

ABB BALDOR RELIANCE III

Customer information packet D5020R

20HP, 1750RPM, DC, 2113ATZ, DPG,

Specifications

Enclosure	DP
Frame	MC2113ATZ
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	MC
Heater Indicator	No Heater
Lifting Lugs	Standard Lifting Lugs
Motor Standards	NEMA
Mounting Arrangement	F1
Overall Length	29.62 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.	G6060B A
Layout	609950-001
Eff. date	04-13-2015
CD Diagram	406770-002
Poles	00
Leads	
Proprietary	False
Created date	04-09-2015

Nameplate

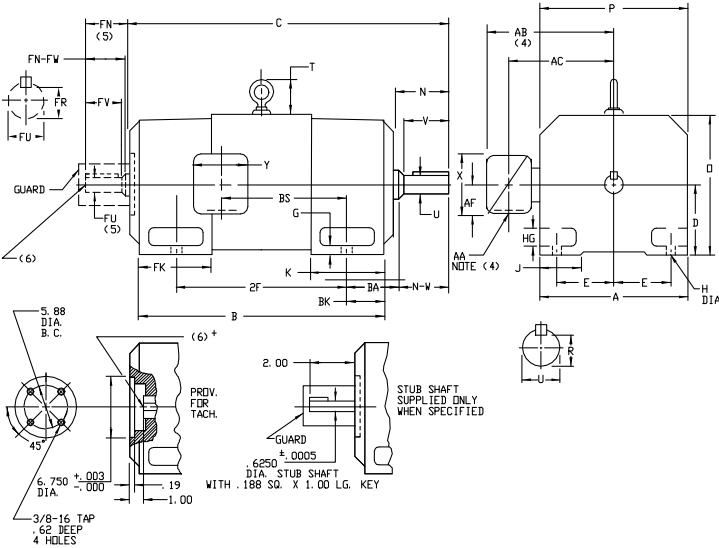
000613006HP									
CAT.NO.	D5020R	SPEC NO.		T21S1323					
FR	MC 2113ATZ	HP	20		DUTY		CONT		
ENCL.	DP	RPM	1750/ 2300			S.F.	1.0		
ENCL MOD	GUARDED	VOLTS		500		INSUL		F	
MAX SAFE SPEED	4500	AMPS		35.00		AMB.		40	
FIELD DATA		SER.NO.							
WINDING	STAB SHUNT	POWER CODE		C					
VOLTS	300	D.E. BRG.		50BC03J30X					
MAX AMPS @ 25 C	1.98	O.D.E. BRG.		45BC02J30X					
HOT AMPS	1.39/ .99	MIN. AMB.		0		TYPE		TR	
BRUSH:419904051AB; FLD. DATA									
FOR HIGH VOLTS; FIELD VOLTS									
150/300									

609950-001

INDUSTRIAL DIRECT CURRENT MOTORS
AND GENERATORS - RPM III

ENCLOSURE: DRIP-PROOF FULLY-GUARDED, COOLING: SELF-VENTILATED
SPLASHPROOF, TOTALLY ENCLOSED NON-VENTILATED
MOUNTING: FOOT ACCESSORIES: PROVISION FOR
METHOD OF DRIVE: COUPLED OR BELTED TACHOMETER MOUNTING
ONLY WHEN SPECIFIED

FRAMES SC2113ATZ THRU LC2812ATZ



DIMENSIONS ARE IN INCHES; SEE 609950-1M FOR DIMENSIONS IN MILLIMETERS

FRAME	A	X(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	5.50	62	56	1.88	2.75	14.00	13.94	3.38	4.75	6.75	9.19	3.50

FRAME	D(7)	B	BS	2F	N	N-W	UK(2)	V	R(3)	SQ	LGTH.	FN	FN-FW	FK(2)	FV	FR(2)	SV	LGTH.	WT.
SC2113ATZ	28.38	22.50	11.38	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	.375	2.25	315
MC2113ATZ	29.62	23.75	12.62	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	.375	2.25	340
LC2113ATZ	31.25	25.38	14.25	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	.375	2.25	370
SC2512ATZ	31.69	25.06	13.56	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	505
MC2512ATZ	33.19	26.56	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	540
LC2512ATZ	34.69	28.06	16.56	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	580
MC2812ATZ	37.38	29.94	18.25	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	775
LC2812ATZ	39.62	32.19	19.50	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	850

