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# Product Information Packet

# EM50454L-2340

## 450HP,1788RPM,3PH,60HZ,5010,TEFC,F1

| Part Detail | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Revision:** | H | **Status:** | PRD/A | **Change #:** | | **Proprietary:** | No |
| **Type:** | AC | **Prod. Type:** | A50192M | **Elec. Spec:** | A50WG4851 | **CD Diagram:** | 416820-004 |
| **Enclosure:** | TEFC | **Mfg Plant:** | | **Mech. Spec:** | | **Layout:** | 616159-804 |
| **Frame:** | 5010 | **Mounting:** | F1 | **Poles:** | 04 | **Created Date:** | 02-11-2014 |
| **Base:** | | **Rotation:** | R | **Insulation:** | F | **Eff. Date:** | 08-11-2016 |
| **Leads:** | 6#6 4824-6-P | | | | | **Replaced By:** | |
| **Literature:** | | **Elec. Diagram:** | | | | | |

## Nameplate NP3131

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **ENERGY EFFICIENT** | | | **SERIAL NO.** | | | | | | | | |
| **CATALOG NO.** | EM50454L-2340 | | | **SPEC NO.** | KGPEM50454L-2340 | | | | | | |
| **HP** | 450 | **RPM** | 1788 | **FRAME** | 5010 | **HZ** | 60 | **SERVICE FACTOR** | 1.15 | | |
| **VOLTS** | 2300/4000 | **F.L. AMPS** | 102/58.8 | **PHASE** | 3 | **TYPE** | | **ENCL.** | TEFC | | |
| **F.L.EFF.** | 95.5 | **F.L.P.F.** | 86 | **MOTOR WEIGHT** | 4860 | | | **INSUL.CLASS** | F | | |
| **DESIGN** | - | **NEMA CODE** | F | **MAX AMBIENT** | 40 | **DUTY** | CONT | | | | |
| | 115 | **C RISE/** | RES | **AT** | | **HP** | 517 | **AMPS** | 118/67.9 | | |
| **D.E. BRG.** | 110BC03J30X | | | **O.D.E. BRG.** | 110BC02J30X | | | | | | |
| **WDG. THERMAL** | 100 OHM | **QTY.** | 6 | **BRG. THERMAL** | | | | | | | |
| **LUBE** | POLYREX EM | | | | | | | | | | |
| **VOLTS** | 120/240 | **AMPS** | 2.9/1.46 | **WATTS** | 350/350 | **QTY** | 2 | | | | |
| **CERTIFICATE OF COMP NO.** | LR52580 | | | | | | | | | | |
| | | | | | | | | | | | |
| | NEMA NOM EFF = 95.4% | | | | | | | | | | |
| | | | | | | | | | | | |

## Parts List

| Part Number | Description | Quantity |
|---|---|---|
| SA276842 | SA KGPEM50454L-2340 | 1.000 EA |
| RA263400 | RA KGPEM50454L-2340 | 1.000 EA |
| 482406006P | 06 AWG,UL3499,BLACK,7.5kV,BELDEN#37506 | 41.000 FT |
| 606800016D | RTD LAC | 7.000 EA |
| 069306003B | CABLE TIE 14 T&B L14509C | 9.000 EA |
| 482413004Y | #4 SLEEVING (GREEN) PER FT | 12.000 FT |
| 424731025P | HEATER LAC | 2.000 EA |
| 034692001AB | HCSPP 1/8" PLATED | 2.000 EA |
| 034692001AB | HCSPP 1/8" PLATED | 2.000 EA |
| 419512012S | SHRINK MKR, | 1.000 EA |
| 034017013AB | LCKW 5/16 STD. PLATED | 4.000 EA |
| 034017013AB | LCKW 5/16 STD. PLATED | 4.000 EA |
| 616156056R | G30-GP CAP 6222 LOCKED/CONVERSION ENG | 1.000 EA |
| 032018004BK | HHCS 5/16-18X1/2 PLATED | 4.000 EA |
| 035051022AA | BBLCW W-22 | 1.000 EA |
| 609233018A | G30 CAP 609233001WCA - ENGLISH | 1.000 EA |
| 616145012A | THERMAL BARRIER, LAC | 1.000 EA |
| T-0346-24 | HALF KEY BALANCE 004600044AK | 1.000 EA |
| 415915007C | GASK, LAC | 1.000 EA |
| 036150030NA | SKHD SSCR;STAT;BT-G508 | 2.000 EA |
| 034690004AB | PPLG 1/2" PLATED | 4.000 EA |
| 034690004AB | PPLG 1/2" PLATED | 2.000 EA |
| 034690004AB | PPLG 1/2" PLATED | 2.000 EA |
| 034690002AB | "unbulked" PPLG 1/4" PLTD. | 4.000 EA |

## Parts List (continued)

| Part Number | Description | Quantity |
|---|---|---|
| 034691008AB | 1 1/2 PIPE PLUG- BIN STOCK | 2.000 EA |
| 807474042A | BRACKET BE GP 6322 VIB PROV. ENGLISH | 1.000 EA |
| 032018036CK | HHCS 3/8-16X4-1/2 PLTD. | 4.000 EA |
| 035000001AB | ALFTG CAT.NO.1627-B PLTD | 1.000 EA |
| 032018036CK | HHCS 3/8-16X4-1/2 PLTD. | 4.000 EA |
| 035000001AB | ALFTG CAT.NO.1627-B PLTD | 1.000 EA |
| 032018004AK | HHCS 1/4-20X1/2 PLATED | 4.000 EA |
| 710607005WPA | THRM BARRIER BRKT, LAC | 1.000 EA |
| 034530040EB | PP NIPP DE GRS DR | 1.000 EA |
| 034630002AJ | PP CPLG ODE | 1.000 EA |
| 034630005AJ | PP CPLG ODE GRS DR | 1.000 EA |
| 034017014AB | LCKW 3/8 STD. PLATED | 4.000 EA |
| 406673001E | CAP PLUG | 2.000 EA |
| 032130022HB | HXSCHCS BE BRKT- b/s 4/11/14 | 4.000 EA |
| 034630002AJ | PP CPLG ODE | 1.000 EA |
| 034630005AJ | PP CPLG ODE GRS DR | 1.000 EA |
| 034017014AB | LCKW 3/8 STD. PLATED | 4.000 EA |
| 406673001E | CAP PLUG | 2.000 EA |
| 032130022HB | HXSCHCS BE BRKT- b/s 4/11/14 | 4.000 EA |
| 034017014AB | LCKW 3/8 STD. PLATED | 4.000 EA |
| 032018008CK | HHCS 3/8-16X1L PLATED | 4.000 EA |
| 034000012AB | WSHR 1/4 STD. PLATED | 4.000 EA |
| 415915007B | GASK, 46" LAC | 1.000 EA |
| 705500324X | TERMINAL BOX WELDMENT 19X19X14 | 1.000 EA |

