

**BALDOR® • RELIANCE™**

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# Customer information packet

## D51100RB-1BV

C3214ATZ, 100HP, 1150RPM, 500, 300, , F2

**Specifications**

<b>Armature Voltage</b>	500 V
<b>Base Speed</b>	1150 rpm
<b>Enclosure</b>	DPG-FV
<b>Field Voltage</b>	300 V
<b>Frame</b>	C3214ATZ
<b>Output Power</b>	100.000 HP
<b>Ambient Temperature</b>	40 °C
<b>Armature Current</b>	163.0 a
<b>Bearing Grease Type</b>	Polyrex EM (-20F +300F)
<b>Drip Cover</b>	No Drip Cover
<b>Duty Rating</b>	CONT
<b>Feedback Device</b>	NO FEEDBACK
<b>Field Winding Type</b>	STR. SHUNT
<b>Frame Prefix</b>	C
<b>Heater Indicator</b>	No Heater
<b>Insulation Class</b>	F
<b>IP Rating</b>	IP23
<b>Lifting Lugs</b>	Standard Lifting Lugs
<b>Motor Standards</b>	NEMA
<b>Mounting Arrangement</b>	F1
<b>Overall Length</b>	46.25 IN
<b>Service Factor</b>	1.00
<b>Shaft Diameter</b>	2.624 IN
<b>Shaft Ground Indicator</b>	No Shaft Grounding
<b>Shaft Slinger Indicator</b>	No Slinger

**Part detail**

<b>Revision</b>	-
<b>Type</b>	DC
<b>Mech. spec.</b>	
<b>Base</b>	
<b>Status</b>	PRD/A
<b>Elec. spec.</b>	G8718A B
<b>Layout</b>	616032-001
<b>Eff. date</b>	01-29-2019
<b>CD Diagram</b>	406770-006
<b>Poles</b>	00
<b>Leads</b>	
<b>Proprietary</b>	False
<b>Created date</b>	01-24-2019

**Nameplate**

000613006HP					
<b>CAT.NO.</b>	D51100RB-1BV	<b>SPEC NO.</b>	D32-A000-0076		
<b>FR</b>	C3214ATZ	<b>HP</b>	100	<b>DUTY</b>	CONT
<b>ENCL.</b>	DPG-FV	<b>RPM</b>	1150/2000	<b>S.F.</b>	1.00
<b>ENCL MOD</b>		<b>VOLTS</b>	500	<b>INSUL</b>	F
<b>MAX SAFE SPEED</b>	03600	<b>AMPS</b>	163.00	<b>AMB.</b>	40
	<b>FIELD DATA</b>	<b>SER.NO.</b>			
<b>WINDING</b>	STR. SHUNT	<b>POWER CODE</b>	C		
<b>VOLTS</b>	300	<b>D.E. BRG.</b>	85BC02J30X		
<b>MAX AMPS @ 25 C</b>	8.37	<b>O.D.E. BRG.</b>	65BC02J30X		
<b>HOT AMPS</b>	5.96/2.79	<b>MIN. AMB.</b>	0	<b>TYPE</b>	TR
	BRUSH:419904052AB				

