

**BALDOR • RELIANCE**

---

# Customer information packet

## EM31104

.33HP, 1725RPM, 3PH, 60HZ, 56, 3416M, ODP, F1, N

Class - None

Division - Not Applicable

## Specifications

Enclosure	ODP
Frame	56
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	.330 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1800 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	.700 A @ 460.0 V 1.400 A @ 230.0 V 1.700 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	0.7 a

## Part detail

Revision	J
Type	AC
Mech. spec.	34B061
Base	
Status	PRD/A
Elec. spec.	34WGS936
Layout	34LYB061
Eff. date	05-16-2024
CD Diagram	CD0005
Poles	04
Leads	9#18
Proprietary	False
Created date	03-04-2014

Insulation Class	F
Inverter Code	Not Inverter
KVA Code	N
Lifting Lugs	No Lifting Lugs
Locked Bearing Indicator	No 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	4
Overall Length	10.25 IN
Power Factor	66
Product Family	General Purpose
Pulley End Bearing Type	Ball
Pulley Face Code	Standard
Pulley Shaft Indicator	Standard
Rodent Screen	None
RoHS Status	ROHS COMPLIANT
Service Factor	1.35
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	1725 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**

<b>NP3155L</b>									
<b>CAT.NO.</b>	EM31104								
<b>SPEC.</b>	34B061S936G1								
<b>HP</b>	.33								
<b>VOLTS</b>	230/460								
<b>AMP</b>	1.4/.7								
<b>RPM</b>	1725								
<b>FRAME</b>	56		<b>HZ</b>	60		<b>PH</b>	3		
<b>SER.F.</b>	1.35	<b>CODE</b>	N	<b>DES</b>	B	<b>CL</b>	F		
<b>F.L. AVG. EFF.</b>	73.4	<b>PF</b>	66						
<b>RATING</b>	40C AMB-CONT								
<b>CC</b>									
<b>DE</b>	6203		<b>ODE</b>	6203					
<b>ENCL</b>	ODP	<b>SN</b>							
	SFA 1.6/.8								

**AC Induction Motor Performance Data**

Record # 44897

Typical performance - not guaranteed values

Winding: 34WGS936-R001		Type: 3416M	Enclosure: OPEN		
<b>Nameplate Data</b>			<b>460 V, 60 Hz: High Voltage Connection</b>		
Rated Output (HP)	.33	Full Load Torque	1.007 LB-FT		
Volts	230/460	Start Configuration	direct on line		
Full Load Amps	1.2/.6	Breakdown Torque	4.56 LB-FT		
R.P.M.	1725	Pull-up Torque	3.18 LB-FT		
Hz	60 Phase	3	Locked-rotor Torque	3.82 LB-FT	
NEMA Design Code	B	KVA Code	L	Starting Current	4.74 A
Service Factor (S.F.)	1.35	No-load Current	0.445 A		
NEMA Nom. Eff.	73.4	Power Factor	66	Line-line Res. @ 25°C	43.915 Ω
Rating - Duty	40C	AMB-CONT	Temp. Rise @ Rated Load	18°C	
S.F. Amps	1.5/.7	Temp. Rise @ S.F. Load	24°C		
		Locked-rotor Power Factor	58		
		Rotor inertia	0.0381 LB-FT <sup>2</sup>		

**Load Characteristics 460 V, 60 Hz, 0.33 HP**

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	30	45	57	66	73	78	75
Efficiency	55.9	69.8	74.8	76.7	76.9	76.2	76.6
Speed	1785.9	1772.3	1758.5	1743.2	1726.8	1709.1	1720
Line amperes	0.458	0.497	0.55	0.617	0.696	0.787	0.732

