

BALDOR® • RELIANCE 

Product Information Packet

VEM31107

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

| Part Detail | | | | | | | |
|-------------|--------|-------------|------------|-------------|--------|---------------|------------|
| Revision: | G | Status: | PRD/A | Change #: | | Proprietary: | No |
| Type: | AC | Elec. Spec: | 34WGS937 | CD Diagram: | CD0005 | Mfg Plant: | |
| Mech. Spec: | 34F012 | Layout: | 34LYF012 | Poles: | 02 | Created Date: | 10-03-2014 |
| Base: | N | Eff. Date: | 07-26-2021 | Leads: | 9#18 | | |

| Specs | | | |
|---------------------------------|-------------------------|--------------------------------|--------------------|
| Catalog Number: | VEM31107 | Inverter Code: | Not Inverter |
| Enclosure: | OPEN | KVA Code: | P |
| Frame: | 56C | Lifting Lugs: | No Lifting Lugs |
| Frame Material: | Steel | Locked Bearing Indicator: | Locked Bearing |
| Output @ Frequency: | .500 HP @ 60 HZ | Motor Lead Quantity/Wire Size: | 9 @ 18 AWG |
| Synchronous Speed @ Frequency: | 3600 RPM @ 60 HZ | Motor Lead Exit: | Ko Box |
| Voltage @ Frequency: | 230.0 V @ 60 HZ | Motor Lead Termination: | Flying Leads |
| | 460.0 V @ 60 HZ | Motor Type: | 3416M |
| XP Class and Group: | None | Mounting Arrangement: | F1 |
| XP Division: | Not Applicable | Power Factor: | 78 |
| Agency Approvals: | C UR US ENERGY | Product Family: | General Purpose |
| Auxillary Box: | No Auxillary Box | Pulley End Bearing Type: | Ball |
| Auxillary Box Lead Termination: | None | Pulley Face Code: | C-Face |
| Base Indicator: | No Mounting | Pulley Shaft Indicator: | Standard |
| Bearing Grease Type: | Polyrex EM (-20F +300F) | Rodent Screen: | None |
| Blower: | None | RoHS Status: | ROHS COMPLIANT |
| Current @ Voltage: | .800 A @ 460.0 V | Shaft Extension Location: | Pulley End |
| | 1.600 A @ 230.0 V | Shaft Ground Indicator: | No Shaft Grounding |

| | | | |
|---------------------------------------|---------------------------|------------------------------------|---------------------|
| | 1.900 A @ 208.0 V | Shaft Rotation: | Reversible |
| Design Code: | B | Shaft Slinger Indicator: | No Slinger |
| Drip Cover: | Drip Cover | Speed Code: | Single Speed |
| Duty Rating: | CONT | Motor Standards: | NEMA |
| Electrically Isolated Bearing: | Not Electrically Isolated | Starting Method: | Direct on line |
| Feedback Device: | NO FEEDBACK | Thermal Device - Bearing: | None |
| Front Face Code: | Drip Cover Mounting | Thermal Device - Winding: | None |
| Front Shaft Indicator: | None | Vibration Sensor Indicator: | No Vibration Sensor |
| Heater Indicator: | No Heater | Winding Thermal 1: | None |
| Insulation Class: | B | Winding Thermal 2: | None |

| Nameplate NP3155L | | | | | | | | | | |
|-------------------|--------------|--|------|----|-----|------|--|----------------|-----|---|
| CAT.NO. | VEM31107 | | | | | | | | | |
| SPEC. | 34F012S937G1 | | | | | | | | | |
| 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 | | | | | | | | USABLE AT 208V | 1.9 | |
| DE | 6203 | | | | ODE | 6203 | | | | |
| ENCL | OPEN | | SN | | | | | | | |
| | SFA 1.8/9 | | | | | | | | | |

| Parts List | | |
|---------------|--|----------|
| Part Number | Description | Quantity |
| SA288050 | SA 34F012S937G1 | 1.000 EA |
| RA274251 | RA 34F012S937G1 | 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 |
| 34EP3210A03SP | 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 |
| 34FH4000A11 | DRIP COVER, STAMPED,PRIMER | 1.000 EA |
| 51XW1032A06 | 10-32 X .38, TAPTITE II, HEX WSHR SLTD S | 3.000 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 |
| MG1000Y03 | MUNSELL 2.53Y 6.70/ 4.60, GLOSS 20, | 0.014 GA |
| 85XU0407S04 | 4X1/4 U DRIVE PIN STAINLESS | 2.000 EA |
| HA3100A12 | THRUBOLT 10-32 X 7.375 | 4.000 EA |
| LC0005E01 | CONN.DIA./WARNING LABEL (LC0005/LB1119N) | 1.000 EA |
| NP3155L | ALUM SUPER-E UL CSA CC "SEMS" | 1.000 EA |
| 35PA1066 | PKG GRP, PRINT PK1008A06 | 1.000 EA |

