

# **ABB BALDOR RELIANCE III**

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## **Customer information packet**

### IDBRPM281004R1

100HP, 1750, 460V, FL2890, TEBC, F3

**Specifications**

<b>Enclosure</b>	TEBC
<b>Frame</b>	FL2890Z
<b>Frame Material</b>	Exposed Laminations
<b>Frequency</b>	60.00 Hz
<b>Output @ Frequency</b>	100.000 HP @ 60 HZ
<b>Phase</b>	3
<b>Synchronous Speed @ Frequency</b>	1800 RPM @ 60 HZ
<b>Voltage @ Frequency</b>	460.0 V @ 60 HZ
<b>Agency Approvals</b>	CCSA US
<b>Auxiliary Box</b>	NO AUXILLARY BOX
<b>Base Indicator</b>	Rigid
<b>Bearing Grease Type</b>	Polyrex EM (-20F +300F)
<b>Current @ Voltage</b>	124.000 A @ 460.0 V
<b>Duty Rating</b>	CONT
<b>Feedback Device</b>	NO FEEDBACK
<b>Frame Prefix</b>	FL
<b>Heater Indicator</b>	No Heater
<b>High Voltage Full Load Amps</b>	124.0 a
<b>Insulation Class</b>	H
<b>IP Rating</b>	NONE
<b>Motor Standards</b>	NEMA
<b>Mounting Arrangement</b>	F3
<b>Overall Length</b>	46.80 IN
<b>Product Family</b>	General Industrial
<b>Pulley End Bearing Type</b>	Ball
<b>Pulley Face Code</b>	Standard
<b>Service Factor</b>	1.00
<b>Shaft Diameter</b>	2.624 IN
<b>Shaft Ground Indicator</b>	Shaft Grounding
<b>Shaft Rotation</b>	Reversible
<b>Speed</b>	1780 rpm
<b>Starting Method</b>	Full Voltage

**Part Detail**

<b>Revision</b>	B
<b>Type</b>	AC
<b>Mech. spec.</b>	
<b>Base</b>	
<b>Status</b>	PRD/A
<b>Elec. spec.</b>	L4052A
<b>Layout</b>	617531-053
<b>Eff. date</b>	03-24-2022
<b>CD Diagram</b>	422927-001
<b>Poles</b>	04
<b>Leads</b>	
<b>Proprietary</b>	False
<b>Created date</b>	11-02-2021

**Thermal Device - Bearing**

**None**

**Thermal Device - Winding**

**Normally Closed Thermostat**

**Nameplate**

**000613006MY**

	<b>DUTY</b>	<b>HP</b>	<b>RPM</b>	<b>AMPS</b>	<b>VOLTS</b>	<b>HZ</b>	
	CONT	100	1780	124	460	60	
	CONT	100	3555	120	460	120	
<b>CAT.NO.</b>	IDBRPM281004R1		<b>SPEC. NO.</b>	F28-A000-0370			
<b>SER.NO</b>		<b>FR</b>	FL2890Z	<b>INSUL</b>	H		
<b>PH.</b>	3	<b>MAX SAFE SPEED</b>	5000	<b>AMB.</b>	45	<b>MIN. AMB.</b>	-25
<b>DESIGN NO.</b>	L4052A	<b>TYPE</b>		<b>ENCL.</b>	TEAO-BC		
<b>S.F.</b>	1.00	<b>D.E. BRG.</b>	75BC02J30X				
<b>ENCL MOD</b>		<b>O.D.E. BRG.</b>	55BC02J30X				
	IP44						

REL S.O.	-	VOLTS	460	ENCLOSURE	TEBC	WYE CONN EQ CKT OHMS PER PHASE			
FRAME	FL2890	AMPS	124	MAX SAFE RPM	4800	(AT BASE RATING, 25 °C)			
HP	100	DUTY	CONT	IM (AMPS)	59	R1	.0288	X1	.200
BASE SPEED	1780	S.F.	1.0	P.F. @NL/FL	.035/.805	R2	.0185	X2	.254
PHASE/HERTZ	3/60	AMB °C/INSUL	45/H	WK <sup>2</sup> (Lb-Ft <sup>2</sup> )	9.7			XM	4.49

