

# ABB BALDOR RELIANCE III

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## Customer information packet

### SPM31154

1.5HP, 1770RPM, 3PH, 60HZ, 56H, 3528M, ODP, F1

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                        |
|---------------------------------------|----------------------------------------|
| <b>Enclosure</b>                      | ODP                                    |
| <b>Frame</b>                          | 56H                                    |
| <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>             | 1.500 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>               | WEEE<br>NEMA PREMIUM 4                 |
| <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>              | 2.250 A @ 460.0 V<br>4.500 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>         | 87.5 %                                 |
| <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>    | 2.3 a                                  |
| <b>Insulation Class</b>               | F                                      |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | D          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 35E6250    |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 35WGZ964   |
| <b>Layout</b>       | 35LYE6250  |
| <b>Eff. date</b>    | 06-07-2024 |
| <b>CD Diagram</b>   | CD0005     |
| <b>Poles</b>        | 04         |
| <b>Leads</b>        | 9#18       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 09-08-2023 |

|                                      |                            |
|--------------------------------------|----------------------------|
| <b>Inverter Code</b>                 | <b>Inverter Duty</b>       |
| <b>KVA Code</b>                      | <b>M</b>                   |
| <b>Lifting Lugs</b>                  | <b>No Lifting Lugs</b>     |
| <b>Locked Bearing Indicator</b>      | <b>No Locked Bearing</b>   |
| <b>Max Speed</b>                     | <b>2700 rpm</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>3528M</b>               |
| <b>Mounting Arrangement</b>          | <b>F1</b>                  |
| <b>Number of Poles</b>               | <b>4</b>                   |
| <b>Overall Length</b>                | <b>11.75 IN</b>            |
| <b>Power Factor</b>                  | <b>72</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>RoHS Status</b>                   | <b>ROHS COMPLIANT</b>      |
| <b>Service Factor</b>                | <b>1.15</b>                |
| <b>Shaft Diameter</b>                | <b>0.625 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>1770 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**

| NP4423A01A01L |               |         |          |      |    |               |      |       |      |    |       |  |
|---------------|---------------|---------|----------|------|----|---------------|------|-------|------|----|-------|--|
| CAT #         | SPM31154      |         |          |      |    | WGT           | 45   | LBS   |      |    |       |  |
| SPEC          | 35E6250Z964   |         |          |      |    | ENCL          | ODP  |       |      |    |       |  |
| SER #         |               |         |          |      |    | CC            | 010A | IP    | 23   |    |       |  |
| HP            | 1.5           | MAG CUR |          |      |    | 1.45          |      |       |      |    |       |  |
| VOLTS         | 230/460       |         |          |      |    | NEMA NOM. EFF |      |       |      |    | 87.5  |  |
| AMPS          | 4.5/2.25      |         |          |      |    |               | PF   | 72    |      |    |       |  |
| RATING        | 40C AMB-CONT  |         |          |      |    |               |      |       |      |    |       |  |
| RPM           | 1770          |         |          |      |    | MAX RPM       |      |       | 2700 |    |       |  |
| FRAME         | 56H           | HZ      | 60       | CODE |    |               | M    | CLASS |      | F  |       |  |
| SER.F.        | 1.15          | SF AMP  | 4.9/2.45 |      |    |               | PH   | 3     | DES  | B  |       |  |
| DE            | 6205          |         | ODE      | 6203 |    |               |      |       |      |    |       |  |
| LUBRICATION   | POLYREX EM    |         |          |      |    |               |      |       |      |    |       |  |
| ID LOGO       | INVERTER TYPE |         |          | VPWM |    | CHP           | 60   | TO    |      | 90 | 1.5:1 |  |
| ID LOGO       | WK2           | 0.202   | CT       | 6    | TO | 60            | 10:1 |       |      |    |       |  |
| ID LOGO       | SL HZ         | 1       | VT       | 3    | TO | 60            | 20:1 |       |      |    |       |  |
|               |               |         |          |      |    |               |      |       |      |    |       |  |
|               |               |         |          |      |    |               |      |       |      |    |       |  |
|               |               |         |          |      |    |               |      |       |      |    |       |  |
|               |               |         |          |      |    |               | QR   |       |      |    |       |  |
| YR            |               |         |          |      |    |               |      |       |      |    |       |  |

**AC Induction Motor Performance Data**

Record # 96330

Preliminary Data Sheet

| Winding: 35WGZ964-R001 |    |          | Type: 3528M                              |                           | Enclosure: ODP          |                       |
|------------------------|----|----------|------------------------------------------|---------------------------|-------------------------|-----------------------|
| Nameplate Data         |    |          | 460 V, 60 Hz:<br>High Voltage Connection |                           |                         |                       |
| Rated Output (HP)      |    | 1.5      | Full Load Torque                         |                           | 4.47 LB-FT              |                       |
| Volts                  |    | 230/460  | Start Configuration                      |                           | direct on line          |                       |
| Full Load Amps         |    | 4.5/2.25 | Breakdown Torque                         |                           | 20.2 LB-FT              |                       |
| R.P.M.                 |    | 1770     | Pull-up Torque                           |                           | 10.1 LB-FT              |                       |
| Hz                     | 60 | Phase    | 3                                        | Locked-rotor Torque       |                         | 13.3 LB-FT            |
| NEMA Design Code       |    | B        | KVA Code                                 |                           | M                       | Starting Current      |
| Service Factor (S.F.)  |    | 1.15     | No-load Current                          |                           | 1.45 A                  |                       |
| NEMA Nom. Eff.         |    | 87.5     | Power Factor                             |                           | 72                      | Line-line Res. @ 25°C |
| Rating - Duty          |    | 40C      | AMB-CONT                                 |                           | Temp. Rise @ Rated Load |                       |
| S.F. Amps              |    | 4.9/2.45 | Temp. Rise @ S.F. Load                   |                           | 50°C                    |                       |
|                        |    |          |                                          | Locked-rotor Power Factor |                         | 55.3                  |
|                        |    |          |                                          | Rotor inertia             |                         | 0.202 lb-ft²          |

**Load Characteristics 460 V, 60 Hz, 1.5 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 31   | 50   | 63   | 72   | 78   | 82   | 76   |
| Efficiency      | 76.4 | 84.6 | 87   | 87.5 | 86.9 | 86   | 87.1 |
| Speed           | 1793 | 1786 | 1778 | 1771 | 1763 | 1754 | 1766 |
| Line amperes    | 1.51 | 1.67 | 1.92 | 2.23 | 2.6  | 3    | 2.45 |

ABB Motors and Mechanical Inc.

WINDING # 35WGZ964

Typical performance - not guaranteed values.

1.5 HP 3 PH 60 HZ 1770 RPM 460 V 3528M

TORQUES (LB-FT): PO=20.2 PU=10.1 LR=13.3 LRA=20.7