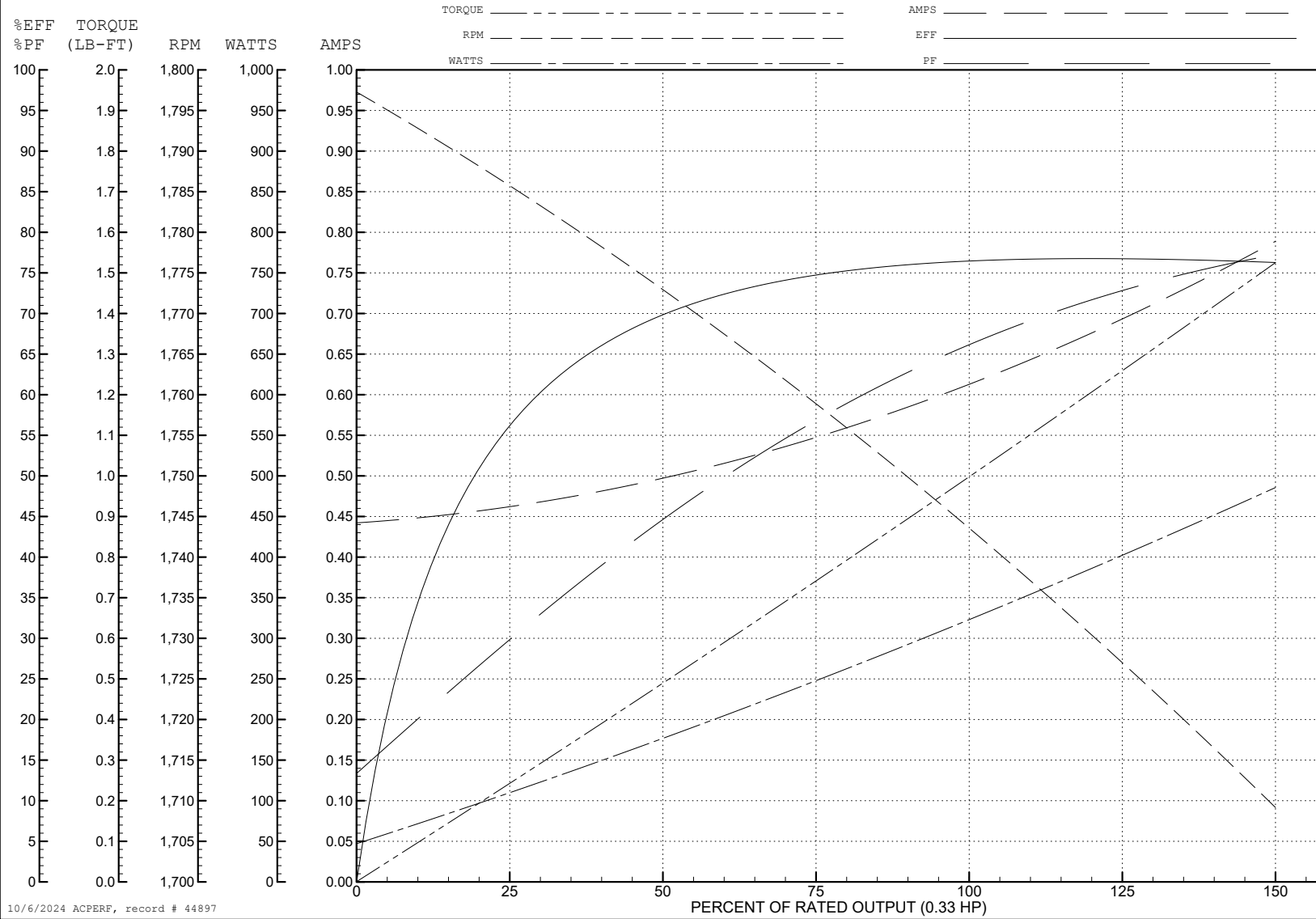
ABB Motors and Mechanical Inc.

WINDING # 34WGS936

0.33 HP 3 PH 60 HZ 1725 RPM 460 V 3416M

Typical performance - not guaranteed values.

TORQUES (LB-FT) : PO=4.56 PU=3.18 LR=3.82 LRA=4.74



10/6/2024 ACPERF, record # 44897

**AC Induction Motor Performance Data**

Record # 49383

Typical performance - not guaranteed values

<b>Winding: 34WGS936-R001</b>		<b>Type: 3416M</b>		<b>Enclosure: OPEN</b>	
<b>Nameplate Data</b>			<b>230 V, 60 Hz: Low Voltage Connection</b>		
<b>Rated Output (HP)</b>	.33	<b>Full Load Torque</b>	1.007 LB-FT		
<b>Volts</b>	230/460	<b>Start Configuration</b>	direct on line		
<b>Full Load Amps</b>	1.2/.6	<b>Breakdown Torque</b>	4.56 LB-FT		
<b>R.P.M.</b>	1725	<b>Pull-up Torque</b>	3.18 LB-FT		
<b>Hz</b>	60 Phase	3	<b>Locked-rotor Torque</b>	3.82 LB-FT	
<b>NEMA Design Code</b>	B	<b>KVA Code</b>	L	<b>Starting Current</b>	9.48 A
<b>Service Factor (S.F.)</b>	1.35		<b>No-load Current</b>	0.89 A	
<b>NEMA Nom. Eff.</b>	73.4	<b>Power Factor</b>	66	<b>Line-line Res. @ 25°C</b>	10.979 Ω
<b>Rating - Duty</b>	40C AMB-CONT		<b>Temp. Rise @ Rated Load</b>	18°C	
<b>S.F. Amps</b>	1.5/.7		<b>Temp. Rise @ S.F. Load</b>	24°C	
			<b>Locked-rotor Power Factor</b>	58	
			<b>Rotor inertia</b>	0.0381 LB-FT <sup>2</sup>	

