

ABB BALDOR RELIANCE III

Customer information packet

IDCRPM25504

50HP, 1800, 460V, FL2570, TEFC, F3

Specifications

Enclosure	TEFC
Frame	FL2570Z
Frame Material	Exposed Laminations
Frequency	60.00 Hz
Output @ Frequency	50.000 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	49.000 A @ 460.0 V
Duty Rating	CONT
Feedback Device	NO FEEDBACK
Frame Prefix	FL
Heater Indicator	No Heater
High Voltage Full Load Amps	49.0 a
Insulation Class	H
KVA Code	F
Motor Standards	NEMA
Mounting Arrangement	F3
Overall Length	29.79 IN
Product Family	General Industrial
Pulley End Bearing Type	Ball
Pulley Face Code	Standard
Service Factor	1.15
Shaft Diameter	2.124 IN
Shaft Ground Indicator	Shaft Grounding
Shaft Rotation	Reversible

Part Detail

Revision	A
Type	AC
Mech. spec.	
Base	
Status	PRD/A
Elec. spec.	LS6049A
Layout	617573-073
Eff. date	01-21-2022
CD Diagram	422927-001
Poles	04
Leads	
Proprietary	False
Created date	11-02-2021

Speed	1800 rpm
Starting Method	Full Voltage
Thermal Device - Bearing	None
Thermal Device - Winding	Normally Closed Thermostat

Nameplate
000613007QF

	DUTY	HP	RPM	AMPS	VOLTS	HZ																	
	CONT	50	1800	49	460	60																	
CAT.NO.	IDCRPM25504		SPEC. NO.		F25-A000-0405																		
SER.NO			FRAME SIZE		FL2570Z		TYPE PSM																
AMB.	40	S.F.	1.15	ENCL.	TEFC		PH	3	DESIGN	B	CODE	F											
NEMA NOM. EFF	96.6		GUARANTEED EFFICIENCY		95.9		POWER FACTOR		97.2		INSUL. CLASS		H										
D.E. BRG.	65BC03JPP30A		O.D.E. BRG.		50BC03JPP30A																		
VPWM INVERTER DUTY @1.0SF	CHP HZ	60-90		CT HZ	1-60		VT HZ	0-60															
	IP54 X/T																						

000692000VY

MEAS OPEN CIRCUIT VOLTAGE

IS VOLTS AT RPM.

