

ABB BALDOR RELIANCE III

Customer information packet

ZDBRPM21404

40HP, 1750, 460V, FL2173, TEBC, F3

Specifications

Enclosure	TEBC
Frame	FL2173Z
Frame Material	Exposed Laminations
Frequency	60.00 Hz
Output @ Frequency	40.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1800 RPM @ 60 HZ
Voltage @ Frequency	460.0 V @ 60 HZ
Agency Approvals	CCSA US
Auxiliary Box	NO AUXILLARY BOX
Base Indicator	Rigid
Bearing Grease Type	Polyrex EM (-20F +300F)
Current @ Voltage	51.000 A @ 460.0 V
Duty Rating	CONT
Feedback Device	ENCODER
Frame Prefix	FL
Heater Indicator	No Heater
High Voltage Full Load Amps	51.0 a
Insulation Class	H
IP Rating	NONE
Motor Standards	NEMA
Mounting Arrangement	F3
Overall Length	35.81 IN
Product Family	General Industrial
Pulley End Bearing Type	Ball
Pulley Face Code	Standard
Service Factor	1.00
Shaft Diameter	1.875 IN
Shaft Ground Indicator	Shaft Grounding
Shaft Rotation	Reversible
Speed	1770 rpm
Starting Method	Full Voltage

Part Detail

Revision	A
Type	AC
Mech. spec.	
Base	
Status	PRD/A
Elec. spec.	L3311A
Layout	617525-359
Eff. date	01-19-2022
CD Diagram	422927-001
Poles	04
Leads	
Proprietary	False
Created date	11-10-2021

Thermal Device - Bearing	None
Thermal Device - Winding	Normally Closed Thermostat

Nameplate

000613006MY									
	DUTY	HP	RPM	AMPS	VOLTS	HZ			
	CONT	40	1770		51	460	60		
	CONT	40	3525		49	460	120		
CAT.NO.	ZDBRPM21404		SPEC. NO.		F21-A000-0469				
SER.NO			FR	FL2173Z	INSUL		H		
PH.	3	MAX SAFE SPEED		5000	AMB.		50	MIN. AMB.	-25
DESIGN NO.	L3311A		TYPE		ENCL.		TEAO-BC		
S.F.	1.00		D.E. BRG.		50BC03JPP30A				
ENCL MOD			O.D.E. BRG.		45BC02JPP30A				
	IP44								

REL S.O.	-	VOLTS	460	ENCLOSURE	TEBC	WYE CONN	EQ	CKT	OHMS	PER PHASE
FRAME	FL2173	AMPS	51	MAX SAFE RPM	5000	(AT BASE RATING, 25 °C)				
HP	40	DUTY	CONT	IM (AMPS)	20	R1	.108	X1	.495	
BASE SPEED	1770	S.F.	1.0	P.F.@NL/FL	.060/.820	R2	.0747	X2	.632	
PHASE/HERTZ	3/60	AMB °C/INSUL	50/H	WK ² (Lb-Ft ²)	2.64			XM	11.5	

RATED FULL LOAD DATA

	RPM	HP	TORQUE LB-FT	FUND VOLTS	FREQ-HZ	AMPS
BASE SPEED	1768	40.0	119	460	60	50.7
MAX SPEED	3526	40.0	60	460	120	49.1
MIN SPEED	0	0	119	16.1	1.08	50.7

LOAD PERFORMANCE AT BASE SPEED

	RPM	HP	TORQUE LB-FT	FUND VOLTS	FREQ-HZ	AMPS
NO LOAD	1800	0	0	460	60	22.9
1/4	1792	10.0	29	460	60	25.9
1/2	1785	20.0	59	460	60	32.3
3/4	1776	30.0	89	460	60	40.8
FULL LOAD	1768	40.0	119	460	60	50.7
O/L	1726	78.1	238	460	60	97.6

