



Customer information packet

D5020R-BV

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

Specifications

Enclosure	DP
Frame	SC2113ATZ
Frame Material	Exposed Laminations
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	28.63 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.	G6006D B
Layout	616002-001
Eff. date	04-13-2015
CD Diagram	406770-006
Poles	00
Leads	
Proprietary	False
Created date	04-09-2015

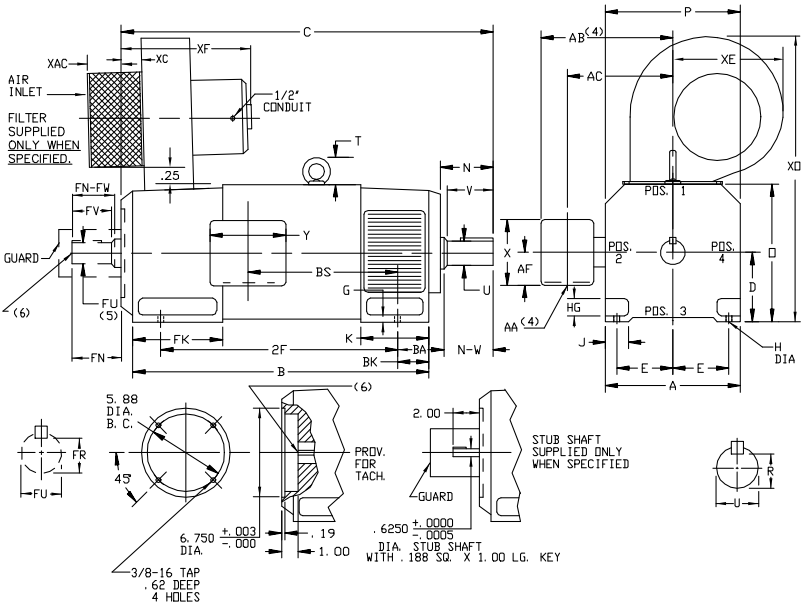
Nameplate

000613006HP									
CAT.NO.	D5020R-BV	SPEC NO.		T21T1350					
FR	SC 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	STR SHUNT	POWER CODE		C					
VOLTS	300	D.E. BRG.		50BC03J30X					
MAX AMPS @ 25 C	3.04	O.D.E. BRG.		45BC02J30X					
HOT AMPS	2.17/ 1.45	MIN. AMB.		0		TYPE		TR	
BRUSH:419904051AB									

616002-001

INDUSTRIAL DIRECT CURRENT MOTORS
AND GENERATORS - RPM III

ENCLOSURE: DRIP-PROOF FULLY-GUARDED,
SPLASHPROOF
MOUNTING: FOOT
METHOD OF DRIVE: COUPLED OR BELTED
COOLING: FORCE VENTILATED
WITH INTEGRAL
BLOWER AND MOTOR
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	N	N-W	U(2)	V	R(3)	SO.	LGTH.	FN	FN-FW	FU(2)	FV	FR(3)	SO.	LGTH.	LBS.
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 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" 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.
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
MTL: -		

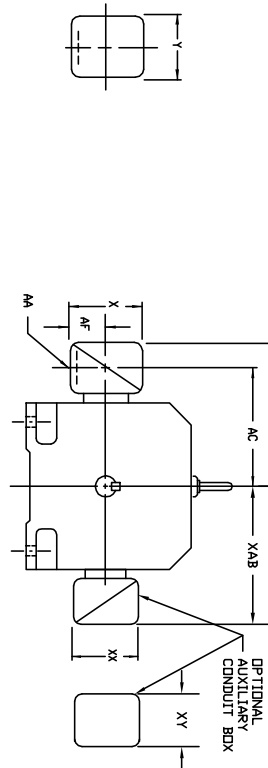
BALDOR
DIMENSION DRAWING, SC2113ATZ - LC2115ATZ, DPP, FOOT MTG
SH 1 of 1

616002-001

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						ONE SIZE LARGER							
		AA(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
C2514ATZ	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
C2815ATZ	155	3"	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	259	4"	15.91	11.84	5.38	10.56	9.00	703036-3-R	5" (4)	18.72	13.47	7.00	12.75	15.00	703036-1-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
C2113ATZ	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
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
C2115ATZ	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
C2512ATZ	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
C2512ATZ	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
C2514ATZ	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
C2514ATZ	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
C2812ATZ	155	3"	14.47	10.72	3.62	7.88	9.25	76700-R	4"	14.47	10.72	3.62	7.88	9.25
C2815ATZ	259	4"	15.78	11.59	4.12	9.50	10.50	76700-R	5" (4)	15.78	11.59	4.12	9.50	10.50

CONDUIT BOX DIMENSIONS WITH TERMINAL BOARDS (IEC TYPE BOX)

STANDARD SIZE											
FRAME SIZE	AMPS	AB	AC	AF	X	AA	Y	PART NUMBER			
C210	100	10.71	8.98	2.72	7.48	--	7.48	706310-56-A			
	200	11.66	9.25	3.35	8.82	--	8.82	706310-56-B			
	400	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			
C280	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			
	1600	18.27	13.54	7.68	15.35	--	15.35	706310-63-C			

OPTIONAL AUXILIARY CONDUIT BOX DIMENSIONS (MAXIMUM)							
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
C250	8.44	4.25	602007-26-A	C250	11.88	8.00	706310-3-B
C280	9.12	4.25	602007-26-A	C280	12.62	8.00	706310-3-B

(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"/"Y" 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

BALDOR

DIMENSION SHEET

SH 1 of 1

609959-001

406770-006

CONNECTION DIAGRAM

406770-006

--- (NOTE 6)

W1

D-C MOTOR - STRAIGHT SHUNT

THREE WIRE RTD

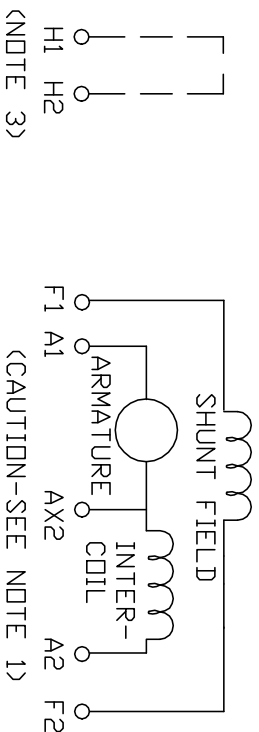
TD

TD

(NOTE 5)

II

2



(NOTE 3)

<CAUTION-SEE NOTE 1>

(NOTE 4)

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 FDR MOTOR GROUNDING. GROUND LEAD, WHEN PROVIDED, WILL BE GREEN.

CUSTOMER _____ 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

REVISÉ: 02:41:08 02/01/2013

MTL: —

BY: MGHPC

BALDOR

D-C MOTOR CONNECTION DIAGRAM, STRAIGHT SHUNT

SH 1 of 1