

# PRODUCT INFORMATION PACKET

Model No: LM28215

Catalog No: LM28215

Elevator Duty Motor, 20 HP, 3 Ph, 30 Hz, 200 V, 900 RPM, 324TC Frame, DP



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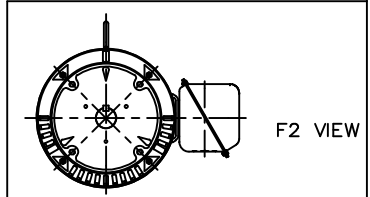
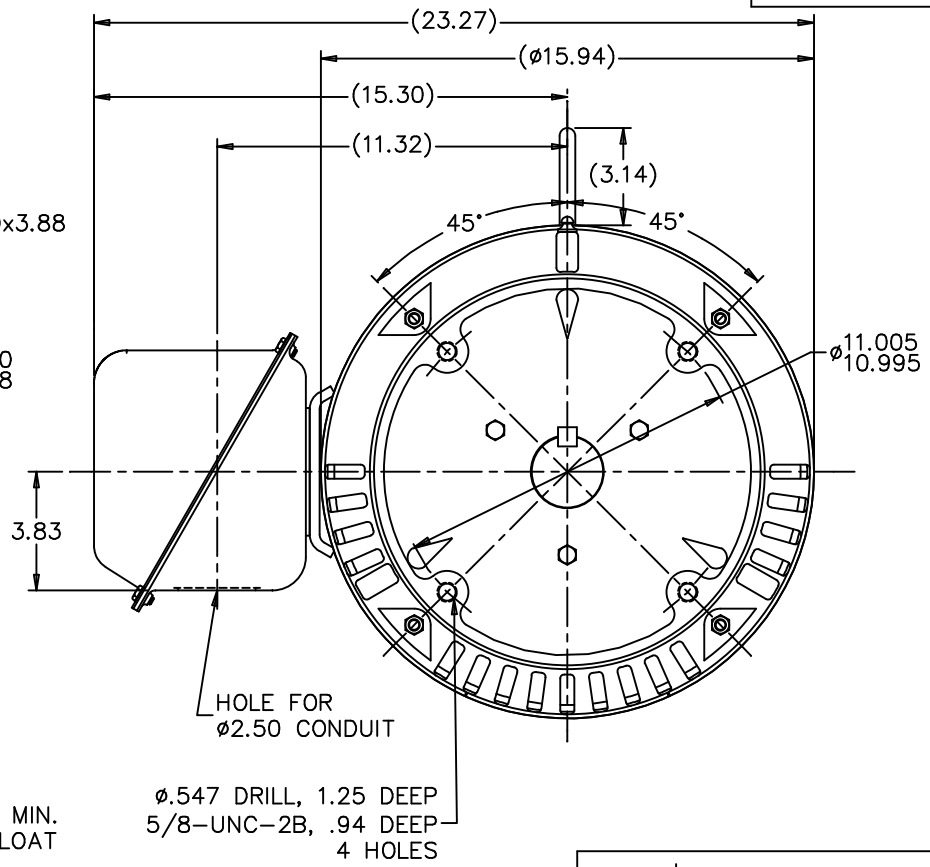
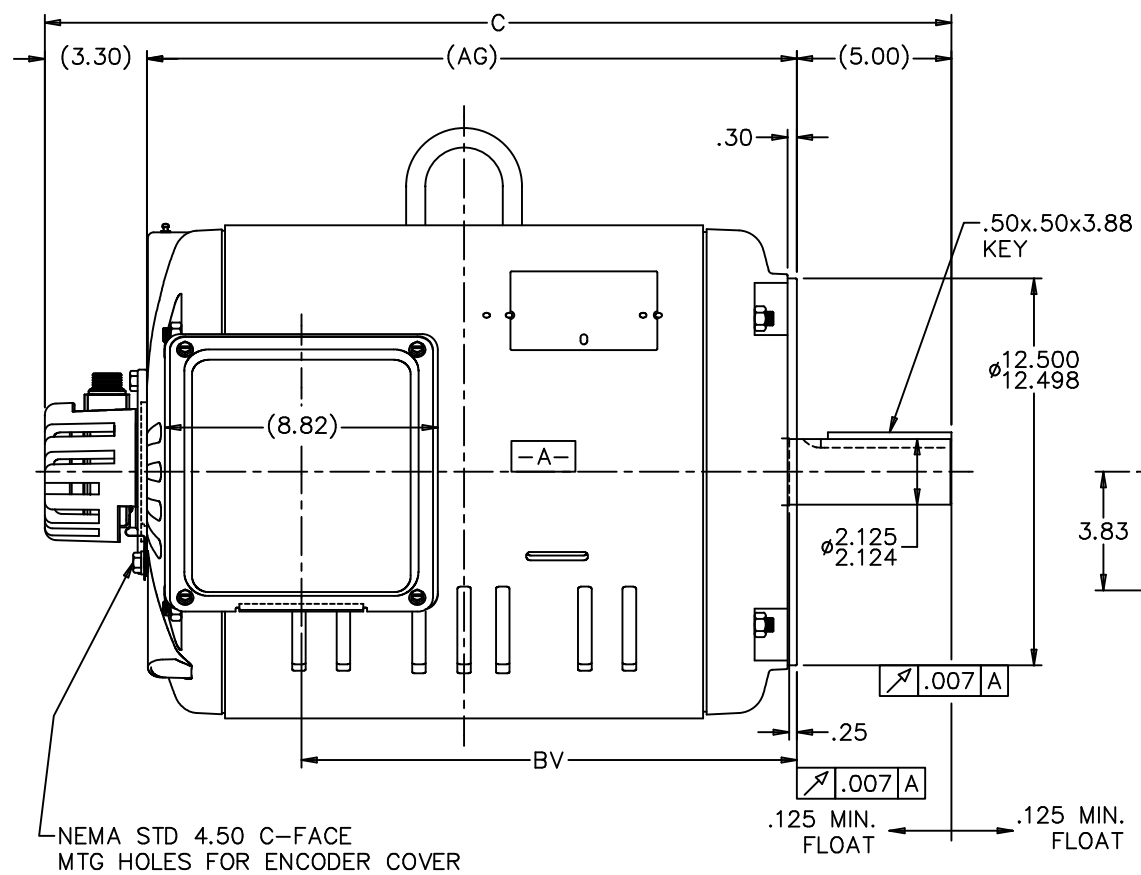
### Nameplate Specifications

