

ABB BALDOR RELIANCE III

Customer information packet

IDCRPM281004

100HP, 1800, 460V, FL2890, TEFC, F3

Specifications

Enclosure	TEFC
Frame	FL2890Z
Frame Material	Exposed Laminations
Frequency	60.00 Hz
Output @ Frequency	100.000 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	98.000 A @ 460.0 V
Duty Rating	CONT
Feedback Device	NO FEEDBACK
Frame Prefix	FL
Heater Indicator	No Heater
High Voltage Full Load Amps	98.0 a
Insulation Class	H
KVA Code	F
Motor Standards	NEMA
Mounting Arrangement	F3
Overall Length	36.59 IN
Product Family	General Industrial
Pulley End Bearing Type	Ball
Pulley Face Code	Standard
Service Factor	1.00
Shaft Diameter	2.624 IN
Shaft Ground Indicator	Shaft Grounding
Shaft Rotation	Reversible

Part Detail

Revision	B
Type	AC
Mech. spec.	
Base	
Status	PRD/A
Elec. spec.	LS7031A
Layout	617245-073
Eff. date	03-24-2022
CD Diagram	422927-001
Poles	04
Leads	
Proprietary	False
Created date	11-01-2021

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	100	1800	98	460	60														
CAT.NO.	IDCRPM281004		SPEC. NO.		F28-A000-0372															
SER.NO			FRAME SIZE		FL2890Z		TYPE PSM													
AMB.	40	S.F.	1.00	ENCL.	TEFC		PH	3	DESIGN	B	CODE	F								
NEMA NOM. EFF	97.3		GUARANTEED EFFICIENCY		96.7		POWER FACTOR		99.1		INSUL. CLASS		H							
D.E. BRG.	75BC02J30X		O.D.E. BRG.		55BC02J30X															
VPWM INVERTER DUTY @1.0SF	CHP HZ	60-90		CT HZ	1-60		VT HZ	0-60												
	IP54 X/T																			

