

ABB BALDOR RELIANCE III

Customer information packet D2020R

20 1750 LC2113ATZ DPG 240V

Specifications

Enclosure	DP
Frame	LC2113ATZ
Frame Material	Steel
Output Power	20.000 HP
Agency Approvals	CCSA US
Ambient Temperature	40 °C
Bearing Grease Type	Polyrex EM (-20F +300F)
Drip Cover	No Drip Cover
Feedback Device	NO FEEDBACK
Field Winding Type	STAB SHUNT
Frame Prefix	LC
Heater Indicator	No Heater
Lifting Lugs	Standard Lifting Lugs
Motor Standards	NEMA
Mounting Arrangement	F1
Overall Length	31.25 IN
Shaft Extension Location	Pulley End
Shaft Ground Indicator	No Shaft Grounding
Shaft Slinger Indicator	No Slinger

Part Detail

Revision	-
Type	DC
Mech. spec.	
Base	
Status	PRD/A
Elec. spec.	G6068A A
Layout	609950-001
Eff. date	04-13-2015
CD Diagram	406770-001
Poles	00
Leads	
Proprietary	False
Created date	04-09-2015

Nameplate

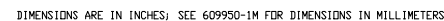
000613006HP									
CAT.NO.	D2020R	SPEC NO.		T21S1331					
FR	LC 2113ATZ	HP	20		DUTY		CONT		
ENCL.	DP	RPM	1750/ 2300			S.F.	1.0		
ENCL MOD	GUARDED	VOLTS		240		INSUL		F	
MAX SAFE SPEED	4500	AMPS	74.00			AMB.	40		
FIELD DATA		SER.NO.							
WINDING	STAB SHUNT	POWER CODE		C					
VOLTS	150	D.E. BRG.		50BC03J30X					
MAX AMPS @ 25 C	4.23	O.D.E. BRG.		45BC02J30X					
HOT AMPS	2.97/ 1.90	MIN. AMB.		0		TYPE		TR	
BRUSH:419904051AC									

Parts List

Part number	Description	Quantity
SA297155	SA T21S1331	1.000 ea
AA016174	AA T21S1331	1.000 ea
000613006HP	NAMEPLATE - RPM III D-C MOTOR W/CSA LOGO	1.000 ea
000692000FP	NP, WARNING LIFT INSTRUCTIONS	1.000 ea
000692000FS	WARNING LABEL	1.000 ea
033775004EA	DRSCR #6-1/4 304 S.S.	6.000 ea
406770001	C/D TAG (STAB SHUNT)	1.000 ea
034182010GA	KEY 1/2 X 3/8 X 1.25"	1.000 ea
036000012HB	HHCS M6X12MM LONG PLATED	4.000 ea
036000020KB	MHHCS M10-1.5X20MM PLTD.	4.000 ea
036501008AB	KPNUT M6-1.0 ZINCPLTED	8.000 ea
036610010AB	MHSLW M10 PLATED	4.000 ea
419904-51AC	BRUSH EXTRUDER DUTY C	4.000 ea
419905003A	FLAT WASHER ROCKER RPM III RGG	4.000 ea
419905008A	HARDWARE	8.000 ea
706364051RCA	BRHLD METRIC SPRING CHG.	4.000 ea
706372001B	ROCKR METRIC	1.000 ea
034693001AB	PPLG - G508- use 034692001AB	1.000 ea
034693001AB	PPLG - G508- use 034692001AB	1.000 ea
035000001A	ALFTG 1/8" 1610-BL	1.000 ea
035000001BB	GREASE FTG,GRS.IN	1.000 ea
036000055JB	HHCS,DE CAP	2.000 ea
036000060KB	HHCS,DE CAP	3.000 ea
036500010AB	METRIC NUT M10-1.5PLTD400	4.000 ea
036500010AB	METRIC NUT M10-1.5PLTD400	4.000 ea
406055001B	GRFTG	1.000 ea
400638001H	SPRING WASHER (Customer number 43699)	1.000 ea
418150003A	GREASE FITTING CAP	2.000 ea
609830005P	TBOLT METRIC RP609830-	4.000 ea
801924102A	BRKT,ODE,C210	1.000 ea
801925102A	BRKT,DE,C210	1.000 ea

