

# ABB BALDOR RELIANCE III

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## Customer information packet

### L3409M

.5HP, 1725RPM, 1PH, 60HZ, 48, 3421L, TEFC, F1

Class - None

Division - Not Applicable

**Specifications**

|                                |                                                             |
|--------------------------------|-------------------------------------------------------------|
| Enclosure                      | TEFC                                                        |
| Frame                          | 48                                                          |
| Frame Material                 | Steel                                                       |
| Frequency                      | 60.00 Hz                                                    |
| Haz Area Class and Group       | None                                                        |
| Haz Area Division              | Not Applicable                                              |
| Motor Letter Type              | Cap Start, Induction Run                                    |
| Output @ Frequency             | .500 HP @ 60 HZ                                             |
| Phase                          | 1                                                           |
| Synchronous Speed @ Frequency  | 1800 RPM @ 60 HZ                                            |
| Voltage @ Frequency            | 230.0 V @ 60 HZ<br>115.0 V @ 60 HZ                          |
| Agency Approvals               | C UR US                                                     |
| 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              | 7.400 A @ 115.0 V<br>4.300 A @ 208.0 V<br>3.700 A @ 230.0 V |
| Design Code                    | N                                                           |
| Drip Cover                     | No Drip Cover                                               |
| Duty Rating                    | CONT                                                        |
| Efficiency @ 100% Load         | 68.0 %                                                      |
| 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    | 3.7 a                                                       |

**Part Detail**

|              |                |
|--------------|----------------|
| Revision     | AE             |
| Type         | AC             |
| Mech. spec.  | 34C051         |
| Base         |                |
| Status       | PRD/A          |
| Elec. spec.  | 34WG5594       |
| Layout       | 34LYC051       |
| Eff. date    | 12-30-2024     |
| CD Diagram   | CD0008         |
| Poles        | 04             |
| Leads        | 6#18,1#16 #4TH |
| Proprietary  | False          |
| Created date | 01-01-0001     |

|                                      |                         |
|--------------------------------------|-------------------------|
| <b>Insulation Class</b>              | <b>B</b>                |
| <b>Inverter Code</b>                 | Not Inverter            |
| <b>IP Rating</b>                     | NONE                    |
| <b>KVA Code</b>                      | J                       |
| <b>Lifting Lugs</b>                  | No Lifting Lugs         |
| <b>Locked Bearing Indicator</b>      | No Locked Bearing       |
| <b>Motor Lead Exit</b>               | Ko Box                  |
| <b>Motor Lead Quantity/Wire Size</b> | 6 @ 18 AWG              |
| <b>Motor Lead Termination</b>        | Flying Leads            |
| <b>Motor Standards</b>               | NEMA                    |
| <b>Motor Type</b>                    | 3421L                   |
| <b>Mounting Arrangement</b>          | F1                      |
| <b>Number of Poles</b>               | 4                       |
| <b>Overall Length</b>                | 11.34 IN                |
| <b>Power Factor</b>                  | 66                      |
| <b>Product Family</b>                | General Purpose         |
| <b>Pulley End Bearing Type</b>       | Ball                    |
| <b>Pulley Face Code</b>              | Standard                |
| <b>Pulley Shaft Indicator</b>        | Standard                |
| <b>Rodent Screen</b>                 | None                    |
| <b>Service Factor</b>                | 1.25                    |
| <b>Shaft Diameter</b>                | 0.500 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>                         | 1725 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>             | Manual Thermal Overload |
| <b>Winding Thermal 1 Location</b>    | SB                      |

Winding Thermal 2

None

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**Nameplate**

| NP1257L      |              |  |      |      |    |     |   |    |   |  |  |
|--------------|--------------|--|------|------|----|-----|---|----|---|--|--|
| CAT.NO.      | L3409M       |  |      |      |    |     |   |    |   |  |  |
| SPEC.        | 34C51-5594   |  |      |      |    |     |   |    |   |  |  |
| HP           | .5           |  |      |      |    |     |   |    |   |  |  |
| VOLTS        | 115/230      |  |      |      |    |     |   |    |   |  |  |
| AMP          | 7.4/3.7      |  |      |      |    |     |   |    |   |  |  |
| RPM          | 1725         |  |      |      |    |     |   |    |   |  |  |
| FRAME        | 48           |  |      | HZ   | 60 |     |   | PH | 1 |  |  |
| SER.F.       | 1.25         |  | CODE | J    |    | DES | N | CL | B |  |  |
| NEMA-NOM-EFF | 68           |  | PF   | 66   |    |     |   |    |   |  |  |
| RATING       | 40C AMB-CONT |  |      |      |    |     |   |    |   |  |  |
| CC           |              |  |      |      |    |     |   |    |   |  |  |
| DE           | 6203         |  | ODE  | 6203 |    |     |   |    |   |  |  |
| ENCL         | TEFC         |  | SN   |      |    |     |   |    |   |  |  |
|              | SFA 8.2/4.1  |  |      |      |    |     |   |    |   |  |  |

