

# ABB BALDOR RELIANCE III

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## Customer information packet

### VSPM31155

2HP, 3450RPM, 3PH, 60HZ, 56C, 3524M, OPEN, F1, N

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>             | 2.000 HP @ 60 HZ                                            |
| <b>Phase</b>                          | 3                                                           |
| <b>Synchronous Speed @ Frequency</b>  | 3600 RPM @ 60 HZ                                            |
| <b>Voltage @ Frequency</b>            | 230.0 V @ 60 HZ<br>460.0 V @ 60 HZ                          |
| <b>Agency Approvals</b>               | NEMA PREMIUM 4<br>WEEE                                      |
| <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>              | 2.500 A @ 460.0 V<br>5.000 A @ 230.0 V<br>5.500 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>         | 86.5 %                                                      |
| <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>    | 2.5 a                                                       |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | C          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 35E6396    |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 35WGS095   |
| <b>Layout</b>       | 35LYE6396  |
| <b>Eff. date</b>    | 11-19-2025 |
| <b>CD Diagram</b>   | CD0005     |
| <b>Poles</b>        | 02         |
| <b>Leads</b>        | 9#18       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 01-09-2024 |

|                                      |                     |
|--------------------------------------|---------------------|
| <b>Insulation Class</b>              | F                   |
| <b>Inverter Code</b>                 | Inverter Ready      |
| <b>KVA Code</b>                      | K                   |
| <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>               | 2                   |
| <b>Overall Length</b>                | 12.07 IN            |
| <b>Power Factor</b>                  | 90                  |
| <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>RoHS Status</b>                   | ROHS COMPLIANT      |
| <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>                         | 3450 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**

| NP4423A01A01L |               |      |         |     |      |               |      |    |       |      |      |  |       |   |  |
|---------------|---------------|------|---------|-----|------|---------------|------|----|-------|------|------|--|-------|---|--|
| CAT #         | VSPM31155     |      |         |     |      | WGT           | 43   |    | LBS   |      |      |  |       |   |  |
| SPEC          | 35E6396S095   |      |         |     |      | ENCL          | OPEN |    |       |      |      |  |       |   |  |
| SER #         |               |      |         |     |      | CC            | 010A |    | IP    | 23   |      |  |       |   |  |
| HP            | 2             |      | MAG CUR |     |      |               |      |    |       |      |      |  |       |   |  |
| VOLTS         | 230/460       |      |         |     |      | NEMA NOM. EFF |      |    |       |      |      |  | 86.5  |   |  |
| AMPS          | 5/2.5         |      |         |     |      |               |      | PF | 90    |      |      |  |       |   |  |
| RATING        | 40C AMB-CONT  |      |         |     |      |               |      |    |       |      |      |  |       |   |  |
| RPM           | 3450          |      |         |     |      | MAX RPM       |      |    |       |      |      |  |       |   |  |
| FRAME         | 56C           |      | HZ      | 60  |      | CODE          | K    |    | CLASS | F    |      |  |       |   |  |
| SER.F.        | 1.15          |      | SF AMP  |     |      |               |      |    |       | 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           | 0.07 |         | CT  | 6    |               | TO   | 60 |       | 10:1 |      |  |       |   |  |
| ID LOGO       | SL HZ         |      |         |     | VT   | 3             |      | TO | 60    |      | 20:1 |  |       |   |  |
|               |               |      |         |     |      |               |      |    |       |      |      |  |       |   |  |
|               |               |      |         |     |      |               |      |    |       |      |      |  |       |   |  |
|               |               |      |         |     |      |               |      |    |       |      |      |  |       |   |  |
|               |               |      |         |     |      |               |      | QR |       |      |      |  |       |   |  |
| YR            |               |      |         |     |      |               |      |    |       |      |      |  |       |   |  |

**AC Induction Motor Performance Data**

Record # 112221

Typical performance - not guaranteed values

| Winding: 35WGS095-R005 |    |         | Type: 3524M                              |                     | Enclosure: OPEN           |           |               |
|------------------------|----|---------|------------------------------------------|---------------------|---------------------------|-----------|---------------|
| Nameplate Data         |    |         | 460 V, 60 Hz:<br>High Voltage Connection |                     |                           |           |               |
| Rated Output (HP)      |    | 2       | Full Load Torque                         |                     | 3 LB-FT                   |           |               |
| Volts                  |    | 230/460 | Start Configuration                      |                     | direct on line            |           |               |
| Full Load Amps         |    | 5/2.5   | Breakdown Torque                         |                     | 11 LB-FT                  |           |               |
| R.P.M.                 |    | 3450    | Pull-up Torque                           |                     | 7.6 LB-FT                 |           |               |
| Hz                     | 60 | Phase   | 3                                        | Locked-rotor Torque |                           | 9.8 LB-FT |               |
| NEMA Design Code       |    | B       | KVA Code                                 | K                   | Starting Current          |           | 22 A          |
| Service Factor (S.F.)  |    | 1.15    | No-load Current                          |                     | 0.9 A                     |           |               |
| NEMA Nom. Eff.         |    | 86.5    | Power Factor                             | 90                  | Line-line Res. @ 25°C     |           | 7.37 Ω        |
| Rating - Duty          |    | 40C     | AMB-CONT                                 |                     | Temp. Rise @ Rated Load   |           | 23°C          |
| S.F. Amps              |    |         |                                          |                     | Temp. Rise @ S.F. Load    |           | 28°C          |
|                        |    |         |                                          |                     | Locked-rotor Power Factor |           | 48.6          |
|                        |    |         |                                          |                     | Rotor inertia             |           | 0.0664 lb-ft² |

**Load Characteristics 460 V, 60 Hz, 2 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 52   | 77   | 84   | 85   | 89   | 88   | 87   |
| Efficiency      | 83.8 | 87.8 | 88.1 | 87.2 | 85.6 | 83.6 | 86.2 |
| Speed           | 3569 | 3540 | 3509 | 3475 | 3438 | 3398 | 3453 |
| Line amperes    | 1.1  | 1.4  | 1.9  | 2.5  | 3    | 3.7  | 2.8  |

ABB Motors and Mechanical Inc.

WINDING # 35WGS095

Typical performance - not guaranteed values.

2 HP 3 PH 60 HZ 3450 RPM 460 V 3524M

TORQUES (LB-FT) : PO=11 PU=7.6 LR=9.8 LRA=22





