

ABB BALDOR RELIANCE III

Customer information packet

IDCRPM18204

20HP, 1750, 460V, FL1848, TEFC, F1, LSPM

Specifications

Enclosure	TEFC
Frame	FL1848Z
Frame Material	Exposed Laminations
Frequency	60.00 Hz
Output @ Frequency	20.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1800 RPM @ 60 HZ
Voltage @ Frequency	460.0 V @ 60 HZ
Agency Approvals	CCSA US NEMA PREMIUM
Auxiliary Box	NO AUXILLARY BOX
Base Indicator	Rigid
Bearing Grease Type	Polyrex EM (-20F +300F)
Constant Torque Speed Range	1-60
Current @ Voltage	20.000 A @ 460.0 V
Duty Rating	CONT
Feedback Device	NO FEEDBACK
Frame Prefix	FL
Heater Indicator	No Heater
High Voltage Full Load Amps	20.0 a
Insulation Class	H
KVA Code	G
Motor Standards	NEMA
Mounting Arrangement	F3
Overall Length	24.26 IN
Product Family	Blower - Centrifugal
Pulley End Bearing Type	Ball
Pulley Face Code	Other
Service Factor	1.15
Shaft Diameter	1.375 IN
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible

Part Detail

Revision	J
Type	AC
Mech. spec.	
Base	
Status	PRD/A
Elec. spec.	LS6571A
Layout	617511-001
Eff. date	01-21-2022
CD Diagram	422927-001
Poles	04
Leads	
Proprietary	False
Created date	03-22-2016

Speed	1800 rpm
Thermal Device - Bearing	None
Thermal Device - Winding	Normally Closed Thermostat

Nameplate
000613007QF

	DUTY	HP	RPM	AMPS	VOLTS	HZ										
	CONT	20	1800	20.0	460	60										
CAT.NO.	IDCRPM18204		SPEC. NO.		F18-A000-0097											
SER.NO			FRAME SIZE		FL1848Z		TYPE PSM									
AMB.	40	S.F.	1.15	ENCL.	TEFC		PH	3	DESIGN	B	CODE	G				
NEMA NOM. EFF	94.9		GUARANTEED EFFICIENCY			94		POWER FACTOR		92.8		INSUL. CLASS		H		
D.E. BRG.	45BC02J30X		O.D.E. BRG.		35BC02J30X											
VPWM INVERTER DUTY @1.0SF	CHP HZ	60-90		CT HZ	1-60		VT HZ	0-60								
	X/T															

000692000VY		
MEAS OPEN CIRCUIT VOLTAGE		
IS		VOLTS AT
		RPM.