**Parts List**

| Part number   | Description                              | Quantity |
|---------------|------------------------------------------|----------|
| SA008578      | SA 34C51-5594                            | 1.000 ea |
| RA005025      | RA 34C51-5594                            | 1.000 ea |
| NS2512A01     | INSULATOR, CONDUIT BOX X                 | 1.000 ea |
| 34CB3002A     | CB CAST W/.88 DIA HOLE                   | 1.000 ea |
| 34GS1029A01   | GASKET, CONDUIT BOX                      | 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 |
| 51XW0832A07   | 8-32 X .44, TAPTITE II, HEX WSHR SLTD SE | 2.000 ea |
| 34EP3102A01SP | FR ENDPLATE, MACH                        | 1.000 ea |
| WD1000A16     | 2-520128-2 AMP FLAG TERMINAL(4M/RL)      | 1.000 ea |
| 34CB4800SP    | CAPACITOR COVER, STAMPED PRIMED          | 1.000 ea |
| 34GS3000SP    | GASKET, CAPACITOR BOX                    | 1.000 ea |
| 51XB1016A05   | 10-16X5/16HX WA SL SR TYB (F/S)          | 2.000 ea |
| HW5100A03     | WAVY WASHER (W1543-017)                  | 1.000 ea |
| 34EP3102A02SP | FR/PU ENDPLATE, MACH                     | 1.000 ea |
| XY1032A02     | 10-32 HEX NUT DIRECTIONAL SERRATION      | 4.000 ea |
| 34FN3002A01SP | EXTERNAL FAN, PLASTIC, .637/.639 HUB W/  | 1.000 ea |
| 34FH4002A01SP | IEC FH NO GREASER PRIMED                 | 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 |
| 34GS1031A01   | GASKET, FLAT CONDUIT BOX LID (LEXIDE)    | 1.000 ea |
| 51XW0832A07   | 8-32 X .44, TAPTITE II, HEX WSHR SLTD SE | 4.000 ea |
| MG1050G01     | CELEROL MEDIUM CHARCOAL METALLIC GRAY    | 0.014 ga |
| 85XU0407S04   | 4X1/4 U DRIVE PIN STAINLESS              | 2.000 ea |
| SP5051B16     | MDL 34 TORQ STAT SW,TYPE L , STD F1 & F2 | 1.000 ea |
| EC1270A02SP   | ELEC CAP, 270-324 MFD, 125V, 1.48D X 3.  | 1.000 ea |
| HA3100A44     | THRUBOLT 10-32 X 8.000                   | 4.000 ea |
| LB1624        | COMBINED WARNING LABEL, ISO/ANSI PICTOGR | 1.000 ea |
| LB1087        | LABEL,MANUAL RESET (ROLL LABEL)          | 1.000 ea |
| LC0008        | CONNECTION LABEL                         | 1.000 ea |
| NP1257L       | ALUM UL CC THERMAL REV MTG               | 1.000 ea |

|          |                                         |          |
|----------|-----------------------------------------|----------|
| 34PA1002 | PKG GRP, PRINT PK1001A02                | 1.000 ea |
| MN416A01 | TAG-INSTAL-MAINT no wire (2500 bx)11/25 | 1.000 ea |

**Accessories**

| Part number | Description | Multiplier |
|-------------|-------------|------------|
| 34-3900T    | C-FACE KIT  | A8         |



