

ABB BALDOR RELIANCE III

Customer information packet D1815R

1.50HP, 1750RPM, DC, 189ATY, TENV,

Specifications

Armature Voltage	180 V
Base Speed	1750 rpm
Enclosure	TENV
Field Voltage	200 V
Frame	DC0189ATY
Output Power	1.500 HP
Agency Approvals	CCSA US
Ambient Temperature	40 °C
Armature Current	7.2 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.	G4604A
Layout	609980-503
Eff. date	01-02-2020
CD Diagram	406770-007
Poles	00
Leads	
Proprietary	False
Created date	12-27-2019

Nameplate

000613006HP									
CAT.NO.		SPEC NO.	T18S1119						
FR	DC0189ATY	HP	1.5	DUTY		CONT			
ENCL.	TENV	RPM	1750	S.F.		1.0			
ENCL MOD		VOLTS	180	INSUL		F			
MAX SAFE SPEED	04500	AMPS	7.20	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	1.10/.55	MIN. AMB.	0	TYPE		TR			
	BRUSH:419904050A								
	SPLASHPROOF								

ABB BALDOR RELIANCE III

CUSTOMER INFORMATION
DC189AT

MOTOR PACKET
1.50HP

D1815R

BASE SPEED
1750

WINDING TYPE
STRAIGHT SHUNT

S.F.
1.0

ENCL.
TENV

AMB⁰C/INSUL
40/F

DUTY
CONT

POWER CODE/FORM FACTOR
2/2 230-60-0

TYPE
TR

WK²(LB-FT²)
.6247

COOLING AIR(CFM/IN H₂O)
-/-

θ (sec)
.788

R (hot)
.0560

T_E
.0109

T_M
.0441

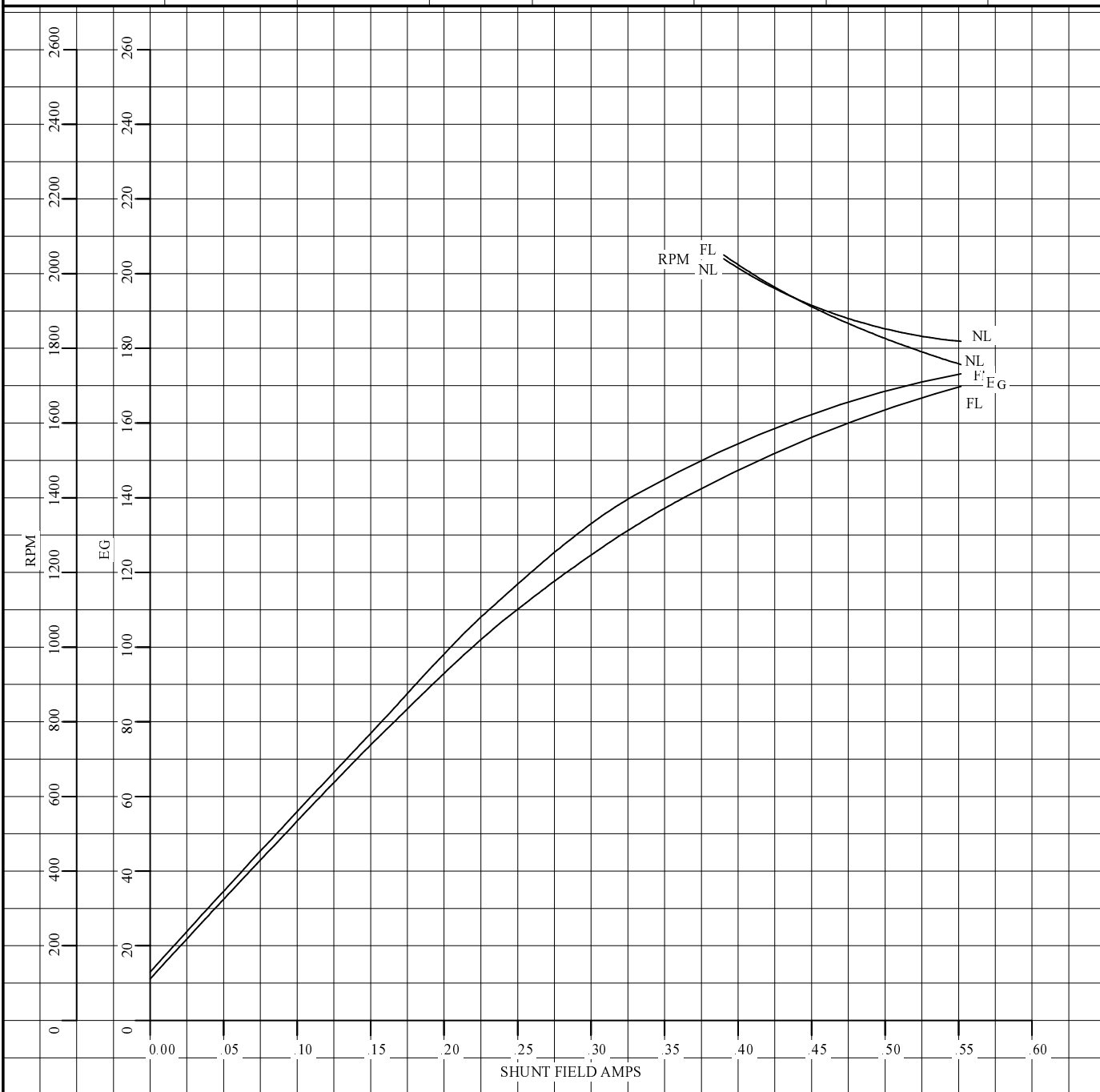
BASIC RPM
1950

MAX CONT RPM
2050

WINDER RPM
-

MAX. SAFE
4500

WINDING	VOLTS	RESISTANCE		CURRENT		INDUCTANCE	TURNS PER COIL
		25 ⁰ C	HOT	25 ⁰ C	HOT		
