

ABB BALDOR RELIANCE III

Customer information packet D5520R

20 1750/2300 LC2512ATZ TEFC 500V

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.	G6143B A
Layout	609951-013
Eff. date	04-13-2015
CD Diagram	406770-002
Poles	00
Leads	
Proprietary	False
Created date	04-10-2015

Nameplate

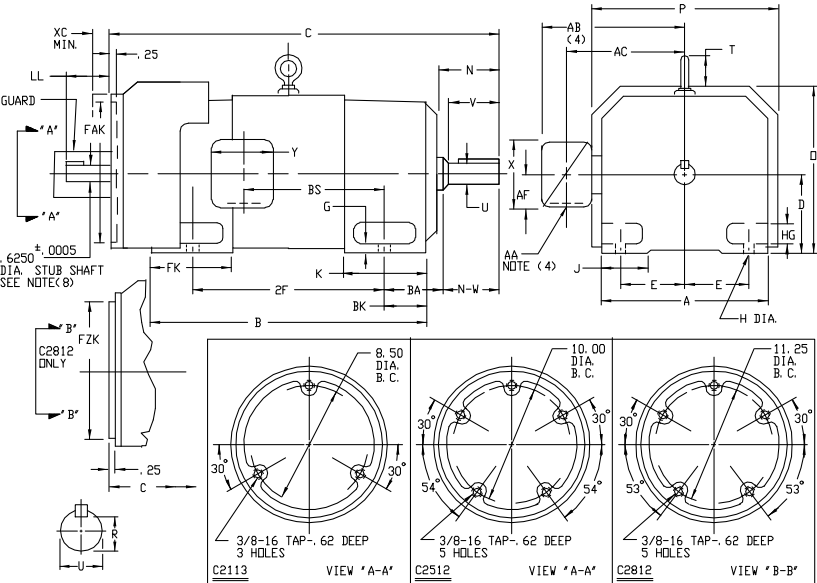
000613006HP									
CAT.NO.			SPEC NO.		T25S0304				
FR	LC 2512ATZ	HP	20		DUTY		CONT		
ENCL.	TEFC	RPM	1750/ 2300		S.F.		1.0		
ENCL MOD			VOLTS		500		INSUL		F
MAX SAFE SPEED	4500	AMPS		33.00		AMB.		40	
FIELD DATA		SER.NO.							
WINDING	STAB SHUNT		POWER CODE		C				
VOLTS	300		D.E. BRG.		60BC03J30X				
MAX AMPS @ 25 C	2.06		O.D.E. BRG.		50BC02J30X				
HOT AMPS	1.43/ .98		MIN. AMB.		0		TYPE		TR
BRUSH:419904051AB; FLD. DATA									
FOR HIGH VOLTS; F.V. 150/300									

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	
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) "B" 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 RUNOUT AND ECCENTRICITY .007 MAX. T.I.R.
(7) "FZK" VARIES + .000 - .005-----FACE RUNOUT 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 OR 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.

TACHOMETER	LL
BC-42	4.25
BC-46	
RD-11	
RD-12	
RD-51	
RD-61	
RE-62	3.80 1.12
M627, M628	
M727, M737	
M738	
DYNAPAR 74S	SEE NOTE (9)
RE-045 SPY	

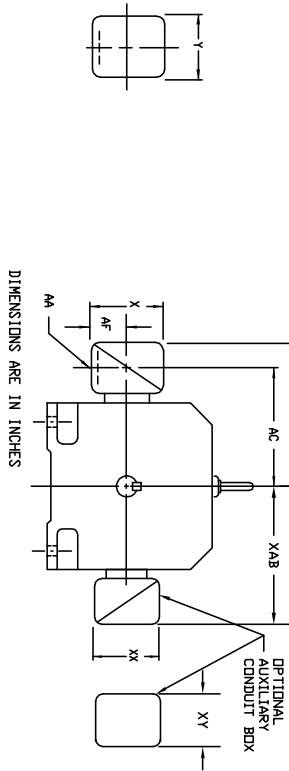
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION.