**AC Induction Motor Performance Data**

Record # 6781

Typical performance - not guaranteed values

| Winding: 34WG5594-R001 |    |              | Type: 3421L                              | Enclosure: TEFC         |                       |            |                            |
|------------------------|----|--------------|------------------------------------------|-------------------------|-----------------------|------------|----------------------------|
| Nameplate Data         |    |              | 230 V, 60 Hz:<br>High Voltage Connection |                         |                       |            |                            |
| Rated Output (HP)      |    | .5           | Full Load Torque                         |                         | 1.5 LB-FT             |            |                            |
| Volts                  |    | 115/230      | Start Configuration                      |                         | direct on line        |            |                            |
| Full Load Amps         |    | 7.4/3.7      | Breakdown Torque                         |                         | 4.13 LB-FT            |            |                            |
| R.P.M.                 |    | 1725         | Pull-up Torque                           |                         | 3.6 LB-FT             |            |                            |
| Hz                     | 60 | Phase        | 1                                        | Locked-rotor Torque     |                       | 4.65 LB-FT |                            |
| NEMA Design Code       |    | N            | KVA Code                                 | J                       | Starting Current      |            | 16.5 A                     |
| Service Factor (S.F.)  |    | 1.25         |                                          | No-load Current         |                       | 2.8 A      |                            |
| NEMA Nom. Eff.         |    | 68           | Power Factor                             | 66                      | Line-line Res. @ 25°C |            | 4.44 Ω A Ph<br>3.19 Ω B Ph |
| Rating - Duty          |    | 40C AMB-CONT |                                          | Temp. Rise @ Rated Load |                       | 63°C       |                            |
| S.F. Amps              |    | 8.2/4.1      |                                          | Temp. Rise @ S.F. Load  |                       | 77°C       |                            |

**Load Characteristics 230 V, 60 Hz, 0.5 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 32   | 46   | 59   | 66   | 72   | 80   | 72   |
| Efficiency      | 42   | 58   | 65   | 68   | 69   | 68   | 69   |
| Speed           | 1783 | 1765 | 1750 | 1730 | 1710 | 1680 | 1710 |
| Line amperes    | 2.8  | 3    | 3.3  | 3.7  | 4.1  | 4.8  | 4.1  |

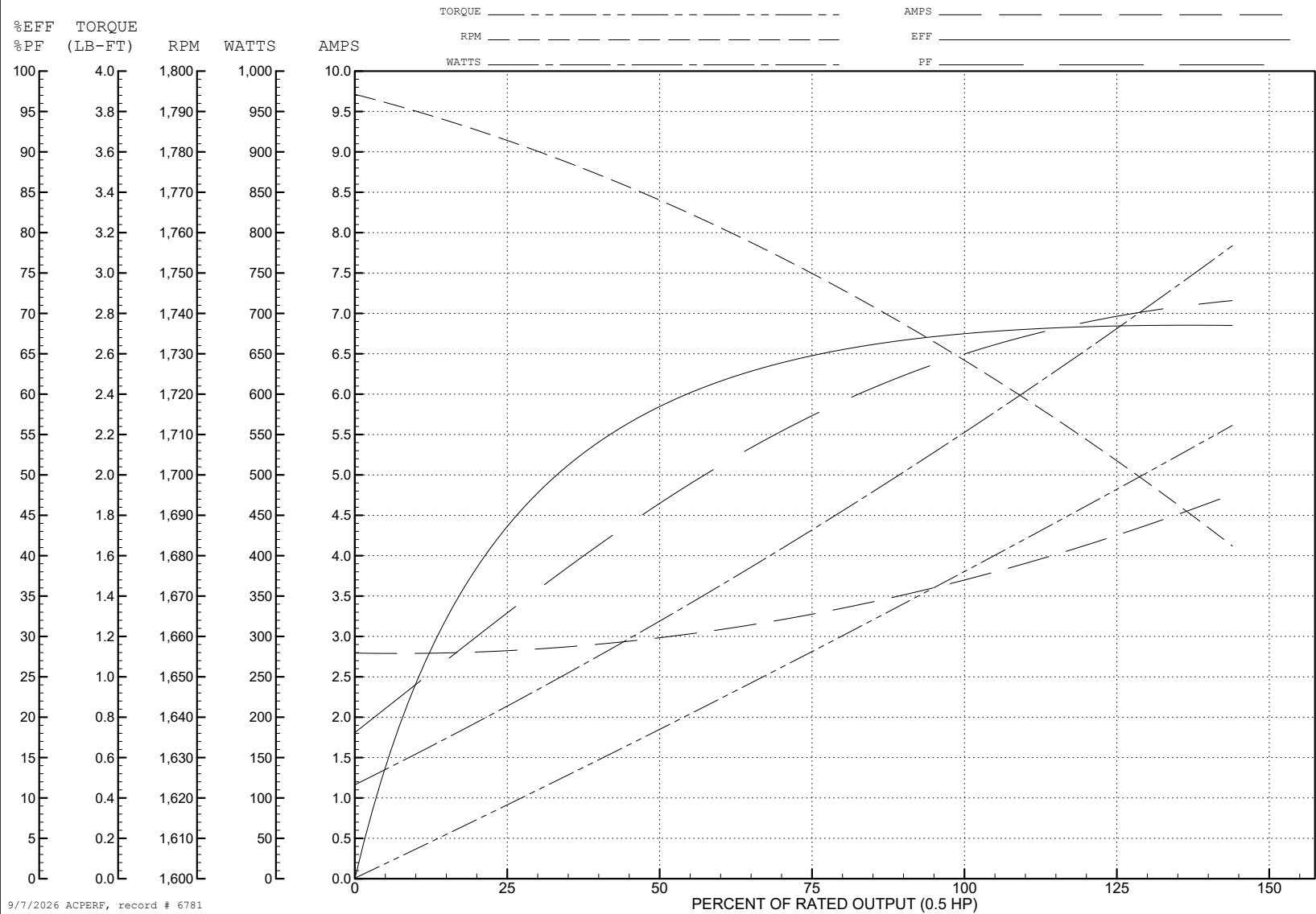
ABB Motors and Mechanical Inc.

