

# ABB BALDOR RELIANCE III

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## Customer information packet

JL3509A

1HP, 3450RPM, 1PH, 60HZ, 56J, 3524L, TEFC, F1

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                                              |
|---------------------------------------|--------------------------------------------------------------|
| <b>Enclosure</b>                      | TEFC                                                         |
| <b>Frame</b>                          | 56J                                                          |
| <b>Frame Material</b>                 | Steel                                                        |
| <b>Frequency</b>                      | 60.00 Hz                                                     |
| <b>Haz Area Class and Group</b>       | None                                                         |
| <b>Haz Area Division</b>              | Not Applicable                                               |
| <b>Motor Letter Type</b>              | Cap Start, Induction Run                                     |
| <b>Output @ Frequency</b>             | 1.000 HP @ 60 HZ                                             |
| <b>Phase</b>                          | 1                                                            |
| <b>Synchronous Speed @ Frequency</b>  | 3600 RPM @ 60 HZ                                             |
| <b>Voltage @ Frequency</b>            | 115.0 V @ 60 HZ<br>230.0 V @ 60 HZ                           |
| <b>Agency Approvals</b>               | UR<br>CSA                                                    |
| <b>Ambient Temperature</b>            | 40 °C                                                        |
| <b>Auxiliary Box</b>                  | NO AUXILLARY BOX                                             |
| <b>Auxiliary Box Lead Termination</b> | None                                                         |
| <b>Base Indicator</b>                 | No Mounting                                                  |
| <b>Bearing Grease Type</b>            | Polyrex EM (-20F +300F)                                      |
| <b>Blower</b>                         | None                                                         |
| <b>Current @ Voltage</b>              | 12.000 A @ 115.0 V<br>5.800 A @ 208.0 V<br>6.000 A @ 230.0 V |
| <b>Design Code</b>                    | N                                                            |
| <b>Drip Cover</b>                     | No Drip Cover                                                |
| <b>Duty Rating</b>                    | CONT                                                         |
| <b>Efficiency @ 100% Load</b>         | 66.0 %                                                       |
| <b>Electrically Isolated Bearing</b>  | Not Electrically Isolated                                    |
| <b>Feedback Device</b>                | NO FEEDBACK                                                  |
| <b>Front Face Code</b>                | Standard                                                     |
| <b>Front Shaft Indicator</b>          | None                                                         |
| <b>Heater Indicator</b>               | No Heater                                                    |

**Part Detail**

|                     |                    |
|---------------------|--------------------|
| <b>Revision</b>     | BK                 |
| <b>Type</b>         | AC                 |
| <b>Mech. spec.</b>  | 35F083             |
| <b>Base</b>         |                    |
| <b>Status</b>       | PRD/A              |
| <b>Elec. spec.</b>  | 35WG0498           |
| <b>Layout</b>       | 35LYF083           |
| <b>Eff. date</b>    | 01-12-2026         |
| <b>CD Diagram</b>   | CD0094             |
| <b>Poles</b>        | 02                 |
| <b>Leads</b>        | 4#16 A&J,1#14 #4TH |
| <b>Proprietary</b>  | False              |
| <b>Created date</b> | 06-21-2007         |

|                               |                            |
|-------------------------------|----------------------------|
| High Voltage Full Load Amps   | 6.0 a                      |
| Insulation Class              | B                          |
| Inverter Code                 | Not Inverter               |
| KVA Code                      | K                          |
| Lifting Lugs                  | No Lifting Lugs            |
| Locked Bearing Indicator      | Locked Bearing             |
| Motor Lead Exit               | Ko Box                     |
| Motor Lead Quantity/Wire Size | 1 @ 14 AWG, #4TH           |
| Motor Lead Termination        | Flying Leads               |
| Motor Standards               | NEMA                       |
| Motor Type                    | 3524L                      |
| Mounting Arrangement          | F1                         |
| Number of Poles               | 2                          |
| Overall Length                | 13.74 IN                   |
| Power Factor                  | 81                         |
| 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                         | 3450 rpm                   |
| Speed Code                    | Single Speed               |
| Starting Method               | Direct on line             |
| Thermal Device - Bearing      | None                       |
| Thermal Device - Winding      | Do Not Use Eve-Not Valid   |
| Vibration Sensor Indicator    | No Vibration Sensor        |
| Winding Thermal 1             | Automatic Thermal Overload |



|                            |      |
|----------------------------|------|
| Winding Thermal 1 Location | SB   |
| Winding Thermal 2          | None |

