ABB BALDOR RELIANCE

Customer information packet

CD1805R

5HP, 1750RPM, DC, 1810ATCZ, DPG,

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Specifications

Armature Voltage	180 V
Base Speed	1750 rpm
Enclosure	DP
Field Voltage	200 V
Frame	DC1810ATCZ
Output Power	5.000 HP
Agency Approvals	CCSA US
Ambient Temperature	40 °C
Armature Current	24.0 a
Drip Cover	No Drip Cover
Duty Rating	CONT
Feedback Device	NO FEEDBACK
Field Winding Type	STR. SHUNT
Frame Prefix	DC
Heater Indicator	No Heater
Insulation Class	F
Lifting Lugs	Standard Lifting Lugs
Motor Standards	NEMA
Mounting Arrangement	F3
Overall Length	21.94 IN
Service Factor	1.00
Shaft Diameter	1.125 IN
Shaft Ground Indicator	No Shaft Grounding
Shaft Slinger Indicator	No Slinger
Thermal Device - Bearing	None

Part Detail

Revision	-
Type	DC
Mech. spec.	
Base	
Status	PRD/A
Elec. spec.	G4611A
Layout	609980-503
Eff. date	12-13-2019
CD Diagram	406770-007
Poles	00
Leads	
Proprietary	False
Created date	12-12-2019

Nameplate

000613006HP								
CAT.NO.	CD1805R	**SPEC NO.**	T18S1105					
FR	DC1810ATCZ	**HP**	5	**DUTY**	CONT			
ENCL.	DP	**RPM**	1750	**S.F.**	1.0			
ENCL MOD	GUARDED	**VOLTS**	180	**INSUL**	F			
MAX SAFE SPEED	04500	**AMPS**	24.00	**AMB.**	40			
	FIELD DATA	**SER.NO.**						
WINDING	STR. SHUNT	**POWER CODE**	2/2-230-60-0					
VOLTS	200/100	**D.E. BRG.**	30BC02JPP30A					
MAX AMPS @ 25 C	1.68	**O.D.E. BRG.**	30BC02JPG30A					
HOT AMPS	1.30	**MIN. AMB.**	0	**TYPE**	TR			
	BRUSH:419904050A							
	FLD. DATA FOR HIGH VOLTS							

REL. S.O.	FRAME	RATING	RPM	ARM. VOLTS	ARM. AMPS
	DC1810ATZ	5.00HP	1750	180	24.0

WINDING TYPE	S.F.	ENCL.	AMB°C/INSUL	DUTY	FIELD VOLTS
STRAIGHT SHUNT	1.0	DPG	40/F	CONT	200

POWER CODE	TYPE	WK²(LB-FT²)	HOT ARM. CIR. RES.	FLD. AMPS@25°C	HOT FIELD RES
2/2 230-60-0	TR	.6800	.591	1.67	153

ARM. CIR. IND. (mh)	FIELD IND. (H)	COOLING AIR (CFM/IN H_2O)	TURNS PER COIL SHUNT/SERIES	TEST DATE
8.76	14.1	-/-	1600/0	-

LOAD PERFORMANCE

LOAD	AMPERES	TORQUE IN LB.-FT.	OUTPUT IN HP	RPM	PERCENT EFFICIENCY
NO LOAD	.77	0	0	1950	0
1/4	6.0	3.34	1.22	1921	65.6
2/4	12	7.13	2.56	1887	75.3
3/4	18	10.8	3.83	1860	77.5
4/4	24	14.4	5.03	1841	77.7
O.L.	36	20.6	7.22	1836	76.5

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
1.30	1950	1840	160	155
1.21	1960	1870	156	152
1.13	1970	1920	153	148
1.05	1990	1970	149	144
.977	2030	2050	146	139

