

# PRODUCT INFORMATION PACKET

Model No: 256THFNA8038

Catalog No: Y598

Blue Max® Inverter Duty Encoder Motor, 20 HP, 3 Ph, 60 Hz, 230/460 V, 1800 RPM, 256TC Frame, TEFC



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### Nameplate Specifications

Output HP	<b>20 Hp</b>	Output KW	<b>14.9 kW</b>
Frequency	<b>60 Hz</b>	Voltage	<b>230/460 V</b>
Current	<b>52.0/26.0 A</b>	Speed	<b>1775 rpm</b>
Service Factor	<b>1</b>	Phase	<b>3</b>
Efficiency	<b>91 %</b>	Power Factor	<b>78</b>
Duty	<b>Continuous</b>	Insulation Class	<b>H</b>
Design Code	<b>INV</b>	KVA Code	<b>J</b>
Frame	<b>256TC</b>	Enclosure	<b>Totally Enclosed Fan Cooled</b>
Thermal Protection	<b>Thermostat</b>	Ambient Temperature	<b>40 °C</b>
Drive End Bearing Size	<b>6309</b>	Opp Drive End Bearing Size	<b>6210</b>
UL	<b>Recognized</b>	CSA	<b>Y</b>
CE	<b>Y</b>	IP Code	<b>43</b>
Number of Speeds	<b>1</b>		

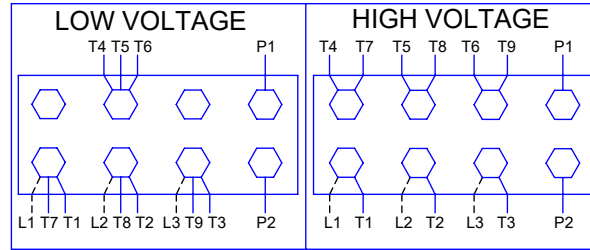
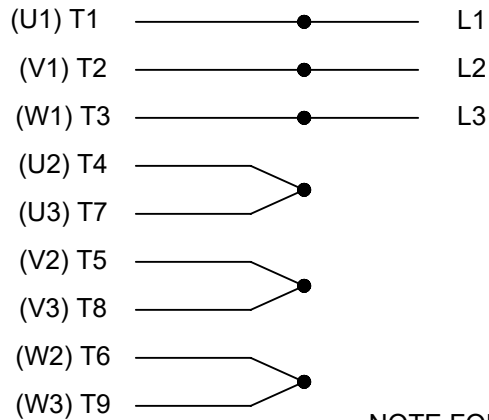
### Technical Specifications

Electrical Type	<b>Squirrel Cage Inverter Duty</b>	Starting Method	<b>Inverter Only</b>
Poles	<b>4</b>	Rotation	<b>Reversible</b>
Resistance Main	<b>.325 Ohms</b>	Mounting	<b>Rigid Base</b>
Motor Orientation	<b>Horizontal</b>	Drive End Bearing	<b>Ball</b>
Opp Drive End Bearing	<b>Ball</b>	Frame Material	<b>Cast Iron</b>
Shaft Type	<b>T</b>	Overall Length	<b>28.09 in</b>
Frame Length	<b>12.25 in</b>	Shaft Diameter	<b>1.625 in</b>
Shaft Extension	<b>3.75 in</b>	Assembly/Box Mounting	<b>F1/F2 CAPABLE</b>
Inverter Load	<b>CONSTANT 2000:1</b>		
Outline Drawing	<b>B-SS203502-1225</b>	Connection Drawing	<b>A-EE7308T</b>



