



Customer information packet

D5020RS-BV

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

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

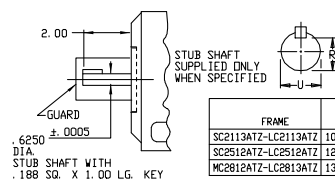
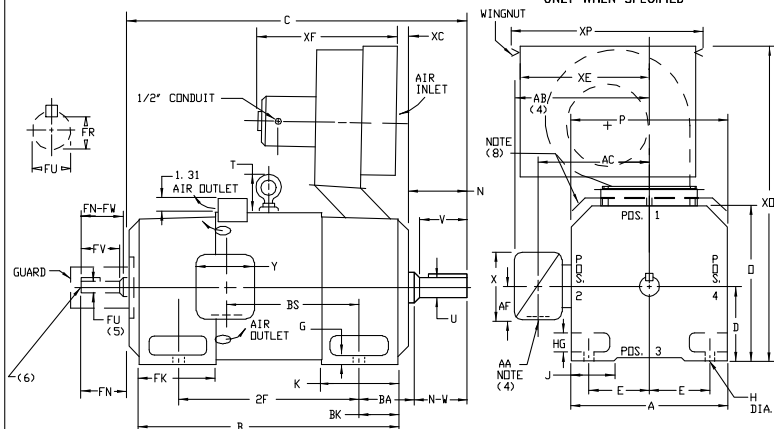
Revision	-
Type	DC
Mech. spec.	
Base	
Status	PRD/A
Elec. spec.	G6393E A
Layout	609952-096
Eff. date	04-13-2015
CD Diagram	406770-001
Poles	00
Leads	
Proprietary	False
Created date	04-09-2015

Nameplate

000613006LP									
CAT.NO.	D5020RS-BV	SPEC NO.		T21T1344					
FR	MC 2113ATZ	HP	20		DUTY		CONT		
ENCL.	DP	RPM	1750/ 2300		S.F.		1.0		
ENCL MOD	FORCE VENT	VOLTS	500		INSUL			F	
MAX SAFE SPEED	4500	AMPS	37.00		AMB.		40		
FIELD DATA		SER.NO.							
WINDING	STAB SHUNT	POWER CODE		C					
VOLTS	300	D.E. BRG.		50BC03J30X					
MAX AMPS @ 25 C	2.24	O.D.E. BRG.		45BC02J30X					
HOT AMPS	1.71/ 1.14	MIN. AMB.		0		TYPE		TR	
BRUSH:419904051AB; AIR BAFFLED									

609952-096

INDUSTRIAL DIRECT CURRENT MOTORS AND GENERATORS - RPM III

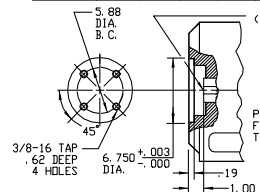
ENCLOSURE: DRIP-PROOF FULLY-GUARDED,
SPLASHPROOFCOOLING: FORCE VENTILATED
WITH INTEGRAL BLOWER AND MOTOR
AIR FILTERED-SPECIAL BAFFLEMOUNTING: FOOT
METHOD OF DRIVE: COUPLED OR BELTED
FRAMES SC2113ATZ THRU C2813ATZACCESSORIES: PROVISION FOR
TACHOMETER MOUNTING
ONLY WHEN SPECIFIED

DIMENSIONS ARE IN INCHES

FRAME	XC	XE	XF	XD	XP
SC2113ATZ-LC2113ATZ	1.00	10.00	17.25	28.00	14.50
SC2512ATZ-LC2512ATZ	2.50	10.00	17.25	30.31	14.50
MC2812ATZ-LC2813ATZ	1.75	10.00	18.50	30.62	14.50