Output HP	<b>20 Hp</b>	Output KW	<b>14.9 kW</b>
Frequency	<b>30 Hz</b>	Voltage	<b>200 V</b>
Current	<b>62.0 A</b>	Speed	<b>880 rpm</b>
Service Factor	<b>1</b>	Phase	<b>3</b>
Efficiency	<b>91 %</b>	Power Factor	<b>75.5</b>
Duty	<b>Elevator</b>	Insulation Class	<b>F</b>
Design Code	<b>INV</b>	KVA Code	<b>L</b>
Frame	<b>324TC</b>	Enclosure	<b>Drip Proof</b>
Thermal Protection	<b>No Protection</b>	Ambient Temperature	<b>40 °C</b>
Drive End Bearing Size	<b>311</b>	Opp Drive End Bearing Size	<b>309</b>
UL	<b>Recognized</b>	CSA	<b>Y</b>
CE	<b>Y</b>	IP Code	<b>22</b>
Number of Speeds	<b>1</b>		

### Technical Specifications

Electrical Type	<b>Squirrel Cage Inverter Duty</b>	Starting Method	<b>Wye Start Delta Run Or Inverter</b>
Poles	<b>4</b>	Rotation	<b>Reversible</b>
Resistance Main	<b>.55 Ohms</b>	Mounting	<b>Round</b>
Motor Orientation	<b>Horizontal</b>	Drive End Bearing	<b>Ball</b>
Opp Drive End Bearing	<b>Ball</b>	Frame Material	<b>Rolled Steel</b>
Shaft Type	<b>T</b>	Overall Length	<b>29.30 in</b>
Frame Length	<b>15.63 in</b>	Shaft Diameter	<b>2.125 in</b>
Shaft Extension	<b>5.3 in</b>	Assembly/Box Mounting	<b>F1/F2 CAPABLE</b>
Connection Drawing	<b>A-EE7340D-LN</b>	Outline Drawing	<b>XG3D1EC33B-1507</b>