**RATED FULL LOAD DATA**

	RPM	HP	TORQUE LB-FT	FUND VOLTS	FREQ-HZ	AMPS
BASE SPEED	1781	100	295	460	60	125
MAX SPEED	3556	100	148	460	120	120
MIN SPEED	0	0	295	10.5	.648	125

**LOAD PERFORMANCE AT BASE SPEED**

	RPM	HP	TORQUE LB-FT	FUND VOLTS	FREQ-HZ	AMPS
NO LOAD	1800	0	0	460	60	58.3
1/4	1795	25.0	73	460	60	65.8
1/2	1791	50.1	147	460	60	81.0
3/4	1786	74.9	220	460	60	101
FULL LOAD	1781	100	295	460	60	125
O/L	1756	197	590	460	60	237

REMARKS: TYPICAL DATA



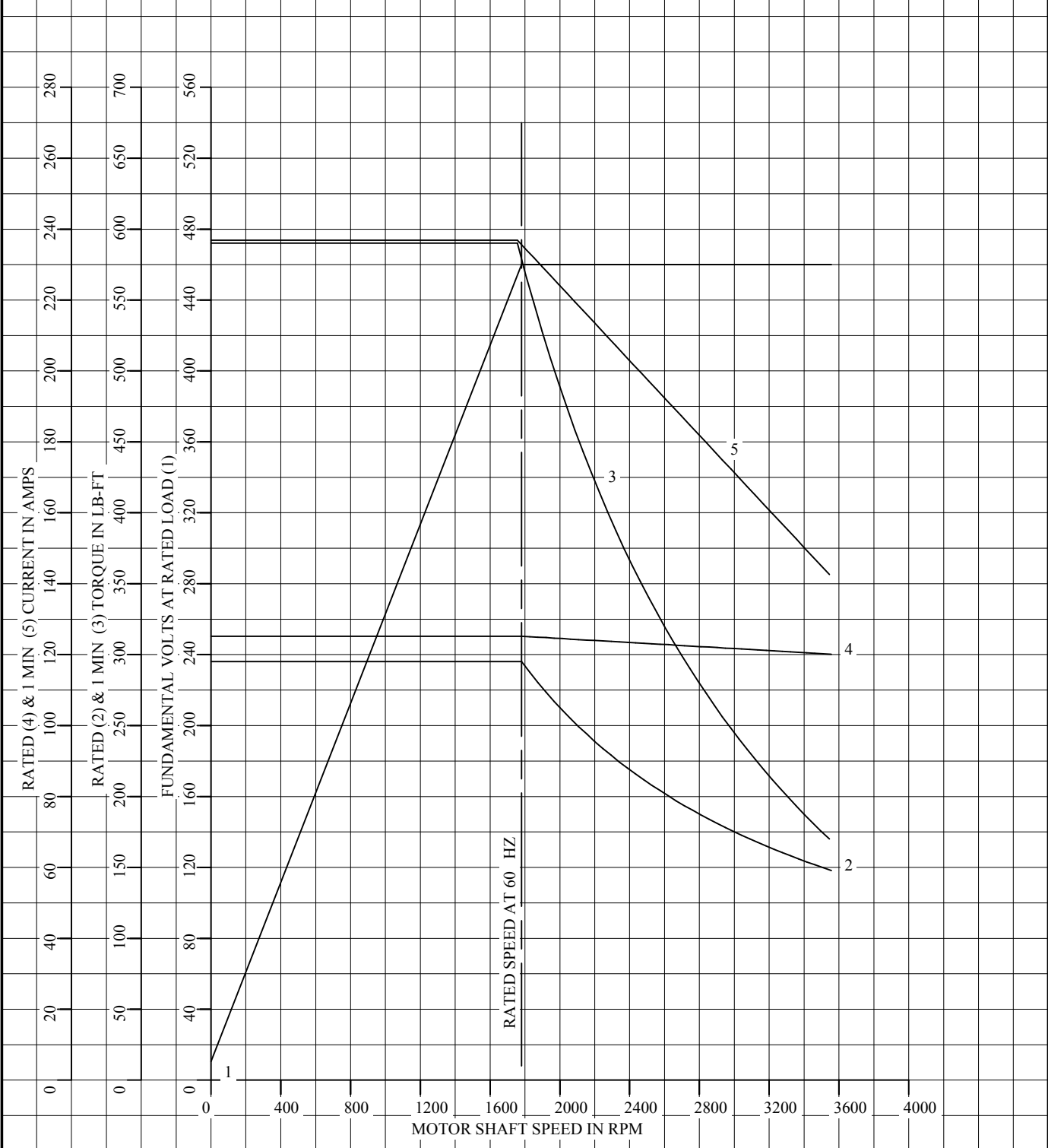
DR. BY R. SMITH  
 CK. BY R. SMITH  
 APP. BY S. EVON  
 DATE 6-27-08