Parts List

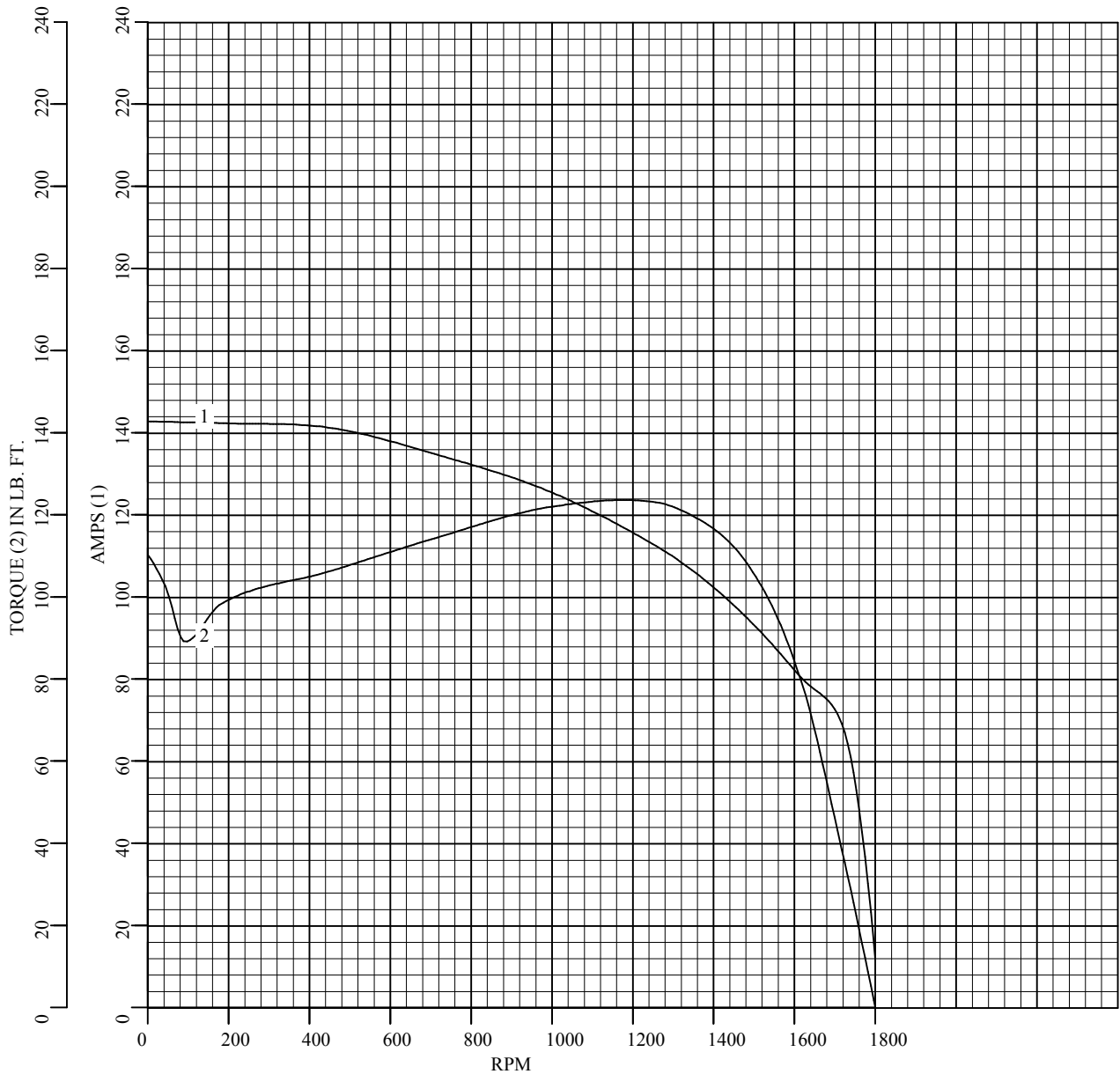
Part number	Description	Quantity
WS309045	WS F18-A000-0097	1.000 ea
RA305263	RA F18-A000-0097	1.000 ea
411716004A	219P039 - 219P039 - LA	1.000 ea
033775004EA	DRSCR #6-1/4 304 S.S.	4.000 ea
000613007QF	NP,RPM AC - XE WITH CERTIFIED LOGO	1.000 ea
000692000XM	LABEL QR CODE	1.000 ea
LB1613	LABEL, QR CODE, ADHESIVE LABEL	1.000 ea
000692000VY	PERMANENT MAGNET MOTOR NAMEPLATE	1.000 ea
422927001	C/D LABEL	1.000 ea
004824007AB	PAINT,XT	0.100 ea
418057243A	GROOVE PIN	1.000 ea
807504052E	FL1848 FRAME	1.000 ea
807580012AAB	BRKT, ODE, FL180, TOP MOUNT	1.000 ea
807580005A	BRKT,DE,FL180	1.000 ea
BP5068BJ01	BRUSH, .187 X .187 X 1.00	1.000 ea
HA4054	SHORT T-DRAIN FITTING, .125" N.P.T.	1.000 ea
004824015A	GREASE POLYREX EM	0.100 lb
HA4054	SHORT T-DRAIN FITTING, .125" N.P.T.	1.000 ea
036000050JB	M8-1,25 X 50 MHHCS	2.000 ea
032018014AK	HHCS 1/4-20X1-3/4 PLTD.	3.000 ea
415045002J	SLGR	1.000 ea
415045002H	SLGR	1.000 ea
400638001D	WAVEN (Customer number 43699)	1.000 ea
034017012AB	LCKW 1/4 STD. PLATED 034017012AF	4.000 ea
036000016DB	HHCS	2.000 ea
418150003A	GREASE FITTING CAP	2.000 ea
035000001A	ALFTG 1/8" 1610-BL	1.000 ea
035000001A	ALFTG 1/8" 1610-BL	1.000 ea
411693051B	LUG, LIFTING	2.000 ea
033102012AG	HXNUT LEAD CONN 1/4-20 GR5 ZP	4.000 ea
032003184CB	THRU BOLT	4.000 ea

