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# Customer information packet

## JL3504A

.5HP, 1725RPM, 1PH, 60HZ, 56J, 3421L, TEFC, F1

MDS OF MICHIGAN INC

Class - None

Division - Not Applicable

## Specifications

|                                |                                                             |
|--------------------------------|-------------------------------------------------------------|
| Enclosure                      | TEFC                                                        |
| Frame                          | 56J                                                         |
| 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            | 115.0 V @ 60 HZ<br>230.0 V @ 60 HZ                          |
| Agency Approvals               | UR<br>CSA                                                   |
| Ambient Temperature            | 40 °C                                                       |
| Auxillary Box                  | No Auxillary Box                                            |
| Auxillary Box Lead Termination | None                                                        |
| Base Indicator                 | No Mounting                                                 |
| Bearing Grease Type            | Polyrex EM (-20F +300F)                                     |
| Blower                         | None                                                        |
| Current @ Voltage              | 3.700 A @ 230.0 V<br>4.300 A @ 208.0 V<br>7.400 A @ 115.0 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                                                   |

## Part detail

|              |                  |
|--------------|------------------|
| Revision     | AB               |
| Type         | AC               |
| Mech. spec.  | 34-3099          |
| Base         |                  |
| Status       | PRD/A            |
| Elec. spec.  | 34WG5593         |
| Layout       | 34LY3099         |
| Eff. date    | 11-06-2024       |
| CD Diagram   | CD0094           |
| Poles        | 04               |
| Leads        | 4#18,1#16 #4TH Y |
| Proprietary  | False            |
| Created date | 01-01-0001       |

|                               |                            |
|-------------------------------|----------------------------|
| High Voltage Full Load Amps   | 3.7 a                      |
| Insulation Class              | B                          |
| Inverter Code                 | Not Inverter               |
| KVA Code                      | J                          |
| Lifting Lugs                  | No Lifting Lugs            |
| Locked Bearing Indicator      | Locked Bearing             |
| Motor Lead Exit               | Ko Box                     |
| Motor Lead Quantity/Wire Size | 4 @ 18 AWG                 |
| Motor Lead Termination        | Flying Leads               |
| Motor Standards               | NEMA                       |
| Motor Type                    | 3421L                      |
| Mounting Arrangement          | F1                         |
| Number of Poles               | 4                          |
| Overall Length                | 12.85 IN                   |
| Power Factor                  | 66                         |
| Product Family                | General Purpose            |
| Pulley End Bearing Type       | Ball                       |
| Pulley Face Code              | C-Face                     |
| Pulley Shaft Indicator        | Ext Thread                 |
| Rodent Screen                 | None                       |
| RoHS Status                   | ROHS COMPLIANT             |
| Service Factor                | 1.25                       |
| Shaft Diameter                | 0.625 IN                   |
| Shaft Extension Location      | Pulley End                 |
| Shaft Ground Indicator        | No Shaft Grounding         |
| Shaft Rotation                | Fixed Opposite Standard    |
| 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             | Automatic Thermal Overload |

**Winding Thermal 1 Location**

**SB**

## Nameplate

| NP1257L      |              |      |      |     |   |    |   |  |  |
|--------------|--------------|------|------|-----|---|----|---|--|--|
| CAT.NO.      | JL3504A      |      |      |     |   |    |   |  |  |
| SPEC.        | 34-3099-5593 |      |      |     |   |    |   |  |  |
| HP           | .5           |      |      |     |   |    |   |  |  |
| VOLTS        | 115/230      |      |      |     |   |    |   |  |  |
| AMP          | 7.4/3.7      |      |      |     |   |    |   |  |  |
| RPM          | 1725         |      |      |     |   |    |   |  |  |
| FRAME        | 56J          |      | 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 |
|---------------|------------------------------------------|----------|
| SA018264      | SA 34-3099-5593                          | 1.000 ea |
| RA014417      | RA 34-3099-5593                          | 1.000 ea |
| EC1270A02SP   | ELEC CAP, 270-324 MFD, 125V, 1.48D X 3.  | 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 |
| 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 |
| 34EP3300A24SP | PU ENDPLATE, MACH                        | 1.000 ea |
| 51XN1032A20   | 10-32 X 1 1/4 HX WS SL SR                | 2.000 ea |
| 34FN3002A01SP | EXTERNAL FAN, PLASTIC, .637/.639 HUB W/  | 1.000 ea |
| 34FH4002A03SP | IEC FH NO GREASER W/.88 DIA SHAFT HOLE,  | 1.000 ea |
| 51XW1032A06   | 10-32 X .38, TAPTITE II, HEX WSHR SLTD S | 3.000 ea |
| WD4100A81     | CAPLUG BPF-7/8, FOR .86-.88 HOLE         | 1.000 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 |
| RM1010A01     | 35-968-1 VINYL CLS                       | 1.000 ea |
| MG1050G01     | CELEROL MEDIUM CHARCOAL METALLIC GRAY    | 0.014 ga |
| 85XU0407S04   | 4X1/4 U DRIVE PIN STAINLESS              | 2.000 ea |
| SP5051B59     | MDL 34 TORQ STAT SW,TYPE L               | 1.000 ea |
| HA3100A15     | THRUBOLT 10-32 X 8.375                   | 4.000 ea |
| MN416A01      | TAG-INSTAL-MAINT no wire (2500bx)4/22    | 1.000 ea |
| LB1118        | LABEL,WARNING (ROLL LABEL)               | 1.000 ea |
| LC0031        | CONNECTION LABEL                         | 1.000 ea |

