ABB BALDOR RELIANCE

Customer information packet

CEM31107

.5HP, 3450RPM, 3PH, 60HZ, 56C, 3416M, OPEN, F1
Class - None
Division - Not Applicable

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Specifications

Enclosure	OPEN
Frame	56C
Frame Material	Steel
Frequency	60.00 Hz
Haz Area Class and Group	None
Haz Area Division	Not Applicable
Motor Letter Type	Three Phase
Output @ Frequency	.500 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	3600 RPM @ 60 HZ
Voltage @ Frequency	230.0 V @ 60 HZ
	460.0 V @ 60 HZ
Agency Approvals	CURUSEEV
Ambient Temperature	40 °C
Auxiliary Box	NO AUXILLARY BOX
Auxiliary Box Lead Termination	None
Base Indicator	Rigid
Bearing Grease Type	Polyrex EM (-20F +300F)
Blower	None
Current @ Voltage	.800 A @ 460.0 V
	1.600 A @ 230.0 V
	1.900 A @ 208.0 V
Design Code	B
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	73.4 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Face Code	Standard
Front Shaft Indicator	None
Heater Indicator	No Heater
High Voltage Full Load Amps	0.8 a

Part Detail

Revision	K
Type	AC
Mech. spec.	34F010
Base	
Status	PRD/A
Elec. spec.	34WGS937
Layout	34LYF010
Eff. date	02-12-2025
CD Diagram	CD0005
Poles	02
Leads	9#18
Proprietary	False
Created date	09-30-2014

Insulation Class	B
Inverter Code	Not Inverter
KVA Code	P
Lifting Lugs	No Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Motor Lead Exit	Ko Box
Motor Lead Quantity/Wire Size	9 @ 18 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	3416M
Mounting Arrangement	F1
Number of Poles	2
Overall Length	10.10 IN
Power Factor	78
Product Family	General Purpose
Pulley End Bearing Type	Ball
Pulley Face Code	C-Face
Pulley Shaft Indicator	Standard
Rodent Screen	None
RoHS Status	ROHS COMPLIANT
Service Factor	1.25
Shaft Diameter	0.625 IN
Shaft Extension Location	Pulley End
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	No Slinger
Speed	3450 rpm
Speed Code	Single Speed
Starting Method	Direct on line
Thermal Device - Bearing	None
Thermal Device - Winding	None
Vibration Sensor Indicator	No Vibration Sensor
Winding Thermal 1	None
Winding Thermal 2	None

Nameplate

	NP3155L									
CAT.NO.	CEM31107									
SPEC.	34F010S937G1									
HP	.5									
VOLTS	230/460									
AMP	1.6/.8									
RPM	3450									
FRAME	56C		**HZ**	60			**PH**	3		
SER.F.	1.25	**CODE**	P	**DES**	B	**CL**	B			
F.L. AVG. EFF.	73.4	**PF**	78							
RATING	40C AMB-CONT									
CC										
DE	6203		**ODE**	6203						
ENCL	OPEN	**SN**								
	SFA 1.8/.9									

Parts List

Part number	Description	Quantity
SA287921	SA 34F010S937G1	1.000 ea
RA274124	RA 34F010S937G1	1.000 ea
NS2512A01	INSULATOR, CONDUIT BOX X	1.000 ea
34CB3002A	CB CAST W/.88 DIA HOLE	1.000 ea
51XB1016A07	10-16 X 7/16 HXWSSLD SERTYB	2.000 ea
11XW1032G06	10-32 X .38, TAPTITE II, HEX WSHR SLTD U	1.000 ea
34EP3210A01SP	FR ENDPLATE, MACH	1.000 ea
HW5100A03	WAVY WASHER (W1543-017)	1.000 ea
34EP3401A01SP	PU ENDPLATE, MACH	1.000 ea
34AD2000	BAFFLE PLATE, STAMPED	1.000 ea
60XW0632A06	6-32 X 3/8 TORX HEAD SCREW TAPTITE II	4.000 ea
51XN1032A20	10-32 X 1 1/4 HX WS SL SR	2.000 ea
34CB4517	CB LID 4 MTG HOLES .22 DIA STAMPED, FOR	1.000 ea
51XW0832A07	8-32 X .44, TAPTITE II, HEX WSHR SLTD SE	4.000 ea
HW2501D13	KEY, 3/16 SQ X 1.375	1.000 ea
HA7000A04	KEY RETAINER 0.625 DIA SHAFTS	1.000 ea
MG1050Y01	CELEROL BALDOR GOLD *5 GALLON BUCKET*	0.014 ga
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	2.000 ea
HA3100A12	THRUBOLT 10-32 X 7.375	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
LC0005	CONN.DIA.,TY M,9-LD,DUAL VOLT,REVERSING	1.000 ea
NP3155L	ALUM SUPER-E UL CC "SEMS"	1.000 ea
35PA1066	PKG GRP, PRINT PK1008A07	1.000 ea
PK3085X	FOAM SHAFT SUPPORT PRECUT 4-1/4 X 6-3/4	1.000 ea

