

ABB BALDOR RELIANCE III

Customer information packet

XEFRPM32404

40HP, 1800, 460V, HL324T, TEFC, F1

Specifications

Enclosure	TEFC
Frame	HL324T
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 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	40.000 A @ 460.0 V
Duty Rating	CONT
Feedback Device	NO FEEDBACK
Frame Prefix	HL
Heater Indicator	No Heater
High Voltage Full Load Amps	40.0 a
Insulation Class	H
KVA Code	G
Motor Standards	NEMA
Mounting Arrangement	F1
Overall Length	28.81 IN
Product Family	Fan
Pulley End Bearing Type	Ball
Pulley Face Code	Other
Service Factor	1.15
Shaft Diameter	2.124 IN
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible

Part Detail

Revision	E
Type	AC
Mech. spec.	
Base	
Status	PRD/A
Elec. spec.	LS7020A
Layout	619698-001
Eff. date	04-23-2019
CD Diagram	422927-001
Poles	04
Leads	
Proprietary	False
Created date	05-10-2016



Speed	1800 rpm
Thermal Device - Bearing	None
Thermal Device - Winding	None

Nameplate
000613007QF

	DUTY	HP	RPM	AMPS	VOLTS	HZ											
	CONT	40	1800	40	460	60											
CAT.NO.	XEFRPM32404		SPEC. NO.		H32-A000-0002												
SER.NO			FRAME SIZE		HL324T		TYPE PSM										
AMB.	40	S.F.	1.15	ENCL.	TEFC		PH	3	DESIGN	B	CODE	G					
NEMA NOM. EFF	96.4		GUARANTEED EFFICIENCY		95.6		POWER FACTOR		93.3		INSUL. CLASS					H	
D.E. BRG.	65BC03J30X		O.D.E. BRG.		50BC03J30X												
VPWM INVERTER DUTY @1.0SF	CHP HZ	60-90		CT HZ	1-60		VT HZ	0-60									
	X/T																