|          |                               |          |
|----------|-------------------------------|----------|
| NP1257L  | ALUM UL CC THERMAL REV MTG    | 1.000 ea |
| 35PA1066 | PKG GRP, PRINT PK1008A06      | 1.000 ea |
| PK3083   | STYROFOAM PACKING CRADLE      | 1.000 ea |
| PK3088   | MICROFOAM, 8"X"8 PERF. SHEETS | 1.000 ea |

**Accessories**

| Part number | Description | Multiplier |
|-------------|-------------|------------|
| 34-171      | C FACE KIT  | A8         |

## AC Induction Motor Performance Data

Record # 6779

Typical performance - not guaranteed values

| Winding: 34WG5593-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     | Starting Current                         |                 | 16.5 A                     |
| Service Factor (S.F.)  |    | 1.25         |              | No-load Current                          |                 | 2.8 A                      |
| NEMA Nom. Eff.         |    | 68           | Power Factor | 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  |

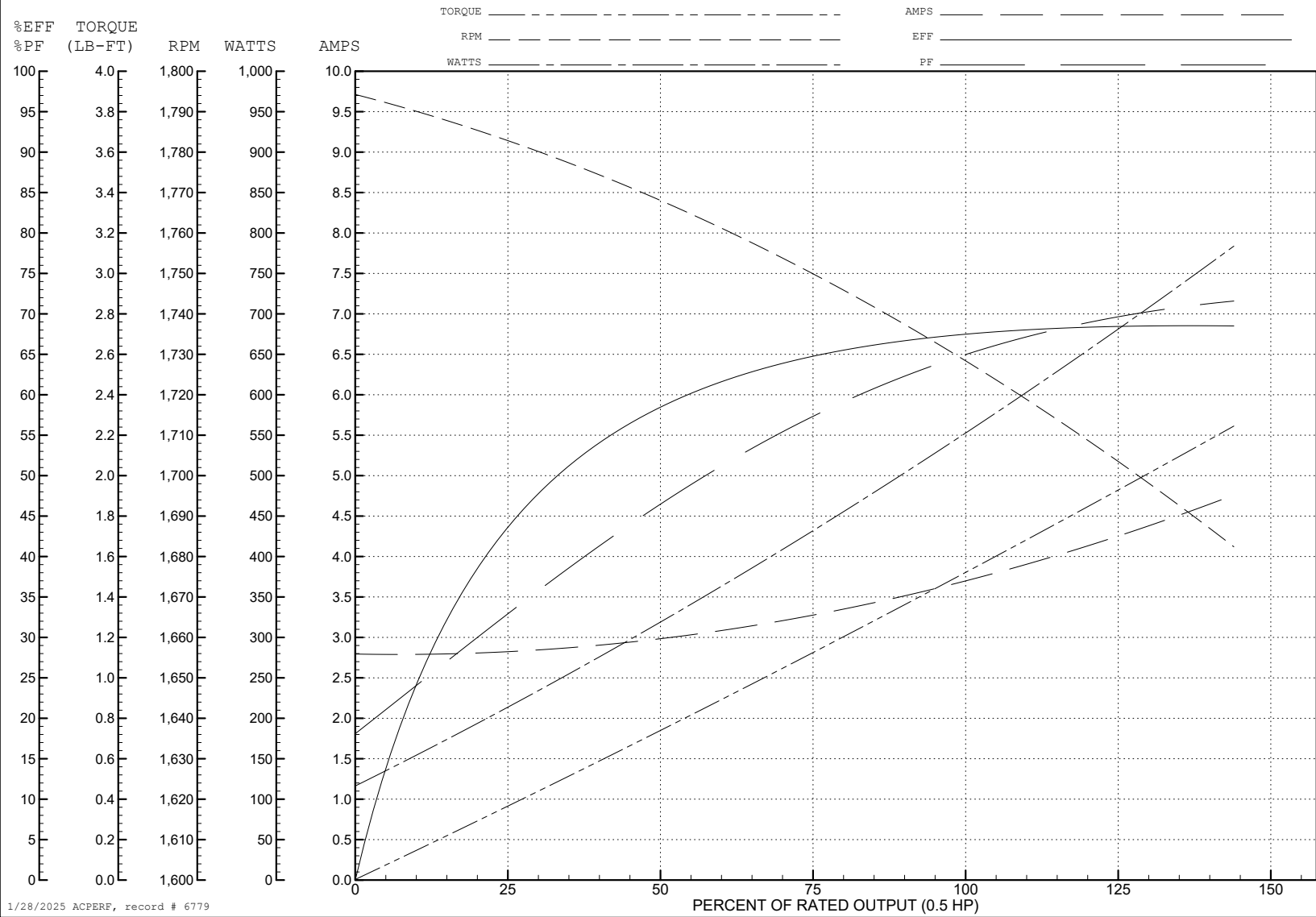
ABB Motors and Mechanical Inc.