Parts List

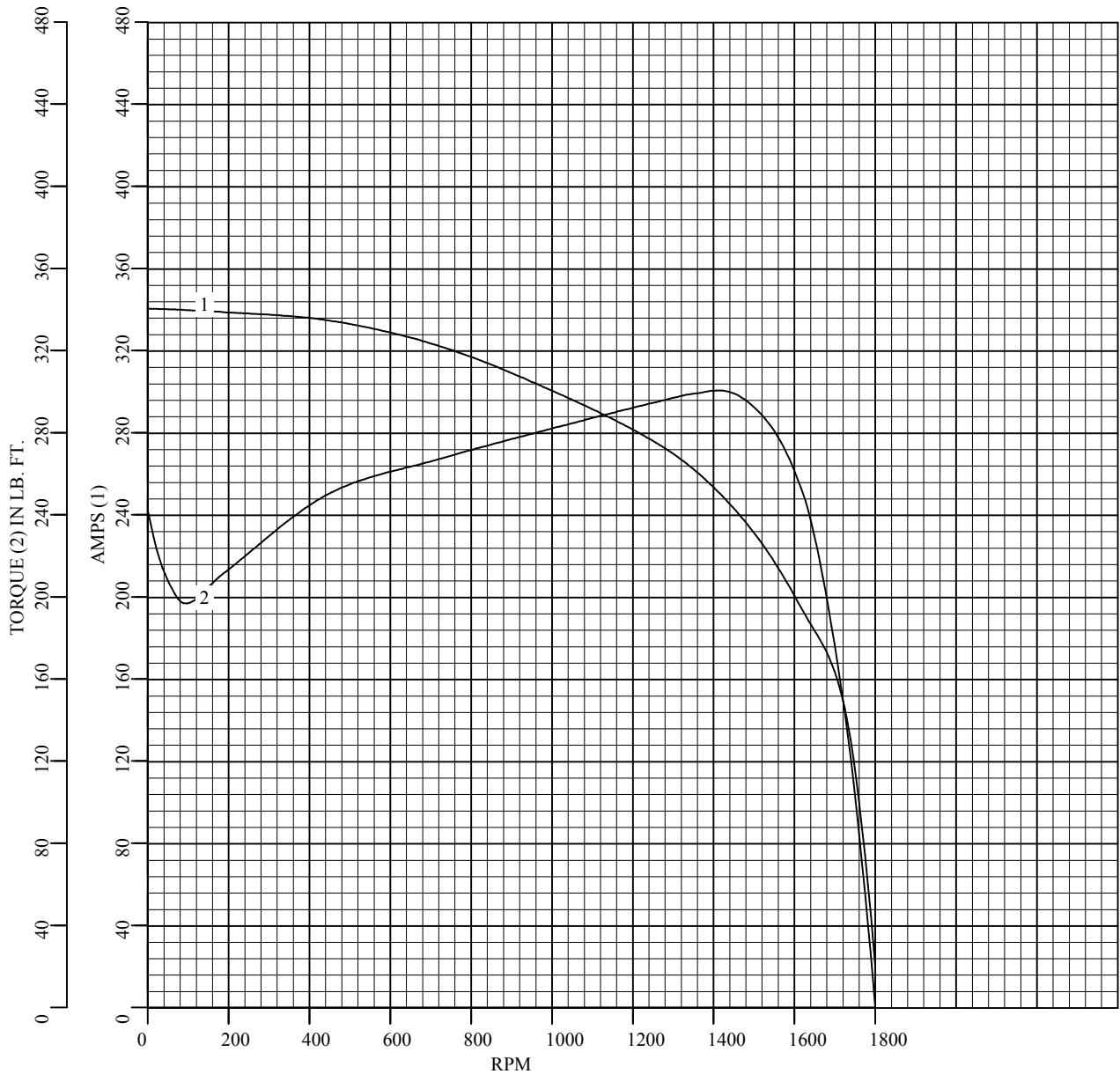
Part number	Description	Quantity
WS393162	WS F25-A000-0405	1.000 ea
RA389692	RA F25-A000-0405	1.000 ea
418018122A	LABEL	2.000 ea
033775004EA	DRSCR #6-1/4 304 S.S.	4.000 ea
000613007QF	NP,RPM AC - XE WITH CERTIFIED LOGO	1.000 ea
000692000XM	LABEL QR CODE	1.000 ea
LB1613	LABEL, QR CODE, ADHESIVE LABEL	1.000 ea
000692000VY	PERMANENT MAGNET MOTOR NAMEPLATE	1.000 ea
422927001	C/D LABEL	1.000 ea
004824007AB	PAINT,XT	0.100 ea
807582004AAB	BRKT,ODE,L250	1.000 ea
807582003AAA	BRKT,DE,250AC	1.000 ea
BP5068BJ01	BRUSH, .187 X .187 X 1.00	2.000 ea
HA4054	SHORT T-DRAIN FITTING, .125" N.P.T.	1.000 ea
HA4054	SHORT T-DRAIN FITTING, .125" N.P.T.	1.000 ea
415045002G	SLGR	1.000 ea
415045002E	SLGR	1.000 ea
400638001H	SPRING WASHER (Customer number 43699)	1.000 ea
036610010AB	MHSLW M10 PLATED	4.000 ea
036000016DB	HHCS	4.000 ea
036100080KA	M10-1.50X 80MM HXSOCHDCS	3.000 ea
418057491A	LIFTING LUG	2.000 ea
036500010AB	METRIC NUT M10-1.5PLTD400	4.000 ea
036500010AB	METRIC NUT M10-1.5PLTD400	4.000 ea
609830005ACL	STUD FRAME .375X11.38	4.000 ea
BP5248	BP5248	2.000 ea
415000103D	T/LUG #4AWG-1/0AWG W/HOLE FOR .250 BOLT	1.000 ea
415072001B	CLAMP	1.000 ea
417733004AC	GASK C/BOX	1.000 ea
706310640B	BACKPLATE GASKET C/BOX 706310-637	1.000 ea
034180012FA	KEY 3/8X3/8X1-1/2 L - 360	1.000 ea