REMARKS: TYPICAL DATA
CORRELATED DATA

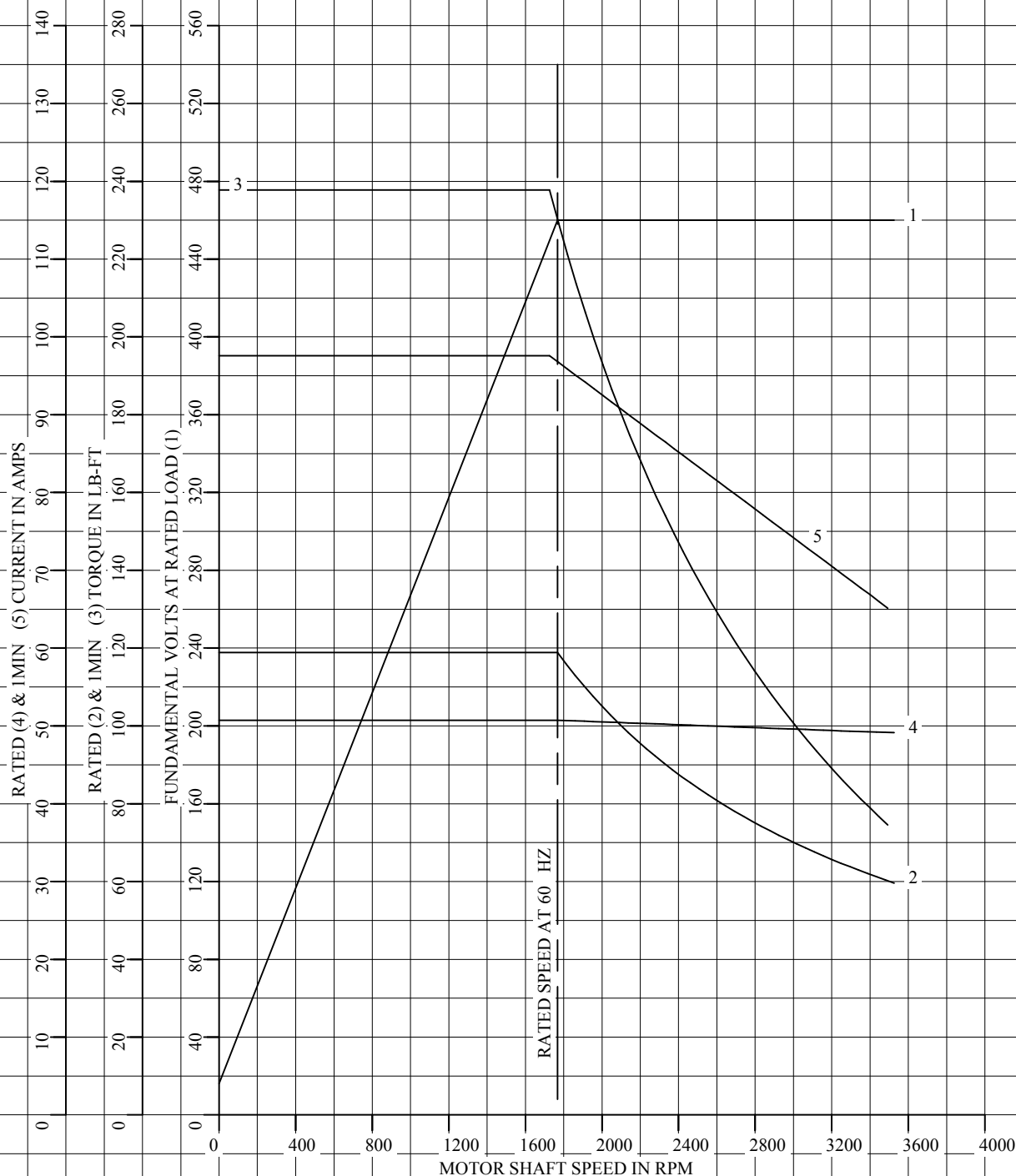


DR. BY K. GREEN
CK. BY B. GRANT
APP. BY J. MARTIN
DATE 8-25-14

A-C MOTOR
PERFORMANCE DATA L3311A
ISSUE DATE 2-19-16

REL S.O.	-	VOLTS	460	ENCLOSURE	TEBC	WYE CONN	EQ	CKT	OHMS	PER PHASE
FRAME	FL2173	AMPS	51	MAX SAFE RPM	5000	(AT BASE RATING, 25 °C)				
HP	40	DUTY	CONT	IM (AMPS)	20	R1	.108	X1	.495	
