

# ABB BALDOR RELIANCE III

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## Customer information packet

### PCL3513M

1.5HP, 3450RPM, 1PH, 60HZ, 56C, 3520LC, TEFC

Class - None

Division - Not Applicable

**Specifications**

|                                |                                         |
|--------------------------------|-----------------------------------------|
| Enclosure                      | TEFC                                    |
| Frame                          | 56C                                     |
| Frame Material                 | Steel                                   |
| Frequency                      | 60.00 Hz                                |
| Haz Area Class and Group       | None                                    |
| Haz Area Division              | Not Applicable                          |
| Motor Letter Type              | Cap Start, Cap Run                      |
| Output @ Frequency             | 1.500 HP @ 60 HZ                        |
| Phase                          | 1                                       |
| Synchronous Speed @ Frequency  | 3600 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                                   |
| Auxiliary Box                  | NO AUXILLARY BOX                        |
| Auxiliary Box Lead Termination | None                                    |
| Base Indicator                 | Rigid                                   |
| Bearing Grease Type            | Polyrex EM (-20F +300F)                 |
| Blower                         | None                                    |
| Current @ Voltage              | 13.200 A @ 115.0 V<br>6.600 A @ 230.0 V |
| Design Code                    | L                                       |
| Drip Cover                     | No Drip Cover                           |
| Duty Rating                    | CONT                                    |
| Efficiency @ 100% Load         | 75.5 %                                  |
| 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    | 6.6 a                                   |

**Part Detail**

|              |                              |
|--------------|------------------------------|
| Revision     | AC                           |
| Type         | AC                           |
| Mech. spec.  | 35T982                       |
| Base         |                              |
| Status       | PRD/A                        |
| Elec. spec.  | 35WGY862                     |
| Layout       | 35LYT982                     |
| Eff. date    | 05-07-2024                   |
| CD Diagram   | CD0320                       |
| Poles        | 02                           |
| Leads        | 4#16 A&J,2#18 B PH,1#14 #4TH |
| Proprietary  | False                        |
| Created date | 06-22-2007                   |

|                                      |                                |
|--------------------------------------|--------------------------------|
| <b>Insulation Class</b>              | <b>B</b>                       |
| <b>Inverter Code</b>                 | <b>Not Inverter</b>            |
| <b>KVA Code</b>                      | <b>F</b>                       |
| <b>Lifting Lugs</b>                  | <b>No Lifting Lugs</b>         |
| <b>Locked Bearing Indicator</b>      | <b>Locked Bearing</b>          |
| <b>Motor Lead Exit</b>               | <b>Ko Box</b>                  |
| <b>Motor Lead Quantity/Wire Size</b> | <b>4 @ 16 AWG, A&amp;J</b>     |
| <b>Motor Lead Termination</b>        | <b>Flying Leads</b>            |
| <b>Motor Standards</b>               | <b>NEMA</b>                    |
| <b>Motor Type</b>                    | <b>3520LC</b>                  |
| <b>Mounting Arrangement</b>          | <b>F1</b>                      |
| <b>Number of Poles</b>               | <b>2</b>                       |
| <b>Overall Length</b>                | <b>13.25 IN</b>                |
| <b>Power Factor</b>                  | <b>98</b>                      |
| <b>Product Family</b>                | <b>General Purpose</b>         |
| <b>Pulley End Bearing Type</b>       | <b>Ball</b>                    |
| <b>Pulley Face Code</b>              | <b>C-Face</b>                  |
| <b>Pulley Shaft Indicator</b>        | <b>Standard</b>                |
| <b>Rodent Screen</b>                 | <b>None</b>                    |
| <b>Service Factor</b>                | <b>1.15</b>                    |
| <b>Shaft Diameter</b>                | <b>0.625 IN</b>                |
| <b>Shaft Extension Location</b>      | <b>Pulley End</b>              |
| <b>Shaft Ground Indicator</b>        | <b>No Shaft Grounding</b>      |
| <b>Shaft Rotation</b>                | <b>Reversible</b>              |
| <b>Shaft Slinger Indicator</b>       | <b>No Slinger</b>              |
| <b>Speed</b>                         | <b>3450 rpm</b>                |
| <b>Speed Code</b>                    | <b>Single Speed</b>            |
| <b>Starting Method</b>               | <b>Direct on line</b>          |
| <b>Thermal Device - Bearing</b>      | <b>None</b>                    |
| <b>Thermal Device - Winding</b>      | <b>Do Not Use</b>              |
| <b>Vibration Sensor Indicator</b>    | <b>No Vibration Sensor</b>     |
| <b>Winding Thermal 1</b>             | <b>Manual Thermal Overload</b> |
| <b>Winding Thermal 1 Location</b>    | <b>KO</b>                      |
| <b>Winding Thermal 2</b>             | <b>None</b>                    |

