

BALDOR® • *RELIANCE*

Product Information Packet

D2020R

20 1750 LC2113ATZ DPG 240V

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Part Detail			
Type:	DC	Prod. Type:	TR
Power Code:	C	Weight:	391
Frame Group:	LC 2113ATZ	Mounting Pos.:	F1
HP:	20	Enclosure:	DPG
RPM:	1750/2300	Wound:	STAB SHUNT
Service Factor:	1.0	Arm V:	240
Arm A:	74.00	Field V:	150
Field A:	4.23	Field A Hot:	2.97/1.90
Insulation Class:	F	Ambient:	40
Duty:	CONT	DE Bearing:	50BC03J30X
ODE Bearing:	45BC02J30X	Brushes:	419904-51AC
Brush Qty.:			

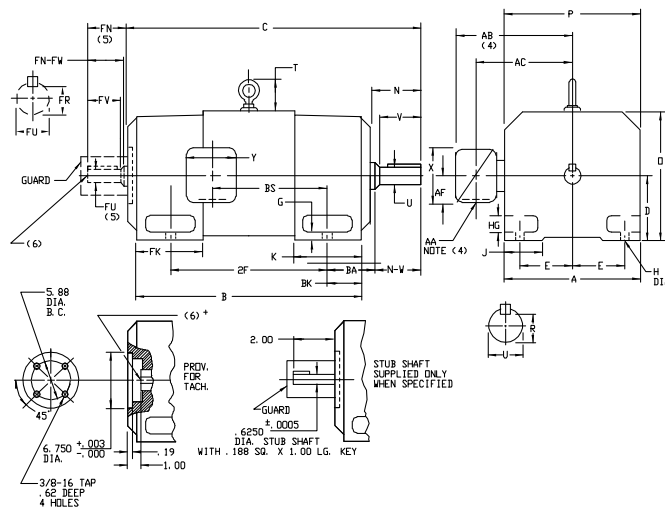
609950-001

INDUSTRIAL DIRECT CURRENT MOTORS AND GENERATORS - RPM III

ENCLOSURE: DRIP-PROOF FULLY-GUARDED, COOLING: SELF-VENTILATED
 SPLASHPROOF, TOTALLY ENCLOSED NON-VENTILATED

MOUNTING: FOOT ACCESSORIES: PROVISION FOR TACHOMETER MOUNTING
 METHOD OF DRIVE: COUPLED OR BELTED ONLY WHEN SPECIFIED

FRAMES SC2113ATZ THRU LC2812ATZ



DIMENSIONS ARE IN INCHES; SEE 609950-1M FOR DIMENSIONS IN MILLIMETERS

FRAME	A	B(1)	E	G	H	HG	J	D	P	T	BA	K	FK	BK
SC2113ATZ-LC2113ATZ	10.25	5.25	4.25	.44	.44	1.38	1.75	10.44	10.31	2.56	3.50	5.19	6.81	2.38
SC2512ATZ-LC2512ATZ	12.31	6.25	5.00	.50	.56	1.62	2.00	12.50	12.44	3.06	4.25	6.06	8.00	3.00
MC2812ATZ-LC2812ATZ	13.78	7.00	5.50	.62	.56	1.88	2.75	14.00	13.94	3.38	4.75	6.75	9.19	3.50

FRAME	C(7)	B	BS	2F	DRIVE END SHAFT AND KEY							OPPOSITE DRIVE END SHAFT AND KEYS					WT. LBS.		
					N	N-W	U(2)	V	R(2)	SO	LGTH	FN	FN-FV	FR(2)	FV	FR(2)		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	315
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	340
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	370
SC2512ATZ	31.69	25.06	12.06	20.00	4.50	4.25	2.125	4.00	1.845	.500	3.00	4.00	3.75	1.875	3.50	1.591	.500	2.50	525
MC2512ATZ	33.19	26.56	13.56	20.00	4.50	4.25	2.125	4.00	1.845	.500	3.00	4.00	3.75	1.875	3.50	1.591	.500	2.50	540
LC2512ATZ	34.69	28.06	15.06	20.00	4.50	4.25	2.125	4.00	1.845	.500	3.00	4.00	3.75	1.875	3.50	1.591	.500	2.50	580
MC2812ATZ	37.38	29.94	14.25	22.00	5.00	4.75	2.375	4.50	2.021	.625	3.50	4.50	4.25	2.125	4.00	1.845	.500	3.00	775
LC2812ATZ	39.62	32.19	16.50	22.00	5.00	4.75	2.375	4.50	2.021	.625	3.50	4.50	4.25	2.125	4.00	1.845	.500	3.00	850

- (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 "V" VARY---.000 ---.001
 - (3) "R" AND "F" VARY---.000 ---.015
 - (4) TERMINAL BOX VARIES WITH N.P. FOR DIMENSIONS "AA", "AB", "AC", "AF", "X" AND "Y". REFER TO BOX D/S. CSTR. 609950-1. *APP. 609950-2. MILL. 609950-3
 - (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 DFP, 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, W-4, V-5, V-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.

