

# ABB BALDOR RELIANCE III

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## Customer information packet

### EJMM3709T

7.5HP, 3520RPM, 3PH, 60HZ, 213JM, 3728M, TEFC

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                                               |
|---------------------------------------|---------------------------------------------------------------|
| <b>Enclosure</b>                      | TEFC                                                          |
| <b>Frame</b>                          | 213JM                                                         |
| <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>             | 7.500 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>208.0 V @ 60 HZ<br>460.0 V @ 60 HZ         |
| <b>Agency Approvals</b>               | CSA EEV<br>NEMA PREMIUM<br>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>                 | Rigid                                                         |
| <b>Bearing Grease Type</b>            | Polyrex EM (-20F +300F)                                       |
| <b>Blower</b>                         | None                                                          |
| <b>Current @ Voltage</b>              | 9.000 A @ 460.0 V<br>19.000 A @ 208.0 V<br>18.000 A @ 230.0 V |
| <b>Design Code</b>                    | A                                                             |
| <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                                                   |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | E          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 37M031     |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 37WGL869   |
| <b>Layout</b>       | 37LYM031   |
| <b>Eff. date</b>    | 04-22-2025 |
| <b>CD Diagram</b>   | CD0005     |
| <b>Poles</b>        | 02         |
| <b>Leads</b>        | 9#14       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 11-18-2020 |

|                               |                       |
|-------------------------------|-----------------------|
| Front Shaft Indicator         | None                  |
| Heater Indicator              | No Heater             |
| High Voltage Full Load Amps   | 9.0 a                 |
| Insulation Class              | F                     |
| Inverter Code                 | Inverter Ready        |
| KVA Code                      | J                     |
| Lifting Lugs                  | Standard Lifting Lugs |
| Locked Bearing Indicator      | Locked Bearing        |
| Motor Lead Quantity/Wire Size | 9 @ 14 AWG            |
| Motor Lead Termination        | Flying Leads          |
| Motor Standards               | NEMA                  |
| Motor Type                    | 3728M                 |
| Mounting Arrangement          | F1                    |
| Number of Poles               | 2                     |
| Overall Length                | 19.76 IN              |
| Power Factor                  | 84                    |
| Product Family                | General Purpose       |
| Pulley End Bearing Type       | Ball                  |
| Pulley Face Code              | C-Face                |
| Pulley Shaft Indicator        | Tapped & Key          |
| Rodent Screen                 | None                  |
| Service Factor                | 1.15                  |
| Shaft Diameter                | 0.875 IN              |
| Shaft Ground Indicator        | No Shaft Grounding    |
| Shaft Rotation                | Reversible            |
| Shaft Slinger Indicator       | Shaft Slinger         |
| Speed                         | 3520 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**

| NP3441LUA                        |                              |             |            |            |   |              |       |  |  |
|----------------------------------|------------------------------|-------------|------------|------------|---|--------------|-------|--|--|
| <b>CAT.NO.</b>                   | EJMM3709T                    |             |            |            |   |              |       |  |  |
| <b>SPEC</b>                      | 37M031L869G1                 |             |            |            |   |              |       |  |  |
| <b>HP</b>                        | 7.5                          |             |            |            |   |              |       |  |  |
| <b>VOLTS</b>                     | 208-230/460                  |             |            |            |   |              |       |  |  |
| <b>AMPS</b>                      | 19-18/9                      |             |            |            |   |              |       |  |  |
| <b>RPM</b>                       | 3520                         |             |            |            |   |              |       |  |  |
| <b>FRAME</b>                     | 213JM                        |             | <b>HZ</b>  | 60         |   | <b>PH</b>    | 3     |  |  |
| <b>SF</b>                        | 1.15                         | <b>CODE</b> | J          | <b>DES</b> | A | <b>CLASS</b> | F     |  |  |
| <b>NEMA NOM. EFF</b>             | 89.5                         | <b>PF</b>   | 84         |            |   |              |       |  |  |
| <b>RATING</b>                    | 40C AMB-CONT                 |             |            |            |   |              |       |  |  |
| <b>CC</b>                        | 010A                         |             |            |            |   |              |       |  |  |
| <b>ENCL</b>                      | TEFC                         | <b>SER</b>  |            |            |   |              |       |  |  |
| <b>DE</b>                        | 6309                         |             | <b>ODE</b> | 6206       |   |              |       |  |  |
| <b>VPWM INVERTER READY</b>       |                              |             |            |            |   |              |       |  |  |
| <b>CT6-60H(10:1)VT3-60H(20:1</b> |                              |             |            |            |   |              |       |  |  |
|                                  | 50HZ 7.5HP 190/380V 22/11.0A |             |            |            |   |              | SF1.0 |  |  |