ARM CIRCUIT	180	.853	1.12	-	7.20	14.5 mH	-
SERIES S1-S2	-	-	-	-	-	-	-
SHUNT F1-F2	200	277	363	.722	.552	65.8 H	2500



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



DR. BY B. GRANT
CK. BY B. GRANT
APP. BY T. EVON
DATE 7-8-88

D-C
APPLICATION
DATA

SG4604A

ISSUE DATE 7-8-88

REL S.O.	FRAME	RATING	RPM	ARM. VOLTS	ARM. AMPS
	DC189AT	1.50HP	1750	180	7.20
WINDING TYPE		S.F.	ENCL.	AMB °C/INSUL	DUTY
STRAIGHT SHUNT		1.0	TENV	40/F	CONT
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	1.11	.721	362
ARM. CIR. IND. (mh)	FIELD IND. (H)	COOLING AIR(CFM/IN H ² 0)		TURNS PER COIL SHUNT/SERIES	TEST DATE
14.5	65.8	-/-		2500/.00000	-
LOAD PERFORMANCE					
LOAD	AMPERES	TORQUE IN LB.-FT.	OUTPUT IN HP	RPM	% EFFICIENCY
NO LOAD	.56	0	0	1807	0
1/4	1.8	.861	.294	1792	49.0
2/4	3.6	2.10	.710	1777	66.9
3/4	5.4	3.31	1.11	1764	73.0
4/4	7.2	4.50	1.50	1756	75.6
O.L.	11	6.75	2.25	1751	77.1
RPM VS. FIELD AMPS					
FIELD AMPS	RPM N.L.	RPM F.L.	Eg N.L. @ BASE SPEED	Eg F.L. @ BASE SPEED	
.551	1806	1756	173	169	
.511	1842	1809	169	164	
.470	1885	1873	165	159	
.430	1949	1951	160	152	
.390	2039	2050	153	145	
REMARKS: TYPICAL DATA MAXIMUM SAFE SPEED = 4500 RPM SPEED REGULATOR REQUIRED FOR STABILITY					
		DR. BY <u>B. GRANT</u> CK. BY <u>B. GRANT</u> APP. BY <u>T. EVON</u> DATE <u>7-8-88</u>		D-C MOTOR PERFORMANCE DATA DG4604A ISSUE DATE 7-8-88	