000692000VY

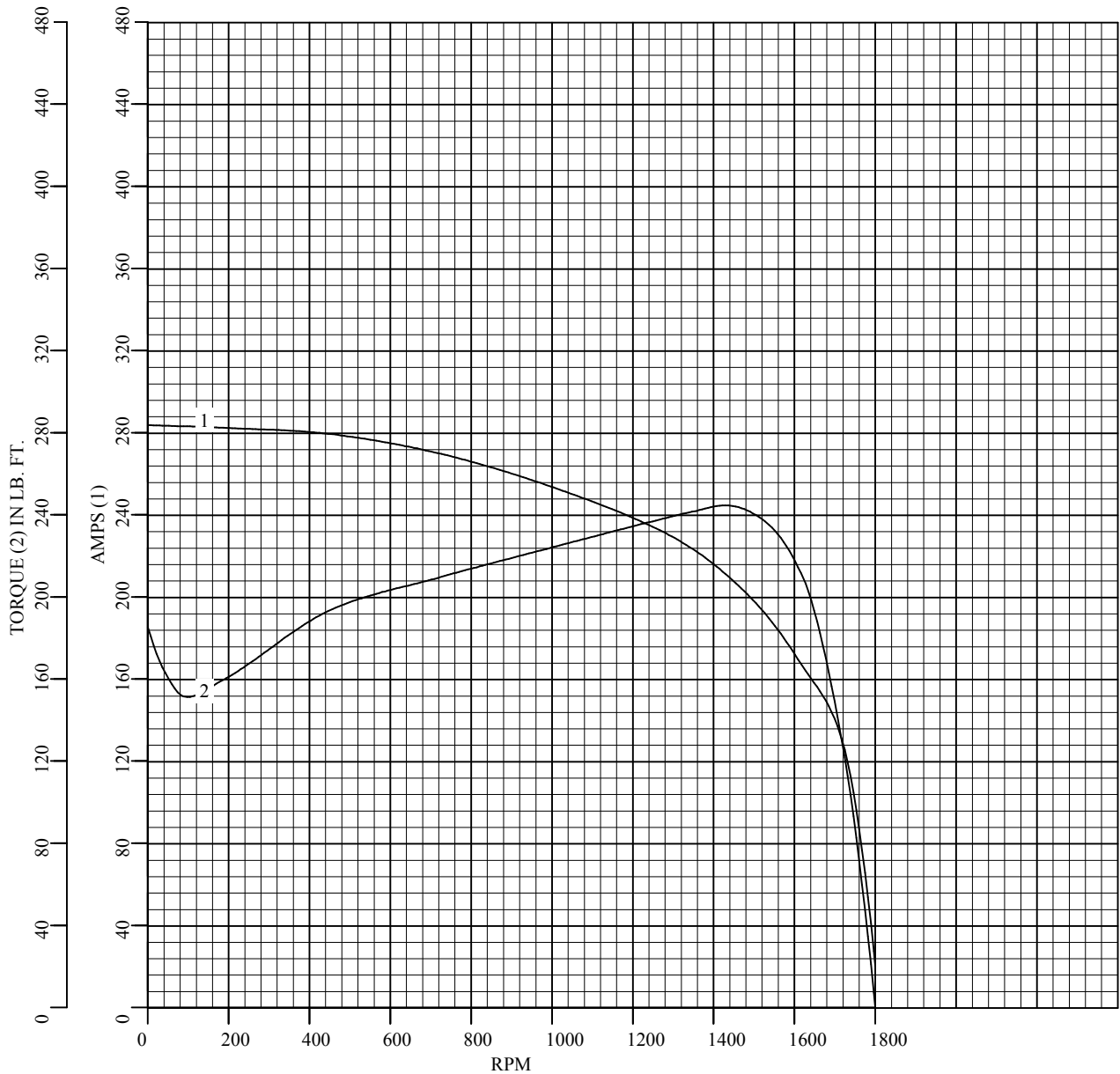
MEAS OPEN CIRCUIT VOLTAGE

IS VOLTS AT RPM.

S.O.	FRAME	HP	TYPE	PHASE	HERTZ	RPM
--	HL324T	40	PSM	3	60	1800
VOLTS	AMPS	DUTY	AMB [°] C	INSUL	S.F.	NEMA DESIGN
460	41.7	CONT	40	H	1.15	B
CODE LETTER	ENCL	ROTOR INERTIA (lb-ft ²)	STATOR RES. @ 25 [°] C OHMS (BETWEEN LINES)	TYPICAL DATA		
G	TEFC	2.96	.2444			
PERFORMANCE						
LOAD	HP	AMPERES	RPM	% POWER FACTOR	% EFFICIENCY	
NO LOAD	0	20.4	1800	3.70	N/A	
1/4	10.0	17.7	1800	57.2	93.0	
2/4	20.0	23.3	1800	84.0	95.7	
3/4	30.0	31.9	1800	91.4	96.3	
4/4	40.0	41.6	1800	93.3	96.4	
5/4	50.0	52.2	1800	93.1	96.1	
SPEED TORQUE						
	RPM	TORQUE (% FULL LOAD)	TORQUE (lb-ft)	AMPERES		
LOCKED ROTOR	0	159	185.4	283.6		
PULL OUT	1800	217	254.0	130.4		
FULL LOAD	1800	100	116.8	41.6		
THIS IS A PERMANENT MAGNET MOTOR GENERATED OPEN CIRCUIT LINE-LINE VOLTAGE at 25[°]C = 18.5 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 DATA		

S.O.	--	HERTZ	60	AMB°C	40	CODE LETTER	G
FRAME	HL324T	RPM	1800	INSUL	H	WK ² (lb-ft ²)	2.96
HP	40	VOLTS	460	S.F.	1.15	NEMA DESIGN	B
TYPE	PSM	AMPS	41.7	ENCL	TEFC	STATOR RES. @ 25°C	.2444
PHASE	3	DUTY	CONT			OHMS (BETWEEN LINES)	

