

PRODUCT INFORMATION PACKET



Model No: LM20029
Catalog No: LM20029
20 HP Automotive Duty Motor, 3 phase, 1800 RPM, 460 V, 286U Frame, TEFC
Automotive Duty Motors



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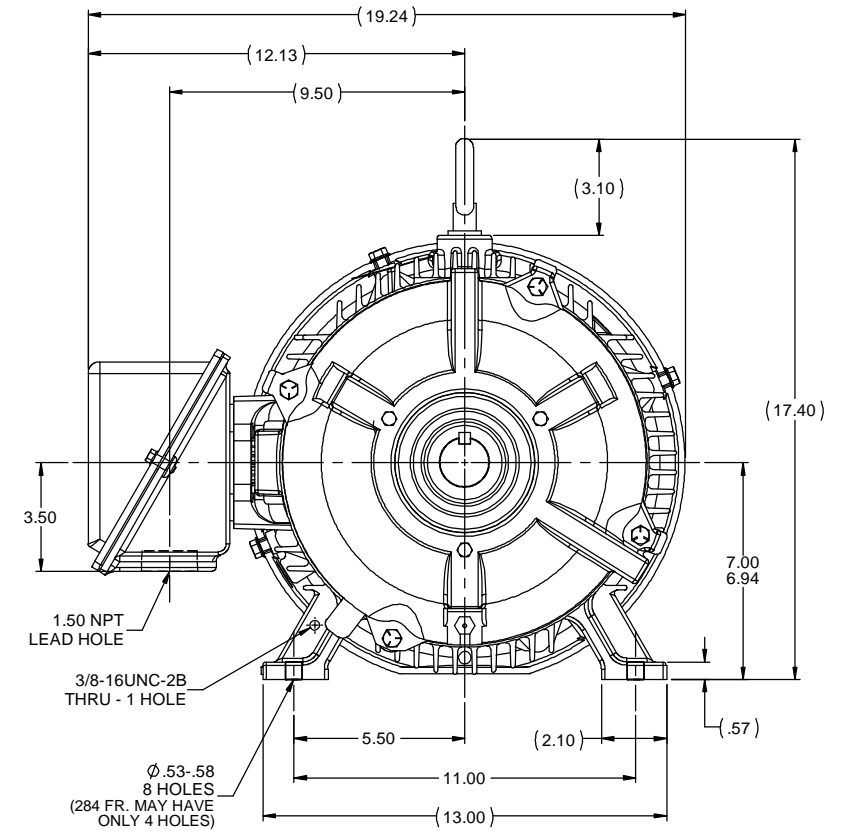
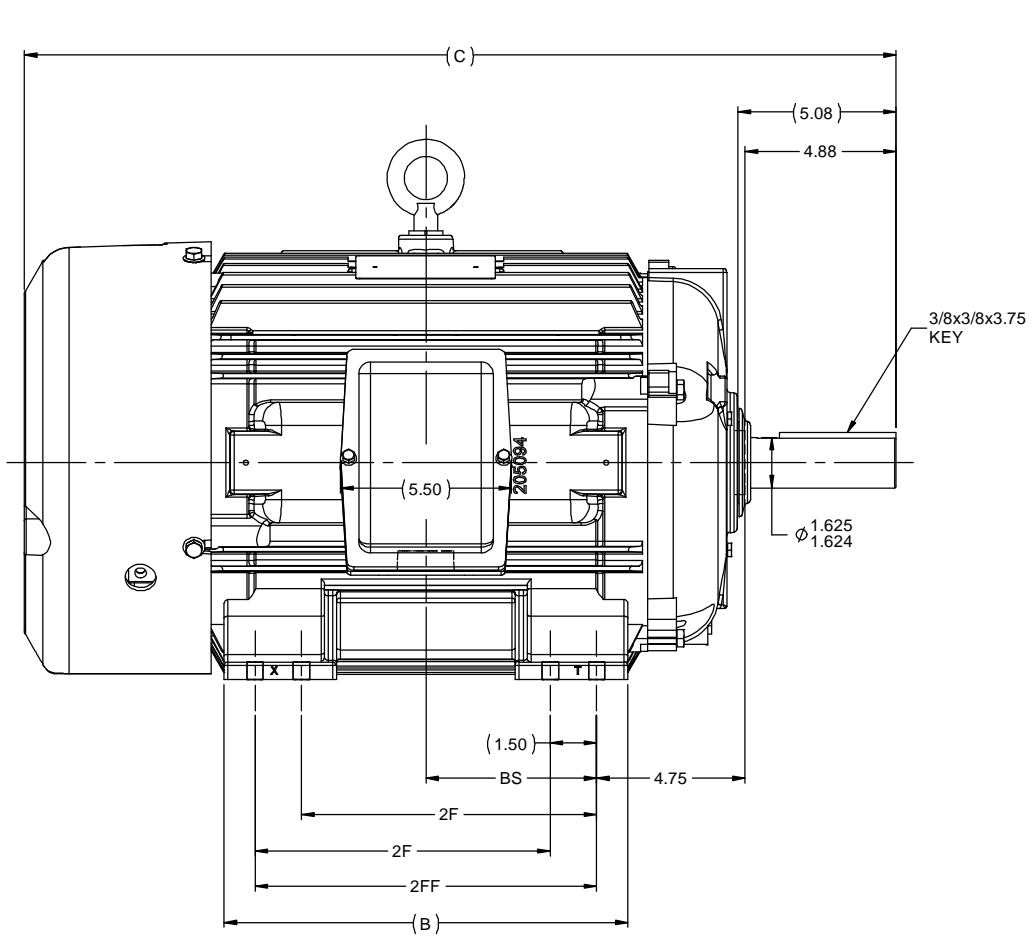
Nameplate Specifications

