

# **BALDOR**® • *RELIANCE*

## **Product Information Packet**

### **D5003R**

**3HP, 1750RPM, DC, 1811ATZ, DPG,**

Copyright © All product information within this document is subject to Baldor Electric Company copyright © protection, unless otherwise noted.

Part Detail			
Type:	DC	Prod. Type:	TR
Power Code:	D	Weight:	197
Frame Group:	C 1811ATZ	Mounting Pos.:	F1
HP:	3	Enclosure:	DPG
RPM:	1750/2300	Wound:	STR. SHUNT
Service Factor:	1.0	Arm V:	500
Arm A:	5.20	Field V:	300
Field A:	.72	Field A Hot:	.57/.32
Insulation Class:	F	Ambient:	40
Duty:	CONT	DE Bearing:	40BC02J30X
ODE Bearing:	30BC02J30X	Brushes:	419904-51E
Brush Qty.:			

609980-001

## INDUSTRIAL DIRECT CURRENT MOTORS AND GENERATORS - RPM III

ENCLOSURE: DRIP-PROOF FULLY-GUARDED  
SPLASHPROOF, TOTALLY ENCLOSED

MOUNTING: FOOT  
METHOD OF DRIVE: COUPLED OR BELTED

COOLING: SELF-VENTILATED  
NON-VENTILATED

ACCESSORIES: PROVISION FOR  
TACHOMETER MOUNTING  
ONLY WHEN SPECIFIED

### FRAMES C180ATZ

DIMENSIONS ARE IN INCHES

FRAME	A	BK (1)	E	G	H	J	D	P	T	BA	K	FK	BK
C1811ATZ-C1812ATZ	9.00	4.50	3.75	.31	1.44	1.50	8.88	8.75	1.88	2.75	4.38	4.38	1.50

FRAME	C (8)	B	BS	2F	N	N-W	LK (2)	V	R (4)	SD	LGTH	FN	FN-FW	FUC (2)	FV	FR (4)	SD	LGTH	LBS.
C1811ATZ	23.94	14.00	11.00	12.50	3.00	2.75	1.3750	2.50	1.201	.312	1.75	2.44	2.25	1.1250	2.00	.986	2.50	1.38	175
C1812ATZ	25.44	15.50	12.50	14.00	3.00	2.75	1.3750	2.50	1.201	.312	1.75	2.44	2.25	1.1250	2.00	.986	2.50	1.38	175

FRAME	MAX AMPS	AA (5)	AB	AC	AF	X	Y	PART NUMBER	ONE SIZE LARGER PART NUMBER
C180ATZ	40	3/4 & 1"	7.31	5.75	1.94	4.38	5.00	705028-1-R	1-1/4 & 1-1/2
	96	1-1/4 & 1-1/2	8.31	6.31	2.50	5.00	6.12	705029-1-R	2" & 2-1/2"

FRAME	MAX AMPS	AA (6)	AB	AC	AF	X	Y	PART NUMBER	ONE SIZE LARGER PART NUMBER
C180ATZ	18	3/4	9.38	7.38	2.50	5.00	5.75	705028-2-S	1
	40	1	9.38	7.38	2.50	5.00	5.75	705028-2-T	1-1/2
	96	1-1/2	10.31	7.88	3.00	6.00	7.00	705029-2-R	2

3/8-16 TAP  
75 DEEP  
4 HOLES

4.500 +.000  
-.003  
DIA.

45°

5.88  
DIA.  
B.C.

MOTOR SHAFT  
TAPPED FOR SCREW  
IN STUB SHAFT

2.25

.188 X .188  
X 1.00 KEY

.6250 ±.0005  
DIA.

STUB SHAFT SUPPLIED  
ONLY WHEN SPECIFIED

GUARD

AA SEE NOTE (3)

GUARD

(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 'FU' VARY +.0000 - .0005

(3) TERMINAL BOX CAN BE ROTATED FOR LEAD OUTLET AT TOP, SIDES OR BOTTOM.

FOR 'X/Y' TERMINAL BOX DIMENSIONS SEE 609989-1 FOR W/U TYPE TERMINAL BOX DIMENSIONS SEE 609989-2

(4) 'R' AND 'FR' VARY +.000, -.015

(5) AA CONDUIT TERMINAL BOX PROVIDED WITH DOUBLE KNOCKOUT.

(6) AA PIPE TAP

(7) OPPOSITE DRIVE END SHAFT SUPPLIED ONLY WHEN SPECIFIED.