**Nameplate**

| NP1257L      |              |      |      |     |   |    |   |  |  |
|--------------|--------------|------|------|-----|---|----|---|--|--|
| CAT.NO.      | PCL3513M     |      |      |     |   |    |   |  |  |
| SPEC.        | 35T982Y862   |      |      |     |   |    |   |  |  |
| HP           | 1.5          |      |      |     |   |    |   |  |  |
| VOLTS        | 115/230      |      |      |     |   |    |   |  |  |
| AMP          | 13.2/6.6     |      |      |     |   |    |   |  |  |
| RPM          | 3450         |      |      |     |   |    |   |  |  |
| FRAME        | 56C          |      | HZ   | 60  |   | PH | 1 |  |  |
| SER.F.       | 1.15         | CODE | F    | DES | L | CL | B |  |  |
| NEMA-NOM-EFF | 75.5         | PF   | 98   |     |   |    |   |  |  |
| RATING       | 40C AMB-CONT |      |      |     |   |    |   |  |  |
| CC           |              |      |      |     |   |    |   |  |  |
| DE           | 6205         | ODE  | 6203 |     |   |    |   |  |  |
| ENCL         | TEFC         | SN   |      |     |   |    |   |  |  |

**Parts List**

| Part number | Description                              | Quantity |
|-------------|------------------------------------------|----------|
| SA111033    | SA 35T982Y862                            | 1.000 ea |
| RA102412    | RA 35T982Y862                            | 1.000 ea |
| OC3060C09SP | CAPACITOR 60 MFD 240 VAC                 | 1.000 ea |
| TPMRT30AB   | THERMAL 1PH 0.75 MAN 120C                | 1.000 ea |
| EC1340A03   | ELEC CAP, 340-408 MFD, 125V, 1.81D X 3.  | 1.000 ea |
| NS2512A01   | INSULATOR, CONDUIT BOX X                 | 1.000 ea |
| 35CB3007A37 | 35 CB .88 DIA @ 6:00, .75 MTO @ 3:00     | 1.000 ea |
| 36GS1000SP  | GASKET-CONDUIT BOX, .06 THICK #SV-330 LE | 1.000 ea |
| 51XB1016A07 | 10-16 X 7/16 HXWSSLD SERTYB              | 2.000 ea |
| NS2500A02   | INSULATOR, MAN THER PROT                 | 1.000 ea |
| HA6001A01   | THERMAL RETAINER (PLATED)                | 1.000 ea |
| 51XB1214A10 | 12-14 X 5/8HX WS SL SR TYBX              | 2.000 ea |
| 11XW1032G06 | 10-32 X .38, TAPTITE II, HEX WSHR SLTD U | 1.000 ea |
| 35EP3122K00 | MASTER ODE,203 BRG,.683SH,#26 DRN,FH MTG | 1.000 ea |
| 35CB3801    | CAPACITOR COVER, CAST                    | 1.000 ea |
| NS2501A02   | INSULATOR, CAPACITOR BOX                 | 1.000 ea |
| HA7010      | CAPACITOR RETENTION CLAMP                | 1.000 ea |
| 34GS3002    | GASKET, CAPACITOR BOX                    | 1.000 ea |
| 51XB1016A08 | 10-16X 1/2HXWSSLD SERTYB                 | 2.000 ea |
| 51XW0832A07 | 8-32 X .44, TAPTITE II, HEX WSHR SLTD SE | 2.000 ea |
| HW5100A03   | WAVY WASHER (W1543-017)                  | 1.000 ea |
| 35EP3307F00 | MASTER DE,205 BRG,.998SH,#26 DRN         | 1.000 ea |
| 51XN1032A20 | 10-32 X 1 1/4 HX WS SL SR                | 2.000 ea |
| 51XB1214A16 | 12-14X1.00 HXWSSLD SERTYB                | 1.000 ea |
| 51XW1032A06 | 10-32 X .38, TAPTITE II, HEX WSHR SLTD S | 3.000 ea |
| 35CB4521GX  | CONDUIT BOX LID KIT **ORDER INDIV PARTS  | 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 |
| 85XU0407S04 | 4X1/4 U DRIVE PIN STAINLESS              | 2.000 ea |
| LB1087      | LABEL,MANUAL RESET (ROLL LABEL)          | 1.000 ea |