REMARKS: TYPICAL DATA MAXIMUM SAFE SPEED = 4500 RPM

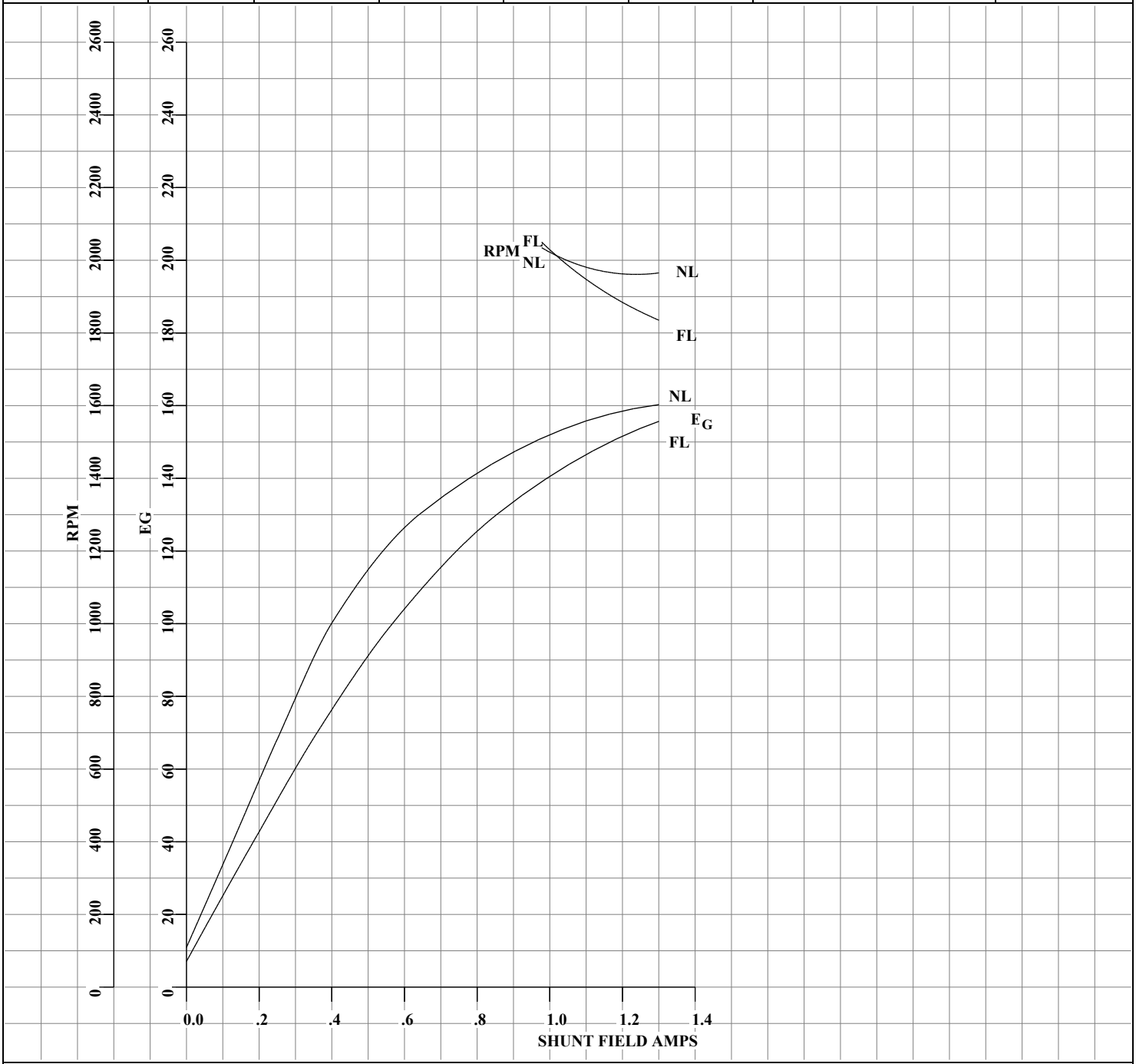
ABB	DRAWN BY: R.ERLACHER CHECKED BY: R.ERLACHER APPROVED BY: T.S.EVON DATE: 08-05-88	DC MOTOR PERFORMANCE DATA	DG4611A DATE ISSUED 03-10-92

FRAME	RATING	BASE SPEED	WINDING TYPE
DC1810ATZ	5.00HP	1750	STRAIGHT SHUNT

S.F.	ENCL.	AMB°C/INSUL	DUTY	POWER CODE/FORM FACTOR	TYPE	WK²(LB-FT²)
1.0	DPG	40/F	CONT	2/2 230-60-0	TR	.6800

COOLING AIR (CFM/IN H_2O)	J (sec)	R (hot)	T E	T M	BASIC RPM	MAX CONT	WINDER RPM	MAX. SAFE SPEED
-/-	.257	.102	.0125	.0264	1950	2050	-	4500

