PRODUCT INFORMATION PACKET

Model No: 254TTGN16524
Catalog No: C307B
Hazardous Duty® Explosion Proof Motor, 15 & 10 HP, 3 Ph, 60 & 50 Hz, 230/460 & 190/380 V, 3600 & 3000 RPM, 254TC Frame, EPFC

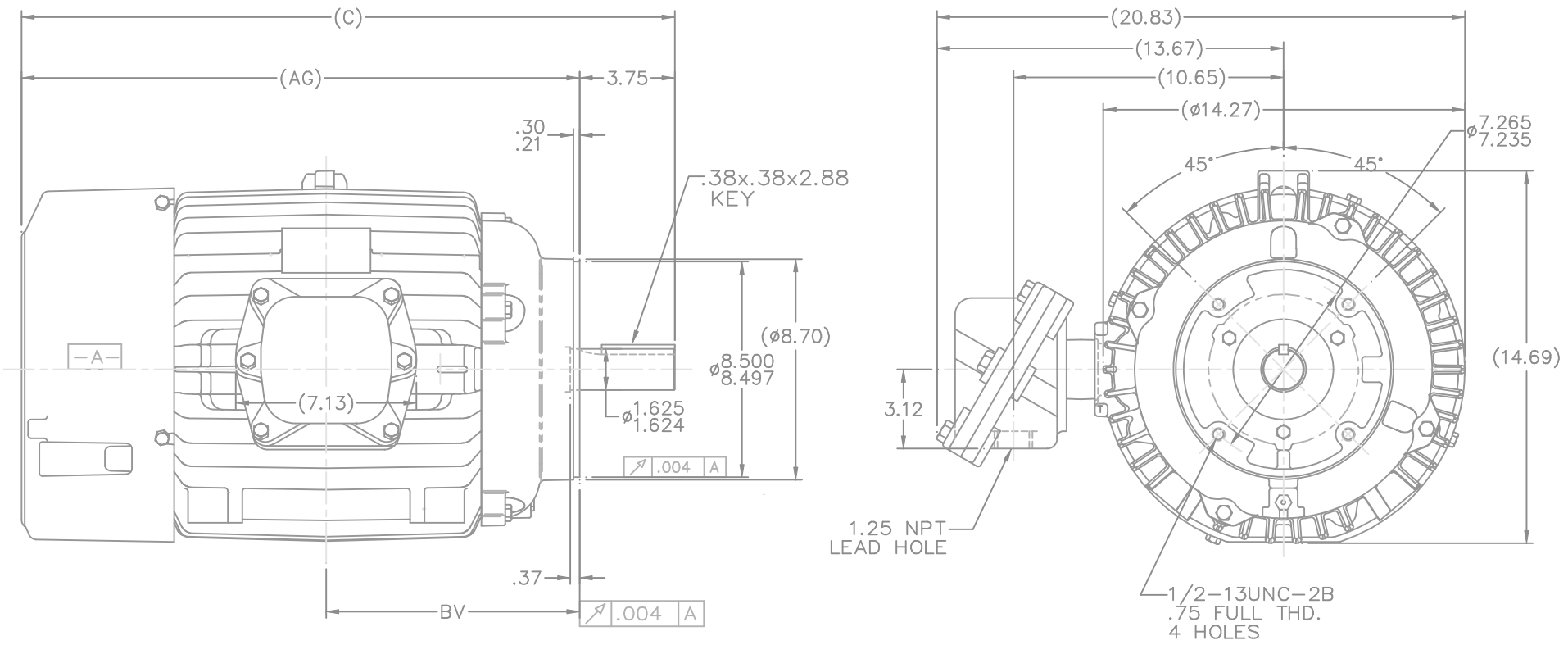
marathon® Motors

Nameplate Specifications

Phase	3	Output HP	15 & 10 Hp
Output KW	11.2 & 7.5 kW	Voltage	230/460 & 190/380 V
Speed	3535 & 2950 rpm	Service Factor	1.0 & 1.0
Frame	254TC	Enclosure	Explosion Proof Fan cooled
Thermal Protection	Thermostat	Efficiency	91 & 90.2 %
Ambient Temperature	40 °C	Frequency	60 & 50 Hz
Current	36/18 & 30/15 A	Power Factor	86
Duty	Continuous	Insulation Class	F
Design Code	B	KVA Code	G
Drive End Bearing Size	6309	Opp Drive End Bearing Size	6210
UL	UL Listed And CSA Certified	CSA	Y
CE	N	IP Code	54
Number of Speeds	1	Hazardous Location	EXP PROOF CL I GR C&D CL II GR F&G T3B