BASE SPEED	1770	S.F.	1.0	P.F. @NL/FL	.060/.820	R2	.0747	X2	.632	
PHASE/HERTZ	3/60	AMB °C/INSUL	50/H	WK ² (Lb-Ft ²)	2.64			XM	11.5	

CORRELATED DATA
VARIABLE SPEED AC MOTOR CURVES



REMARKS: TYPICAL DATA
DATA VALID FOR NAMEPLATE SPEED RANGE ONLY

BALDOR
A MEMBER OF THE ABB GROUP

DR. BY K. GREEN
CK. BY B. GRANT
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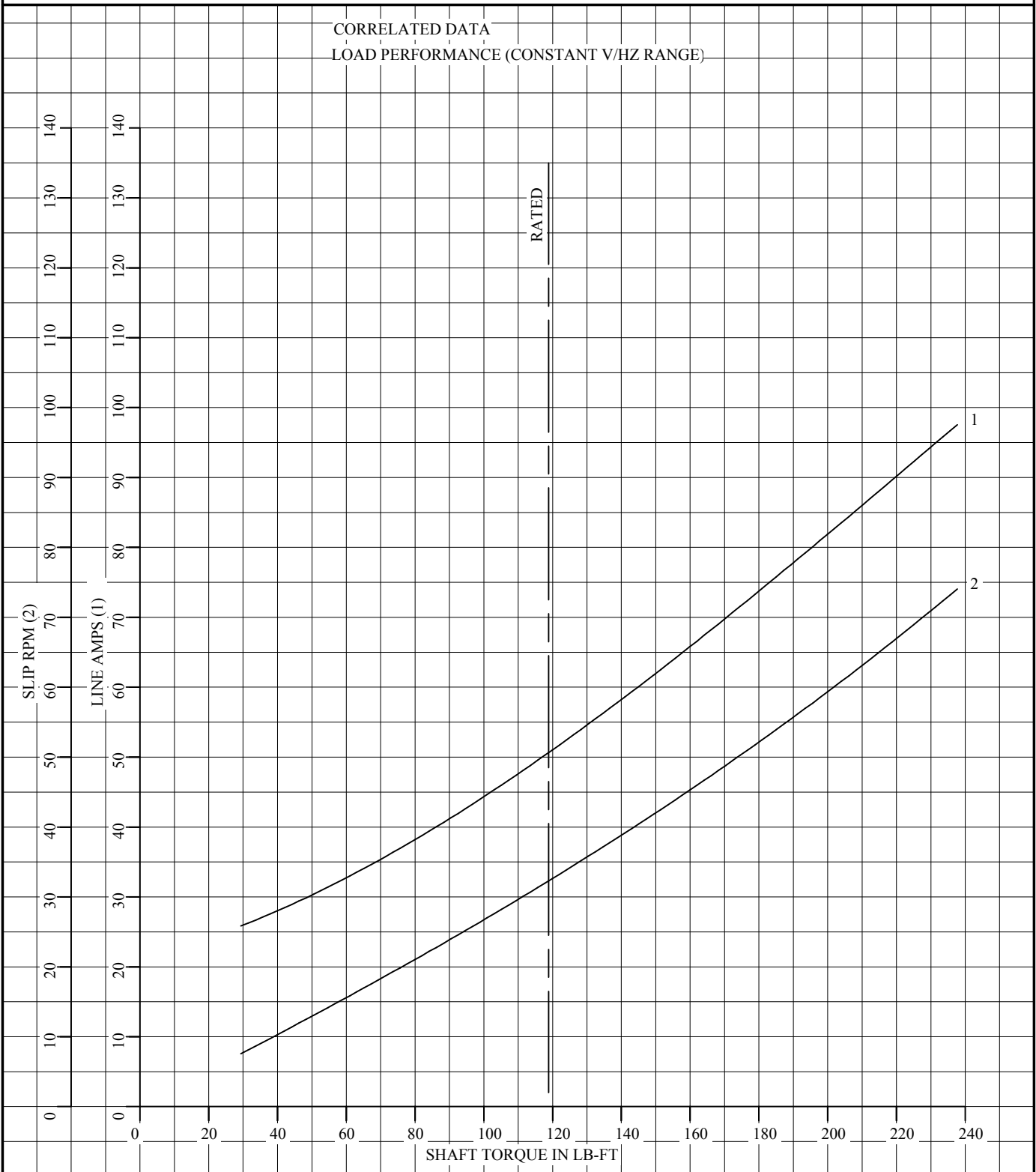
**A-C MOTOR
PERFORMANCE
CURVES**