000692000VY

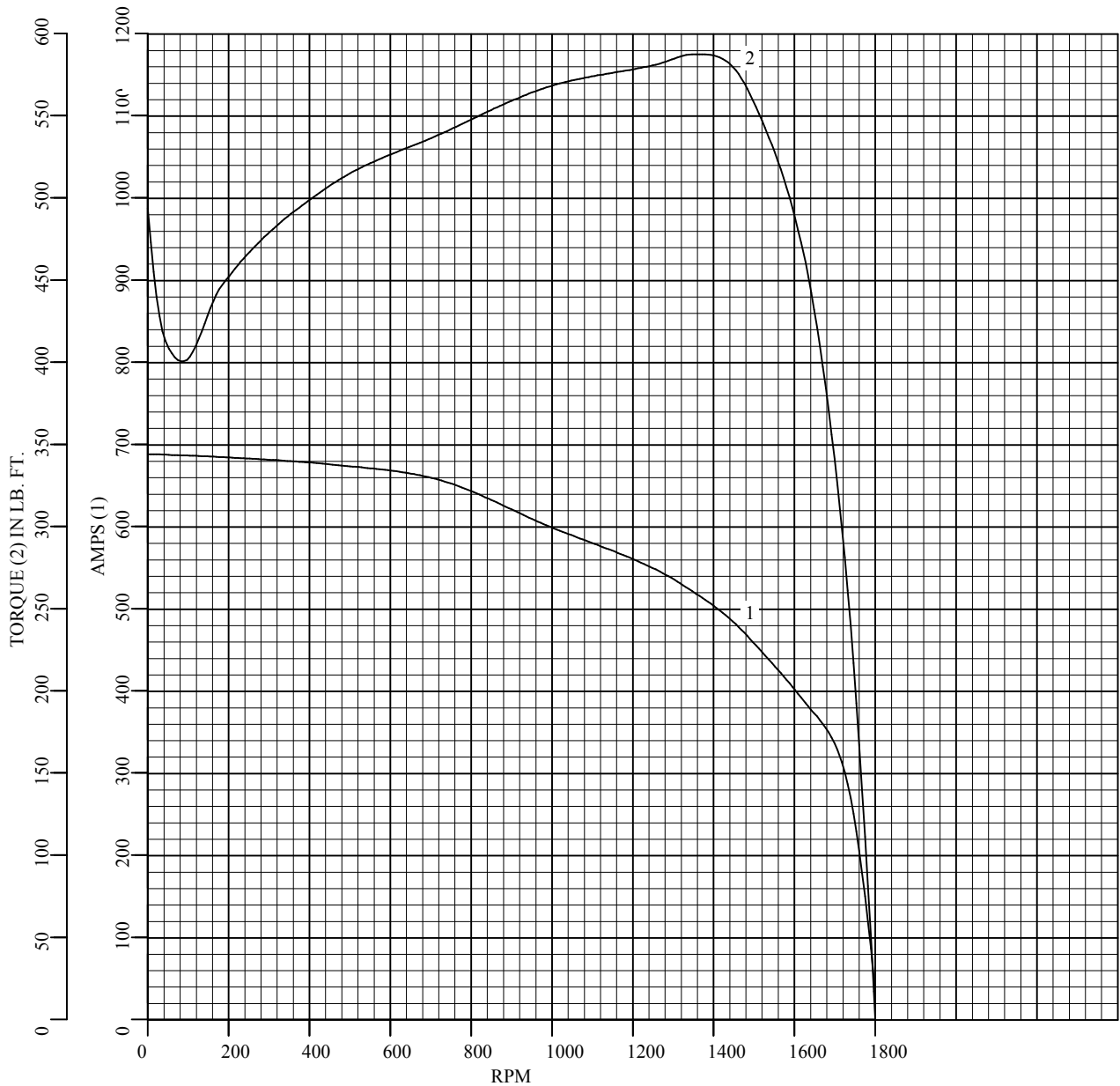
MEAS OPEN CIRCUIT VOLTAGE

IS VOLTS AT RPM.

S.O.	FRAME	HP	TYPE	PHASE	HERTZ	RPM
--	FL2890	100	PSM	3	60	1800
VOLTS	AMPS	DUTY	AMB ⁰ C	INSUL	S.F.	NEMA DESIGN
460	96.9	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	11.1	.06784			
PERFORMANCE						
LOAD	HP	AMPERES	RPM	% POWER FACTOR	% EFFICIENCY	
NO LOAD	0	32.1	1800	3.50	N/A	
1/4	25.0	28.3	1800	86.8	95.3	
2/4	49.9	49.0	1800	98.7	96.8	
3/4	74.9	72.6	1800	99.4	97.2	
4/4	99.8	96.9	1800	99.1	97.3	
5/4	125	122	1800	98.3	97.2	
SPEED TORQUE						
	RPM	TORQUE (% FULL LOAD)	TORQUE (lb-ft)	AMPERES		
LOCKED ROTOR	0	169	493.9	688.0		
PULL OUT	1800	220	642.1	275.6		
FULL LOAD	1800	100	291.5	96.9		
THIS IS A PERMANENT MAGNET MOTOR GENERATED OPEN CIRCUIT LINE-LINE VOLTAGE at 25 ⁰ C = 22.1 VOLTS PER 100 RPM REMARKS:						
		DR. BY CAD CK. BY RFM APP. BY RFM DATE 05/25/2016		LSPM MOTOR PERFORMANCE DATA LS7031A ISSUE DATE 05/25/2016		

S.O.	--	HERTZ	60	AMB ⁰ C	40	CODE LETTER	G
FRAME	FL2890	RPM	1800	INSUL	H	WK ² (lb-ft ²)	11.1
HP	100	VOLTS	460	S.F.	1.15	NEMA DESIGN	B
TYPE	PSM	AMPS	96.9	ENCL	TEFC	STATOR RES. @ 25 ⁰ C	.06784
PHASE	3	DUTY	CONT			OHMS (BETWEEN LINES)	