BP5248	BP5248	1.000 ea
415000103G	TLUG	1.000 ea
415072001A	CLAMP	1.000 ea
417733002A	GASKET	2.000 ea
034180010DA	KEY 1/4X1/4X1-1/4L	1.000 ea
078546001NA	EXT FAN 7.50 OD&1.126 DIA BORE 78546-1G	1.000 ea
807505051A	GRILL, FAN COVER	1.000 ea
807505050A	COVER, FAN	1.000 ea
036000012HB	HHCS M6X12MM LONG PLATED	3.000 ea
418010006A	CAST,MPLATE,180-280,EX1,7BY	1.000 ea
418057373A	SCREW SHEET METAL	3.000 ea
418018074A	GROUND LABEL G100 METRIC 160 D.C.	1.000 ea
406673002AE	2" CAP PLUG	1.000 ea
406673002C	.75 CAP PLUG	2.000 ea
036620009AB	M8 EXTERNAL LK WASHER	1.000 ea
034630001AJ	1/8" PIPE COUPLING	1.000 ea
034530016AB	P/NIP 1/8X2 PLATED - 320	1.000 ea
036601009AB	M8 FLAT WASHER	4.000 ea
706320004C	CBOX REPL 705028-2C MTRC	1.000 ea
075459000A	C/BOX CVR W75459	1.000 ea
065564000D	GASK 210-250	1.000 ea
036000012HB	HHCS M6X12MM LONG PLATED	2.000 ea
036000045JB	M8-1.25 X 45MM HXHCS	4.000 ea
034180020EA	KEY 5/16X5/16X2-1/2 L	1.000 ea
000640000P	TAG WINDING THERMOST	1.000 ea
004824007CQR	C2 PAINT SYSTEM MEDIUM GRAY CHARCOAL MET	0.100 ea
034693001AB	PPLG - G508- use 034692001AB	1.000 ea
034693001AB	PPLG - G508- use 034692001AB	1.000 ea
LB1549	LABEL, BLANK 1.375 X 2.250 IMPRINTABLE	1.000 ea

S.O.	FRAME	HP	TYPE	PHASE	HERTZ	RPM
--	FL1848	20	PSM	3	60	1800
VOLTS	AMPS	DUTY	AMB ^o C	INSUL	S.F.	NEMA DESIGN
460	21.3	CONT	40	H	1.15	B
CODE LETTER	ENCL	ROTOR INERTIA (lb-ft ²)	STATOR RES. @ 25 ^o C OHMS (BETWEEN LINES)			
G	TEFC	.83	.5367	TYPICAL DATA		
PERFORMANCE						
LOAD	HP	AMPERES	RPM	% POWER FACTOR	% EFFICIENCY	
NO LOAD	0	11.7	1800	4.10	N/A	
1/4	5.00	10.3	1800	50.1	90.9	
2/4	10.0	12.5	1800	79.5	94.3	
3/4	15.0	16.5	1800	89.6	95.0	
4/4	20.0	21.3	1800	92.8	94.9	
5/4	25.0	26.5	1800	93.6	94.5	
SPEED TORQUE						
	RPM	TORQUE (% FULL LOAD)	TORQUE (lb-ft)	AMPERES		
LOCKED ROTOR	0	189	110.3	142.7		
PULL OUT	1800	244	142.6	65.7		
FULL LOAD	1800	100	58.4	21.3		
THIS IS A PERMANENT MAGNET MOTOR GENERATED OPEN CIRCUIT LINE-LINE VOLTAGE at 25^oC = 18.2 VOLTS PER 100 RPM REMARKS:						
		DR. BY <u>CAD</u> CK. BY <u>RFM</u> APP. BY <u>RFM</u> DATE <u>05/25/2016</u>		LSPM MOTOR PERFORMANCE LS6571A DATA ISSUE DATE 05/25/2016		