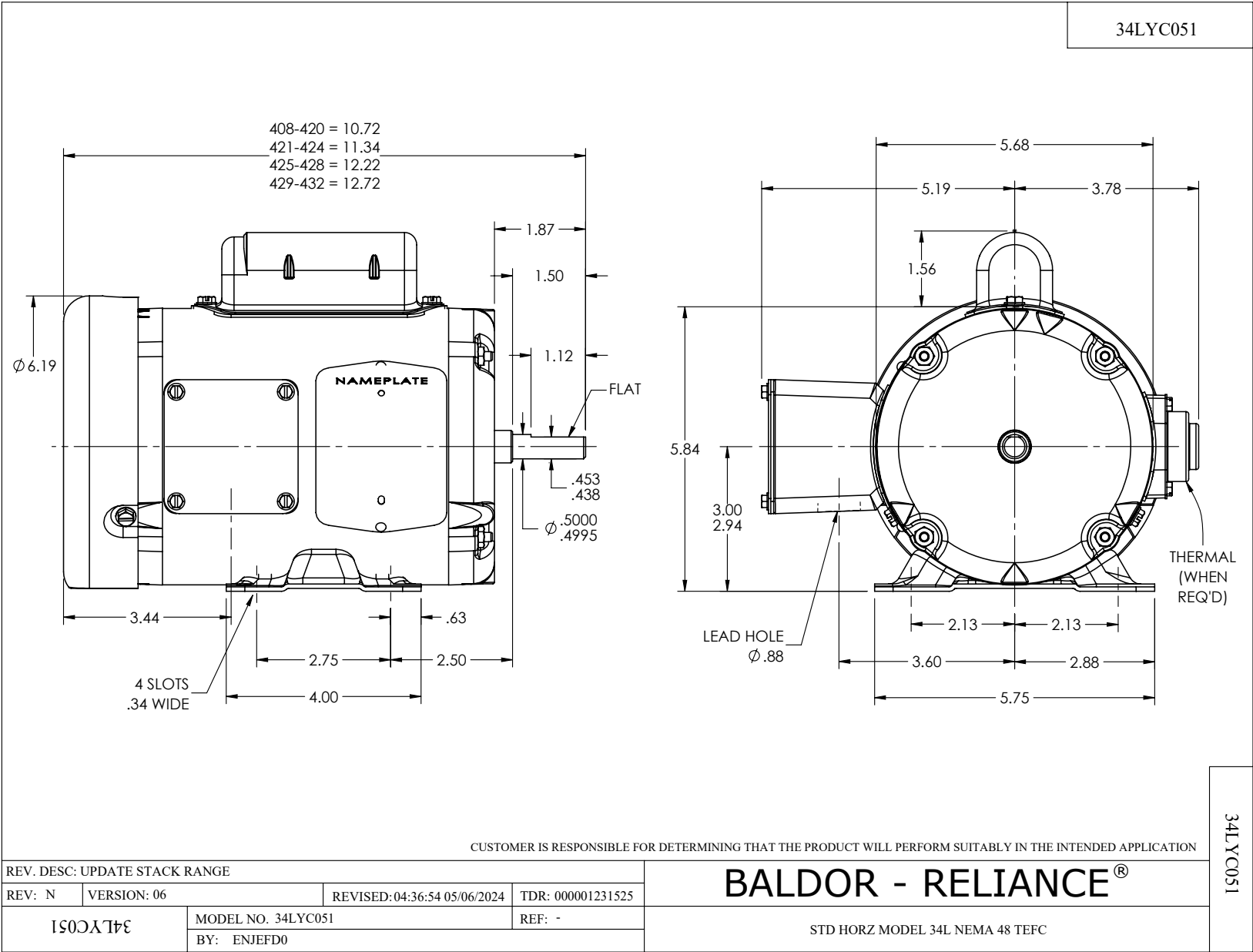
WINDING # 34WG5594

Typical performance - not guaranteed values.