078548001T	FAN 250	1.000 ea
708534051A	FL250 FAN GRILL	1.000 ea
708534050A	BLOWER SHROUD	1.000 ea
036000012HB	HHCS M6X12MM LONG PLATED	3.000 ea
418057256F	HHCS M6 12MM ZINCPLAT	1.000 ea
418057373A	SCREW SHEET METAL	7.000 ea
418018074A	GROUND LABEL G100 METRIC 160 D.C.	1.000 ea
406673002C	.75 CAP PLUG	1.000 ea
406673002AE	2" CAP PLUG	1.000 ea
036620009AB	M8 EXTERNAL LK WASHER	1.000 ea
706310638A	BACK PLATE FOR 706310-637 WITH 3.12" BOL	1.000 ea
423709011A	WASHER	8.000 ea
708533003A	PLATE, BTM FAN/BLOWER	2.000 ea
706310637A	C/BOX, MILL, RPMAC,9X9X4, 375IN^3	1.000 ea
706310641A	LIPPED CBOX LID FOR 706310-642	1.000 ea
706310640A	LID GASKET C/BOX 706310-637	1.000 ea
036010012HB	HHCS T/BOX BRACE	16.000 ea
036000012HB	HHCS M6X12MM LONG PLATED	4.000 ea
034180024GA	KEY 1/2X1/2X3 L	1.000 ea
000640000P	TAG WINDING THERMOST	1.000 ea
004824007CQR	C2 PAINT SYSTEM MEDIUM GRAY CHARCOAL MET	0.100 ea
LB1549	LABEL, BLANK 1.375 X 2.250 IMPRINTABLE	1.000 ea

S.O.	FRAME	HP	TYPE	PHASE	HERTZ	RPM
--	FL2570	50	PSM	3	60	1800
VOLTS	AMPS	DUTY	AMB ⁰ C	INSUL	S.F.	NEMA DESIGN
460	49.8	CONT	40	H	1.15	B
CODE LETTER	ENCL	ROTOR INERTIA (lb-ft ²)	STATOR RES. @ 25 ⁰ C OHMS (BETWEEN LINES)	TYPICAL DATA		
G	TEFC	3.89	.1878			
PERFORMANCE						
LOAD	HP	AMPERES	RPM	% POWER FACTOR	% EFFICIENCY	
NO LOAD	0	19.8	1800	3.80	N/A	
1/4	12.5	16.5	1800	75.4	94.1	
2/4	24.9	25.7	1800	94.8	96.1	
3/4	37.4	37.4	1800	97.2	96.6	
4/4	49.9	49.8	1800	97.2	96.6	
5/4	62.4	63.1	1800	96.2	96.4	
SPEED TORQUE						
	RPM	TORQUE (% FULL LOAD)	TORQUE (lb-ft)	AMPERES		
LOCKED ROTOR	0	166	242.2	340.5		
PULL OUT	1800	208	302.5	132.4		
FULL LOAD	1800	100	145.7	49.8		
THIS IS A PERMANENT MAGNET MOTOR GENERATED OPEN CIRCUIT LINE-LINE VOLTAGE at 25 ⁰ C = 20.4 VOLTS PER 100 RPM REMARKS:						
		DR. BY CAD CK. BY RFM APP. BY RFM DATE 05/25/2016		LSPM MOTOR PERFORMANCE DATA LS6049A ISSUE DATE 05/25/2016		

S.O.	--	HERTZ	60	AMB ⁰ C	40	CODE LETTER	G
FRAME	FL2570	RPM	1800	INSUL	H	WK ² (lb-ft ²)	3.89
HP	50	VOLTS	460	S.F.	1.15	NEMA DESIGN	B
TYPE	PSM	AMPS	49.8	ENCL	TEFC	STATOR RES. @ 25 ⁰ C	.1878
PHASE	3	DUTY	CONT			OHMS (BETWEEN LINES)	