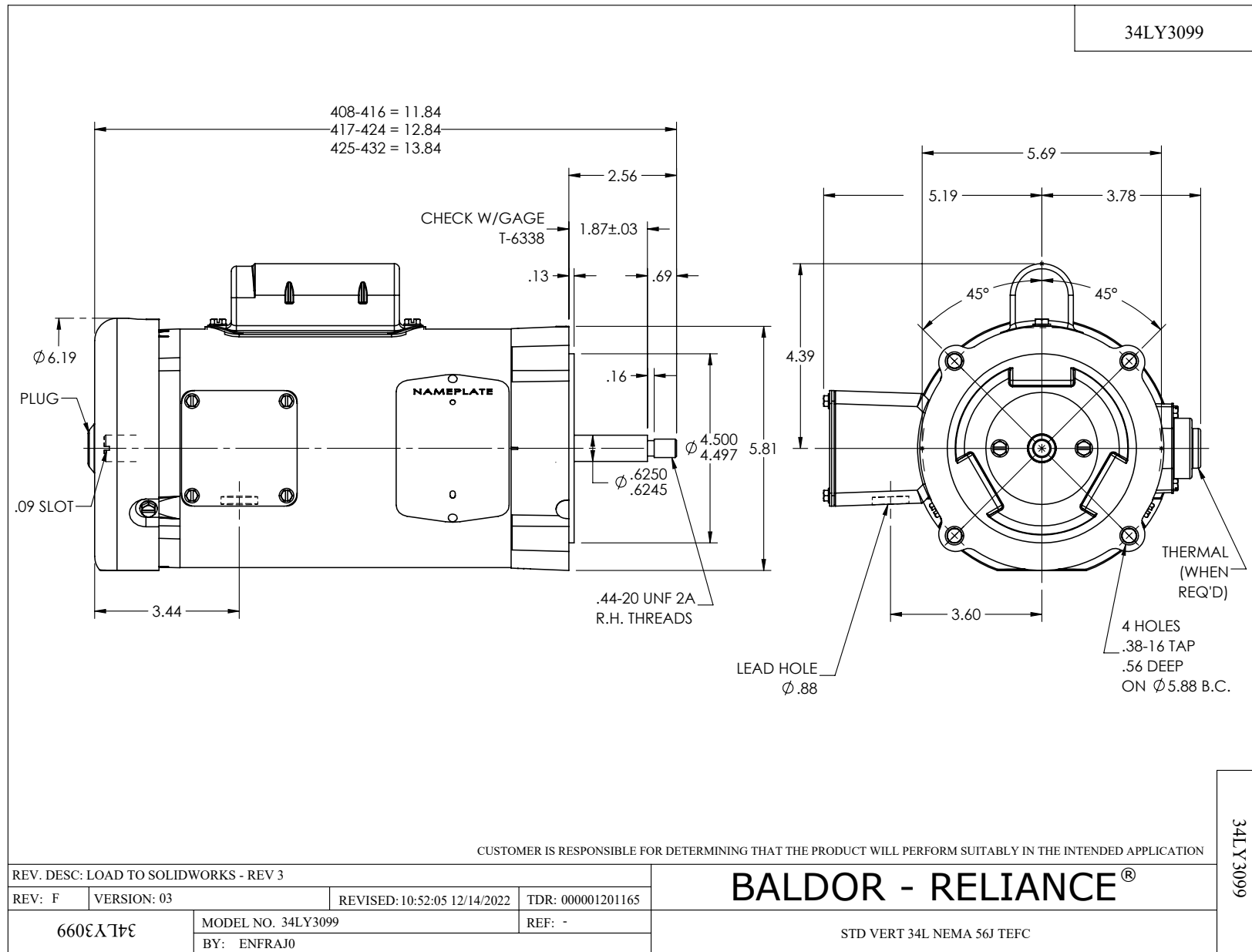
WINDING # 34WG5593

Typical performance - not guaranteed values.

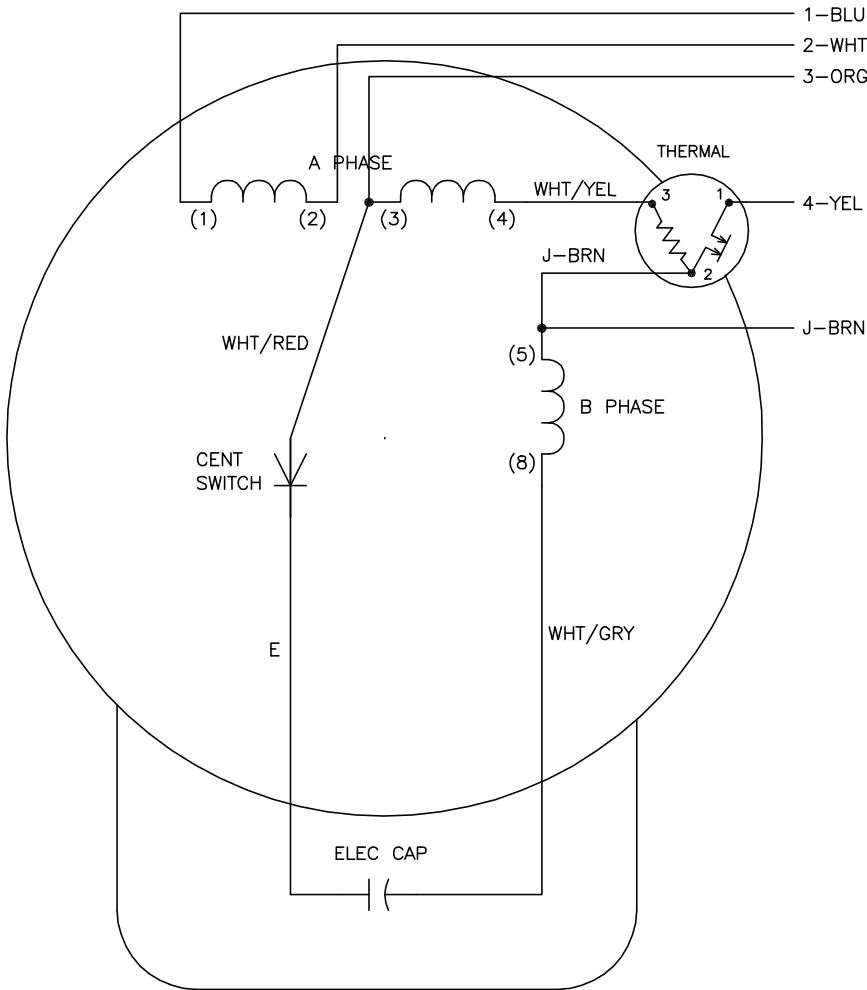
0.5 HP 1 PH 60 HZ 1725 RPM 230 V 3421L

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





CD0094



|      | LINE A | LINE B | JOIN | JOIN |
|------|--------|--------|------|------|
| HIGH | 1      | 4      | 2,3  | J    |
| LOW  | 1,3    | 4      | 2,J  | —    |

- NOTES:
1. CONNECTIONS ARE SHOWN FOR CCW ROTATION FACING END OPPOSITE SHAFT EXTENSION (STD). FOR CW ROTATION, INTERCHANGE 5 AND 8 INTERNALLY.
  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 OPTIONAL THERMAL CONNECTION |                      |                              |
| REV. LTR: E                                   | VERSION: 01          | TDR: 000000373039            |
| CD0094                                        | FILE: \AAA\00007\476 | REVISED: 11:12:36 08/11/2005 |
|                                               | MTL: —               | BY: ENJOEPO                  |

BALDOR ELECTRIC Co.

TYPE L, DV, FIX, THERMAL, 5 LEAD

CD0094