| | | |
|---|---|---|
| 705500324F | GASK, TERM BOX, LAC, FRONT COVER | 1.000 EA |
| 705500324D | CVR T/BOX FRONT | 1.000 EA |
| 705500324G | GASK, TERM BOX, LAC, BOTTOM COVER | 1.000 EA |
| 705500324E | BOTTOM COVER | 1.000 EA |
| 033519006MC | SHWHTS, 5/16-18 THREAD CUTTING | 30.000 EA |
| 418199008B | N/P | 1.000 EA |
| 032130012HB | HXSCHCS BE BRKT | 1.000 EA |
| MP1011A01 | 4 MIL X 12FT X 100 FT POLYETHYLENE | 0.100 RL |
| 034530064BB | P/NIP 1/4X8 PLATED | 1.000 EA |
| 035000001F | RELIEF FTG. G/DRN | 1.000 EA |
| 035000001F | RELIEF FTG. G/DRN | 1.000 EA |
| 034017012AB | LCKW 1/4 STD. PLATED | 4.000 EA |
| 415045002D | SLGR - 440 | 1.000 EA |
| 034600007AB | RED.BSHG.GRS/DRN | 1.000 EA |
| 034600007AB | RED.BSHG.GRS/DRN | 1.000 EA |
| 415916013L | T/BLK S/HTR LAC | 2.000 EA |
| 807470006A | AIR DEFL B/E BRKT | 1.000 EA |
| 034017014AB | LCKW 3/8 STD. PLATED | 4.000 EA |
| 419512002A | ID TAG, ROLL LAC | 0.002 RL |
| 041009000FB | TERMINAL LUG | 6.000 EA |
| 041009038G | TERMINAL LUG | 6.000 EA |
| 001767000CC | N/P | 1.000 EA |
| 000692000SC | N/P | 5.000 EA |
| 482406006P | 06 AWG,UL3499,BLACK,7.5kV,BELDEN#37506 | 12.000 FT |
| 034690001AB | SQHDPLG, COND | 2.000 EA |
| 807473001XBB | GRILL, GP - FAN COVER, G30/5000, ENGLISH | 1.000 EA |

| | | |
|---|---|---|
| 807468084A | BRACKET FE GP | 1.000 EA |
| 033102013AB | NUT 5/16-18 PLATED | 4.000 EA |
| 807473044A | FAN COVER ODE | 1.000 EA |
| 034530048EB | PP NIPP ODE GRS DR | 1.000 EA |
| 034530072BB | PIPE NIPPLE,DE - 440-BS | 1.000 EA |
| 034000016AB | WSHR .531ID 1.062OD .095 | 4.000 EA |
| 417526016A | BRG SPACER | 1.000 EA |
| 032375004HB | SLRHMS 8-32X1/2 PLATED | 2.000 EA |
| 415915001A | GASK, LAC | 7.000 FT |
| 482413004Y | #4 SLEEVING (GREEN) PER FT | 30.000 FT |
| 482415000A | GREASE (MOBIL POLYREX EM) | 2.652 LB |
| 034186031GA | KEY FE FAN - G512 | 1.000 EA |
| 049843019E | PLTE NNN 049843049WCA | 1.000 EA |
| 065774015A | TBRD 180-280 | 1.000 EA |
| 075458000AF | CONDUIT BOX | 1.000 EA |
| 415917004A | N/P | 1.000 EA |
| PK4110A11 | SHAFT BLOCKING | 1.000 EA |
| PK5006A09 | WOOD BASE SHIPPING BASE | 1.000 EA |
| 482413003Y | #3 SLEEVING (GREEN) | 3.000 FT |
| 032018006AK | HHCS 1/4-20X3/4L PLATED | 4.000 EA |
| 034530040HB | P/NIP 1-1/2X5L PLATED-b/s | 1.000 EA |
| 049843019G | PLTE 320 049843048WCA | 1.000 EA |
| 071421043G | C/BOX WDG RTD | 1.000 EA |
| 032375005HB | RHMS 8-32X5/8L PLATED | 4.000 EA |
| 032018007CK | HHCS 3/8-16X7/8L PLATED | 4.000 EA |
| 034530040HB | P/NIP 1-1/2X5L PLATED-b/s | 1.000 EA |

| | | |
|---|---|---|
| 403938056A | GASK, LAC | 1.000 EA |
| 403938055A | GASK, TBOX MTG, LAC | 1.000 EA |
| 032018014DK | HHCS 1/2-13X1-3/4 PLTD | 4.000 EA |
| 041009003F | TERMINAL LUG | 4.000 EA |
| 032018005CK | HHCS; 3/8X5/8 | 4.000 EA |
| 705547084R | FAN, LAC | 1.000 EA |
| 403938027E | GASK, LAC | 1.000 EA |
| 041009003D | T & B LUG (A116) | 18.000 EA |
| 803076025A | SPACER TERM.BOX | 1.000 EA |
| 032018016DK | HHCS 1/2-13X2L PLTD. | 4.000 EA |
| 709239013B | AIR INLT BAFF FC -13A | 1.000 EA |
| 004793040A | BUTT SPLICE SPHTR | 2.000 EA |
| 419512012SG | LABELS, HEAT SHRINK SET | 1.000 EA |
| 419512012SG | LABELS, HEAT SHRINK SET | 1.000 EA |
| 402558004A | BRDRN- added to b/s 5/31 | 1.000 EA |
| 419306099AG | N/P - MAKE IN ASSEMBLY | 1.000 EA |
| 419306099B | N/P - MAKE IN ASSEMBLY | 1.000 EA |
| 419306099A | N/P - MAKE IN ASSEMBLY | 1.000 EA |
| 034691004AB | 1/2 PIPE PLUG | 2.000 EA |
| 406673000F | PPLG | 1.000 EA |
| 406673000B | PPLG | 1.000 EA |
| 412027034A | SUPPORT(T.B.) - G512 | 1.000 EA |
| 415917001A | RTD TAG | 4.000 EA |
| 415916013C | T/BLK S/HTR LAC | 1.000 EA |
| 075459000A | C/BOX CVR W75459 | 1.000 EA |
| 032130006AB | HSHCS 1/4-20X3/4L PLTD. | 2.000 EA |

