

# ABB BALDOR RELIANCE III

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## Customer information packet

### VEM31153

.75HP, 1180RPM, 3PH, 60HZ, 56C, 3524M, OPEN, F1

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                                             |
|---------------------------------------|-------------------------------------------------------------|
| <b>Enclosure</b>                      | OPEN                                                        |
| <b>Frame</b>                          | 56C                                                         |
| <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>              | Three Phase                                                 |
| <b>Output @ Frequency</b>             | .750 HP @ 60 HZ                                             |
| <b>Phase</b>                          | 3                                                           |
| <b>Synchronous Speed @ Frequency</b>  | 1200 RPM @ 60 HZ                                            |
| <b>Voltage @ Frequency</b>            | 230.0 V @ 60 HZ<br>460.0 V @ 60 HZ                          |
| <b>Agency Approvals</b>               | CURUSEEV                                                    |
| <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>              | 1.550 A @ 460.0 V<br>2.900 A @ 208.0 V<br>3.100 A @ 230.0 V |
| <b>Design Code</b>                    | B                                                           |
| <b>Drip Cover</b>                     | Drip Cover                                                  |
| <b>Duty Rating</b>                    | CONT                                                        |
| <b>Efficiency @ 100% Load</b>         | 81.7 %                                                      |
| <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                                                   |
| <b>High Voltage Full Load Amps</b>    | 1.6 a                                                       |
| <b>Insulation Class</b>               | F                                                           |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | F          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 35E4017    |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 35WGG031   |
| <b>Layout</b>       | 35LYE4017  |
| <b>Eff. date</b>    | 01-05-2026 |
| <b>CD Diagram</b>   | CD0005     |
| <b>Poles</b>        | 06         |
| <b>Leads</b>        | 9#18 Y     |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 09-09-2022 |

|                                      |                     |
|--------------------------------------|---------------------|
| <b>Inverter Code</b>                 | Inverter Ready      |
| <b>IP Rating</b>                     | NONE                |
| <b>KVA Code</b>                      | M                   |
| <b>Lifting Lugs</b>                  | No Lifting Lugs     |
| <b>Locked Bearing Indicator</b>      | Locked Bearing      |
| <b>Motor Lead Quantity/Wire Size</b> | 9 @ 18 AWG          |
| <b>Motor Lead Termination</b>        | Flying Leads        |
| <b>Motor Standards</b>               | NEMA                |
| <b>Motor Type</b>                    | 3524M               |
| <b>Mounting Arrangement</b>          | F1                  |
| <b>Number of Poles</b>               | 6                   |
| <b>Overall Length</b>                | 13.23 IN            |
| <b>Power Factor</b>                  | 55                  |
| <b>Product Family</b>                | General Purpose     |
| <b>Pulley End Bearing Type</b>       | Ball                |
| <b>Pulley Face Code</b>              | C-Face              |
| <b>Pulley Shaft Indicator</b>        | Standard            |
| <b>Rodent Screen</b>                 | None                |
| <b>Service Factor</b>                | 1.15                |
| <b>Shaft Diameter</b>                | 0.625 IN            |
| <b>Shaft Ground Indicator</b>        | No Shaft Grounding  |
| <b>Shaft Rotation</b>                | Reversible          |
| <b>Shaft Slinger Indicator</b>       | No Slinger          |
| <b>Speed</b>                         | 1180 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>             | None                |
| <b>Winding Thermal 2</b>             | None                |

**Nameplate**

| NP3155L        |               |      |     |      |   |    |   |    |   |  |  |
|----------------|---------------|------|-----|------|---|----|---|----|---|--|--|
| CAT.NO.        | VEM31153      |      |     |      |   |    |   |    |   |  |  |
| SPEC.          | 35E4017G031G1 |      |     |      |   |    |   |    |   |  |  |
| HP             | .75           |      |     |      |   |    |   |    |   |  |  |
| VOLTS          | 230/460       |      |     |      |   |    |   |    |   |  |  |
| AMP            | 3.1/1.55      |      |     |      |   |    |   |    |   |  |  |
| RPM            | 1180          |      |     |      |   |    |   |    |   |  |  |
| FRAME          | 56C           |      | HZ  | 60   |   |    |   | PH | 3 |  |  |
| SER.F.         | 1.15          | CODE | M   | DES  | B | CL | F |    |   |  |  |
| F.L. AVG. EFF. | 81.7          | PF   | 55  |      |   |    |   |    |   |  |  |
| RATING         | 40C AMB-CONT  |      |     |      |   |    |   |    |   |  |  |
| CC             |               |      |     |      |   |    |   |    |   |  |  |
| DE             | 6205          |      | ODE | 6203 |   |    |   |    |   |  |  |
| ENCL           | OPEN          | SN   |     |      |   |    |   |    |   |  |  |
|                | SFA 2.9/1.45  |      |     |      |   |    |   |    |   |  |  |