032018004CK	HHCS 3/8-16X1/2L PLATED	4.000 ea
036000012HB	HHCS M6X12MM LONG PLATED	2.000 ea
036000045JB	M8-1.25 X 45MM HXHCS	4.000 ea
036620009AB	M8 EXTERNAL LK WASHER	1.000 ea
065564000B	GASK 250-280	1.000 ea
075453000A	CBOXC, PAINTED 250-280	1.000 ea
417733001D	GASKT	2.000 ea
418010006A	CAST,MPLATE,180-280,EX1,7BY	1.000 ea
418018074A	GROUND LABEL G100 METRIC 160 D.C.	1.000 ea
422919001	CVRKT BE SOLID C210	1.000 ea
422919003	HHCVR KIT,C210,DE,LOUVERED	1.000 ea
422919003	HHCVR KIT,C210,DE,LOUVERED	1.000 ea
422919012	HHCVR KIT,C210,ODE,SOLID	1.000 ea
422919014	HHCVR KIT,C210,ODE,LOUVERED	1.000 ea
422919014	HHCVR KIT,C210,ODE,LOUVERED	1.000 ea
706305026A	GUARD,SHAFT	1.000 ea
706320005A	CONDUIT BOX	1.000 ea
000640000P	TAG WINDING THERMOST	1.000 ea
000692000NG	LABEL ;NP 4POLE METRIC LABEL	1.000 ea
034180020GA	KEY 1/2X1/2X2-1/2 L	1.000 ea

FRAMES SC2113ATZ THRU LC2812ATZ



FRAME	A	D(1)	E	G	H	HG	J	D	P	T	BA	K	FK	BK
SC2113ATZ-LC2113ATZ	10.25	5.25	4.25	44	44	1.38	1.75	10.44	10.31	2.56	3.50	5.19	6.81	2.38
SC2512ATZ-LC2512ATZ	12.31	6.25	5.00	.50	.56	1.62	2.00	12.50	12.44	3.06	4.25	6.06	8.00	3.00
MC2812ATZ-LC2812ATZ	13.78	7.00	5.00	.62	.56	1.88	2.75	14.00	13.94	3.38	4.75	6.75	9.19	3.50

DRIVE END SHUNT AND KEY											OPPOSITE DRIVE END SHUNT AND KEY(S)										WT.
FRAME	(C7)	B	BS	2F	N	N-W	V	V-R	S	LGTH	FN	FN-FW	FK-FZ	V	FR	FR-3	S	LGTH	LGTH		
32213137	28.68	22.50	11.88	18.00	4.00	3.75	1.875	3.50	1.591	500	2.50	3.50	3.25	1.625	3.00	1.416	3.75	2.25	2.15	340	
32213147	29.32	23.75	12.38	18.00	4.00	3.75	1.875	3.50	1.591	500	2.50	3.50	3.25	1.625	3.00	1.416	3.75	2.25	2.15	340	
32213157	31.69	25.84	14.26	20.00	4.50	4.25	2.125	4.00	1.845	500	3.00	4.00	3.75	1.875	3.50	1.591	500	2.50	2.50	305	
32213217	31.19	26.56	13.06	20.00	4.50	4.25	2.125	4.00	1.845	500	3.00	4.00	3.75	1.875	3.50	1.591	500	2.50	2.50	340	
32213227	34.69	28.16	15.06	20.00	4.50	4.25	2.125	4.00	1.845	500	3.00	4.00	3.75	1.875	3.50	1.591	500	2.50	2.50	380	
32213237	29.34	24.14	12.54	20.00	4.50	4.25	2.125	4.00	1.845	500	3.00	4.00	3.75	1.875	3.50	1.591	500	2.50	2.50	340	
32213247	35.62	29.14	15.14	22.00	5.00	4.75	2.375	4.50	2.021	625	3.50	4.50	4.25	2.125	4.00	1.845	500	3.00	3.00	380	

- (1) "D" DIMENSION WILL NOT BE EXCEEDED. SHIMS UP TO .03 INCHES IN THICKNESS ARE USUALLY REQUIRED FOR COUPLED OR GEARED MACHINES.
- (2) "U" AND "F" VARY-----, 000 - .001
- (3) "R" AND "FR" VARY-----, 000 - .015
- (4) TERMINAL BOX VARIES WITH H.P. FOR DIMENSIONS "AA", "AB", "AC", "AD", "X" AND "Y". REFER TO BOX D/S (STD. 609959-1, "X/P" 609959-2, MILL 609959-3)
- (5) OPPOSITE DRIVE END SHAFT SUPPLIED ONLY WHEN SPECIFIED.
- (6) MOTOR SHAFT TAPPED FOR SCREW-IN SHAFT STUD.
- (7) IN THE MOTOR APPLICATION DOES NOT REQUIRE THE USE OF DDP. DRIVE END, ADD .25 TO "C" DIM. FOR BRACKET COVER.

