

# ABB BALDOR RELIANCE III

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## Customer information packet

### VESSWDM3554

1.5HP, 1770RPM, 3PH, 60HZ, 56C, 3524M, TEFC, F1

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                                             |
|---------------------------------------|-------------------------------------------------------------|
| <b>Enclosure</b>                      | TEFC                                                        |
| <b>Frame</b>                          | 56C                                                         |
| <b>Frame Material</b>                 | Stainless 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>               | CSA EEV<br>NEMA PREMIUM<br>NEMA_PREMIUM<br>UR               |
| <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>              | 4.640 A @ 208.0 V<br>4.600 A @ 230.0 V<br>2.300 A @ 460.0 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                                                        |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | D          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 35W179     |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 35WGL955   |
| <b>Layout</b>       | 35LYW179   |
| <b>Eff. date</b>    | 06-14-2024 |
| <b>CD Diagram</b>   | CD0005     |
| <b>Poles</b>        | 04         |
| <b>Leads</b>        | 9#18       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 01-10-2022 |

|                                      |                               |
|--------------------------------------|-------------------------------|
| <b>Heater Indicator</b>              | No Heater                     |
| <b>High Voltage Full Load Amps</b>   | 2.3 a                         |
| <b>Insulation Class</b>              | F                             |
| <b>Inverter Code</b>                 | Inverter Ready                |
| <b>KVA Code</b>                      | M                             |
| <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>               | 4                             |
| <b>Overall Length</b>                | 13.34 IN                      |
| <b>Power Factor</b>                  | 72                            |
| <b>Product Family</b>                | Wash Down All Stainless Steel |
| <b>Pulley End Bearing Type</b>       | Sealed Bearing                |
| <b>Pulley Face Code</b>              | C-Face                        |
| <b>Pulley Shaft Indicator</b>        | Standard                      |
| <b>Rodent Screen</b>                 | None                          |
| <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>                         | 1770 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

| NP1953A01    |               |  |      |     |      |   |  |       |    |   |  |
|--------------|---------------|--|------|-----|------|---|--|-------|----|---|--|
| CAT.NO.      | VESSWDM3554   |  |      |     |      |   |  |       |    |   |  |
| SPEC.        | 35W179L955G1  |  |      |     |      |   |  |       |    |   |  |
| HP           | 1.5           |  |      |     |      |   |  |       |    |   |  |
| VOLTS        | 230/460       |  |      |     |      |   |  |       |    |   |  |
| AMP          | 4.6/2.3       |  |      |     |      |   |  |       |    |   |  |
| RPM          | 1770          |  |      |     |      |   |  |       |    |   |  |
| FRAME        | 56C           |  |      | HZ  | 60   |   |  |       | PH | 3 |  |
| SER.F.       | 1.15          |  | CODE | M   | DES  | B |  | CLASS |    | F |  |
| NEMA-NOM-EFF | 86.5          |  |      | PF  | 72   |   |  |       |    |   |  |
| RATING       | 40C AMB-CONT  |  |      |     |      |   |  |       |    |   |  |
| CC           | 010A          |  |      |     |      |   |  |       |    |   |  |
| DE           | 6205          |  |      | ODE | 6203 |   |  |       |    |   |  |
| ENCL         | TEFC          |  | SN   |     |      |   |  |       |    |   |  |
|              | SFA 4.72/2.36 |  |      |     |      |   |  |       |    |   |  |

**AC Induction Motor Performance Data**

Record # 95387

Typical performance - not guaranteed values

| Winding: 35WGL955-R001 |          |                   | Type: 3524M                              |  | Enclosure: TEFC |  |
|------------------------|----------|-------------------|------------------------------------------|--|-----------------|--|
| Nameplate Data         |          |                   | 460 V, 60 Hz:<br>High Voltage Connection |  |                 |  |
| Rated Output (HP)      |          | 1.5               | Full Load Torque                         |  | 4.48 LB-FT      |  |
| Volts                  |          | 230/460           | Start Configuration                      |  | direct on line  |  |
| Full Load Amps         |          | 4.6/2.3           | Breakdown Torque                         |  | 18.8 LB-FT      |  |
| R.P.M.                 |          | 1770              | Pull-up Torque                           |  | 9.6 LB-FT       |  |
| Hz                     | 60 Phase | 3                 | Locked-rotor Torque                      |  | 12.6 LB-FT      |  |
| NEMA Design Code       |          | B KVA Code        | Starting Current                         |  | 19.7 A          |  |
| Service Factor (S.F.)  |          | 1.15              | No-load Current                          |  | 1.51 A          |  |
| NEMA Nom. Eff.         |          | 86.5 Power Factor | Line-line Res. @ 25°C                    |  | 11.8 Ω          |  |
| Rating - Duty          |          | 40C AMB-CONT      | Temp. Rise @ Rated Load                  |  | 48°C            |  |
| S.F. Amps              |          | 5/2.5             | Temp. Rise @ S.F. Load                   |  | 57°C            |  |
|                        |          |                   | Locked-rotor Power Factor                |  | 58.4            |  |
|                        |          |                   | Rotor inertia                            |  | 0.173 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   | 49   | 63   | 72   | 78   | 81   | 76   |
| Efficiency      | 75.1 | 83.5 | 86   | 86.5 | 85.8 | 84.8 | 86.1 |
| Speed           | 1792 | 1785 | 1777 | 1769 | 1760 | 1750 | 1764 |
| Line amperes    | 1.56 | 1.72 | 1.97 | 2.28 | 2.65 | 3.06 | 2.5  |

ABB Motors and Mechanical Inc.

WINDING # 35WGL955

Typical performance - not guaranteed values.

1.5 HP 3 PH 60 HZ 1770 RPM 460 V 3524M

TORQUES (LB-FT): PO=18.8 PU=9.6 LR=12.6 LRA=19.7





