

# ABB BALDOR RELIANCE III

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## Customer information packet

### IDFRPM28504

50HP, 1750, 460V, FL2882, TEFC, F3

**Specifications**

<b>Enclosure</b>	TEFC
<b>Frame</b>	FL2882Z
<b>Frame Material</b>	Exposed Laminations
<b>Frequency</b>	60.00 Hz
<b>Output @ Frequency</b>	50.000 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>	64.000 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>	64.0 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>	34.59 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>	1785 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>	L4049A
<b>Layout</b>	617242-073
<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>	10-27-2021

**Thermal Device - Bearing**

**None**

**Thermal Device - Winding**

**Normally Closed Thermostat**

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**Nameplate**

**000613006MY**

	<b>DUTY</b>	<b>HP</b>	<b>RPM</b>	<b>AMPS</b>	<b>VOLTS</b>	<b>HZ</b>	
	CONT	50	1785	64	460	60	
	CONT	50	3565	60	460	120	
<b>CAT.NO.</b>	IDFRPM28504		<b>SPEC. NO.</b>	F28-A000-0366			
<b>SER.NO</b>		<b>FR</b>	FL2882Z	<b>INSUL</b>	H		
<b>PH.</b>	3	<b>MAX SAFE SPEED</b>	5000	<b>AMB.</b>	40	<b>MIN. AMB.</b>	-25
<b>DESIGN NO.</b>	L4049A	<b>TYPE</b>		<b>ENCL.</b>	TEFC		
<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	TEFC	WYE CONN EQ CKT OHMS PER PHASE			
FRAME	FL2882	AMPS	64	MAX SAFE RPM	4800	(AT BASE RATING, 25 °C)			
HP	50	DUTY	CONT	IM (AMPS)	31	R1	.0515	X1	.353
BASE SPEED	1785	S.F.	1.0	P.F.@NL/FL	.044/.796	R2	.0316	X2	.492
PHASE/HERTZ	3/60	AMB °C/INSUL	40/H	WK <sup>2</sup> (Lb-Ft <sup>2</sup> )	8.3			XM	8.43

**RATED FULL LOAD DATA**

	RPM	HP	TORQUE LB-FT	FUND VOLTS	FREQ-HZ	AMPS
BASE SPEED	1784	50.0	147	460	60	63.5
MAX SPEED	3562	50.0	74	460	120	62.6
MIN SPEED	0	0	147	9.42	.549	63.5

**LOAD PERFORMANCE AT BASE SPEED**

	RPM	HP	TORQUE LB-FT	FUND VOLTS	FREQ-HZ	AMPS
NO LOAD	1800	0	0	460	60	30.5
1/4	1796	12.5	37	460	60	34.2
1/2	1792	25.0	73	460	60	41.8
3/4	1788	37.5	110	460	60	51.9
FULL LOAD	1784	50.0	147	460	60	63.5
O/L	1764	98.9	295	460	60	117