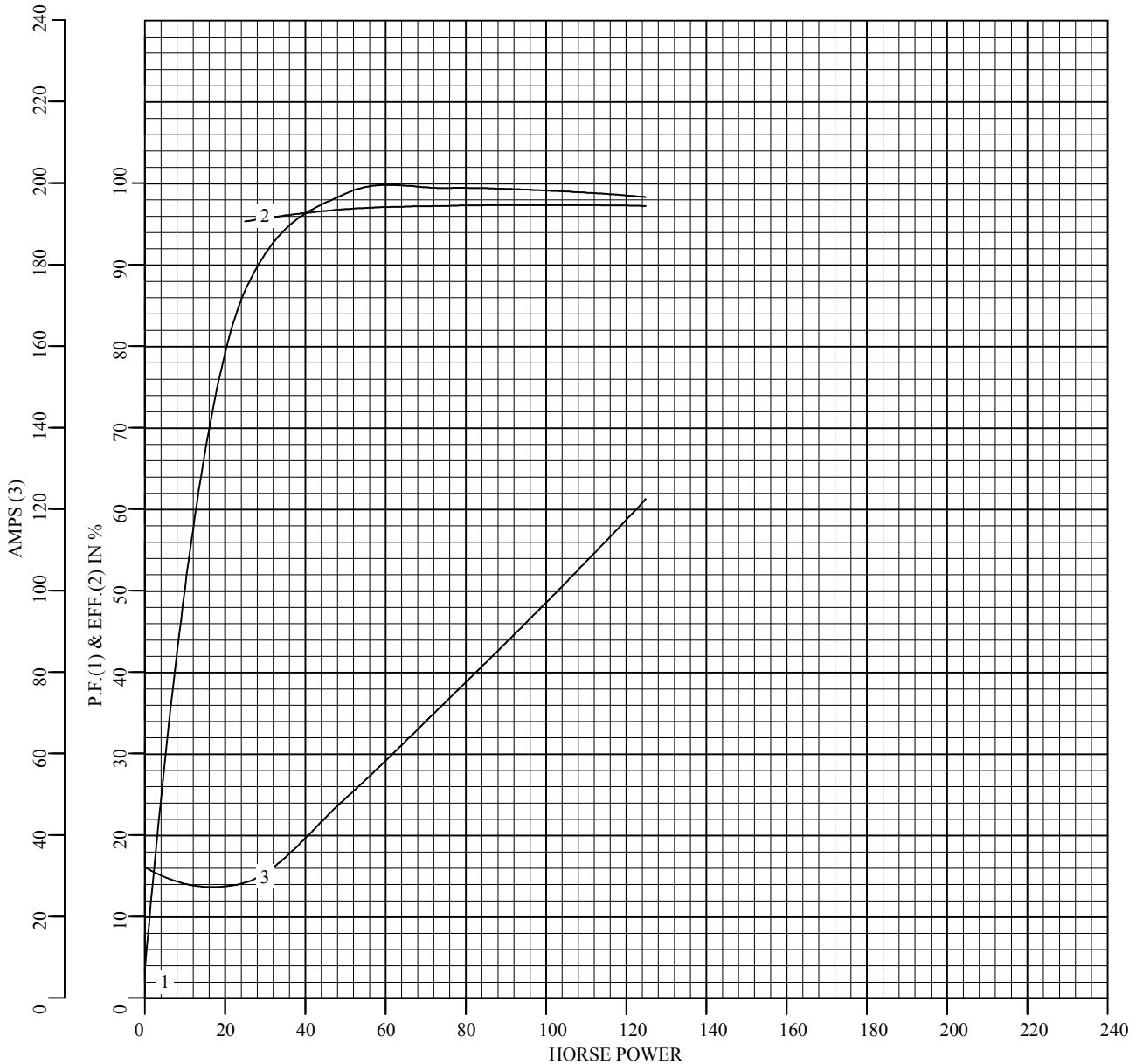
Amps & Torque vs. RPM During Acceleration



TYPICAL DATA

S.O.	--	HERTZ	60	AMB ⁰ C	40	CODE LETTER	G
FRAME	FL2890	RPM	1800	INSUL	H	WK ² (lb-ft ²)	11.1
HP	100	VOLTS	460	S.F.	1.15	NEMA DESIGN	B
TYPE	PSM	AMPS	96.9	ENCL	TEFC	STATOR RES. @ 25 ⁰ C	.06784
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