TERMINAL BOX CAN BE ROTATED FOR LEAD OUTLET AT TOP, SIDES OR BOTTOM.
TERMINAL BOX LOCATED ON OPPOSITE SIDE WHEN F=2, W=1, W=4, W=5, W=7,
OR C-1 MOUNTING IS SPECIFIED. BOX LOCATED ON TOP WHEN SPECIFIED.
MOTOR WEIGHT MAY VARY 15% FOR NON-STANDARD RATINGS AND/OR ACCESSORIES.
IF MOUNTING CLEARANCE DETAILS ARE REQUIRED, CONSULT FACTORY.

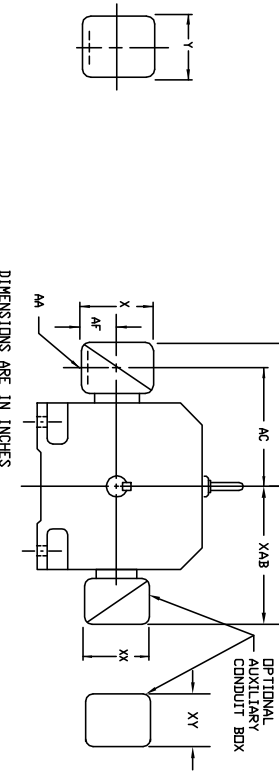
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION.

REV. DESC: LOADED TO BUS		
REV. LTR: -	VERSION: 00	TDR: 000000577407
FILE: \RGG\00015\543	REVISED: 10:21:19 01/26/2011	BY: RGGBG
MTL: -		

DIMENSION DRAWING,SC2113ATZ - LC2812ATZ,DPP,TENV,FOOT MTG

SH 1 of 1

609959-001

INDUSTRIAL DIRECT CURRENT MOTORS
AND GENERATORS - RPM III
TERMINAL BOX DIMENSIONS
STANDARD SIZE AND ONE SIZE LARGER
FRAMES C2113ATZ THRU C2815ATZ

DIMENSIONS ARE IN INCHES

STEEL TERMINAL BOX DIMENSIONS															
FRAME SIZE	MAX. AMPS	STANDARD SIZE					END SIZE LARGER								
		AK(1)	AB	AC	AF	X	Y	AA(1)	AB	AC	AF	X	Y		
C2113ATZ	40	3/4 & 1"	8.97	7.47	1.94	4.38	5.00	705028-1-R	1-1/4 & 1-1/2	10.03	8.03	2.50	5.50	6.12	705029-1-R
C2115ATZ	96	1-1/4 & 1-1/2	10.03	8.03	2.50	5.50	6.12	705029-1-R	2" & 2-1/2	11.16	8.41	3.19	7.00	7.62	705030-1-R
(2)	208	2" & 2-1/2	11.16	8.41	3.19	7.00	7.62	705030-1-R	2" & 2-1/2	11.16	8.41	3.19	7.00	7.62	705030-1-R
C2516ATZ	40	3/4 & 1"	10.03	8.53	1.94	4.38	5.00	705028-1-R	1-1/4 & 1-1/2	11.09	9.09	2.50	5.50	6.12	705029-1-R
C2514ATZ	96	1-1/4 & 1-1/2	11.09	9.09	2.50	5.50	6.12	705029-1-R	2" & 2-1/2	12.22	9.47	3.19	7.00	7.62	705030-1-R
(2)	208	2" & 2-1/2	12.22	9.47	3.19	7.00	7.62	705030-1-R	2" & 2-1/2	12.22	9.47	3.19	7.00	7.62	705030-1-R
C2816ATZ	188	2"	14.03	10.53	4.25	8.44	7.25	74874-R	3"	14.47	11.22	4.25	8.44	7.25	74874-24-R
C2815ATZ	188	3"	14.47	11.22	4.25	8.44	7.25	74874-24-R	4"	15.91	11.84	5.38	10.56	9.00	706308-3-R
(2)	269	4"	15.91	11.84	5.38	10.56	9.00	706308-3-R	5" (4)	18.72	13.47	7.00	12.75	15.00	706589-1-C