Technical Specifications

Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Line Or Inverter
Poles	2	Rotation	Reversible
Resistance Main	.66 Ohms	Mounting	Round
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	T	Overall Length	25.77 in
Frame Length	12.25 in	Shaft Diameter	1.625 in
Shaft Extension	3.75 in	Assembly/Box Mounting	F1 ONLY
Inverter Load	CONSTANT 2:1		
Outline Drawing	B-SS207446-1225	Connection Drawing	A-EE7308T



NOTES:
1. BOX CAN BE ROTATED CLOCKWISE UP TO 270° FROM ITS ORIGINAL POSITION.
2. NAMEPLATE TO BE READ FROM CONDUIT BOX SIDE OF MOTOR

DASH	FRAME	C	AG	BV	
1225	254-6TC	25.77	22.02	10.00	

NO.	REVISION	BY & DATE	CHK
2	REDRAWN IN AUTOCAD	RWR 09-27-2004	
1	NEW DRAWING MU18309	MH 02-06-1998	ML

TOLERANCES UNLESS SPECIFIED

DEC.	INCHES
.X	±.1
.XX	±.03
.XXX	±.005
.XXXX	±.0005
ANG	±7'30"

MARATHON ELECTRIC

TITLE OUTLINE
254-6TC FR. -EXP. PR. - 'C' FACE

MAT'L.
FINISH
CAD FILE ss207446

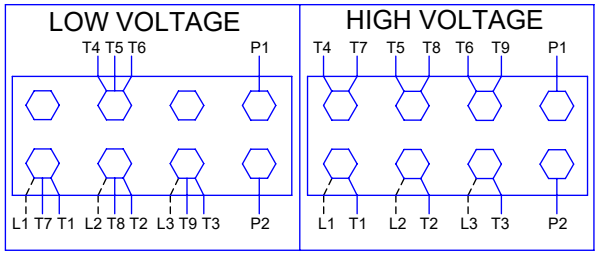
RFP 02-06-1998
DIST LB

DRAWN MH 02-05-1998
CHK ML 02-06-1998
APPD TB 02-06-1998
SCALE 1=4
REF
FMF
PREV

SIZE B | DRAWING NO. SS207446 | PAGE 1 OF 1 | REV. 2

HIGH VOLTAGE

(U1) T1 — L1
(V1) T2 — L2
(W1) T3 — L3
(U2) T4
(U3) T7
(V2) T5
(V3) T8
(W2) T6
(W3) T9

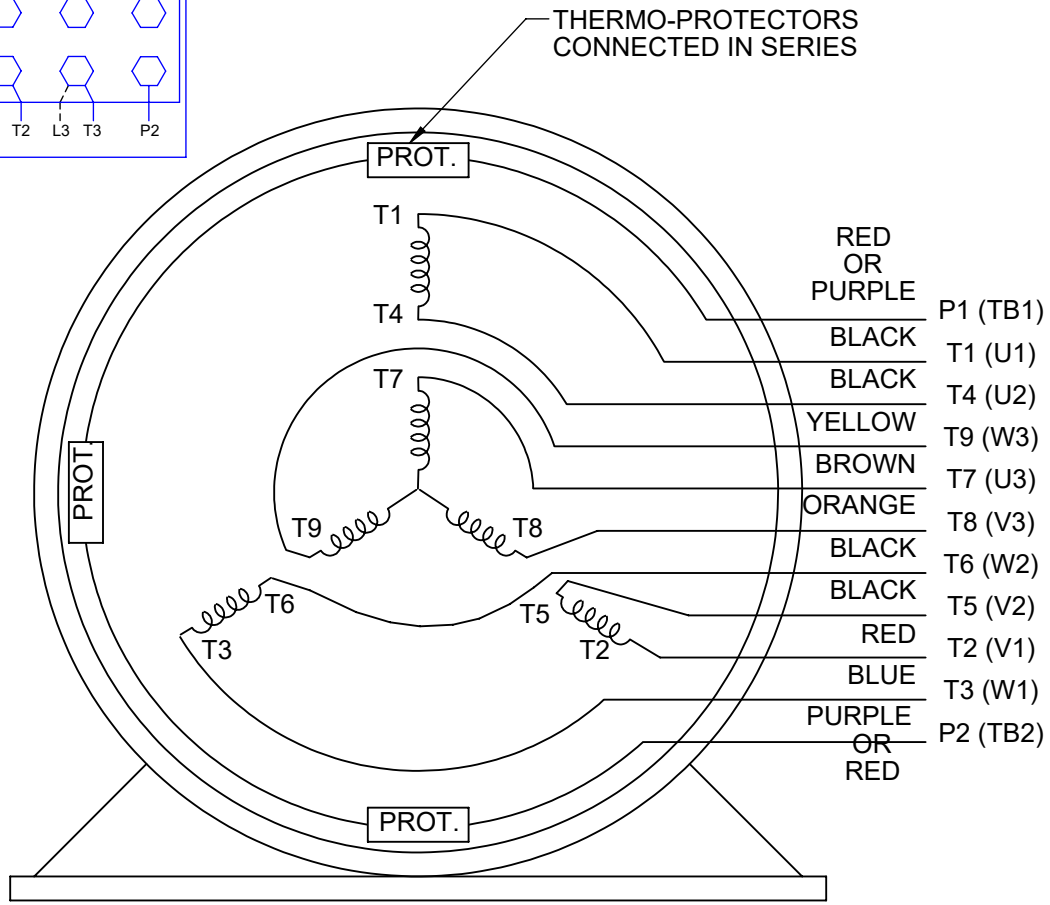


NOTE FOR FACTORY USE ONLY:
