

# ABB BALDOR RELIANCE III

---

## Customer information packet

### IDCSWDM3546

1HP, 1770RPM, 3PH, 60HZ, 56C, 3522M, TENV, F1, N

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                                             |
|---------------------------------------|-------------------------------------------------------------|
| <b>Enclosure</b>                      | TENV                                                        |
| <b>Frame</b>                          | 56C                                                         |
| <b>Frame Material</b>                 | Stainless 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>              | Three Phase                                                 |
| <b>Output @ Frequency</b>             | 1.000 HP @ 60 HZ                                            |
| <b>Phase</b>                          | 3                                                           |
| <b>Synchronous Speed @ Frequency</b>  | 1800 RPM @ 60 HZ                                            |
| <b>Voltage @ Frequency</b>            | 208.0 V @ 60 HZ<br>230.0 V @ 60 HZ<br>460.0 V @ 60 HZ       |
| <b>Agency Approvals</b>               | CSA<br>UR                                                   |
| <b>Ambient Temperature</b>            | 40 °C                                                       |
| <b>Auxiliary Box</b>                  | NO AUXILLARY BOX                                            |
| <b>Auxiliary Box Lead Termination</b> | None                                                        |
| <b>Base Indicator</b>                 | Rigid                                                       |
| <b>Bearing Grease Type</b>            | Polyrex EM (-20F +300F)                                     |
| <b>Blower</b>                         | None                                                        |
| <b>Current @ Voltage</b>              | 3.300 A @ 208.0 V<br>3.060 A @ 230.0 V<br>1.530 A @ 460.0 V |
| <b>Design Code</b>                    | B                                                           |
| <b>Drip Cover</b>                     | No Drip Cover                                               |
| <b>Duty Rating</b>                    | CONT                                                        |
| <b>Efficiency @ 100% Load</b>         | 85.5 %                                                      |
| <b>Electrically Isolated Bearing</b>  | Not Electrically Isolated                                   |
| <b>Feedback Device</b>                | NO FEEDBACK                                                 |
| <b>Front Shaft Indicator</b>          | None                                                        |
| <b>Heater Indicator</b>               | No Heater                                                   |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | B          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 35S638     |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 35WGZ818   |
| <b>Layout</b>       | 35LYS638   |
| <b>Eff. date</b>    | 01-11-2023 |
| <b>CD Diagram</b>   | CD0005     |
| <b>Poles</b>        | 04         |
| <b>Leads</b>        | 9#18       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 01-10-2022 |

|                               |                            |
|-------------------------------|----------------------------|
| High Voltage Full Load Amps   | 1.5 a                      |
| Insulation Class              | H                          |
| Inverter Code                 | Inverter Ready             |
| KVA Code                      | N                          |
| Lifting Lugs                  | No Lifting Lugs            |
| Locked Bearing Indicator      | Locked Bearing             |
| Max Speed                     | 2700 rpm                   |
| Motor Lead Quantity/Wire Size | 9 @ 18 AWG                 |
| Motor Lead Termination        | Flying Leads               |
| Motor Standards               | NEMA                       |
| Motor Type                    | 3522M                      |
| Mounting Arrangement          | F1                         |
| Number of Poles               | 4                          |
| Overall Length                | 12.06 IN                   |
| Power Factor                  | 66                         |
| Product Family                | Wash Down Paint Free       |
| Pulley End Bearing Type       | Sealed Bearing             |
| Pulley Face Code              | C-Face                     |
| Pulley Shaft Indicator        | Standard                   |
| Rodent Screen                 | None                       |
| Service Factor                | 1.00                       |
| Shaft Diameter                | 0.625 IN                   |
| Shaft Ground Indicator        | No Shaft Grounding         |
| Shaft Rotation                | Reversible                 |
| Shaft Slinger Indicator       | No Slinger                 |
| Speed                         | 1770 rpm                   |
| Speed Code                    | Single Speed               |
| Starting Method               | Direct on line             |
| Thermal Device - Bearing      | None                       |
| Thermal Device - Winding      | Normally Closed Thermostat |
| Vibration Sensor Indicator    | No Vibration Sensor        |
| Winding Thermal 1             | None                       |
| Winding Thermal 2             | None                       |

**Nameplate**

| NP1608L      |                |    |         |         |               |   |  |  |  |
|--------------|----------------|----|---------|---------|---------------|---|--|--|--|
| CAT NO       | IDCSWDM3546    |    |         |         |               |   |  |  |  |
| SPEC.        | 35S638Z818G1   |    |         |         |               |   |  |  |  |
| FRAME        | 56C            |    |         | HP      | 1 TE          |   |  |  |  |
| VOLTS        | 208-230/460    |    |         |         |               |   |  |  |  |
| MAG CUR      | 2.16-2.46/1.23 |    |         | FLA     | 3.3-3.06/1.53 |   |  |  |  |
| RPM          | 1770           |    |         | RPM MAX | 2700          |   |  |  |  |
| HZ           | 60             |    | PH      | 3       | CLASS         | H |  |  |  |
| SER.F.       | 1.00           |    | DES     | B       | SL HZ         | 1 |  |  |  |
| NEMA-NOM-EFF | 85.5           |    | WK2     | 0.159   |               |   |  |  |  |
| BLWR V       |                | PH |         | HZ      |               | A |  |  |  |
| RATING       | 40C AMB-CONT   |    |         |         |               |   |  |  |  |
| DE BRG       | 6205           |    | ODE BRG | 6203    |               |   |  |  |  |
| CC           | 010A           | SN |         |         |               |   |  |  |  |