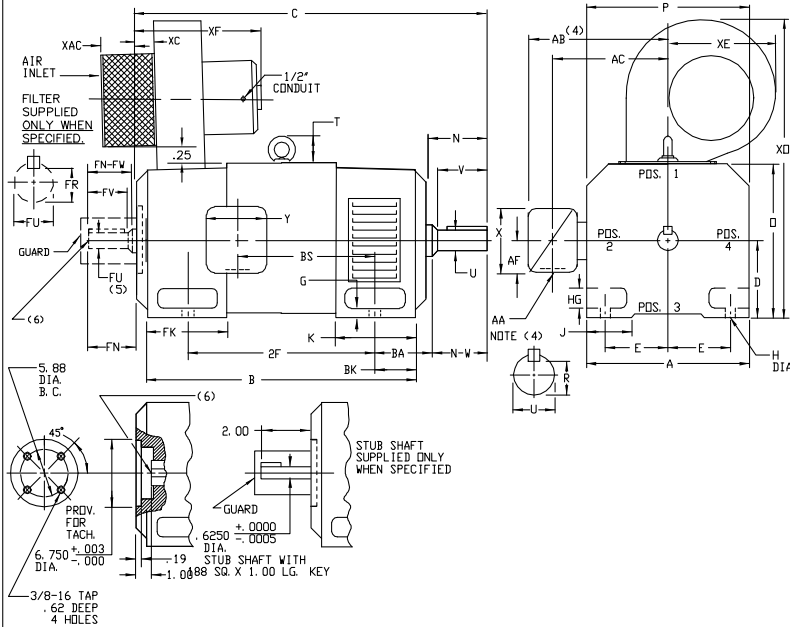
616032-001

## INDUSTRIAL DIRECT CURRENT MOTORS AND GENERATORS - RPM III

ENCLOSURE: DRIP-PROOF FULLY-GUARDED  
SPLASHPROOF  
MOUNTING: FOOT

COOLING: FORCE VENTILATED  
WITH INTEGRAL  
BLOWER AND MOTOR

ACCESSORIES: PROVISION FOR TACHOMETER MOUNTING ONLY WHEN SPECIFIED  
FRAMES SC3210ATZ THRU ULC3214ATZ



DIMENSIONS ARE IN INCHES

FRAME	XAC	XC	XE	XF	XO
SC3210ATZ-ULC3214ATZ	6.75	3.25	8.50	19.25	28.00

FRAME	A	B(1)	E	G	H	HG	J	O	P	T	BA	K	FK	LG(8)	BK
SC3210ATZ-ULC3214ATZ	15.50	8.00	6.25	.75	.69	2.25	3.00	15.81	15.62	3.54	5.25	6.75	7.94	10.44	4.00

FRAME	METHOD OF DRIVE	C(7)		B	BS	DRIVE END SHAFT AND KEY					OPPOSITE DRIVE END SHAFT AND KEY					WT. LBS.						
		STD.	LG.(8)			N	N-W	U(2)	V	R(3)	ISO.	LGTH.	FN	FN-FW	FU(2)		FV	FR(3)	SO.	LGTH.		
SC3210ATZ- LSC3210ATZ	COUPLED	36.25	38.75	28.31	30.81	13.38	20.00	5.50	5.25	2.625	5.00	2.275	6.25	4.00	4.75	4.50	2.250	4.25	1.972	5.00	3.25	1115
ULC3210ATZ-ULC3210ATZ	BELETD	36.75	39.25	28.31	30.81	13.38	20.00	6.00	5.75	2.875	5.50	2.450	7.50	4.25	4.75	4.50	2.250	4.25	1.972	5.00	3.25	1120
MC3212ATZ- LMC3212ATZ	COUPLED	39.25	41.75	31.31	33.81	16.38	25.00	5.50	5.25	2.625	5.00	2.275	6.25	4.00	4.75	4.50	2.250	4.25	1.972	5.00	3.25	1210
UMC3212ATZ-ULMC3212ATZ	BELETD	39.75	42.25	31.31	33.81	16.38	25.00	6.00	5.75	2.875	5.50	2.450	7.50	4.25	4.75	4.50	2.250	4.25	1.972	5.00	3.25	1215
LC3212ATZ- LLC3212ATZ	COUPLED	41.25	43.75	33.31	35.81	18.38	25.00	5.50	5.25	2.625	5.00	2.275	6.25	4.00	4.75	4.50	2.250	4.25	1.972	5.00	3.25	1290
ULC3212ATZ-ULLC3212ATZ	BELETD	41.75	44.25	33.31	35.81	18.38	25.00	6.00	5.75	2.875	5.50	2.450	7.50	4.25	4.75	4.50	2.250	4.25	1.972	5.00	3.25	1295
C3214ATZ- L C3214ATZ	COUPLED	46.25	48.75	38.31	40.81	23.38	32.00	5.50	5.25	2.625	5.00	2.275	6.25	4.00	4.75	4.50	2.250	4.25	1.972	5.00	3.25	1470
ULC3214ATZ- ULC3214ATZ	BELETD	46.75	49.25	38.31	40.81	23.38	32.00	6.00	5.75	2.875	5.50	2.450	7.50	4.25	4.75	4.50	2.250	4.25	1.972	5.00	3.25	1475

- (1) "D" DIMENSION WILL NOT BE EXCEEDED. SHIMS UP TO .06 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. 609979-1, "X"/P 609979-2, MILL 609979-3)
- (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.
- (8) DIMENSION FOR FRAMES WITH PREFIX LSC, LMC, LLC, LC, ULSC, ULMC, ULLC OR ULC.
- (9) "XE" DIMENSION IS NOT APPLICABLE TO "C3214ATZ" FRAMES (BLOWER MOTOR IS CENTERED ON SHAFT C/L).

