ABB BALDOR RELIANCE

Customer information packet

D1802R

DC0189ATY, 2HP, 1750RPM, 180, 200, TENV, F3

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Specifications

Armature Voltage	180 V
Base Speed	1750 rpm
Enclosure	TENV
Field Voltage	200 V
Frame	DC0189ATY
Output Power	2.000 HP
Agency Approvals	CCSA US
Ambient Temperature	40 °C
Armature Current	9.5 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	21.19 IN
Service Factor	1.00
Shaft Diameter	0.875 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.	G4603A
Layout	609980-503
Eff. date	12-27-2019
CD Diagram	406770-007
Poles	00
Leads	
Proprietary	False
Created date	12-27-2019

Nameplate

000613006HP									
CAT.NO.	D1802R		**SPEC NO.**	T18S1117					
FR	DC0189ATY	**HP**	2		**DUTY**	CONT			
ENCL.	TENV	**RPM**	1750		**S.F.**	1.0			
ENCL MOD		**VOLTS**	180		**INSUL**	F			
MAX SAFE SPEED	04500	**AMPS**	9.50		**AMB.**	40			
	FIELD DATA	**SER.NO.**							
WINDING	STR. SHUNT	**POWER CODE**	2/2-230-60-0						
VOLTS	100/200	**D.E. BRG.**	30BC02JPP30A						
MAX AMPS @ 25 C	1.44/.72	**O.D.E. BRG.**	30BC02JPG30A						
HOT AMPS	1.02/.51	**MIN. AMB.**	0		**TYPE**	TR			
	BRUSH:419904050A								
	SPLASHPROOF								

ABB BALDOR RELIANCE

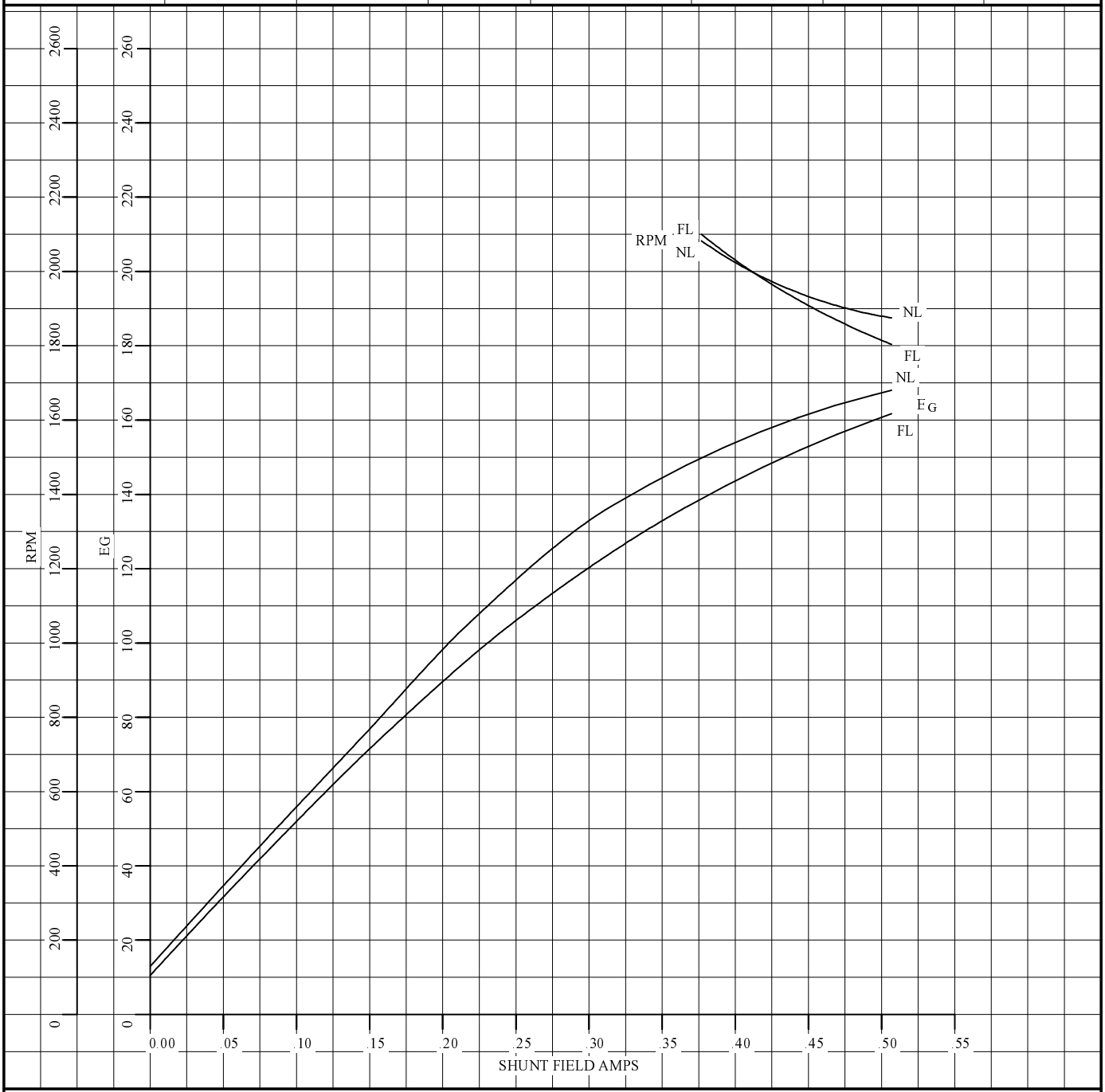
CUSTOMER INFORMATION PACKET D1802R DC189AT, 2HP, 1750RPM, 180V, 200, TENV, F3

