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# Customer information packet

## CEM31107

.5HP, 3450RPM, 3PH, 60HZ, 56C, 3416M, OPEN, F1

Class - None

Division - Not Applicable

## 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
Auxillary Box	No Auxillary Box
Auxillary 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

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

**Nameplate**

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

**AC Induction Motor Performance Data**

Record # 47468

Typical performance - not guaranteed values

Winding: 34WGS937-R002		Type: 3416M	Enclosure: OPEN		
<b>Nameplate Data</b>			<b>460 V, 60 Hz: High Voltage Connection</b>		
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. @ 25°C	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-FT <sup>2</sup>		

**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

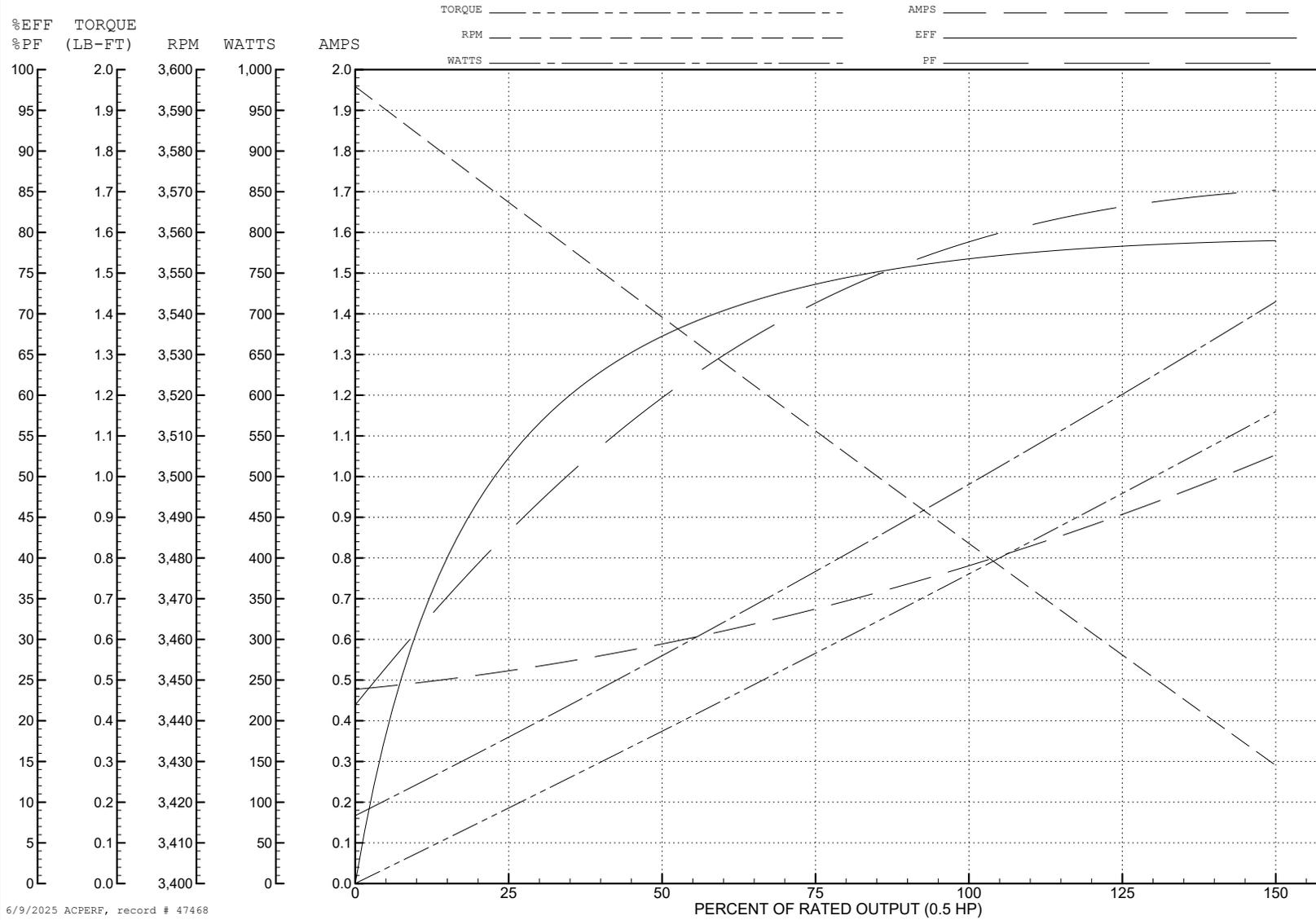
ABB Motors and Mechanical Inc.

