

ABB BALDOR RELIANCE III

Customer information packet

ZDPM28150-BV

150HP, 1800, 460V, FL2890, TEBC, F3

Specifications

Enclosure	TEBC
Frame	FL2890Z
Frame Material	Exposed Laminations
Frequency	60.00 Hz
Output @ Frequency	150.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1800 RPM @ 60 HZ
Voltage @ Frequency	460.0 V @ 60 HZ
Agency Approvals	CCSA US
Auxiliary Box	NO AUXILLARY BOX
Base Indicator	Rigid
Bearing Grease Type	Polyrex EM (-20F +300F)
Current @ Voltage	168.000 A @ 460.0 V
Duty Rating	CONT
Feedback Device	RESOLVER
Frame Prefix	FL
Heater Indicator	No Heater
High Voltage Full Load Amps	168.0 a
Insulation Class	H
IP Rating	NONE
Motor Standards	NEMA
Mounting Arrangement	F3
Overall Length	46.06 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
Speed	1800 rpm
Starting Method	Full Voltage

Part Detail

Revision	B
Type	AC
Mech. spec.	
Base	
Status	PRD/A
Elec. spec.	PM4057A
Layout	617531-357
Eff. date	03-24-2022
CD Diagram	422927-001
Poles	04
Leads	
Proprietary	False
Created date	11-08-2021

Thermal Device - Bearing	None
Thermal Device - Winding	Normally Closed Thermostat

Nameplate

000613006MY									
	DUTY	HP	RPM	AMPS	VOLTS	HZ			
	CONT	150	1800		168	460	60		
	CONT	150	3000		168	460	100		
CAT.NO.	ZDPM28150-BV			SPEC. NO.	F28-A000-0378				
SER.NO				FR	FL2890Z	INSUL	H		
PH.	3	MAX SAFE SPEED			5000	AMB.	40	MIN. AMB.	-25
DESIGN NO.	PM4057A			TYPE		ENCL.	TEAO-BC		
S.F.	1.00			D.E. BRG.	75BC02J30X				
ENCL MOD				O.D.E. BRG.	55BC02J30X				
	IP44								

000692000VY		
MEAS OPEN CIRCUIT VOLTAGE		
IS		
	VOLTS AT	
		RPM.

Parts List

Part number	Description	Quantity
WS393385	WS F28-A000-0378	1.000 ea
RA389914	RA F28-A000-0378	1.000 ea
418018122A	LABEL	2.000 ea
033775004EA	DRSCR #6-1/4 304 S.S.	4.000 ea
000613006MY	NP-RPMAC INVERTER DUTY	1.000 ea
000692000NH	LABEL DIRECTION AIR FL	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
807583004AAB	BRKT,ODE,FL280	1.000 ea
807583003AAA	BRKT,DE,FL280	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
004824015A	GREASE POLYREX EM	0.300 lb
036600014AB	FLTW MOTOR MTG.	2.000 ea
400638001G	WAVEN (Customer number 43699)	1.000 ea
036000016DB	HHCS	4.000 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
036100070KA	METRIC HSHCS	3.000 ea
036100070JA	HSHCS M8 70MM UNPLATED	3.000 ea
036140001D	EYEBOLT - 360	2.000 ea
034693001AB	PPLG - G508- use 034692001AB	1.000 ea
034693001AB	PPLG - G508- use 034692001AB	1.000 ea
036500011AB	METRIC NUT M12-1.75 PLT.	4.000 ea
036500011AB	METRIC NUT M12-1.75 PLT.	4.000 ea
609830005G	TBOLT VERSION 3	4.000 ea
BP5248	BP5248	2.000 ea