**BLOWER  
DATA**

VOLTS	PH/HZ	FL AMPS	LR AMPS	FRAME	CFM

REMARKS: TYPICAL DATA

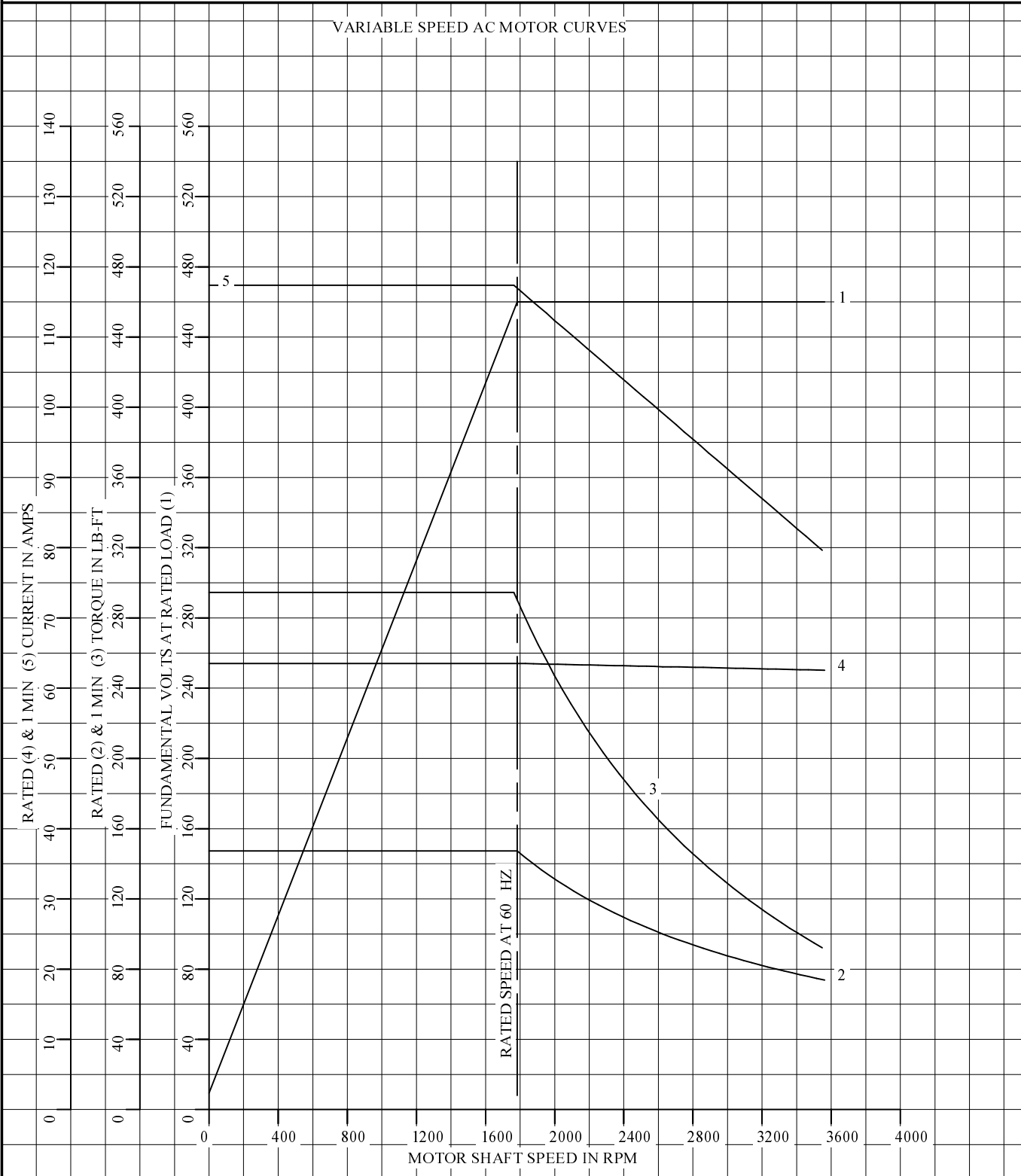


DR. BY R. SMITH  
 CK. BY R. SMITH  
 APP. BY S. EVON  
 DATE 6-27-08

**A-C MOTOR  
 PERFORMANCE DATA** L4049A  
 ISSUE DATE 6-27-08

REL S.O.	-	VOLTS	460	ENCLOSURE	TEFC	WYE CONN EQ CKT OHMS PER PHASE	
FRAME	FL2882	AMPS	64	MAX SAFE RPM	4800	(AT BASE RATING, 25 °C)	
HP	50	DUTY	CONT	IM (AMPS)	31	R1	.0515 X1 .353
BASE SPEED	1785	S.F.	1.0	P.F.@NL/FL	.044/.796	R2	.0316 X2 .492
PHASE/HERTZ	3/60	AMB °C/INSUL	40/H	WK <sup>2</sup> (Lb-Ft <sup>2</sup> )	8.3		XM 8.43