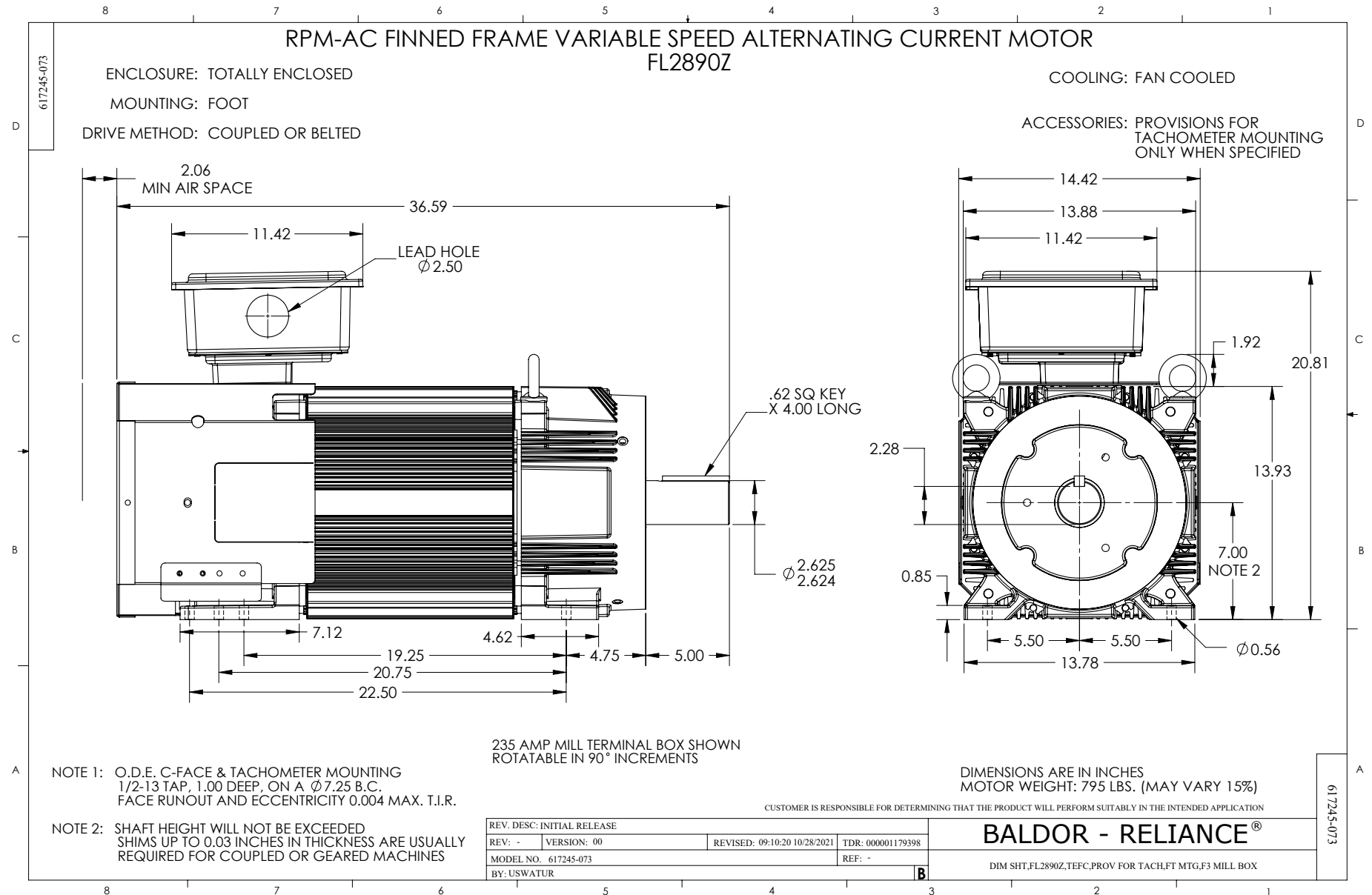
**LSPM MOTOR
PERFORMANCE
CURVES**

ISSUE DATE

LS7031A

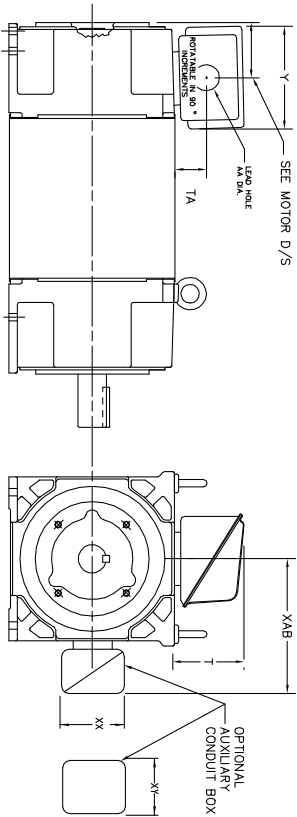
05/25/2016

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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	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	208	706320004C	6.75	2.36	4.38	1.75/2.00
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	2.36	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	2.36	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	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	