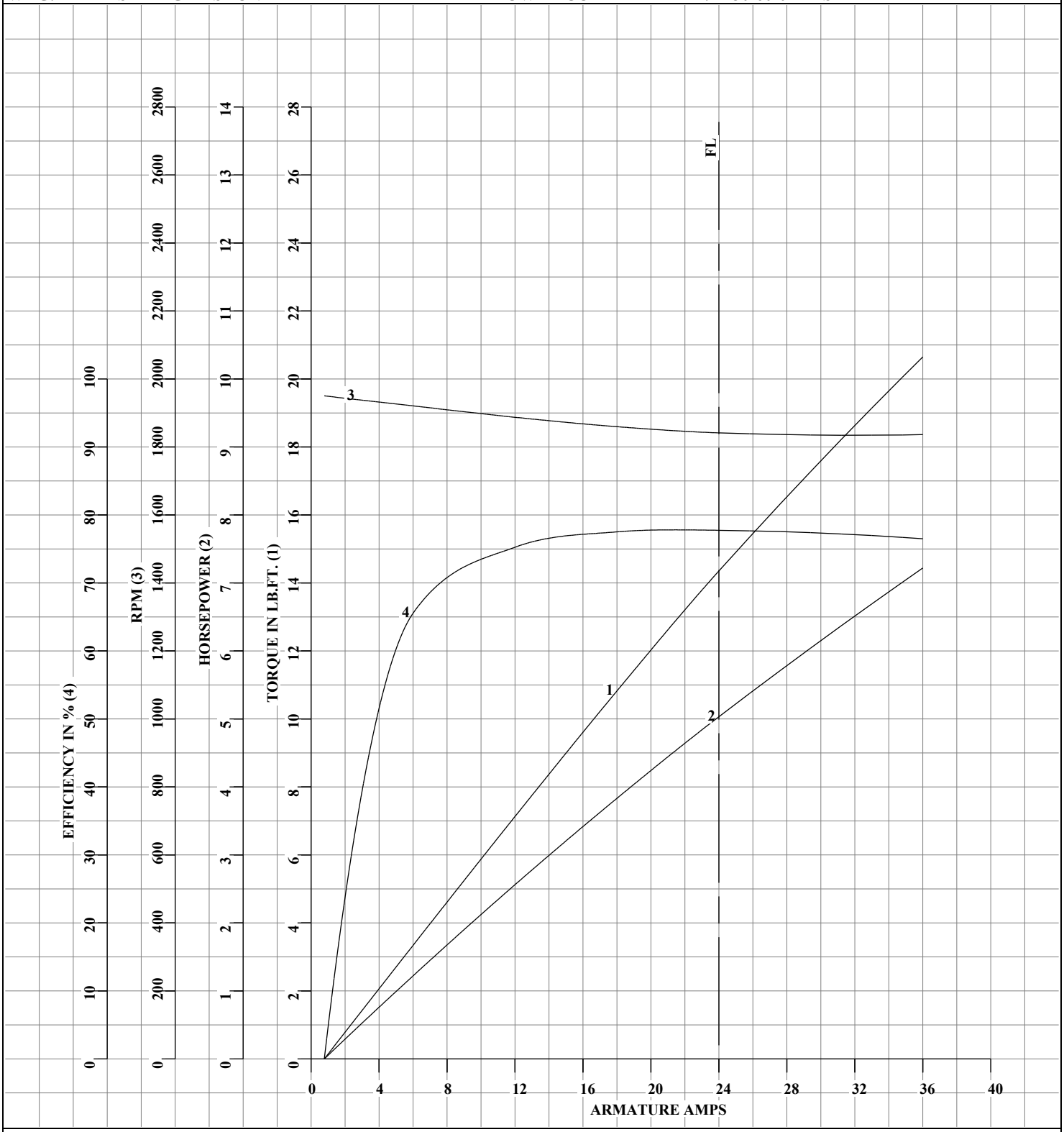
WINDING	VOLTS	RESISTANCE		CURRENT		INDUCTANCE	TURNS PER C
		25°C	HOT	25°C	HOT		
ARM CIRCUIT	180	.461	.592	-	24.0	8.77	-
SERIES S1-S2	-	-	-	-	-	-	-
SHUNT F1-F2	200	119	154	1.68	1.30	14.1	1600



REMARKS: TYPICAL DATACURVES VALID FOR NAMEPLATE SPEED RANGE ONLY

ABB	DRAWN BY: R.ERLACHER CHECKED BY: R.ERLACHER APPROVED BY: T.S.EVON DATE: 08-05-88	DC MOTOR APPLICATION DATA	G4611A ISSUE DATE 03-10-92