AC Induction Motor Performance Data
Record # 47468
Typical performance - not guaranteed values

Winding: 34WGS937-R002	**Type:** 3416M	**Enclosure:** OPEN

Nameplate Data				**460 V, 60 Hz: High Voltage Connection**	
Rated Output (HP)			.5	**Full Load Torque**	0.767 LB-FT
Volts			230/460	**Start Configuration**	direct on line
Full Load Amps			1.6/.8	**Breakdown Torque**	4.81 LB-FT
R.P.M.			3450	**Pull-up Torque**	3.29 LB-FT
Hz	60	**Phase**	3	**Locked-rotor Torque**	4.44 LB-FT
NEMA Design Code	B	**KVA Code**	P	**Starting Current**	7.88 A
Service Factor (S.F.)			1.25	**No-load Current**	0.48 A
NEMA Nom. Eff.	73.4	**Power Factor**	78	**Line-line Res. @ 25ºC**	22.08 Ω
Rating - Duty			40C AMB-CONT	**Temp. Rise @ Rated Load**	15°C
S.F. Amps			1.8/.9	**Temp. Rise @ S.F. Load**	17°C
				Locked-rotor Power Factor	66
				Rotor inertia	0.0148 LB-FT2

Load Characteristics 460 V, 60 Hz, 0.5 HP

% of Rated Load	**25**	**50**	**75**	**100**	**125**	**150**	**S.F.**
Power Factor	45	61	72	78	83	86	83
Efficiency	54	67.8	73.9	76.9	78.3	78.8	78.3
Speed	3560	3537.1	3511.5	3484.8	3456.5	3427.6	3456
Line amperes	0.524	0.591	0.676	0.79	0.911	1.05	0.911

