

# ABB BALDOR RELIANCE III

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## Customer information packet

### VFSWDM3537-E

.5HP, 3500RPM, 3PH, 60HZ, 56C, 3516M, TENV, F1

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                                            |
|---------------------------------------|------------------------------------------------------------|
| <b>Enclosure</b>                      | TENV                                                       |
| <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>             | .500 HP @ 60 HZ                                            |
| <b>Phase</b>                          | 3                                                          |
| <b>Synchronous Speed @ Frequency</b>  | 3600 RPM @ 60 HZ                                           |
| <b>Voltage @ Frequency</b>            | 460.0 V @ 60 HZ<br>230.0 V @ 60 HZ<br>208.0 V @ 60 HZ      |
| <b>Agency Approvals</b>               | CSA<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>              | 1.500 A @ 208.0 V<br>1.400 A @ 230.0 V<br>.700 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>         | 84.0 %                                                     |
| <b>Electrically Isolated Bearing</b>  | Not Electrically Isolated                                  |
| <b>Feedback Device</b>                | NO FEEDBACK                                                |
| <b>Front Face Code</b>                | Standard                                                   |
| <b>Front Shaft Indicator</b>          | None                                                       |

**Part Detail**

|                     |                                                              |
|---------------------|--------------------------------------------------------------|
| <b>Revision</b>     | N                                                            |
| <b>Type</b>         | AC                                                           |
| <b>Mech. spec.</b>  | 35E4656                                                      |
| <b>Base</b>         |                                                              |
| <b>Status</b>       | PRD/A                                                        |
| <b>Elec. spec.</b>  | 35WGP069                                                     |
| <b>Layout</b>       | 35LYE4656                                                    |
| <b>Eff. date</b>    | 09-09-2026                                                   |
| <b>CD Diagram</b>   | CD0005                                                       |
| <b>Poles</b>        | 02                                                           |
| <b>Leads</b>        | 9#18 15" lead length,0#0 dbl dip &<br>bake,0#0 phase insulaY |
| <b>Proprietary</b>  | False                                                        |
| <b>Created date</b> | 06-21-2017                                                   |

|                               |                        |
|-------------------------------|------------------------|
| Heater Indicator              | No Heater              |
| High Voltage Full Load Amps   | 0.7 a                  |
| Insulation Class              | H                      |
| Inverter Code                 | Inverter Ready         |
| KVA Code                      | N                      |
| Lifting Lugs                  | No Lifting Lugs        |
| Locked Bearing Indicator      | Locked Bearing         |
| Motor Finish                  | UNPAINTED              |
| Motor Lead Exit               | Ko Box                 |
| Motor Lead Quantity/Wire Size | @ 0 AWG<br>9 @ 18 AWG  |
| Motor Lead Termination        | Flying Leads           |
| Motor Standards               | NEMA                   |
| Motor Type                    | 3516M                  |
| Mounting Arrangement          | F1                     |
| Number of Poles               | 2                      |
| Overall Length                | 11.78 IN               |
| Power Factor                  | 84                     |
| Product Family                | WD All SS Encapsulated |
| Pulley End Bearing Type       | Sealed Bearing         |
| Pulley Face Code              | C-Face                 |
| Pulley Shaft Indicator        | Standard               |
| Rodent Screen                 | None                   |
| RoHS Status                   | ROHS COMPLIANT         |
| Service Factor                | 1.15                   |
| Shaft Diameter                | 0.625 IN               |
| Shaft Extension Location      | Pulley End             |
| Shaft Ground Indicator        | No Shaft Grounding     |
| Shaft Rotation                | Reversible             |
| Shaft Slinger Indicator       | No Slinger             |
| Speed                         | 3500 rpm               |
| Speed Code                    | Single Speed           |
| Starting Method               | Direct on line         |
| Thermal Device - Bearing      | None                   |

|                            |                     |
|----------------------------|---------------------|
| Thermal Device - Winding   | None                |
| Vibration Sensor Indicator | No Vibration Sensor |
| Winding Thermal 1          | None                |
| Winding Thermal 2          | None                |



**AC Induction Motor Performance Data**

Record # 63631

Typical performance - not guaranteed values

| Winding: 35WGP069-R009 |    |              | Type: 3516M                              |                           | Enclosure: TENV       |               |        |
|------------------------|----|--------------|------------------------------------------|---------------------------|-----------------------|---------------|--------|
| Nameplate Data         |    |              | 460 V, 60 Hz:<br>High Voltage Connection |                           |                       |               |        |
| Rated Output (HP)      |    | .5           | Full Load Torque                         |                           | 0.753 LB-FT           |               |        |
| Volts                  |    | 208-230/460  | Start Configuration                      |                           | direct on line        |               |        |
| Full Load Amps         |    | 1.5-1.4/.7   | Breakdown Torque                         |                           | 4.09 LB-FT            |               |        |
| R.P.M.                 |    | 3500         | Pull-up Torque                           |                           | 2.2 LB-FT             |               |        |
| Hz                     | 60 | Phase        | 3                                        | Locked-rotor Torque       |                       | 2.47 LB-FT    |        |
| NEMA Design Code       |    | B            | KVA Code                                 | N                         | Starting Current      |               | 6.97 A |
| Service Factor (S.F.)  |    | 1.15         |                                          | No-load Current           |                       | 0.394 A       |        |
| NEMA Nom. Eff.         |    | 84           | Power Factor                             | 84                        | Line-line Res. @ 25°C |               | 25.2 Ω |
| Rating - Duty          |    | 40C AMB-CONT |                                          | Temp. Rise @ Rated Load   |                       | 63°C          |        |
| S.F. Amps              |    |              |                                          | Temp. Rise @ S.F. Load    |                       | 72°C          |        |
|                        |    |              |                                          | Locked-rotor Power Factor |                       | 54.7          |        |
|                        |    |              |                                          | Rotor inertia             |                       | 0.0443 LB-FT2 |        |

**Load Characteristics 460 V, 60 Hz, 0.5 HP**

| % of Rated Load | 25    | 50    | 75   | 100   | 125   | 150  | S.F.  |
|-----------------|-------|-------|------|-------|-------|------|-------|
| Power Factor    | 50    | 65    | 74   | 81    | 84    | 87   | 83    |
| Efficiency      | 49.5  | 65    | 71.2 | 75    | 76.3  | 76.7 | 75.8  |
| Speed           | 3568  | 3541  | 3517 | 3492  | 3464  | 3436 | 3475  |
| Line amperes    | 0.453 | 0.545 | 0.65 | 0.774 | 0.904 | 1.05 | 0.852 |

ABB Motors and Mechanical Inc.

WINDING # 35WGP069

Typical performance - not guaranteed values.

0.5 HP 3 PH 60 HZ 3500 RPM 460 V 3516M

TORQUES (LB-FT): PO=4.09 PU=2.2 LR=2.47 LRA=6.97