VARIABLE SPEED AC MOTOR CURVES



REMARKS: TYPICAL DATA  
DATA VALID FOR NAMEPLATE SPEED RANGE ONLY



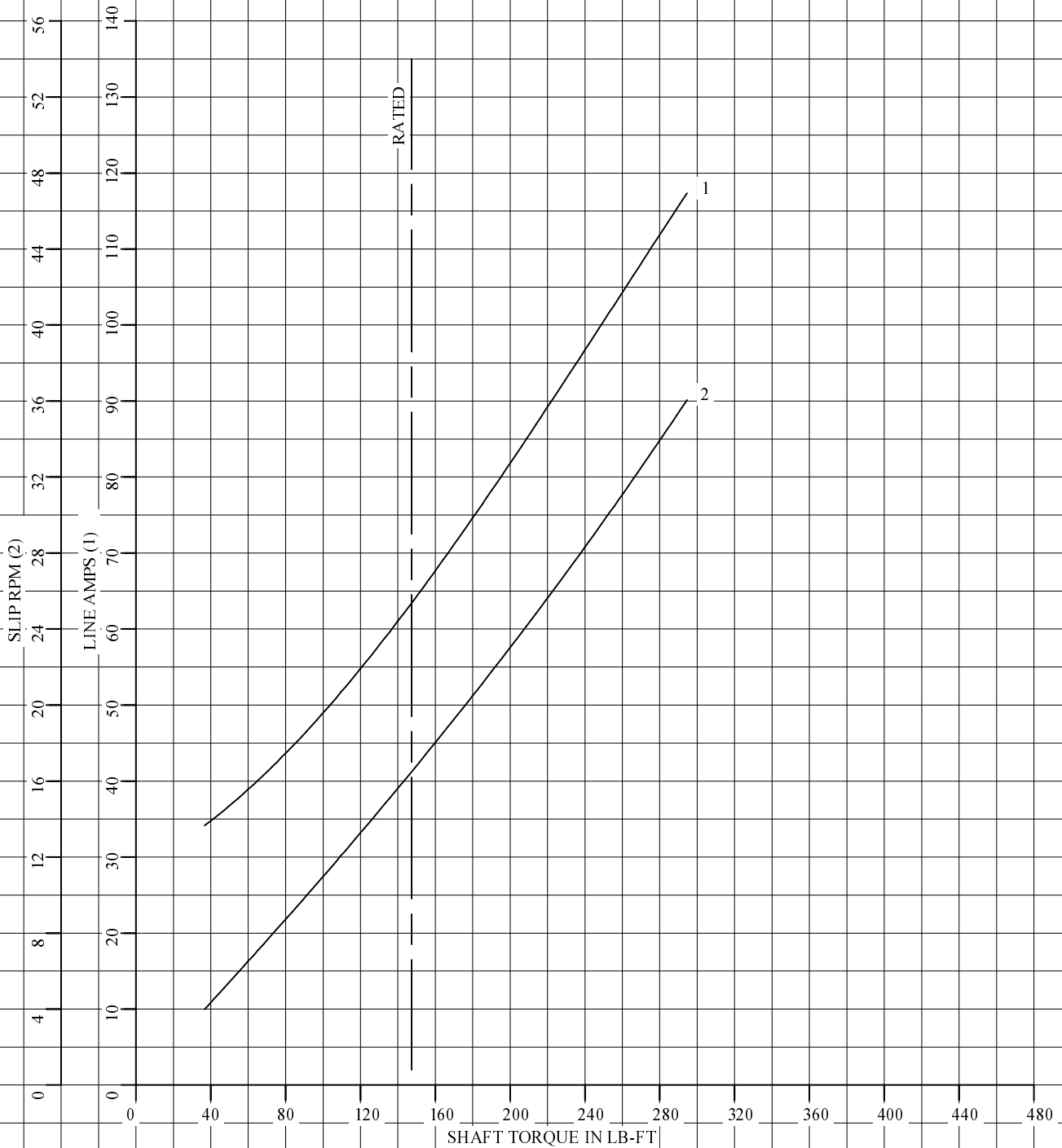
DR. BY R. SMITH  
CK. BY R. SMITH  
APP. BY S. EVON  
DATE 6-27-08