|               |                                          |          |
|---------------|------------------------------------------|----------|
| WD1000A16     | 2-520128-2 AMP FLAG TERMINAL(4M/RL)      | 4.000 ea |
| MJ1000A02     | GREASE, POLYREX EM EXXON                 | 0.050 lb |
| 35FN3002A05SP | EXFN, PLASTIC, 6.376 OD, .638 ID         | 1.000 ea |
| MG1050G01     | CELEROL MEDIUM CHARCOAL METALLIC GRAY    | 0.017 ga |
| 35FH4005A32   | IEC FH NO GRSR W/3 HOLES - PRIMED        | 1.000 ea |
| HA3100A15     | THRUBOLT 10-32 X 8.375                   | 4.000 ea |
| SP5181A28     | MODEL 35 LC TORQ STAT SWITCH LEAD ASSY   | 1.000 ea |
| LB1624        | COMBINED WARNING LABEL, ISO/ANSI PICTOGR | 1.000 ea |
| LC0269        | 1PH,DV,REV,THERMAL,7 LD,L.AMP THRU HTR H | 1.000 ea |
| NP1257L       | ALUM UL CC THERMAL REV MTG               | 1.000 ea |
| 35PA1066      | PKG GRP, PRINT PK1008A07                 | 1.000 ea |
| FE-0000001    | ZRTG FE ASSEMBLY                         | 1.000 ea |
| PE-0000001    | ZRTG PE ASSEMBLY                         | 1.000 ea |

**AC Induction Motor Performance Data**

Record # 10350

Typical performance - not guaranteed values

| Winding: 35WGY862-R001 |    |              | Type: 3520LC                             |                         | Enclosure: TEFC       |            |                            |
|------------------------|----|--------------|------------------------------------------|-------------------------|-----------------------|------------|----------------------------|
| Nameplate Data         |    |              | 230 V, 60 Hz:<br>High Voltage Connection |                         |                       |            |                            |
| Rated Output (HP)      |    | 1.5          | Full Load Torque                         |                         | 2.25 LB-FT            |            |                            |
| Volts                  |    | 115/230      | Start Configuration                      |                         | direct on line        |            |                            |
| Full Load Amps         |    | 13.2/6.6     | Breakdown Torque                         |                         | 4.63 LB-FT            |            |                            |
| R.P.M.                 |    | 3450         | Pull-up Torque                           |                         | 3.25 LB-FT            |            |                            |
| Hz                     | 60 | Phase        | 1                                        | Locked-rotor Torque     |                       | 4.25 LB-FT |                            |
| NEMA Design Code       |    | L            | KVA Code                                 | F                       | Starting Current      |            | 34.7 A                     |
| Service Factor (S.F.)  |    | 1.15         |                                          | No-load Current         |                       | 1.5 A      |                            |
| NEMA Nom. Eff.         |    | 75.5         | Power Factor                             | 98                      | Line-line Res. @ 25°C |            | 2.38 Ω A Ph<br>1.84 Ω B Ph |
| Rating - Duty          |    | 40C AMB-CONT |                                          | Temp. Rise @ Rated Load |                       | 40°C       |                            |
| S.F. Amps              |    |              |                                          | Temp. Rise @ S.F. Load  |                       | 47°C       |                            |