CAST IRON TERMINAL BOX DIMENSIONS															
FRAME SIZE	MAX. AMPS	STANDARD SIZE						ONE SIZE LARGER							
		AK(3)	AB	AC	AF	X	Y	AK(3)	AB	AC	AF	X	Y		
C2113ATZ	18	3/4	10.03	8.03	2.50	5.00	5.75	705028-2-S	1"	10.03	8.03	2.50	5.00	5.75	705028-2-T
C2115ATZ	40	1"	10.03	8.03	2.50	5.00	5.75	705028-2-T	1-1/2	10.97	8.53	3.00	6.00	7.00	705029-2-R
C2115ATZ	96	1-1/2	10.97	8.53	3.00	6.00	7.00	705029-2-R	2"	10.97	8.53	3.00	6.00	7.00	705029-2-S
C2516ATZ	208	2"	10.97	8.53	3.00	6.00	7.00	705029-2-S	2-1/2	12.66	8.91	3.62	7.88	9.25	705030-2-R
C2516ATZ	18	3/4	11.09	9.09	2.50	5.00	5.75	705028-2-S	1"	11.09	9.09	2.50	5.00	5.75	705028-2-T
C2516ATZ	40	1"	11.09	9.09	2.50	5.00	5.75	705028-2-T	1-1/2	12.03	9.59	3.00	6.00	7.00	705029-2-R
C2516ATZ	96	1-1/2	12.03	9.59	3.00	6.00	7.00	705029-2-R	2"	12.03	9.59	3.00	6.00	7.00	705029-2-S
C2516ATZ	208	2"	12.03	9.59	3.00	6.00	7.00	705029-2-S	2-1/2	13.72	9.97	3.62	7.88	9.25	705030-2-R
C2813ATZ	188	2"	12.78	10.34	3.00	6.00	7.00	75460-T	3"	14.47	10.72	3.62	7.88	9.25	76708-R
C2815ATZ	188	3"	14.47	10.72	3.62	7.88	9.25	76708-R	4"	15.78	11.59	4.12	9.50	10.50	76708-R
C2815ATZ	269	4"	15.78	11.59	4.12	9.50	10.50	76708-R	5" (4)	18.59	13.34	7.00	12.75	15.00	76870-S

CONDUIT BOX DIMENSIONS WITH TERMINAL BOARDS (IEC TYPE BOX)

STANDARD SIZE									
FRAME SIZE	AMPS	AB	AC	AF	X	AA	Y	PART NUMBER	PART NUMBER
C210	100	10.71	8.98	2.72	7.48	--	7.48	706310-56-A	706310-225-R
	200	11.66	9.25	3.35	8.82	--	8.82	706310-56-B	706310-226-R
	100	11.30	9.57	2.72	7.48	--	7.48	706310-56-A	706310-225-R
	200	11.85	9.84	3.35	8.82	--	8.82	706310-56-B	706310-226-R
C250	400	17.48	12.75	6.20	14.39	--	14.39	706310-63-B & 706310-63G	706310-63-B & 706310-63G
	800	17.48	12.75	6.20	14.39	--	14.39	706310-63-B & 706310-63G	706310-63-B & 706310-63G
	200	12.60	10.59	3.76	8.82	--	8.82	706310-56-B	706310-226-R
	400	18.27	13.54	6.20	14.39	--	14.39	706310-63-B & 706310-63G	706310-63-B & 706310-63G
C280	800	18.27	13.54	6.20	14.39	--	14.39	706310-63-B & 706310-63G	706310-63-B & 706310-63G
	1600	18.27	13.54	7.68	15.35	--	15.35	706310-63-C	706310-63-C

OPTIONAL AUXILIARY CONDUIT BOX DIMENSIONS (MAXIMUM)											
FRAME SIZE	XAB	XY	PART NUMBER	FRAME SIZE	XAB	XY	PART NUMBER	FRAME SIZE	XAB	XY	PART NUMBER
C210	7.38	4.25	602007-26-A	C210	10.88	8.00	706310-3-B	C210	11.88	8.00	706310-3-B
C250	8.44	4.25	602007-26-A	C250	11.88	8.00	706310-3-B	C250	11.88	8.00	706310-3-B
C280	9.12	4.25	602007-26-A	C280	12.62	8.00	706310-3-B	C280	12.62	8.00	706310-3-B