(8) WHEN THE MOTOR APPLICATION DOES NOT REQUIRE THE USE OF OPP. DRIVE END, ADD .25 TO 'C' DIM. FOR BRACKET COVER.

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.

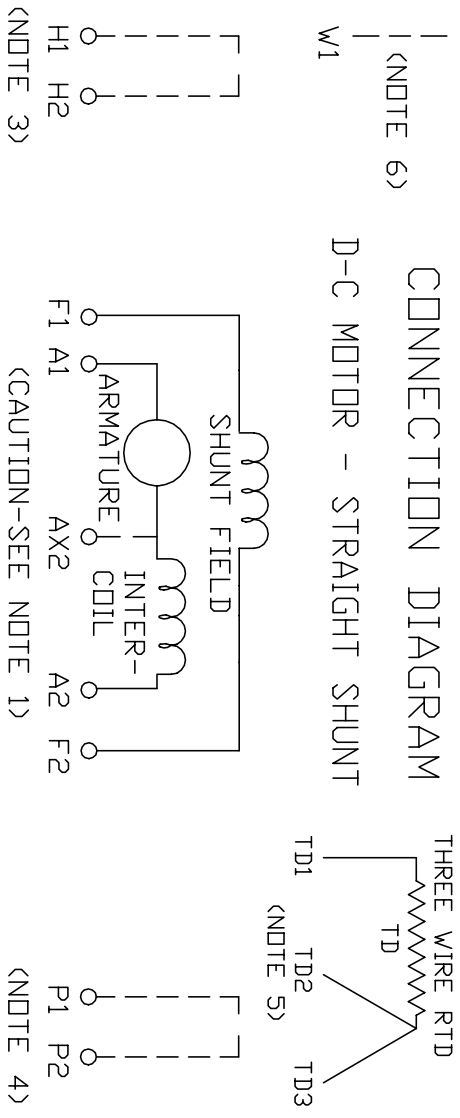
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION.

REV. DESC: LOADED TO BUS	VERSION: 00	TDR: 000000577407
REV. LTR: -	REVISED: 01:47:13 01/26/2011	BY: CONNAS
MTL: -		

DIMENSION DRAWING, C180ATZ, DPP, TENV, FOOT MTG.