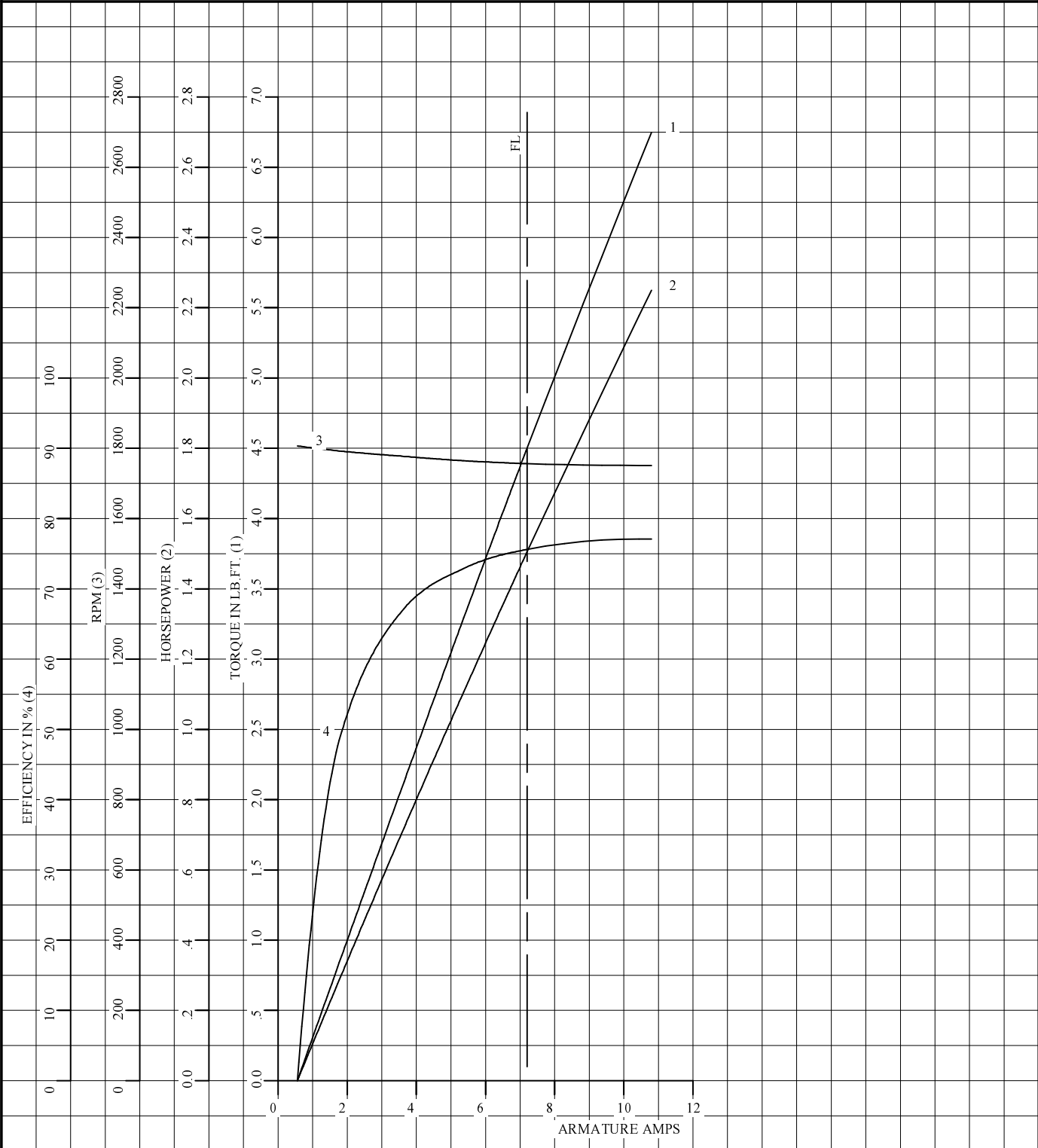
HP/KW 1.50HP
RPM 1750
ARM. VOLTS 180
WDG. TYPE STRAIGHT SHUNT