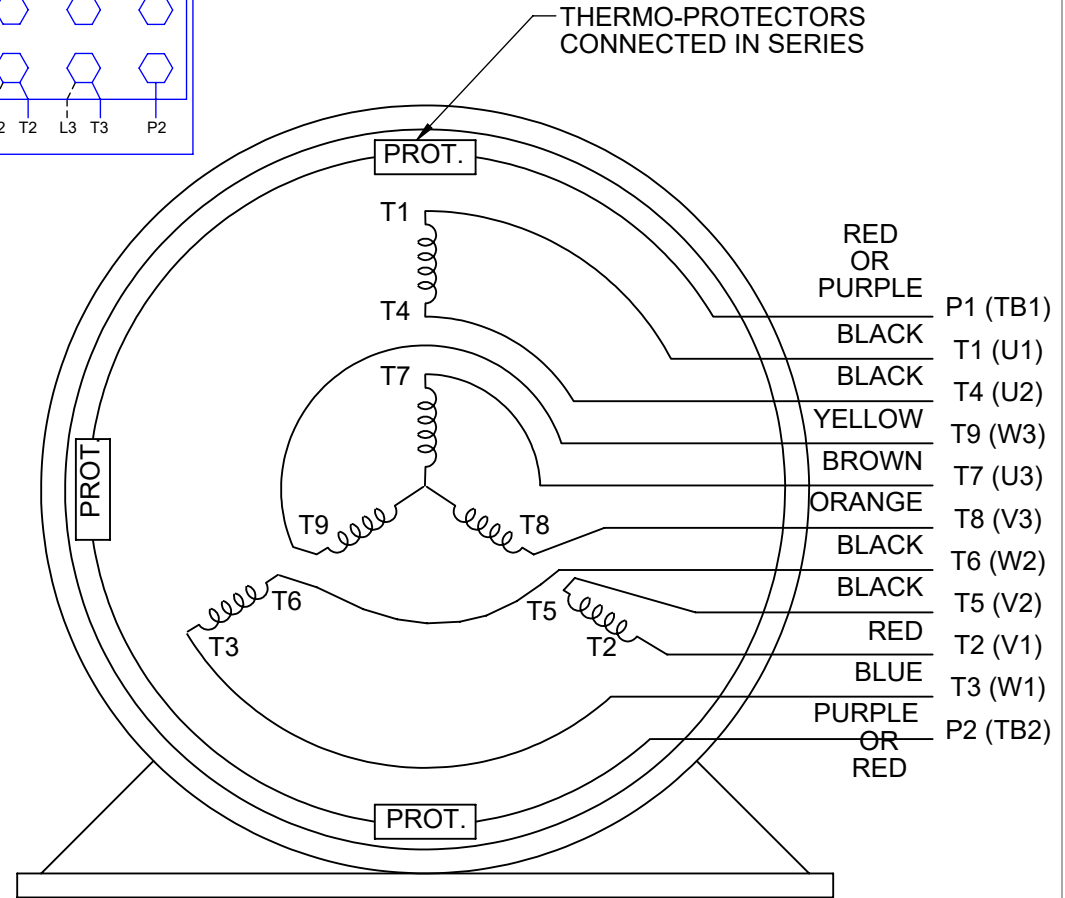


**HIGH VOLTAGE**



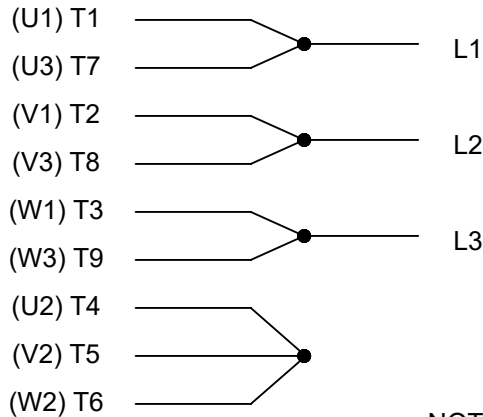
**THREE PHASE  
DUAL VOLTAGE MOTOR**

THERMO-PROTECTORS  
CONNECTED IN SERIES



NOTE FOR FACTORY USE ONLY:  
TO SURGE TEST FOR COMMON CONNECT:  
HIGH VOLT: CONNECT P1 TO T1  
THEN P2 TO L1  
LOW VOLT: CONNECT P1 TO T1 & T7,  
THEN P2 TO L1

**LOW VOLTAGE**



**VIEW OF TERMINAL END**

NOTE: LEAD'S COLOR CAN BE YELLOW OR WHITE FOR MT2 PLANT

DRAWING REVISION T	REVISION BY ZR	DATE 01-14-2019		DRAWN BY SMC	Regal Beloit America, Inc.	
ECO ECO-0159915	APPROVED BY DR	DATE 01-15-2019		DATE 05-13-1992		
ECO DESCRIPTION ADDED TERMINAL CONNECTION DIAGRAM				APPROVED BY TB	DESCRIPTION <b>CONN DIAGRAM-INTERNAL</b> 3 PHASE - DUAL VOLTAGE MOTOR	
<small>COPYRIGHT REGAL BELOIT AMERICA, INC. ALL RIGHTS RESERVED. PROPRIETARY AND CONFIDENTIAL INFORMATION - THIS DOCUMENT IS THE PROPERTY OF REGAL BELOIT AMERICA, INC. ("OWNER") AND CONTAINS OWNER'S PROPRIETARY INFORMATION. ANY PERSON, CORPORATION OR OTHER FIRM RECEIVING IT IS DEEMED, BY RECEIVING IT, TO AGREE THAT IT, AND/OR ANY PART OF IT, SHALL NOT BE DISCLOSED TO ANY PERSON, CORPORATION OR OTHER ENTITY, DUPLICATED, AND/OR USED, EXCEPT AS EXPRESSLY APPROVED IN WRITING IN ADVANCE BY OWNER. THIS DOCUMENT SHALL BE RETURNED TO OWNER UPON REQUEST. IT MAY BE SUBJECT TO CERTAIN RESTRICTIONS UNDER APPLICABLE EXPORT CONTROL LAWS AND REGULATIONS.</small>				DATE 05-13-1992	MATERIAL	PROCESS/FINISH
			REFERENCE EE7308/EE7300	SIZE A	DRAWING NUMBER EE7308T	SHEET 1 OF 1
			THIRD ANGLE PROJECTION			