| | | |
|---|---|---|
| 065564000A | GASKET | 1.000 EA |
| 071422000A | C/BOX W 071422000 | 1.000 EA |
| 047993000B | GASKET LAC | 1.000 EA |
| 032130007AB | HXSCHCS C/B CVR-449 | 10.000 EA |
| 034180064LA | KEY DRV END EXT | 1.000 EA |
| NP3131 | "BALDOR ONLY" INDUSTRIAL MOTOR, SS, | 1.000 EA |
| 406255394A | N/P | 1.000 EA |
| 000692000EF | CAUTION LABEL | 1.000 EA |
| 482403000BVZ | WILCO NO. 789.201 Per Eng use MG1200G96- | 1.000 GA |
| 609911003A | NAMEPLATE SUPPORT | 1.000 EA |
| 033775004EA | DRSCR #6-1/4  304 S.S. | 10.000 EA |
| 000692000CL | N/P | 1.000 EA |
| 000692000FR | WARNING, HIGH VOLTAGE LABEL | 1.000 EA |
| 406255121B | N/P | 1.000 EA |
| 406991001SL | INSTRUCTION MANUAL | 1.000 EA |
| 412043012C | PLUG - 210 | 1.000 EA |
| LB1532 | BALDOR LABEL, 12.00 LONG X 2.00 HIGH | 2.000 EA |
| 032080006LB | 1/4 -20 X 3/4 HWHMS | 22.000 EA |
| 034000016AB | WSHR .531ID 1.062OD .095 | 4.000 EA |

| BALDOR -RELIANCE SALES ORDER | FRAME | HP | TYPE | PHASE | HERTZ | RPM |
|---|---|---|---|---|---|---|
| A50WG4851-R001 | 5010 | 450 | P | 3 | 60 | 1788 |

| VOLTS | AMPS | DUTY | AMB°C | INSUL | S.F. | NEMA DESIGN |
|---|---|---|---|---|---|---|
| 2300 / 4000 | 102 / 59 | CONT | 40 | F | 1.15 | --- |

| CODE LETTER | ENCL. | ROTOR WK$^2$ (lb-ft$^2$) | STATOR RES.@25°C OHMS (BETWEEN LINES) | TYPICAL DATA |
|---|---|---|---|---|
| F | TEFC | 173 | 0.22561 / 0.67682 | |

**PERFORMANCE**

| LOAD | HP | AMPERES | RPM | % POWER FACTOR | % EFFICIENCY |
|---|---|---|---|---|---|
| NO LOAD | 0 | 16.5 | 1800 | 5.2 | 0.0 |
| 1/4 | 113 | 21.7 | 1797 | 60.2 | 92.8 |
| 2/4 | 225 | 32.4 | 1795 | 78.6 | 95.3 |
| 3/4 | 338 | 45.0 | 1792 | 84.5 | 95.7 |
| 4/4 | 450 | 58.8 | 1788 | 86.3 | 95.5 |
| 5/4 | 563 | 74.0 | 1785 | 86.0 | 95.0 |
| 6/4 | 675 | 91.0 | 1780 | 84.6 | 94.4 |

**SPEED TORQUE**

| | RPM | TORQUE % FULL LOAD | TORQUE LB-FT | AMPERES |
|---|---|---|---|---|
| LOCKED ROTOR | 0 | 92 | 1218 | 351.9 |
| PULL UP | 72 | 82 | 1085 | 351.0 |
| BREAKDOWN | 1752 | 231 | 3046 | 181.4 |
| FULL LOAD | 1788 | 100 | 1321 | 58.8 |

AMPERES SHOWN FOR **4000** VOLT CONNECTION(S). IF OTHER VOLTAGE CONNECTIONS ARE AVAILABLE, THE AMPERES WILL VARY INVERSELY WITH THE VOLTAGE.

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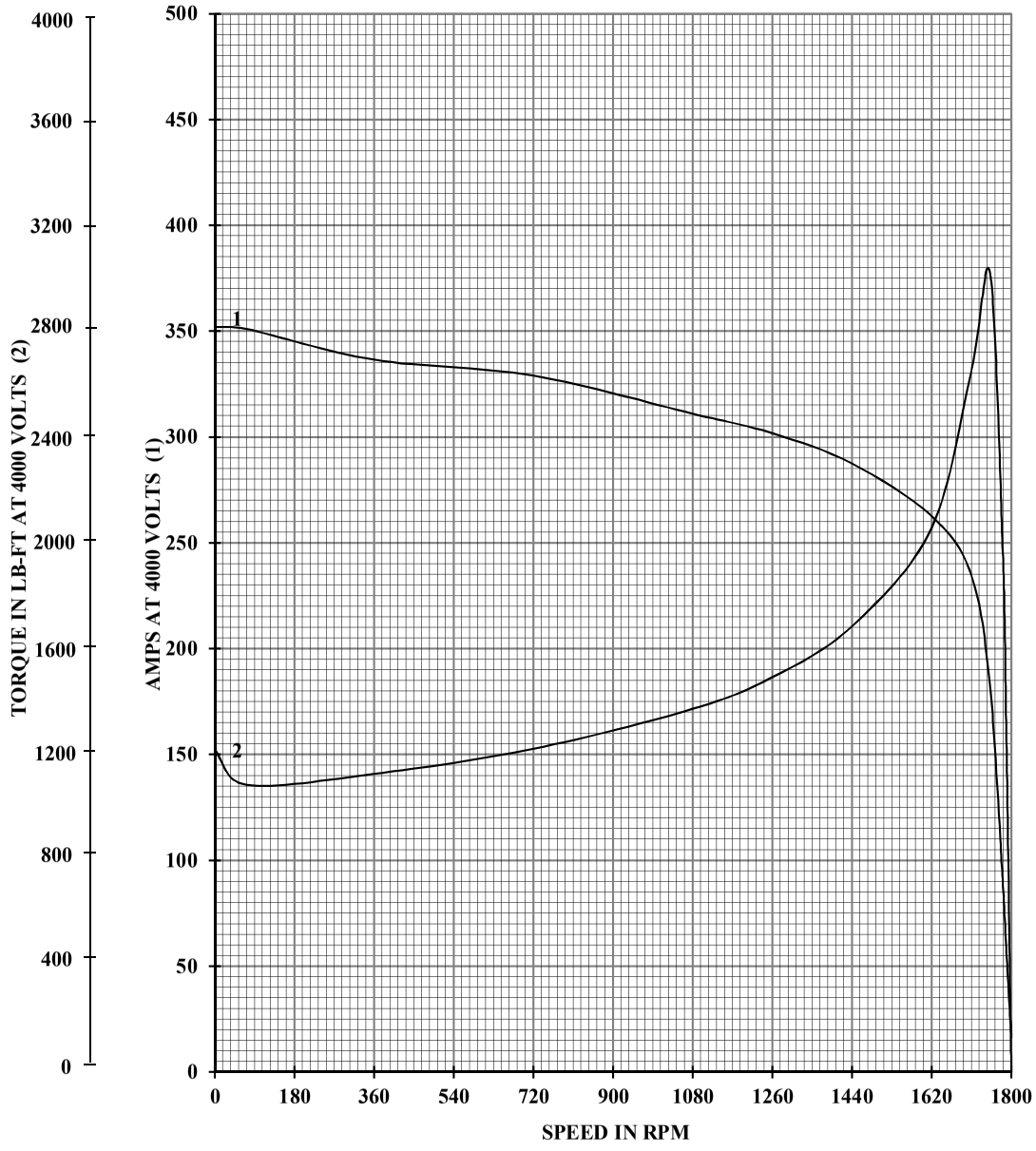
DR. BY C. Evans
CK. BY J. LaVallee
APP. BY B. LeRoy
DATE 2/3/2014