Output HP	20 Hp	Output KW	14.9 kW
Frequency	60 Hz	Voltage	460 V
Current	24.1 A	Speed	1775 rpm
Service Factor	1	Phase	3
Efficiency	93 %	Power Factor	84
Duty	Continuous	Insulation Class	F
Design Code	B	KVA Code	G
Frame	286U	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No	Ambient Temperature	65 °C
Drive End Bearing Size	6311	Opp Drive End Bearing Size	6210
UL	Recognized	CSA	Y
CE	Y	IP Code	43
Number of Speeds	1		

Technical Specifications

Electrical Type	Squirrel Cage Induction Run	Starting Method	Across The Line
Poles	4	Rotation	Reversible
Resistance Main	.474 Ohms	Mounting	Rigid Base
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	U	Overall Length	28.06 in
Frame Length	14.25 in	Shaft Diameter	1.625 in
Shaft Extension	4.88 in	Assembly/Box Mounting	F1/F2 CAPABLE
Outline Drawing	B-SS311055LN-1425	Connection Drawing	EE7300

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- NOTES:
 1. CONDUIT BOX CAN BE ROTATED IN 90 ° STEPS.
 2. CONDUIT BOX CAN BE MOUNTED ON OPPOSITE SIDE BY REMOVING BRACKETS AND TURNING FRAME 180 °.
 3. NAMEPLATES TO BE READ FROM CONDUIT BOX SIDE OF MOTOR.

1275	284U	26.56	11.50	9.50	---	4.75
1425	284/286U	28.06	13.00	9.50	11.00	5.50
DASH	FRAME	C	B	2F	2FF	BS

		TOLERANCES UNLESS SPECIFIED				Lincoln WORKS		DRAWN HLB 10-10-2000	
		DEC INCHES						CHK ML 10-16-2000	
		X ±.1						APPR TB 10-16-2000	
3	UPDATED TO NEW FRAME DESIGN MU109232	MSG 08-16-2012	TB	XX	±.03	TITLE OUTLINE - TEFC - TFPA		SCALE 1:4	
2	286 FR. WAS 284 FR. (IN NOTE) CN 29200-1344	HLB 01-25-2001	ML	XXX	±.005	280U FR. - STD. - 11.00 LAM. - CAST C' BOX		REF	
1	NEW DRAWING MU33973	HLB 10-16-2000	ML	XXXX	±.0005	MATL		FMF MU33973	
NO	REVISION	BY & DATE	CHK	LANG	±7'30"	FINISH		PAGE OF	
						RFP 10-16-2000 PREV		SIZE DRAWING NO	
						NETWORK FILE NAME SS311055LN		REV	
						SIZE B DRAWING NO SS311055LN		REV 3	



**THREE PHASE - SINGLE VOLTAGE
MOTOR - CONDUIT BOX @ 'A'**

**TO REVERSE ROTATION:
INTERCHANGE ANY TWO
LINE LEAD CONNECTIONS.**

TERMINAL BLOCK WHEN SPECIFIED



VIEW OF TERMINAL END

**IF MOTOR HAS
6 LEADS**



A-9806 DECAL

**OPTIONAL CORD
CONNECTION**



DRAWING REVISION AB	REVISION BY JJB	DATE 06-27-2017
ECO ECO-0125361	APPROVED BY TB	DATE 06-27-2017
ECO DESCRIPTION UPDATED TO CURRENT STANDARDS		
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DRAWN BY DA
DATE 03-26-1993
APPROVED BY TB
DATE 03-26-1993
REFERENCE
THIRD ANGLE PROJECTION

Regal Beloit America, Inc.	
DESCRIPTION CONNECTION DIAGRAM EXTERNAL - SINGLE VOLTAGE - 3Ø MOTOR	
MATERIAL	PROCESS/FINISH
SIZE A	DRAWING NUMBER EE7300
SHEET 1 OF 1	



