

BALDOR® • RELIANCE™

Customer information packet

D2020R-BV

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

Specifications

Enclosure	DP
Frame	SC2113ATZ
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	STR. SHUNT
Frame Prefix	SC
Heater Indicator	No Heater
Lifting Lugs	Standard Lifting Lugs
Motor Standards	NEMA
Mounting Arrangement	F1
Overall Length	28.38 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.	G6339B B
Layout	616002-001
Eff. date	04-13-2015
CD Diagram	406770-006
Poles	00
Leads	
Proprietary	False
Created date	04-09-2015

Nameplate

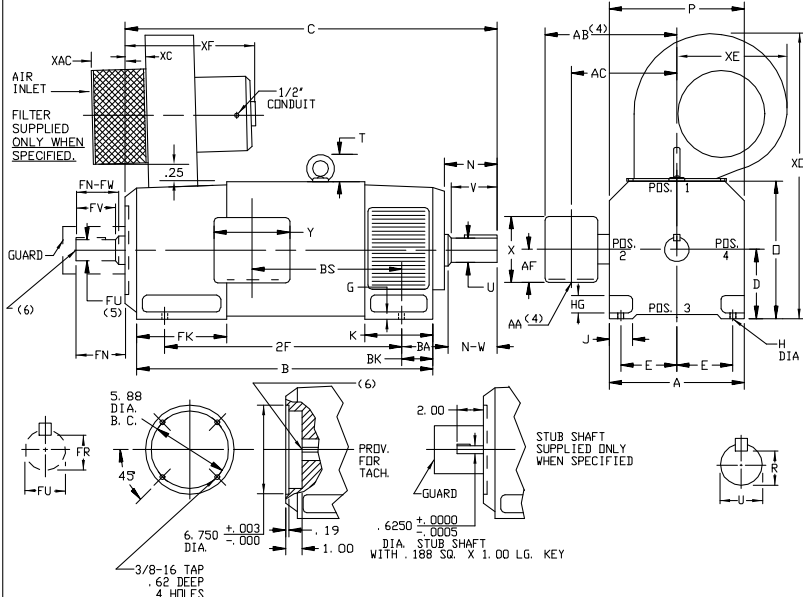
000613006HP

CAT.NO.	D2020R-BV	SPEC NO.	T21T1363		
FR	SC 2113ATZ	HP	20	DUTY	CONT
ENCL.	DP	RPM	1750/ 2300	S.F.	1.0
ENCL MOD	FORCE VENT	VOLTS	240	INSUL	F
MAX SAFE SPEED	4500	AMPS	76.50	AMB.	40
	FIELD DATA	SER.NO.			
WINDING	STR. SHUNT	POWER CODE	D		
VOLTS	150	D.E. BRG.	50BC03J30X		
MAX AMPS @ 25 C	7.12	O.D.E. BRG.	45BC02J30X		
HOT AMPS	5.07/ 3.32	MIN. AMB.	0	TYPE	TR
	BRUSH:419904051AC				

616002-001

INDUSTRIAL DIRECT CURRENT MOTORS AND GENERATORS - RPM III

ENCLOSURE: DRIP-PROOF FULLY-GUARDED, SPLASHPROOF
 COOLING: FORCE VENTILATED WITH INTEGRAL BLOWER AND MOTOR
 MOUNTING: FOOT
 METHOD OF DRIVE: COUPLED OR BELTED
 ACCESSORIES: PROVISION FOR TACHOMETER MOUNTING ONLY WHEN SPECIFIED
 FRAMES SC2113ATZ THRU LC2115ATZ



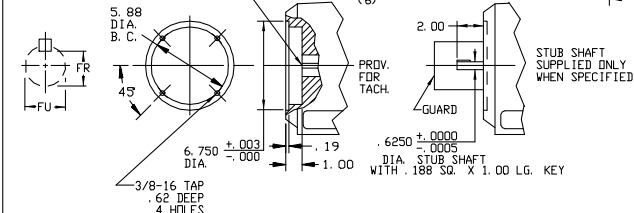
DIMENSIONS ARE IN INCHES

FRAME	XAC	XC	XE	XF	XO
SC2113ATZ-LC2115ATZ	7.75	2.25	10.00	16.00	22.75

FRAME	A	D(1)	E	G	H	HG	J	O	P	T	BA	K	FK	BK
SC2113ATZ-LC2115ATZ	10.25	5.25	4.25	.44	.44	1.38	1.75	10.44	10.31	2.08	3.50	5.19	6.81	2.38