CERTIFICATION DATA SHEET

Model#: 256THFNA8038 BC WINDING#: K2564204 R12 1  
 CONN. DIAGRAM: A-EE7308T ASSEMBLY: F1/F2 CAPABLE  
 OUTLINE: B-SS203502-1225

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN		
20	14.9	1800	1775	256TC	TEFC	J	INV		
PH	Hz	VOLTS	FL AMPS	START TYPE	DUTY	INSL	S.F	AMB°C	ELEVATION
3	60	230/460	52/26	INVERTER ONLY	CONTINUOUS	H4	1.0	40	3300
FULL LOAD EFF: 91	3/4 LOAD EFF: 90.2	1/2 LOAD EFF: 88.5	GTD. EFF		ELEC. TYPE		NO LOAD AMPS		
FULL LOAD PF: 78	3/4 LOAD PF: 72	1/2 LOAD PF: 58	89.5		SQ CAGE INV DUTY		28 / 14		
F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE		F.L. RISE°C				
59.2 LB-FT	364 / 182	147 LB-FT 248	195 LB-FT 329		60				
SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS /HOUR	APPROX. MOTOR WGT			
68 dBA	78 dBA	2.7 LB-FT^2	- LB-FT^2	- SEC.	-	377 LBS.			

EQUIVALENT WYE CKT.PARAMETERS (OHMS PER PHASE)

R1	R2	X1	X2	XM
0.22578	0.1633	0.81082	0.43594	19.028
RM	ZREF	XR	TD	TD0
986.9	14.2	5.2	0.018	0.316

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

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
C-FACE	ENCODER	RIGID	HORIZONTAL	FALSE	NONE	FALSE	NONE	BLUE (ENAMEL)

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	OPE	POLYREX EM	T	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON
BALL	BALL						
6309	6210						

THERMO-PROTECTORS				THERMISTORS	CONTROL	SPACE /n HEATERS
THERMOSTATS	PROTECTORS	WDG RTDs	BRG RTDs	NONE	FALSE	NONE VOLTS
TSTATS (N/C)	NOT	NONE	NONE			

If Inverter equals NONE, contact factory for further information

INVERTER TORQUE: CONSTANT 2000:1 INV. HP SPEED RANGE: 1.5 X BASE SPEED
ENCODER: PROVISIONS ONLY DYNAPAR HS35 NONE NONE PPR
BRAKE: NONE NONE NONE P/N NONE

\*  
N  
O  
T  
E  
S  
\*

NONE	NONE	
- FT-LB	NONE V	NONE Hz

DATE: 06/21/2017 09:40:25 AM  
FORM 3531 REV.3 02/07/99  
\*\* Subject to change without notice.

Data Sheet

Date: 6/20/2017

256THFNA8038

Customer: \_\_\_\_\_



Attention: \_\_\_\_\_

Submittal

Submitted by: FAREEDA DUDEKULA

Data @ 460 V

Motor Load Data

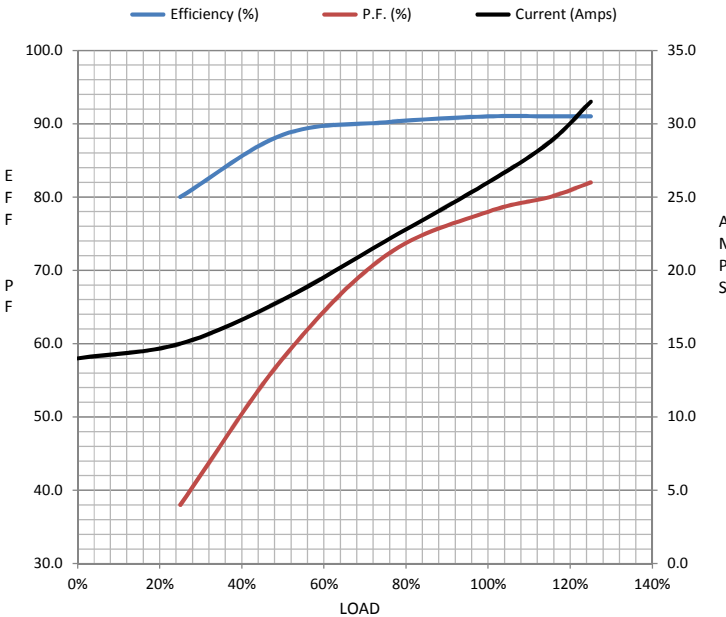
Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	14.0	15.0	18.0	22.0	26.0	28.8	31.5	182
Torque (ft-lb)	0.00	14.8	29.5	44.5	59.2	66.9	74.5	147
RPM	1800	1795	1788	1782	1775	1,771	1765	0
Efficiency (%)		80.0	88.5	90.2	91.0	91.0	91.0	
P.F. (%)	6.0	38.0	58.0	72.0	78.0	80.0	82.0	39.5