| Parts List (continued) | | |
|-------------------------------|---|-----------------|
| Part Number | Description | Quantity |
| MN416A01 | TAG-INSTAL-MAINT no wire (2100/bx) 4/22 | 1.000 EA |
| PK3083 | STYROFOAM PACKING CRADLE | 1.000 EA |
| PK3088 | MICROFOAM, 8"X"8 PERF. SHEETS | 1.000 EA |

AC Induction Motor Performance Data

Record # 47468

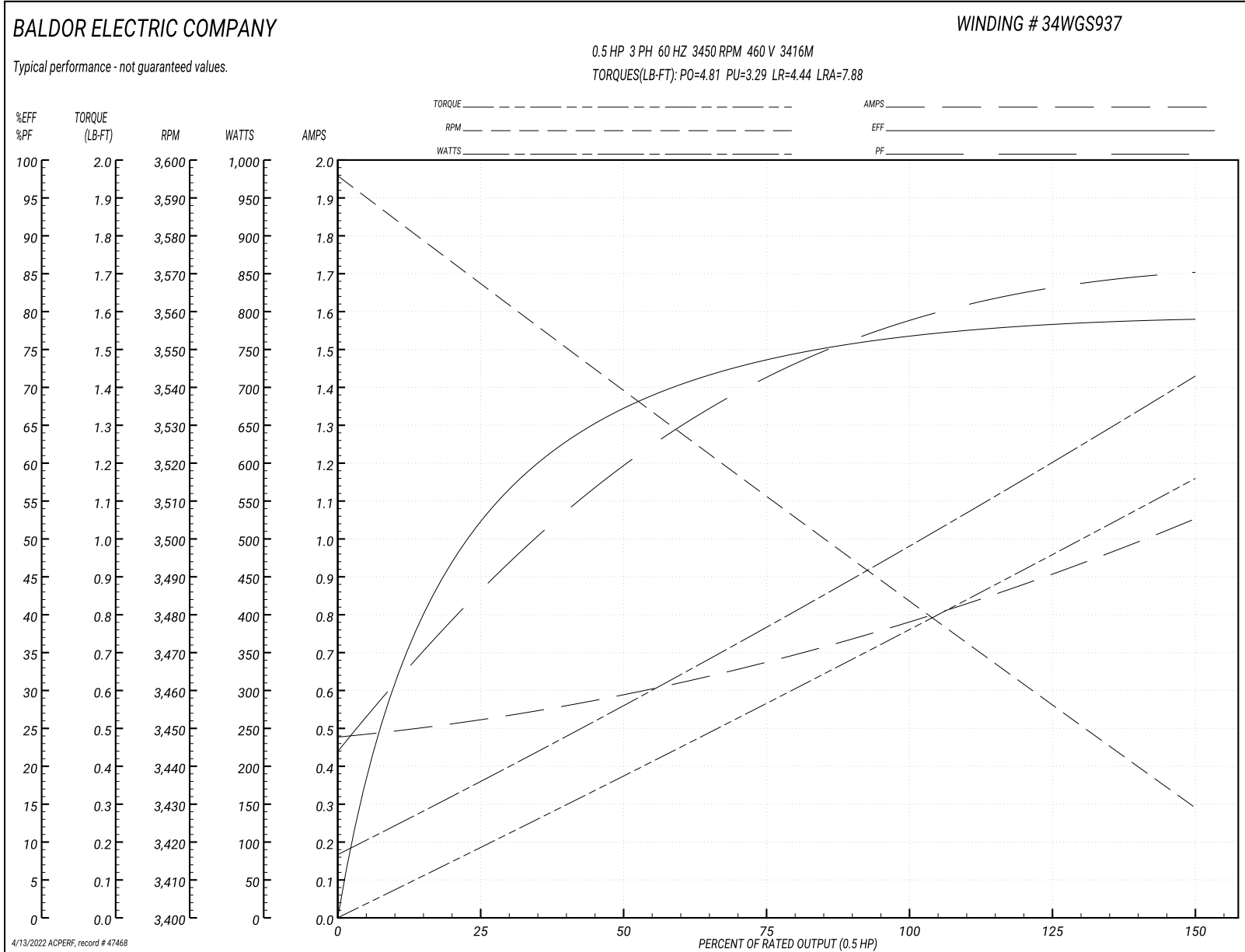
Typical performance - not guaranteed values

| 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 | Locked-rotor Torque | 4.44 LB-FT | | |
| NEMA Design Code | B | Starting Current | 7.88 A | | |
| Service Factor (S.F.) | 1.25 | No-load Current | 0.48 A | | |
| NEMA Nom. Eff. | 73.4 | 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 ² | | |