FRAME	A	DK(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-LC2813ATZ	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	C	B	BS	2F	N	N-W	UK(2)	V	R(3)	SA	LGTH.	FN	FN-FW	FK(2)	FV	FR(3)	SQ.	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	345
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	370
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	400
SC2512ATZ	31.69	25.06	12.06	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	535
MC2512ATZ	33.19	26.56	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	570
LC2512ATZ	34.69	28.06	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	610
MC2812ATZ	37.38	29.94	14.25	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	810
LC2812ATZ	39.62	32.19	16.50	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	885
LC2813ATZ	41.25	33.81	18.12	25.00	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	940



- (1) "B" 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 SHAFT SUPPLIED ONLY WHEN SPECIFIED.
 - (6) MOTOR SHAFT TAPPED FOR SCREW-IN STUB SHAFT.
 - (7) WHEN THE MOTOR APPLICATION DOES NOT REQUIRE THE USE OF DPP, DRIVE END, ADD .25 TO "C" DIA. FOR BRACKET COVER.
 - (8) FOR HORIZONTAL APPLICATIONS ONLY.
- TERMINAL BOX CAN BE ROTATED FOR LEAD OUTLET AT TOP, SIDES OR BOTTOM. TERMINAL BOX LOCATED ON OPPOSITE SIDE WHEN F-2, W-1, V-4, Y-5, W-7, OR C-1 MOUNTING IS SPECIFIED. BOX LOCATED ON TOP WHEN SPECIFIED. BLOWER ASSEMBLY CAN BE LOCATED AT POSITIONS 1, 2, OR 4. MOTOR WEIGHT MAY VARY 15% FOR NON-STANDARD RATINGS AND/OR ACCESSORIES. IF MOUNTING CLEARANCE DETAILS ARE REQUIRED, CONSULT FACTORY. BLOWER MOTOR

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

REV. DESC: UPDATE FRAME SIZE		
REV. LTR: A	VERSION: 01	TDR: 000000845571
FILE: \RGG\00015\585	REVISED: 10:46:47 03/25/2014	BY: RGGWT
MTL: -		

BALDOR

DIMENSION DRAWING, SC2113ATZ - C2813ATZ, DPP, FOOT MTG.

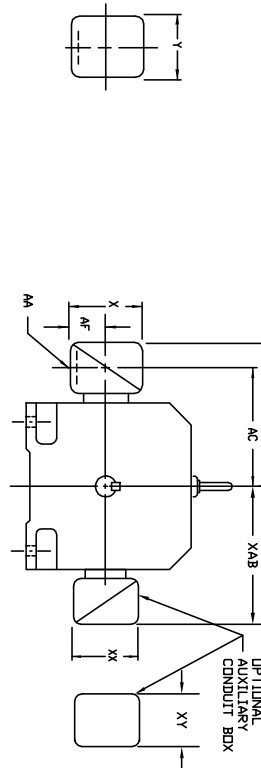
SH 1 of 1

609952-096

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



FRAME SIZE	MAX. AMPS	STANDARD SIZE						STEEL TERMINAL BOX DIMENSIONS						ONE SIZE LARGER					
		AK(1)	AB	AC	AF	X	Y	NUMBER	AK(1)	AB	AC	AF	X	Y	NUMBER	AK(1)	AB	AC	AF
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	1-1/4 & 1-1/2	10.03	8.03	2.50
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" & 2-1/2	11.16	8.41	3.19
(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	2" & 2-1/2	11.16	8.41	3.19
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	1-1/4 & 1-1/2	11.09	9.09	2.50
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" & 2-1/2	12.22	9.47	3.19
C2515ATZ	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	2" & 2-1/2	12.22	9.47	3.19
(2)	128	2"	14.03	10.53	4.23	8.44	7.23	74874-R	3"	14.47	11.22	4.23	8.44	7.23	74874-24-R	3"	15.91	11.84	5.38
C2816ATZ	195	3"	14.47	11.22	4.23	8.44	7.23	74874-24-R	3"	15.91	11.84	5.38	10.56	9.00	706308-3-R	3"	18.72	13.47	7.00
C2815ATZ	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	5" (4)	21.50	15.00	10.56

