

# ABB BALDOR RELIANCE III

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## Customer information packet

### VFSWDNM3611T-E

3HP, 1750RPM, 3PH, 60HZ, 182TC, 3646M, TENV, F1

Class - None

Division - Not Applicable

**Specifications**

|                                |                                                             |
|--------------------------------|-------------------------------------------------------------|
| Enclosure                      | TENV                                                        |
| Frame                          | 182TC                                                       |
| Frame Material                 | Stainless Steel                                             |
| Frequency                      | 60.00 Hz                                                    |
| Haz Area Class and Group       | None                                                        |
| Haz Area Division              | Not Applicable                                              |
| Motor Letter Type              | Three Phase                                                 |
| Output @ Frequency             | 3.000 HP @ 60 HZ                                            |
| Phase                          | 3                                                           |
| Synchronous Speed @ Frequency  | 1800 RPM @ 60 HZ                                            |
| Voltage @ Frequency            | 460.0 V @ 60 HZ<br>230.0 V @ 60 HZ                          |
| Agency Approvals               | CSA<br>NEMA PREMIUM<br>UR                                   |
| 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              | 8.000 A @ 230.0 V<br>8.600 A @ 208.0 V<br>4.000 A @ 460.0 V |
| Design Code                    | B                                                           |
| Drip Cover                     | No Drip Cover                                               |
| Duty Rating                    | CONT                                                        |
| Efficiency @ 100% Load         | 89.5 %                                                      |
| Electrically Isolated Bearing  | Not Electrically Isolated                                   |
| Feedback Device                | NO FEEDBACK                                                 |
| Front Face Code                | Standard                                                    |
| Front Shaft Indicator          | None                                                        |

**Part Detail**

|              |            |
|--------------|------------|
| Revision     | Q          |
| Type         | AC         |
| Mech. spec.  | 36R540     |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 36WGR704   |
| Layout       | 36LYR540   |
| Eff. date    | 11-25-2025 |
| CD Diagram   | CD0005     |
| Poles        | 04         |
| Leads        | 9#16       |
| Proprietary  | False      |
| Created date | 07-14-2017 |

|                                      |                        |
|--------------------------------------|------------------------|
| <b>Heater Indicator</b>              | No Heater              |
| <b>High Voltage Full Load Amps</b>   | 4.0 a                  |
| <b>Insulation Class</b>              | H                      |
| <b>Inverter Code</b>                 | Inverter Ready         |
| <b>KVA Code</b>                      | K                      |
| <b>Lifting Lugs</b>                  | Standard Lifting Lugs  |
| <b>Locked Bearing Indicator</b>      | Locked Bearing         |
| <b>Motor Lead Exit</b>               | Ko Box                 |
| <b>Motor Lead Quantity/Wire Size</b> | 9 @ 16 AWG             |
| <b>Motor Lead Termination</b>        | Flying Leads           |
| <b>Motor Standards</b>               | NEMA                   |
| <b>Motor Type</b>                    | 3646M                  |
| <b>Mounting Arrangement</b>          | F1                     |
| <b>Number of Poles</b>               | 4                      |
| <b>Overall Length</b>                | 17.05 IN               |
| <b>Power Factor</b>                  | 79                     |
| <b>Product Family</b>                | WD All SS 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>                | 1.15                   |
| <b>Shaft Diameter</b>                | 1.125 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>       | Shaft Slinger          |
| <b>Speed</b>                         | 1750 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 |