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

609951-013

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					PART NUMBER			
		AA(1)	AB	AC	AF	Y	AA(1)	AB	AC	AF	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
C2516ATZ	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	128	2"	14.03	10.53	4.25	8.44	7.25	74874-R	3"	14.47	11.22	4.25	8.44	7.25	74874-R
C2816ATZ	195	3"	14.47	11.22	4.25	8.44	7.25	74874-R	4"	15.91	11.84	5.38	10.56	9.00	706308-3-R
(2)	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

CAST IRON TERMINAL BOX DIMENSIONS															
FRAME SIZE	MAX. AMPS	STANDARD SIZE					ONE SIZE LARGER								
		AB	AC	AF	X	Y	NUMBER	AB	AC	AF	X	Y	NUMBER		
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	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
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	705029-2-R
(2)	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
C2514ATZ	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	705029-2-R
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	705029-2-S
(2)	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	705030-2-R
C2813ATZ	128	2"	12.78	10.34	3.00	6.00	7.00	75460-T	3"	14.47	10.72	3.62	7.88	9.25	76700-R
C2815ATZ	195	3"	14.47	10.72	3.62	7.88	9.25	76700-R	4"	15.78	11.59	4.12	9.50	10.50	76708-R
C2815ATZ	269	4"	15.78	11.59	4.12	9.50	10.50	76708-R	5" (4)	18.59	13.34	7.00	12.75	15.00	76870-S

CONDUIT BOX DIMENSIONS WITH TERMINAL BOARDS (IEC TYPE BOX)

CONDUIT BOX DIMENSIONS WITH TERMINAL BOXES (SEE LIST BELOW)									
STANDARD SIZE									
FRAME SIZE	AMPS	AB	AC	AF	X	AA	Y	PART NUMBER	PART NUMBER
C210	100	10.71	8.98	2.72	7.48	--	7.48	706310-56-A	706310-225-R
	200	11.26	9.25	3.35	8.82	--	8.82	706310-56-B	706310-226-R
	100	11.30	9.57	2.72	7.48	--	7.48	706310-56-A	706310-225-R
	200	11.85	9.84	3.35	8.82	--	8.82	706310-56-B	706310-226-R
C250	400	17.48	12.75	6.20	14.39	--	14.39	706310-63-B & 706310-63G	706310-63-B & 706310-63G
	800	17.48	12.75	6.20	14.39	--	14.39	706310-63-B & 706310-63G	706310-63-B & 706310-63G
	200	12.60	10.59	3.76	8.82	--	8.82	706310-56-B	706310-226-R
	400	18.27	13.54	6.20	14.39	--	14.39	706310-63-B & 706310-63G	706310-63-B & 706310-63G
C280	800	18.27	13.54	6.20	14.39	--	14.39	706310-63-B & 706310-63G	706310-63-B & 706310-63G
	1600	18.27	13.54	7.68	15.35	--	15.35	706310-63-C	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) MAX CONDUIT
(2) RATES PROVIDED WITH DOUBLE KNUCKLE
(3) MAX PIPE LAP(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 ON TOP WHEN SPECIFIED.
FOR "X"/P/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

406770-002			406770-002	
CONNECTION DIAGRAM D-C MOTOR - STAB. SHUNT DUAL VOLTAGE FIELD W1 (NOTE 7) SHUNT FIELD F2 INTER-COIL AX2 A2 S1 S2 S3 S4 F22 P1 P2 (NOTE 4) (CAUTION-SEE NOTE 1) (NOTE 2) (NOTE 5) THREE WIRE RTD TD TD1 TD2 TD3 (NOTE 6)				
ARMATURE AND FIELD EXTERNAL CONNECTIONS WARNING- SEE NOTE 8 FOR GROUNDING INSTRUCTIONS CCW ROTATION LOW VOLTAGE FIELD CONNECTION CW ROTATION CCW ROTATION HIGH VOLTAGE FIELD CONNECTION CW ROTATION 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 OPPOSITE DRIVE END BRACKET, ADJACENT TO THE TERMINAL BOX FOR FOR MOTOR GROUNDING. GROUND LEAD, WHEN PROVIDED, WILL BE GREEN.				
CUSTOMER _____ ORDER NO. _____ S.D. NO. _____ CUSTOMER _____ RELIANCE _____				
REV. DESC: UPDATE LOGO AND TITLEBLOCK: LOADED TO BUS		BALDOR		
REV. LTR: -	VERSION: 00	TDR: 000000781086	D-C MOTOR CONNECTION DIAGRAM STAB. SHUNT, DUAL VOLTAGE FIELD	
FILE: \RSN\00026\434		REVISED: 02: 35: 07 02/01/2013	SH 1 of 1	
MTL: -		BY: MGHPC		