**A-C MOTOR PERFORMANCE**

VGPM454E4K
**SH 1 OF 7**
**ISSUE DATE: 2/3/2014**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| REL S.O. | A50WG4851-R001 | HERTZ | 60 | AMB°C | 40 | CODE LETTER | F |
| FRAME | 5010 | RPM | 1788 | INSUL | F | ENCLOSURE | TEFC |
| HP | 450 | VOLTS | 2300 / 4000 | S.F. | 1.15 | STATOR RES.@25°C | 0.22561 / 0.67682 |
| TYPE | P | AMPS | 102 / 59 | NEMA DESIGN | --- | OHMS (BETWEEN LINES) | |
| PHASE | 3 | DUTY | CONT | ROTOR WK² (lb-ft²) | 173 | TYPICAL DATA | |




AMPERES SHOWN FOR **4000** VOLT CONNECTION, IF OTHER VOLTAGE CONNECTIONS ARE AVAILABLE, THE AMPERES WILL VARY INVERSELY WITH THE VOLTAGE.

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DATE 2/3/2014

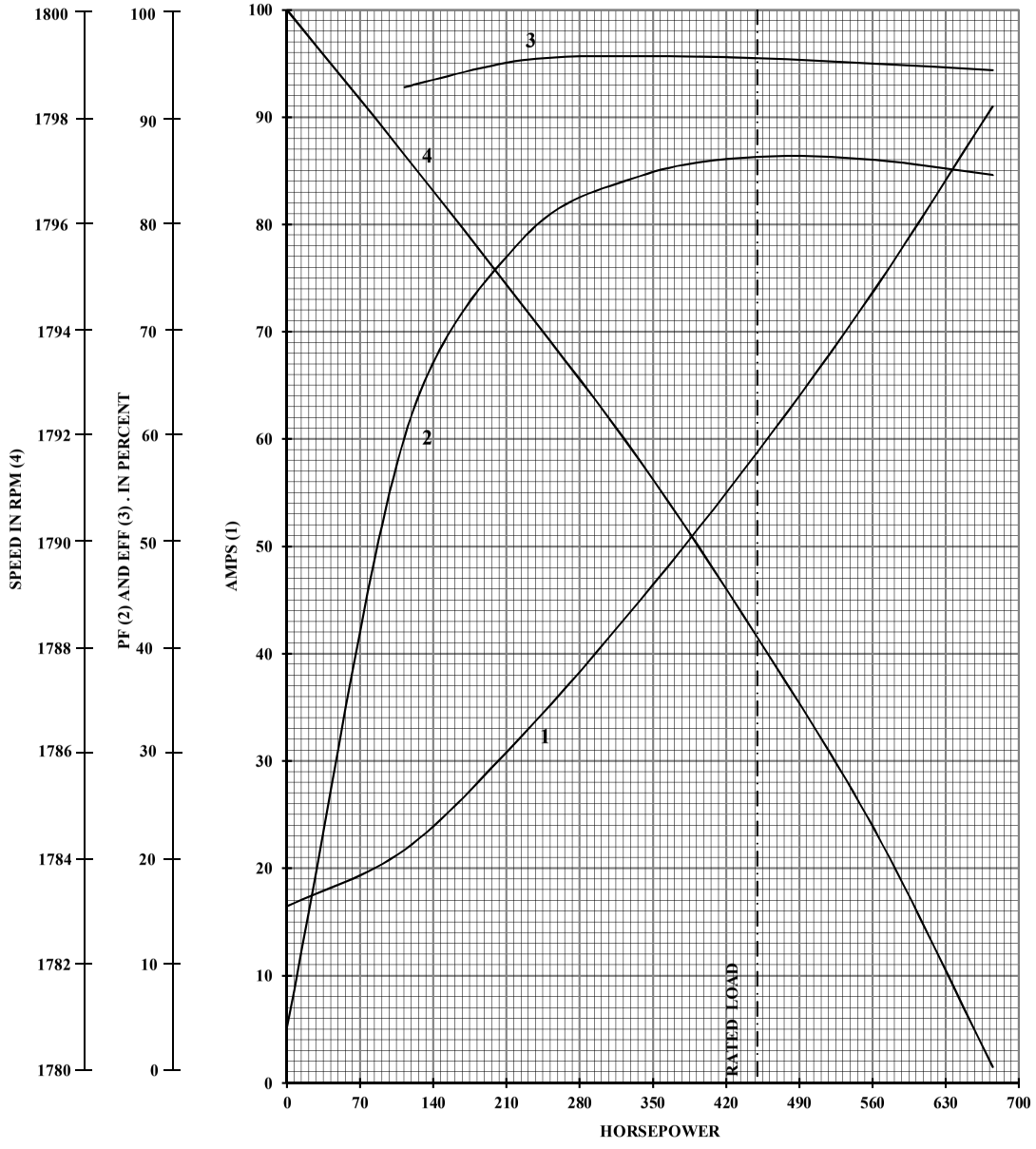
**A-C MOTOR PERFORMANCE CURVES**

VGPM454E4K

**SH 2 OF 7**

**ISSUE DATE: 2/3/2014**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| REL S.O. | A50WG4851-R001 | HERTZ | 60 | AMB°C | 40 | CODE LETTER | F |
| FRAME | 5010 | RPM | 1788 | INSUL | F | ENCLOSURE | TEFC |
| HP | 450 | VOLTS | 2300 / 4000 | S.F. | 1.15 | STATOR RES.@25°C | 0.22561 / 0.67682 |
| TYPE | P | AMPS | 102 / 59 | NEMA DESIGN | --- | | OHMS (BETWEEN LINES) |
| PHASE | 3 | DUTY | CONT | ROTOR WK$^2$ (lb-ft$^2$) | 173 | TYPICAL DATA | |




AMPERES SHOWN FOR **4000** VOLT CONNECTION, IF OTHER VOLTAGE CONNECTIONS ARE AVAILABLE, THE AMPERES WILL VARY INVERSELY WITH THE VOLTAGE.

