

ABB BALDOR RELIANCE III



Customer information packet D2520R

20 1750/2300 LC2512ATZ TEFC 240V

Specifications

Enclosure	TEFC
Frame	LC2512ATZ
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	CUST SUPPLIED/PROVISIONS
Field Winding Type	STAB SHUNT
Frame Prefix	LC
Heater Indicator	No Heater
Lifting Lugs	Standard Lifting Lugs
Motor Standards	NEMA
Mounting Arrangement	F1
Overall Length	38.94 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.	G6315A B
Layout	609951-013
Eff. date	04-13-2015
CD Diagram	406770-001
Poles	00
Leads	
Proprietary	False
Created date	04-10-2015

Nameplate

000613006HP					
CAT.NO.		SPEC NO.	T25S0303		
FR	LC 2512ATZ	HP	20	DUTY	CONT
ENCL.	TEFC	RPM	1750/ 2300	S.F.	1.0
ENCL MOD		VOLTS	240	INSUL	F
MAX SAFE SPEED	4500	AMPS	71.00	AMB.	40
	FIELD DATA	SER.NO.			
WINDING	STAB SHUNT	POWER CODE	C		
VOLTS	150	D.E. BRG.	60BC03J30X		
MAX AMPS @ 25 C	4.14	O.D.E. BRG.	50BC02J30X		
HOT AMPS	2.83/ 2.01	MIN. AMB.	0	TYPE	TR
	BRUSH:419904051AC				

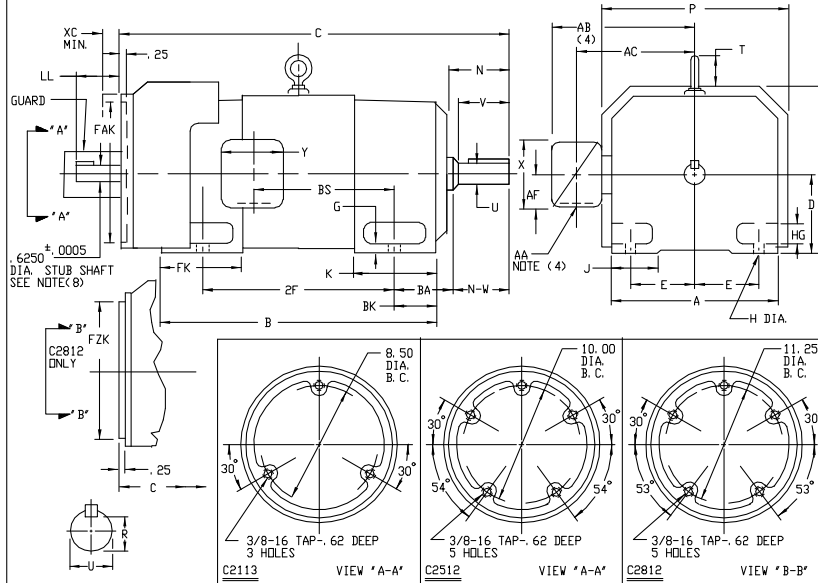
609951-013

INDUSTRIAL DIRECT CURRENT MOTORS AND GENERATORS - RPM III

ENCLOSURE: TOTALLY ENCLOSED
MOUNTING: FOOT
METHOD OF DRIVE: COUPLED OR BELTED

COOLING: FAN COOLED
ACCESSORIES: PROVISION FOR
TACHOMETER MOUNTING
ONLY WHEN SPECIFIED

FRAMES SC2113ATZ THRU LC2812ATZ



DIMENSIONS ARE IN INCHES

FRAME	A	BC(1)	E	G	H	HG	J	D	P	T	BA	K	FK	BK	FAK(6)	FZK(7)	XC(5)
SC2113ATZ-LC2113ATZ	10.25	5.25	4.25	.44	.44	1.38	1.75	11.62	12.75	1.38	3.50	5.19	6.81	2.38	9.750	N/A	1.25
SC2512ATZ-LC2512ATZ	12.31	6.25	5.00	.50	.56	1.62	2.00	13.62	14.75	1.94	4.25	6.06	8.00	3.00	11.250	N/A	1.25
MC2812ATZ-LC2812ATZ	13.78	7.00	5.50	.62	.56	1.88	2.75	15.06	16.12	2.31	4.75	6.75	9.19	3.50	N/A	12.500	1.25