(1) 1/4" CONDUIT.
(2) RACEWAYS PROVIDED WITH DOUBLE KNUCKLE.
(3) 1/4" PIPE LAP.(4) TERMINAL BOX 76870-S AND 76870-98 EXTENDS BELOW MOTOR FEET.
TERMINAL BOX 76870-S AND 76870-98 EXTENDS BELOW MOTOR FEET.
DR - C-1 MOUNTING IS SPECIFIED. BOX LOCATED ON TOP WHEN SPECIFIED.
FOR "X"/P/TERMINAL BOX DIMENSIONS SEE 609959-2.
FOR MILL TYPE TERMINAL BOX DIMENSIONS SEE 609959-3.

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

REV. DESC: ADD 706310-63G C/BOX TO C250 AND C280 FRAMES	VERSION: 01	TDR: 000000816512
REV. LTR: A		
FILE: \RGG\00021\153		REVISED: 03: 09: 09 09/06/2013
MTL: -		BY: RGGWT

BALDOR

DIMENSION SHEET

SH 1 of 1

609959-001

406770-001			406770-001	
CONNECTION DIAGRAM D-C MOTOR - STAB. SHUNT W1 <NOTE 7> SHUNT FIELD ARMATURE INTER-COIL SERIES FIELD SERIES FIELD H1 H2 F1 A1 AX2 A2 S1 S2 S3 S4 F2 P1 P2 <NOTE 4> <CAUTION-SEE NOTE 1> <NOTE 2> <NOTE 5> TD1 TD TD2 TD3 <NOTE 6> ARMATURE AND FIELD EXTERNAL CONNECTIONS WARNING- SEE NOTE 8 FOR GROUNDING INSTRUCTIONS A1 A2 S1 S2 F1 F2 CCW ROTATION A1 S1 A2 S2 F1 F2 CW ROTATION ROTATION FACING COMMUTATOR END 1. CAUTION — ARMATURE AND SERIES FIELD MAY HAVE MULTIPLE LEADS. CONNECT ALL LUGS WITH THE SAME MARKING TOGETHER. 2. OPTIONAL SERIES FIELD IS MARKED S3 AND S4. FOR CUMULATIVE SERIES FIELD, CONNECT S3 TO S2 AND CONNECT S4 TO NEGATIVE. FOR DIFFERENTIAL SERIES FIELD CONNECT S4 TO S2 AND S3 TO NEGATIVE. 3. OPTIONAL CONTROL SIGNAL LEAD IS MARKED AX2. ALWAYS TAKE INTERPOLE DROP BETWEEN A2 AND AX2. NOTE: NEMA DESIGNATION FOR AX2 IS LETTER C. 4. SPACE HEATERS, WHEN PROVIDED, WILL HAVE LEADS MARKED H1 AND H2, H3, H4, ETC. 5. THERMAL PROTECTOR, WHEN PROVIDED, WILL HAVE LEADS MARKED P1 AND P2, P3, P4, ETC. 6. WINDING RTD'S, WHEN PROVIDED, WILL HAVE LEADS MARKED TD1, TD2, & TD3 7. BRUSH WEAR SENSOR, WHEN PROVIDED, WILL HAVE LEAD MARKED W1. 8. WARNING — MOTOR MUST BE GROUNDED TO PREVENT SERIOUS INJURIES TO PERSONNEL. GROUND THE MOTOR PER IEC, NATIONAL ELECTRICAL CODE AND ANY APPLICABLE LOCAL ELECTRICAL CODES. A TAPPED HOLE IS PROVIDED IN THE CONDUIT BOX, ON THE FOOT, FRAME BRACE OR OPPOSITE DRIVE END BRACKET, ADJACENT TO THE TERMINAL BOX FOR MOTOR GROUNDING. GROUND LEAD, WHEN PROVIDED, WILL BE GREEN. CUSTOMER _____ ORDER NO. _____ S.D. NO. _____ RELIANCE CUSTOMER				

REV. DESC: DELETED DUPLICATE WORDS FROM NOTE 8

REV. LTR: A

VERSION: 01

TDR: 000000970330

FILE: \RSN\00026\422

REVISED: 10:19:12 03/11/2016

BY: RAGTBM

MTL: —

BALDOR

D-C MOTOR CONNECTION DIAGRAM STAB. SHUNT

SH 1 of 1