**Load Characteristics 230 V, 60 Hz, 0.33 HP**

<b>% of Rated Load</b>	<b>25</b>	<b>50</b>	<b>75</b>	<b>100</b>	<b>125</b>	<b>150</b>	<b>S.F.</b>
<b>Power Factor</b>	30	45	57	66	73	78	75
<b>Efficiency</b>	55.9	69.8	74.8	76.7	76.9	76.2	76.6
<b>Speed</b>	1785.9	1772.3	1758.5	1743.2	1726.8	1709.1	1720
<b>Line amperes</b>	0.916	0.994	1.1	1.234	1.392	1.574	1.464

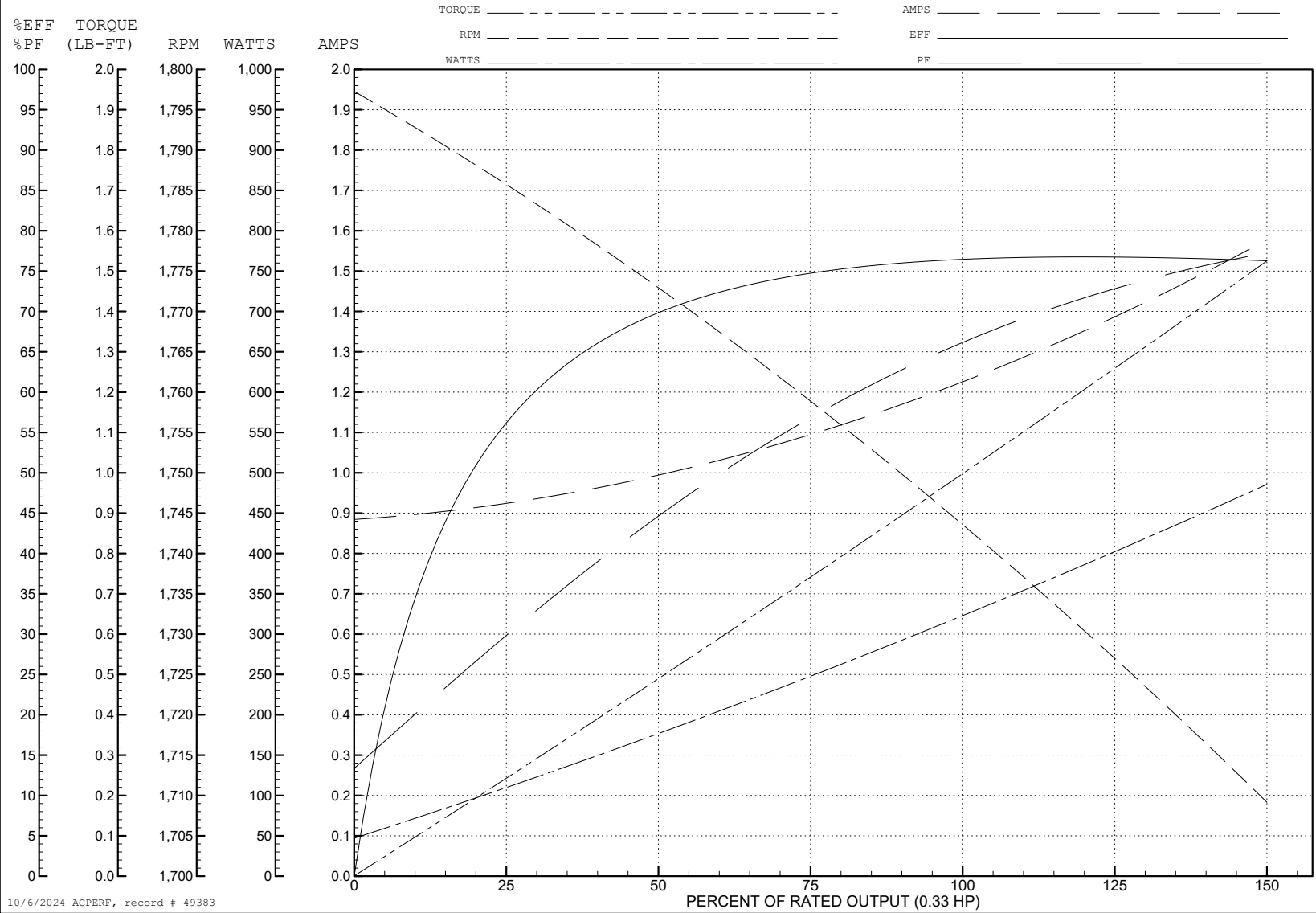
ABB Motors and Mechanical Inc.

