

# ABB BALDOR RELIANCE III

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## Customer information packet

### EBM3116T

1HP, 1760RPM, 3PH, 60HZ, 143T, 3520M, OPEN, F1

Class - None

Division - Not Applicable

**Specifications**

|                                |                                                             |
|--------------------------------|-------------------------------------------------------------|
| Enclosure                      | OPEN                                                        |
| Frame                          | 143T                                                        |
| Frame Material                 | Steel                                                       |
| Frequency                      | 60.00 Hz                                                    |
| Haz Area Class and Group       | None                                                        |
| Haz Area Division              | Not Applicable                                              |
| Motor Letter Type              | Three Phase                                                 |
| Output @ Frequency             | 1.000 HP @ 60 HZ                                            |
| Phase                          | 3                                                           |
| Synchronous Speed @ Frequency  | 1800 RPM @ 60 HZ                                            |
| Voltage @ Frequency            | 230.0 V @ 60 HZ<br>460.0 V @ 60 HZ                          |
| Agency Approvals               | CURUSEEV<br>NEMA PREMIUM                                    |
| Ambient Temperature            | 40 °C                                                       |
| Auxiliary Box                  | NO AUXILLARY BOX                                            |
| Auxiliary Box Lead Termination | None                                                        |
| Base Indicator                 | Rigid                                                       |
| Bearing Grease Type            | Polyrex EM (-20F +300F)                                     |
| Blower                         | None                                                        |
| Current @ Voltage              | 1.630 A @ 460.0 V<br>3.200 A @ 208.0 V<br>3.260 A @ 230.0 V |
| Design Code                    | B                                                           |
| Drip Cover                     | No Drip Cover                                               |
| Duty Rating                    | CONT                                                        |
| Efficiency @ 100% Load         | 85.5 %                                                      |
| Electrically Isolated Bearing  | Not Electrically Isolated                                   |
| Feedback Device                | NO FEEDBACK                                                 |
| Front Shaft Indicator          | None                                                        |
| Heater Indicator               | No Heater                                                   |
| High Voltage Full Load Amps    | 1.6 a                                                       |

**Part Detail**

|              |            |
|--------------|------------|
| Revision     | F          |
| Type         | AC         |
| Mech. spec.  | 35BB021    |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 35WGG004   |
| Layout       | 35LYBB021  |
| Eff. date    | 01-12-2026 |
| CD Diagram   | CD0005     |
| Poles        | 04         |
| Leads        | 9#18       |
| Proprietary  | False      |
| Created date | 03-11-2022 |

|                                      |                            |
|--------------------------------------|----------------------------|
| <b>Insulation Class</b>              | <b>F</b>                   |
| <b>Inverter Code</b>                 | <b>Inverter Ready</b>      |
| <b>KVA Code</b>                      | <b>N</b>                   |
| <b>Lifting Lugs</b>                  | <b>No Lifting Lugs</b>     |
| <b>Locked Bearing Indicator</b>      | <b>No Locked Bearing</b>   |
| <b>Motor Lead Quantity/Wire Size</b> | <b>9 @ 18 AWG</b>          |
| <b>Motor Lead Termination</b>        | <b>Flying Leads</b>        |
| <b>Motor Standards</b>               | <b>NEMA</b>                |
| <b>Motor Type</b>                    | <b>3520M</b>               |
| <b>Mounting Arrangement</b>          | <b>F1</b>                  |
| <b>Number of Poles</b>               | <b>4</b>                   |
| <b>Overall Length</b>                | <b>15.37 IN</b>            |
| <b>Power Factor</b>                  | <b>67</b>                  |
| <b>Product Family</b>                | <b>General Purpose</b>     |
| <b>Pulley End Bearing Type</b>       | <b>Ball</b>                |
| <b>Pulley Face Code</b>              | <b>Standard</b>            |
| <b>Pulley Shaft Indicator</b>        | <b>Standard</b>            |
| <b>Rodent Screen</b>                 | <b>None</b>                |
| <b>Service Factor</b>                | <b>1.15</b>                |
| <b>Shaft Diameter</b>                | <b>0.875 IN</b>            |
| <b>Shaft Ground Indicator</b>        | <b>No Shaft Grounding</b>  |
| <b>Shaft Rotation</b>                | <b>Reversible</b>          |
| <b>Shaft Slinger Indicator</b>       | <b>No Slinger</b>          |
| <b>Speed</b>                         | <b>1760 rpm</b>            |
| <b>Speed Code</b>                    | <b>Single Speed</b>        |
| <b>Starting Method</b>               | <b>Direct on line</b>      |
| <b>Thermal Device - Bearing</b>      | <b>None</b>                |
| <b>Thermal Device - Winding</b>      | <b>None</b>                |
| <b>Vibration Sensor Indicator</b>    | <b>No Vibration Sensor</b> |
| <b>Winding Thermal 1</b>             | <b>None</b>                |
| <b>Winding Thermal 2</b>             | <b>None</b>                |