FRAME SIZE	MAX. AMPS	STANDARD SIZE						CAST IRON TERMINAL BOX DIMENSIONS						ONE SIZE LARGER					
		AK(3)	AB	AC	AF	X	Y	NUMBER	AK(3)	AB	AC	AF	X	Y	NUMBER	AK(3)	AB	AC	AF
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	1"	10.03	8.03	2.50
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	1-1/2	10.97	8.53	3.00
C2115ATZ	96	1-1/2	10.97	8.53	3.00	6.00	7.00	705029-2-R	2"	12.66	8.91	3.62	7.88	9.25	705030-2-R	2"	12.66	8.91	3.62
(2)	208	2"	12.66	8.91	3.62	7.88	9.25	705030-2-R	2-1/2	11.09	9.09	2.50	5.00	5.75	705028-2-S	2-1/2	11.09	9.09	2.50
C2516ATZ	40	3/4	11.09	9.09	2.50	5.00	5.75	705028-2-S	1"	12.03	9.59	3.00	6.00	7.00	705029-2-R	1-1/2	12.03	9.59	3.00
C2514ATZ	96	1-1/2	12.03	9.59	3.00	6.00	7.00	705029-2-R	2"	13.72	9.97	3.62	7.88	9.25	705030-2-R	2"	13.72	9.97	3.62
C2515ATZ	208	2"	12.78	10.34	3.00	6.00	7.00	75460-T	2-1/2	14.47	10.72	3.62	7.88	9.25	705030-2-R	2-1/2	14.47	10.72	3.62
C2813ATZ	188	2"	14.47	10.72	3.62	7.88	9.25	76700-R	3"	15.78	11.59	4.12	9.50	10.50	76700-R	3"	15.78	11.59	4.12
C2815ATZ	269	4"	15.78	11.59	4.12	9.50	10.50	76700-R	5" (4)	18.59	13.34	7.00	12.75	15.00	76870-S	5" (4)	21.50	15.00	10.56

CONDUIT BOX DIMENSIONS WITH TERMINAL BOARDS (IEC TYPE BOX)

FRAME SIZE	AMPS	STANDARD SIZE						ONE SIZE LARGER					
		AB	AC	AF	X	AA	Y	AB	AC	AF	X	Y	AA
C210	100	10.71	8.98	2.72	7.48	---	7.48	10.71	8.98	2.72	7.48	---	7.48
	200	11.66	9.23	3.33	8.82	---	8.82	11.66	9.23	3.33	8.82	---	8.82
	400	11.30	9.57	2.72	7.48	---	7.48	11.30	9.57	2.72	7.48	---	7.48
C250	200	11.85	9.84	3.35	8.82	---	8.82	11.85	9.84	3.35	8.82	---	8.82
	400	17.48	12.75	6.20	14.39	---	14.39	17.48	12.75	6.20	14.39	---	14.39
	800	17.48	12.75	6.20	14.39	---	14.39	17.48	12.75	6.20	14.39	---	14.39
C280	200	12.60	10.59	3.76	8.82	---	8.82	12.60	10.59	3.76	8.82	---	8.82
	400	18.27	13.54	6.20	14.39	---	14.39	18.27	13.54	6.20	14.39	---	14.39
	800	18.27	13.54	6.20	14.39	---	14.39	18.27	13.54	6.20	14.39	---	14.39
	1600	18.27	13.54	7.68	15.35	---	15.35	18.27	13.54	7.68	15.35	---	15.35

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

(1) 1/4" CONDUIT.
(2) RACE PROVIDED WITH DOUBLE KNUCKLE.
(3) 1/4" PIPE CAP.