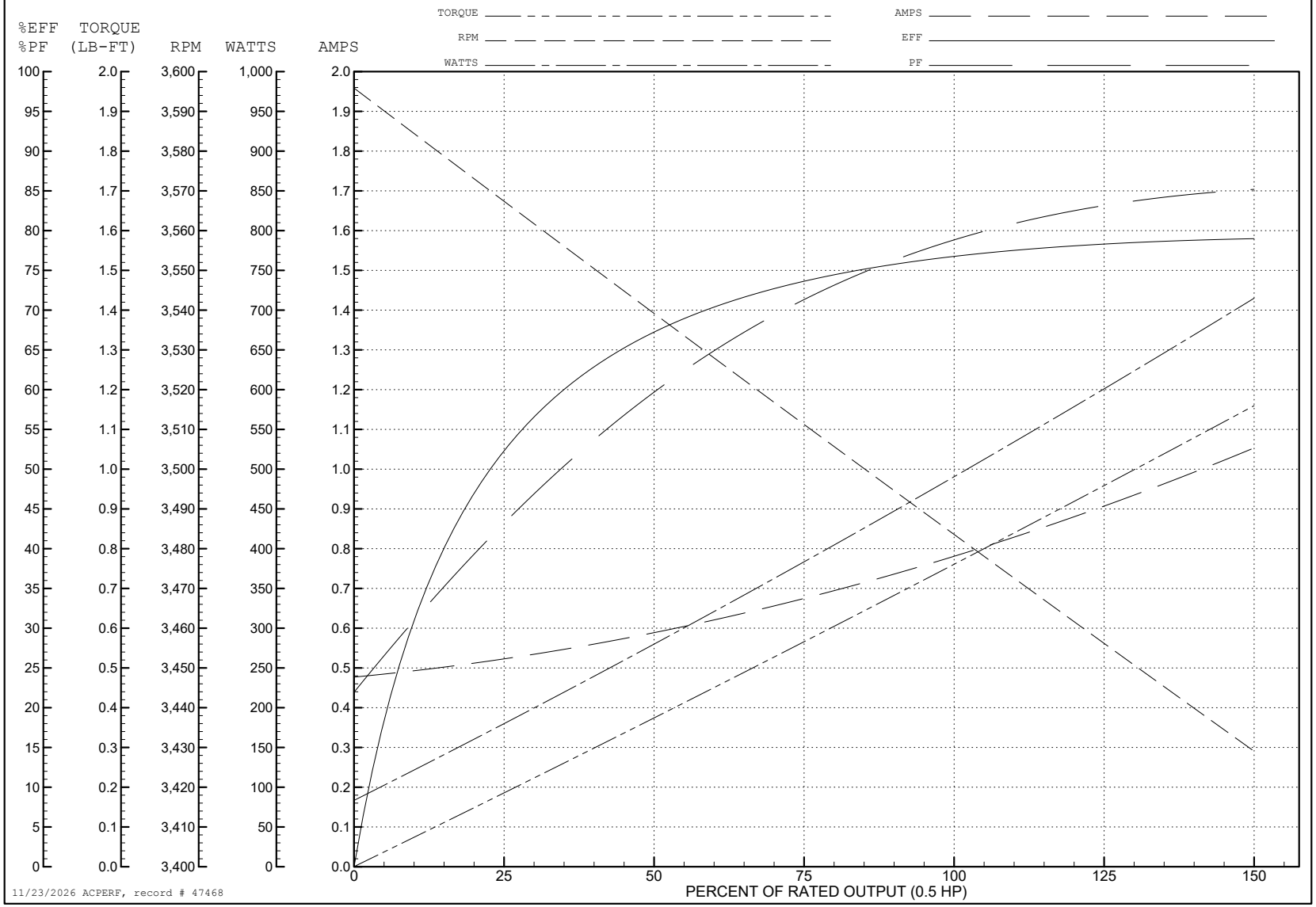
ABB Motors and Mechanical Inc.

WINDING # 34WGS937

0.5 HP 3 PH 60 HZ 3450 RPM 460 V 3416M

Typical performance - not guaranteed values.

TORQUES(LB-FT): PO=4.81 PU=3.29 LR=4.44 LRA=7.88



11/23/2026 ACPERF, record # 47468

AC Induction Motor Performance Data
Record # 49386
Typical performance - not guaranteed values

Winding: 34WGS937-R002	**Type:** 3416M	**Enclosure:** OPEN

Nameplate Data				**230 V, 60 Hz: High Voltage Connection**	
Rated Output (HP)			.5	**Full Load Torque**	0.767 LB-FT
Volts			230/460	**Start Configuration**	direct on line
Full Load Amps			1.6/.8	**Breakdown Torque**	4.81 LB-FT
R.P.M.			3450	**Pull-up Torque**	3.29 LB-FT
Hz	60	**Phase**	3	**Locked-rotor Torque**	4.44 LB-FT
NEMA Design Code	B	**KVA Code**	P	**Starting Current**	15.76 A
Service Factor (S.F.)			1.25	**No-load Current**	0.96 A
NEMA Nom. Eff.	73.4	**Power Factor**	78	**Line-line Res. @ 25ºC**	5.52 Ω
Rating - Duty			40C AMB-CONT	**Temp. Rise @ Rated Load**	15°C
S.F. Amps			1.8/.9	**Temp. Rise @ S.F. Load**	17°C
				Locked-rotor Power Factor	66
				Rotor inertia	0.0148 LB-FT2

Load Characteristics 230 V, 60 Hz, 0.5 HP

% of Rated Load	**25**	**50**	**75**	**100**	**125**	**150**	**S.F.**
Power Factor	45	61	72	78	83	85	83
Efficiency	54	67.8	73.9	76.9	78.3	78.8	78.3
Speed	3560	3537.1	3511.5	3484.8	3456.5	3427.6	3456
Line amperes	1.048	1.182	1.352	1.58	1.822	2.1	1.822