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**A-C MOTOR PERFORMANCE CURVES**

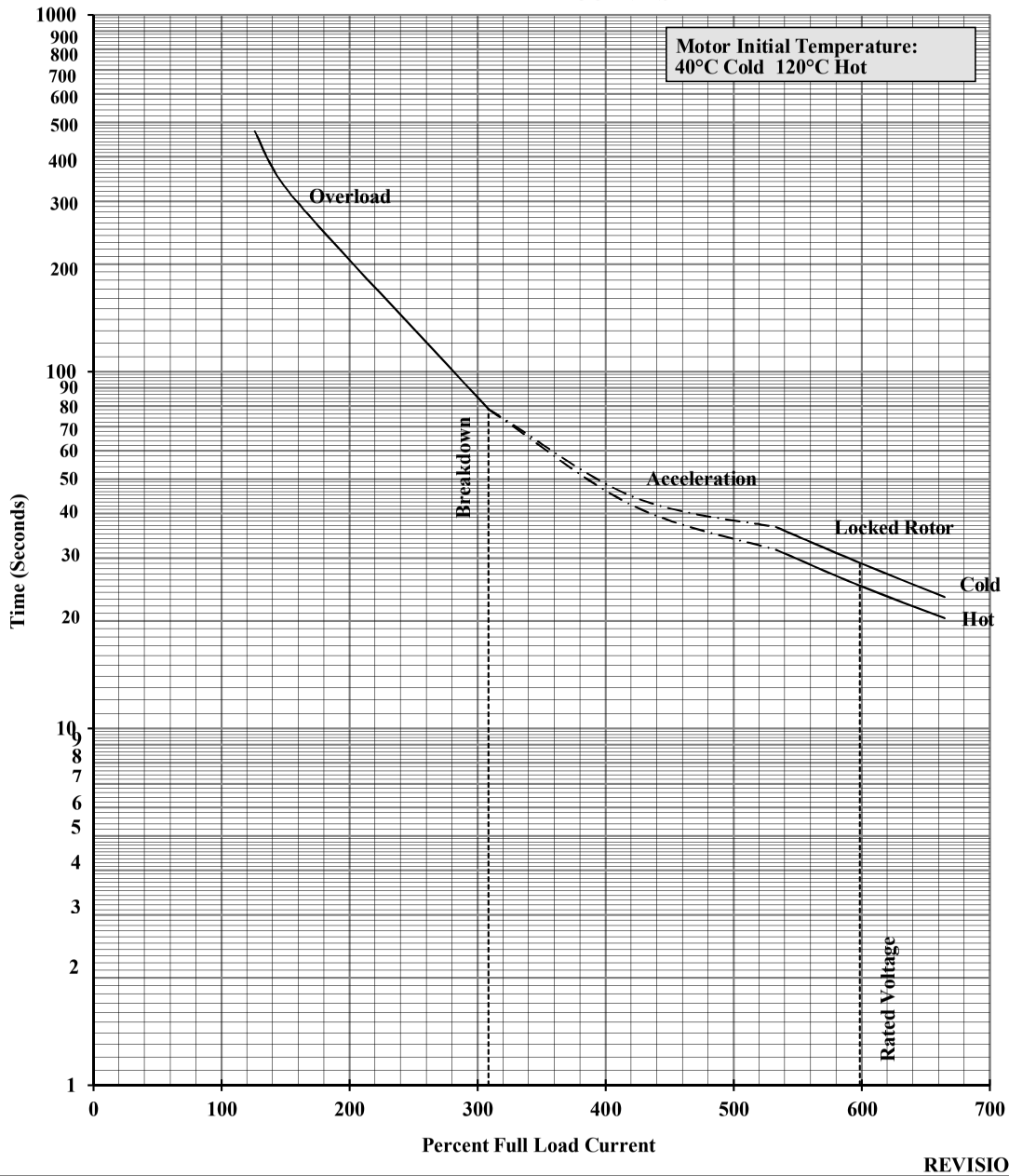
VGPM454E4K

**SH 3 OF 7**

**ISSUE DATE: 2/3/2014**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| REL S.O. | A50WG4851-R001 | HERTZ | 60 | AMB°C | 40 | CODE LETTER | F |
| FRAME | 5010 | RPM | 1788 | INSUL | F | ENCLOSURE | TEFC |
| HP | 450 | VOLTS | 2300 / 4000 | S.F. | 1.15 | STATOR RES.@25°C | 0.22561 / 0.67682 |
| TYPE | P | AMPS | 102 / 59 | NEMA DESIGN | --- | | OHMS (BETWEEN LINES) |
| PHASE | 3 | DUTY | CONT | ROTOR WK² (lb-ft²) | 173 | TYPICAL DATA | |

## THERMAL LIMIT CURVES




REVISION 0

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|---|---|---|---|
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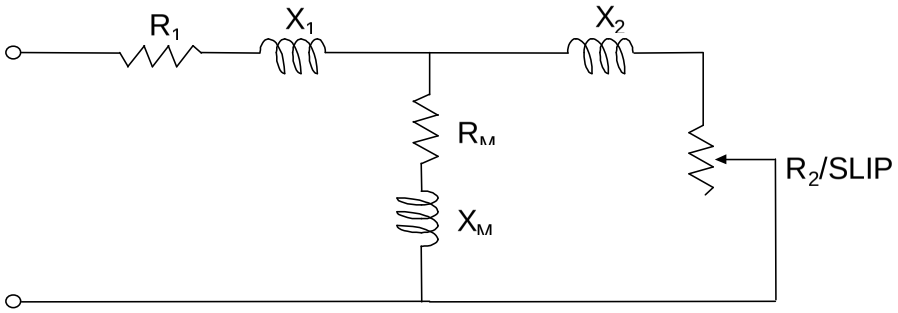
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| REL S.O. | A50WG4851-R001 | HERTZ | 60 | AMB°C | 40 | CODE LETTER | F |
| FRAME | 5010 | RPM | 1788 | INSUL | F | ENCLOSURE | TEFC |
| HP | 450 | VOLTS | 2300 / 4000 | S.F. | 1.15 | STATOR RES.@25°C | 0.22561 / 0.67682 |
| TYPE | P | AMPS | 102 / 59 | NEMA DESIGN | --- | OHMS (BETWEEN LINES) | |
| PHASE | 3 | DUTY | CONT | ROTOR WK² (lb-ft²) | 173 | TYPICAL DATA | |