S.O.	--	HERTZ	60	AMB ^o C	40	CODE LETTER	G
FRAME	FL1848	RPM	1800	INSUL	H	WK ² (lb-ft ²)	.83
HP	20	VOLTS	460	S.F.	1.15	NEMA DESIGN	B
TYPE	PSM	AMPS	21.3	ENCL	TEFC	STATOR RES. @ 25 ^o C	.5367
PHASE	3	DUTY	CONT			OHMS (BETWEEN LINES)	

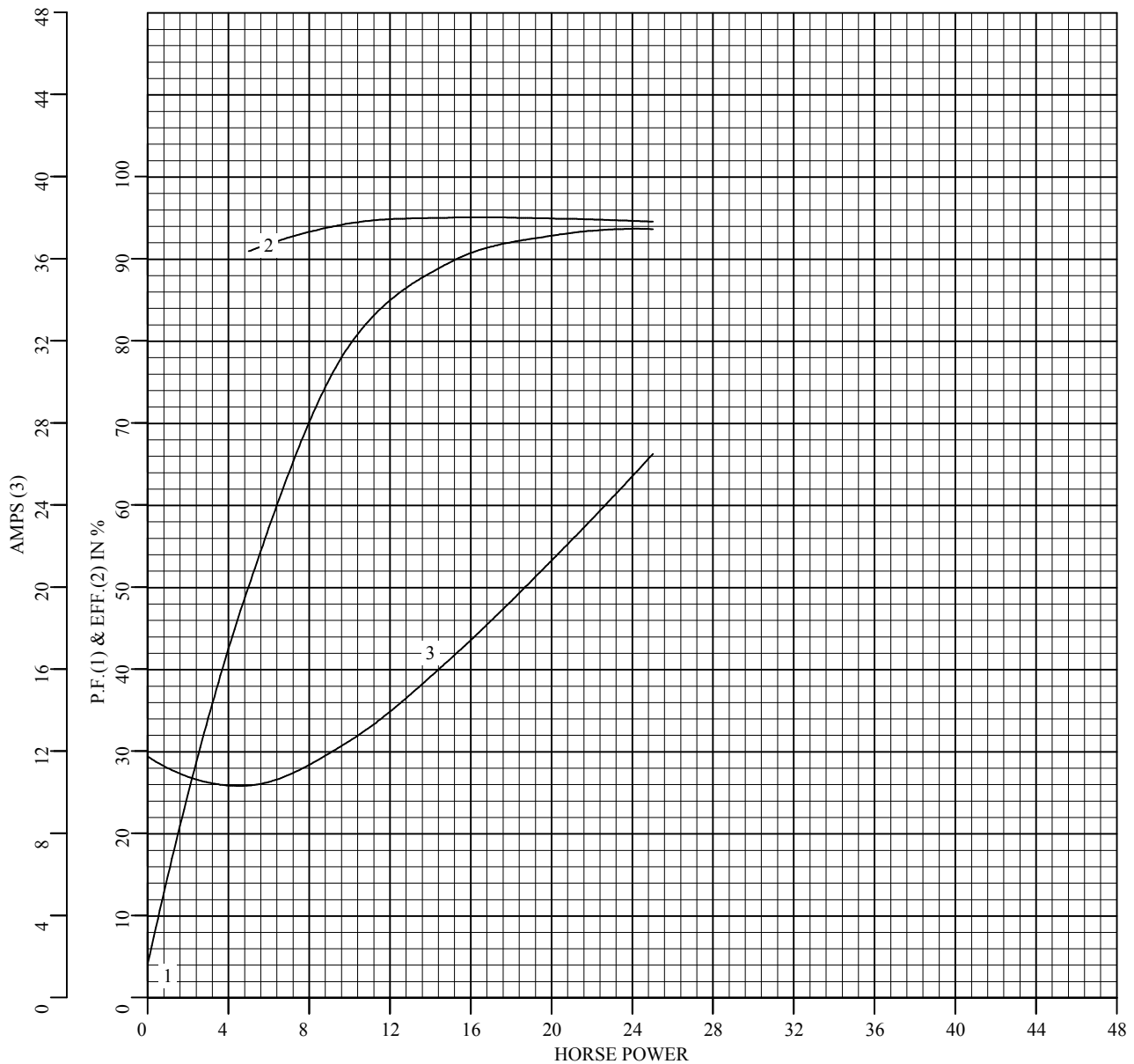
Amps & Torque vs. RPM During Acceleration