WINDING # 34WGS937

Typical performance - not guaranteed values.

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

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



6/9/2025 ACPERF, record # 47468

**AC Induction Motor Performance Data**

Record # 49386

Typical performance - not guaranteed values

Winding: 34WGS937-R002		Type: 3416M	Enclosure: OPEN		
<b>Nameplate Data</b>			<b>230 V, 60 Hz: High Voltage Connection</b>		
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. @ 25°C	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-FT <sup>2</sup>		

**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

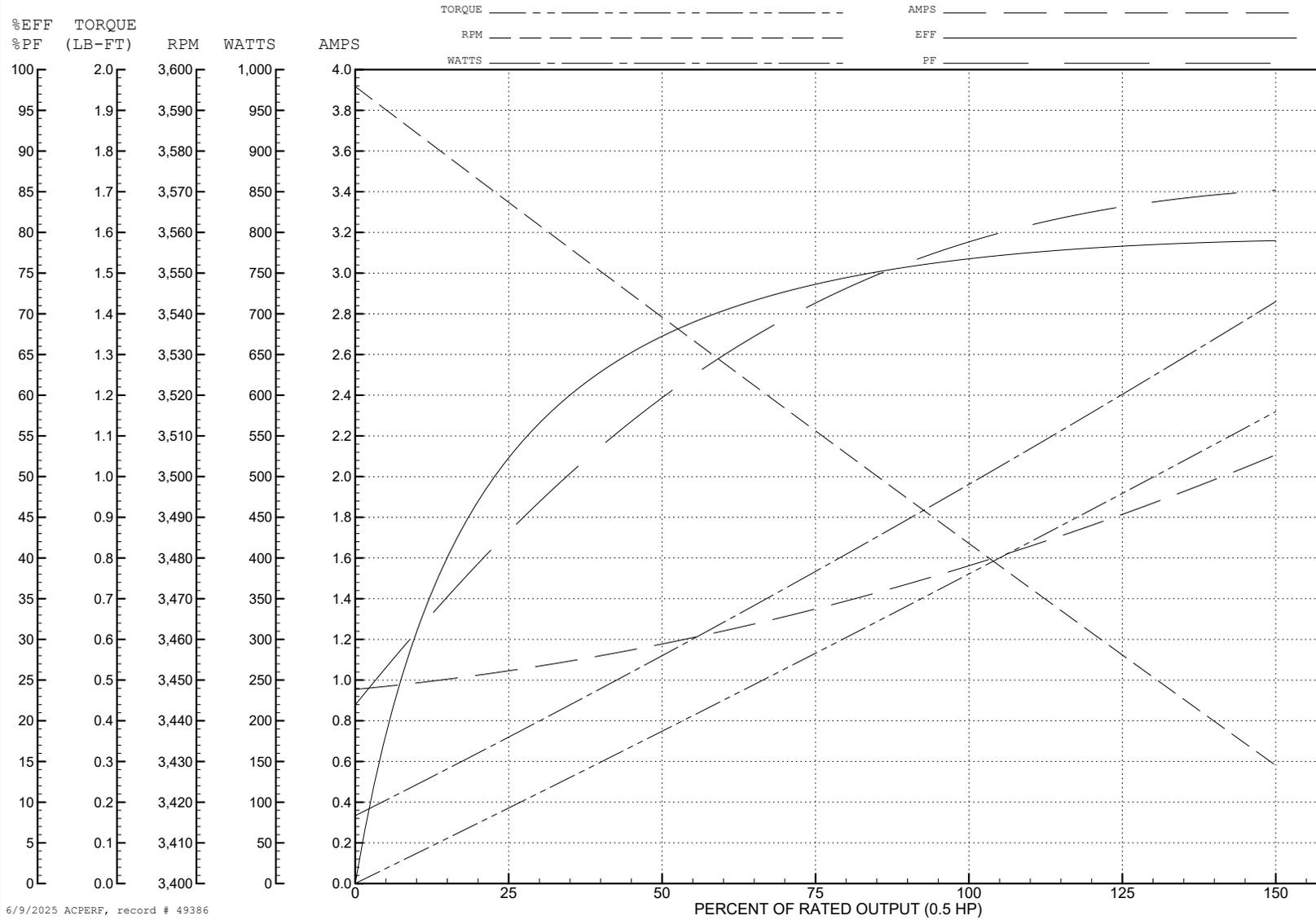
ABB Motors and Mechanical Inc.

