

ABB BALDOR RELIANCE III

Customer information packet

CD5319

1HP, 1750RPM, DC, 56C, 3535D, TEFC, F1

Class - None

Division -

Specifications

Armature Voltage	90 V
Base Speed	1750 rpm
Enclosure	TEFC
Field Voltage	100 V
	50 V
Frame	56C
Frame Material	Steel
Haz Area Class and Group	None
Output Power	1.000 HP
Agency Approvals	CSA
	UR
Ambient Temperature	40 °C
Armature Current	10.0 a
Armature Inertia	13.657 lb-ft ²
Base Indicator	Rigid
Bearing Grease Type	Polyrex EM (-20F +300F)
Drip Cover	No Drip Cover
Duty Rating	CONT
Feedback Device	NO FEEDBACK
Field Winding Type	SHUNT
Heater Indicator	No Heater
Lifting Lugs	No Lifting Lugs
Motor Lead Exit	Lead Hole
Motor Lead Quantity/Wire Size	4 @ 18 AWG
	2 @ 14 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Mounting Arrangement	F1
Overall Length	16.29 IN
Product Family	General Purpose
Pulley End Bearing Type	Sealed Bearing
RoHS Status	ROHS COMPLIANT

Part Detail

Revision	Q
Type	DC
Mech. spec.	35P442
Base	
Status	PRD/A
Elec. spec.	35WGZ390
Layout	35LYP442
Eff. date	10-28-2024
CD Diagram	CD0860C01
Poles	00
Leads	
Proprietary	False
Created date	01-01-0001

Service Factor	1.00
Shaft Diameter	0.625 IN
Shaft Extension Location	Pulley End
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	No Slinger

Nameplate

NPO111L			
CAT.NO.	CD5319		
SPEC.	35P442Z390		
HP	1	ENCL	TEFC
RPM	1750		
FRAME	56C	TYPE	3535D
ARM V	90	ARM A	10
FLD V	100/50	FLD A	.6/1.2
INSUL	F	AMB.	40
DUTY	CONT	SUPPLY	1.3
BRG/DE	6205	BRG/ODE	6203
BRUSHES	2/BP5000T07		
	BLANK		
SER.			
BLANK			
APRV-CSA		APRV-UL	

Parts List

Part number	Description	Quantity
SA046474	SA 35P442Z390	1.000 ea
AA005333	AA 35P442Z390	1.000 ea
MH2001A01B19	GLASTIC SHEET .093 X 1.188 X	0.126 lb
BP5000T07SP	CARBON BRUSH - SCHUNK GRADE 3971	1.000 ea
11XW1032G06	10-32 X .38, TAPTITE II, HEX WSHR SLTD U	1.000 ea
HW3001B02	BRASS CUP WASHER W/GROUND SYMBOL TAB,	1.000 ea
35EP3112A02	FR ENDPLATE, MACH	1.000 ea
HW5100A03	WAVY WASHER (W1543-017)	1.000 ea
35EP3301A01	PU ENDPLATE, MACH	1.000 ea
51XN1032A20	10-32 X 1 1/4 HX WS SL SR	2.000 ea
BP5201A14SP	BRUSH HOLDER ASSY	1.000 ea
80XN1032J03	10-32 X 3/16 SET SCREW, HEX SOC, CUP PT	2.000 ea
35FN3002A05SP	EXFN, PLASTIC, 6.376 OD, .638 ID	1.000 ea
51XB1214A16	12-14X1.00 HXWSSLD SERTYB	1.000 ea
35FH5001A10SP	FAN COVER ASS'Y TEFC HORZ	1.000 ea
51XW1032A06	10-32 X .38, TAPTITE II, HEX WSHR SLTD S	3.000 ea
35CB4506	CONDUIT BOX LID, STAMPED	1.000 ea
35GS1010	CONDUIT BOX LID, GASKET	1.000 ea
51XW0832A07	8-32 X .44, TAPTITE II, HEX WSHR SLTD SE	2.000 ea
HW2501D13	KEY, 3/16 SQ X 1.375	1.000 ea
HA7000A04	KEY RETAINER 0.625 DIA SHAFTS	1.000 ea
WD4102A06	SR-7K-2 HEYCO STRN RELIEF OR 23MP07K20 M	1.000 ea
WD4100A17	PLUG STIMPSON D4036	1.000 ea
MG1050G01	CELEROL MEDIUM CHARCOAL METALLIC GRAY	0.017 ga
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	2.000 ea
MJ5004A05	#242-21 LOCTITE GENERAL PURPOSE MED. STR	0.001 ea
HA3101A22	THRUBOLT 1/4-20 X 9.000	4.000 ea
MN416A01	TAG-INSTAL-MAINT no wire (2500 bx)11/25	1.000 ea
LB1624	COMBINED WARNING LABEL, ISO/ANSI PICTOGR	1.000 ea
LC0860	CONN. DIAGRAM-DC(SHUNT WOUND MOTOR)	1.000 ea
NP0111L	NP STD LASER ENGRAVED DC MOTORS, UL CSA	1.000 ea