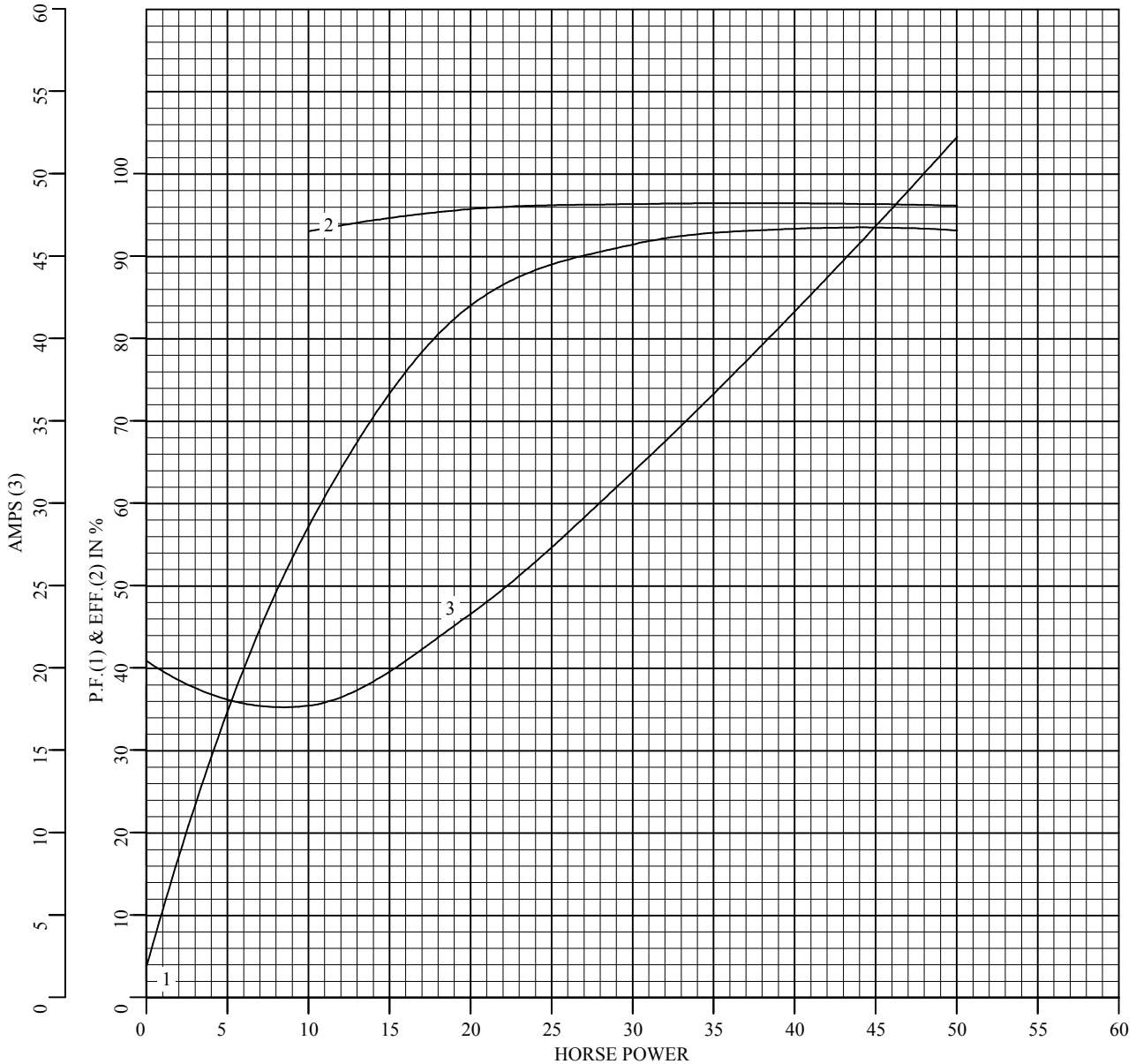
Amps & Torque vs. RPM During Acceleration



TYPICAL DATA

S.O.	--	HERTZ	60	AMB ^o C	40	CODE LETTER	G
FRAME	HL324T	RPM	1800	INSUL	H	WK ² (lb-ft ²)	2.96
HP	40	VOLTS	460	S.F.	1.15	NEMA DESIGN	B
TYPE	PSM	AMPS	41.7	ENCL	TEFC	STATOR RES. @ 25 ^o C	.2444
PHASE	3	DUTY	CONT			OHMS (BETWEEN LINES)	