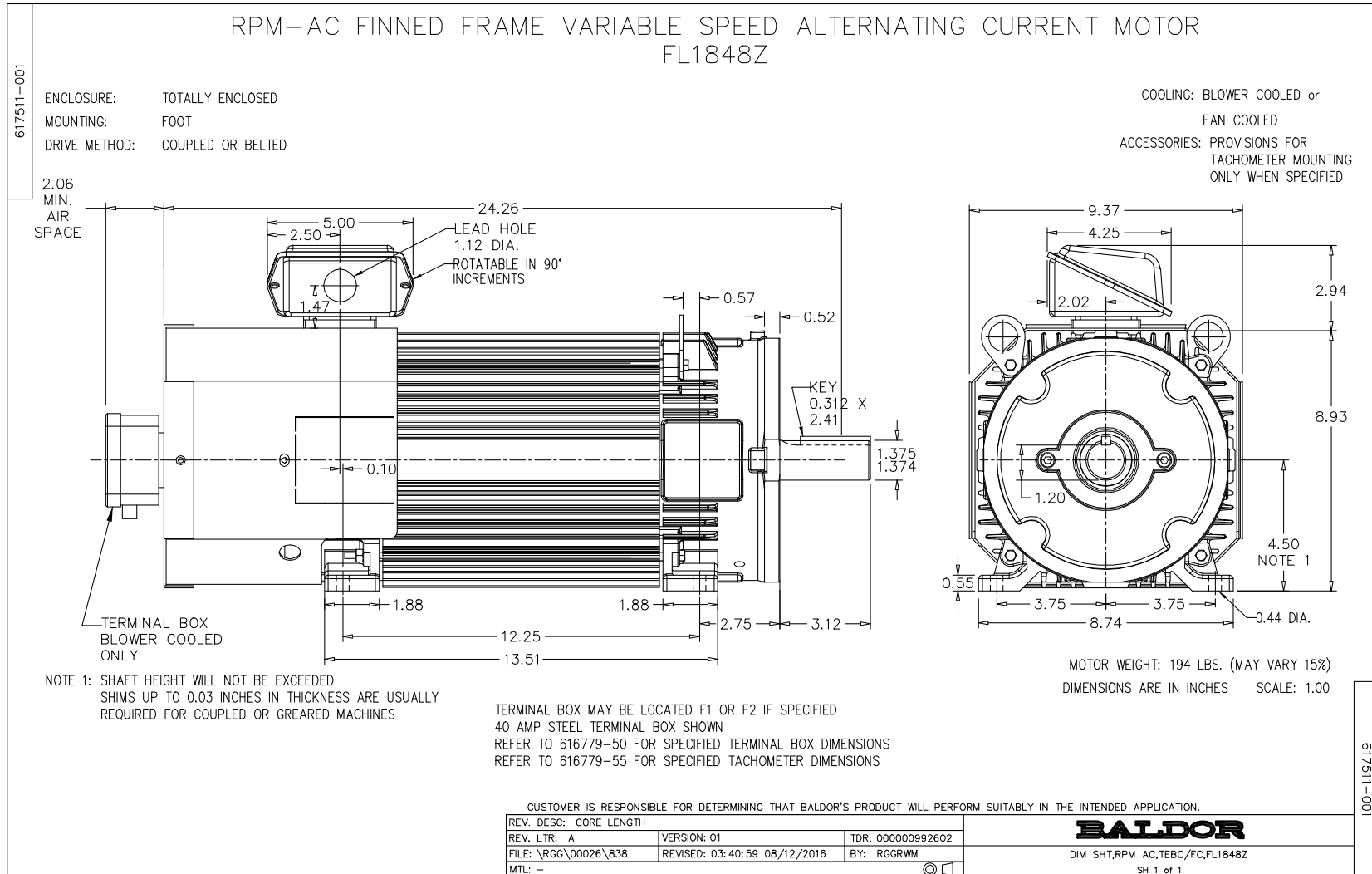
TYPICAL DATA

S.O.	--	HERTZ	60	AMB°C	40	CODE LETTER	G
FRAME	FL1848	RPM	1800	INSUL	H	WK ² (lb-ft ²)	.83
HP	20	VOLTS	460	S.F.	1.15	NEMA DESIGN	B
TYPE	PSM	AMPS	21.3	ENCL	TEFC	STATOR RES. @ 25°C	.5367
PHASE	3	DUTY	CONT			OHMS (BETWEEN LINES)	