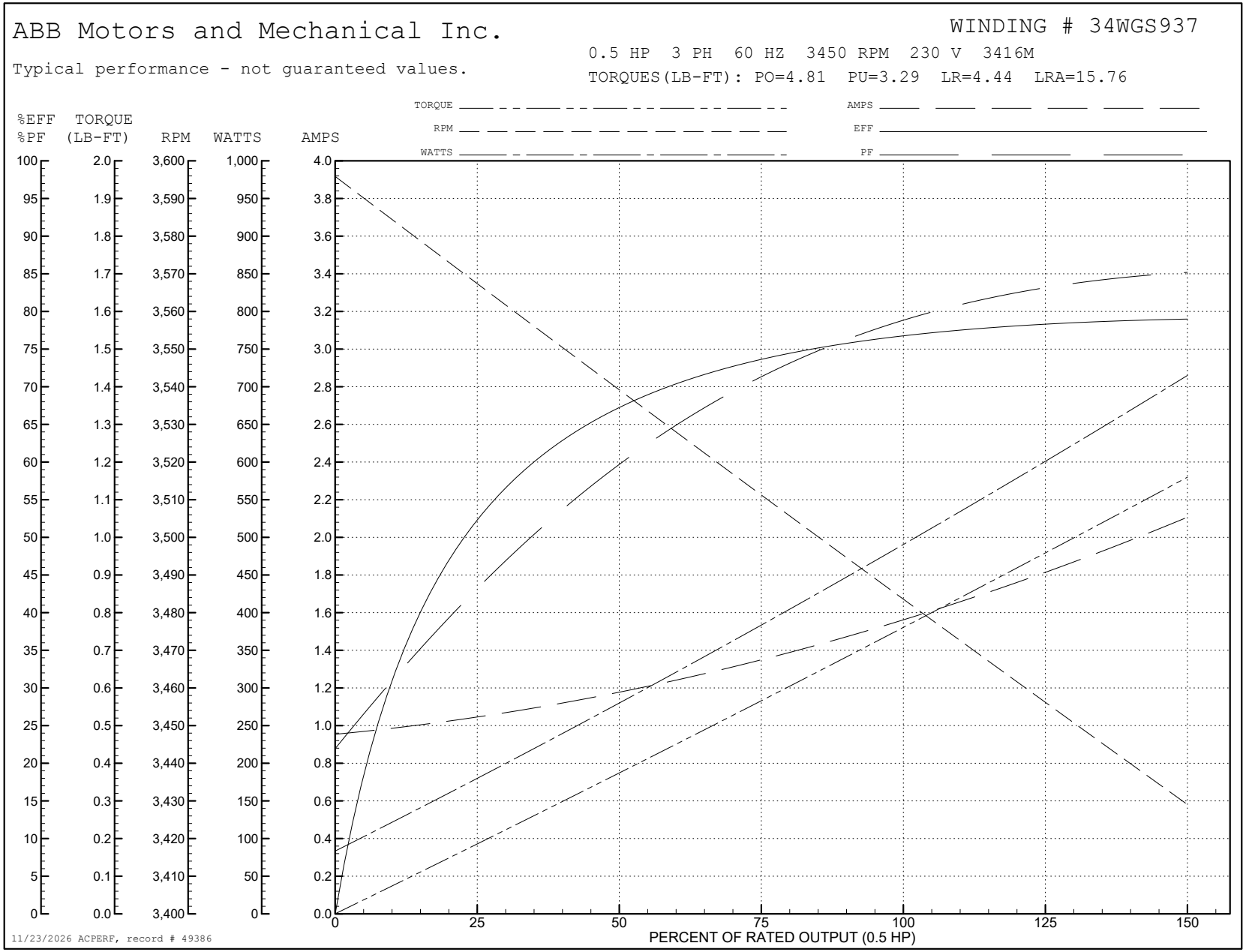
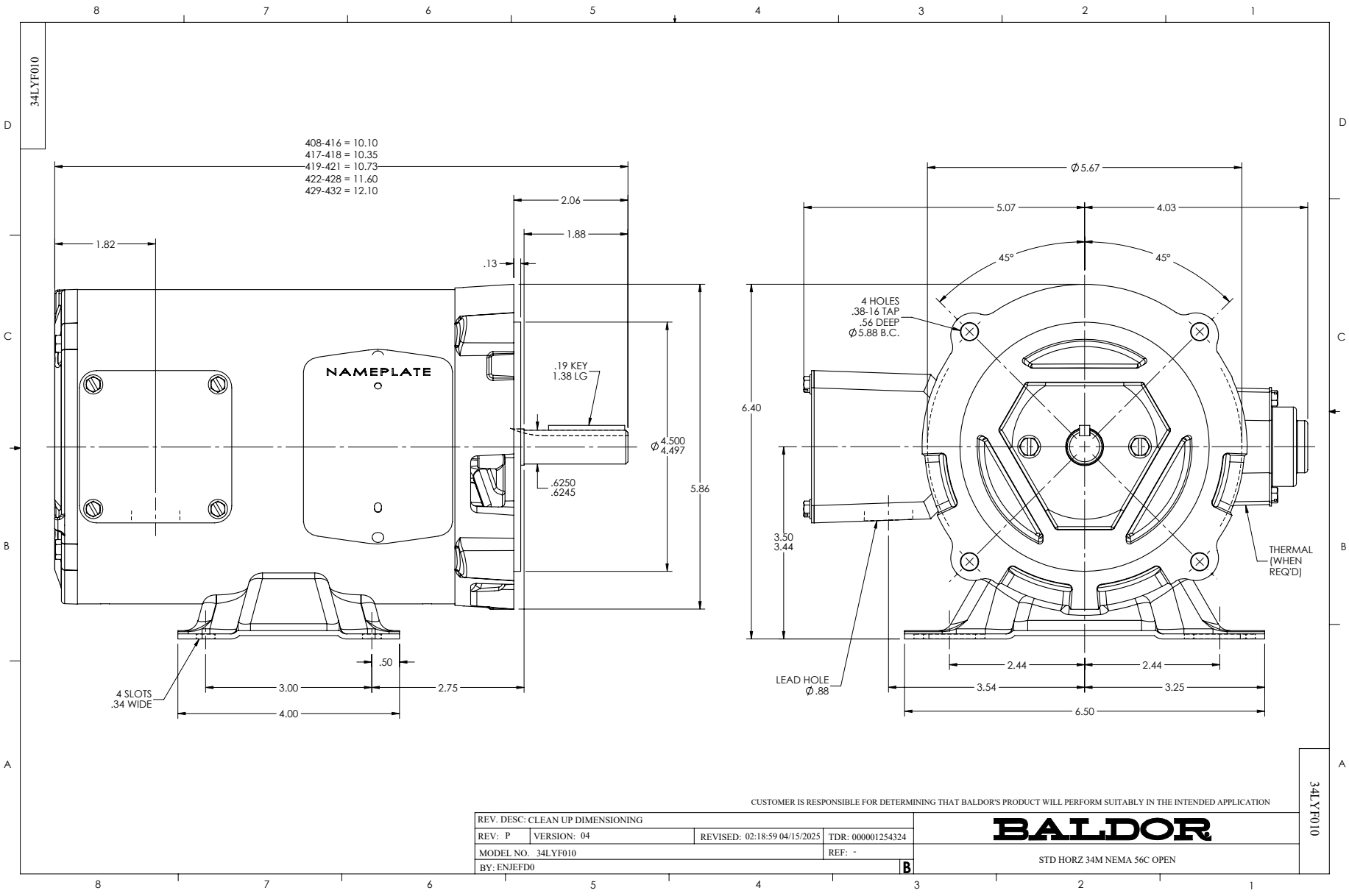