WINDING # 34WGS936

0.33 HP 3 PH 60 HZ 1725 RPM 230 V 3416M

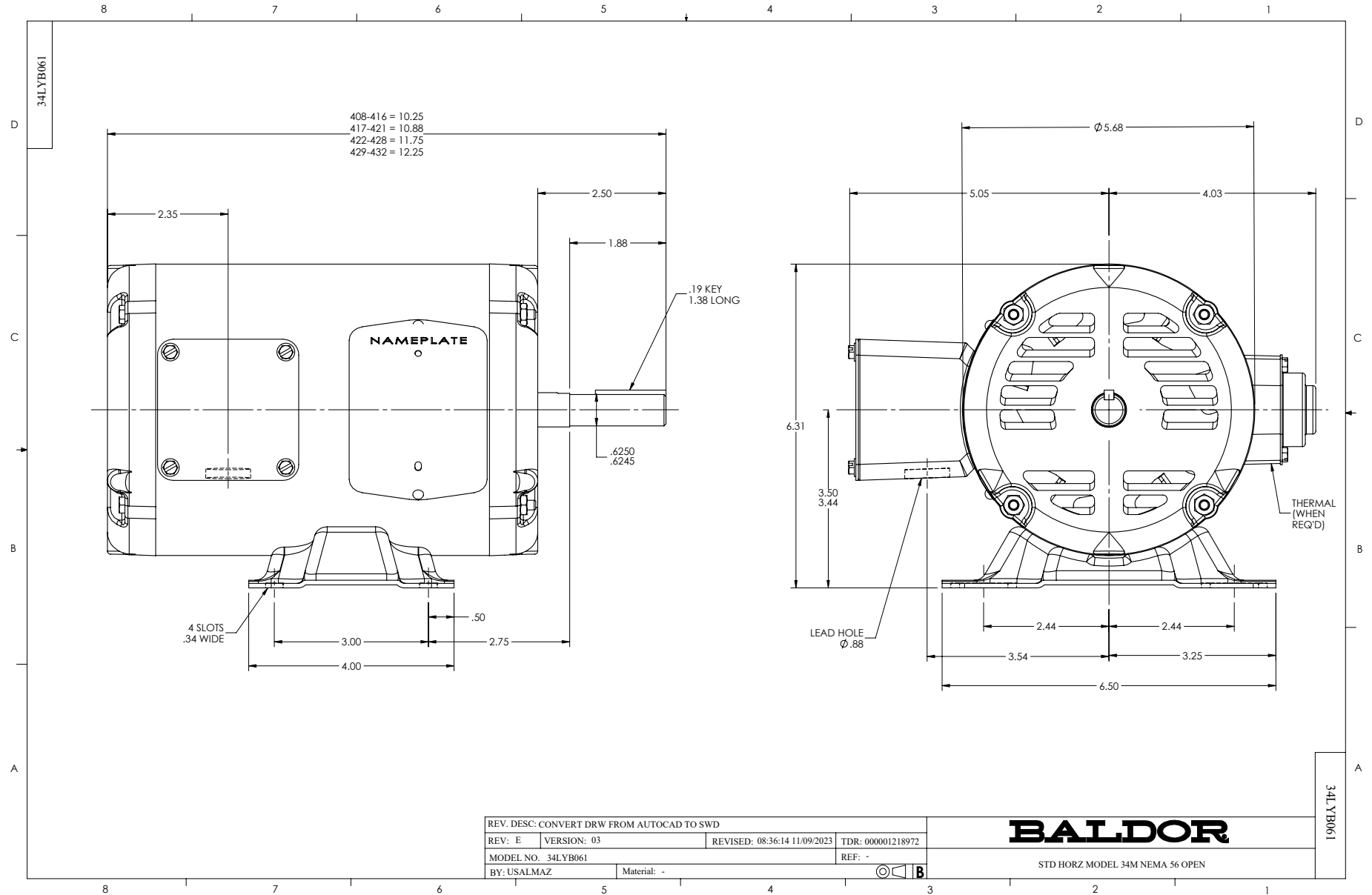
Typical performance - not guaranteed values.

TORQUES (LB-FT): PO=4.56 PU=3.18 LR=3.82 LRA=9.48



10/6/2024 ACPERF, record # 49383





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.

CD0005

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