# EQUIVALENT CIRCUIT DATA

(Per Unit, Per Phase)

| FULL LOAD | | | | LOCKED ROTOR | | | |
|---|---|---|---|---|---|---|---|
| $R_1$ | 0.00929 | $X_1$ | 0.08695 | $R_1$ | 0.00751 | $X_1$ | 0.07404 |
| $R_2$ | 0.00541 | $X_2$ | 0.14400 | $R_2$ | 0.01826 | $X_2$ | 0.06122 |
| $R_M$ | 0.06033 | $X_M$ | 2.86680 | $R_M$ | 0.20598 | $X_M$ | 2.72904 |
| BASE OHMS | | 47.66200 | | BASE VOLTS | | 2309 | |
| SC Time Constant | | 0.066 Sec | | X" = $X_S$ | | 0.13526 | |
| OC Time Constant | | 1.476 Sec | | X/R Ratio | | 12.13 | |




| Parallel Equivalent | | | |
|---|---|---|---|
| FL $R_M$' pu | 136.2867 | LR $R_M$' pu | 36.36318 |
| FL $X_M$' pu | 2.86807 | LR $X_M$' pu | 2.74459 |

$R_1$ = Stator dc resistance
$R_2$ = Rotor resistance
$R_M$ = Core loss resistance
SC = Short circuit
OC = Open circuit

$X_1$ = Stator leakage reactance
$X_2$ = Rotor leakage reactance
$X_M$ = Magnetizing reactance
FL = Full load
LR = Locked rotor

X" = $X_S$ = Subtransient reactance

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A-C MOTOR PERFORMANCE CURVES

VGPM454E4K

SH 5 OF 7

ISSUE DATE: 2/3/2014

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| REL S.O. | A50WG4851-R001 | HERTZ | 60 | AMB°C | 40 | CODE LETTER | F |
| FRAME | 5010 | RPM | 1788 | INSUL | F | ENCLOSURE | TEFC |
| HP | 450 | VOLTS | 2300 / 4000 | S.F. | 1.15 | STATOR RES.@25°C | 0.22561 / 0.67682 |
| TYPE | P | AMPS | 102 / 59 | NEMA DESIGN | --- | OHMS (BETWEEN LINES) | |
| PHASE | 3 | DUTY | CONT | ROTOR WK² (lb-ft²) | 173 | TYPICAL DATA | |

## Recommended Winding and Bearing Temperatures

| Stator Winding | Class B | Class F |
|---|---|---|
| Maximum Running Total Temperature | 130 °C | 155 °C |
| Alarm Total Temperature | 135 °C | 160 °C |
| Trip Total Temperature | 145 °C | 170 °C |

| Sleeve Bearings - Oil Lubricated ( 40 °C Ambient ) | Bearing | Oil |
|---|---|---|
| Typical Running Total Temperature | 93 °C | 60 °C |
| Alarm Total Temperature | 96 °C | 70 °C |
| Trip Total Temperature | 98 °C | 75 °C |

| Anti-Friction Bearings - Grease Lubricated ( 40 °C Ambient ) | Bearing | Grease |
|---|---|---|
| Typical Running Total Temperature | 90 °C | 80 °C |
| Alarm Total Temperature | 110 °C | 100 °C |
| Trip Total Temperature | 120 °C | 110 °C |

## Recommended Vibration Settings for Standard Motors

| Speed (rpm) | Shaft Vibration (mils) | | Bracket Vibration (mils) | |
|---|---|---|---|---|
| | Alarm | Shutdown | Alarm | Shutdown |
| 3600 | 2.50 | 3.00 | 1.00 | 1.50 |
| 1800 | 3.00 | 3.50 | 2.00 | 2.50 |
| 1200 | 3.00 | 3.50 | 2.00 | 2.50 |
| 900 & Lower | 3.00 | 3.50 | 2.00 | 2.50 |

| | | Bracket Vibration (in/sec pk) | |
|---|---|---|---|
| | | Alarm | Shutdown |
| All Speeds | | 0.20* | 0.30* |

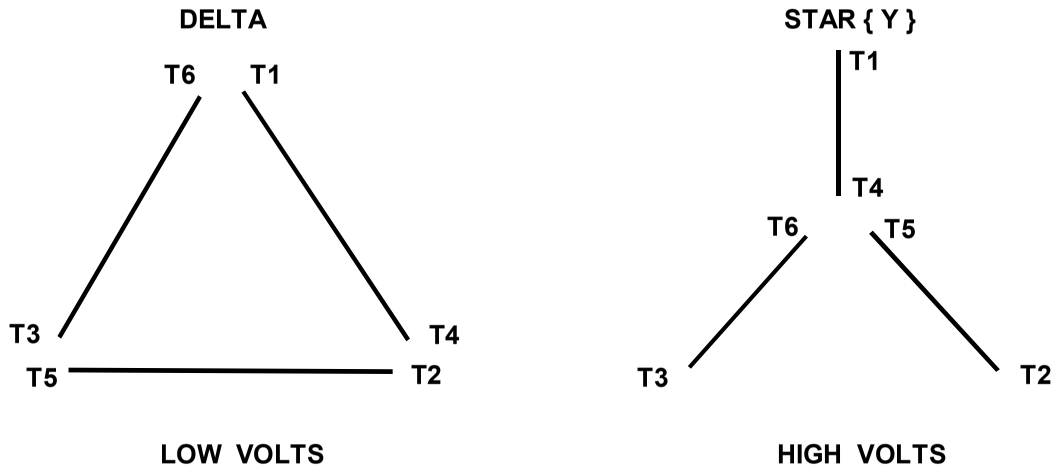
* 0 to 1000 Hz Spectrum

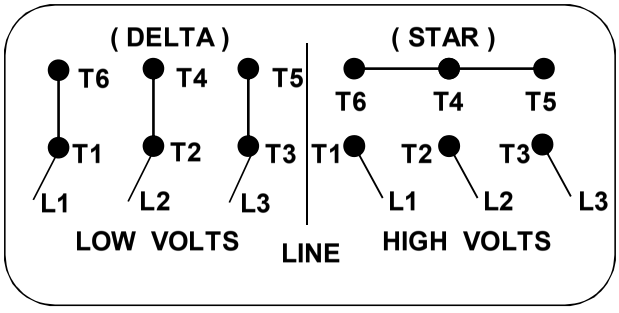
REVISION 0

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| REL S.O. | A50WG4851-R001 | HERTZ | 60 | AMB°C | 40 | CODE LETTER | F |
| FRAME | 5010 | RPM | 1788 | INSUL | F | ENCLOSURE | TEFC |
| HP | 450 | VOLTS | 2300 / 4000 | S.F. | 1.15 | STATOR RES.@25°C | 0.22561 / 0.67682 |
| TYPE | P | AMPS | 102 / 59 | NEMA DESIGN | --- | OHMS (BETWEEN LINES) | |
| PHASE | 3 | DUTY | CONT | ROTOR WK$^2$ (lb-ft$^2$) | 173 | TYPICAL DATA | |