FRAME	DC1810ATZ	DUTY	CONT	TYPE	TR	S.F.	1.0
HP/KW	5.00HP	ENCL.	DPG	WK²(LB-FT²)	.6800	FLD. AMPS @25°C	1.67
RPM	1750	AMB.°C INSUL	40/F	HOT ARM. CIR. RES.	.591	FIELD IND (H)	14.1
ARM. VOLT	180	ARM. AMPS	24.0	ARM. CIRCUIT IND(mh)	8.76	CFM/IN. H_2O	-/-
WDG. TYPE	STRAIGHT SHUNT	FIELD VOLTS	200	HOT FIELD RES.	153	TEST S.O.	-
				POWER CODE	2/2 230-60-0	TEST DATE	-



REMARKS: TYPICAL DATACURVES VALID FOR NAMEPLATE SPEED RANGE ONLY

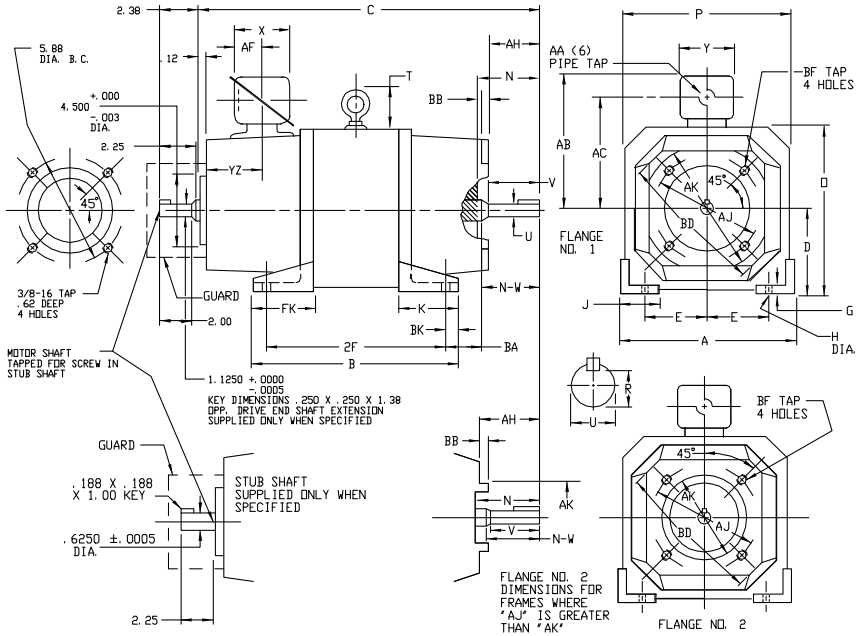
ABB	DRAWN BY: R.ERLACHER CHECKED BY: R.ERLACHER APPROVED BY: T.S.EVON DATE: 08-05-88	DC MOTOR PERFORMANCE DATA	G4611A DATE ISSUED 03-10-92

609980-503

INDUSTRIAL DIRECT CURRENT MOTORS AND GENERATORS – RPM III

ENCLOSURE:DRIP-PROOF FULLY-GUARDED, SPLASHPROOF, TOTALLY ENCLOSED
MOUNTING:FOOT,"C" FACE
METHOD OF DRIVE:COUPLED OR BELTED
COOLING:SELF-VENTILATED NON-VENTILATED
ACCESSORIES:PROVISIONS FOR TACHOMETER MOUNTING ONLY WHEN SPECIFIED

DC180ATY–DC180ATCZ



DIMENSIONS ARE IN INCHES

FRAME	FLANGE	A	D(1)	E	G	H	J	K	FK	BK	D	P	T	BA	BB(7)	BD	BF TAP	BF TAP *DEPTH*	AJ	AK(4)	A.C. SHAFT EXT. REF.
DC189ATY	NO. 2	9.00	4.50	3.75	.31	.44	1.50	3.56	3.56	.50	8.88	8.75	1.88	2.75	.12	8.75	3/8-16	.62	5.88	4.500	140TC EXT.
DC189ATCZ	NO. 1	9.00	4.50	3.75	.31	.44	1.50	3.56	3.56	.50	8.88	8.75	1.88	2.75	.25	8.75	1/2-13	.88	7.25	8.500	180TC EXT.
DC1810ATY	NO. 2	9.00	4.50	3.75	.31	.44	1.50	3.56	3.56	.50	8.88	8.75	1.88	2.75	.12	8.75	3/8-16	.62	5.88	4.500	140TC EXT.
DC1810ATCZ	NO. 1	9.00	4.50	3.75	.31	.44	1.50	3.56	3.56	.50	8.88	8.75	1.88	2.75	.25	8.75	1/2-13	.88	7.25	8.500	180TC EXT.
DC1811ATY	NO. 2	9.00	4.50	3.75	.31	.44	1.50	3.56	3.56	.50	8.88	8.75	1.88	2.75	.12	8.75	3/8-16	.62	5.88	4.500	140TC EXT.
DC1811ATCZ	NO. 1	9.00	4.50	3.75	.31	.44	1.50	3.56	3.56	.50	8.88	8.75	1.88	2.75	.25	8.75	1/2-13	.88	7.25	8.500	180TC EXT.