L3311A
SH 1 OF 2
ISSUE DATE 2-19-16 Page 6 of 10

REL S.O.	-	VOLTS	460	ENCLOSURE	TEBC	WYE CONN EQ CKT OHMS PER PHASE	
FRAME	FL2173	AMPS	51	MAX SAFE RPM	5000	(AT BASE RATING, 25 °C)	
HP	40	DUTY	CONT	IM (AMPS)	20	R1 .108	X1 .495
BASE SPEED	1770	S.F.	1.0	P.F. @NL/FL	.060/.820	R2 .0747	X2 .632
PHASE/HERTZ	3/60	AMB °C/INSUL	50/H	WK ² (Lb-Ft ²)	2.64	XM 11.5	

CORRELATED DATA

LOAD PERFORMANCE (CONSTANT V/HZ RANGE)



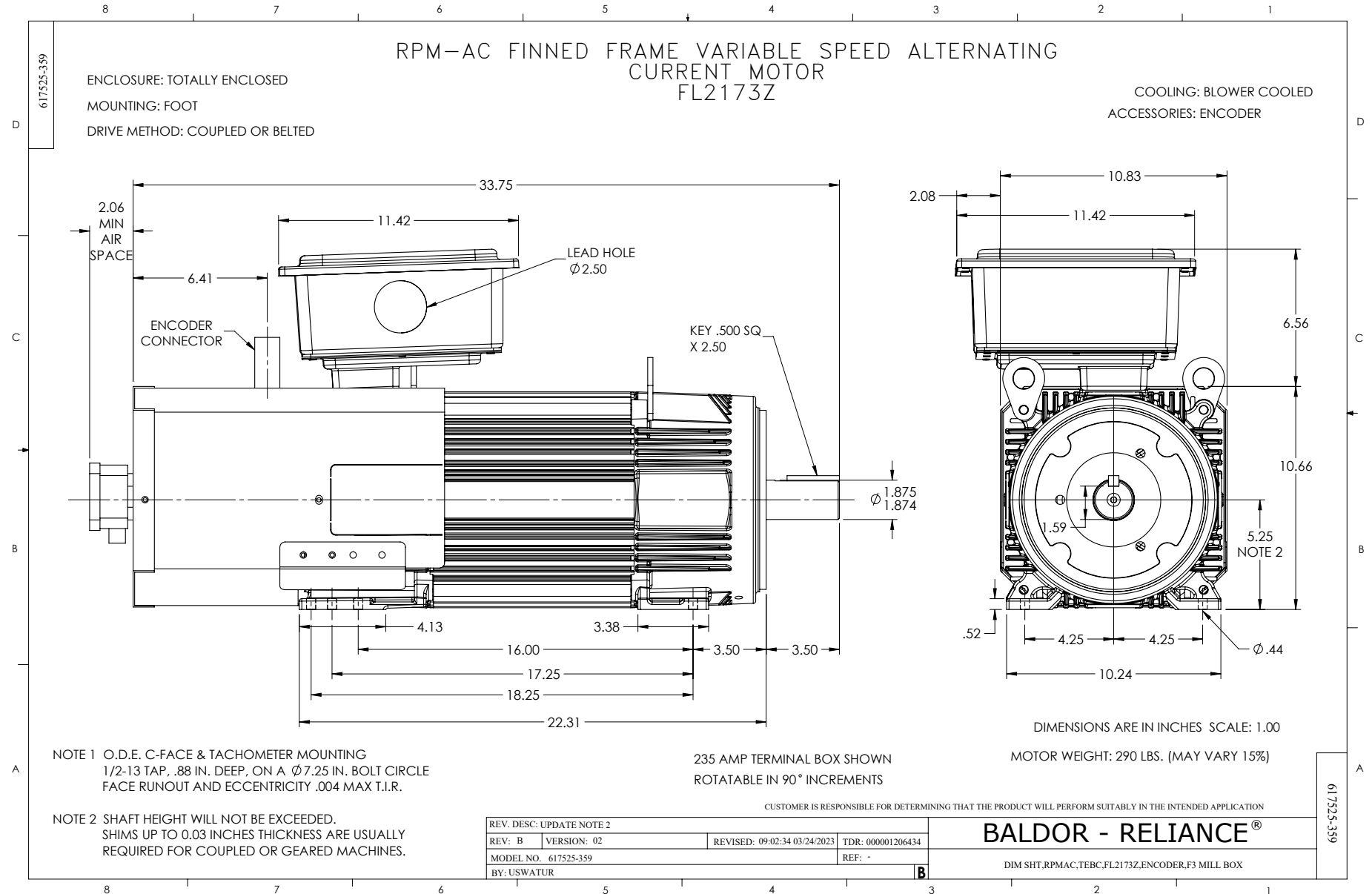
REMARKS: TYPICAL DATA
DATA VALID FOR NAMEPLATE SPEED RANGE ONLY



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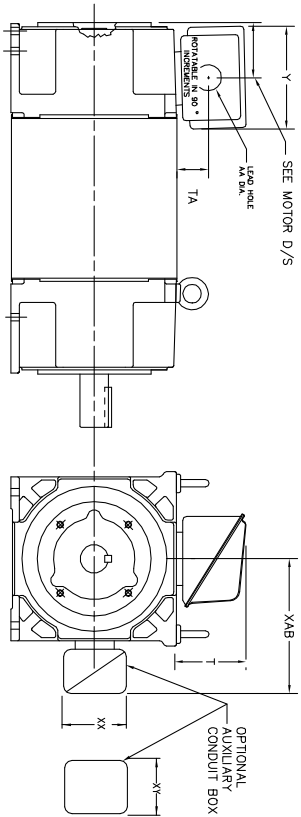
**A-C MOTOR
PERFORMANCE
CURVES**

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INDUSTRIAL ALTERNATING CURRENT MOTORS
RPM AC

STEEL, CAST IRON, MILL AND TERMINAL BOARD CONDUIT BOX DIMENSIONS
NEMA FRAMES RL210 thru RL280 and IEC FRAMES RDL132 thru RDL180
NEMA FRAMES FL180 thru FL280 and IEC FRAMES FDL112 thru FDL180



FRAME	TYPE	TERMINAL STRIP	AMPS	C/BOX	Y	TA	T	AA
FL180	STEEL	N	40	706320003A	5.00	1.62	3.00	1.12
FL180	STEEL	Y/N	75	706320003A	6.12	2.36	4.38	1.75/2.00
FL180	STEEL	N	208	706320007A	6.62	2.00	7.00	2.50/3.00
FL180	CAST IRON	Y/N	208	706320004C	6.75	2.50	4.38	1.0/1.75
FL180 & FDL11	MILL	Y	100	706310056A	7.75	2.30	4.40	PG29/PG16