**A-C MOTOR  
PERFORMANCE  
CURVES**

**L4049A**  
SH 1 OF 2  
ISSUE DATE 6-27-08

REL S.O.	-	VOLTS	460	ENCLOSURE	TEFC	WYE CONN EQ CKT OHMS PER PHASE	
FRAME	FL2882	AMPS	64	MAX SAFE RPM	4800	(AT BASE RATING, 25 °C)	
HP	50	DUTY	CONT	IM (AMPS)	31	R1	.0515 X1 .353
BASE SPEED	1785	S.F.	1.0	P.F.@NL/FL	.044/.796	R2	.0316 X2 .492
PHASE/HERTZ	3/60	AMB °C/INSUL	40/H	WK <sup>2</sup> (Lb-Ft <sup>2</sup> )	8.3		XM 8.43

LOAD PERFORMANCE (CONSTANT V/Hz RANGE)



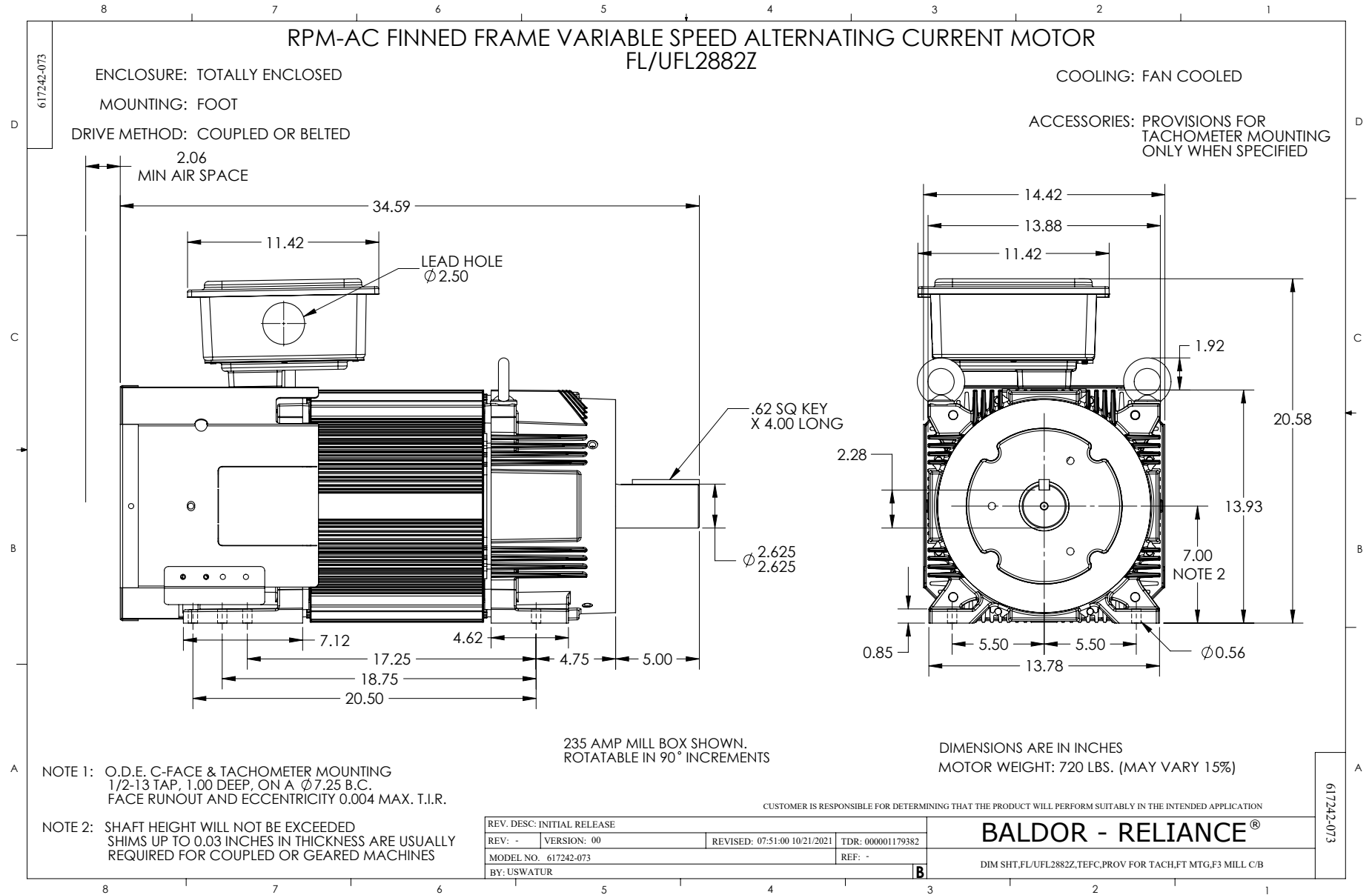
REMARKS: TYPICAL DATA  
DATA VALID FOR NAMEPLATE SPEED RANGE ONLY



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

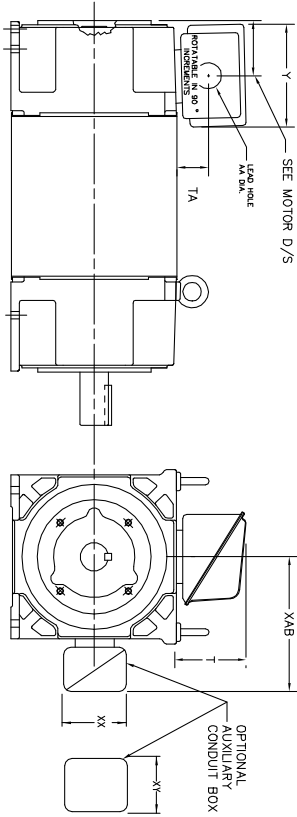
**A-C MOTOR  
PERFORMANCE  
CURVES**

**L4049A**  
SH 2 OF 2  
ISSUE DATE 6-27-08



**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	075452001A	7.69	2.38	5.25	1.94
FL210 & RL210	STEEL	N	306	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	706310637A	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	075452001A	7.69	2.38	5.25	1.94
FL250 & RL250	CAST IRON	N	110	075460052B	7.25	2.50	5.25	1.5 TAP
FL250 & RL250	CAST IRON	N	210	706320016A	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	706310056B	9.00	3.06	5.40	PC36/PG16