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	XX	XY	PART NUMBER	FRAME SIZE	YAB	XX	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) 1/4" PIPE CONDUIT.
(2) 1/4" PIPE TAP.
(3) CUSTOMER TO PROVIDE HOLE PER CONDUIT.
(4) 2" DIA. SH OR 1" DIA. DIA. SH.

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.
DR C-1 MOUNTING IS SPECIFIED. BOX LOCATED ON TOP WHEN SPECIFIED.

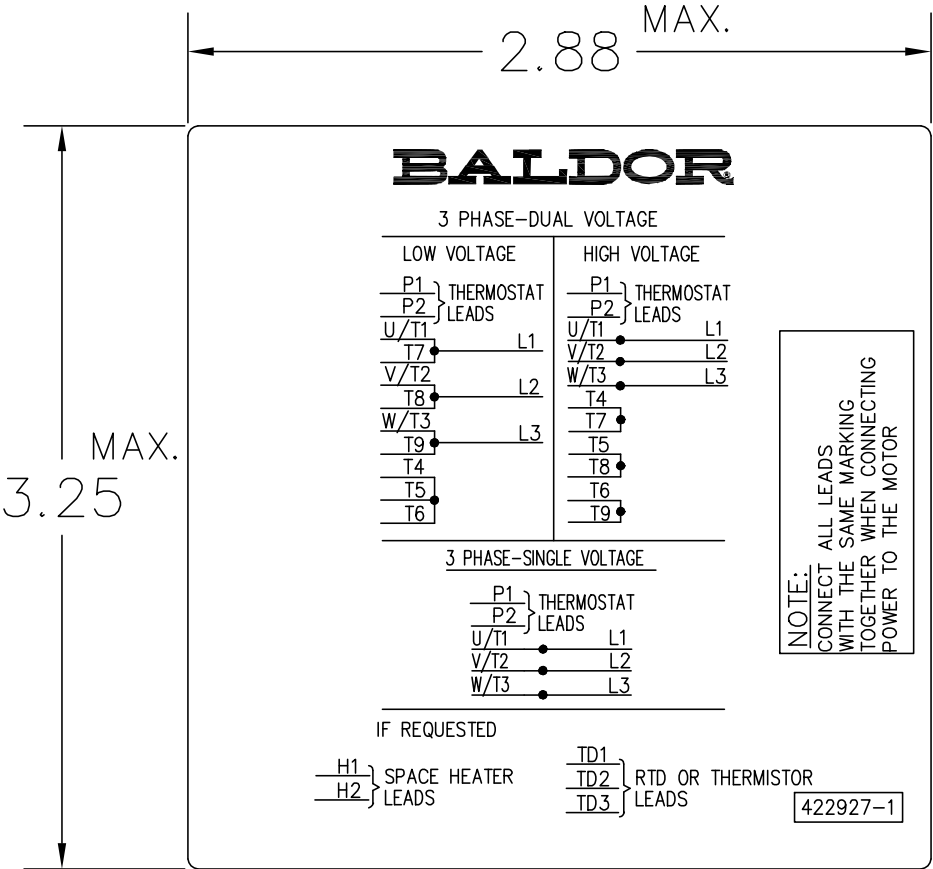
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION.

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
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