27PA1001	PKG GRP, PRINT PK1027A06	1.000 ea
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Accessories

Part number		Description	Multiplier
TK3500		TACHO MOUTING KIT TK3500	A8

DC Motor Performance Data

Record # 1974

Typical performance - not guaranteed values

Winding: 35WGZ390-R001		Type: 3535D	Enclosure: TEFC
Nameplate Data		General Characteristics	
Rated Output (HP)	0.75	Armature Resistance @ 25°C	0.4875 Ω
R.P.M.	1725	Commutating Winding Resistance @ 25°C	0.3834 Ω
Armature Volts	90		
Armature Amps	7.2	Shunt Winding Resistance @ 25°C	171.98 Ω
Field Volts	100 / 50	Armature Inductance	8.709 mH
Field Amps	0.45 / 0.9	Armature Inertia	13.657 LI ²
Rating - Duty	40C AMB-CONT		
Form Factor	1.3		

Load Characteristics at 90 Armature Volts, 100 Field Volts, 0.45 Field Amps

Load Point	1	2	3	4	5	6	7
Armature Amps	0.81	2.76	4.92	7.03	9.23	11.56	14.09
R.P.M.	1882	1815	1773	1751	1717	1669	1641
Torque (LB-FT)	0	0.75	1.5	2.25	3	3.75	4.5

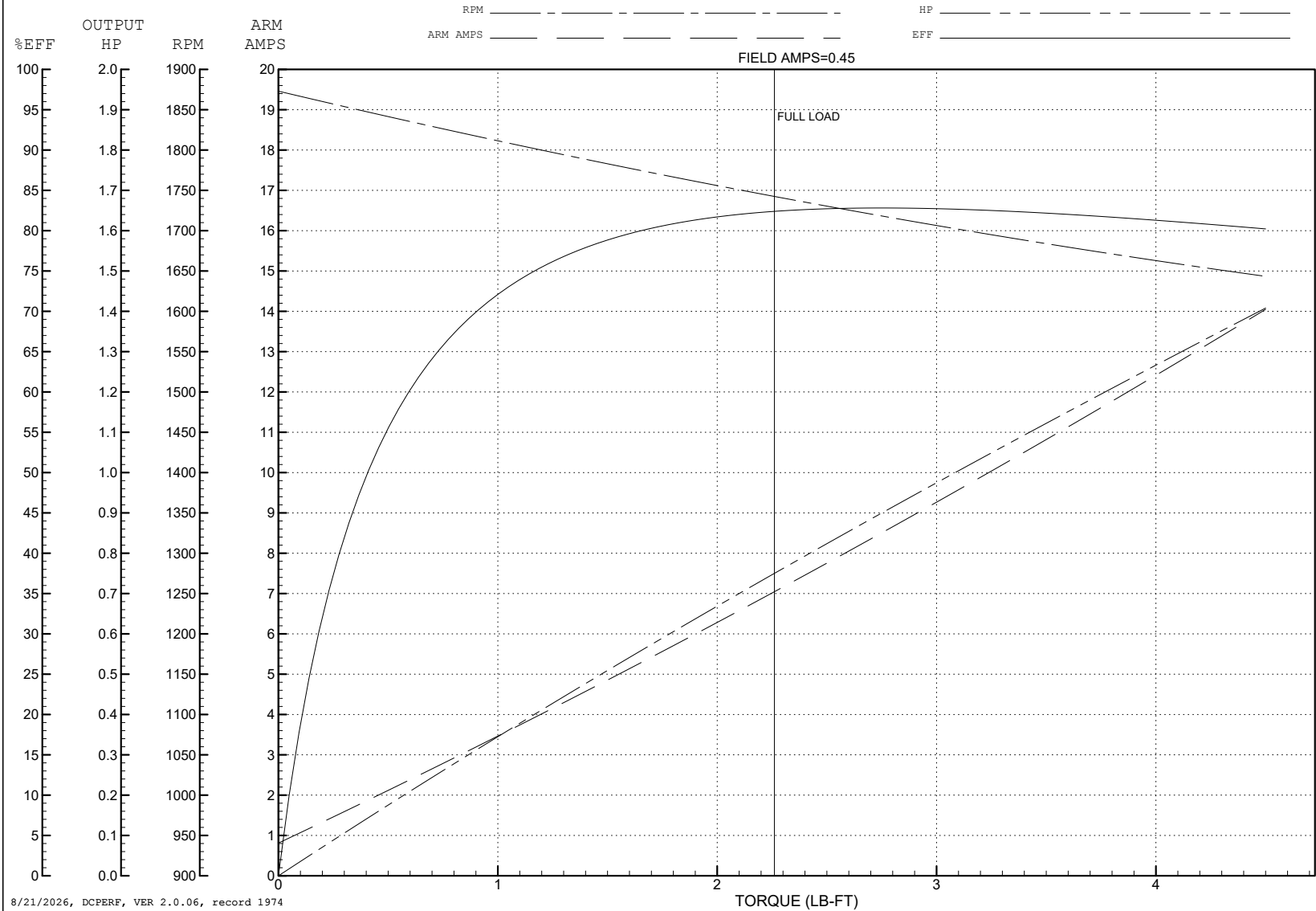
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WINDING # 35WGZ390