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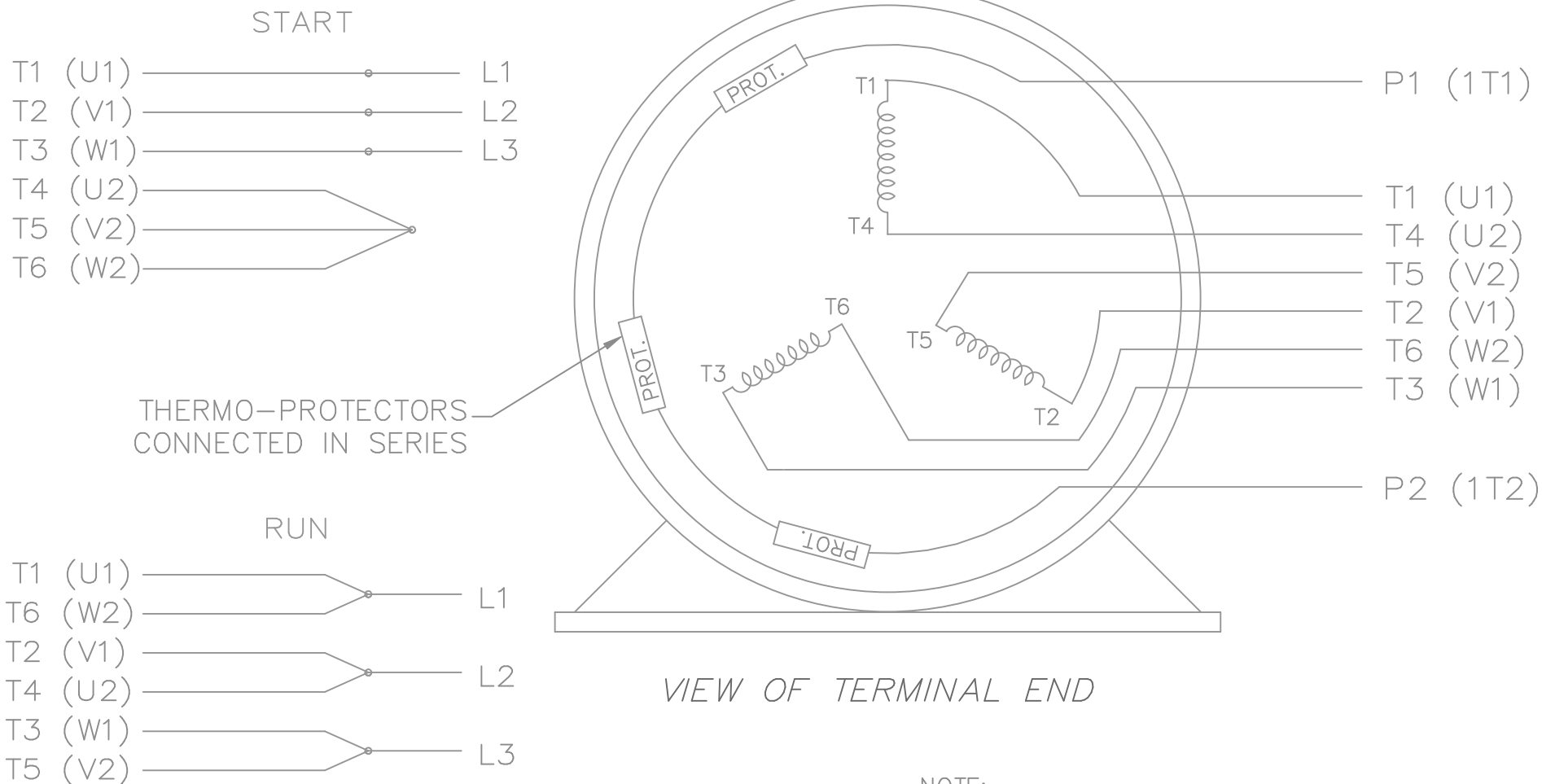


NOTES:  
 1. CONDUIT BOX CAN BE ROTATED IN 90° STEPS.  
 2. NAMEPLATES TO BE READ FROM CONDUIT BOX SIDE OF MOTOR.