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. DR 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.

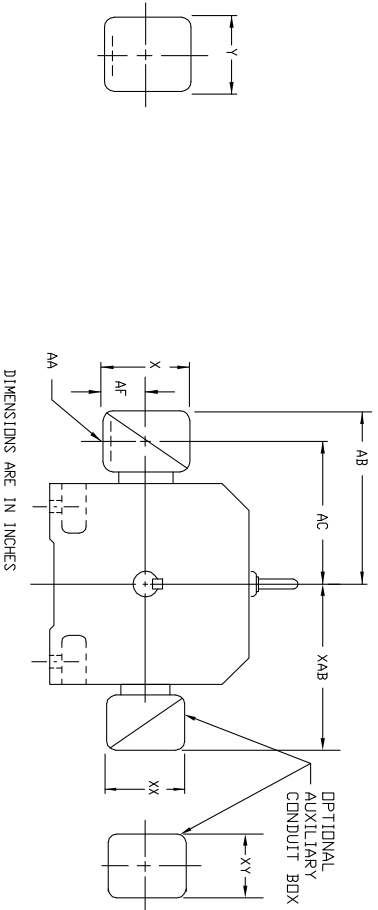
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MTL: -		

**BALDOR**  
DIMENSION DRAWING, SC3210ATZ - ULC3214ATZ, DPP, FOOT MTG  
SH 1 of 1

616032-001

# INDUSTRIAL DIRECT CURRENT MOTORS AND GENERATORS – RPM III

STEEL AND CAST IRON TERMINAL BOX DIMENSIONS  
STANDARD SIZE AND ONE SIZE LARGER  
FRAMES C3210ATZ THRU C3613ATZ



FRAME SIZE	MAX AMPS	STANDARD SIZE						STEEL TERMINAL BOX DIMENSIONS						ONE SIZE LARGER								
		AA(2)	AB	AC	AF	X	Y	PART NUMBER	AA(1)	AB	AC	AF	X	Y	PART NUMBER	AA(2)	AB	AC	AF	X	Y	PART NUMBER
C3210ATZ	185	2	14.88	11.38	4.25	8.44	7.25	74874-R	3	15.31	12.06	4.25	8.44	7.25	74874-24-R	3	15.31	11.56	3.62	7.88	9.25	76700-RB
C3212ATZ	269	3	15.31	12.06	4.25	8.44	7.25	74874-24-R	4	16.75	12.69	5.38	10.56	9.00	700308-3-R	4	16.62	12.44	4.12	9.50	10.50	76708-RR
C3214ATZ	500	4	16.75	12.69	5.38	10.56	9.00	700308-3-R	5	21.00	15.88	6.50	12.10	14.62	702658-1-C	5	19.44	14.19	7.00	12.75	15.00	76870-S
C3612ATZ	185	2	21.00	15.88	6.50	12.10	14.62	702658-1-C	3	16.31	13.06	4.25	8.44	7.25	74874-24-R	3	16.31	12.56	3.62	7.88	9.25	76700-RB
C3612ATZ	269	3	16.31	13.06	4.25	8.44	7.25	74874-24-R	4	17.75	13.69	5.38	10.56	9.00	700308-3-R	4	17.62	13.44	4.12	9.50	10.50	76708-RR
C3613ATZ	500	4	17.75	13.69	5.38	10.56	9.00	700308-3-R	5	22.00	15.88	6.50	12.10	14.62	702658-1-C	5	20.44	15.19	7.00	12.75	15.00	76870-S

FRAME SIZE	MAX AMPS	STANDARD SIZE						CAST IRON TERMINAL BOX DIMENSIONS						ONE SIZE LARGER								
		AA(2)	AB	AC	AF	X	Y	PART NUMBER	AA(1)	AB	AC	AF	X	Y	PART NUMBER	AA(2)	AB	AC	AF	X	Y	PART NUMBER
C3210ATZ	185	3	15.31	11.19	3.00	6.00	7.00	75460-R	3	15.31	11.56	3.62	7.88	9.25	76700-RB	3	15.31	11.56	3.62	7.88	9.25	76700-RB
C3212ATZ	269	4	16.62	12.44	4.12	9.50	10.50	76708-RR	5	19.44	14.19	7.00	12.75	15.00	76870-S	5	19.44	14.19	7.00	12.75	15.00	76870-S
C3214ATZ	500	5	19.44	14.19	7.00	12.75	15.00	76870-S	6	19.44	14.19	7.00	12.75	15.00	76870-S	6	19.44	14.19	7.00	12.75	15.00	76870-S
C3612ATZ	185	3	16.31	12.56	3.62	7.88	9.25	75460-R	3	16.31	12.56	3.62	7.88	9.25	76700-RB	3	16.31	12.56	3.62	7.88	9.25	76700-RB
C3612ATZ	269	4	17.62	13.44	4.12	9.50	10.50	76708-RR	5	17.62	13.44	4.12	9.50	10.50	76708-RR	5	17.62	13.44	4.12	9.50	10.50	76708-RR
C3613ATZ	500	5	20.44	15.19	7.00	12.75	15.00	76870-S	6	20.44	15.19	7.00	12.75	15.00	76870-S	6	20.44	15.19	7.00	12.75	15.00	76870-S