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

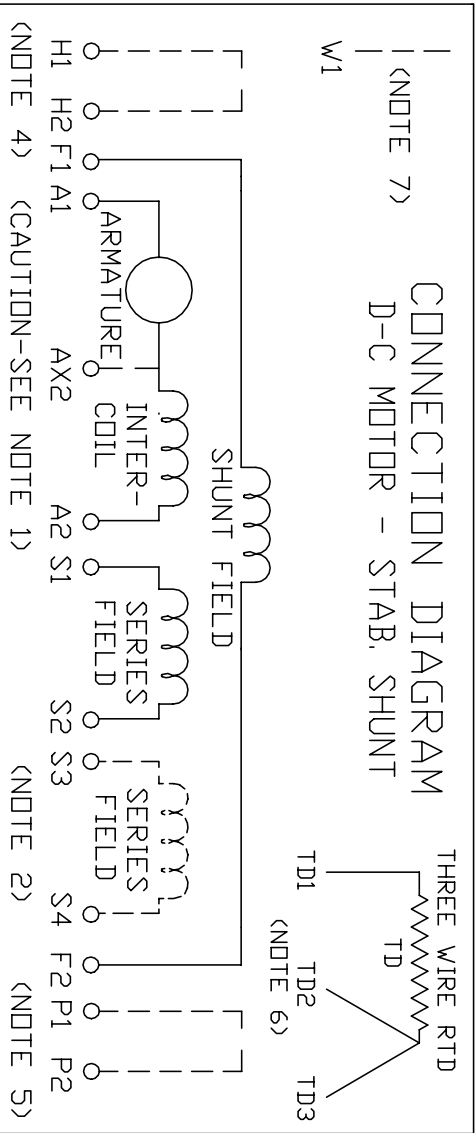
REV. DESC: LOADED TO BUS	VERSION: 00	TDR: 00000577407
REV. LTR: -	REVISED: 10.21.19 01/26/2011	BY: RGGBG
FILE: \RGG\00015\543		
MTL: -		

BALDOR

DIMENSION DRAWING, SC2113ATZ - LC2812ATZ, DPP, TENV, FOOT MTG

SH 1 of 1

100-056609



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 RTDS, 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.

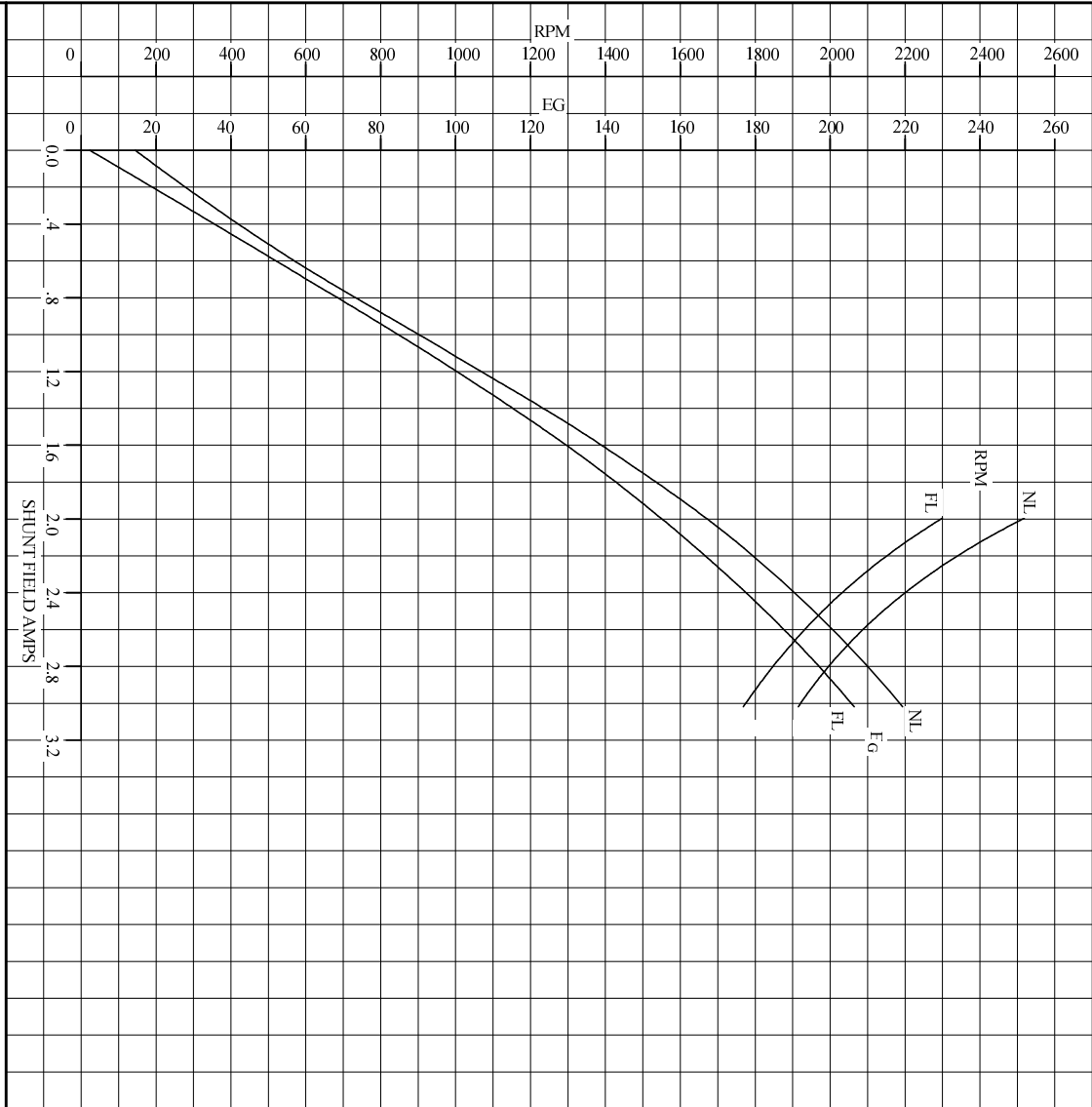
CUSTOMER _____ RELIANCE
ORDER NO. _____ S.D. NO. _____