**Load Characteristics 230 V, 60 Hz, 1.5 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 87   | 90   | 96   | 98   | 97   | 96   | 98   |
| Efficiency      | 51   | 71   | 74.5 | 75.5 | 74   | 70   | 75   |
| Speed           | 3575 | 3550 | 3515 | 3490 | 3440 | 3370 | 3470 |
| Line amperes    | 2.7  | 3.6  | 5    | 6.6  | 8.4  | 10.5 | 7.4  |

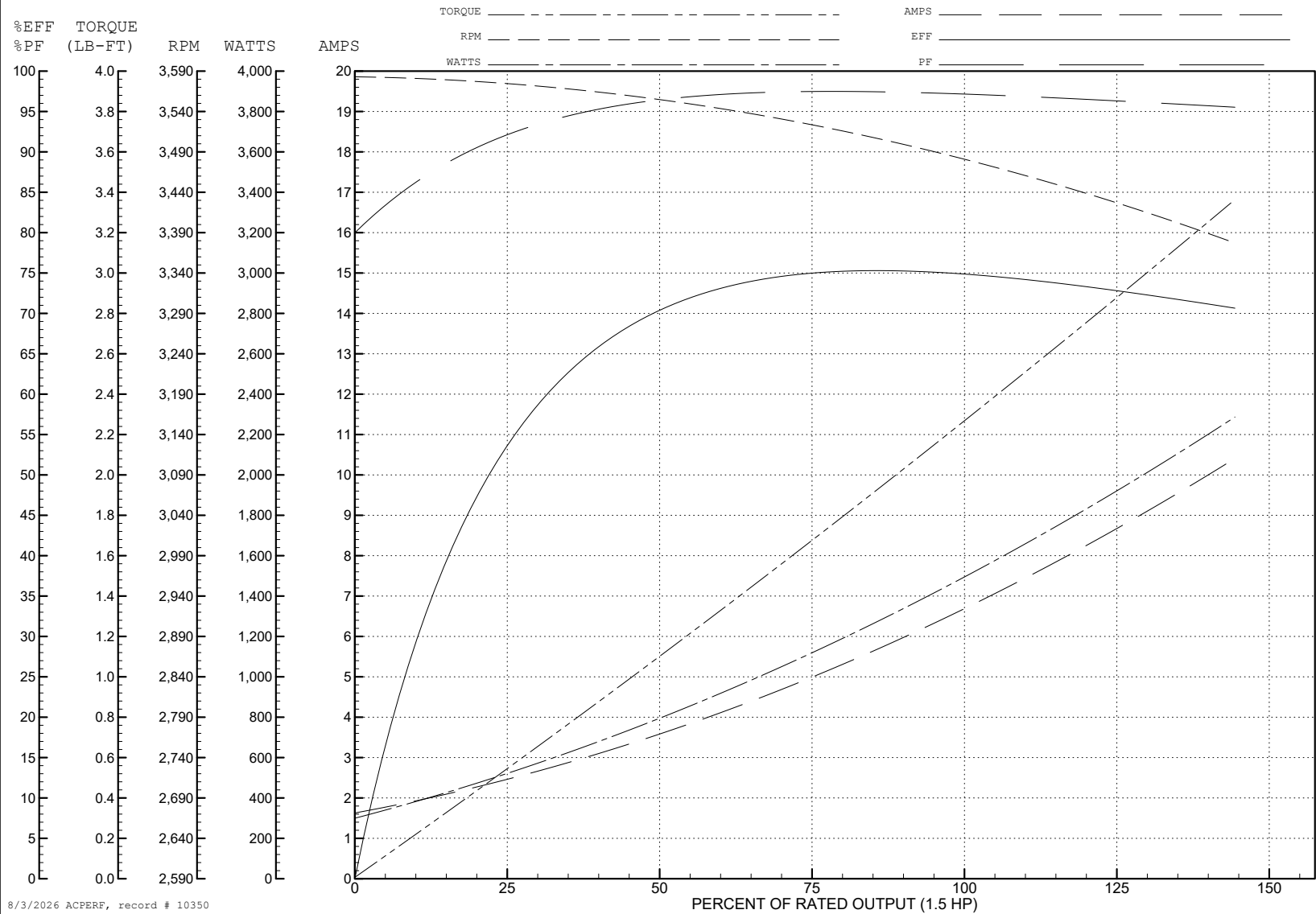
ABB Motors and Mechanical Inc.