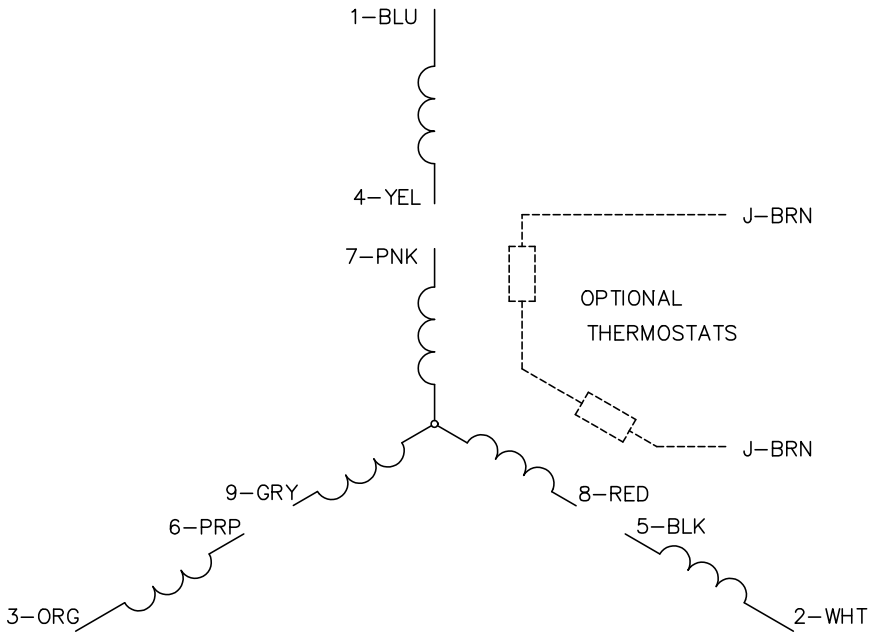
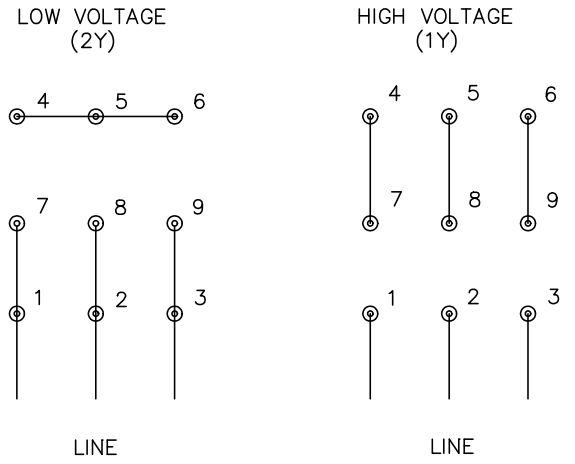


