

# **BALDOR® • RELIANCE**

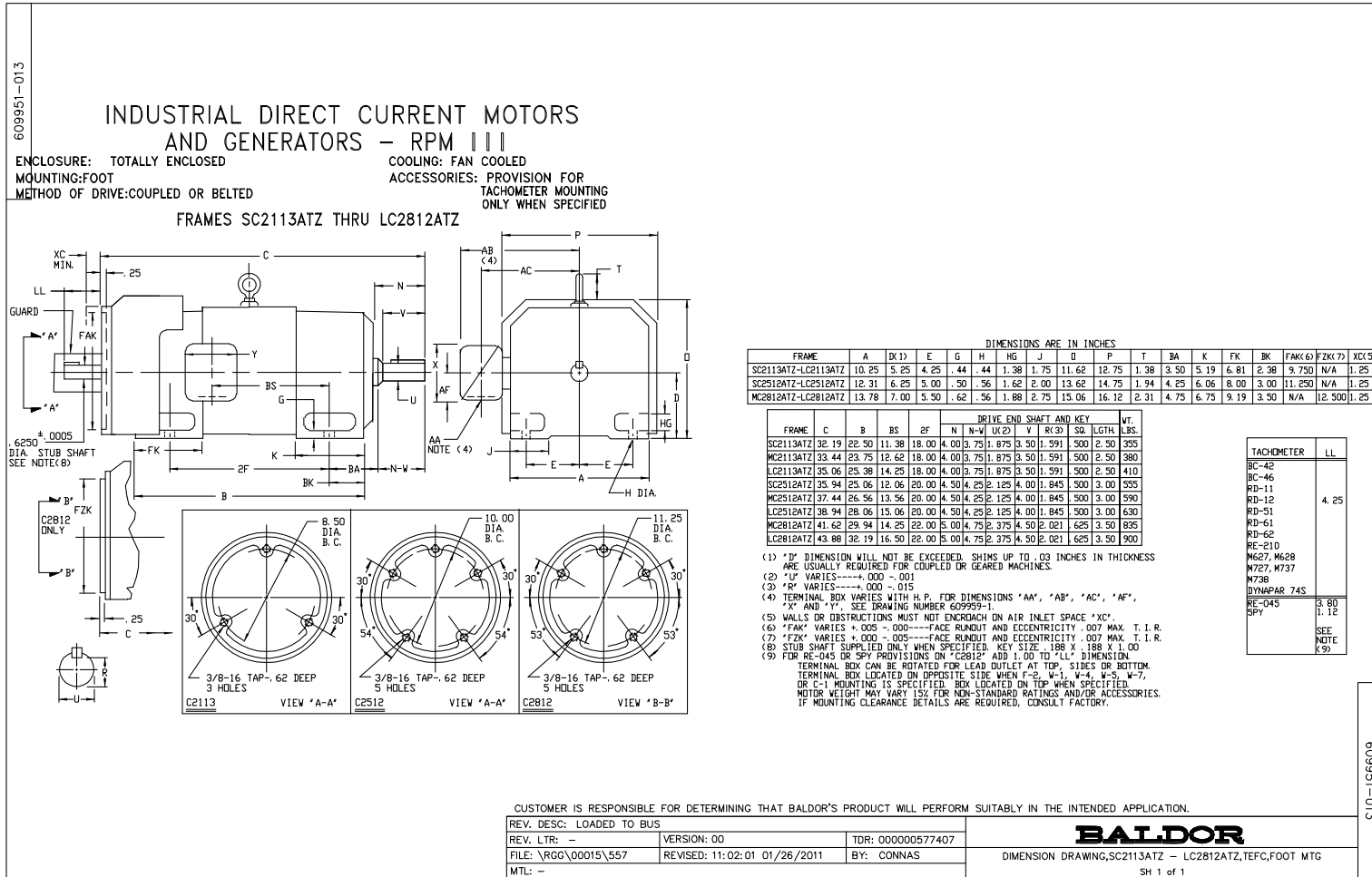
## **Product Information Packet**

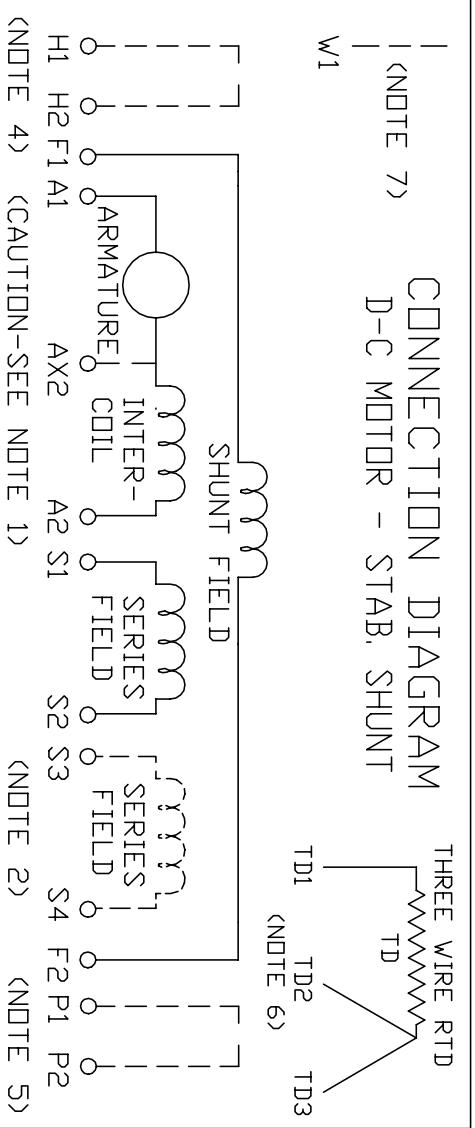
### **D2507R**

**7.50HP, 1750RPM, DC, 2113ATY, TEFC,**

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Part Detail			
Type:	DC	Prod. Type:	TR
Power Code:	C	Weight:	359
Frame Group:	SC 2113ATZ	Mounting Pos.:	F1
HP:	7.5	Enclosure:	TEFC
RPM:	1750/2300	Wound:	STAB SHUNT
Service Factor:	1.0	Arm V:	240
Arm A:	27.00	Field V:	150
Field A:	3.25	Field A Hot:	2.19/1.58
Insulation Class:	F	Ambient:	40
Duty:	CONT	DE Bearing:	50BC03J30X
ODE Bearing:	45BC02J30X	Brushes:	419904-51AB
Brush Qty.:			