Performance Data vs. HP At Synchronous Speed



TYPICAL DATA



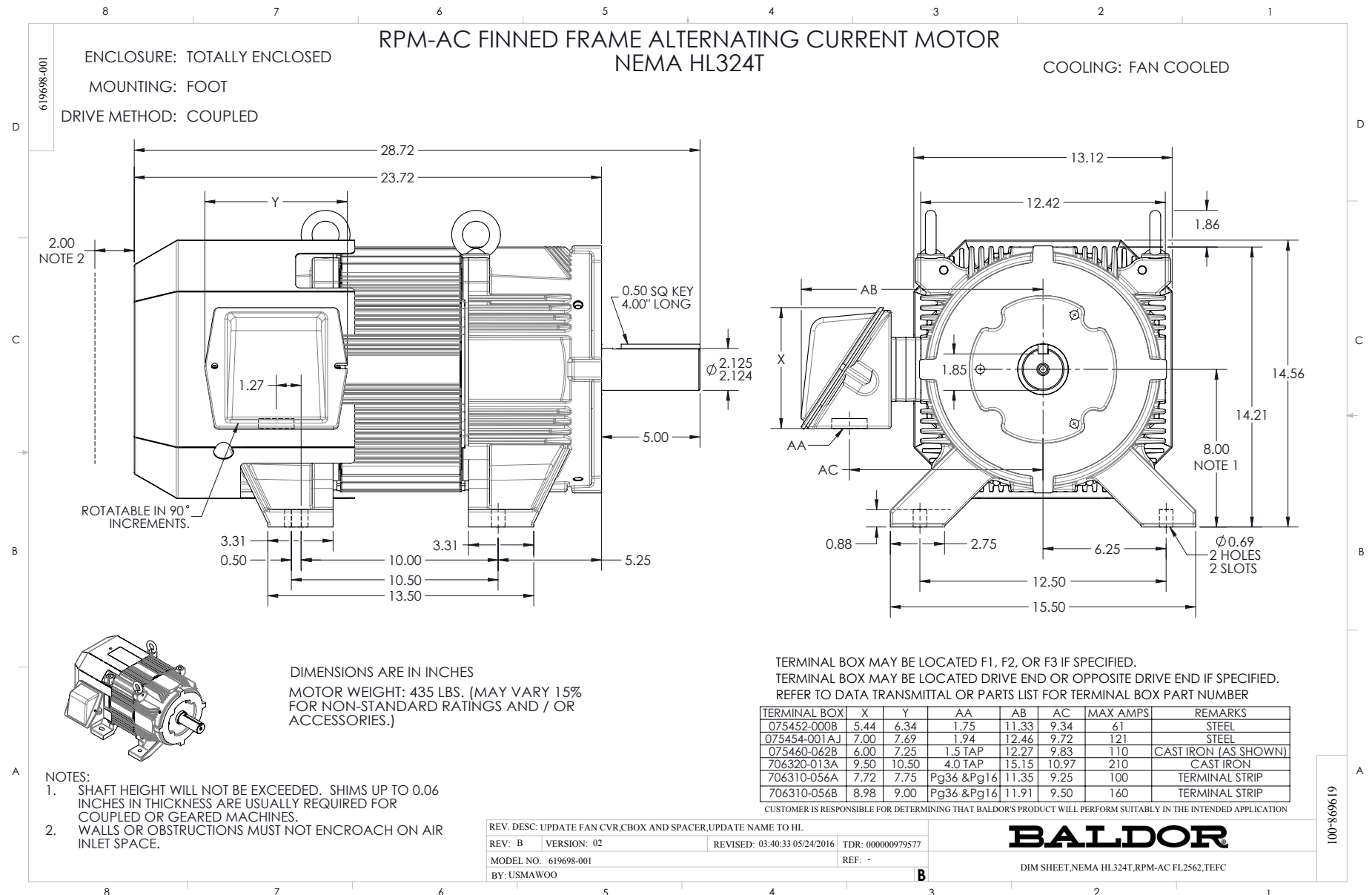
DR. BY	CAD
CK. BY	RFM
APP. BY	RFM
DATE	05/25/2016