**Nameplate**

| NP1257L      |              |  |      |      |    |     |   |    |   |  |  |
|--------------|--------------|--|------|------|----|-----|---|----|---|--|--|
| CAT.NO.      | JL3509A      |  |      |      |    |     |   |    |   |  |  |
| SPEC.        | 35F83-498    |  |      |      |    |     |   |    |   |  |  |
| HP           | 1            |  |      |      |    |     |   |    |   |  |  |
| VOLTS        | 115/230      |  |      |      |    |     |   |    |   |  |  |
| AMP          | 12/6         |  |      |      |    |     |   |    |   |  |  |
| RPM          | 3450         |  |      |      |    |     |   |    |   |  |  |
| FRAME        | 56J          |  |      | HZ   | 60 |     |   | PH | 1 |  |  |
| SER.F.       | 1.25         |  | CODE | K    |    | DES | N | CL | B |  |  |
| NEMA-NOM-EFF | 66           |  | PF   | 81   |    |     |   |    |   |  |  |
| RATING       | 40C AMB-CONT |  |      |      |    |     |   |    |   |  |  |
| CC           |              |  |      |      |    |     |   |    |   |  |  |
| DE           | 6205         |  | ODE  | 6203 |    |     |   |    |   |  |  |
| ENCL         | TEFC         |  | SN   |      |    |     |   |    |   |  |  |
|              | SFA 14.4/7.2 |  |      |      |    |     |   |    |   |  |  |

**Parts List**

| Part number   | Description                              | Quantity |
|---------------|------------------------------------------|----------|
| SA024898      | SA 35F83-498                             | 1.000 ea |
| RA020948      | RA 35F83-498                             | 1.000 ea |
| EC1645A06SP   | ELEC CAP, 645-774 MFD, 125V, 2.06D X 4.  | 1.000 ea |
| NS2512A01     | INSULATOR, CONDUIT BOX X                 | 1.000 ea |
| 35CB3007      | 35 CB CASTING W/.88 DIA. LEAD HOLE       | 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 |
| 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 |
| 51XW0832A07   | 8-32 X .44, TAPTITE II, HEX WSHR SLTD SE | 2.000 ea |
| 85XU0407S04   | 4X1/4 U DRIVE PIN STAINLESS              | 2.000 ea |
| 51XB1016A05   | 10-16X5/16HX WA SL SR TYB (F/S)          | 2.000 ea |
| HW5100A03     | WAVY WASHER (W1543-017)                  | 1.000 ea |
| 35EP3307G00   | MASTER DE,205 BRG,1.232SH,#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 |
| 35FH4005A55   | IEC FH NO GRSR,3 MTG HOLE NO DIMPLES,    | 1.000 ea |
| 51XW1032A06   | 10-32 X .38, TAPTITE II, HEX WSHR SLTD S | 3.000 ea |
| WD4100A10     | 465 NIAGARA PLUG (SO ELEC),FOR 1.093 DIA | 1.000 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 |
| MJ1000A02     | GREASE, POLYREX EM EXXON                 | 0.050 lb |
| 34FN3002A01SP | EXTERNAL FAN, PLASTIC, .637/.639 HUB W/  | 1.000 ea |
| MG1050G01     | CELEROL MEDIUM CHARCOAL METALLIC GRAY    | 0.017 ga |
| SP5051A99     | MODEL 34/35 TORQ STA SW LEAD CONFIG      | 1.000 ea |
| HA3100A15     | THRUBOLT 10-32 X 8.375                   | 4.000 ea |
| LB1118        | LABEL,WARNING (ROLL LABEL)               | 1.000 ea |
| LB1009N       | LABEL,ROTATION DIRECTION (ON ROLLS)      | 1.000 ea |
| WD1000A16     | 2-520128-2 AMP FLAG TERMINAL(4M/RL)      | 2.000 ea |
| 35CB4802A02SP | CAPACITOR COVER, STAMPED X               | 1.000 ea |
| 35GS3001A02   | GASKET, CA.COVER, 5.38 LONG .06 CS301    | 1.000 ea |

|            |                               |          |
|------------|-------------------------------|----------|
| LC0031     | CONNECTION LABEL              | 1.000 ea |
| NP1257L    | ALUM UL CC THERMAL REV MTG    | 1.000 ea |
| 36PA1000   | PKG GRP, PRINT PK1016A08      | 1.000 ea |
| PK3083     | STYROFOAM PACKING CRADLE      | 1.000 ea |
| PK3088     | MICROFOAM, 8"X"8 PERF. SHEETS | 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 # 8070