**Nameplate**

| NP4427AAA01 |                |         |       |    |      |               |       |      |     |      |       |  |  |
|-------------|----------------|---------|-------|----|------|---------------|-------|------|-----|------|-------|--|--|
| CAT #       | VFSWDNM3611T-E |         |       |    |      | WT            | 101   | LBS  |     |      |       |  |  |
| SPEC        | 36R540R704G1   |         |       |    |      | ENCL          | TENV  |      |     |      |       |  |  |
| SER #       |                |         |       |    |      | CC            | 010A  | IP   | 69  |      |       |  |  |
| HP          | 3              | MAG CUR |       |    |      | 4/2           |       |      |     |      |       |  |  |
| VOLTS       | 230/460        |         |       |    |      | NEMA NOM. EFF |       |      |     | 89.5 |       |  |  |
| AMPS        | 8/4            |         |       |    |      | PF            | 79    |      |     |      |       |  |  |
| RATING      | 40C AMB-CONT   |         |       |    |      |               |       |      |     |      |       |  |  |
| RPM         | 1750           |         |       |    |      | MAX RPM       |       | 2700 |     |      |       |  |  |
| FRAME       | 182TC          | HZ      | 60    |    | CODE | K             | CLASS | H    |     |      |       |  |  |
| SER.F.      | 1.15           | SF AMP  | 9/4.5 |    |      |               | PH    | 3    | DES | B    |       |  |  |
| DE          | 6206           |         | ODE   |    | 6206 |               |       |      |     |      |       |  |  |
| LUBRICATION | POLYREX EM     |         |       |    |      |               |       |      |     |      |       |  |  |
| ID LOGO     | INVERTER TYPE  |         |       |    | VPWM |               | CHP   | 60   | TO  | 90   | 1.5:1 |  |  |
| ID LOGO     | WK2            | 0.428   | CT    | 15 | TO   | 60            | 4:1   |      |     |      |       |  |  |
| ID LOGO     | SL HZ          | 1.7     | VT    | 3  | TO   | 60            | 20:1  |      |     |      |       |  |  |
|             |                |         |       |    |      |               |       |      |     |      |       |  |  |
|             |                |         |       |    |      |               |       |      |     |      |       |  |  |
|             |                |         |       |    |      |               |       |      |     |      |       |  |  |
|             |                |         |       |    |      |               |       |      |     |      |       |  |  |
|             |                |         |       |    |      |               | QR    |      |     |      |       |  |  |
| YR          |                |         |       |    |      |               |       |      |     |      |       |  |  |

**Parts List**

| Part number | Description                              | Quantity |
|-------------|------------------------------------------|----------|
| SA343366    | SA 36R540R704G1                          | 1.000 ea |
| RA331819    | RA 36R540R704G1                          | 1.000 ea |
| 35CB1017A02 | 5/36 MID SECT - 3 PC. CONDUIT BOX 3/4 N  | 1.000 ea |
| 11XW1032G08 | 10-32 X .50, TAPTITE II, HEX WSHR SLTD U | 1.000 ea |
| HW3001B01   | BRASS CUP WASHER, FOR #10 SCREW          | 1.000 ea |
| 36EP1920A05 | FREP TENV 206 BRG WD11/12 (STAINLESS)    | 1.000 ea |
| RM1070A42   | O-RING,(#70-7.239) FLOUROELASTOMER COMPO | 1.000 ea |
| HW4500S33   | 1/8 NPT STAINLESS #304 SS PLUG           | 4.000 ea |
| HW5100A06   | W2420-025 WVY WSHR (WB)                  | 1.000 ea |
| 36EP1925A02 | PUEP 182-4TC ENCL 206 BRG WD11/12 STAINL | 1.000 ea |
| RM1070A42   | O-RING,(#70-7.239) FLOUROELASTOMER COMPO | 1.000 ea |
| HW4600G02   | 30 X 47 X 8 LIP SEAL, GRAPHITE INFUSED V | 1.000 ea |
| HW4600F25   | 30 X 48 X 4.5 AFX SEAL, GRAPHITE INFUSED | 1.000 ea |
| HW4500S33   | 1/8 NPT STAINLESS #304 SS PLUG           | 4.000 ea |
| RM1070A14   | O-RING, -010 VITON/FKM .070CS X .239ID   | 4.000 ea |
| 35CB1513A01 | 35-36-37 MACH. LID - 3 PC. CONDUIT BOX   | 1.000 ea |
| RM1070A81   | O-RING, -043 VITON/FKM .070CS X 3.489ID  | 1.000 ea |
| HA3424S48   | STUD - M6X1.0 THDS X 3.00"               | 1.000 ea |
| RM1070A81   | O-RING, -043 VITON/FKM .070CS X 3.489ID  | 1.000 ea |
| HW2502E16   | #303 SS,SQ KEY 1/4 X 1.750               | 1.000 ea |
| HA7000A02   | KEY RETAINER RING, 1 1/8 DIA, 1 3/8 DIA  | 1.000 ea |
| MJ5001A27   | 32220KN GRAY SEALER *MIN BUY 4 QTS=1GAL  | 0.005 qt |
| MJ5004A93   | FOOD GRADE (H1 RATED) ANTISEIZE THRD COM | 0.005 ea |
| HA1025A21   | WSHR,FELT .125" THK                      | 1.000 ea |
| HA5027A09   | DRAIN KIT,(2)HA4002A03 BAGGED W/LABEL    | 1.000 ea |
| MJ1000A02   | GREASE, POLYREX EM EXXON                 | 0.050 lb |
| WD5603A01   | KIT, CLOSED-END LEAD SPLICE (18-14GA)    | 1.000 ea |
| HA3101FS55  | THRUBOLT, 1/4-20 X 13.250 SS FOOD SAFE   | 4.000 ea |
| 36PA1001    | PKG GRP, PRINT PK1017A07                 | 1.000 ea |
| PK3082      | STYROFOAM CRADLE                         | 1.000 ea |
| MN416A01    | TAG-INSTAL-MAINT no wire (2500 bx)11/25  | 1.000 ea |