FRAME	C(7)	B	BS	2F	DRIVE END SHAFT AND KEY							OPPOSITE DRIVE END SHAFT AND KEY(5)					WT. LBS.		
					N	N-W	U(2)	V	R(3)	SG.	LGTH.	FN	FN-FW	FU(2)	FV	FR(3)		SO.	LGTH.
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
MC2115ATZ	32.50	26.62	15.50	22.00	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	425
LC2115ATZ	35.25	29.38	18.25	22.00	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	480

- (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 *FU* 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 BDX 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* 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, V-4, V-5, V-7, OR C-1 MOUNTING IS SPECIFIED. BDX LOCATED ON TOP WHEN SPECIFIED.
 BLOWER ASSEMBLY CAN BE LOCATED AT POSITIONS 1, 2, OR 4, EXCEPT BLOWER ASSEMBLY AND TERMINAL BOX CAN NOT BE LOCATED AT THE SAME POSITION.
 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: 000000578087
REV. LTR: -	REVISED: 08:22:49 01/28/2011	BY: CONNAS
FILE: \RGG\00015\944		
MTL: -		

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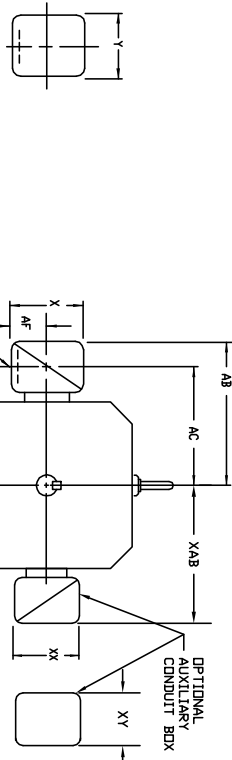
DIMENSION DRAWING, SC2113ATZ - LC2115ATZ, DPP, FOOT MTG

SH 1 of 1

616002-001

609959-001

INDUSTRIAL DIRECT CURRENT MOTORS
AND GENERATORS - RPM III
STANDARD SIZE AND ONE SIZE LARGER
TERMINAL BOX DIMENSIONS
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	AK(1)	AB	AC	AF	X	Y	AK(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					
C2115ATZ (C)	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	705029-1-R	1-1/4 & 1-1/2	11.09	9.09	2.50	5.50	6.12	705029-1-R					
C2516ATZ (C)	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					
C2516ATZ (C)	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					
C2815ATZ	155	3"	14.03	10.53	4.25	8.44	7.25	7487-4-R	3"	14.47	11.22	4.25	8.44	7.25	7487-4-R					
C2815ATZ (C)	259	4"	15.91	11.22	4.25	8.44	7.25	7487-4-R	5" (4)	15.91	11.84	5.38	10.56	9.00	706589-1-C					

FRAME SIZE	MAX. AMPS	STANDARD SIZE						CAST IRON TERMINAL BOX DIMENSIONS						ONE SIZE LARGER						
		AK(3)	AB	AC	AF	X	Y	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					
C2113ATZ (C)	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-S					
C2115ATZ	96	1-1/2	10.97	8.53	3.00	6.00	7.00	705029-2-S	2"	10.97	8.53	3.00	6.00	7.00	705029-2-S					
C2115ATZ (C)	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 (C)	96	1-1/2	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 (C)	208	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-S					
C2813ATZ	155	3"	12.78	10.34	3.00	6.00	7.00	75460-T	3"	13.72	9.97	3.62	7.88	9.25	705030-2-S					
C2813ATZ (C)	259	4"	14.47	10.72	3.62	7.88	9.25	76700-4R	4"	14.47	10.72	3.62	7.88	9.25	76700-4R					
C2815ATZ	155	3"	15.78	11.59	4.12	9.50	10.50	76708-RR	5" (4)	15.78	11.59	4.12	9.50	10.50	76708-RR					
C2815ATZ (C)	259	4"	15.78	11.59	4.12	9.50	10.50	76708-RR	5" (4)	18.59	13.34	7.00	12.75	15.00	76870-S					