FL210 & RL210	STEEL	N	61	075452000B	6.34	2.00	4.12	1.75
FL210 & RL210	STEEL	N	121	075452001A	7.69	2.38	5.25	1.94
FL210 & RL210	STEEL	N	306	706320016A	9.00	4.12	8.44	4.59
FL210 & RL210	CAST IRON	N	110	075460062B	7.25	2.50	5.25	1.5 TAP
FL210 & RL210	MILL	Y	100	706310229A	7.75	2.30	4.40	PG29/PG16
FL210 & RL210	MILL	Y	160	706310056A	9.00	3.06	5.40	PG36/PG16
FL210 & RL210	MILL	Y/N	235	706310056B	11.42	4.00	6.72	2.50

FL250 & RL250	STEEL	N	61	075452000B	6.34	2.00	4.12	1.75
FL250 & RL250	STEEL	N	121	075452001A	7.69	2.38	5.25	1.94
FL250 & RL250	STEEL	N	306	706320016A	9.00	4.12	8.44	4.59
FL250 & RL250	CAST IRON	N	110	075460062B	7.25	2.50	5.25	1.5 TAP
FL250 & RL250	CAST IRON	N	210	706320013A	10.50	4.88	9.00	4.0 TAP
FL250 & RL250	MILL	Y	100	706310229A	7.75	2.30	4.40	PG29/PG16
FL250 & RL250	MILL	Y	160	706310056B	9.00	3.06	5.40	PG36/PG16
FL250 & RL250	MILL	Y/N	235	706310057A	11.42	4.00	6.72	2.50
FL250 & RL250	MILL	Y	400	706310063B	14.39	7.43	12.15	BLANK

FL280 & RL280	STEEL	N	160	706320029A	7.25	3.50	7.06	2.50
FL280 & RL280	STEEL	N	306	706320016A	9.00	4.12	8.44	4.59
FL280 & RL280	STEEL	N	500	702658001C	14.62	7.56	12.70	5.00
FL280 & RL280	CAST IRON	N	140	706320012B	9.25	4.81	8.56	3.0 TAP
FL280 & RL280	CAST IRON	N	210	706320013A	10.50	4.88	9.00	4.0 TAP
FL280 & RL280	CAST IRON	N	510	706320014D	15.00	7.56	12.81	5.0 TAP
FL280 & RL280	MILL	Y	100	706310056A	7.75	2.30	4.40	PG29/PG16
FL280 & RL280	MILL	Y	160	706310056B	9.00	3.06	5.40	PG36/PG16
FL280 & RL280	MILL	Y/N	235	706310057A	11.42	4.00	6.72	2.50
FL280 & RL280	MILL	Y	400	706310063B	14.39	7.43	12.15	BLANK

FRAME SIZE	YAB	XA	XY	PART NUMBER	FRAME SIZE	YAB	XA	XY	PART NUMBER
FL210/FL180/RL210/RL182	7.38	4.25	4.25	602007-26-A	FL210/FL180/RL210/RL132	10.88	8.00	8.00	706310-3-B
FL250/FL160/RL250/RL160	8.44	4.25	4.25	602007-26-A	FL250/FL160/RL250/RL160	11.88	8.00	8.00	706310-3-B
FL280/FL180/RL280/RL180	9.12	4.25	4.25	602007-26-A	FL280/FL180/RL280/RL180	12.62	8.00	8.00	706310-3-B

(1) 1"AW CONDUIT.
(2) 1"AW PIPE TAP.
(3) CUSTOMER TO PROVIDE HOLE PER CONDUIT.
(4) 2" DIA. SA OR 1" DIA. DIA. W/6

TERMINAL BOX CAN BE ROTATED FOR LEAD OUTLET AT TOP, SIDES OR BOTTOM.
TERMINAL BOX LOCATED ON OPPOSITE SIDE WHEN F-2, V-1, V-4, V-5, V-7,
OR C-1 MOUNTING IS SPECIFIED. BOX LOCATED ON TOP WHEN SPECIFIED.

