

# ABB BALDOR RELIANCE III

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## Customer information packet

### EM31101

.25HP, 1140RPM, 3PH, 60HZ, 56, 3416M, ODP, F1, N

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                                            |
|---------------------------------------|------------------------------------------------------------|
| <b>Enclosure</b>                      | ODP                                                        |
| <b>Frame</b>                          | 56                                                         |
| <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>             | .250 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>                 | Rigid                                                      |
| <b>Bearing Grease Type</b>            | Polyrex EM (-20F +300F)                                    |
| <b>Blower</b>                         | None                                                       |
| <b>Current @ Voltage</b>              | .700 A @ 460.0 V<br>1.400 A @ 230.0 V<br>1.700 A @ 208.0 V |
| <b>Design Code</b>                    | B                                                          |
| <b>Drip Cover</b>                     | No Drip Cover                                              |
| <b>Duty Rating</b>                    | CONT                                                       |
| <b>Efficiency @ 100% Load</b>         | 67.5 %                                                     |
| <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                                                  |
| <b>High Voltage Full Load Amps</b>    | 0.7 a                                                      |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | H          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 34B061     |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 34WGR138   |
| <b>Layout</b>       | 34LYB061   |
| <b>Eff. date</b>    | 12-30-2024 |
| <b>CD Diagram</b>   | CD0005     |
| <b>Poles</b>        | 06         |
| <b>Leads</b>        | 9#18       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 02-26-2014 |

|                               |                     |
|-------------------------------|---------------------|
| Insulation Class              | F                   |
| Inverter Code                 | Not Inverter        |
| KVA Code                      | N                   |
| Lifting Lugs                  | No Lifting Lugs     |
| Locked Bearing Indicator      | No Locked Bearing   |
| Motor Lead Exit               | Ko Box              |
| Motor Lead Quantity/Wire Size | 9 @ 18 AWG          |
| Motor Lead Termination        | Flying Leads        |
| Motor Standards               | NEMA                |
| Motor Type                    | 3416M               |
| Mounting Arrangement          | F1                  |
| Number of Poles               | 6                   |
| Overall Length                | 10.25 IN            |
| Power Factor                  | 48                  |
| Product Family                | General Purpose     |
| Pulley End Bearing Type       | Ball                |
| Pulley Face Code              | Standard            |
| Pulley Shaft Indicator        | Standard            |
| Rodent Screen                 | None                |
| RoHS Status                   | ROHS COMPLIANT      |
| Service Factor                | 1.35                |
| Shaft Diameter                | 0.625 IN            |
| Shaft Extension Location      | Pulley End          |
| Shaft Ground Indicator        | No Shaft Grounding  |
| Shaft Rotation                | Reversible          |
| Shaft Slinger Indicator       | No Slinger          |
| Speed                         | 1140 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             | None                |
| Winding Thermal 2             | None                |

**Nameplate**

| NP3155L        |              |      |     |      |   |    |   |    |   |  |  |
|----------------|--------------|------|-----|------|---|----|---|----|---|--|--|
| CAT.NO.        | EM31101      |      |     |      |   |    |   |    |   |  |  |
| SPEC.          | 34B061R138G1 |      |     |      |   |    |   |    |   |  |  |
| HP             | .25          |      |     |      |   |    |   |    |   |  |  |
| VOLTS          | 230/460      |      |     |      |   |    |   |    |   |  |  |
| AMP            | 1.4/.7       |      |     |      |   |    |   |    |   |  |  |
| RPM            | 1140         |      |     |      |   |    |   |    |   |  |  |
| FRAME          | 56           |      | HZ  | 60   |   |    |   | PH | 3 |  |  |
| SER.F.         | 1.35         | CODE | N   | DES  | B | CL | F |    |   |  |  |
| F.L. AVG. EFF. | 67.5         | PF   | 48  |      |   |    |   |    |   |  |  |
| RATING         | 40C AMB-CONT |      |     |      |   |    |   |    |   |  |  |
| CC             |              |      |     |      |   |    |   |    |   |  |  |
| DE             | 6203         |      | ODE | 6203 |   |    |   |    |   |  |  |
| ENCL           | ODP          | SN   |     |      |   |    |   |    |   |  |  |
|                | SFA 1.6/.8   |      |     |      |   |    |   |    |   |  |  |

**AC Induction Motor Performance Data**

Record # 44896

Typical performance - not guaranteed values

| Winding: 34WGR138-R001 |    |         | Type: 3416M                              |                     | Enclosure: OPEN         |            |        |
|------------------------|----|---------|------------------------------------------|---------------------|-------------------------|------------|--------|
| Nameplate Data         |    |         | 460 V, 60 Hz:<br>High Voltage Connection |                     |                         |            |        |
| Rated Output (HP)      |    | .25     | Full Load Torque                         |                     | 1.14 LB-FT              |            |        |
| Volts                  |    | 230/460 | Start Configuration                      |                     | direct on line          |            |        |
| Full Load Amps         |    | 1.4/.7  | Breakdown Torque                         |                     | 5.98 LB-FT              |            |        |
| R.P.M.                 |    | 1140    | Pull-up Torque                           |                     | 3.59 LB-FT              |            |        |
| Hz                     | 60 | Phase   | 3                                        | Locked-rotor Torque |                         | 4.66 LB-FT |        |
| NEMA Design Code       |    | B       | KVA Code                                 | L                   | Starting Current        |            | 3.58 A |
| Service Factor (S.F.)  |    | 1.35    | No-load Current                          |                     | 0.639 A                 |            |        |
| NEMA Nom. Eff.         |    | 67.5    | Power Factor                             | 48                  | Line-line Res. @ 25°C   |            | 55.4 Ω |
| Rating - Duty          |    | 40C     | AMB-CONT                                 |                     | Temp. Rise @ Rated Load |            | 37°C   |
| S.F. Amps              |    | 1.6/.8  | Temp. Rise @ S.F. Load                   |                     | 43°C                    |            |        |
|                        |    |         | Locked-rotor Power Factor                |                     | 65                      |            |        |
|                        |    |         | Rotor inertia                            |                     | 0.038 LB-FT2            |            |        |

**Load Characteristics 460 V, 60 Hz, 0.25 HP**

| % of Rated Load | 25    | 50    | 75    | 100   | 125   | 150   | S.F. |
|-----------------|-------|-------|-------|-------|-------|-------|------|
| Power Factor    | 22    | 31    | 39    | 47    | 54    | 60    | 56   |
| Efficiency      | 42.6  | 57.9  | 65.1  | 68.7  | 70.8  | 71.3  | 71   |
| Speed           | 1187  | 1178  | 1169  | 1158  | 1146  | 1132  | 1140 |
| Line amperes    | 0.644 | 0.664 | 0.693 | 0.727 | 0.769 | 0.821 | 0.79 |

ABB Motors and Mechanical Inc.

WINDING # 34WGR138

Typical performance - not guaranteed values.

0.25 HP 3 PH 60 HZ 1140 RPM 460 V 3416M

TORQUES (LB-FT) : PO=5.98 PU=3.59 LR=4.66 LRA=3.58