FRAME	RATING	BASE SPEED	WINDING TYPE
DC189AT	2.00HP	1750	STRAIGHT SHUNT

S.F.	ENCL.	AMB^{O}C/INSUL	DUTY	POWER CODE/FORM FACTOR	TYPE	WK^2(LB-FT^2)
1.0	TENV	40/F	CONT	2/2 230-60-0	TR	.6247

COOLING AIR(CFM/IN H_2O)	$\bar{J}$ (sec)	$\bar{R}$ (hot)	T_E	T_M	BASIC RPM	MAX CONT RPM	WINDER RPM	MAX. SAFE
-/-	.591	.0799	.0103	.0472	1950	2100	-	4500

WINDING	VOLTS	RESISTANCE		CURRENT		INDUCTANCE	TURNS PER COIL
		25^{O}C	HOT	25^{O}C	HOT		
ARM CIRCUIT	180	.853	1.23	-	9.50	14.5 mH	-
SERIES S1-S2	-	-	-	-	-	-	-
SHUNT F1-F2	200	277	395	.722	.507	64.4 H	2500



REMARKS: TYPICAL DATA SPEED REGULATOR REQUIRED FOR STABILITY
CURVES VALID FOR NAMEPLATE SPEED RANGE ONLY

BALDOR
BALDOR • DODGE • RELIANCE

DR. BY J. MARTIN
CK. BY J. MARTIN
APP. BY T. EVON
DATE 7-8-88

D-C APPLICATION DATA

SG4603A

ISSUE DATE 1/30/91

REL S.O.	FRAME	RATING	RPM	ARM. VOLTS	ARM. AMPS
	DC189AT	2.00HP	1750	180	9.50

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

POWER CODE	TYPE	WK^2(LB-FT^2)	HOT ARM.CIR.RES.	FLD. AMPS@25 °C	HOT FIELD RES
2/2 230-60-0	TR	.6247	1.22	.721	394

ARM. CIR. IND. (mh)	FIELD IND. (H)	COOLING AIR(CFM/IN H_2O)	TURNS PER COIL SHUNT/SERIES	TEST DATE
14.5	64.3	-/-	2500/.00000	-