WINDING # 35WGY862

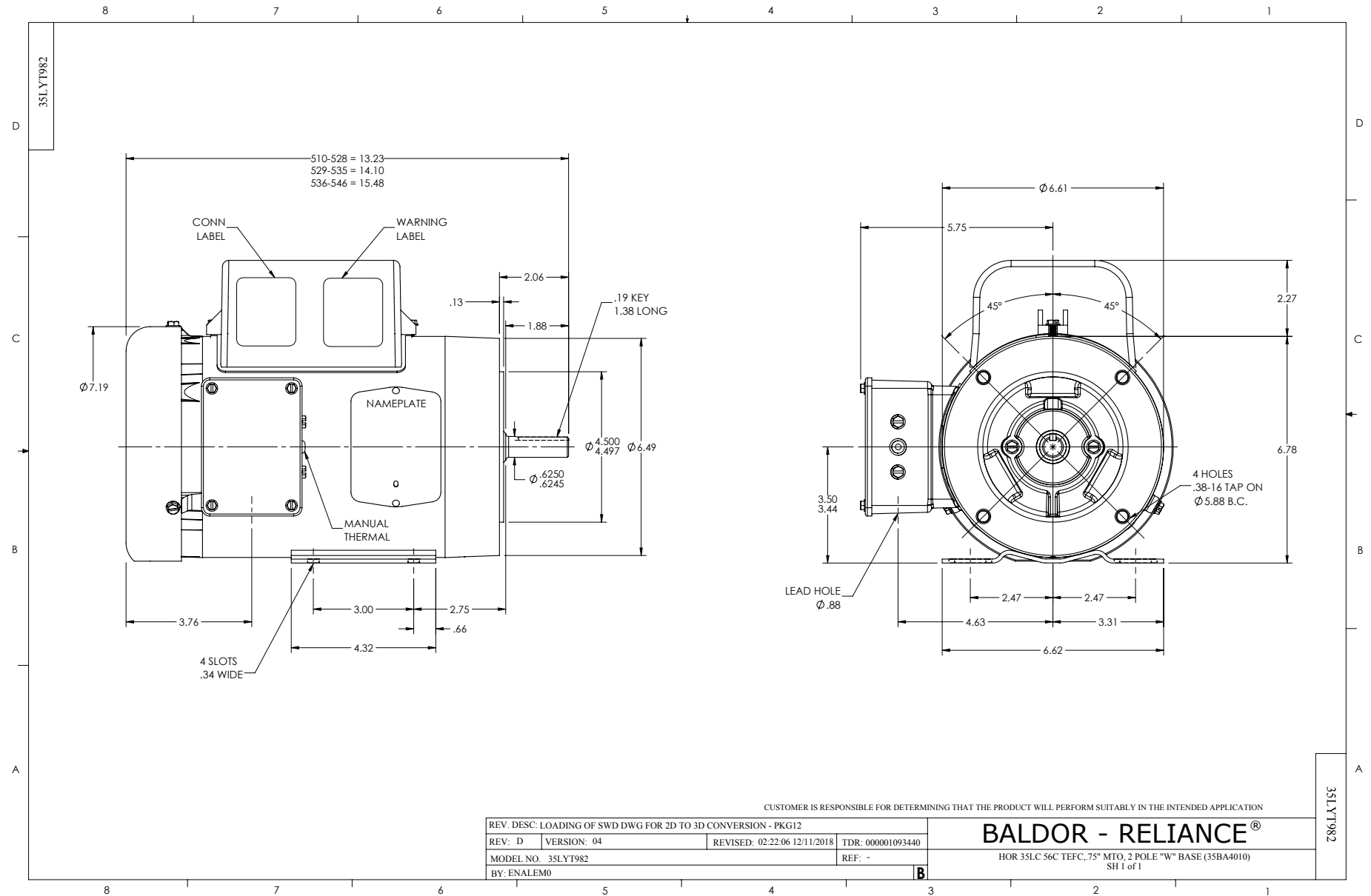
Typical performance - not guaranteed values.