Typical performance - not guaranteed values

| Winding: 35WG0498-R001 |    |              | Type: 3524L                              |                         | Enclosure: TEFC       |         |                            |
|------------------------|----|--------------|------------------------------------------|-------------------------|-----------------------|---------|----------------------------|
| Nameplate Data         |    |              | 230 V, 60 Hz:<br>High Voltage Connection |                         |                       |         |                            |
| Rated Output (HP)      |    | 1            | Full Load Torque                         |                         | 1.5 LB-FT             |         |                            |
| Volts                  |    | 115/230      | Start Configuration                      |                         | direct on line        |         |                            |
| Full Load Amps         |    | 12/6         | Breakdown Torque                         |                         | 4.1 LB-FT             |         |                            |
| R.P.M.                 |    | 3450         | Pull-up Torque                           |                         | 3.1 LB-FT             |         |                            |
| Hz                     | 60 | Phase        | 1                                        | Locked-rotor Torque     |                       | 5 LB-FT |                            |
| NEMA Design Code       |    | N            | KVA Code                                 | K                       | Starting Current      |         | 38.5 A                     |
| Service Factor (S.F.)  |    | 1.25         |                                          | No-load Current         |                       | 2.95 A  |                            |
| NEMA Nom. Eff.         |    | 66           | Power Factor                             | 81                      | Line-line Res. @ 25°C |         | 2.46 Ω A Ph<br>1.75 Ω B Ph |
| Rating - Duty          |    | 40C AMB-CONT |                                          | Temp. Rise @ Rated Load |                       |         |                            |
| S.F. Amps              |    | 14.4/7.2     |                                          | Temp. Rise @ S.F. Load  |                       |         |                            |

**Load Characteristics 230 V, 60 Hz, 1 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 50   | 64   | 75   | 81   | 84   | 86   | 84   |
| Efficiency      | 49   | 65   | 67   | 69   | 68   | 67.5 | 68   |
| Speed           | 3570 | 3550 | 3530 | 3505 | 3472 | 3445 | 3472 |
| Line amperes    | 3.2  | 3.7  | 4.5  | 5.5  | 6.75 | 7.7  | 6.75 |

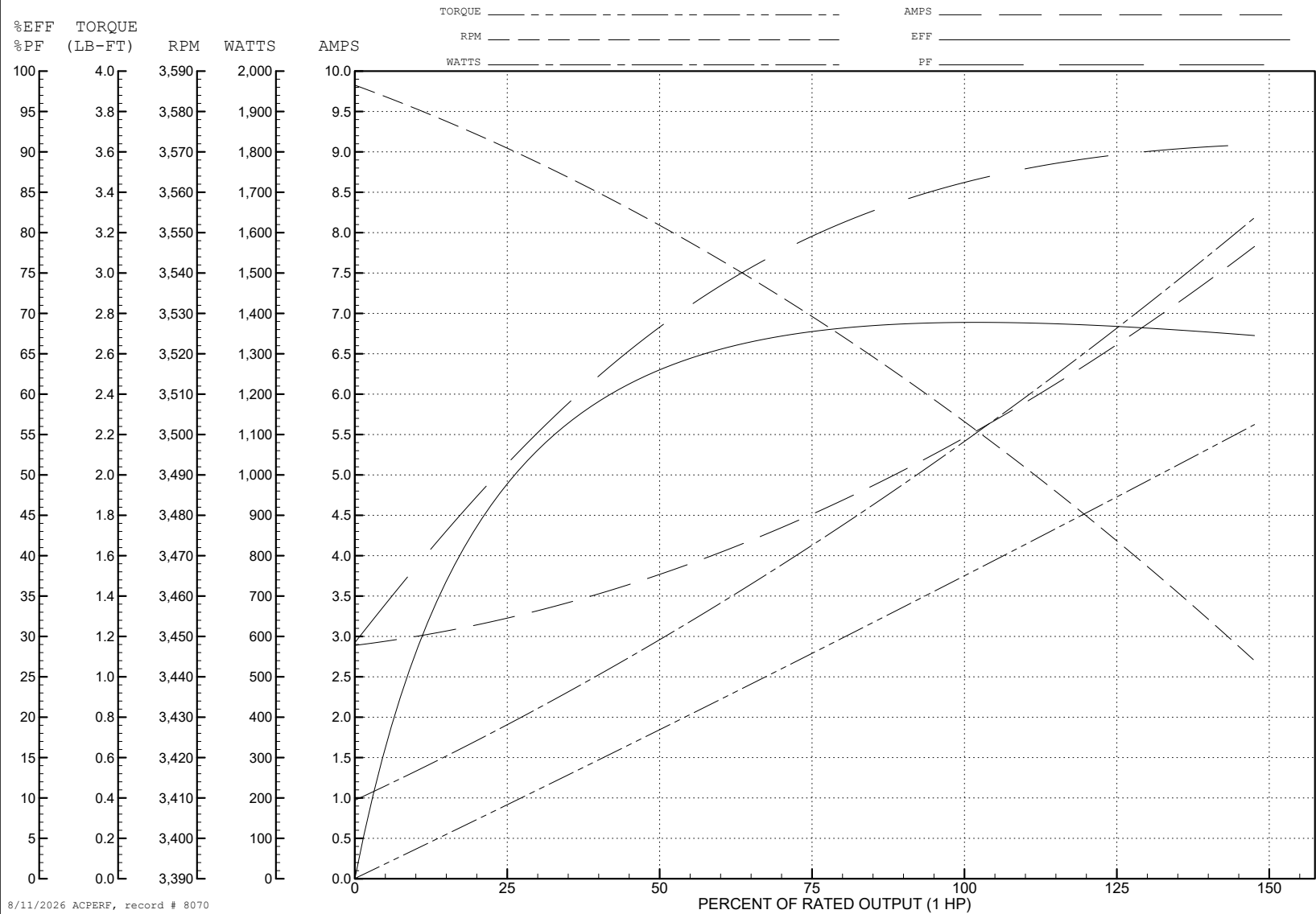
ABB Motors and Mechanical Inc.