# A-C MOTOR
# CONNECTION DIAGRAM

## STANDARD 6 LEAD ( DELTA / STAR { Y } CONNECTED )
## DUAL VOLTAGE ( LOW VOLTS / HIGH VOLTS )




( N.P. 1767-CC )

REVISION 0

| | | | |
|---|---|---|---|
| BALDOR A MEMBER OF THE ABB GROUP | DR. BY C. Evans<br>CK. BY J. LaVallee<br>APP. BY B. LeRoy<br>DATE 2/3/2014 | A-C MOTOR PERFORMANCE CURVES | VGPM454E4K<br>SH 7 OF 7<br>ISSUE DATE: 2/3/2014 |

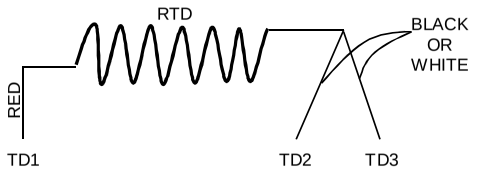
# RESISTANCE TEMPERATURE CONNECTION DIAGRAM

WINDING

**100 OHM @ 0°C**

BEARING

**N/A**

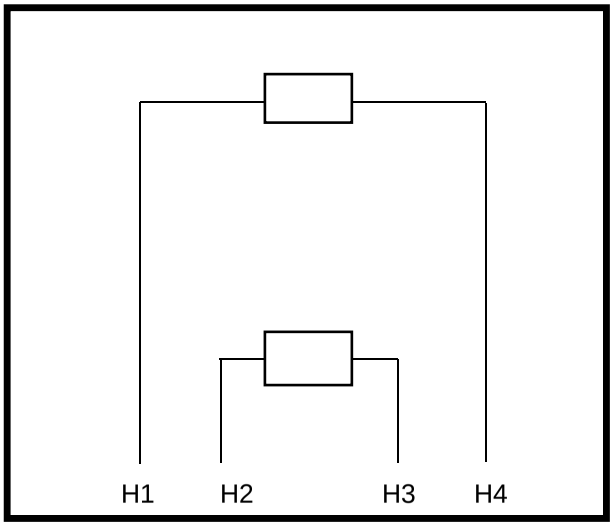



| | | | |
|---|---|---|---|
| BALDOR · DODGE · RELIANCE | DR. BY Chris Stockton<br>CK. BY Chris Stockton<br>APP. BY Joe Hillhouse<br>DATE 3/5/2014 | A-C MOTOR AUXILARY CONNECTIONS | G30_GP<br>SHEET 1 OF 2 |

# SPACE HEATER CONNECTION

**VOLTS** 120/240 **AMPS** 2.9/1.46 **WATTS** 350/350

**PHASE** 1 **HZ.** 60




**HEATER CONNECTIONS**

LOW VOLTAGE - PARALLEL
L1 - H1 & H2
L2 - H3 & H4

HIGH VOLTAGE - SERIES
L1 - H1
L2 - H2
CONNECT H3 TO H4

| | | | |
|---|---|---|---|
| BALDOR · DODGE · RELIANCE | DR. BY Chris Stockton<br>CK. BY Chris Stockton<br>APP. BY Joe Hillhouse<br>DATE 3/5/2014 | A-C MOTOR AUXILARY CONNECTIONS | G30_GP<br>SHEET 2 OF 2 |