Motor Speed Data

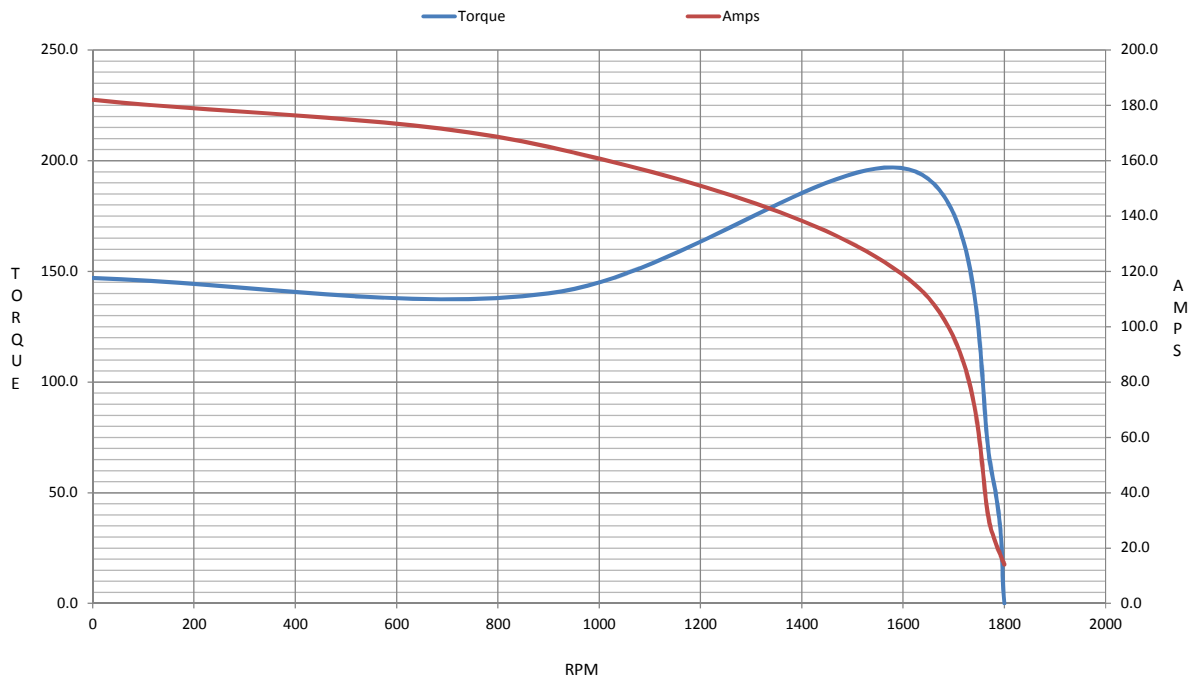
	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	900	1625	1775	1800
Current (Amps)	182	165	115	26.0	14.0
Torque (ft-lb)	147	140	195	59.2	0.00

Information Block

HP	20.0			
Sync. RPM	1800			
Frame	256			
Enclosure	TEFC			
Construction	TFN			
Voltage	230/460 V			
Frequency	60 Hz			
Design	A			
LR Code letter	J			
Service Factor	1.0			
Temp Rise @ FL	55 °C			
Duty	CONT			
Ambient	40 °C			
Elevation	1,000 feet			
Rotor/Shaft wk <sup>2</sup>	2.70 Lb-Ft <sup>2</sup>			
Ref Wdg	K2564204 R12			
Sound Pressure @ 1M	68 dBA			
VFD Rating	CONSTANT 2000:1			
Outline Dwg	B-SS203502-1225			
Conn. Diag	A-EE7308T			
Additional Specifications:				
0				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.2260	0.1630	0.8110	0.4360	19.0280



Speed -Torque Curve





## 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 : 256THFNA8038

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

Catalog No : Y598

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**