

# ABB BALDOR RELIANCE III

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## Customer information packet

### EWDM3704T

3HP, 1160RPM, 3PH, 60HZ, 213T, TEFC, F1

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                        |
|---------------------------------------|----------------------------------------|
| <b>Enclosure</b>                      | TEFC                                   |
| <b>Frame</b>                          | 213T                                   |
| <b>Frame Material</b>                 | 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>             | 3.000 HP @ 60 HZ                       |
| <b>Phase</b>                          | 3                                      |
| <b>Synchronous Speed @ Frequency</b>  | 1200 RPM @ 60 HZ                       |
| <b>Voltage @ Frequency</b>            | 230.0 V @ 60 HZ<br>460.0 V @ 60 HZ     |
| <b>Agency Approvals</b>               | CSA<br>CSA EEV<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>                 | Rigid                                  |
| <b>Bearing Grease Type</b>            | Polyrex EM (-20F +300F)                |
| <b>Blower</b>                         | None                                   |
| <b>Current @ Voltage</b>              | 4.600 A @ 460.0 V<br>9.200 A @ 230.0 V |
| <b>Design Code</b>                    | B                                      |
| <b>Drip Cover</b>                     | No Drip Cover                          |
| <b>Duty Rating</b>                    | CONT                                   |
| <b>Efficiency @ 100% Load</b>         | 89.5 %                                 |
| <b>Electrically Isolated Bearing</b>  | Not Electrically Isolated              |
| <b>Feedback Device</b>                | NO FEEDBACK                            |
| <b>Heater Indicator</b>               | No Heater                              |
| <b>High Voltage Full Load Amps</b>    | 4.6 a                                  |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | D          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  |            |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 37WGS519   |
| <b>Layout</b>       | 37LYE572   |
| <b>Eff. date</b>    | 02-14-2024 |
| <b>CD Diagram</b>   | CD0005     |
| <b>Poles</b>        | 06         |
| <b>Leads</b>        | 9#14       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 11-25-2019 |

|                                   |                       |
|-----------------------------------|-----------------------|
| <b>Insulation Class</b>           | F                     |
| <b>Inverter Code</b>              | Inverter Ready        |
| <b>KVA Code</b>                   | L                     |
| <b>Lifting Lugs</b>               | Standard Lifting Lugs |
| <b>Locked Bearing Indicator</b>   | No Locked Bearing     |
| <b>Motor Lead Termination</b>     | Flying Leads          |
| <b>Motor Standards</b>            | NEMA                  |
| <b>Motor Type</b>                 | 3738M                 |
| <b>Mounting Arrangement</b>       | F1                    |
| <b>Number of Poles</b>            | 6                     |
| <b>Overall Length</b>             | 19.04 IN              |
| <b>Power Factor</b>               | 68                    |
| <b>Product Family</b>             | Wash Down             |
| <b>Pulley Face Code</b>           | Standard              |
| <b>Rodent Screen</b>              | None                  |
| <b>Service Factor</b>             | 1.15                  |
| <b>Shaft Diameter</b>             | 1.375 IN              |
| <b>Shaft Ground Indicator</b>     | No Shaft Grounding    |
| <b>Shaft Rotation</b>             | Reversible            |
| <b>Speed</b>                      | 1160 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

| NP1669L      |                         |      |     |      |   |       |    |   |  |
|--------------|-------------------------|------|-----|------|---|-------|----|---|--|
| CAT.NO.      | EWDM3704T               |      |     |      |   |       |    |   |  |
| SPEC.        | 37-0000-0166            |      |     |      |   |       |    |   |  |
| HP           | 3                       |      |     |      |   |       |    |   |  |
| VOLTS        | 230/460                 |      |     |      |   |       |    |   |  |
| AMP          | 9.2/4.6                 |      |     |      |   |       |    |   |  |
| RPM          | 1160                    |      |     |      |   |       |    |   |  |
| FRAME        | 213T                    |      | HZ  | 60   |   |       | PH | 3 |  |
| SER.F.       | 1.15                    | CODE | L   | DES  | B | CLASS |    | F |  |
| NEMA-NOM-EFF | 89.5                    | PF   | 68  |      |   |       |    |   |  |
| RATING       | 40C AMB-CONT            |      |     |      |   |       |    |   |  |
| CC           | 010A                    |      |     |      |   |       |    |   |  |
| DE           | 6307                    |      | ODE | 6206 |   |       |    |   |  |
| ENCL         | TEFC                    | SN   |     |      |   |       |    |   |  |
| BLANK        | 20:1 CT, 20:1 VT,1.00SF |      |     |      |   |       |    |   |  |