ARMATURE AND FIELD EXTERNAL CONNECTIONS  
WARNING- SEE NOTE 8 FOR GROUNDING INSTRUCTIONS



ROTATION FACING COMMUTATOR END

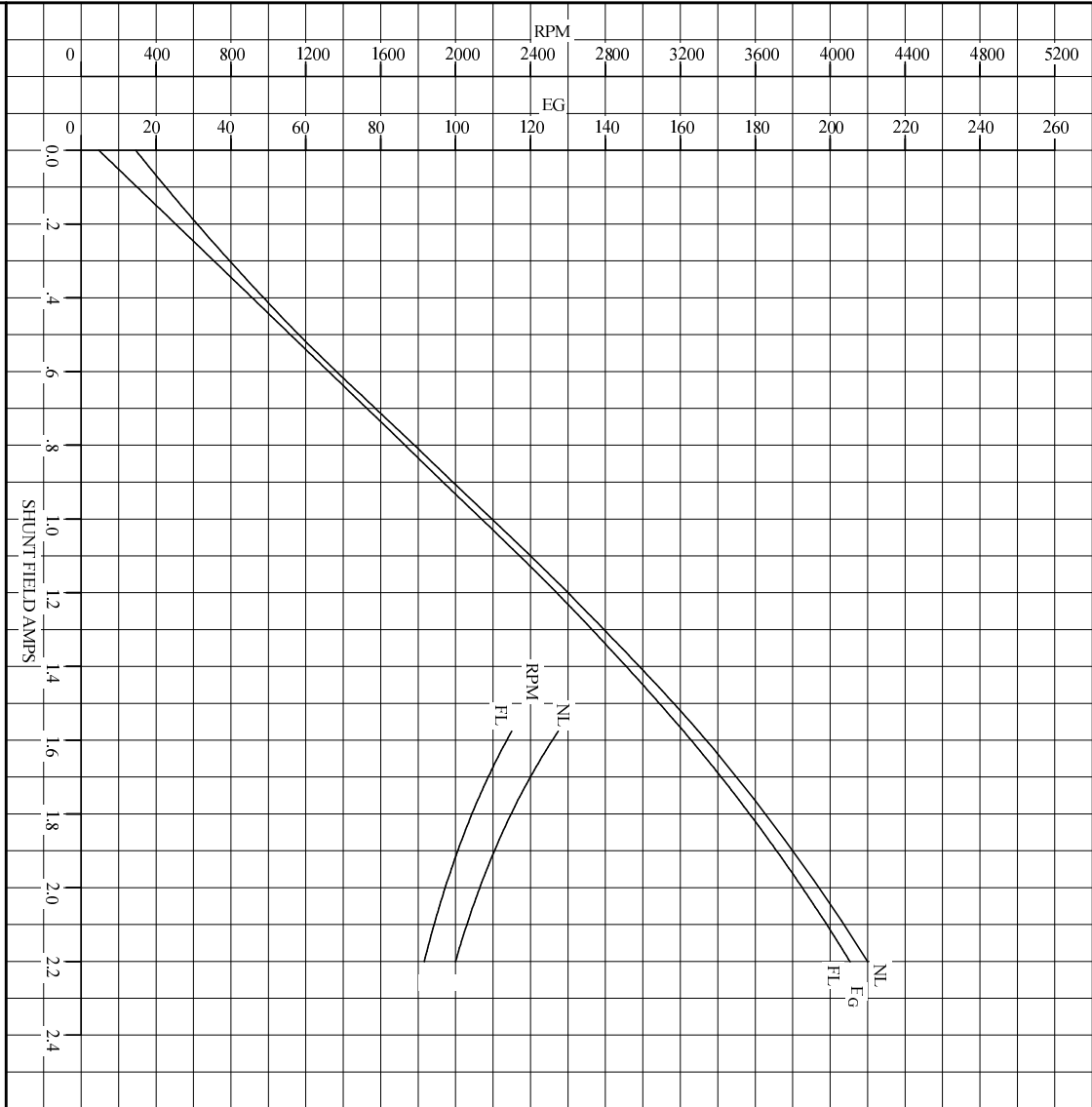
1. **CAUTION** — ARMATURE AND SERIES FIELD MAY HAVE MULTIPLE LEADS. CONNECT ALL LUGS WITH THE SAME MARKING TOGETHER.
2. OPTIONAL SERIES FIELD IS MARKED S3 AND S4. FOR CUMULATIVE SERIES FIELD, CONNECT S3 TO S2 AND CONNECT S4 TO NEGATIVE. FOR DIFFERENTIAL SERIES FIELD CONNECT S4 TO S2 AND S3 TO NEGATIVE.
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 \_\_\_\_\_ ORDER NO. \_\_\_\_\_ S.D. NO. \_\_\_\_\_  
 RELIANCE ELECTRIC  
 CLEVELAND, OHIO 44117 U.S.A.  
 DR. BY N.L. EVANS  
 CK. BY N. JESCHKE  
 APP. BY E. J. HINER  
 DATE 5-5-69  
 CONNECTION DIAGRAM 406770-1 ORIGINAL AT RCC

