

# ABB BALDOR RELIANCE III

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## Customer information packet

### VFSWDL3509

1HP, 3450RPM, 1PH, 60HZ, 56C, 3524L, TEFC, F1, N

Class - None

Division - Not Applicable

**Specifications**

|                                |                                         |
|--------------------------------|-----------------------------------------|
| Enclosure                      | TEFC                                    |
| Frame                          | 56C                                     |
| Frame Material                 | Stainless Steel                         |
| Frequency                      | 60.00 Hz                                |
| Haz Area Class and Group       | None                                    |
| Haz Area Division              | Not Applicable                          |
| Motor Letter Type              | Cap Start, Induction Run                |
| Output @ Frequency             | 1.000 HP @ 60 HZ                        |
| Phase                          | 1                                       |
| Synchronous Speed @ Frequency  | 3600 RPM @ 60 HZ                        |
| Voltage @ Frequency            | 115.0 V @ 60 HZ<br>230.0 V @ 60 HZ      |
| Agency Approvals               | UR<br>CSA                               |
| Ambient Temperature            | 40 °C                                   |
| Auxiliary Box                  | NO AUXILLARY BOX                        |
| Auxiliary Box Lead Termination | None                                    |
| Base Indicator                 | No Mounting                             |
| Bearing Grease Type            | Polyrex EM (-20F +300F)                 |
| Blower                         | None                                    |
| Current @ Voltage              | 11.600 A @ 115.0 V<br>5.800 A @ 230.0 V |
| Design Code                    | N                                       |
| Drip Cover                     | No Drip Cover                           |
| Duty Rating                    | CONT                                    |
| Efficiency @ 100% Load         | 68.0 %                                  |
| Electrically Isolated Bearing  | Not Electrically Isolated               |
| Feedback Device                | NO FEEDBACK                             |
| Front Face Code                | Standard                                |
| Front Shaft Indicator          | None                                    |
| Heater Indicator               | No Heater                               |
| High Voltage Full Load Amps    | 5.8 a                                   |

**Part Detail**

|              |                     |
|--------------|---------------------|
| Revision     | F                   |
| Type         | AC                  |
| Mech. spec.  | 35E4628             |
| Base         |                     |
| Status       | PRD/A               |
| Elec. spec.  | 35WGL350            |
| Layout       | 35LYE4628           |
| Eff. date    | 08-30-2023          |
| CD Diagram   | CD0648              |
| Poles        | 02                  |
| Leads        | 4#16 A PH,3#18 B PH |
| Proprietary  | False               |
| Created date | 06-28-2017          |

|                                      |                            |
|--------------------------------------|----------------------------|
| <b>Insulation Class</b>              | F                          |
| <b>Inverter Code</b>                 | Not Inverter               |
| <b>KVA Code</b>                      | K                          |
| <b>Lifting Lugs</b>                  | No Lifting Lugs            |
| <b>Locked Bearing Indicator</b>      | Locked Bearing             |
| <b>Motor Finish</b>                  | UNPAINTED                  |
| <b>Motor Lead Exit</b>               | Ko Box                     |
| <b>Motor Lead Quantity/Wire Size</b> | @ 0 AWG<br>9 @ 18 AWG      |
| <b>Motor Lead Termination</b>        | Flying Leads               |
| <b>Motor Standards</b>               | NEMA                       |
| <b>Motor Type</b>                    | 3524L                      |
| <b>Mounting Arrangement</b>          | F1                         |
| <b>Number of Poles</b>               | 2                          |
| <b>Overall Length</b>                | 13.96 IN                   |
| <b>Power Factor</b>                  | 80                         |
| <b>Product Family</b>                | WD All SD Non-Encapsulated |
| <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>RoHS Status</b>                   | ROHS COMPLIANT             |
| <b>Service Factor</b>                | 1.25                       |
| <b>Shaft Diameter</b>                | 0.625 IN                   |
| <b>Shaft Extension Location</b>      | Pulley End                 |
| <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        |

|                   |      |
|-------------------|------|
| Winding Thermal 1 | None |
| Winding Thermal 2 | None |

[illegible]

**AC Induction Motor Performance Data**

Record # 67393

Typical performance - not guaranteed values

| Winding: 35WGL350-R001 |  |              | Type: 3524L                              |                         | Enclosure: TEFC |                       |            |                               |
|------------------------|--|--------------|------------------------------------------|-------------------------|-----------------|-----------------------|------------|-------------------------------|
|                        |  |              |                                          |                         |                 |                       |            |                               |
| Nameplate Data         |  |              | 230 V, 60 Hz:<br>High Voltage Connection |                         |                 |                       |            |                               |
| Rated Output (HP)      |  | 1            | Full Load Torque                         |                         | 1.516 LB-FT     |                       |            |                               |
| Volts                  |  | 115/230      | Start Configuration                      |                         | direct on line  |                       |            |                               |
| Full Load Amps         |  | 11.6/5.8     | Breakdown Torque                         |                         | 4.11 LB-FT      |                       |            |                               |
| R.P.M.                 |  | 3450         | Pull-up Torque                           |                         | 3.53 LB-FT      |                       |            |                               |
| Hz                     |  | 60           | Phase                                    |                         | 1               | Locked-rotor Torque   | 5.64 LB-FT |                               |
| NEMA Design Code       |  | N            | KVA Code                                 |                         | K               | Starting Current      |            | 39.5 A                        |
| Service Factor (S.F.)  |  | 1.25         |                                          | No-load Current         |                 | 3.55 A                |            |                               |
| NEMA Nom. Eff.         |  | 68           | Power Factor                             |                         | 80              | Line-line Res. @ 25°C |            | 2.097 Ω A Ph<br>1.1004 Ω B Ph |
| Rating - Duty          |  | 40C AMB-CONT |                                          | Temp. Rise @ Rated Load |                 | 75°C                  |            |                               |
| S.F. Amps              |  | 13.8/6.9     |                                          | Temp. Rise @ S.F. Load  |                 | 100°C                 |            |                               |

**Load Characteristics 230 V, 60 Hz, 1 HP**

| % of Rated Load | 25     | 50     | 75   | 100    | 125    | 150    | S.F. |
|-----------------|--------|--------|------|--------|--------|--------|------|
| Power Factor    | 57     | 69     | 77   | 81     | 85     | 87     | 85   |
| Efficiency      | 36.9   | 52.1   | 60.8 | 65.3   | 66.8   | 66.9   | 66.8 |
| Speed           | 3564.8 | 3547.2 | 3529 | 3511.3 | 3485.8 | 3458.1 | 3486 |
| Line amperes    | 3.96   | 4.63   | 5.38 | 6.19   | 7.28   | 8.44   | 7.28 |

ABB Motors and Mechanical Inc.

WINDING # 35WGL350

Typical performance - not guaranteed values.

1 HP 1 PH 60 HZ 3450 RPM 230 V 3524L

TORQUES (LB-FT) : PO=4.11 PU=3.53 LR=5.64 LRA=39.5