CERTIFICATION DATA SHEET

2100 WASHINGTON ST.
GRAFTON, WI
PH. 262-277-8810

CONN. DIAGRAM: A-EE7300-LN

OUTLINE: B-SS311055LN-1425

CATALOG #: LM20029

WINDING #: K2564164 R15 2

MOUNTING: F1/F2 CAPABLE

TYPICAL MOTOR PERFORMANCE DATA

HP	kW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
20	14.9	1800	1775	286U	TEFC	G	B

PH	Hz	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB°C
3	60	460	24.1	ACROSS THE LINE	CONTINUOUS	F3	1.0	65

FULL LOAD EFF:	93	3/4 LOAD EFF:	93.6	1/2 LOAD EFF:	93	GTD. EFF		ELEC. TYPE	
FULL LOAD PF:	84	3/4 LOAD PF:	81	1/2 LOAD PF:	72	91.7	SQ CAGE IND RUN		

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
59.2 LB-FT	138	104 LB-FT 176 %	146 LB-FT 247 %	55

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS / HOUR	APPROX. MOTOR WGT
65 dBA	75 dBA	3.2 LB-FT^2	125 LB-FT^2	25 SEC.	2	525 LBS.

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
STANDARD	STANDARD	RIGID	HORIZONTAL	FALSE	NONE	FALSE	NONE	GRAY - LINCOLN

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	ODE	POLYREX EM	U	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON
BALL	BALL						
311	210						

THERMO-PROTECTORS				THERMISTORS	CONTROL	SPACE HEATERS
THERMOSTATS	PROTECTORS	WDG RTDs	BRG RTDs	NONE	FALSE	NONE VOLTS
NONE	NOT	NONE	NONE			

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INVERTER TORQUE: NONE
INV. HP SPEED RANGE: NONE
ENCODER: NONE
NONE NONE
NONE NONE PPR
BRAKE: NONE NONE
NONE P/N NONE
NONE NONE
NONE FT-LB NONE V NONE Hz

Data Sheet

Date: 1/19/2018

LM20029



Data @ **460 V**

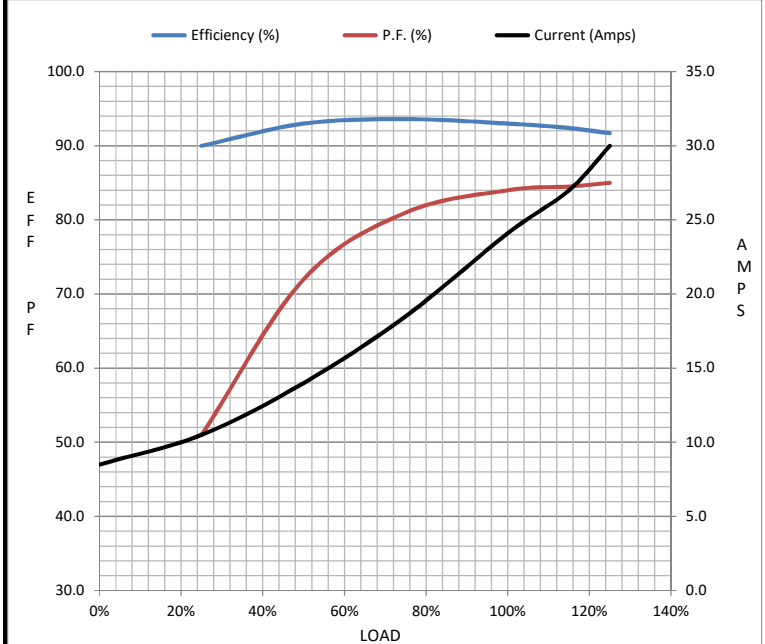
Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	8.5	10.5	14.0	18.5	24.1	27.0	30.0	138
Torque (ft-lb)	0.00	14.5	29.5	44.5	59.2	68.0	74.5	104
RPM	1800	1795	1785	1780	1775	1.770	1760	0
Efficiency (%)		90.0	93.0	93.6	93.0	92.4	91.7	
P.F. (%)	8.5	51.0	72.0	81.0	84.0	84.5	85.0	40.0

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	900	1625	1775	1800
Current (Amps)	138	115	86.0	24.1	8.5
Torque (ft-lb)	104	100	146	59.2	0.00

Information Block				
HP	20.0			
Sync. RPM	1800			
Frame	286			
Enclosure	TEFC			
Construction	TFP			
Voltage	460 V			
Frequency	60 Hz			
Design	B			
LR Code letter	G			
Service Factor	1.15			
Temp Rise @ FL	55 °C			
Duty	CONT			
Ambient	40 °C			
Elevation	1,000 feet			
Rotor/Shaft wk ²	3.2 Lb-Ft ²			
Ref Wdg	K2564164 R15			
Sound Pressure @ 1M	65 dBA			
VFD Rating	NONE			
Outline Dwg	B-SS311055LN-1425			
Conn. Diag	A-EE7300-LN			
Additional Specifications:				
0				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.2670	0.2070	0.9900	1.4910	28.4000



Speed - Torque Curve