- (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 "FV" VARY-----+ .000 - .001
(3) "R" AND "FR" VARY-----+ .000 - .015
(4) TERMINAL BOX VARIES WITH H.P. FOR DIMENSIONS "AA", "AB", "AC", "AF", "X" AND "Y". REFER TO BOX D/S. (STD. 609959-1, "X/P" 609959-2, MILL. 609959-3)
(5) OPPOSITE DRIVE END SHFT SUPPLIED ONLY WHEN SPECIFIED.
(6) MOTOR SHFT TAPPED FOR 3/8"-16 IN STUB SHFT.
(7) WHEN THE MOTOR APPLICATION DOES NOT REQUIRE THE USE OF DFP, 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, V-1, W-4, V-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	VERSION: 00	TDR: 000000577407
REV. LTR: -	REVISED: 10:21:19 01/26/2011	BY: RGGBG
FILE: \RGG\00015\543		
MTL: -		

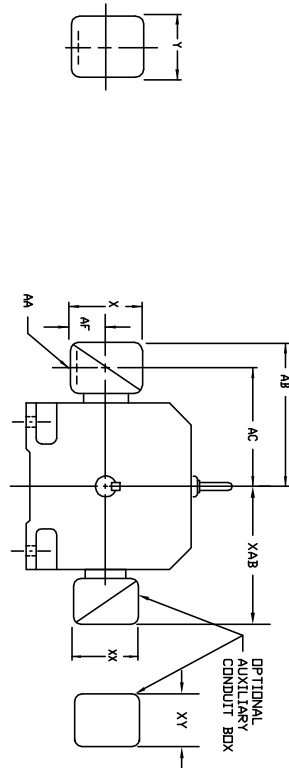
BALDOR
DIMENSION DRAWING, SC2113ATZ - LC2812ATZ, DPP, TENV, FOOT MTG
SH 1 of 1

609950-001

**INDUSTRIAL DIRECT CURRENT MOTORS
AND GENERATORS - RPM III**

TERMINAL BOX DIMENSIONS

**STANDARD SIZE AND ONE SIZE LARGER
FRAMES C2113A1Z THRU C2815A1Z**



DIMENSIONS ARE IN INCHES

[illegible]

CAST IRON TERMINAL BOX DIMENSIONS															
FRAME SIZE	MAX. AMPS	STANDARD SIZE					PART		ONE SIZE LARGER					PART	
		AB	AC	AF	X	Y	NUMBER	AB	AC	AF	X	Y	NUMBER		
C2113M12	18	3/4	10.03	8.03	2.50	5.00	5.75	705029-2-S	1"	10.03	8.03	2.50	5.00	5.75	705029-2-R
C2113M17	40	1"	10.03	8.03	2.50	5.00	5.75	705029-2-T	1-1/2	10.97	8.53	3.00	6.00	7.00	705029-2-R
C2115M12	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-T
C2512M12	208	2"	10.97	8.53	3.00	6.00	7.00	705029-2-T	2-1/2	12.66	8.91	3.62	7.88	9.25	705029-2-R
C2512M17	18	3/4	11.09	9.09	2.50	5.00	5.75	705028-2-T	1"	11.09	9.09	2.50	5.00	5.75	705028-2-T
C2513M12	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-S
C2513M17	96	1-1/2	12.03	9.59	3.00	6.00	7.00	705029-2-S	2"	12.03	9.59	3.00	6.00	7.00	705029-2-T
C2515M12	208	2"	12.03	9.59	3.00	6.00	7.00	705029-2-T	2-1/2	13.72	9.97	3.62	7.88	9.25	705029-2-R
C2812M12	128	3"	12.78	10.34	3.00	6.00	7.00	754601-T	3"	14.47	10.72	3.62	7.88	9.25	754601-RB
C2812M17	165	3"	14.47	10.72	3.62	7.88	9.25	754601-RB	4"	15.78	11.59	4.12	9.50	10.50	767008-R
C2815M12	365	4"	15.78	11.59	4.12	9.50	10.50	767008-R	5" (4)	18.59	13.34	4.75	13.50	15.00	768701-S