DASH	FRAME	C	AG	BV				
1507	324TC	29.30	21.01	16.02				
1657	326TC	30.80	22.01	17.52				

				TOLERANCES UNLESS SPECIFIED		Lincoln MOTOR		DRAWN CTO 06-04-2002	
				DEC.	INCHES			CHK	ML
				.X	±.1			APPD	HNH
				.XX	±.03	TITLE OUTLINE ( NO FEET)		SCALE	1=4
				.XXX	±.005	VVVF ELEVATOR HOIST MOTOR 320 ODP UE		REF	
1	NEW DRAWING	MU41749	CTO 06-12-2002	HNH	.XXXX	±.0005	MATL	FMF	
NO.	REVISION		BY & DATE	CHK	ANG	±7'30"	FINISH	PREV	
THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH OUR WORK ALL RIGHTS OF DESIGN AND INVENTION ARE RESERVED THIS IS AN ELECTRONICALLY GENERATED DOCUMENT - DO NOT SCALE THIS PRINT				RFP	CAD FILE xg3d1ec33b		SIZE	DRAWING NO.	PAGE OF
				DIST	BY		B	XG3D1EC33B	1


THREE PHASE  
WYE START DELTA RUN



THERMO-PROTECTORS  
CONNECTED IN SERIES

VIEW OF TERMINAL END

NOTE:  
IEC LEAD MARKINGS ARE NOTED IN PARANTHESES

				TOLERANCES UNLESS SPECIFIED			DRAWN KL 11-10-2000			
				DEC.	INCHES		CHK DJK 11-10-2000			
				.X	±.1		APPD DJK 11-10-2000			
				.XX	±.02		SCALE 1=1			
2	ADDED IEC LEAD MARKINGS	MSG 10-08-2008	ML	.XXX	±.005	TITLE CONNECTION DIAGRAM - EXTERNAL - 3φ WYE START DELTA RUN - SINGLE VOLTAGE	REF			
1	NEW DRAWING MU34618	KL 11-10-2000	DJK	.XXXX	±.0005		MAT'L.	FMF		
NO.	REVISION	BY & DATE	CHK	ANG	±7'30"	FINISH	PREV			
THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH OUR WORK ALL RIGHTS OF DESIGN AND INVENTION ARE RESERVED THIS IS AN ELECTRONICALLY GENERATED DOCUMENT - DO NOT SCALE THIS PRINT				RFP	11-10-2000	CAD FILE EE7340D_LN	SIZE A	DRAWING NO. EE7340D_LN	PAGE OF 2	REV. 2
				DIST						



1051 CHEYENNE AVE.  
GRAFTON, WI 53024  
PH. 262-277-8810

DATA VOLTS: 460

**CERTIFICATION DATA SHEET**

CONN. DIAGRAM: A-EE7340D-LN  
OUTLINE: XG3D1EC33B-1507  
WINDING: C3244035

CAT #: LM28215

NONE 2

**TYPICAL MOTOR PERFORMANCE DATA**

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
20	14.9	900	880	324TC	DP	TDR	L	INF

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB	ELEV.
3	30	200	62	Y START D RUN OR INV	SPL	F	1.15	40	3300

F.L. EFF	91.0	3/4 LD EFF	91.7	1/2 LD EFF	90.2	GTD EFF	ELECT. TYPE
F.L. PF	75.5	3/4 LD PF	67.0	1/2 LD PF	53.0	88.5	SQ CAGE INV DUTY

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (° C)
119 LB-FT	518	300 LB-FT 252%	440 LB-FT 370%	100

PRESSURE @ 3	SOUND	POWER	ROTOR WK²	MAX. LOAD WK²	SAFE STALL TIME	STARTS/HOUR	MOTOR WGT
999 dBA	1008 dBA		8.0 LB-FT²	0 LB-FT²	0 SEC.	0	0 LB.