ABB Motors and Mechanical Inc.
WINDING # 34WGS937
0.5 HP 3 PH 60 HZ 3450 RPM 230 V 3416M
Typical performance - not guaranteed values.
TORQUES(LB-FT): PO=4.81 PU=3.29 LR=4.44 LRA=15.76
TORQUE
RPM
WATTS
AMPS
EFF
PF
%EFF %PF
TORQUE (LB-FT)
RPM
WATTS
AMPS
PERCENT OF RATED OUTPUT (0.5 HP)
11/23/2026 ACPERF, record # 49386


34LYF010
408-416 = 10.10
417-418 = 10.35
419-421 = 10.73
422-428 = 11.60
429-432 = 12.10
2.06
1.88
1.82
.13
NAMEPLATE
.19 KEY
1.38 LG
Ø4.500
4.497
.6250
.6245
5.86
.50
4 SLOTS
.34 WIDE
3.00
2.75
4.00
Ø5.67
5.07
4.03
45°
45°
4 HOLES
.38-16 TAP
.56 DEEP
Ø5.88 B.C.
6.40
3.50
3.44
THERMAL
(WHEN
REQ'D)
LEAD HOLE
Ø.88
2.44
2.44
3.54
3.25
6.50
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION
REV. DESC: CLEAN UP DIMENSIONING
REV: P
VERSION: 04
REVISED: 02:18:59 04/15/2025
TDR: 000001254324
MODEL NO. 34LYF010
REF: -
BY: ENJEFD0
B
BALDOR
STD HORZ 34M NEMA 56C OPEN
34LYF010

CD0005





NOTES:

1. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
2. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
3. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY BE A MULTIPLE OF THOSE SHOWN ABOVE.
4. LEAD COLORS ARE OPTIONAL. LEADS MUST ALWAYS BE NUMBERED AS SHOWN.

CD0005

REV. DESC: REVISE TO SHOW OPTIONAL COLORS			BALDOR ELECTRIC Co.
REV. LTR: E	BY: JLP	REVISED: 01/19/99 10:15	TDR: 0171435
CD0005		FILE: AAA00005140	MDL: –
		MTL: –	3PH, DV, 9 LEADS