WINDING # 35WG0498

Typical performance - not guaranteed values.

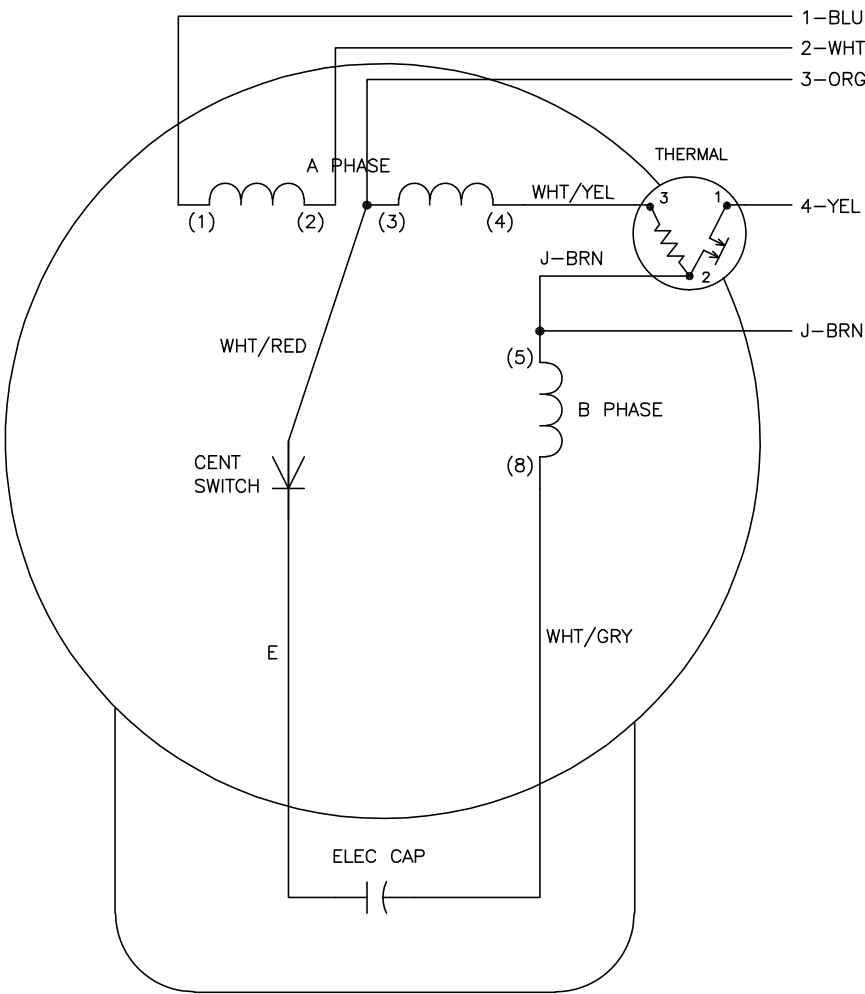
1 HP 1 PH 60 HZ 3450 RPM 230 V 3524L

TORQUES (LB-FT) : PO=4.1 PU=3.1 LR=5 LRA=38.5





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.

CD0094

|                                                      |                              |                   |
|------------------------------------------------------|------------------------------|-------------------|
| REV. DESC: ADD B PH AMPS THRU HTR HVC TO DESCRIPTION |                              |                   |
| REV. LTR: F                                          | VERSION: 02                  | TDR: 000001258306 |
| FILE: \AAA\00007\476                                 | REVISED: 03:40:33 06/18/2025 | BY: ENBRIR0       |
| MTL: —                                               | © □                          |                   |

**BALDOR - RELIANCE®**

TYPE L, DV, FIX, THERMAL, B PH AMPS THRU HTR HVC, 5 LEAD  
SH 1 of 1