Nameplate

| NP1259L      |               |  |      |      |     |   |  |    |   |  |  |
|--------------|---------------|--|------|------|-----|---|--|----|---|--|--|
| CAT.NO.      | EBM3116T      |  |      |      |     |   |  |    |   |  |  |
| SPEC.        | 35BB021G004G1 |  |      |      |     |   |  |    |   |  |  |
| HP           | 1             |  |      |      |     |   |  |    |   |  |  |
| VOLTS        | 230/460       |  |      |      |     |   |  |    |   |  |  |
| AMP          | 3.26/1.63     |  |      |      |     |   |  |    |   |  |  |
| RPM          | 1760          |  |      |      |     |   |  |    |   |  |  |
| FRAME        | 143T          |  | HZ   | 60   |     |   |  | PH | 3 |  |  |
| SER.F.       | 1.15          |  | CODE | N    | DES | B |  | CL | F |  |  |
| NEMA-NOM-EFF | 85.5          |  | PF   | 67   |     |   |  |    |   |  |  |
| RATING       | 40C AMB-CONT  |  |      |      |     |   |  |    |   |  |  |
| CC           | 010A          |  |      |      |     |   |  |    |   |  |  |
| DE           | 6205          |  | ODE  | 6203 |     |   |  |    |   |  |  |
| ENCL         | OPEN          |  | SN   |      |     |   |  |    |   |  |  |
|              | SFA 3.52/1.76 |  |      |      |     |   |  |    |   |  |  |

**AC Induction Motor Performance Data**

Record # 86927

Typical performance - not guaranteed values

| Winding: 35WGG004-R007 |      |              | Type: 3520M                              |                       | Enclosure: OPEN |  |
|------------------------|------|--------------|------------------------------------------|-----------------------|-----------------|--|
| Nameplate Data         |      |              | 460 V, 60 Hz:<br>High Voltage Connection |                       |                 |  |
| Rated Output (HP)      |      | 1            | Full Load Torque                         |                       | 2.97 LB-FT      |  |
| Volts                  |      | 230/460      | Start Configuration                      |                       | direct on line  |  |
| Full Load Amps         |      | 3.26/1.63    | Breakdown Torque                         |                       | 13.68 LB-FT     |  |
| R.P.M.                 |      | 1760         | Pull-up Torque                           |                       | 7.85 LB-FT      |  |
| Hz                     | 60   | Phase        | 3                                        | Locked-rotor Torque   | 9.01 LB-FT      |  |
| NEMA Design Code       | B    | KVA Code     | N                                        | Starting Current      | 14.13 A         |  |
| Service Factor (S.F.)  |      | 1.15         | No-load Current                          |                       | 1.08 A          |  |
| NEMA Nom. Eff.         | 85.5 | Power Factor | 67                                       | Line-line Res. @ 25°C | 16.9 Ω          |  |
| Rating - Duty          |      | 40C AMB-CONT | Temp. Rise @ Rated Load                  |                       | 24°C            |  |
| S.F. Amps              |      | 3.52/1.76    | Temp. Rise @ S.F. Load                   |                       | 27°C            |  |
|                        |      |              | Locked-rotor Power Factor                |                       | 61.5            |  |
|                        |      |              | 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    | 30   | 47   | 60   | 69   | 76   | 79   | 73   |
| Efficiency      | 72.1 | 81.7 | 84.7 | 85.7 | 85.5 | 84.7 | 85.6 |
| Speed           | 1791 | 1784 | 1776 | 1768 | 1759 | 1750 | 1763 |
| Line amperes    | 1.11 | 1.22 | 1.38 | 1.59 | 1.82 | 2.09 | 1.73 |

ABB Motors and Mechanical Inc.

WINDING # 35WGG004

Typical performance - not guaranteed values.

1 HP 3 PH 60 HZ 1760 RPM 460 V 3520M

TORQUES (LB-FT): PO=13.68 PU=7.85 LR=9.01 LRA=14.13