ENCL. TENV
AMB °C INSL. 40/F
ARM. AMPS 7.20
FIELD VOLTS 200

WK2(LB-FT2) .6247
HOT ARM. CIR. RES. 1.11
ARM. CIRCUIT IND(mh) 14.5
HOT FIELD RES. 362

FLD.AMPS@25 °C .721
FIELD IND (H) 65.8
CFM/IN. H₂O -/-
TEST S.O. -
TEST DATE -

POWER CODE 2/2 230-60-0



REMARKS: TYPICAL DATA SPEED REGULATOR REQUIRED FOR STABILITY



DR. BY B. GRANT
CK. BY B. GRANT
APP. BY T. EVON
DATE 7-8-88

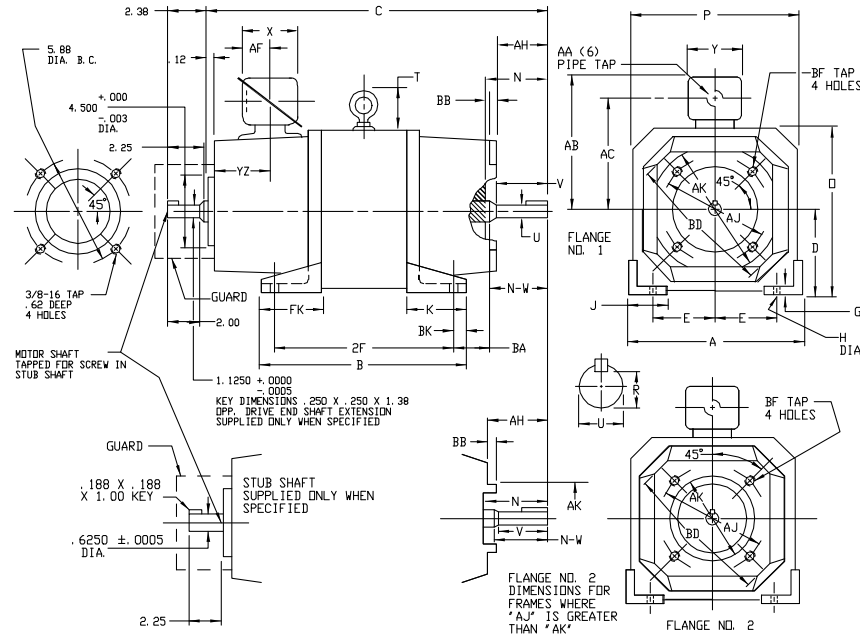
**D-C
PERFORMANCE
CURVES**

PG4604A

ISSUE DATE 7-8-88

609980-503

INDUSTRIAL DIRECT CURRENT MOTORS AND GENERATORS - RPM III
ENCLOSURE: DRIP-PROOF FULLY-GUARDED MOUNTING: FOOT, "C" FACE COOLING: SELF-VENTILATED ACCESSORIES: PROVISIONS FOR
SPLASHPROOF, TOTALLY ENCLOSED METHOD OF DRIVE: COUPLED OR BELTED NON-VENTILATED TACHOMETER MOUNTING
ONLY WHEN SPECIFIED
DC180ATY-DC180ATCZ



DIMENSIONS ARE IN INCHES

FRAME	FLANGE	A	DC1	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	ND. 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	ND. 1	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	7.25	8.500	180TC EXT.
DC181DATY	ND. 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.
DC181DATCZ	ND. 1	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	7.25	8.500	180TC EXT.
DC1811ATY	ND. 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	ND. 1	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	7.25	8.500	180TC EXT.

FRAME	FLANGE	C(5)	B	2F	DRIVE END SHAFT AND KEY								TERMINAL BOLT DIMENSIONS								WT. LBS.
					N	N-W	UK(2)	V	AA	R(3)	SS	LGTH	AA	AB	AC	AF	X	Y	YZ		
DC189ATY	ND. 2	18.81	11.62	10.00	2.44	2.25	.8750	2.00	2.12	.771	1.88	1.38	1.00	7.30	6.11	2.19	4.38	3.75	3.25	130	
DC189ATCZ	ND. 1	19.44	11.62	10.00	3.06	2.88	1.1250	2.62	2.62	.986	2.50	1.81	1.00	7.30	6.11	2.19	4.38	3.75	3.25	130	
DC181DATY	ND. 2	19.56	12.38	11.00	2.44	2.25	.8750	2.00	2.12	.771	1.88	1.38	1.00	7.30	6.11	2.19	4.38	3.75	3.25	155	
DC181DATCZ	ND. 1	20.19	12.38	11.00	3.06	2.88	1.1250	2.62	2.62	.986	2.50	1.81	1.00	7.30	6.11	2.19	4.38	3.75	3.25	155	
DC1811ATY	ND. 2	21.06	13.88	12.50	2.44	2.25	.8750	2.00	2.12	.771	1.88	1.38	1.00	7.30	6.11	2.19	4.38	3.75	3.25	185	
DC1811ATCZ	ND. 1	21.69	13.88	12.50	3.06	2.88	1.1250	2.62	2.62	.986	2.50	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 RUNDUT 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: RGNAS
MTL: -		

BALDOR - RELIANCE®

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

SH 1 of 1

609980-503