LOAD PERFORMANCE

LOAD	AMPERES	TORQUE IN LB.-FT.	OUTPUT IN HP	RPM	% EFFICIENCY
NO LOAD	.57	0	0	1861	0
1/4	2.4	1.22	.425	1835	57.8
2/4	4.8	2.79	.965	1816	71.6
3/4	7.1	4.31	1.48	1805	75.4
4/4	9.5	5.77	1.98	1800	76.5
O.L.	14	8.38	2.90	1816	76.1

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
.506	1861	1799	167	161
.474	1902	1859	164	156
.441	1944	1926	161	151
.409	2003	2005	156	145
.376	2082	2100	150	138

REMARKS: TYPICAL DATA

MAXIMUM SAFE SPEED = 4500 RPM
SPEED REGULATOR REQUIRED FOR STABILITY

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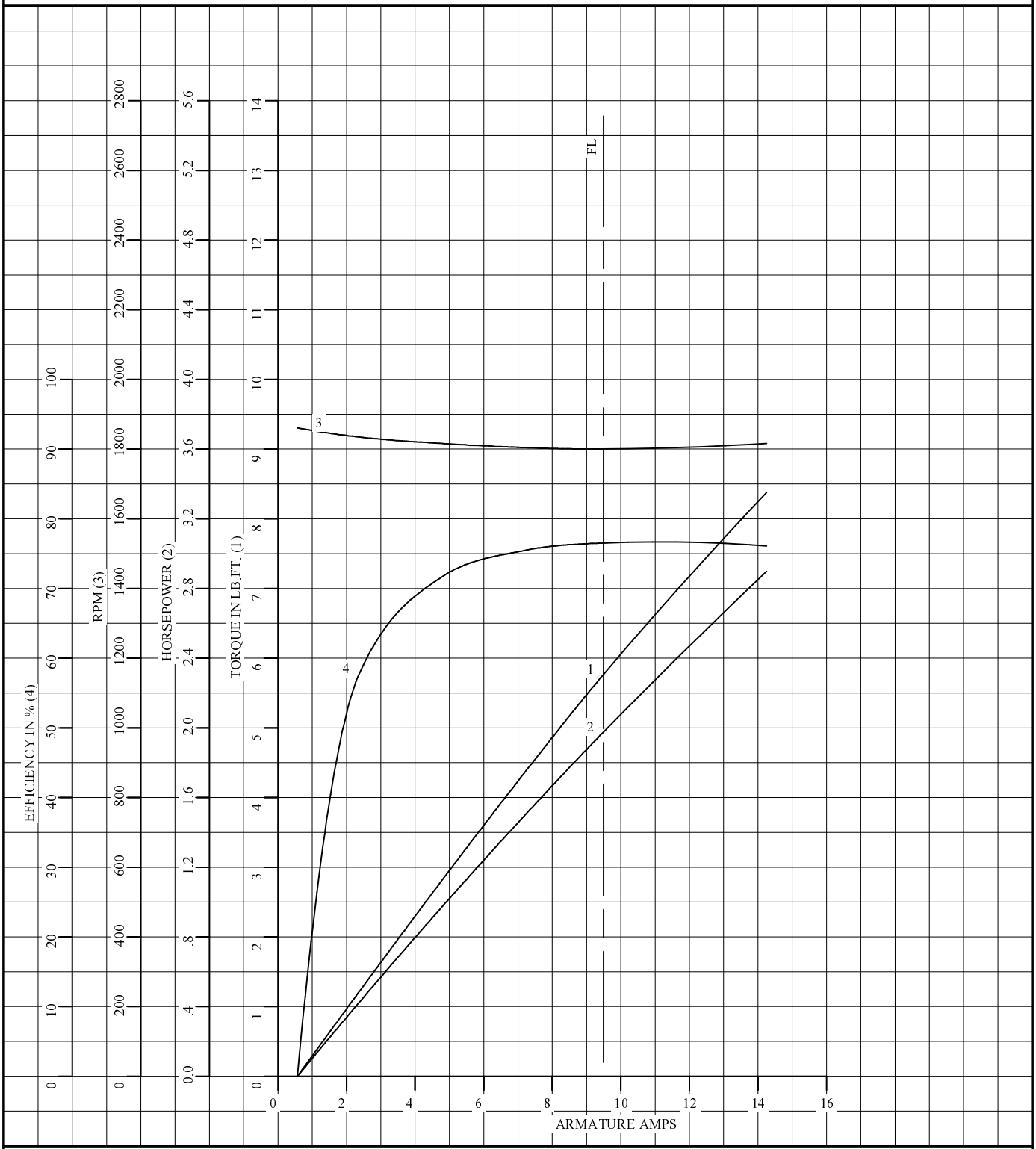
D-C MOTOR PERFORMANCE DATA