FRAME SIZE	AMPS	STANDARD SIZE						OPTIONAL AUXILIARY CONDUIT BOX DIMENSIONS (MAXIMUM)							
		AB	AC	AF	X	AA (3)	Y	PART NUMBER	AB	AC	AF	X	AA (3)	Y	PART NUMBER
C320	400	19.02	15.28	6.20	14.39	---	14.39	706310-63-B	4.25	4.25	602007-26-A	14.50	8.00	8.00	706310-3-B
	800	19.02	15.28	6.20	14.39	---	14.39	706310-63-B	4.25	4.25	602007-26-A	14.50	8.00	8.00	706310-3-B
	1600	19.02	15.28	7.68	15.35	---	15.35	706310-63-C	4.25	4.25	602007-26-A	14.50	8.00	8.00	706310-3-B
C360	400	20.00	15.28	6.20	14.39	---	14.39	706310-63-B	4.25	4.25	602007-26-A	14.50	8.00	8.00	706310-3-B
	800	20.00	15.28	6.20	14.39	---	14.39	706310-63-B	4.25	4.25	602007-26-A	14.50	8.00	8.00	706310-3-B
	1600	20.00	15.28	7.68	15.35	---	15.35	706310-63-C	4.25	4.25	602007-26-A	14.50	8.00	8.00	706310-3-B

- (1) \*AA\* CONDUIT.
- (2) \*AA\* PIPE TAP.
- (3) CUSTOMER TO PROVIDE HOLE FOR CONDUIT.
- (4) TERMINAL BOX LOCATED ON OPPOSITE SIDE WHEN F-2, V-1, V-4, W-5, W-7.
- (5) TERMINAL BOX LOCATED ON TOP WHEN SPECIFIED.
- (6) \*X/P\* TERMINAL BOX DIMENSIONS SEE 609979-2.
- (7) \*Y/P\* TERMINAL BOX DIMENSIONS SEE 609979-3.

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

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MTL: -		

**BALDOR**

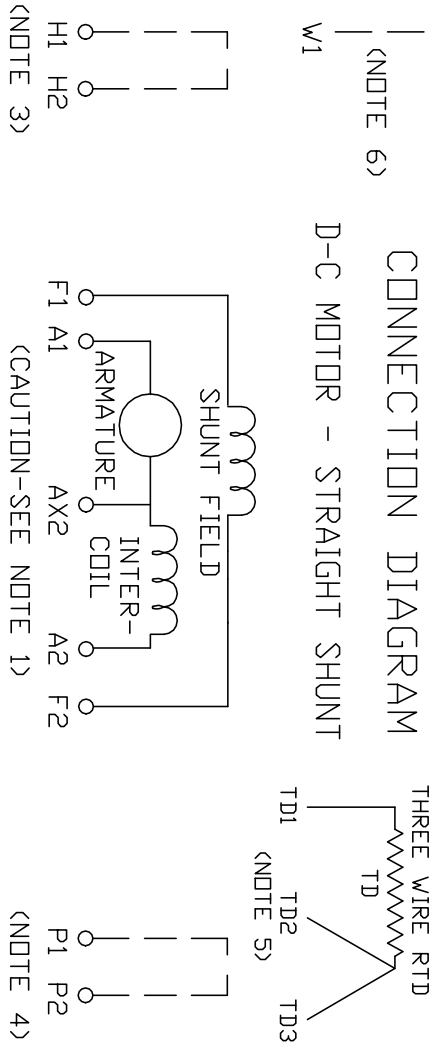
DIM SHT,C3210ATZ THRU C3613ATZ,W/AUX C/BOX  
SH 1 of 1

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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  
SH 1 of 1