610490001A	16M 2P TENV VER 56C SUPER E, CE	1.000 ea
415000103D	T/LUG #4AWG-1/0AWG W/HOLE FOR .250 BOLT	1.000 ea
036000012HB	HHCS M6X12MM LONG PLATED	3.000 ea
422962052AB	STUB SHAFT	1.000 ea
800123015A	RESOLVER	1.000 ea
600164003A	WHEEL, BLOWER	1.000 ea
036600008AB	MFWSH M6 PLATED	4.000 ea
417733004J	GASKT	1.000 ea
706310640B	BACKPLATE GASKET C/BOX 706310-637	1.000 ea
609843001K	GASKET HANDHOLE COVER FE	1.000 ea
708535017A	FAN COVER,GRILL	1.000 ea
036000025HB	HHCS M6-1.0X25L PLTD.	4.000 ea
032018006CK	HHCS 3/8-16X3/4L PLATED 411409	4.000 ea
036500008AB	METRIC H.NUT M6-1.0 PLTD	4.000 ea
708535010C	FAN COVER FL280 WITH ENCODER/RMM BLWR	1.000 ea
036000012KB	M10 1.50 X 12MM HXHDCS	3.000 ea
000613006NT	NAME PLATE IEC	1.000 ea
418057256F	HHCS M6 12MM ZINCPLAT	1.000 ea
036610008AB	METRIC LCKW M6 PLTD-G508	4.000 ea
418057373A	SCREW SHEET METAL	7.000 ea
418018074A	GROUND LABEL G100 METRIC 160 D.C.	1.000 ea
708533003A	PLATE, BTM FAN/BLOWER	2.000 ea
706313063A	BLOWER HOUSING	1.000 ea
410978010A	FLANGE, INLET BLOWER	1.000 ea
410978011A	GRILL, INLET BLOWER HSG	1.000 ea
406673002C	.75 CAP PLUG	1.000 ea
036620009AB	M8 EXTERNAL LK WASHER	1.000 ea
034630001AJ	1/8" PIPE COUPLING	1.000 ea
034017014AB	LCKW 3/8 STD. PLATED	4.000 ea
706310642A	BACK PLATE FOR 706310-637 WITH 5.00" BOL	1.000 ea
036600009AB	METRIC FLWASH M8 PLATED	2.000 ea
036310010FB	RHMS TERM/BLK MTG	2.000 ea
034530016AB	P/NIP 1/8X2 PLATED - 320	1.000 ea
418057461B	PLATE, ENCODER	1.000 ea

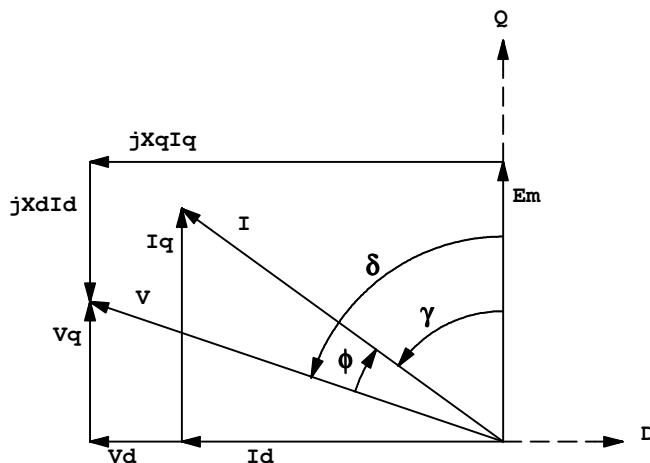
036320008CB	M2.5 SCREW	4.000 ea
036500006AB	M4-0.7 METRIC HEX NUT	2.000 ea
706310637A	C/BOX, MILL, RPMAC,9X9X4, 375IN^3	1.000 ea
706310641A	LIPPED CBOX LID FOR 706310-642	1.000 ea
706310640A	LID GASKET C/BOX 706310-637	1.000 ea
036010012HB	HHCS T/BOX BRACE	16.000 ea
036000012JB	M8-1.25 X 12MM HXHDC	4.000 ea
034180032HA	KEY 5/8X5/8X4	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
004824007AB	PAINT,XT	0.100 ea

S.O. 0	VOLTS 460	TYPE IPM	STATOR RES. @ 25 °C .0328
FRAME FL2890	AMPS 166.0	ENCLOSURE TEBC	OHMS (BETWEEN LINES)
HP 150	DUTY CONT	MAX SAFE RPM 5000	
BASE SPEED 1800	S.F. 1.0	WK ² (Lb-Ft ²) 10.56	
PHASE/HERTZ 3/60	AMB °C/INSUL 40/H	MAX INSTANTANEOUS OVERLOAD AMPS 498	

VARIABLE SPEED PERFORMANCE

HP	AMPS (rms)	RPM	GAMMA*	POWER FACT.	EFF.	VOLTS (L-L) (rms)	Em (L-N) (rms)	Lq (mH)	Ld (mH)
OpenCkt**	N/A	1800	5.0	N/A	N/A	N/A	193	N/A	N/A
OpenCkt, hot	N/A	1800	5.0	N/A	N/A	N/A	154	N/A	N/A
31.1	41.5	1800	29.6	96.1	95.5	351	154	10.6	1.70
69.6	83.0	1800	36.7	93.4	96.1	402	154	7.80	1.70
109	125	1800	40.2	91.3	96.2	428	154	6.20	1.60
150	166	1800	43.7	89.5	96.0	453	154	5.40	1.60

Remarks: TYPICAL DATA
 CONSTANT TORQUE 0-1800 RPM, CONSTANT POWER 1800-3000 RPM
 200% OVERLOAD BELOW BASE SPEED TAPERED TO 100% AT 3000 RPM



*Gamma is the current angle relative to counter emf, defined to be positive when current leads counter emf.