Typical performance - not guaranteed values.

0.75 HP DC 1725 RPM 90 V ARM 100/50 V FLD 3535D

ENCL: TEFC DUTY: CONT CL: F



DC Motor Performance Data

Record # 2536

Typical performance - not guaranteed values

Winding: 35WGZ390-R001		Type: 3535D	Enclosure: TEFC
Nameplate Data		General Characteristics	
Rated Output (HP)	1	Armature Resistance @ 25°C	0.4875 Ω
R.P.M.	1750	Commutating Winding Resistance @ 25°C	0.3834 Ω
Armature Volts	90		
Armature Amps	10	Shunt Winding Resistance @ 25°C	171.98 Ω
Field Volts	100 / 50	Armature Inductance	8.709 mH
Field Amps	0.6 / 1.2	Armature Inertia	13.657 LI ²
Rating - Duty	40C AMB-CONT		
Form Factor	1.3		

Load Characteristics at 90 Armature Volts, 100 Field Volts, 0.45 Field Amps

Load Point	1	2	3	4	5	6	7
Armature Amps	0.81	2.76	4.92	7.03	9.23	11.56	14.09
R.P.M.	1882	1815	1773	1751	1717	1669	1641
Torque (LB-FT)	0	0.75	1.5	2.25	3	3.75	4.5