WINDING # 34WGS937

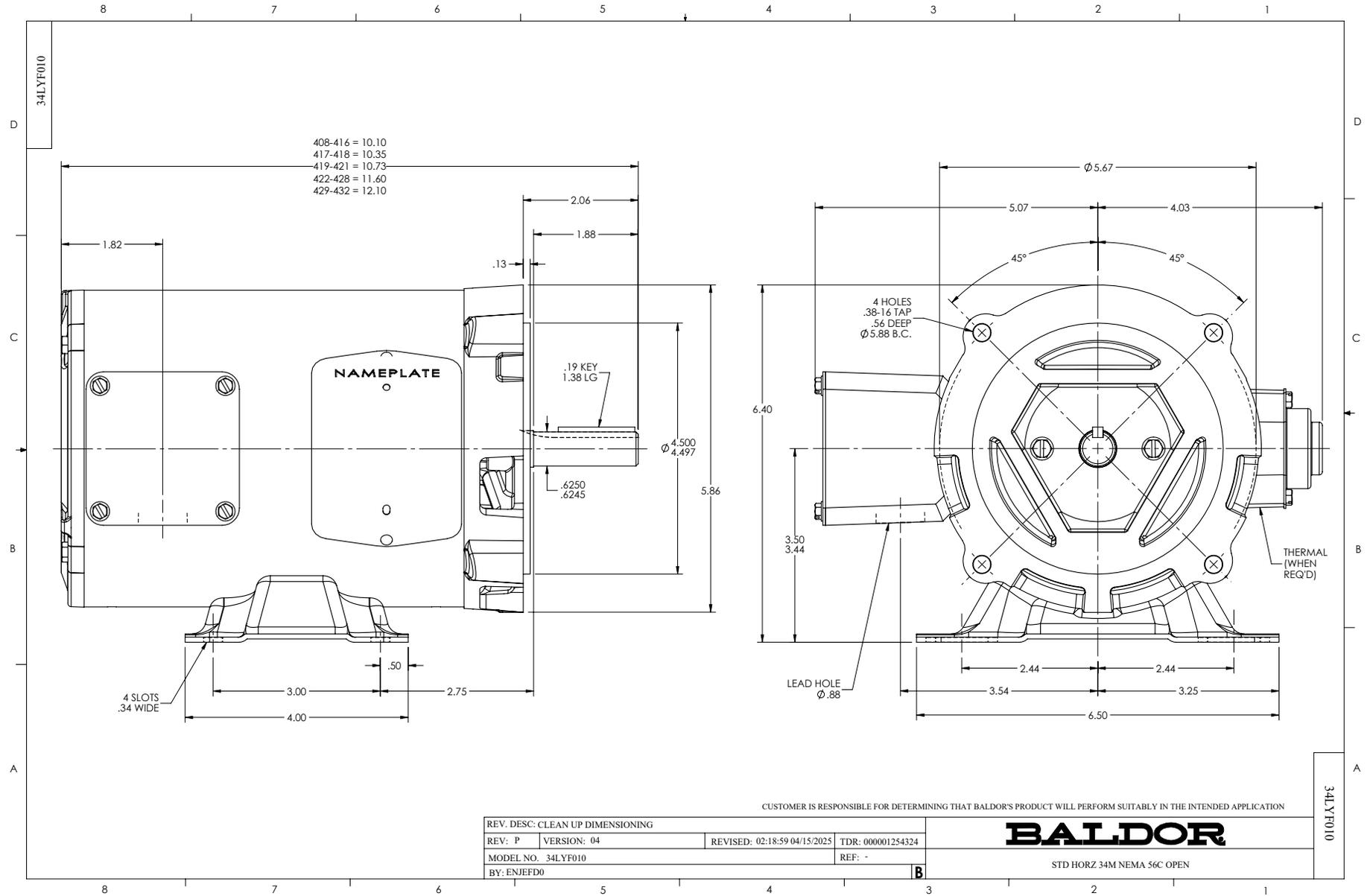
Typical performance - not guaranteed values.