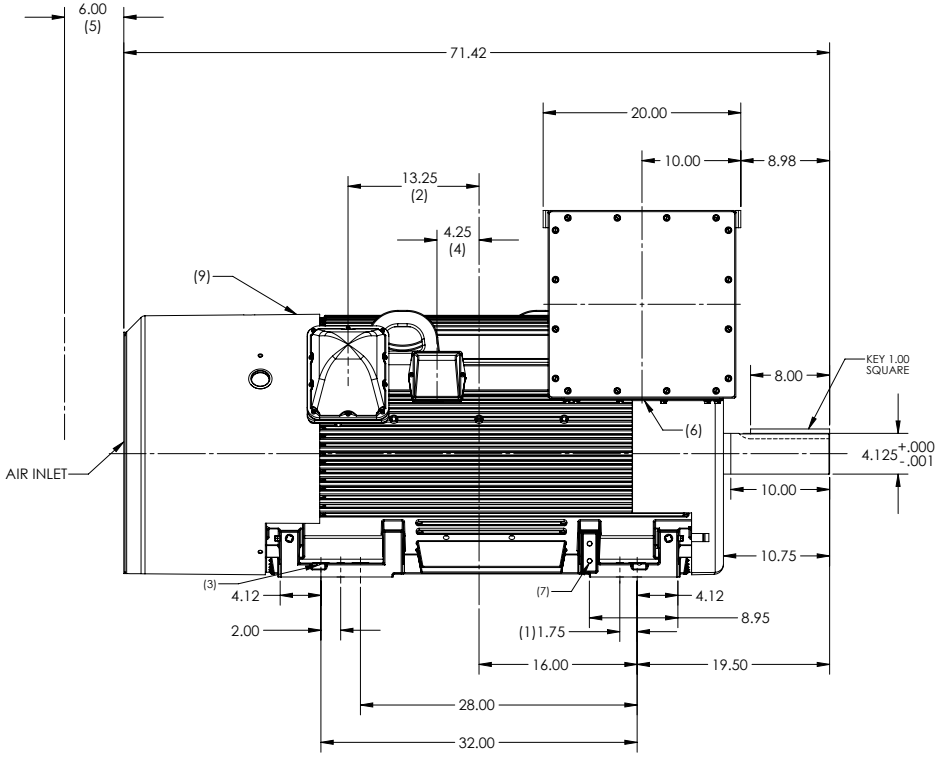
616159-804

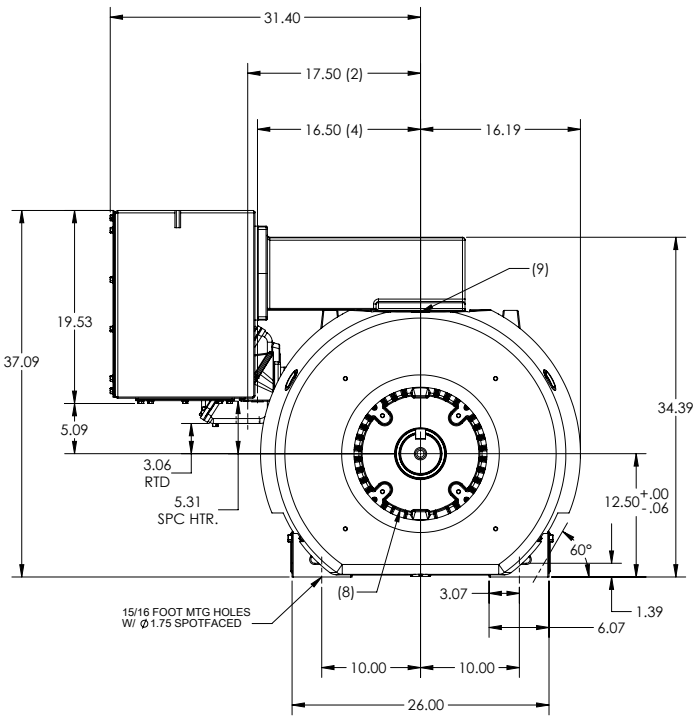
# GENERAL PURPOSE STOCK ALTERNATING CURRENT MOTORS

ENCLOSURE: TOTALLY ENCLOSED
MOUNTING: FOOT

SQUIRREL-CAGE INDUCTION
1800 RPM MAX
FRAME G5010L
(FIELD CONVERTIBLE COUPLE/BELT)
INCLUDES G5009L FRAME MOUNTING HOLES

COOLING: FAN COOLED
ANTI-FRICTION BEARINGS
ENGLISH HARDWARE
OVERSIZE MAIN CONDUIT BOX



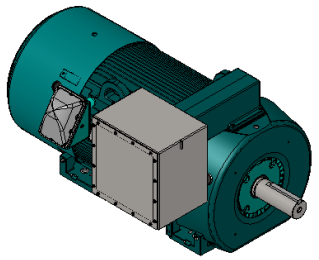




**NOTES:**

1. **(4) 3/4-10 JACKSCREW HOLES**
2. **2.0 NPT FOR WINDING TEMPERATURE DETECTOR LEADS**
3. **11/32 DOWEL PIN PILOT HOLES, 1 HOLE EACH FOOT**
4. **3/4 NPT FOR MOTOR SPACE HEATER LEADS**
5. **WALL OR OBSTRUCTION MUST NOT ENCROACH ON AIR INLET SPACE**
6. **CUSTOMER TO PROVIDE HOLE FOR MOTOR POWER LEADS**
7. **TWO GROUND PADS DIAGONALLY OPPOSITE EACH OTHER, TAPPED 1/2-13**
8. **1/8 NPT PROVISIONS FOR BEARING TEMPERATURE DETECTOR LEADS.**
9. **GREASE POINT**

CONDUIT BOX LOCATED ON OPPOSITE SIDE WHEN F-2.
IF MOUNTING CLEARANCE DETAILS ARE REQUIRED, CONSULT FACTORY.
MAXIMUM PERMISSIBLE SHAFT RUNOUT WHEN MEASURED AT END OF STANDARD SHAFT EXTENSION IS .003" T.I.R.

**WEIGHT (LBS): 5500 (MAXIMUM)**
DIMENSIONS ARE IN INCHES



**CATALOG #'S**

| | |
|---|---|
| **M50454L-4** | **EM50454L-4** |
| **M50504L-4** | **EM50504L-4** |
| | **EM50454L-5** |
| **M50404L - 2340** | **EM50504L-5** |
| **M50454L - 2340** | |

CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION

REV. DESC: UPDATE BOX TO FROM 19X19X12 TO 19X19X14

| | | | |
|---|---|---|---|
| **REV:** H | **VERSION:** - 08 | **REVISED:** 10:57:03 09/16/2016 | **TDR:** 000000997103 |
| **MODEL NO.** 616159-804 | | | **REF:** - |
| **BY:** MGHMTT | Material: – | C | |

BALDOR

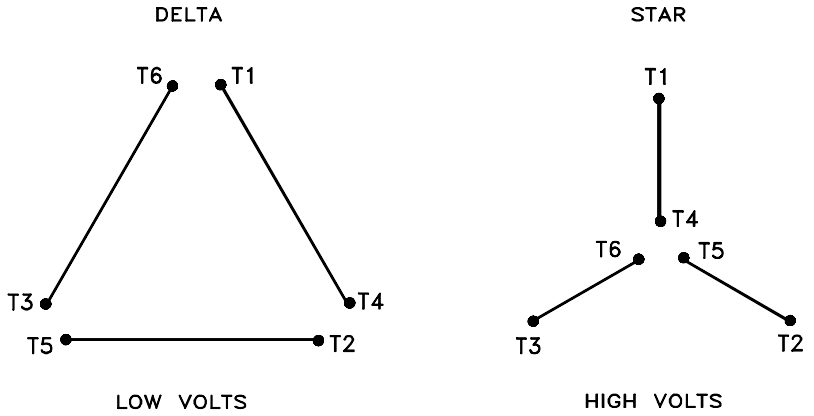
G5010L,TEFC,S/N,CPLD,1800,A/F,F-1,19X19X

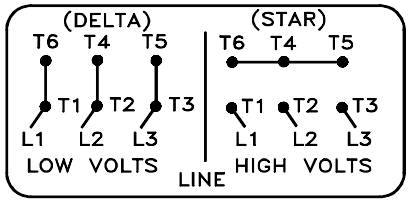
616159-804

416820–004

# A–C MOTOR
# CONNECTION DIAGRAM

## STANDARD 6 LEAD (DELTA/STAR CONNECTED)
## DUAL VOLTAGE (LOW VOLTS/HIGH VOLTS)




(N.P. 1767–CC)

| | | | |
|---|---|---|---|
| REV. DESC: ADDED CLASSIFICATONS | | | BALDOR |
| REV. LTR: B | VERSION: 02 | TDR: 000000539297 | |
| FILE: \RSN\00017\950 | | REVISED: 11:58:09 05/04/2010 | A–C MOTOR CONNECTION DIAGRAM |
| MTL: – | | BY: RAGRA | SH 1 of 1 |

416820–004