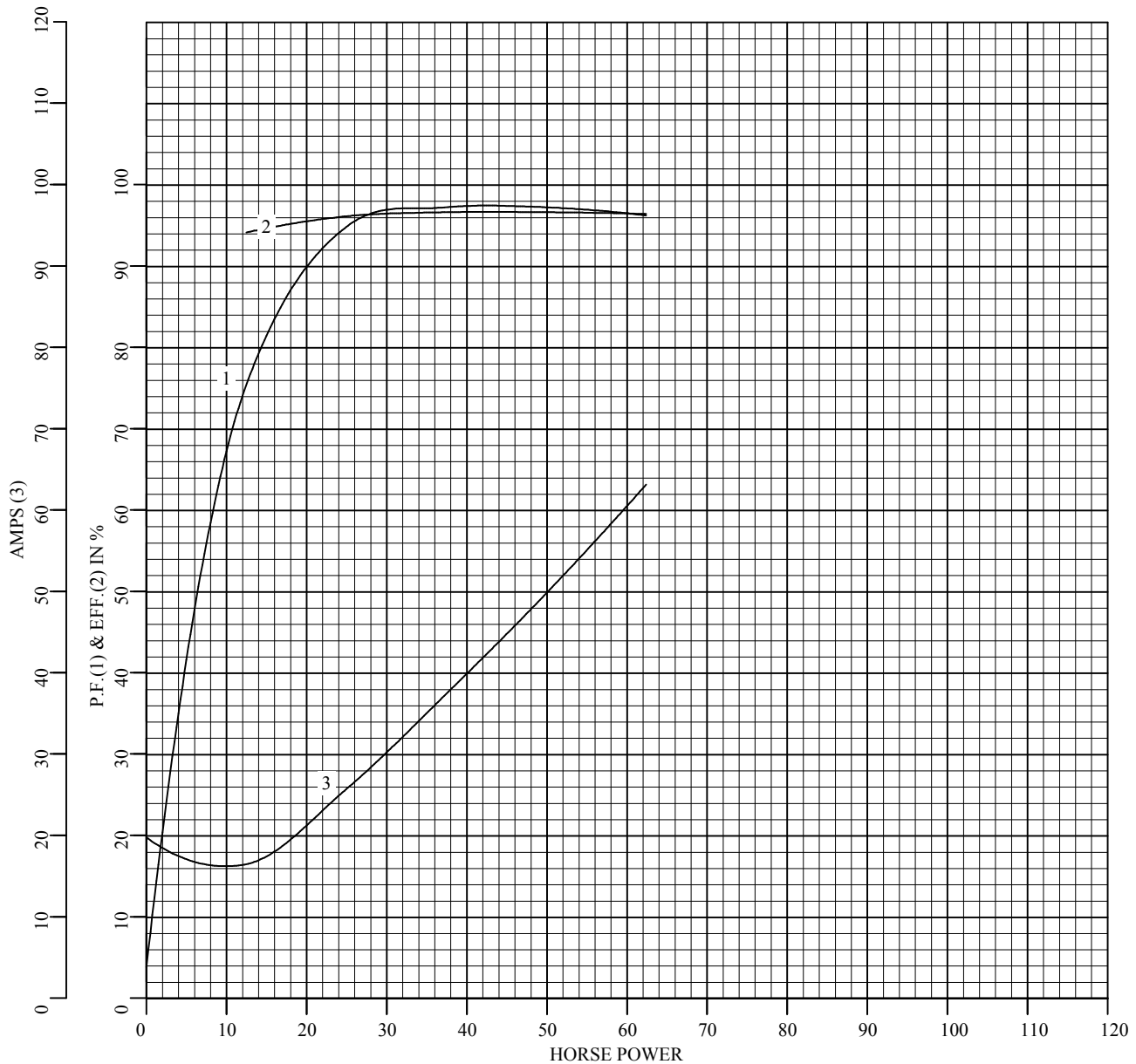
Amps & Torque vs. RPM During Acceleration