C/R 290048, 354478, 354480

REL. S.O.	FRAME	RATING	HP	ARM. VOLTS	ARM. AMPS
	SC2113AT	7.50HP	1750	240	27.0
WINDING TYPE		S.F.	ENCL.	AMB °C/INSUL	DUTY
STAB. SHUNT		1.0	TEFC	40/F	CONT
					FIELD VOLTS
					150
POWER CODE	TYPE	WK <sup>2</sup> (LB-FT <sup>2</sup> )	HOT ARM. CIR. RES.	FLD. AMPS@25 °C	HOT FIELD RES
C	TR	2.329	.679	3.26	68.1
ARM. CIR. IND. (mh)	FIELD IND. (H)	COOLING AIR (CFM/IN H 20)	TURNS PER COIL SHUNT/SERIES	TEST DATE	
5.93	8.06	-/-	700/2	-	
LOAD PERFORMANCE					
LOAD	AMPERES	TORQUE IN LB.-FT.	OUTPUT IN HP	HP	EFFICIENCY %
NO LOAD	1.5	0	0	1986	0
1/4	6.8	4.48	1.66	1947	62.3
2/4	14	10.2	3.69	1906	76.1
3/4	20	15.8	5.62	1867	80.1
4/4	27	21.4	7.46	1833	81.2
O.L.	41	32.2	10.8	1771	80.1
RPM VS. FIELD AMPS			Eg VS. FIELD AMPS		
FIELD AMPS	RPM N.L.	RPM F.L.	Eg N.L. @ BASE SPEED	Eg F.L. @ BASE SPEED	
	2.20	1985	210	205	
	2.04	2097	1917	200	195
	1.88	2217	2020	189	184
	1.73	2365	2145	177	173
	1.57	2549	2300	164	160
REMARKS: TYPICAL DATA					
MAXIMUM SAFE SPEED = 4500 RPM					
<b>RELIANCE ELECTRIC</b>		DR. BY B. GRANT CK. BY R. GRANT APP. BY T. EVON DATE 7-31-85		<b>D-C MOTOR PERFORMANCE DATA</b> D66313A ISSUE DATE 7-31-85	

REL. S. O.	FRAME SC2113AT	RATING 7.50HP	BASE SPEED 1750	WINDING TYPE STAB SHUNT
S. F.	ENCL. TEFC	AMB°C/INSUL 40/F	DUTY CONT	POWER CODE/FORM FACTOR C
1.0	TEFC	AMB°C/INSUL 40/F	DUTY CONT	BASIC RPM 2030
COOLING AIR (CFM/IN H <sup>2</sup> O) -/	$\bar{R}$ (hot) .0924	$T_b$ .00789	$T_m$ .0543	MAX CONT RPM 2300
WINDING	VOLTS	RESISTANCE		CURRENT
ARM CIRCUIT	240	25°C .468	HOT .679	25°C HOT
SERIES SI-E2	-	.0157	.0230	27.0 27.0
SHUNT FI-E2	150	46.0	68.2	2.20 2.20
				INDUCTANCE
				PER COIL
				TURN'S
				WINDER RPM 8.07
				MAX. SAFE 4500
				TR
				WK <sup>2</sup> (LB-FT <sup>2</sup> ) 2.329