Equivalently, Gamma is positive when Id is negative.

**Data at 25°C - all other data at rated temperature

BALDOR

DR. BY	CD
CK. BY	RM
APP. BY	RM
DATE	11/23/09

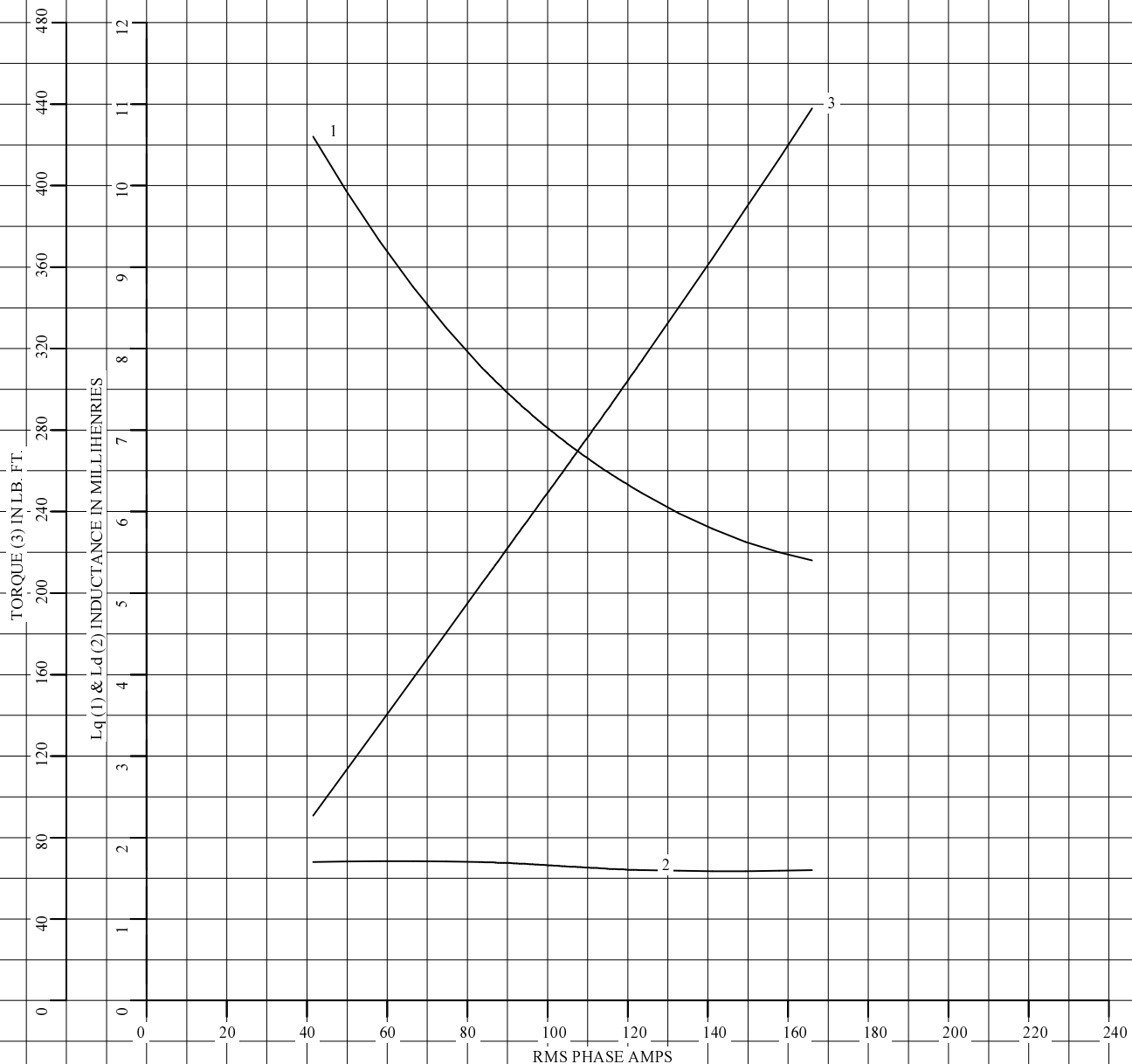
**IPM MOTOR
 PERFORMANCE DATA** PM4057A

ISSUE DATE 11/23/09

S.O. 0	VOLTS 460	TYPE IPM	STATOR RES. @ 25 °C .0328
FRAME FL2890	AMPS 166.0	ENCLOSURE TEBC	OHMS (BETWEEN LINES)
HP 150	DUTY CONT	MAX SAFE RPM 5000	
BASE SPEED 1800	S.F. 1.0	WK ² (Lb-Ft ²) 10.56	
PHASE/HERTZ 3/60	AMB °C/INSUL 40/H	MAX INSTANTANEOUS OVERLOAD AMPS 498	