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 |

Performance Graph at 460V, 60Hz, 0.5HP Typical performance - Not guaranteed values



AC Induction Motor Performance Data

Record # 49386

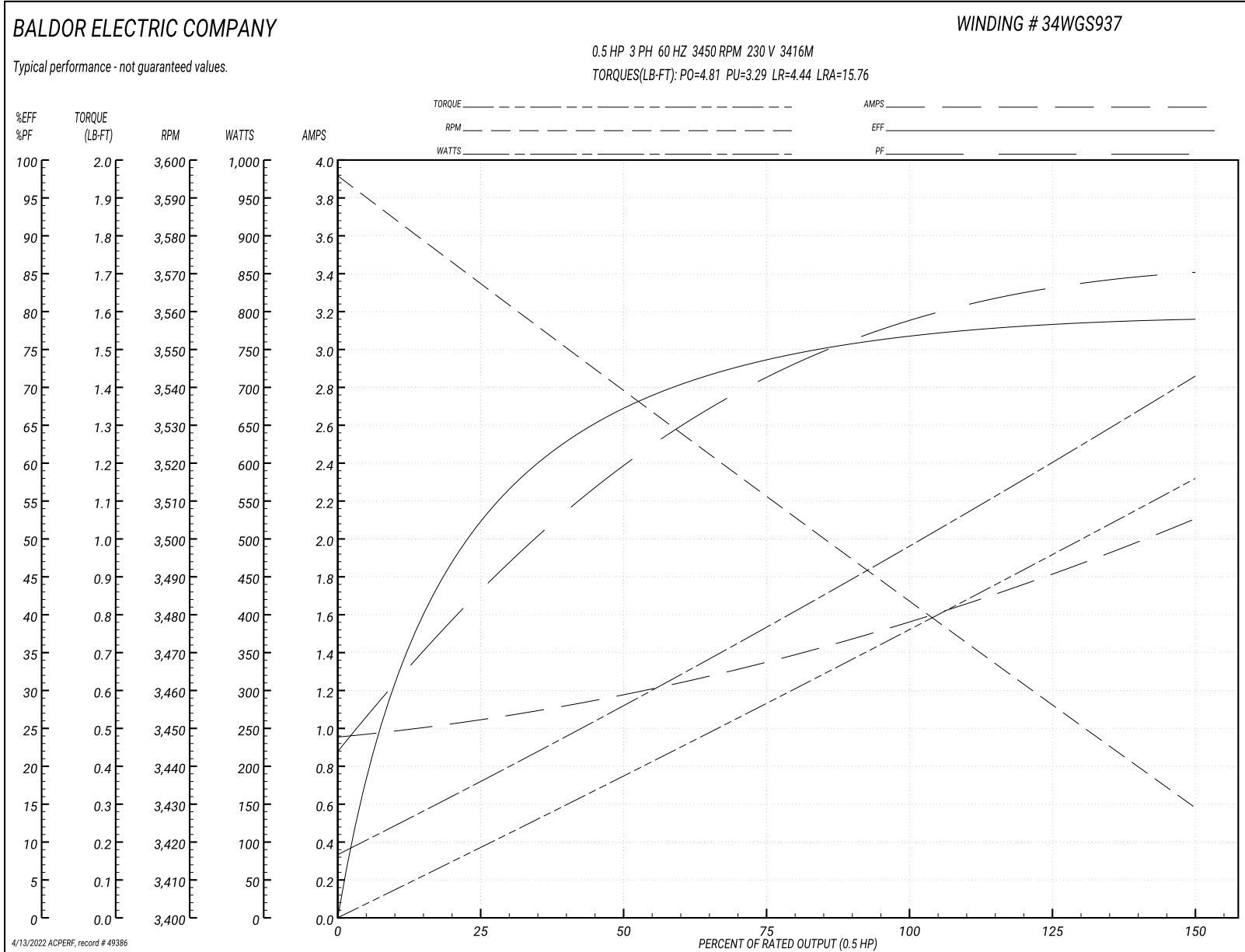
Typical performance - not guaranteed values