**LSPM MOTOR
PERFORMANCE
CURVES**

LS7020A

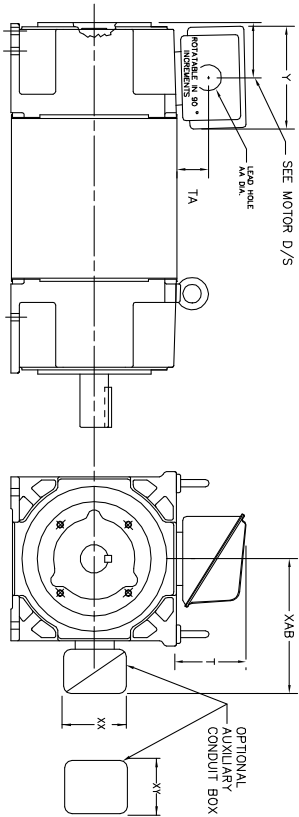
ISSUE DATE

05/25/2016



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	2.50/2.00
FL180	CAST IRON	Y/N	208	706320004C	6.75	2.58	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	7063100637A	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	7063100637A	11.42	4.00	6.72	2.50
FL250 & RL280	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	7063100637A	11.42	4.00	6.72	2.50
FL280 & RL280	MILL	Y	400	706310063B	14.39	7.43	12.15	BLANK

FRAME SIZE	YAB	XX	XY	PART NUMBER	FRAME SIZE	YAB	XX	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.

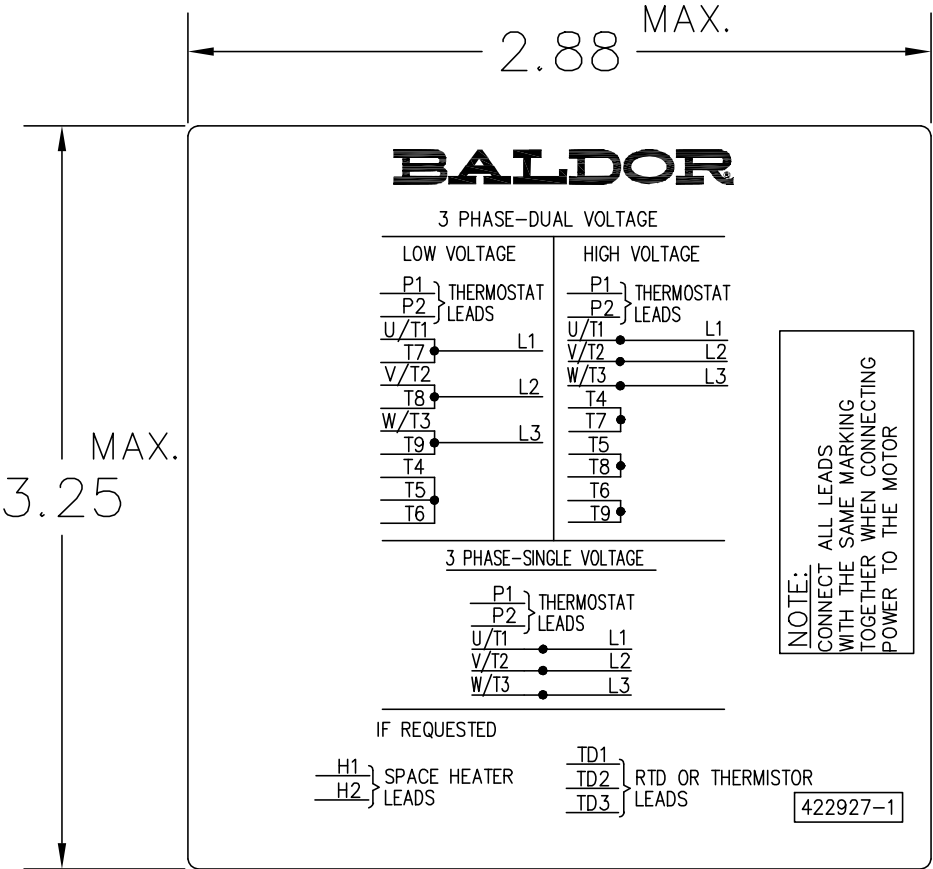
REV. DESC: ADD 706310-637 & 639 BOX	VERSION: 06	TDR: 000001180260
REV. LTR: F	REVISED: 11:08:56 10/26/2021	BY: RCGRWM
FILE: \\RGG\00003\692		
MTL: -		

BALDOR - RELIANCE®

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

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: 000000788708
FILE: \RGG\00000\203	REVISED: 08:09:29 03/04/2013	
MTL: -	BY: RGGWT	

BALDOR
EXTERNAL CONNECTION LABEL
SH 1 of 1