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

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	MOTOR ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
C-FACE	ENCODER	ROUND	HORIZONTAL	NO	NONE	NO	NONE	WATTSAVER

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	ODE	POLYREX EM	T	NONE	NONE	1045 HOT ROLLED (C-204)	ROLLED STEEL
BALL	BALL						
311	309						

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
0.075	0.046	0.164	0.115	3.275	0.150	BOTH

* N O T E S *	INVERTER TORQUE: CONSTANT 1000:1	
	INV. HP SPEED RANGE: NONE	
	ENCODER: DYNAPAR	
	HS35 LINCOLN	
	MS CONNECTOR	1024 PPR

DATE: 8/21/2018	BRAKE: NONE	NONE	NONE
	FT-LB: NA		
	VOLTAGE: NONE		HZ:
UL: V-OVER TEMP PROT 3, P1-P2			

Data Sheet

Date: 8/21/2018

LM28215



Data @ **200 V**

Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	35.7	40.3	44.9	52.9	62.1	67.9	73.6	518
Torque (ft-lb)	0.00	29.5	58.5	89.0	119	135	150	300
RPM	900	895	890	885	880	878	876	0
Efficiency (%)		85.5	90.2	91.7	91.0	90.6	90.2	
P.F. (%)	5.0	31.0	53.0	67.0	75.5	78.0	80.5	44.0

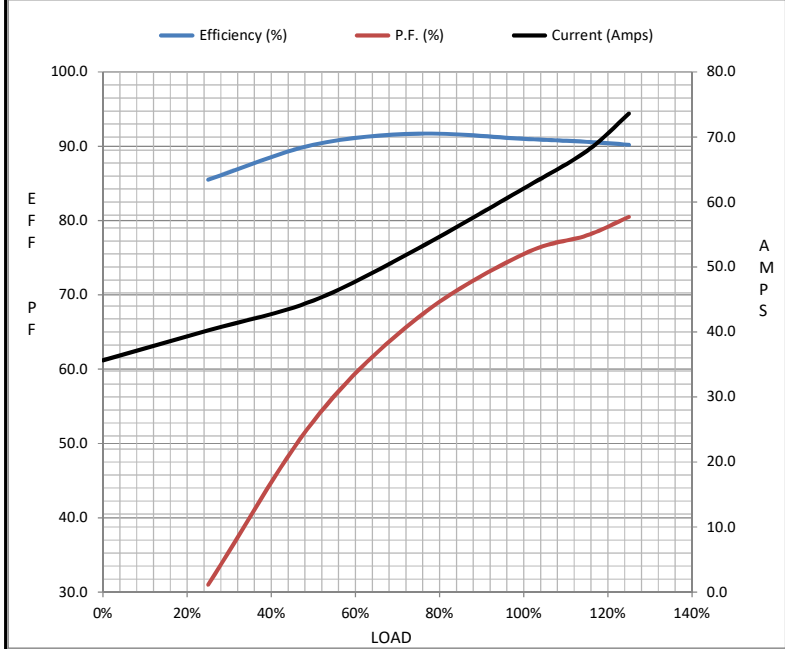
Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	450	710	880	900
Current (Amps)	518	472	311	62.1	35.7
Torque (ft-lb)	300	270	440	119	0.00

**MOTOR IS TOO HOT**

Information Block

HP	#VALUE!			
Sync. RPM	NA			
Frame	324			
Enclosure	DP			
Construction	TDR			
Voltage	200 V			
Frequency	30 Hz			
Design	A			
LR Code letter	L			
Service Factor	HOT			
Temp Rise @ FL	100 ° C			
Duty	SPL			
Ambient	40 ° C			
Elevation	1,000 feet			
Rotor/Shaft wk <sup>2</sup>	8.0 Lb-Ft <sup>2</sup>			
Ref Wdg	C3244035 NONE			
Sound Pressure @ 1M	999 dBA			
VFD Rating	CONSTANT 1000:1			
Outline Dwg	XG3D1EC33B-1507			
Conn. Diag	A-EE7340D-LN			
Additional Specifications:				
0				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.0750	0.0460	0.1640	0.1150	3.2750



Speed - Torque Curve

