

# ABB BALDOR RELIANCE III

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## Customer information packet

### EM31116

1HP, 1770RPM, 3PH, 60HZ, 56, 3520M, OPEN, F1, N

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                                             |
|---------------------------------------|-------------------------------------------------------------|
| <b>Enclosure</b>                      | OPEN                                                        |
| <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>             | 1.000 HP @ 60 HZ                                            |
| <b>Phase</b>                          | 3                                                           |
| <b>Synchronous Speed @ Frequency</b>  | 1800 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>              | 1.600 A @ 460.0 V<br>3.200 A @ 208.0 V<br>3.200 A @ 230.0 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                                                   |
| <b>High Voltage Full Load Amps</b>    | 1.6 a                                                       |
| <b>Insulation Class</b>               | F                                                           |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | L          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 35B011     |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 35WGG004   |
| <b>Layout</b>       | 35LYB011   |
| <b>Eff. date</b>    | 04-28-2026 |
| <b>CD Diagram</b>   | CD0005     |
| <b>Poles</b>        | 04         |
| <b>Leads</b>        | 9#18 Y     |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 01-10-2022 |

| Inverter Code                 | Inverter Duty       |
|-------------------------------|---------------------|
| IP Rating                     | NONE                |
| KVA Code                      | N                   |
| Lifting Lugs                  | No Lifting Lugs     |
| Locked Bearing Indicator      | No Locked Bearing   |
| Motor Lead Quantity/Wire Size | 9 @ 18 AWG          |
| Motor Lead Termination        | Flying Leads        |
| Motor Standards               | NEMA                |
| Motor Type                    | 3520M               |
| Mounting Arrangement          | F1                  |
| Number of Poles               | 4                   |
| Overall Length                | 11.07 IN            |
| Power Factor                  | 69                  |
| Product Family                | General Purpose     |
| Pulley End Bearing Type       | Ball                |
| Pulley Face Code              | Standard            |
| Pulley Shaft Indicator        | Standard            |
| Rodent Screen                 | None                |
| Service Factor                | 1.15                |
| 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      | None                |
| Vibration Sensor Indicator    | No Vibration Sensor |
| Winding Thermal 1             | None                |
| Winding Thermal 2             | None                |

Nameplate

| NP3155LUA      |                            |  |      |      |     |   |  |       |   |       |  |  |
|----------------|----------------------------|--|------|------|-----|---|--|-------|---|-------|--|--|
| CAT.NO.        | EM31116                    |  |      |      |     |   |  |       |   |       |  |  |
| SPEC.          | 35B011G004G1               |  |      |      |     |   |  |       |   |       |  |  |
| HP             | 1                          |  |      |      |     |   |  |       |   |       |  |  |
| VOLTS          | 230/460                    |  |      |      |     |   |  |       |   |       |  |  |
| AMPS           | 3.2/1.6                    |  |      |      |     |   |  |       |   |       |  |  |
| RPM            | 1770                       |  |      |      |     |   |  |       |   |       |  |  |
| FRAME          | 56                         |  | HZ   | 60   |     |   |  | PH    | 3 |       |  |  |
| SF             | 1.15                       |  | CODE | N    | DES | B |  | CLASS | F |       |  |  |
| F.L. AVG. EFF. | 85.5                       |  | PF   | 69   |     |   |  |       |   |       |  |  |
| RATING         | 40C AMB-CONT               |  |      |      |     |   |  |       |   |       |  |  |
| CC             |                            |  |      |      |     |   |  |       |   |       |  |  |
| DE             | 6205                       |  | ODE  | 6203 |     |   |  |       |   |       |  |  |
| ENCL           | OPEN                       |  | SN   |      |     |   |  |       |   |       |  |  |
| USABLE AT      | 50HZ 1HP 190/380V 3.6/1.8A |  |      |      |     |   |  |       |   | SF1.0 |  |  |

**AC Induction Motor Performance Data**

Record # 91625

Typical performance - not guaranteed values

| Winding: 35WGG004-R001 |    |         | Type: 3520M                              |                     | Enclosure: TEFC         |            |      |
|------------------------|----|---------|------------------------------------------|---------------------|-------------------------|------------|------|
| Nameplate Data         |    |         | 460 V, 60 Hz:<br>High Voltage Connection |                     |                         |            |      |
| Rated Output (HP)      |    | 1       | Full Load Torque                         |                     | 2.982 LB-FT             |            |      |
| Volts                  |    | 230/460 | Start Configuration                      |                     | direct on line          |            |      |
| Full Load Amps         |    | 3.2/1.6 | Breakdown Torque                         |                     | 14.6 LB-FT              |            |      |
| R.P.M.                 |    | 1770    | Pull-up Torque                           |                     | 7.57 LB-FT              |            |      |
| Hz                     | 60 | Phase   | 3                                        | Locked-rotor Torque |                         | 9.17 LB-FT |      |
| NEMA Design Code       |    | B       | KVA Code                                 |                     | N                       |            |      |
| Service Factor (S.F.)  |    | 1.15    | Starting Current                         |                     | 14.6 A                  |            |      |
| NEMA Nom. Eff.         |    | 85.5    | Power Factor                             |                     | 69                      |            |      |
| Rating - Duty          |    | 40C     | AMB-CONT                                 |                     | Temp. Rise @ Rated Load |            | 36°C |
| S.F. Amps              |    | 3.4/1.7 | Temp. Rise @ S.F. Load                   |                     | 41°C                    |            |      |
|                        |    |         | Locked-rotor Power Factor                |                     | 61.549                  |            |      |
|                        |    |         | Rotor inertia                            |                     | 0.144 lb-ft²            |            |      |

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

| % of Rated Load | 25   | 50     | 75     | 100    | 125    | 150    | S.F. |
|-----------------|------|--------|--------|--------|--------|--------|------|
| Power Factor    | 29   | 45     | 58     | 67     | 73     | 78     | 71   |
| Efficiency      | 71.1 | 81.2   | 84.7   | 85.8   | 86     | 85.6   | 85.9 |
| Speed           | 1794 | 1787.3 | 1781.1 | 1774.3 | 1767.4 | 1759.4 | 1770 |
| Line amperes    | 1.22 | 1.31   | 1.46   | 1.64   | 1.86   | 2.11   | 1.77 |

ABB Motors and Mechanical Inc.

WINDING # 35WGG004

Typical performance - not guaranteed values.

1 HP 3 PH 60 HZ 1770 RPM 460 V 3520M

TORQUES (LB-FT): PO=14.6 PU=7.57 LR=9.17 LRA=14.6