TO SURGE TEST FOR COMMON CONNECT:
HIGH VOLT: CONNECT P1 TO T1
THEN P2 TO L1
LOW VOLT: CONNECT P1 TO T1 & T7,
THEN P2 TO L1

LOW VOLTAGE

(U1) T1
(U3) T7 — L1
(V1) T2
(V3) T8 — L2
(W1) T3
(W3) T9 — L3
(U2) T4
(V2) T5
(W2) T6

THREE PHASE DUAL VOLTAGE MOTOR



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: CONN DIAGRAM-INTERNAL
				DATE: 05-13-1992	3 PHASE - DUAL VOLTAGE MOTOR
				REFERENCE: EE7308/EE7300	MATERIAL / PROCESS/FINISH
				THIRD ANGLE PROJECTION	SIZE: A — DRAWING NUMBER: EE7308T — 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: A-EE7308T
OUTLINE: B-SS207446-1225
WINDING: K254296 NONE 6
SPEED:

CUSTOMER P.O. #:
REFERENCE MODEL #: 254TTGN16524
CAT #: C307B
CUSTOMER PART #:
MOUNTING: F1 ONLY

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
15	11.2	3600	3535	254TC	TEFC	TFN	G	B

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB	ELEV.
3	60/50	230/460#190/380	36/18&30/15	LINE OR INVERTER	CONT	F	1.15	40	3300

F.L. EFF	91.0	3/4 LD EFF	90.2	1/2 LD EFF	88.5	GTD EFF	ELECT. TYPE
F.L. PF	86.0	3/4 LD PF	82.0	1/2 LD PF	73.0	90.2	SQ CAGE INV RATED

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (°C)
22.2 LB-FT	116	38.0 LB-FT 171%	62.0 LB-FT 279%	65

@ 3 FT.	POWER	ROTOR WK²	MAX. LOAD WK²	SAFE STALL TIME	STARTS/HOUR	MOTOR WGT
72 dBA	81 dBA	1.10 LB-FT²	22 LB-FT²	20 SEC.	2	290 LB.

