010					
Speed -Torque Curve									
<p>Torque Amps</p> <p>Graph showing Torque and Amps vs RPM (0 to 1400).</p>									

## 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 : TCA1P53AE251GAA009

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

Catalog No : R920

Rework No : N/A

Directives :

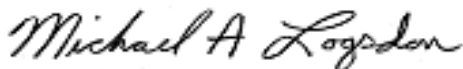
Low Voltage Directive 2014/35/EU

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**