1.5 HP 1 PH 60 HZ 3450 RPM 230 V 3520LC

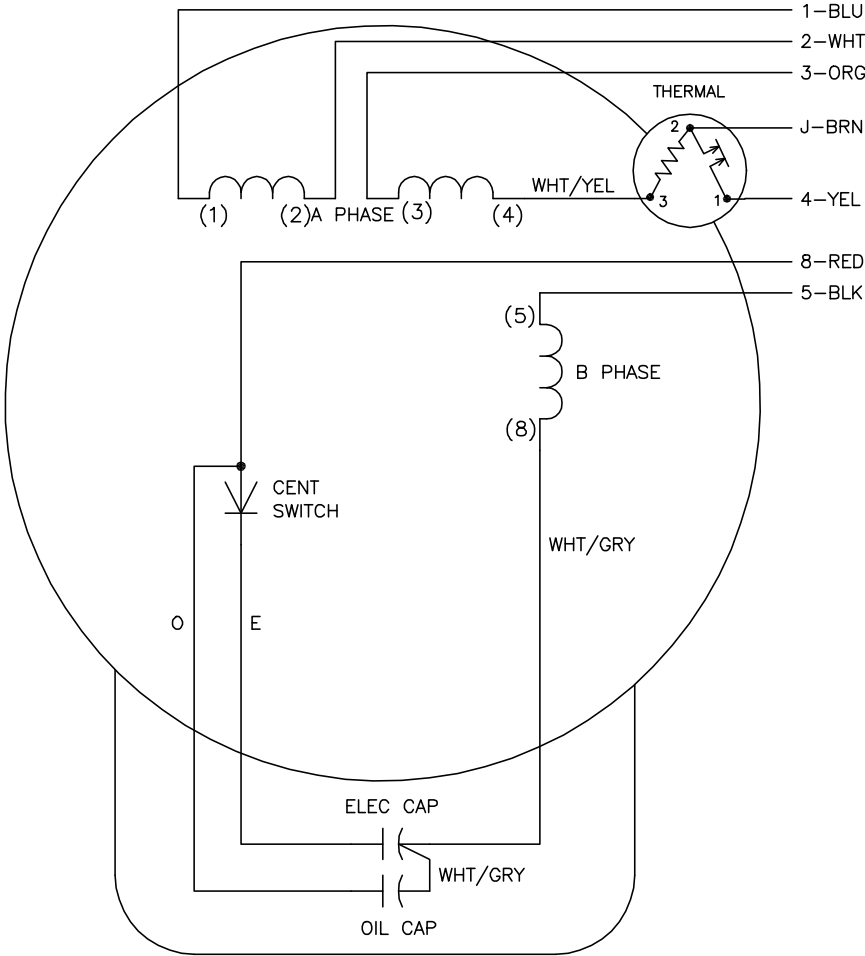
TORQUES (LB-FT): PO=4.63 PU=3.25 LR=4.25 LRA=34.7







CD0320



|          | LINE A | LINE B | JOIN  | JOIN  |
|----------|--------|--------|-------|-------|
| HIGH STD | 1,8    | 4      | 2,3,5 | J     |
| HIGH OPP | 1,5    | 4      | 2,3,8 | J     |
| 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: ADD INTERNAL CONNECTION TO HELP MANUFACTURING |                              |                   |
| REV. LTR: G                                              | VERSION: 01                  | TDR: 000000941594 |
| FILE: \AAA\00007\422                                     | REVISED: 02:21:00 08/28/2015 | BY: ENALEMO       |
| MTL: —                                                   | © □                          |                   |

**BALDOR**

TYPE LC, DV, REV, THERMAL, B PH AMPS THRU HTR HVC, 7 LEAD  
SH 1 of 1

CD0320