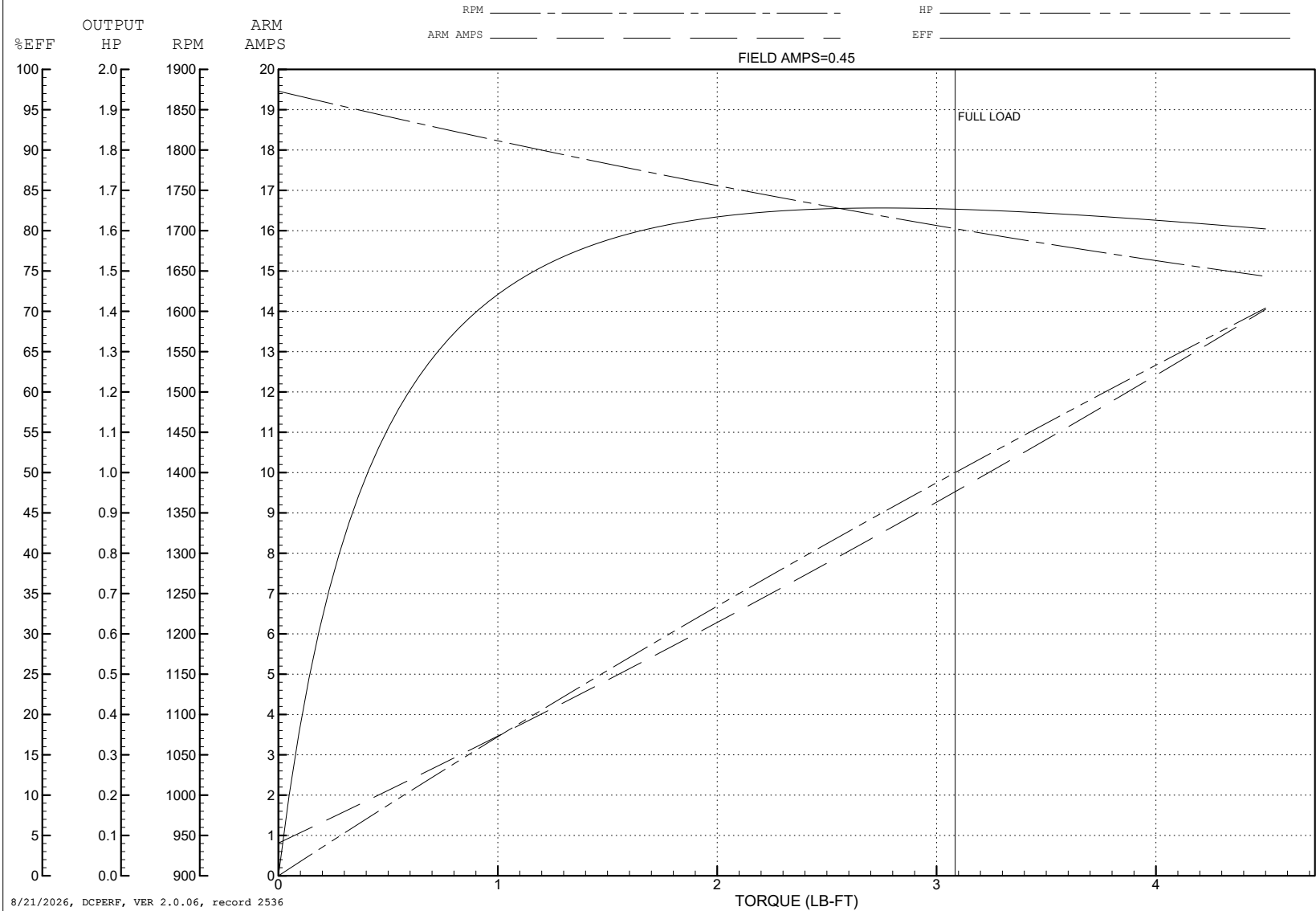
ABB Motors and Mechanical Inc.