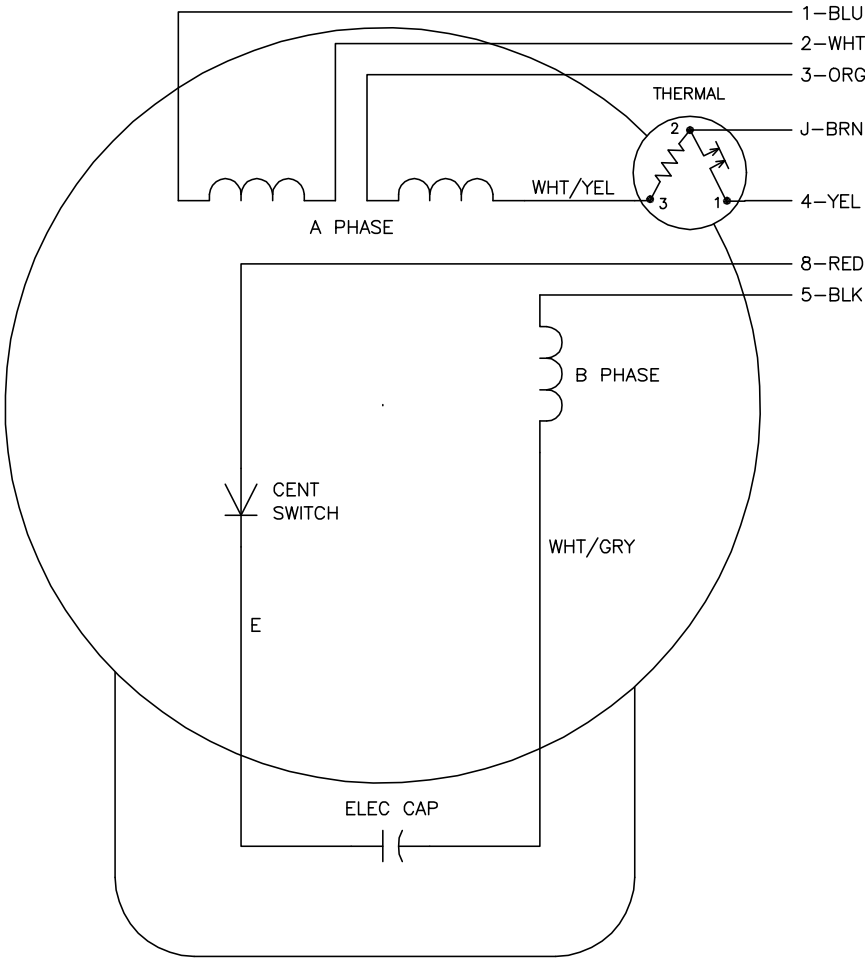
0.5 HP 1 PH 60 HZ 1725 RPM 230 V 3421L

TORQUES (LB-FT): PO=4.13 PU=3.6 LR=4.65 LRA=16.5





CD0008



|          | LINE A | LINE B | JOIN  | JOIN  |
|----------|--------|--------|-------|-------|
| HIGH STD | 1      | 4      | 2,3,8 | J,5   |
| HIGH OPP | 1      | 4      | 2,3,5 | J,8   |
| LOW STD  | 1,3,8  | 4      | —     | 2,J,5 |
| LOW OPP  | 1,3,5  | 4      | —     | 2,J,8 |

- NOTES:
1. STANDARD ROTATION IS CCW FACING END OPPOSITE SHAFT EXTENSION.
  2. MULTIPLE CAPACITORS ARE CONNECTED IN PARALLEL UNLESS OTHERWISE SPECIFIED.
  3. LEAD COLORS ARE OPTIONAL. LEADS MUST ALWAYS BE NUMBERED AS SHOWN.

|                                                            |                      |                              |
|------------------------------------------------------------|----------------------|------------------------------|
| REV. DESC: REMOVE 2-TERMINAL THERMAL DETAIL, SEE CD0008A02 |                      |                              |
| REV. LTR: F                                                | VERSION: 01          | TDR: 000000360649            |
| 800000                                                     | FILE: \AAA\00007\408 | REVISED: 10:56:54 04/18/2005 |
|                                                            | MTL: —               | BY: ENJOEPO                  |

**BALDOR ELECTRIC Co.**

TYPE L, DV, REV, THERMAL, 7 LEADS

CD0008