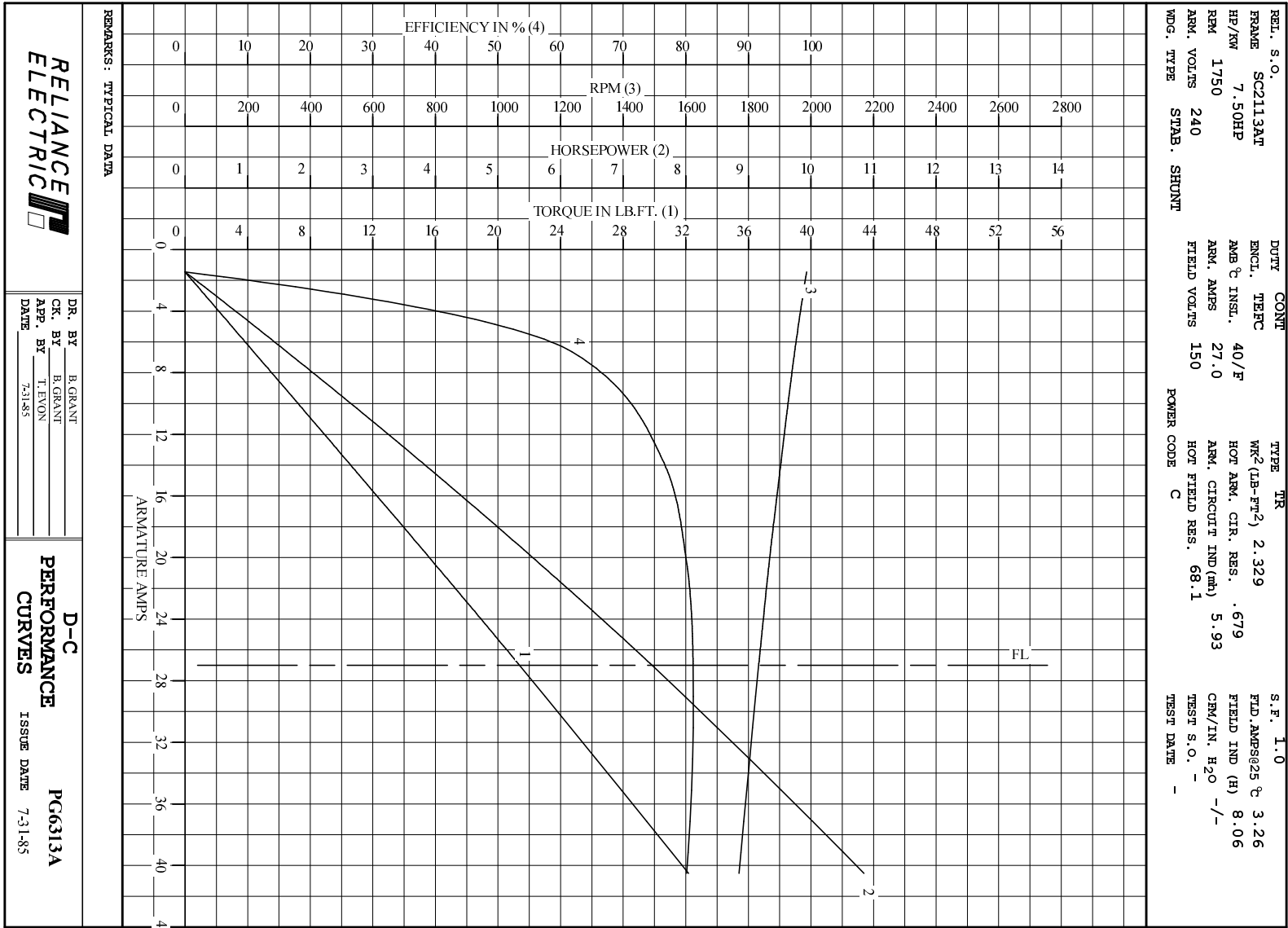


REMARKS: TYPICAL DATA  
CURVES VALID FOR NAMEPLATE SPEED RANGE ONLY



DR. BY B. GRANT  
CR. BY B. GRANT  
APP. BY T. EVONN  
DATE 7-31-85

D-C APPLICATION DATA  
SG6313A  
ISSUE DATE 7-31-85



**RELIANCE  
ELECTRIC**

DR. BY B. GRANT  
 CK. BY B. GRANT  
 APP. BY T. EVON  
 DATE 7-31-85

**D-C  
PERFORMANCE  
CURVES** PG6313A  
 ISSUE DATE 7-31-85