SH 1 of 1

100-066600

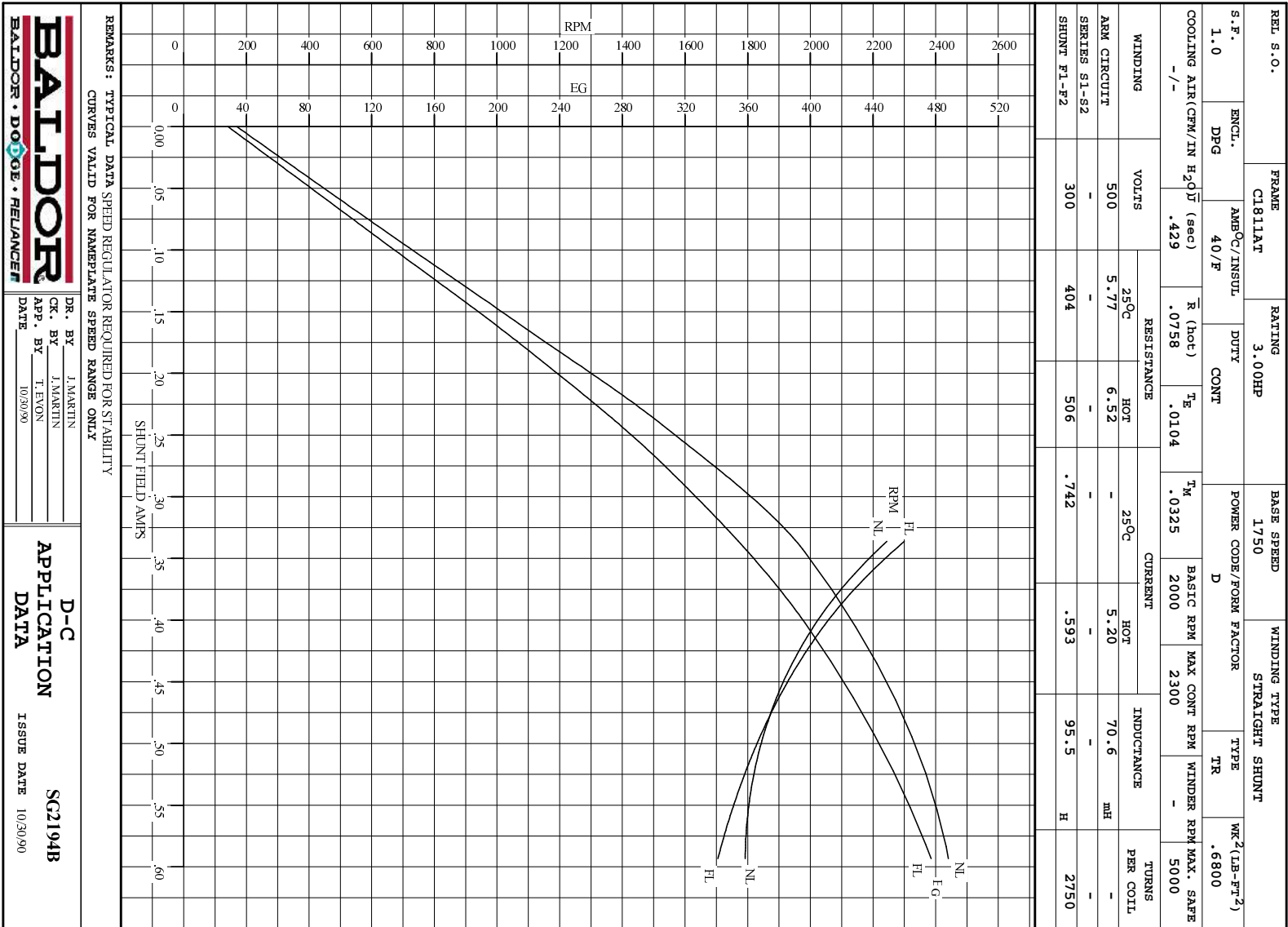


1. **CAUTION** — ARMATURE MAY HAVE MULTIPLE LEADS. CONNECT ALL LUGS WITH THE SAME MARKING TOGETHER.
2. OPTIONAL CONTROL SIGNAL LEAD IS MARKED AX2. ALWAYS TAKE INTERPOLE DROP BETWEEN A2 AND AX2. NOTE: NEMA DESIGNATION FOR AX2 IS LETTER C.
3. SPACE HEATERS, WHEN PROVIDED, WILL HAVE LEADS MARKED H1 AND 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 LEAD MARKED W1.
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.O. NO. \_\_\_\_\_

<p style="font-size: small; margin: 0;">RELIANCE ELECTRIC CLEVELAND, OHIO 44117 U.S.A.</p>	<p style="font-size: x-small; margin: 0;">REV. BY N.L. EVANS                  CK. BY N. JESCHKE                  APP. BY E.J. HINER                  DATE 5-5-69</p>
<p style="font-size: x-large; margin: 0;"><b>406770-6</b></p> <p style="font-size: small; margin: 0;">CONNECTION DIAGRAM</p>	<p style="font-size: small; margin: 0;">ORIGINAL AT RCC</p>

C/R 244907, 290048, 354478, 354480




REL S.O.	FRAME	RATING	RPM	ARM. VOLTS	ARM. AMPS
	C1811AT	3.00HP	1750	500	5.20
WINDING TYPE	S.F.	ENCL.	AMB °C/INSUL	DUTY	FIELD VOLTS
STRAIGHT SHUNT	1.0	DRG	40/F	CONT	300
POWER CODE	TYPE	WK <sup>2</sup> (LB-FT <sup>2</sup> )	HOT ARM.CIR.RES.	FLD. AMPS@25 °C	HOT FIELD RES
D	TR	.6800	6.52	.741	505