Performance Data vs. HP At Synchronous Speed

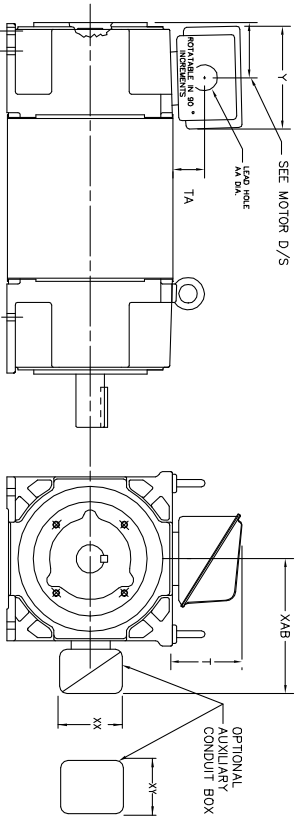


TYPICAL DATA



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	100	706320004B	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	235	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/RL182	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) E DIA .5A OR 1" DIA DIA .46

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.

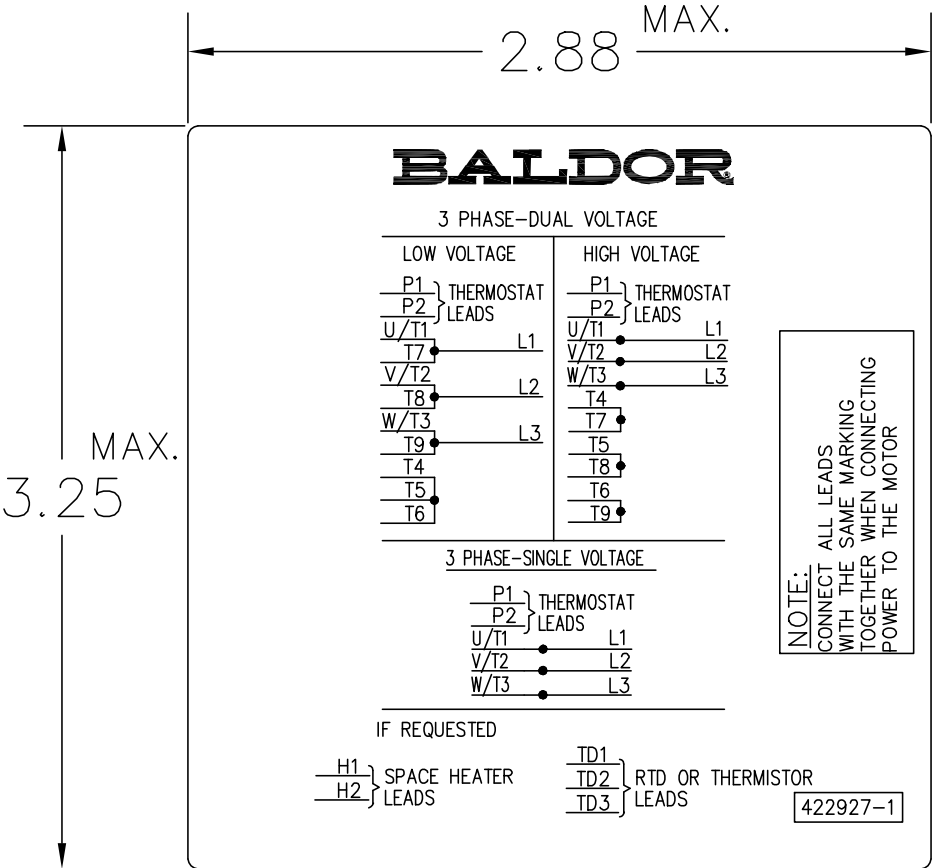
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION.

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

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

SH 1 of 1