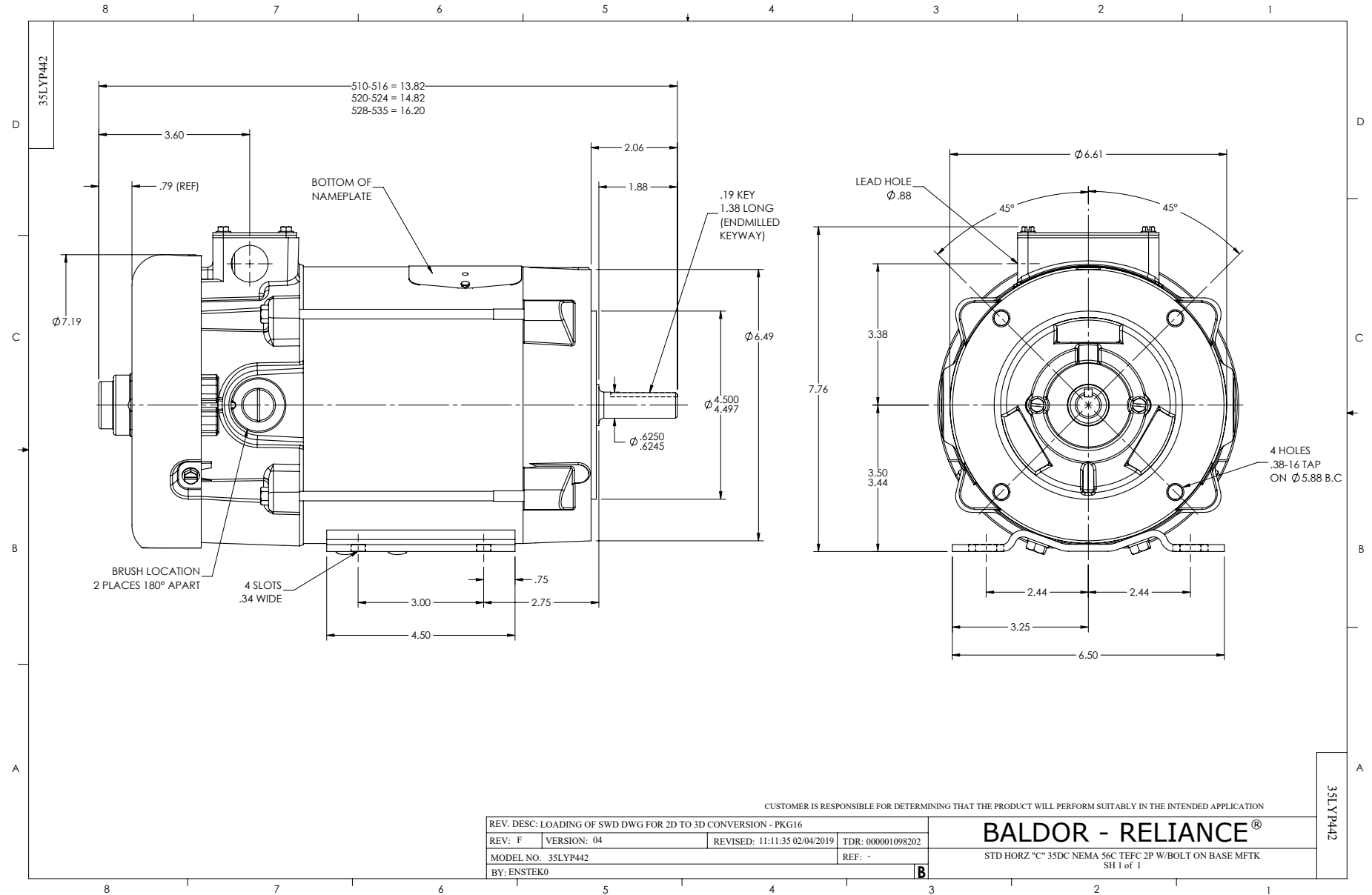
WINDING # 35WGZ390

Typical performance - not guaranteed values.

1 HP DC 1750 RPM 90 V ARM 100/50 V FLD 3535D

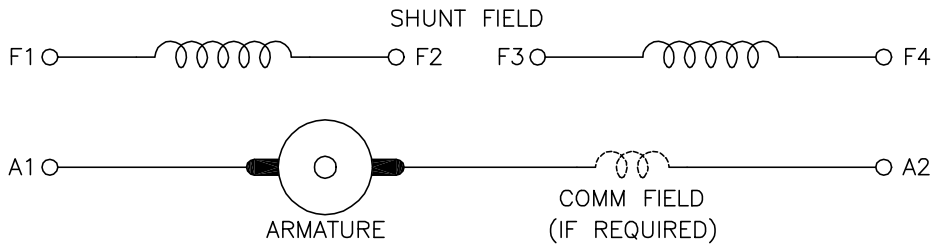
ENCL: TEFC DUTY: CONT CL: F





SHUNT WOUND

CD0860C01



CONNECTION	DIRECTION OF ROTATION			
	CWDE		CCWDE	
	POS TERM (+)	NEG TERM (-)	POS TERM (+)	NEG TERM (-)
HIGH VOLTAGE	A1	A2	A2	A1
	F1	F4	F1	F4
	CONNECT F2 & F3		CONNECT F2 & F3	
LOW VOLTAGE	A1	A2	A2	A1
	F1 & F3	F2 & F4	F1 & F3	F2 & F4

- NOTES:
- 1. LIMIT STARTING INRUSH CURRENT TO NOT MORE THAN 3 TIMES RATED AMPERES BY ENERGIZING THE FULL SHUNT FIELD BEFORE BRINGING THE ARMATURE VOLTAGE UP SLOWLY OR IN STEPS.
 - 2. OPTIONAL FIELD REOSTAT MAY BE CONNECTED IN SERIES WITH THE SHUNT FIELD.
 - 3. OPTIONAL THERMOSTAT LEADS ARE MARKED J,J.

REV. DESC: NEW, REPLACE CD0860			
REV. LTR: -	BY: JLP	REVISED: 15:35:22 11/03/2004	TDR: 347796
10C0980C0		FILE: AAA00121477	REF: CD0860C01
		MTL: -	

BALDOR ELECTRIC Co.

DC CONNECTION DIAGRAM, SHUNT FIELD, 6 LEAD, DUAL VOLTAGE

CD0860C01