**A-C MOTOR  
 PERFORMANCE DATA L4052A**

ISSUE DATE 6-27-08

REL S.O.	-	VOLTS	460	ENCLOSURE	TEBC	WYE CONN EQ CKT OHMS PER PHASE	
FRAME	FL2890	AMPS	124	MAX SAFE RPM	4800	(AT BASE RATING, 25 °C)	
HP	100	DUTY	CONT	IM (AMPS)	59	R1	.0288 X1 .200
BASE SPEED	1780	S.F.	1.0	P.F. @NL/FL	.035/.805	R2	.0185 X2 .254
PHASE/HERTZ	3/60	AMB °C/INSUL	45/H	WK <sup>2</sup> (Lb-Ft <sup>2</sup> )	9.7		XM 4.49

VARIABLE SPEED AC MOTOR CURVES



REMARKS: TYPICAL DATA  
DATA VALID FOR NAMEPLATE SPEED RANGE ONLY



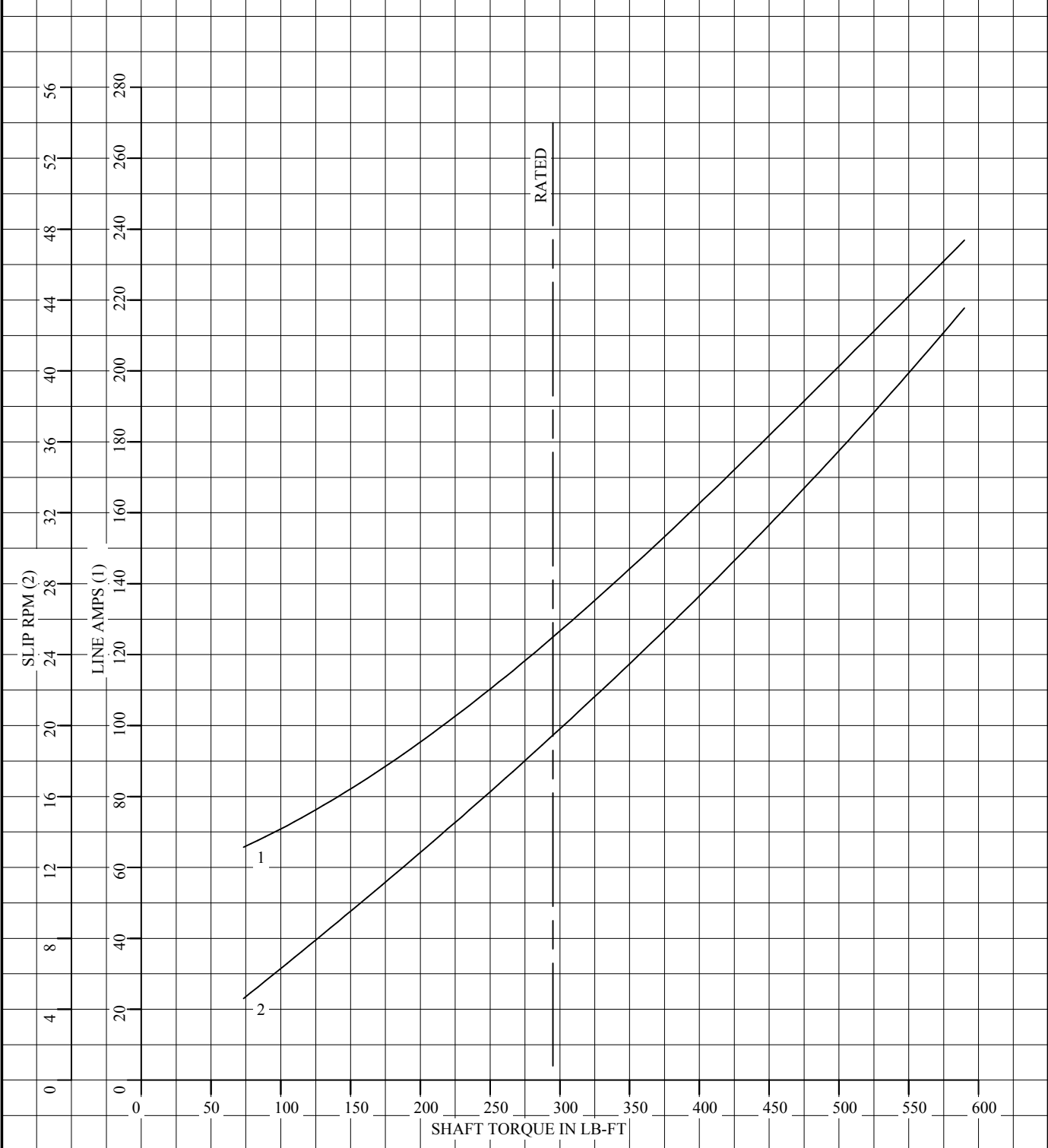
DR. BY R. SMITH  
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DATE 6-27-08

**A-C MOTOR  
PERFORMANCE  
CURVES**

**L4052A**  
SH 1 OF 2  
ISSUE DATE 6-27-08 Page 6 of 10

REL S.O.	-	VOLTS	460	ENCLOSURE	TEBC	WYE CONN EQ CKT OHMS PER PHASE	
FRAME	FL2890	AMPS	124	MAX SAFE RPM	4800	(AT BASE RATING, 25 °C)	
HP	100	DUTY	CONT	IM (AMPS)	59	R1 .0288	X1 .200
BASE SPEED	1780	S.F.	1.0	P.F. @NL/FL	.035/.805	R2 .0185	X2 .254
PHASE/HERTZ	3/60	AMB °C/INSUL	45/H	WK <sup>2</sup> (Lb-Ft <sup>2</sup> )	9.7		XM 4.49

LOAD PERFORMANCE (CONSTANT V/Hz RANGE)