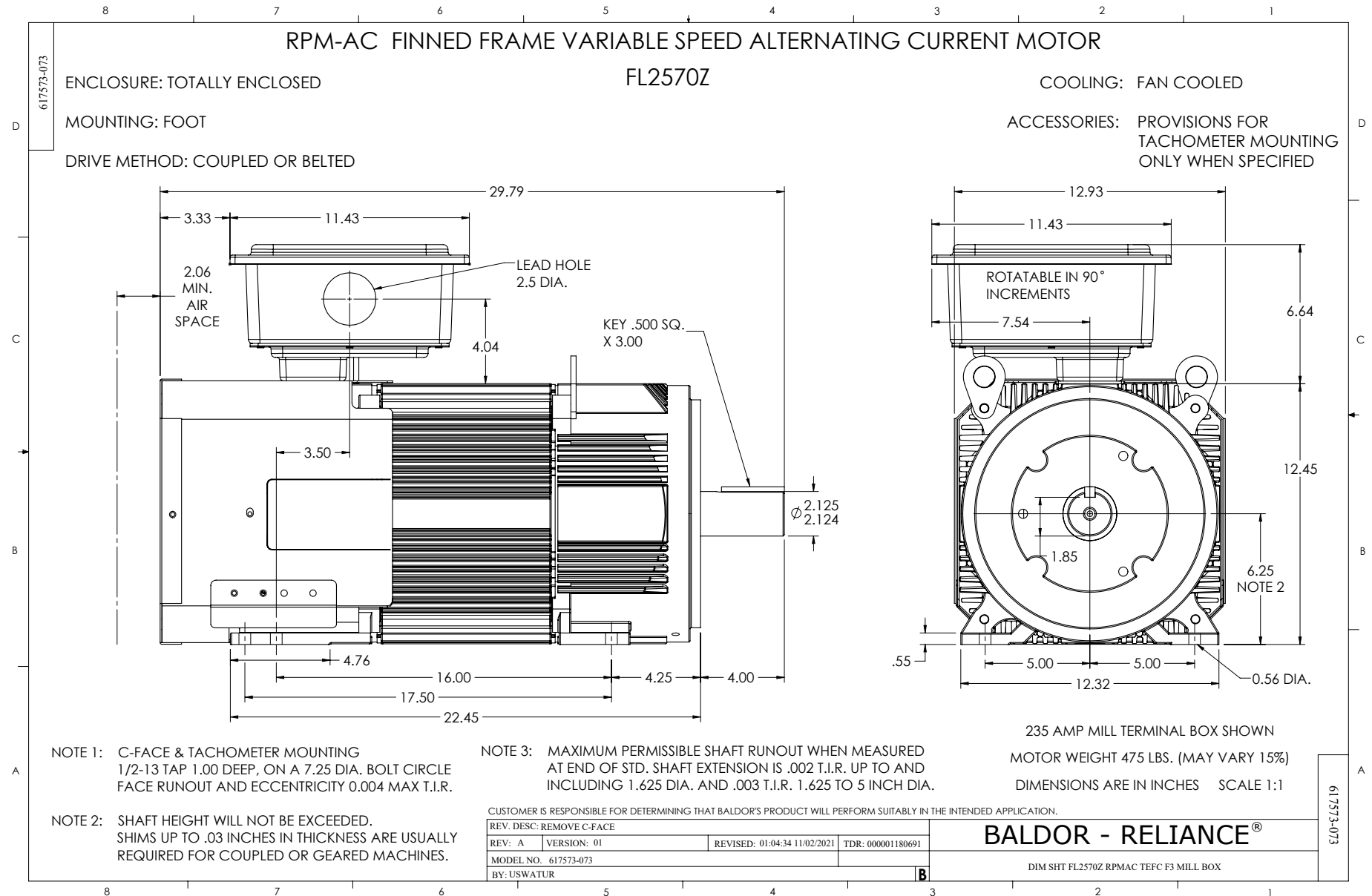
TYPICAL DATA

S.O.	--	HERTZ	60	AMB ⁰ C	40	CODE LETTER	G
FRAME	FL2570	RPM	1800	INSUL	H	WK ² (lb-ft ²)	3.89
HP	50	VOLTS	460	S.F.	1.15	NEMA DESIGN	B
TYPE	PSM	AMPS	49.8	ENCL	TEFC	STATOR RES. @ 25 ⁰ C	.1878
PHASE	3	DUTY	CONT			OHMS (BETWEEN LINES)	