DG4603A
ISSUE DATE 1/30/91

ABB BALDOR RELIANCE III

CUSTOMER INFORMATION PACKET DRIVER - DC0189ATY, 2HP, 1750RPM, 180V, 200, TENV, F3

FRAME DC189AT	RUN CONT	TYPE TR	S.F. 1.0		
HP/KW 2.00HP	ENCL. TENV	$WK^2(LB\text{-}FT^2)$ .6247		FLD.AMPS@25°C .721	
RPM 1750	AMB°C INSL. 40/F	HOT ARM. CIR. RES. 1.22		FIELD IND (H) 64.3	
ARM. VOLTS 180	ARM. AMPS 9.50	ARM. CIRCUIT IND(mh) 14.5		CFM/IN. H_2O -/-	
WDG. TYPE STRAIGHT SHUNT	FIELD VOLTS 200	HOT FIELD RES. 394		TEST S.O. -	
		POWER CODE 2/2 230-60-0		TEST DATE -	



REMARKS: TYPICAL DATA SPEED REGULATOR REQUIRED FOR STABILITY

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D-C PERFORMANCE CURVES

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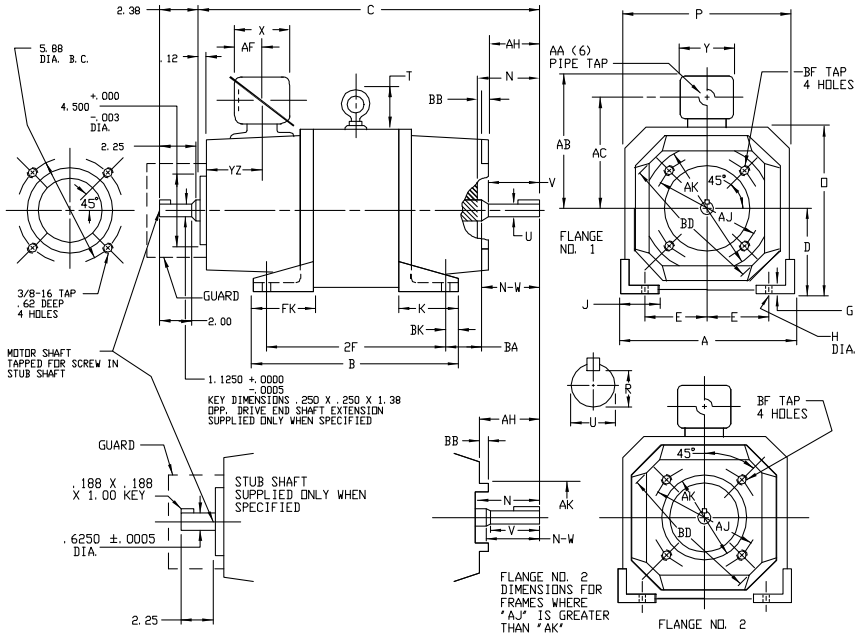
ISSUE DATE 1/30/91

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. LBS.
					N	N-W	UX(2)	V	AH	R(3)	SQ.	LGTH	AA	AB	AC	AF	X	Y	YZ	
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