

# ABB BALDOR RELIANCE III

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## Customer information packet

### VFSWDM3550T-E

1.5HP, 3500RPM, 3PH, 60HZ, 143TC, 3532M, TENV

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                                             |
|---------------------------------------|-------------------------------------------------------------|
| <b>Enclosure</b>                      | TENV                                                        |
| <b>Frame</b>                          | 143TC                                                       |
| <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>  | 3600 RPM @ 60 HZ                                            |
| <b>Voltage @ Frequency</b>            | 230.0 V @ 60 HZ<br>460.0 V @ 60 HZ                          |
| <b>Agency Approvals</b>               | UR<br>CSA                                                   |
| <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>              | 1.800 A @ 460.0 V<br>3.600 A @ 230.0 V<br>3.700 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>         | 85.5 %                                                      |
| <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                                                        |
| <b>Heater Indicator</b>               | No Heater                                                   |

**Part Detail**

|                     |                                                              |
|---------------------|--------------------------------------------------------------|
| <b>Revision</b>     | M                                                            |
| <b>Type</b>         | AC                                                           |
| <b>Mech. spec.</b>  | 35E4717                                                      |
| <b>Base</b>         |                                                              |
| <b>Status</b>       | PRD/A                                                        |
| <b>Elec. spec.</b>  | 35WGR929                                                     |
| <b>Layout</b>       | 35LYE4717                                                    |
| <b>Eff. date</b>    | 08-14-2023                                                   |
| <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> | 07-10-2017                                                   |

|                               |                        |
|-------------------------------|------------------------|
| High Voltage Full Load Amps   | 1.8 a                  |
| Insulation Class              | H                      |
| Inverter Code                 | Inverter Ready         |
| KVA Code                      | M                      |
| 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                    | 3532M                  |
| Mounting Arrangement          | F1                     |
| Number of Poles               | 2                      |
| Overall Length                | 13.72 IN               |
| Power Factor                  | 90                     |
| 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                | 0.875 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                |

**Nameplate**

| NP4427AAA01 |               |        |    |         |    |               |         |      |       |    |      |       |   |  |
|-------------|---------------|--------|----|---------|----|---------------|---------|------|-------|----|------|-------|---|--|
| CAT #       | VFSWDM3550T-E |        |    |         |    | WT            | 50      |      | LBS   |    |      |       |   |  |
| SPEC        | 35E4717R929G1 |        |    |         |    | ENCL          | TENV    |      |       |    |      |       |   |  |
| SER #       |               |        |    |         |    | CC            | 010A    |      | IP    | 69 |      |       |   |  |
| HP          | 1.5           |        |    | MAG CUR |    |               | 1.3/.65 |      |       |    |      |       |   |  |
| VOLTS       | 230/460       |        |    |         |    | NEMA NOM. EFF |         |      |       |    | 85.5 |       |   |  |
| AMPS        | 3.6/1.8       |        |    |         |    | PF            |         | 90   |       |    |      |       |   |  |
| RATING      | 40C AMB-CONT  |        |    |         |    |               |         |      |       |    |      |       |   |  |
| RPM         | 3500          |        |    |         |    | MAX RPM       |         | 5400 |       |    |      |       |   |  |
| FRAME       | 143TC         | HZ     |    | 60      |    | CODE          |         | M    | CLASS |    | H    |       |   |  |
| SER.F.      | 1.15          | SF AMP |    |         |    |               |         |      | PH    | 3  | DES  |       | B |  |
| DE          | 6205          |        |    | ODE     |    | 6205          |         |      |       |    |      |       |   |  |
| LUBRICATION | POLYREX EM    |        |    |         |    |               |         |      |       |    |      |       |   |  |
| ID LOGO     | INVERTER TYPE |        |    | VPWM    |    | CHP           |         | 60   | TO    |    | 90   | 1.5:1 |   |  |
| ID LOGO     | WK2           | 0.09   | CT |         | 15 | TO            |         | 60   | 4:1   |    |      |       |   |  |
| ID LOGO     | SL HZ         | 1.7    | VT |         | 3  | TO            |         | 60   | 20:1  |    |      |       |   |  |
|             |               |        |    |         |    |               |         |      |       |    |      |       |   |  |
|             |               |        |    |         |    |               |         |      |       |    |      |       |   |  |
|             |               |        |    |         |    |               |         |      |       |    |      |       |   |  |
|             |               |        |    |         |    |               |         |      |       |    |      |       |   |  |
|             |               |        |    |         |    |               |         | QR   |       |    |      |       |   |  |
| YR          |               |        |    |         |    |               |         |      |       |    |      |       |   |  |

**AC Induction Motor Performance Data**

Record # 20333

Typical performance - not guaranteed values

| Winding: 35WGR929-R003 |    |             | Type: 3532M                              |                     | Enclosure: TENV           |            |               |
|------------------------|----|-------------|------------------------------------------|---------------------|---------------------------|------------|---------------|
| Nameplate Data         |    |             | 460 V, 60 Hz:<br>High Voltage Connection |                     |                           |            |               |
| Rated Output (HP)      |    | 1.5         | Full Load Torque                         |                     | 2.31 LB-FT                |            |               |
| Volts                  |    | 208-230/460 | Start Configuration                      |                     | direct on line            |            |               |
| Full Load Amps         |    | 3.7-3.6/1.8 | Breakdown Torque                         |                     | 10.9 LB-FT                |            |               |
| R.P.M.                 |    | 3500        | Pull-up Torque                           |                     | 5.2 LB-FT                 |            |               |
| Hz                     | 60 | Phase       | 3                                        | Locked-rotor Torque |                           | 10.2 LB-FT |               |
| NEMA Design Code       |    | B           | KVA Code                                 | M                   | Starting Current          |            | 20.6 A        |
| Service Factor (S.F.)  |    | 1.15        | No-load Current                          |                     | 0.694 A                   |            |               |
| NEMA Nom. Eff.         |    | 85.5        | Power Factor                             | 90                  | Line-line Res. @ 25°C     |            | 7.64 Ω        |
| Rating - Duty          |    | 40C         | AMB-CONT                                 |                     | Temp. Rise @ Rated Load   |            | 78°C          |
| S.F. Amps              |    |             |                                          |                     | Temp. Rise @ S.F. Load    |            | 90°C          |
|                        |    |             |                                          |                     | Locked-rotor Power Factor |            | 46            |
|                        |    |             |                                          |                     | Rotor inertia             |            | 0.0885 LB-FT2 |

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

| % of Rated Load | 25    | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|-------|------|------|------|------|------|------|
| Power Factor    | 55    | 77   | 86   | 92   | 93   | 90   | 93   |
| Efficiency      | 73.8  | 82.3 | 85.2 | 86.1 | 85.9 | 85.5 | 86   |
| Speed           | 3564  | 3536 | 3507 | 3476 | 3444 | 3406 | 3457 |
| Line amperes    | 0.907 | 1.15 | 1.48 | 1.81 | 2.23 | 2.75 | 2.06 |

ABB Motors and Mechanical Inc.

WINDING # 35WGR929

Typical performance - not guaranteed values.

1.5 HP 3 PH 60 HZ 3500 RPM 460 V 3532M

TORQUES (LB-FT): PO=10.9 PU=5.2 LR=10.2 LRA=20.6