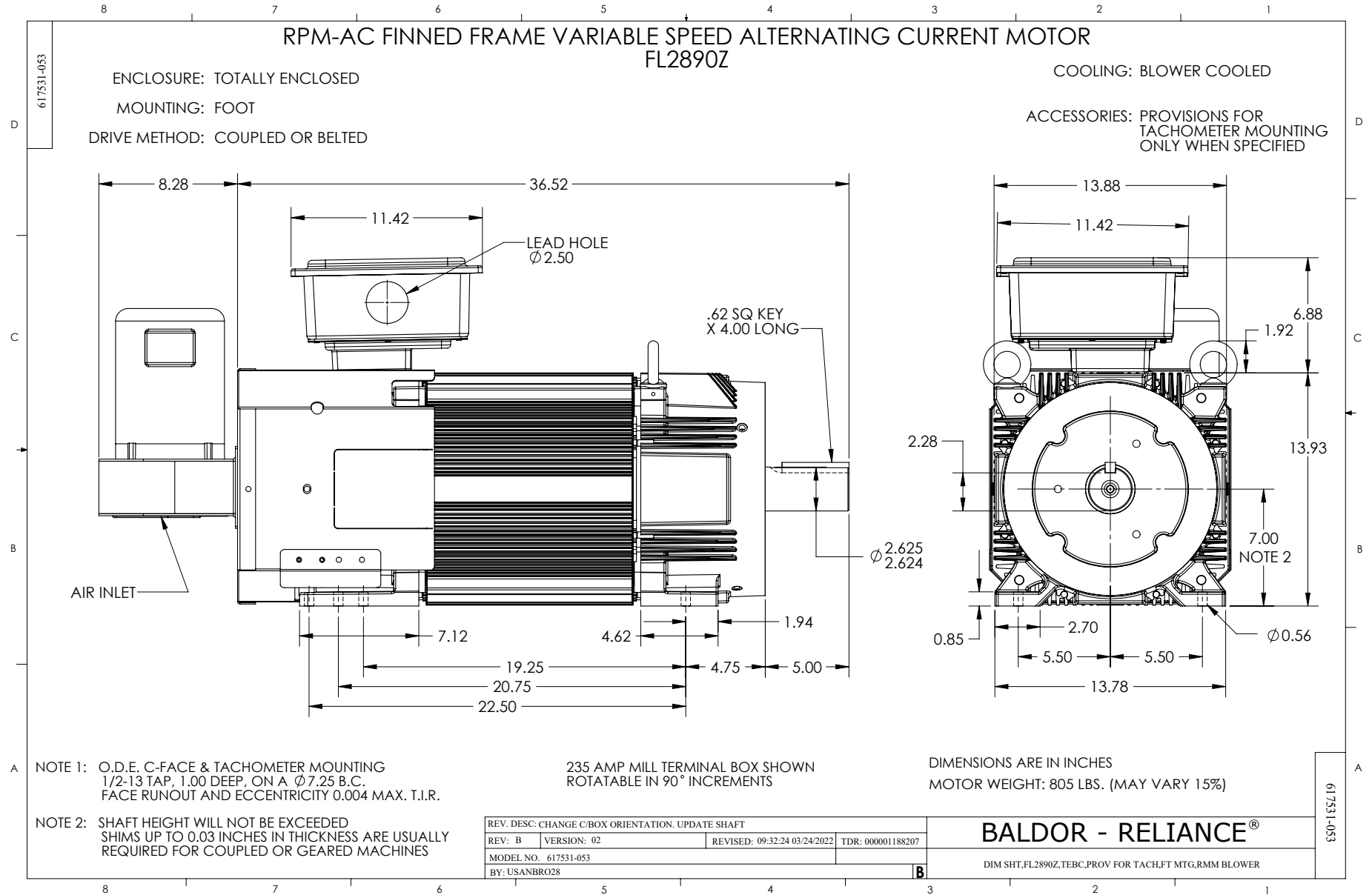
REMARKS: TYPICAL DATA  
DATA VALID FOR NAMEPLATE SPEED RANGE ONLY



DR. BY R. SMITH  
CK. BY R. SMITH  
APP. BY S. EVON  
DATE 6-27-08

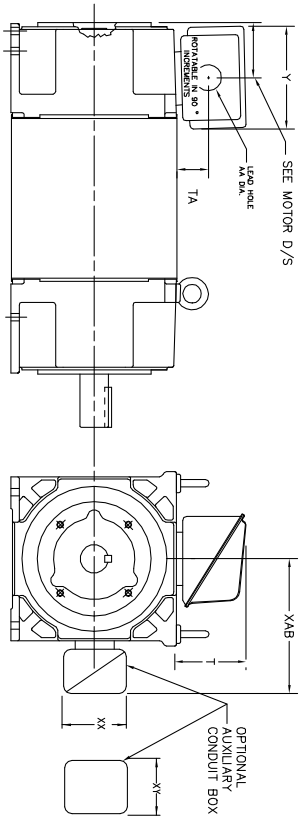
**A-C MOTOR  
PERFORMANCE  
CURVES**

**L4052A**  
SH 2 OF 2  
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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	N	75	706320003A	6.12	2.38	4.38	1.75/2.00
FL180	CAST IRON	N	208	706320007A	6.82	2.00	7.00	2.50/3.00
FL180 & FDL11	CAST IRON	Y/N	40	706320004B	5.75	2.38	4.38	1.50/1.75
FL180 & FDL11	MILL	Y	100	706310028A	7.75	2.30	4.40	PC29/PG16

FL210 & RL210	STEEL	N	61	0754520009	6.34	2.00	4.12	1.75
FL210 & RL210	STEEL	N	121	0754520010	7.69	2.38	5.25	1.94
FL210 & RL210	STEEL	N	336	706320016A	9.00	4.12	8.42	4.89
FL210 & RL210	CAST IRON	N	110	075460052B	7.25	2.50	5.25	1.5 TAP
FL210 & RL210	MILL	Y	100	706310225A	7.75	2.30	4.40	PC29/PG16
FL210 & RL210	MILL	Y	160	706310056A	9.00	3.06	5.40	PC36/PG16
FL210 & RL210	MILL	Y/N	235	706310058B	11.42	4.00	6.72	2.50

FL250 & RL250	STEEL	N	61	0754520009	6.34	2.00	4.12	1.75
FL250 & RL250	STEEL	N	121	0754520010	7.69	2.38	5.25	1.94
FL250 & RL250	STEEL	N	336	706320016A	9.00	4.12	8.42	4.89
FL250 & RL250	CAST IRON	N	110	075460052B	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	706310225A	7.75	2.30	4.40	PC29/PG16