**Parts List**

| Part number   | Description                              | Quantity |
|---------------|------------------------------------------|----------|
| SA407352      | SA 35E4017G031G1                         | 1.000 ea |
| RA398851      | RA 35E4017G031G1                         | 1.000 ea |
| NS2512A01     | INSULATOR, CONDUIT BOX X                 | 1.000 ea |
| 35CB3007      | 35 CB CASTING W/.88 DIA. LEAD HOLE       | 1.000 ea |
| 51XB1016A06   | 10-16X3/8 HXWSSLD SERTYB                 | 2.000 ea |
| 11XW1032G06   | 10-32 X .38, TAPTITE II, HEX WSHR SLTD U | 1.000 ea |
| 35EP3209F00   | MASTER ODE,203 BRG,DRIP CVR              | 1.000 ea |
| HW5100A03     | WAVY WASHER (W1543-017)                  | 1.000 ea |
| 51XN1032A20   | 10-32 X 1 1/4 HX WS SL SR                | 2.000 ea |
| 35EP3402C00   | MASTER DE,205 BRG,OPEN                   | 1.000 ea |
| 35AD2000      | AIR BAFFLE - GALVANNEAL                  | 1.000 ea |
| 60XW0632A06   | 6-32 X 3/8 TORX HEAD SCREW TAPTITE II    | 4.000 ea |
| 35FH4006A01SP | DRIP COVER,STAMPED,W/ PRIMER             | 1.000 ea |
| 51XW1032A06   | 10-32 X .38, TAPTITE II, HEX WSHR SLTD S | 3.000 ea |
| 35CB4521      | 35 LIPPED CB LID (GALV & PHOSPH)         | 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 |
| MJ1000A02     | GREASE, POLYREX EM EXXON                 | 0.050 lb |
| MG1050Y01     | CELEROL BALDOR GOLD *5 GALLON BUCKET*    | 0.017 ga |
| HA3100A15     | THRUBOLT 10-32 X 8.375                   | 4.000 ea |
| LC0005        | CONN.DIA.,TY M,9-LD,DUAL VOLT,REVERSING  | 1.000 ea |
| MN416A01      | TAG-INSTAL-MAINT no wire (2500 bx)11/25  | 1.000 ea |
| LB1624        | COMBINED WARNING LABEL, ISO/ANSI PICTOGR | 1.000 ea |
| NP3155L       | ALUM SUPER-E UL CC "SEMS"                | 1.000 ea |
| PK3082        | STYROFOAM CRADLE                         | 1.000 ea |
| 35PA1066      | PKG GRP, PRINT PK1008A07                 | 1.000 ea |
| FE-0000001    | ZRTG FE ASSEMBLY                         | 1.000 ea |
| PE-0000011    | ZRTG PE ASSEMBLY                         | 1.000 ea |

**AC Induction Motor Performance Data**

Record # 77837

Typical performance - not guaranteed values

| Winding: 35WGG031-R001 |    |          | Type: 3524M  |                                          | Enclosure: OPEN       |                         |        |      |
|------------------------|----|----------|--------------|------------------------------------------|-----------------------|-------------------------|--------|------|
| Nameplate Data         |    |          |              | 460 V, 60 Hz:<br>High Voltage Connection |                       |                         |        |      |
| Rated Output (HP)      |    | .75      |              | Full Load Torque                         |                       | 3.35 LB-FT              |        |      |
| Volts                  |    | 230/460  |              | Start Configuration                      |                       | direct on line          |        |      |
| Full Load Amps         |    | 3.1/1.55 |              | Breakdown Torque                         |                       | 12.9 LB-FT              |        |      |
| R.P.M.                 |    | 1180     |              | Pull-up Torque                           |                       | 7.2 LB-FT               |        |      |
| Hz                     | 60 | Phase    | 3            | Locked-rotor Torque                      |                       | 7.7 LB-FT               |        |      |
| NEMA Design Code       |    | B        | KVA Code     | M                                        |                       | Starting Current        | 9.7 A  |      |
| Service Factor (S.F.)  |    | 1.15     |              | No-load Current                          |                       | 1.22 A                  |        |      |
| NEMA Nom. Eff.         |    | 81.7     | Power Factor | 55                                       | Line-line Res. @ 25°C |                         | 20.1 Ω |      |
| Rating - Duty          |    | 40C      |              | AMB-CONT                                 |                       | Temp. Rise @ Rated Load |        | 34°C |
| S.F. Amps              |    | 3.3/1.65 |              | Temp. Rise @ S.F. Load                   |                       | 38°C                    |        |      |
|                        |    |          |              | Locked-rotor Power Factor                |                       | 50.5                    |        |      |
|                        |    |          |              | Rotor inertia                            |                       | 0.174 lb-ft²            |        |      |

**Load Characteristics 460 V, 60 Hz, 0.75 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 22   | 35   | 47   | 55   | 62   | 67   | 1    |
| Efficiency      | 65   | 76   | 80   | 82   | 82   | 81   | 82.4 |
| Speed           | 1194 | 1189 | 1184 | 1179 | 1172 | 1166 | 1170 |
| Line amperes    | 1.23 | 1.31 | 1.42 | 1.56 | 1.74 | 1.95 | 1.47 |

ABB Motors and Mechanical Inc.

WINDING # 35WGG031

Typical performance - not guaranteed values.

0.75 HP 3 PH 60 HZ 1180 RPM 460 V 3524M

TORQUES (LB-FT): PO=12.9 PU=7.2 LR=7.7 LRA=9.7