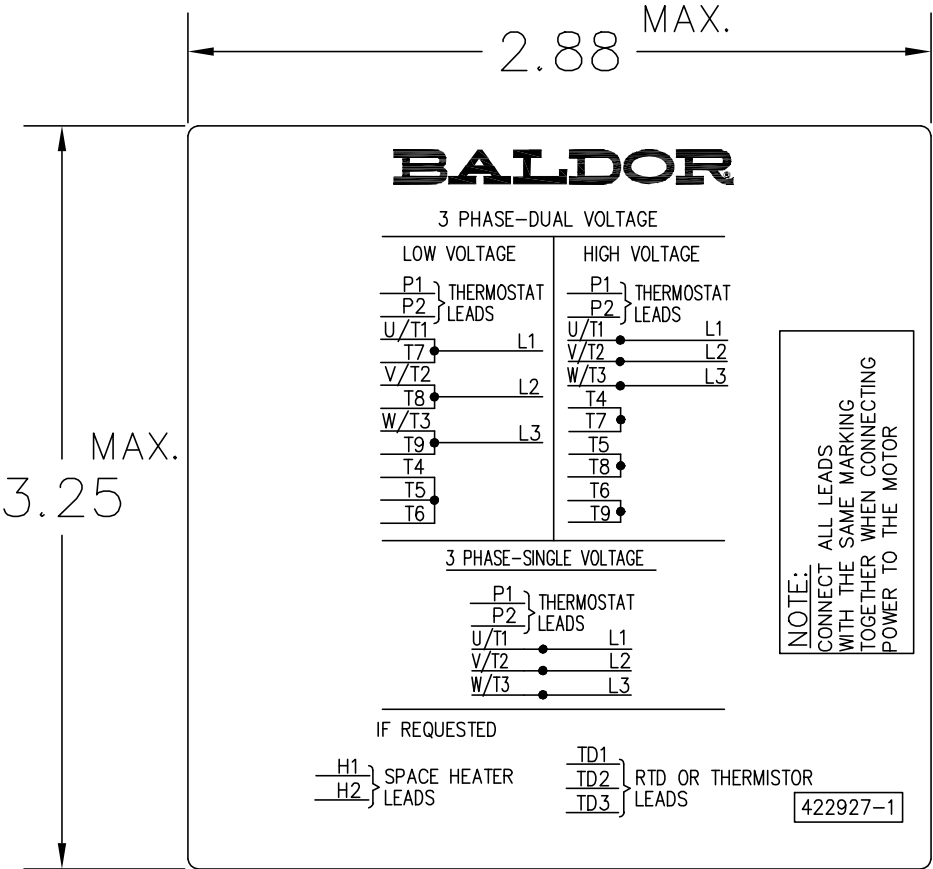
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION.

REV. DESC: ADD 706310-637 & 639 BOX	VERSION: 06	TDR: 000001180260
REV. LTR: F	REVISED: 11:08:56 10/26/2021	BY: RCGRWM
FILE: \\RGG\00003\692		
MTL: -		

BALDOR - RELIANCE®

DIM SHT NEMA RL210-RL280 FL180-FL280 IEC RDL132-RDL180

422927-001



NOTE:
DATA TO BE SIZED
SO THAT IT FITS INTO
MATERIAL DECAL
DIMENSIONS. MAKE
LETTERS & NUMBERS
AS LARGE AS POSSIBLE.

MATERIAL: CERAMATIC DGF-P4
 PERMA GRIP ADHESIVE

ALL LETTERS, NUMBERS
AND LINES TO BE BLACK
ON WHITE BACKGROUND.

422927-001

REV. DESC: CHANGE BACKGROUND COLOR FROM GOLD TO WHITE		
REV. LTR: B	VERSION: 02	TDR: 000000788708
FILE: \RGG\00000\203	REVISED: 08:09:29 03/04/2013	
MTL: -	BY: RGGWT	

BALDOR

EXTERNAL CONNECTION LABEL

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