<p>RELIANCE ELECTRIC</p> <p>CLEVELAND, OHIO 44117 U.S.A.</p>	<p>Rev. by <u>N.L. EVANS</u> Ck. by <u>N. JESCHKE</u> App. by <u>E. J. HINER</u> DATE <u>5-5-69</u></p>
<p>CONNECTION DIAGRAM</p> <p>406770-1</p> <p>ORIGINAL AT RCC</p>	

C/R 290048, 354478, 354480

REL. S.O.	FRAME	RATING	RPM	ARM. VOLTS	ARM. AMPS
	LC2113AT	20.0HP	1750	240	74.0
WINDING TYPE					
S.F.	ENCL.	AMB °C/INSUL	DUTY	FIELD VOLTS	
1.0	DPG	40/F	CONT	150	
STAB. SHUNT					
POWER CODE					
TYPE	WK ² (LB-FT ²)	HOT ARM. CIR. RES.	FLD. AMPS@25 °C	HOT FIELD RES	
C	TR	2.868	.311	4.24	49.6
ARM. CIR. IND. (mh)					
FIELD IND. (H)	COOLING AIR (CFM/IN H 20)	TURNS PER COIL SHUNT/SERIES	TEST DATE		
3.90	6.85	-/-	525/1	-	
LOAD PERFORMANCE					
LOAD	AMPERES	TORQUE IN LB.-FT.	OUTPUT IN HP	RPM	% EFFICIENCY
NO LOAD	2.0	0	0	1900	0
1/4	19	14.5	5.12	1854	77.1
2/4	37	30.6	10.6	1817	84.0
3/4	56	46.1	15.7	1788	84.7
4/4	74	60.9	20.5	1768	83.7
O.L.	111	87.7	29.1	1744	79.9
RPM VS. FIELD AMPS					
FIELD AMPS	RPM N.L.	RPM F.L.	Eg N.L. @ BASE SPEED	Eg F.L. @ BASE SPEED	
3.01	1900	1768	219	206	
2.76	2011	1862	208	195	
2.50	2137	1976	196	182	
2.25	2301	2118	182	169	
1.99	2518	2300	166	154	
REMARKS: TYPICAL DATA					
MAXIMUM SAFE SPEED = 4500 RPM					
			DR. BY <u>B. D. GRANT</u> CK. BY <u>B. D. GRANT</u> APP. BY <u>T. S. EVON</u> DATE <u>03/14/85</u>		D-C MOTOR PERFORMANCE DATA DG6068A ISSUE DATE 03/11/85

REL. S. O.	FRAME LC2113AT	RATING 20.0HP	BASE SPEED 1750	WINDING TYPE STAB SHUNT
S. F. 1.0	ENCL. DPG	AMB°C/INSUL 40/F	DUTY CONT	POWER CODE/FORM FACTOR C
COOLING AIR (CFM/IN H ² O) -/-	\bar{R} (hot) .119	T_b .0112	T_m .0323	BASIC RPM 2030
				MAX CONT RPM 2300
				WINDER RPM MAX. SAFE 4500
WINDING	VOLTS	RESISTANCE		CURRENT
		25°C	HOT	25°C
ARM CIRCUIT	240	.218	.312	-
SERIES SI-E2	-	.00436	.00613	-
SHUNT FI-E2	150	35.4	49.7	4.24
				3.02
				6.85
				H
				INDUCTANCE
				HOT
				74.0
				74.0
				3.90
				mH
				-
				1.00
				525
				TURNS PER COIL