Performance Data vs. HP At Synchronous Speed

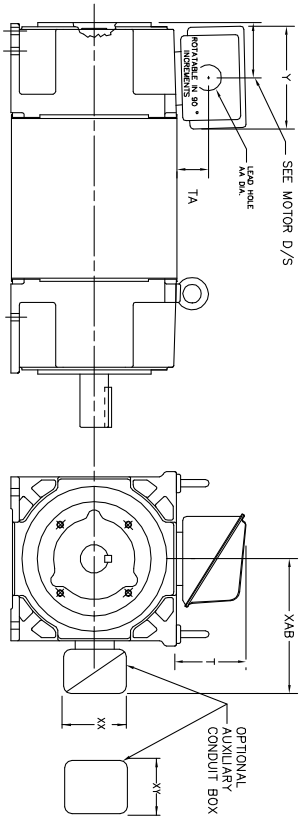


TYPICAL DATA



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	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	075454001A	7.69	2.38	5.25	1.94
FL210 & RL210	STEEL	N	306	706320016A	9.00	4.12	8.44	4.89
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	075454001A	7.69	2.38	5.25	1.94
FL250 & RL250	STEEL	N	306	706320016A	9.00	4.12	8.44	4.89
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	4.89
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/RL210/FL112	7.38	4.25	4.25	602007-26-A	FL210/RL210/FL112	10.88	8.00	8.00	706310-3-B
FL250/RL250/FL160	8.44	4.25	4.25	602007-26-A	FL250/RL250/FL160	11.88	8.00	8.00	706310-3-B
FL280/RL280/FL280/180	9.12	4.25	4.25	602007-26-A	FL280/RL280/FL280/180	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" TAP 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.

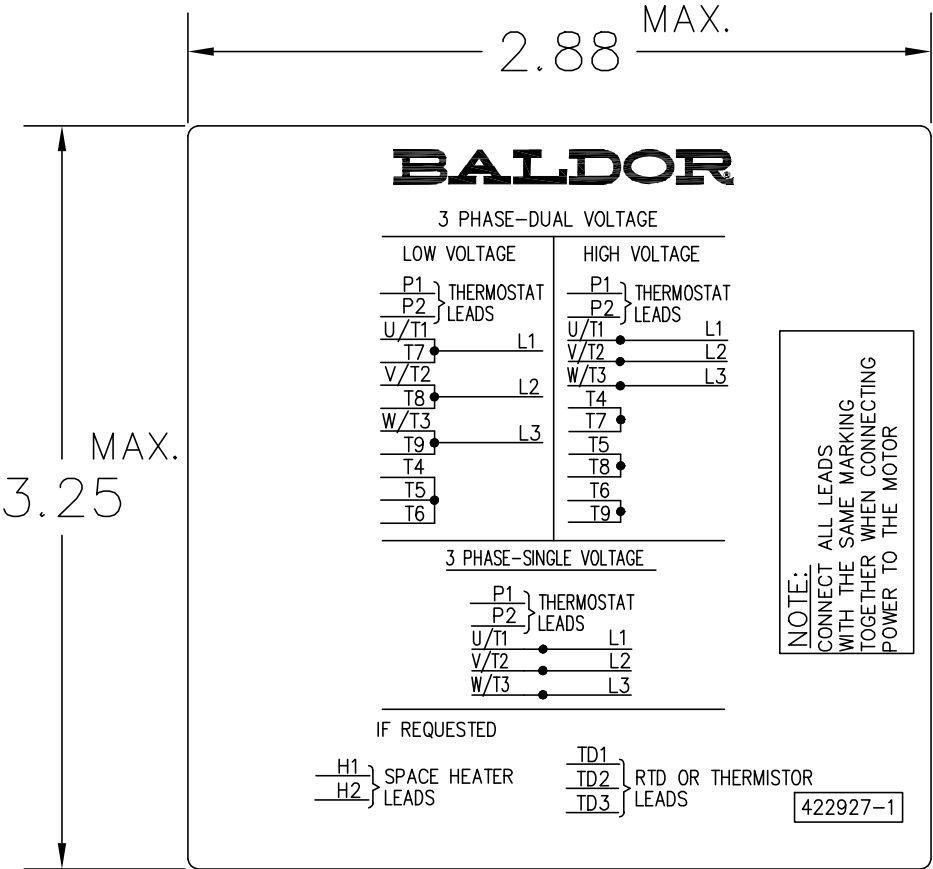
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION.

REV. DESC: ADD 706310-637 & 639 BOX	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