CONDUIT BOX DIMENSIONS WITH TERMINAL BORDERS (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	11.26	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		
C250	200	11.85	9.84	3.35	8.82	---	8.82	706310-56-B	706310-226-R		
	400	17.48	12.75	6.20	14.39	---	14.39	706310-63-B & 706310-636	706310-63-B & 706310-636		
	800	17.48	12.75	6.20	14.39	---	14.39	706310-63-B & 706310-636	706310-63-B & 706310-636		
C280	200	12.60	10.99	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 & 706310-636	706310-63-B & 706310-636		
	800	18.27	13.54	6.20	14.39	---	14.39	706310-63-B & 706310-636	706310-63-B & 706310-636		
	1600	18.27	13.54	7.68	15.35	---	15.35	706310-63-C	706310-63-C		

FRAME SIZE		X-Y		PART NUMBER	
C310	7.48	4.25	4.25	602007-26-A	C310
C350	8.44	4.23	4.23	602007-26-A	C350
C380	9.12	4.23	4.23	602007-26-A	C380

- (1) STEEL CONDUIT.
(2) "AA" TERMINAL BOX FOR CELL13A17 AND C5512A17
(3) FRAMES PROVIDED WITH DOUBLE KNOCKOUT.
(4) "AA" PIPE TAB.
- (4) TERMINAL BOX 76870-05 AND 76870-0R EXTENDS BELOW MOTOR FEET.
TERMINAL BOX CAN BE ROUTED FOR LEAD OUTLET AT TOP, SIZES OR BOTTOM
TERMINAL BOX LOCATED ON OPPOSITE SIDE WHEN F-2, W-4, W-5, W-7,
OR C-1 MOUNTING IS SPECIFIED. BOX LOCATED ON TOP WHEN SPECIFIED.
FOR X/P TYPE TERMINAL BOX DIMENSIONS SEE 609393-2
FOR W/T TYPE TERMINAL BOX DIMENSIONS SEE 609393-3.

609959-001

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		
REV. LTR: A	VERSION: 01	TDR: 000000816512
FILE: \RGG\00021\153		REVISED: 03:09:09 09/06/2013
MTL: -		BY: RGGWT

BALDOIR

DIMENSION SHEET

SH 1 of 1

406770-002			406770-002	
CONNECTION DIAGRAM D-C MOTOR - STAB. SHUNT DUAL VOLTAGE FIELD (NOTE 7) W1 (NOTE 4) (CAUTION-SEE NOTE 1) (NOTE 2) (NOTE 5)				
ARMATURE AND FIELD EXTERNAL CONNECTIONS WARNING- SEE NOTE 8 FOR GROUNDING INSTRUCTIONS CCW ROTATION LOW VOLTAGE FIELD CONNECTION CW ROTATION CCW ROTATION HIGH VOLTAGE FIELD CONNECTION 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 LEAD MARKED W1. 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 OPPOSITE DRIVE END BRACKET, ADJACENT TO THE TERMINAL BOX FOR FOR MOTOR GROUNDING. GROUND LEAD, WHEN PROVIDED, WILL BE GREEN.				
CUSTOMER _____ ORDER NO. _____ S.D. NO. _____ CUSTOMER _____ RELIANCE				
REV. DESC: UPDATE LOGO AND TITLEBLOCK: LOADED TO BUS		BALDOR		
REV. LTR: -	VERSION: 00	TDR: 000000781086	D-C MOTOR CONNECTION DIAGRAM STAB. SHUNT, DUAL VOLTAGE FIELD	
FILE: \RSN\00026\434		REVISED: 02: 35: 07 02/01/2013	SH 1 of 1	
MTL: -		BY: MGHPC		