FRAME	FLANGE	C(5)	B	2F	DRIVE END SHAFT AND KEY							TERMINAL BOX DIMENSIONS							WT.
					N	N-W	UX(2)	V	AH	R(3)	SQ.	LGTH	AA	AB	AC	AF	X	Y	YZ	LBS.
DC189ATY	NO. 2	18.81	11.62	10.00	2.44	2.25	.8750	2.00	2.12	.771	.188	1.38	1.00	7.30	6.11	2.19	4.38	3.75	3.25	130
DC189ATCZ	NO. 1	19.44	11.62	10.00	3.06	2.88	1.1250	2.62	2.62	.986	.250	1.81	1.00	7.30	6.11	2.19	4.38	3.75	3.25	130
DC1810ATY	NO. 2	19.56	12.38	11.00	2.44	2.25	.8750	2.00	2.12	.771	.188	1.38	1.00	7.30	6.11	2.19	4.38	3.75	3.25	155
DC1810ATCZ	NO. 1	20.19	12.38	11.00	3.06	2.88	1.1250	2.62	2.62	.986	.250	1.81	1.00	7.30	6.11	2.19	4.38	3.75	3.25	155
DC1811ATY	NO. 2	21.06	13.88	12.50	2.44	2.25	.8750	2.00	2.12	.771	.188	1.38	1.00	7.30	6.11	2.19	4.38	3.75	3.25	185
DC1811ATCZ	NO. 1	21.69	13.88	12.50	3.06	2.88	1.1250	2.62	2.62	.986	.250	1.81	1.00	7.30	6.11	2.19	4.38	3.75	3.25	185

(1) 'D' DIMENSION WILL NOT BE EXCEEDED. SHIMS UP TO .06 INCHES IN THICKNESS ARE USUALLY REQUIRED FOR COUPLED OR GEARED MACHINES. TOLERANCE +.00/-.06 .
(2) 'U' VARIES +.0000, -.0005.
(3) 'R' VARIES +.000, -.015.
(4) 'AK' VARIES +.000, -.003. FACE RUNOUT AND ECCENTRICITY .004 MAX. T.I.R.
(5) WHEN THE MOTOR APPLICATION DOES NOT REQUIRE THE USE OF DPP. DRIVE END, ADD .25 TO 'C' DIM. FOR BRACKET COVER.
(6) TERMINAL BOX CAN BE ROTATED TO REPOSITION CONDUIT CONNECTION. IF MOUNTING CLEARANCE DETAILS ARE REQUIRED CONSULT FACTORY.
(7) 'BB' OF .25 IS A MINIMUM VALUE.

MOTOR WEIGHT MAY VARY 15% FOR NON-STANDARD RATINGS AND/OR ACCESSORIES.

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

REV. DESC: REVISE "D" DIM TOLERANCE		
REV. LTR: D	VERSION: 04	TDR: 000001148815
FILE: \RGG\00030\373	REVISED: 03:18:10 09/15/2020	BY: RGGNAS
MTL: –		

BALDOR - RELIANCE®

DIMENSION DRAWING,DC180ATY – DC180ATCZ,DPP,TENV,FOOT MTG.

SH 1 of 1

609980-503

406770-007

406770-007

CONNECTION DIAGRAM
D-C MOTOR - STRAIGHT SHUNT
DUAL VOLTAGE FIELD

ARMATURE AND FIELD EXTERNAL CONNECTIONS
WARNING- SEE NOTE 7 FOR GROUNDING INSTRUCTIONS

ROTATION FACING COMMUTATOR END

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 LEADS MARKED TD1, TD2, &TD3.
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. _____

REV. DESC: UPDATE LOGO AND TITLEBLOCK: LOADED TO BUS		
REV. LTR: –	VERSION: 00	TDR: 000000784225
FILE: \MGA\00001\391		REVISED: 02:50:46 02/01/2013
MTL: –		BY: MGHPC

BALDOR

D-C MOTOR CONNECTION DIAGRAM, STR. SHUNT, DUAL VOLTAGE FIELD

SH 1 of 1