**Parts List**

| Part number   | Description                              | Quantity |
|---------------|------------------------------------------|----------|
| SA376624      | SA 37-0000-0166                          | 1.000 ea |
| RA366541      | RA 37-0000-0166                          | 1.000 ea |
| LB1164        | LABEL,WARNING AND DRAIN                  | 1.000 ea |
| LC0005        | CONN.DIA.,TY M,9-LD,DUAL VOLT,REVERSING  | 1.000 ea |
| NP1669L       | SS WD SUPER-E UL PREM REV MTG            | 1.000 ea |
| 85XU0407S04   | 4X1/4 U DRIVE PIN STAINLESS              | 2.000 ea |
| MN416A01      | TAG-INSTAL-MAINT no wire (2500 bx)11/25  | 1.000 ea |
| HW3200A01     | 3/8-16X3/4 EYEBOLT WELDED F/S            | 1.000 ea |
| 07FH4011      | WASHDOWN IEC FH W/PRIMED                 | 1.000 ea |
| 11XW1032S06   | 10-32 X .38, TAPTITE II, HEX WSHR SLTD U | 3.000 ea |
| 37FN3002A01SP | EXFN, PLASTIC, 9.00 OD, 1.155 ID         | 1.000 ea |
| 51XB1214A20   | 12-14X1.25 HXWSSLD SERTYB                | 1.000 ea |
| MJ1000A02     | GREASE, POLYREX EM EXXON                 | 0.050 lb |
| HA3104S17     | THRUBOLT 13.250LG SS                     | 4.000 ea |
| XY3118S12     | 5/16-18 HEX NUT, STAINLESS STEEL         | 4.000 ea |
| 37EP3101A94MW | FRONT TEFC L&M 206 BRG W/O GRSR (WHITE)  | 1.000 ea |
| HA1005A02     | SLINGER, OD 2.00, ID 1.14, 206 BRG,      | 1.000 ea |
| HW5100A06     | W2420-025 WVY WSHR (WB)                  | 1.000 ea |
| HW4032A01     | BLACK DRAIN PLUG FOR WASH DOWN MOTORS    | 3.000 ea |
| 37EP3100A20MW | FRONT ENDPLATE, MACHINED W/WHITE EPOXY   | 1.000 ea |
| HW4600B31SP   | V-RING SLINGER 1.438 X 1.758 X .24 VITON | 1.000 ea |
| HW4600H13     | SEAL 1.375 X 2.125 X 0.313 SINGLE LIP DB | 2.000 ea |
| HA5027A01     | HA4066A01 T-DRAIN X2 BAGGED              | 1.000 ea |
| HW4032A01     | BLACK DRAIN PLUG FOR WASH DOWN MOTORS    | 3.000 ea |
| 37CB3005A04W  | CASTING W/.75 NPT@6(MACH WHITE)          | 1.000 ea |
| 37GS1025      | 37 MOLDED GASKET W/LIP, LEAD SEAL        | 1.000 ea |
| 51XW2520A10   | .25-20 X .62, TAPTITE II, HEX WSHR SLTD  | 2.000 ea |
| 11XW1032G06   | 10-32 X .38, TAPTITE II, HEX WSHR SLTD U | 1.000 ea |
| 37CB4512      | CONDUIT BOX LID FOR WASHDOWN 37 FRAME    | 1.000 ea |
| 37GS1008A02   | 37 GS FOR CB LID - WHITE NEOPRENE        | 1.000 ea |
| 59XW0832S07   | TAPTITE II,HEX WSHR UNSLTD SER,410 S.S., | 4.000 ea |

|           |                                          |          |
|-----------|------------------------------------------|----------|
| MG1025W01 | WILKOFAST, 781.01, SIGNAL WHITE #9003    | 0.022 ga |
| MJ5001A27 | 32220KN GRAY SEALER *MIN BUY 4 QTS=1GAL  | 0.001 qt |
| 37PA1074  | PALLET PACK GRP, PRINT BOX PK1026A06     | 1.000 ea |
| HW2502F22 | KEY, 5/16 SQ X 2.500 SS AUTOMATED        | 1.000 ea |
| HA7000A02 | KEY RETAINER RING, 1 1/8 DIA, 1 3/8 DIA  | 1.000 ea |
| MG1025Z02 | ACTIVATOR WILKOFAST 060.02HF 55 GALLON   | 0.022 ga |
| LB1624    | COMBINED WARNING LABEL, ISO/ANSI PICTOGR | 1.000 ea |

**AC Induction Motor Performance Data**

Record # 53388

Typical performance - not guaranteed values

| Winding: 37WGS519-R032 |      |              | Type: 3738M                              | Enclosure: TEFC       |                |
|------------------------|------|--------------|------------------------------------------|-----------------------|----------------|
| Nameplate Data         |      |              | 460 V, 60 Hz:<br>High Voltage Connection |                       |                |
| Rated Output (HP)      |      | 3            | Full Load Torque                         |                       | 13.4 LB-FT     |
| Volts                  |      | 230/460      | Start Configuration                      |                       | direct on line |
| Full Load Amps         |      | 9.2/4.6      | Breakdown Torque                         |                       | 50.4 LB-FT     |
| R.P.M.                 |      | 1160         | Pull-up Torque                           |                       | 31.8 LB-FT     |
| Hz                     | 60   | Phase        | 3                                        | Locked-rotor Torque   | 33.9 LB-FT     |
| NEMA Design Code       | B    | KVA Code     | L                                        | Starting Current      | 34 A           |
| Service Factor (S.F.)  |      | 1.15         | No-load Current                          |                       | 2.56 A         |
| NEMA Nom. Eff.         | 89.5 | Power Factor | 68                                       | Line-line Res. @ 25°C | 2.67 Ω         |
| Rating - Duty          |      | 40C AMB-CONT | Temp. Rise @ Rated Load                  |                       | 38°C           |
| S.F. Amps              |      |              | Temp. Rise @ S.F. Load                   |                       | 45°C           |
|                        |      |              | Locked-rotor Power Factor                |                       | 22.9           |
|                        |      |              | Rotor inertia                            |                       | 0.945 LB-FT2   |

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

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 30   | 50   | 62   | 69   | 73   | 75   | 70   |
| Efficiency      | 82.1 | 88.6 | 89.5 | 89.8 | 89.1 | 87.6 | 89.1 |
| Speed           | 1193 | 1186 | 1178 | 1170 | 1160 | 1149 | 1166 |
| Line amperes    | 2.74 | 3.19 | 3.82 | 4.53 | 5.44 | 6.41 | 5.14 |

ABB Motors and Mechanical Inc.

WINDING # 37WGS519

Typical performance - not guaranteed values.

3 HP 3 PH 60 HZ 1160 RPM 460 V 3738M

TORQUES (LB-FT): PO=50.4 PU=31.8 LR=33.9 LRA=34