FRAME	C	B	BS	2F	DRIVE END SHAFT AND KEY							WT. LBS.
					N	N-V	UK(2)	V	RK(3)	SR	LGTH.	
SC2113ATZ	32.19	22.50	11.38	18.00	4.00	3.75	1.875	3.50	1.591	500	2.50	355
MC2113ATZ	33.44	23.75	12.62	18.00	4.00	3.75	1.875	3.50	1.591	500	2.50	380
LC2113ATZ	35.06	25.38	14.25	18.00	4.00	3.75	1.875	3.50	1.591	500	2.50	410
SC2512ATZ	35.94	25.06	12.06	20.00	4.50	4.25	2.125	4.00	1.845	500	3.00	555
MC2512ATZ	37.44	26.56	13.56	20.00	4.50	4.25	2.125	4.00	1.845	500	3.00	590
LC2512ATZ	38.94	28.06	15.06	20.00	4.50	4.25	2.125	4.00	1.845	500	3.00	630
MC2812ATZ	41.62	29.94	14.25	22.00	5.00	4.75	2.375	4.50	2.021	625	3.50	835
LC2812ATZ	43.88	32.19	16.50	22.00	5.00	4.75	2.375	4.50	2.021	625	3.50	900

- (1) "D" DIMENSION WILL NOT BE EXCEEDED. SHIMS UP TO .03 INCHES IN THICKNESS ARE USUALLY REQUIRED FOR COUPLED OR GEARED MACHINES.
- (2) "U" VARIES----+.000 --.001
- (3) "2F" VARIES----+.000 --.015
- (4) TERMINAL BOX VARIES WITH H.P. FOR DIMENSIONS "AA", "AB", "AC", "AF", "X" AND "Y". SEE DRAWING NUMBER 609959-1.
- (5) WALLS OR OBSTRUCTIONS MUST NOT ENCRDACH ON AIR INLET SPACE "XC".
- (6) "FAK" VARIES +.005 --.000----FACE RUNDUT AND ECCENTRICITY .007 MAX. T. I. R.
- (7) "FZK" VARIES +.000 --.005----FACE RUNDUT AND ECCENTRICITY .007 MAX. T. I. R.
- (8) STUB SHAFT SUPPLIED ONLY WHEN SPECIFIED. KEY SIZE .188 X .188 X 1.00
- (9) FOR RE-045 DR SPY PROVISIONS ON "C2812" ADD 1.00 TO "LL" DIMENSION. 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. MOTOR WEIGHT MAY VARY 15% FOR NON-STANDARD RATINGS AND/OR ACCESSORIES. IF MOUNTING CLEARANCE DETAILS ARE REQUIRED, CONSULT FACTORY.

TACHMETER	LL
BC-42	
BC-46	
RD-11	
RD-12	4.25
RD-51	
RD-61	
RD-62	
RE-210	
M627, M628	
M727, M737	
M738	
DYNAPAR 74S	
RE-045	3.80
SPY	1.12

SEE NOTE (9)

609951-013

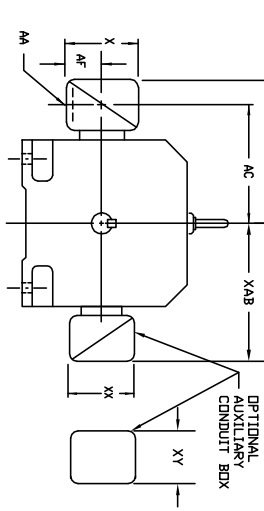
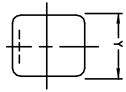
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION.

REV. DESC: LOADED TO BUS	VERSION: 00	TDR: 000000577407
REV. LTR: -	REVISED: 11:02:01 01/26/2011	BY: CONNAS
FILE: \RGG\00015\557		
MTL: -		

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

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	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					
C2518ATZ	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					
C2518ATZ (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					
C2518ATZ (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					
C2818ATZ	188	2"	14.03	10.53	4.25	8.44	7.25	74874-R	2" & 2-1/2	14.47	11.22	4.25	8.44	7.25	74874-R					
C2818ATZ (C)	188	2"	14.47	11.22	4.25	8.44	7.25	74874-R	2" & 2-1/2	14.47	11.22	4.25	8.44	7.25	74874-R					
C2815ATZ	185	3"	15.91	11.22	4.25	8.44	7.25	700308-3-R	5" (4)	15.91	11.84	5.38	10.56	9.00	700308-3-R					
C2815ATZ (C)	259	4"	15.91	11.84	5.38	10.56	9.00	700308-3-R	5" (4)	18.72	13.47	7.00	12.75	15.00	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					
C2518ATZ	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					
C2518ATZ (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					
C2518ATZ (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	128	2"	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)	185	3"	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	185	3"	15.78	11.59	4.12	9.50	10.50	76700-4R	5" (4)	15.78	11.59	4.12	9.50	10.50	76700-4R					
C2815ATZ (C)	259	4"	15.78	11.59	4.12	9.50	10.50	76700-4R	5" (4)	18.59	13.34	7.00	12.75	15.00	76970-S					