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	MOTOR ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
C-FACE	STANDARD	ROUND	HORIZONTAL	UM SEVERE	DF CL I GR C&D CL II GF	NO	NONE	BLUE (ENAMEL)

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

THERMOSTATS	PROTECTORS	WDG RTD's	BRG RTD's	THERMISTORS	CONTROL	SPACE HEATERS
TSTATS (N/C)	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
0.425	0.268	1.493	1.247	39.539	0.080	ODE

NOTES:
*
*

INVERTER TORQUE: CONSTANT 2:1
INV. HP SPEED RANGE: NONE

ENCODER: NONE
NONE
NONE NONE PPR

BRAKE: NONE
NONE NONE
FT-LB: NA
VOLTAGE: NONE HZ:
UL: NONE

PREPARED BY: FAREEDA DUDEKULA
DATE: 11/5/2018

FORM: 3531 REV_4 2/27/06

Data Sheet

Date: 11/5/2018
Customer:
Attention:
Submitted by: FAREEDA DUDEKULA

marathon® electric

254TTGN16524

Submittal

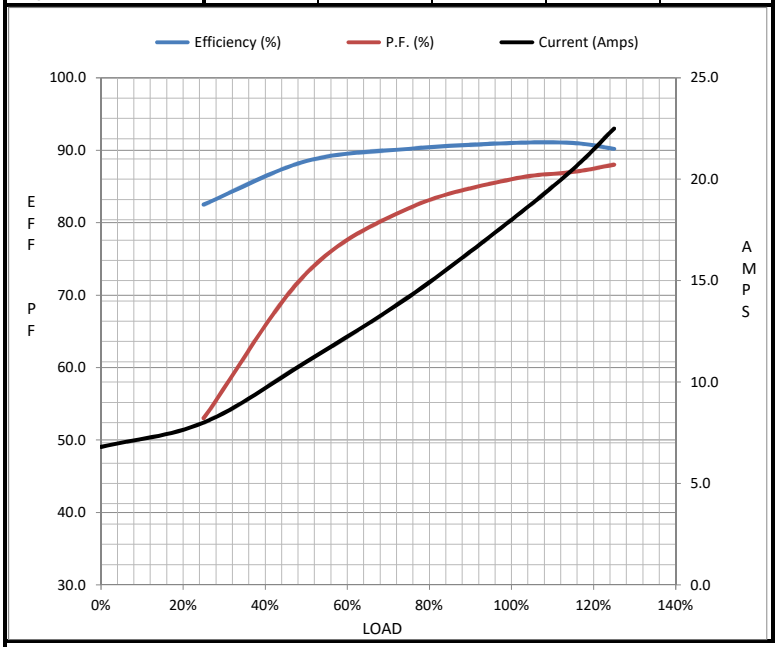
Data @ 460 V

Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	6.8	8.0	11.0	14.2	18.0	20.5	22.5	116	
Torque (ft-lb)	0.00	5.5	11.0	16.5	22.2	25.0	28.0	38.0	
RPM	3600	3585	3570	3555	3535	3,525	3520	0	
Efficiency (%)		82.5	88.5	90.2	91.0	91.0	90.2		
P.F. (%)	9.5	53.0	73.0	82.0	86.0	87.0	88.0	35.0	

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	1800	3175	3535	3600
Current (Amps)	116	103	75.0	18.0	6.8
Torque (ft-lb)	38.0	37.0	62.0	22.2	0.00