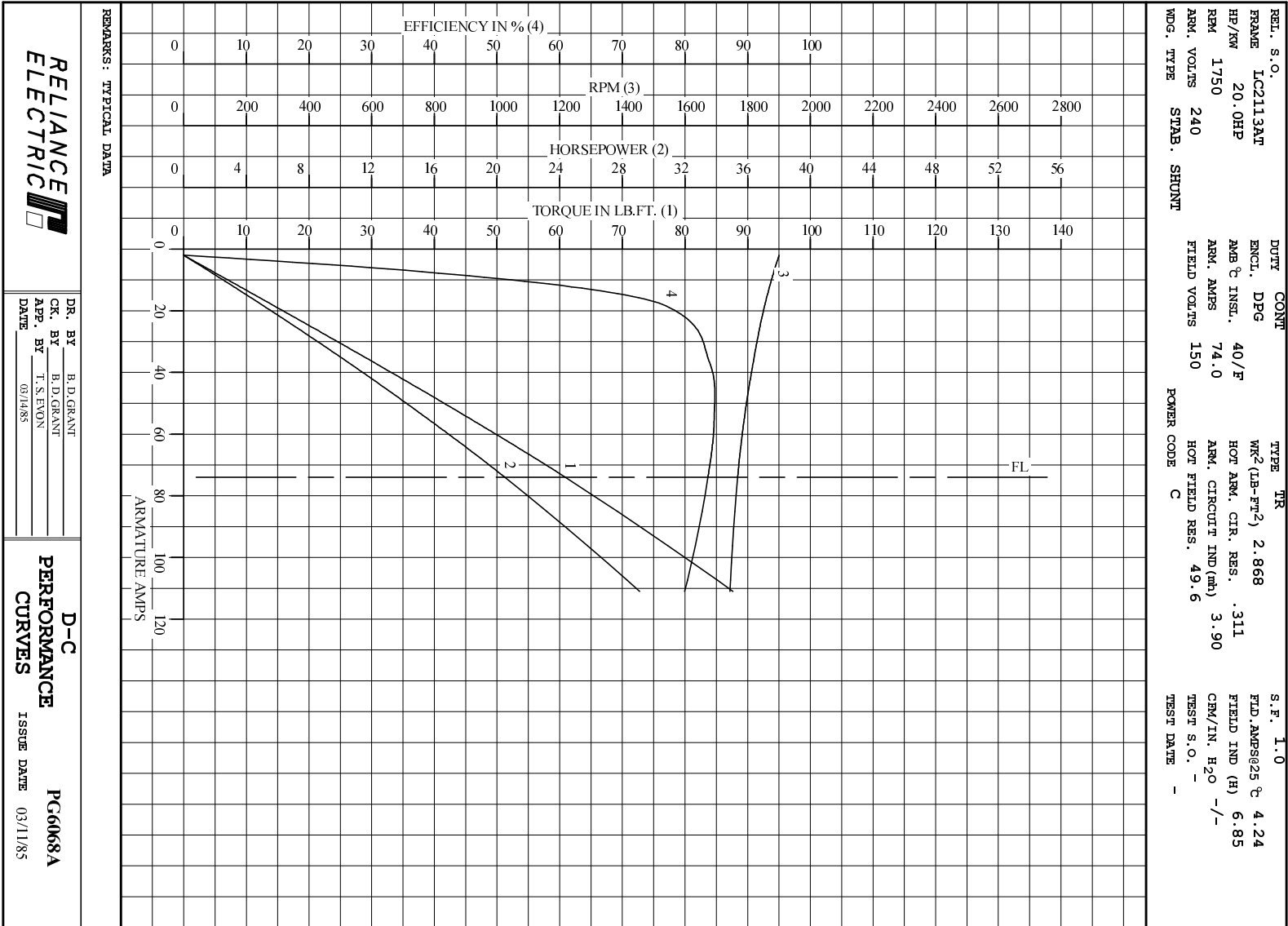
REMARKS: TYPICAL DATA
CURVES VALID FOR NAMEPLATE SPEED RANGE ONLY



DR. BY B. D. GRANT
CK. BY B. D. GRANT
APP. BY T. S. EVONN
DATE 03/11/85

D-C APPLICATION DATA

SC6068A
ISSUE DATE 03/11/85



DR. BY B.D. GRANT
 CK. BY B.D. GRANT
 APP. BY T.S. EVON
 DATE 03/14/85

D-C PERFORMANCE CURVES
 ISSUE DATE 03/11/85
PG6068A