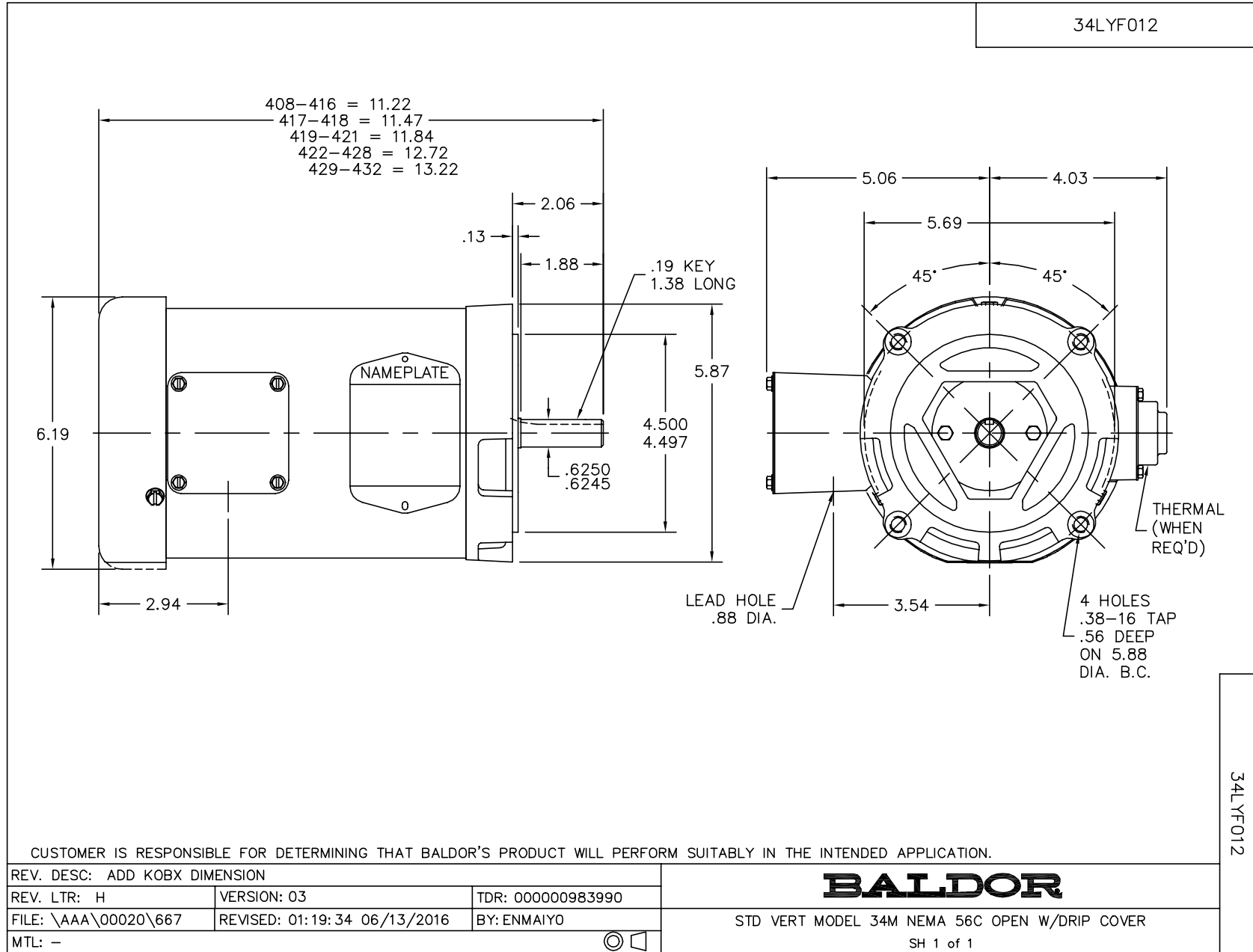
| Winding: 34WGS937-R002 | | Type: 3416M | | Enclosure: OPEN | |
|-------------------------------|--------------|----------------------------|--|------------------------------|---------|
| Nameplate Data | | | 230 V, 60 Hz: High Voltage Connection | | |
| Rated Output (HP) | .5 | Full Load Torque | 0.767 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. @ 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 ² | |

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 |

Performance Graph at 230V, 60Hz, 0.5HP Typical performance - Not guaranteed values





CD0005

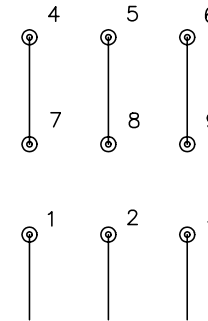


LOW VOLTAGE
(2Y)



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

90000

FILE: AAA00005140

MDL: -

MTL: -

BALDOR ELECTRIC Co.

3PH, DV, 9 LEADS

CD0005