Lq, Ld, & Torque vs. RMS Phase Amps

CONSTANT TORQUE 0-1800 RPM, CONSTANT POWER 1800-3000 RPM
200% OVERLOAD BELOW BASE SPEED TAPERED TO 100% AT 3000 RPM



REMARKS: TYPICAL DATA

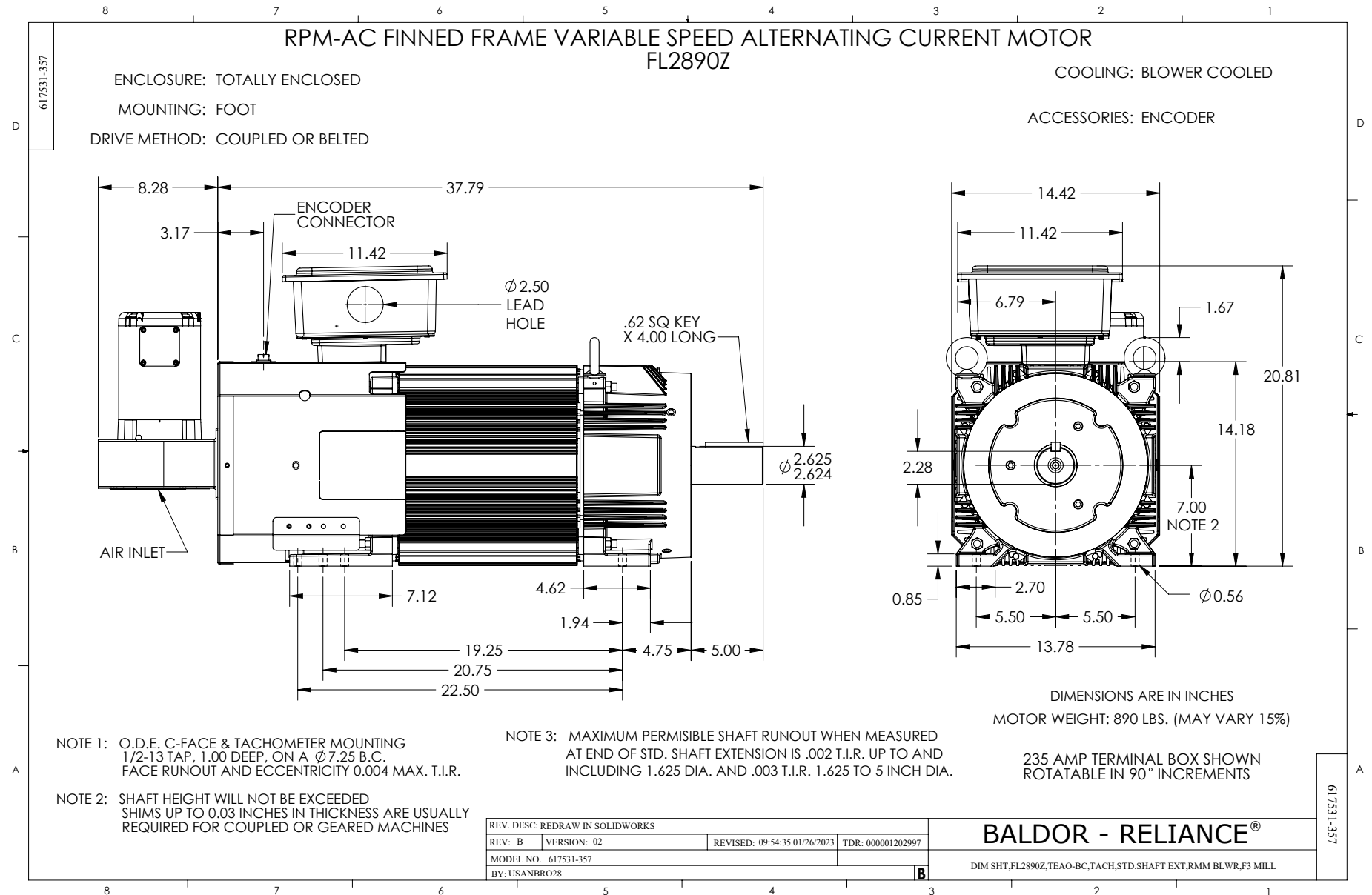
BALDOR

DR. BY	CD
CK. BY	RM
APP. BY	RM
DATE	11/23/09

**IPM MOTOR
PERFORMANCE
DATA**

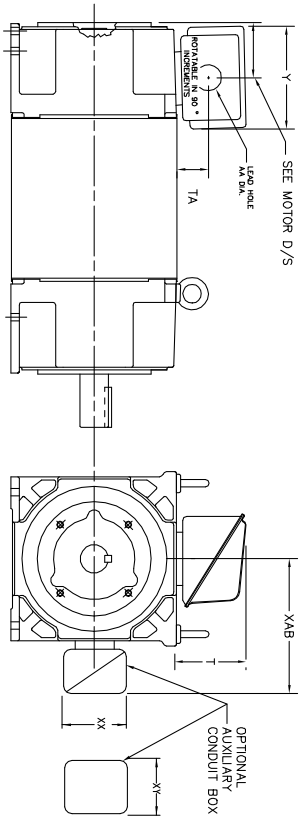
PM4057A

ISSUE DATE 11/23/09



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	2.35	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	