**Parts List**

| Part number | Description                              | Quantity |
|-------------|------------------------------------------|----------|
| SA388185    | SA 37M031L869G1                          | 1.000 ea |
| RA378534    | RA 37M031L869G1                          | 1.000 ea |
| 36FN3000B02 | EXFN, PLASTIC, 6.00 OD, 1.175 ID         | 1.000 ea |
| HW3200A01   | 3/8-16X3/4 EYEBOLT WELDED F/S            | 1.000 ea |
| 37CB3000A10 | SPL CONDUIT BOX MODEL 37                 | 1.000 ea |
| 37GS1000SP  | GASKET, CONDUIT BOX STD., .06 THICK LEXI | 1.000 ea |
| 51XW2520A12 | .25-20 X .75, TAPTITE II, HEX WSHR SLTD  | 2.000 ea |
| 11XW1032G06 | 10-32 X .38, TAPTITE II, HEX WSHR SLTD U | 1.000 ea |
| 37EP3101A29 | FR ENDPLATE, FOR ROUTING PURPOSES        | 1.000 ea |
| HW4500A17   | 317400 ALEMITE GREASE RELIEF             | 1.000 ea |
| HW4500A01   | 1641B(ALEMITE)400 UNIV, GREASE FITT      | 1.000 ea |
| HW5100A06   | W2420-025 WVY WSHR (WB)                  | 1.000 ea |
| 37PE3401T11 | PUEP ASSEMBLY FOR ROUTING PURPOSES       | 1.000 ea |
| HW4500A17   | 317400 ALEMITE GREASE RELIEF             | 1.000 ea |
| HW4500A01   | 1641B(ALEMITE)400 UNIV, GREASE FITT      | 1.000 ea |
| 10XN2520A36 | 1/4-20X 2 1/4 HEX HD X                   | 4.000 ea |
| HW1001A25   | LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I | 4.000 ea |
| XY3118A12   | 5/16-18 HEX NUT DIRECTIONAL SERRATION    | 4.000 ea |
| 07FH4007SP  | PRIMED                                   | 1.000 ea |
| 51XW1032A06 | 10-32 X .38, TAPTITE II, HEX WSHR SLTD S | 3.000 ea |
| HW4600A73   | SLINGER 1.748 X 2.375 X 0.250 FACE SEAL  | 1.000 ea |
| 36CB4516    | 750LIPPED CB LID - GALVANNEAL            | 1.000 ea |
| 37GS1001SP  | GASKET, CONDUIT BOX LID, .06 THICK LEXID | 1.000 ea |
| 51XW0832A07 | 8-32 X .44, TAPTITE II, HEX WSHR SLTD SE | 4.000 ea |
| HW2501D13   | KEY, 3/16 SQ X 1.375                     | 1.000 ea |
| HA7000A01   | KEY RETAINER 7/8" DIA SHAFT              | 1.000 ea |
| 85XU0407S04 | 4X1/4 U DRIVE PIN STAINLESS              | 2.000 ea |
| MJ1000A02   | GREASE, POLYREX EM EXXON                 | 0.050 lb |
| 51XB1214A20 | 12-14X1.25 HXWSSLD SERTYB                | 1.000 ea |
| MG1050Y01   | CELEROL BALDOR GOLD *5 GALLON BUCKET*    | 0.028 ga |
| HA3104A14   | THRUBOLT- 5/16-18 X12.125(OHIO)          | 4.000 ea |

|           |                                          |          |
|-----------|------------------------------------------|----------|
| LC0005    | CONN.DIA.,TY M,9-LD,DUAL VOLT,REVERSING  | 1.000 ea |
| NP3441LUA | AL SUPER-E VPWM INV RDY,UL EEV,NEMA PREM | 1.000 ea |
| 37PA1074  | PALLET PACK GRP, PRINT BOX PK1026A06     | 1.000 ea |
| MN416A01  | TAG-INSTAL-MAINT no wire (2500 bx)11/25  | 1.000 ea |
| LB1624    | COMBINED WARNING LABEL, ISO/ANSI PICTOGR | 1.000 ea |

**AC Induction Motor Performance Data**

Record # 85603

Preliminary Data Sheet

| Winding: 37WGL869-R001 |    |              | Type: 3728M  |                                          | Enclosure: TEFC       |                |        |
|------------------------|----|--------------|--------------|------------------------------------------|-----------------------|----------------|--------|
| Nameplate Data         |    |              |              | 460 V, 60 Hz:<br>High Voltage Connection |                       |                |        |
| Rated Output (HP)      |    | 7.5          |              | Full Load Torque                         |                       | 11.2 LB-FT     |        |
| Volts                  |    | 208-230/460  |              | Start Configuration                      |                       | direct on line |        |
| Full Load Amps         |    | 19-18/9      |              | Breakdown Torque                         |                       | 40.3 LB-FT     |        |
| R.P.M.                 |    | 3520         |              | Pull-up Torque                           |                       | 19.7 LB-FT     |        |
| Hz                     | 60 | Phase        | 3            | Locked-rotor Torque                      |                       | 21.8 LB-FT     |        |
| NEMA Design Code       |    | A            | KVA Code     | J                                        | Starting Current      |                | 68.4 A |
| Service Factor (S.F.)  |    | 1.15         |              | No-load Current                          |                       | 3.52 A         |        |
| NEMA Nom. Eff.         |    | 89.5         | Power Factor | 84                                       | Line-line Res. @ 25°C |                | 1.19 Ω |
| Rating - Duty          |    | 40C AMB-CONT |              | Temp. Rise @ Rated Load                  |                       | 50°C           |        |
| S.F. Amps              |    | 21-20/10     |              | Temp. Rise @ S.F. Load                   |                       | 63°C           |        |
|                        |    |              |              | Locked-rotor Power Factor                |                       | 38.1           |        |
|                        |    |              |              | Rotor inertia                            |                       | 0.255 lb-ft²   |        |

**Load Characteristics 460 V, 60 Hz, 7.5 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 49   | 71   | 81   | 86   | 88   | 89   | 87   |
| Efficiency      | 83.9 | 89.7 | 91   | 90.9 | 90.2 | 89.2 | 90.3 |
| Speed           | 3580 | 3560 | 3540 | 3518 | 3494 | 3468 | 3500 |
| Line amperes    | 4.1  | 5.4  | 7.06 | 8.96 | 11   | 13.2 | 10.2 |

ABB Motors and Mechanical Inc.

WINDING # 37WGL869

Typical performance - not guaranteed values.

7.5 HP 3 PH 60 HZ 3520 RPM 460 V 3728M

TORQUES (LB-FT): PO=40.3 PU=19.7 LR=21.8 LRA=68.4