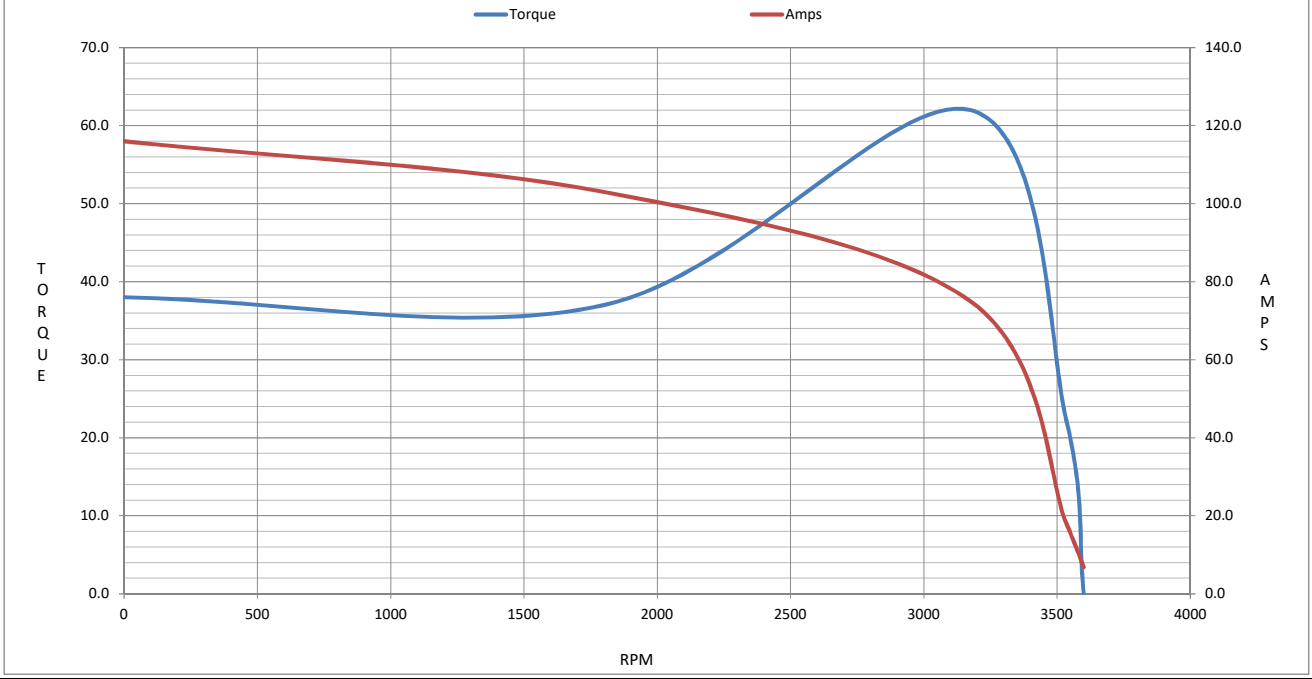
Information Block

HP	15.0	
Sync. RPM	3600	
Frame	254182TTFC6080	
Enclosure	TEFC	
Construction	TFN	
Voltage	230/460#190/380	V
Frequency	60	Hz
Design	A	
LR Code letter	G	
Service Factor	1.15	
Temp Rise @ FL	65	° C
Duty	CONT	
Ambient	40	° C
Elevation	1,000	feet
Rotor/Shaft wk²	1.10	Lb-Ft²
Ref Wdg	K254296 NONE	
Sound Pressure @ 1M	72	dBA
VFD Rating	CONSTANT 2:1	
Outline Dwg	B-SS207446-1225	
Conn. Diag	A-EE7308T	
Additional Specifications:		
0		
0		

EQUIV CKT (OHMS / PHASE)

R1	R2	X1	X2	Xm
0.4250	0.2680	1.4930	1.2470	39.5390

Speed -Torque Curve



CERTIFICATE OF COMPLIANCE

Certificate Number	20220311- E12044
Report Reference	E12044-19950413
Issue Date	2022-MARCH-11
Issued to:	REGAL BELOIT AMERICA INC 1946 W COOK RD FORT WAYNE IN 46818 Tradename: Marathon
This certificate confirms that representative samples of	MOTORS FOR USE IN HAZARDOUS LOCATIONS Electric motors for use in hazardous locations; Class I, Groups C and D; Class II, Groups F and G; Inclusive of Model Number 254TTGN16524 (may have prefix and/or suffix characters). Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.
Standard(s) for Safety:	UL 674 - Electric Motors and Generators for Use in Division 1 Hazardous (Classified) Locations, CSA C22.2 No. 145, Electric Motors and Generators for Use in Hazardous (Classified) Locations
Additional Information:	See the UL Online Certifications Directory at https://iq.ulprospector.com for additional information.

This *Certificate of Compliance* does not provide authorization to apply the UL Mark. Only the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Certification Mark on the product.

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Bruce Mahrenholz, Director North American Certification Program

UL LLC