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	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/FL180	9.12	4.25	4.25	602007-26-A	FL280/RL280/FL180	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-ON-5A OR 1" TAP ON-4C

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.

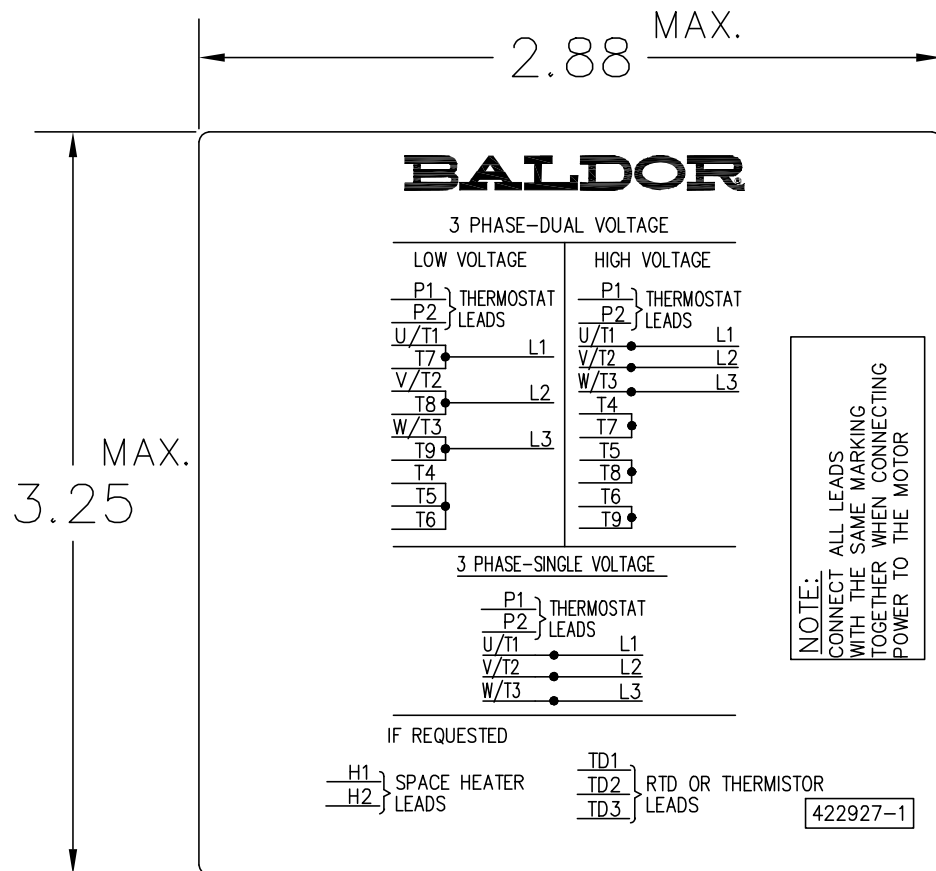
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION.

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

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