|            |                  |          |
|------------|------------------|----------|
| FE-0000007 | ZRTG FE ASSEMBLY | 1.000 ea |
| PE-0000010 | ZRTG PE ASSEMBLY | 1.000 ea |

**AC Induction Motor Performance Data**

Record # 52326

Typical performance - not guaranteed values

| Winding: 36WGR704-R001 |    |              | Type: 3646M                              |                         | Enclosure: TENV  |                       |        |          |
|------------------------|----|--------------|------------------------------------------|-------------------------|------------------|-----------------------|--------|----------|
| Nameplate Data         |    |              | 460 V, 60 Hz:<br>High Voltage Connection |                         |                  |                       |        |          |
| Rated Output (HP)      |    | 3            | Full Load Torque                         |                         | 9.03 LB-FT       |                       |        |          |
| Volts                  |    | 230/460      | Start Configuration                      |                         | direct on line   |                       |        |          |
| Full Load Amps         |    | 8/4          | Breakdown Torque                         |                         | 33.1 LB-FT       |                       |        |          |
| R.P.M.                 |    | 1750         | Pull-up Torque                           |                         | 19.1 LB-FT       |                       |        |          |
| Hz                     | 60 | Phase        | 3                                        | Locked-rotor Torque     |                  | 22.4 LB-FT            |        |          |
| NEMA Design Code       |    | B            | KVA Code                                 | K                       | Starting Current |                       | 30.9 A |          |
| Service Factor (S.F.)  |    | 1.15         |                                          | No-load Current         |                  | 1.96 A                |        |          |
| NEMA Nom. Eff.         |    | 89.5         | Power Factor                             |                         | 76               | Line-line Res. @ 25°C |        | 3.4828 Ω |
| Rating - Duty          |    | 40C AMB-CONT |                                          | Temp. Rise @ Rated Load |                  | 101°C                 |        |          |
| S.F. Amps              |    |              |                                          | Temp. Rise @ S.F. Load  |                  | 125°C                 |        |          |

**Load Characteristics 460 V, 60 Hz, 3 HP**

| % of Rated Load | 25     | 50     | 75   | 100    | 125    | 150    | S.F. |
|-----------------|--------|--------|------|--------|--------|--------|------|
| Power Factor    | 40     | 61     | 72   | 79     | 82     | 84     | 81   |
| Efficiency      | 85.2   | 89.7   | 90.2 | 89.7   | 88.5   | 86.9   | 89   |
| Speed           | 1788.3 | 1777.8 | 1766 | 1753.9 | 1740.2 | 1724.1 | 1746 |
| Line amperes    | 2.17   | 2.62   | 3.3  | 4      | 4.85   | 5.82   | 4.51 |



ABB Motors and Mechanical Inc.

WINDING # 36WGR704

Typical performance - not guaranteed values.

3 HP 3 PH 60 HZ 1750 RPM 460 V 3646M

TORQUES (LB-FT): PO=33.1 PU=19.1 LR=22.4 LRA=30.9