0.5 HP 3 PH 60 HZ 3450 RPM 230 V 3416M

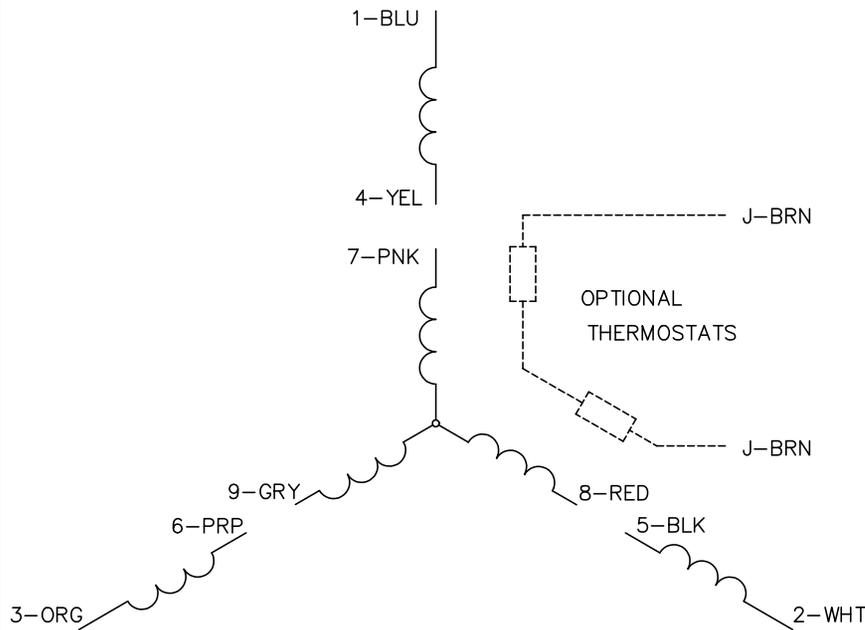
TORQUES (LB-FT): PO=4.81 PU=3.29 LR=4.44 LRA=15.76



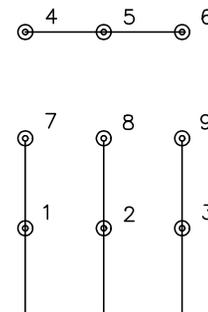
6/9/2025 ACPERF, record # 49386



CD0005

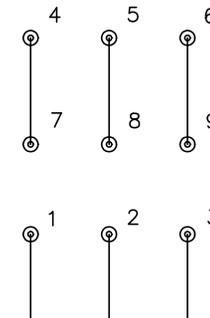


LOW VOLTAGE  
(2Y)



LINE

HIGH VOLTAGE  
(1Y)



LINE

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.

REV. DESC: REVISE TO SHOW OPTIONAL COLORS			
REV. LTR: E	BY: JLP	REVISED: 01/19/99 10:15	TDR: 0171435
S00000		FILE: AAA00005140	MDL: -
		MTL: -	

**BALDOR ELECTRIC Co.**

3PH, DV, 9 LEADS

CD0005