FL250 & RL250	MILL	Y/N	235	706310637A	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	4.88	9.00	4.0 TAP
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	706320015A	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	706310056B	9.00	3.06	5.40	PC36/PG16
FL280 & RL280	MILL	Y/N	235	706310637A	11.42	4.00	6.72	2.50
FL280 & RL280	MILL	Y	400	706310063B	14.39	7.43	12.15	BLANK

FRAME SIZE	XAB	XX	XY	PART NUMBER	FRAME SIZE	XAB	XX	XY	PART NUMBER
FL210/FL180/RL210/RL180	7.38	4.25	4.25	602007-26-A	FL210/FL180/RL210/RL180	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/FL190/RL280/RL190	9.12	4.25	4.25	602007-26-A	FL280/FL190/RL280/RL190	12.62	8.00	8.00	706310-3-B

(1) 7/8" PIPE TAP  
(2) 1/2" PIPE TAP  
(3) CUSTOMER TO PROVIDE W/LE TERE CONDUIT.  
(4) 2" DIA. SA OR 1" DIA. DN W/2"

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.

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.

NOTE:  
CONNECT ALL LEADS  
WITH THE SAME MARKING  
TOGETHER WHEN CONNECTING  
POWER TO THE MOTOR

422927-1

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

SH 1 of 1