FRAME SIZE	AMPS	STANDARD SIZE						OPTIONAL AUXILIARY CONDUIT BOX DIMENSIONS (IEC TYPE BOX)					
		AB	AC	AF	X	AA	Y	PART NUMBER	AB	AC	AF	X	Y
C210	100	10.71	8.98	2.72	7.48	---	7.48	706310-25-A	10.88	8.00	8.00	7.00	706310-3-B
	200	11.66	9.25	3.35	8.82	---	8.82	706310-56-B	11.88	8.00	8.00	706310-3-B	
	100	11.30	9.57	2.72	7.48	---	7.48	706310-56-A	11.88	8.00	8.00	706310-3-B	
	200	11.85	9.84	3.35	8.82	---	8.82	706310-56-B	12.62	8.00	8.00	706310-3-B	
C250	400	17.48	12.75	6.20	14.39	---	14.39	706310-63-B & 706310-63C	17.48	10.50	10.50	7.00	706310-63-B & 706310-63C
	800	17.48	12.75	6.20	14.39	---	14.39	706310-63-B & 706310-63C	17.48	10.50	10.50	7.00	706310-63-B & 706310-63C
	200	12.60	10.59	3.76	8.82	---	8.82	706310-56-B	12.62	8.00	8.00	706310-3-B	
	400	18.27	13.54	6.20	14.39	---	14.39	706310-63-B & 706310-63C	18.27	10.50	10.50	7.00	706310-63-B & 706310-63C
C280	800	18.27	13.54	6.20	14.39	---	14.39	706310-63-B & 706310-63C	18.27	10.50	10.50	7.00	706310-63-B & 706310-63C
	1600	18.27	13.54	7.68	15.35	---	15.35	706310-63-C	18.27	10.50	10.50	7.00	706310-63-B & 706310-63C

- (1) 44" CONDUIT
- (2) 44" CONDUIT
- (3) 44" PIPE
- (4) TERMINAL BOX FOR C2113ATZ AND C2512ATZ
- (5) 44" CONDUIT
- (6) 44" CONDUIT
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- (100) 44" 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



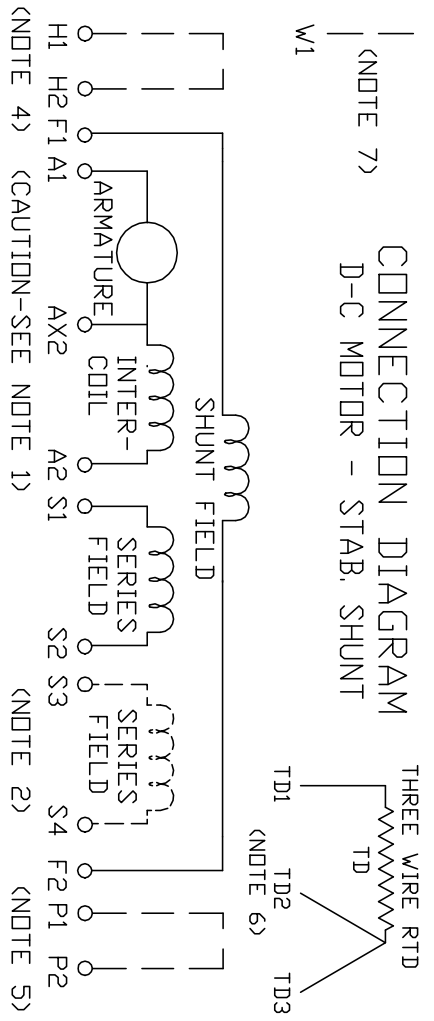
DIMENSION SHEET
SH 1 of 1

609959-001

406770-001

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

REV. DESC: DELETED DUPLICATE WORDS FROM NOTE 8

REV. LTR: A

VERSION: 01

TDR: 00000970330

FILE: \RSN\00026\422

REVISED: 10:19:12 03/11/2016

BY: RAGTBM

MTL: -

BALDOR

D-C MOTOR CONNECTION DIAGRAM STAB. SHUNT

SH 1 of 1