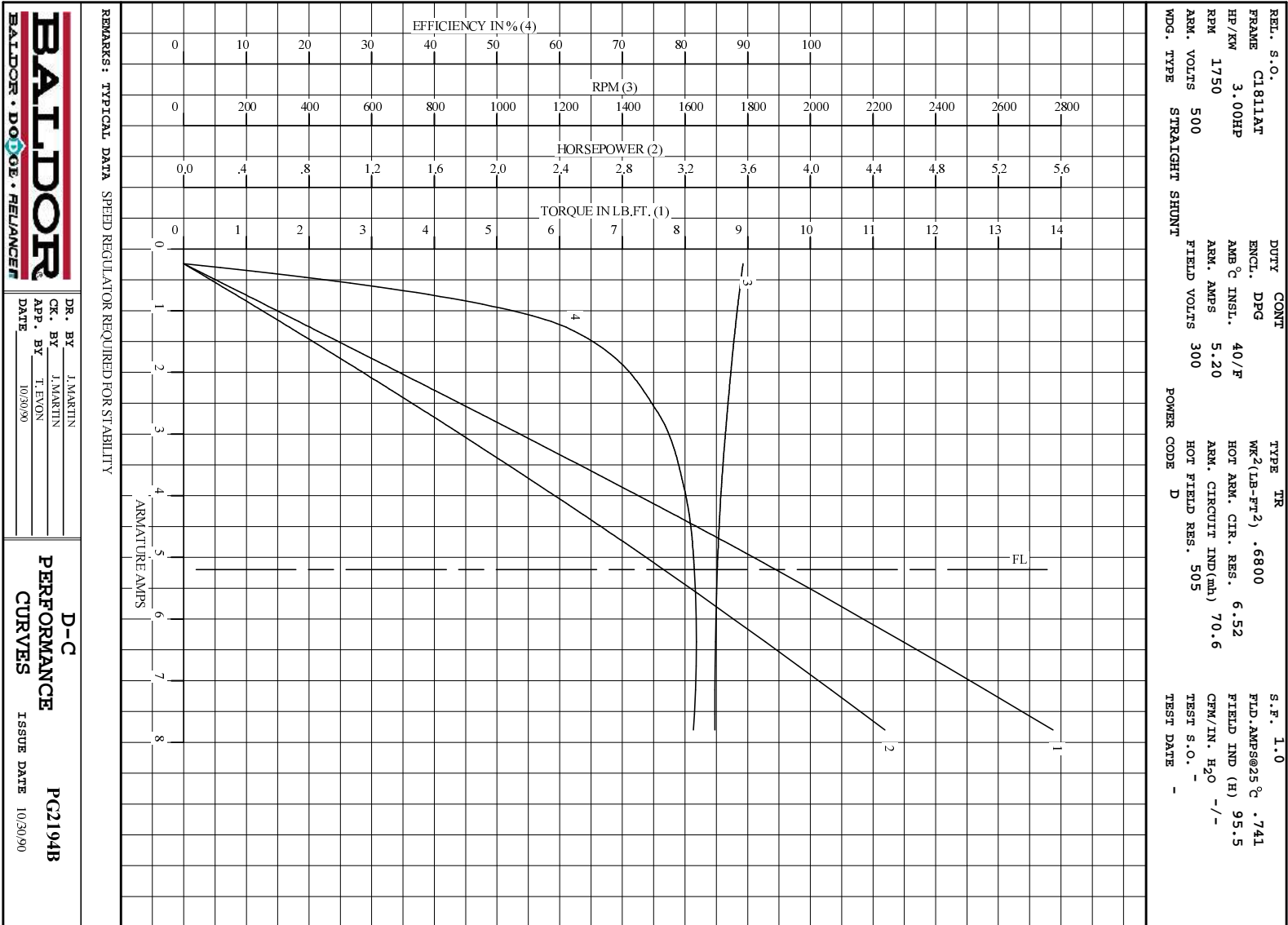
ARM. CIR. IND. (mh)	FIELD IND. (H)	COOLING AIR(CFM/IN H 20)	TURNS PER COIL SHUNT/SERIES	TEST DATE
70.6	95.5	-/-	2750/.00000	

LOAD PERFORMANCE					
LOAD	AMPERES	TORQUE IN LB.-FT.	OUTPUT IN HP	RPM	% EFFICIENCY
NO LOAD	.24	0	0	1785	0
1/4	1.3	2.08	.696	1760	61.7
2/4	2.6	4.60	1.52	1736	75.3
3/4	3.9	7.07	2.31	1716	79.9
4/4	5.2	9.45	3.07	1703	81.5
O.L.	7.8	13.9	4.48	1695	81.3

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
.593	1785	1703	488	477
.529	1815	1784	479	455
.464	1889	1895	460	428
.400	2023	2056	431	395
.336	2244	2300	389	354

REMARKS: TYPICAL DATA  
 MAXIMUM SAFE SPEED = 5000 RPM  
 SPEED REGULATOR REQUIRED FOR STABILITY

	DR. BY J. MARTIN	<b>D-C MOTOR PERFORMANCE DATA</b> DG2194B ISSUE DATE 10/30/90
	CK. BY T. EVON	
	APP. BY T. EVON DATE 10/30/90	



DR. BY J.MARTIN  
 CK. BY J.MARTIN  
 APP. BY T. ENON  
 DATE 10/30/90

**D-C**  
**PERFORMANCE**  
**CURVES** ISSUE DATE 10/30/90  
**PC2194B**