**Parts List**

| Part number  | Description                              | Quantity |
|--------------|------------------------------------------|----------|
| SA402492     | SA 35S638Z818G1                          | 1.000 ea |
| RA393769     | RA 35S638Z818G1                          | 1.000 ea |
| NS2512A01    | INSULATOR, CONDUIT BOX X                 | 1.000 ea |
| 35CB5001A03  | CONDUIT BOX KIT, FOR SUPER II WASHDOWN   | 1.000 ea |
| 11XW1032G06  | 10-32 X .38, TAPTITE II, HEX WSHR SLTD U | 1.000 ea |
| 35EP3122D00U | MASTER ODE,203 BRG,.125NPT DRNS(BALL BUR | 1.000 ea |
| HW4500S33    | 1/8 NPT STAINLESS #304 SS PLUG           | 3.000 ea |
| HW5100A03    | WAVY WASHER (W1543-017)                  | 1.000 ea |
| 35EP3307E00U | MASTER DE,205 BRG,1.623SH,.125NPT DRNS,C | 1.000 ea |
| HW4500S33    | 1/8 NPT STAINLESS #304 SS PLUG           | 3.000 ea |
| HW4606A02    | JM CLIPPER/SEAL (LWE-0938-1624-AL23)     | 1.000 ea |
| 12XN1032S20  | 10-32 X 1-1/4 HEX M.S. , STAINLESS STEEL | 2.000 ea |
| HA1049A01    | DUBO LOK WASHER SIZE 10 (NYLON LOCK SEAL | 2.000 ea |
| HA1049A01    | DUBO LOK WASHER SIZE 10 (NYLON LOCK SEAL | 4.000 ea |
| HW2502D13    | SS KEY, 3/16 SQ X 1.375                  | 1.000 ea |
| HA7000A04    | KEY RETAINER 0.625 DIA SHAFTS            | 1.000 ea |
| MJ5001A02    | 732 CL SEALANT 3 OZ DIXIE BEARING 289100 | 0.001 ea |
| 85XU0407S04  | 4X1/4 U DRIVE PIN STAINLESS              | 2.000 ea |
| LB1164       | LABEL,WARNING AND DRAIN                  | 1.000 ea |
| HA5027A02    | HA4054 T-DRAIN X2 BAGGED WITH LABEL      | 1.000 ea |
| MJ1000A02    | GREASE, POLYREX EM EXXON                 | 0.050 lb |
| HA3100S24    | THRUBOLT 8.625 LENGTH 1.250 TH LENGTH SS | 4.000 ea |
| LC0145B01    | CONNECTION LABEL                         | 1.000 ea |
| NP1608L      | SS WD INV UL CSA CC REV MTG              | 1.000 ea |
| 35PA1066     | PKG GRP, PRINT PK1008A07                 | 1.000 ea |
| PK3082       | STYROFOAM CRADLE                         | 1.000 ea |
| MN416A01     | TAG-INSTAL-MAINT no wire (2500 bx)11/25  | 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 # 91333

Typical performance - not guaranteed values

| Winding: 35WGZ818-R008 |    |               | Type: 3522M                              |                     | Enclosure: TENV           |             |              |
|------------------------|----|---------------|------------------------------------------|---------------------|---------------------------|-------------|--------------|
| Nameplate Data         |    |               | 460 V, 60 Hz:<br>High Voltage Connection |                     |                           |             |              |
| Rated Output (HP)      |    | 1             | Full Load Torque                         |                     | 2.99 LB-FT                |             |              |
| Volts                  |    | 208-230/460   | Start Configuration                      |                     | direct on line            |             |              |
| Full Load Amps         |    | 3.3-3.06/1.53 | Breakdown Torque                         |                     | 16.6 LB-FT                |             |              |
| R.P.M.                 |    | 1770          | Pull-up Torque                           |                     | 7.42 LB-FT                |             |              |
| Hz                     | 60 | Phase         | 3                                        | Locked-rotor Torque |                           | 10.32 LB-FT |              |
| NEMA Design Code       |    | B             | KVA Code                                 | N                   | Starting Current          |             | 16.1 A       |
| Service Factor (S.F.)  |    | 1             | No-load Current                          |                     | 1.23 A                    |             |              |
| NEMA Nom. Eff.         |    | 85.5          | Power Factor                             | 66                  | Line-line Res. @ 25°C     |             | 14.4 Ω       |
| Rating - Duty          |    | 40C           | AMB-CONT                                 |                     | Temp. Rise @ Rated Load   |             | 63°C         |
|                        |    |               |                                          |                     | Locked-rotor Power Factor |             | 59.3666      |
|                        |    |               |                                          |                     | Rotor inertia             |             | 0.159 lb-ft² |

**Load Characteristics 460 V, 60 Hz, 1 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  |
|-----------------|------|------|------|------|------|------|
| Power Factor    | 27   | 43   | 56   | 66   | 73   | 78   |
| Efficiency      | 70.8 | 81.2 | 84.5 | 85.9 | 85.8 | 85.2 |
| Speed           | 1793 | 1786 | 1781 | 1773 | 1766 | 1758 |
| Line amperes    | 1.25 | 1.34 | 1.49 | 1.67 | 1.87 | 2.12 |

ABB Motors and Mechanical Inc.

WINDING # 35WGZ818

Typical performance - not guaranteed values.

1 HP 3 PH 60 HZ 1770 RPM 460 V 3522M

TORQUES (LB-FT): PO=16.6 PU=7.42 LR=10.32 LRA=16.1