FL250 & RL250	MILL	Y	160	706310056A	9.00	3.06	5.40	PC36/PG16
FL250 & RL250	MILL	Y/N	235	706310058B	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	309	706320018	9.00	4.12	8.42	4.89
FL280 & RL280	STEEL	N	500	702565001C	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	PC29/PG16
FL280 & RL280	MILL	Y	160	706310058B	9.00	3.06	5.40	PC36/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	OPTIONAL AUXILIARY CONDUIT BOX DIMENSIONS (MAXIMUM)					
	XAB	XX	XY	PART NUMBER	FRAME SIZE	PART NUMBER
FL180/FL180M/FL180L/FL180	7.38	4.25	4.25	602007-26-A	FL180/FL180M/FL180L/FL180	706310-3-B
FL210/FL210M/FL210L/FL210	8.44	4.25	4.25	602007-26-A	FL210/FL210M/FL210L/FL210	706310-3-B
FL250/FL250M/FL250L/FL250	9.12	4.25	4.25	602007-26-A	FL250/FL250M/FL250L/FL250	706310-3-B
FL280/FL280M/FL280L/FL280	9.12	4.25	4.25	602007-26-A	FL280/FL280M/FL280L/FL280	706310-3-B

- (1) 7/8" PIPE TAP
- (2) CUSTOMER TO PROVIDE WIRE TYPE CONDUIT.
- (3) DIM SA OR 1" DIM DN -40

TERMINAL BOX CAN BE ROTATED FOR LEAD INLET 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.

050-677919

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  
SH 1 of 1

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: 00000788708	
FILE: \RGG\00000\203		REVISED: 08:09:29 03/04/2013	
MTL: -			BY: RGGWT

**BALDOR**

EXTERNAL CONNECTION LABEL

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