(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 IN TOP WHEN SPECIFIED.
FOR "X"/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

REV. LTR: A

VERSION: 01

TDR: 000000816512

FILE: \RGG\00021\153

REVISED: 03:09:09 09/06/2013

MTL: -

BY: RGGWT

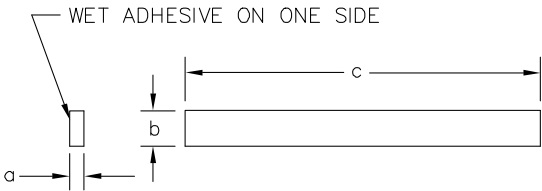
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DIMENSION SHEET

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609959-001

065564-004



SYM	MAKE FROM	a	b	c	REMARKS
A	X	1/8	5/8	24*	TERMBX & CVR 180AT-250AT
B	X	1/8	5/8	37 1/2*	TERMBX & CVR 280AT-320AT
C	Y	1/4	5/8	44 1/2Δ	FILTER TO HOUSING GASKET
D	X	1/8	5/8	170"	TEAO HEAT EXCH.
E	Y	1/4	5/8	72"Δ	TERMBX & CVR

SYM	MAT'L SPEC	a	b	c
X	46024-XV	1/8	5/8	* 50' ROLL; WET ADHESIVE ON ONE SIDE
Y	46024-XV	1/4	5/8	* 50' ROLL; WET ADHESIVE ON ONE SIDE

Δ RELIANCE WILL CUT AND MOUNT ON FILTER HOUSING PER ASSEMBLY DRAWING 603989-2.

* PROD. NOTE: WHEN ORDERING THRU PURCHASING ORDER AS 50 FT. ROLLS, WET ADHESIVE ON ONE SIDE. RELIANCE WILL CUT AND MOUNT ON COVER. PER INSTRUCTIONS ON COVER DRAWINGS.

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

REV. DESC: CHANGE DESCRIPTION ON TITLE BLOCK		
REV. LTR: C	VERSION: 03	TDR: 000000571980
FILE: \RGG\00000\220	REVISED: 10:54:04 12/16/2010	BY: RGGWT
MTL: -		

BALDOR

GASKET,STRIP,CLOSED CELL NEOPRENE

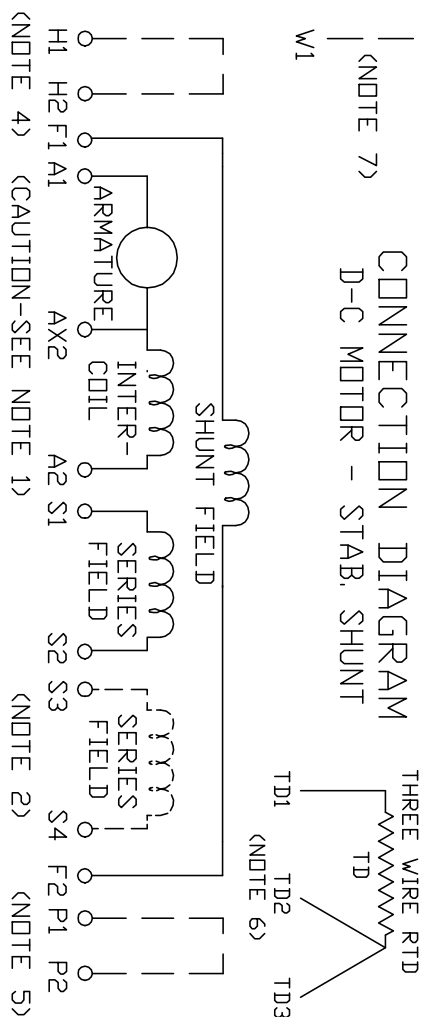
SH 1 of 1

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406770-001

406770-001

CONNECTION DIAGRAM D-C MOTOR - STAB. SHUNT



ARMATURE AND FIELD EXTERNAL CONNECTIONS

WARNING- SEE NOTE 8 FOR GROUNDING INSTRUCTIONS



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 _____ CUSTOMER RELIANCE
ORDER NO. _____ S.D. NO. _____

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

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