FRAME SIZE	AMPS	STANDARD SIZE						OPTIONAL AUXILIARY CONDUIT BOX DIMENSIONS (MAXIMUM)					
		AB	AC	AF	X	AA	Y	AB	AC	AF	X	Y	
C210	100	10.71	8.98	2.72	7.48	---	7.48	706310-25-A					
	200	11.66	9.25	3.35	8.82	---	8.82	706310-56-B					
	100	11.30	9.57	2.72	7.48	---	7.48	706310-56-A					
C250	200	11.85	9.84	3.35	8.82	---	8.82	706310-56-B					
	400	17.48	12.75	6.20	14.39	---	14.39	706310-63-B & 706310-63G					
	800	17.48	12.75	6.20	14.39	---	14.39	706310-63-B & 706310-63G					
	200	12.60	10.59	3.76	8.82	---	8.82	706310-56-B					
	400	18.27	13.54	6.20	14.39	---	14.39	706310-63-B & 706310-63G					
	800	18.27	13.54	6.20	14.39	---	14.39	706310-63-B & 706310-63G					
C280	1600	18.27	13.54	7.68	15.35	---	15.35	706310-63-C					

(1) 1/4" CONDUIT
(2) 1/2" CONDUIT
(3) 3/4" CONDUIT
(4) 1" CONDUIT

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: 00000816512
REV. LTR: A		
FILE: \RGG\00021\153		REVISED: 03: 09: 09 09/06/2013
MTL: -		BY: RGGWT



DIMENSION SHEET
SH 1 of 1

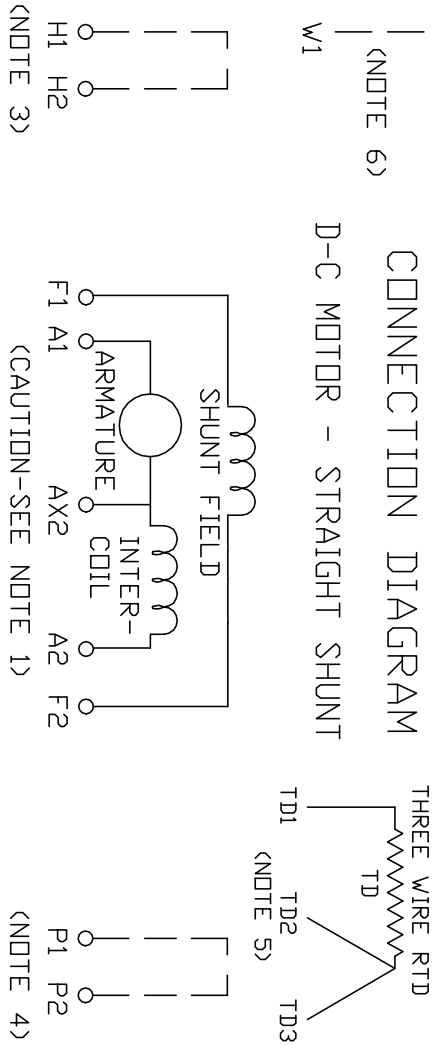
609959-001

406770-006

406770-006

CONNECTION DIAGRAM

D-C MOTOR - STRAIGHT SHUNT



ARMATURE AND FIELD EXTERNAL CONNECTIONS
 WARNING- SEE NOTE 7 FOR GROUNDING INSTRUCTIONS



ROTATION FACING COMMUTATOR END

1. **CAUTION** — ARMATURE MAY HAVE MULTIPLE LEADS. CONNECT ALL LUGS WITH THE SAME MARKING TOGETHER.
2. OPTIONAL CONTROL SIGNAL LEAD IS MARKED AX2. ALWAYS TAKE INTERPOLE DROP BETWEEN A2 AND AX2. NOTE: NEMA DESIGNATION FOR AX2 IS LETTER C.
3. SPACE HEATERS, WHEN PROVIDED, WILL HAVE LEADS MARKED H1 AND H2, H3, H4, ETC.
4. THERMAL PROTECTOR, WHEN PROVIDED, WILL HAVE LEADS MARKED P1 AND P2, P3, P4, ETC.
5. WINDING RTD'S, WHEN PROVIDED, WILL HAVE LEADS MARKED TD1, TD2, & TD3.
6. BRUSH WEAR SENSOR, WHEN PROVIDED, WILL HAVE LEAD MARKED W1.
7. **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 _____ RELIANCE
 ORDER NO. _____ S.D. NO. _____

REV. DESC: UPDATE LOGO AND TITLEBLOCK: LOADED TO BUS		
REV. LTR: -	VERSION: 00	TDR: 000000781086
FILE: \RSN\00026\515	REVISED: 02:41:08 02/01/2013	
MTL: -	BY: MGHPC	

BALDOR

D-C MOTOR CONNECTION DIAGRAM, STRAIGHT SHUNT

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