

# ABB BALDOR RELIANCE III

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## Customer information packet

### EM3769T

7.5HP, 3500RPM, 3PH, 60HZ, 213T, 0724M, TEFC, F

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                         |
|---------------------------------------|-----------------------------------------|
| <b>Enclosure</b>                      | TEFC                                    |
| <b>Frame</b>                          | 213T                                    |
| <b>Frame Material</b>                 | Iron                                    |
| <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>460.0 V @ 60 HZ      |
| <b>Agency Approvals</b>               | NEMA PREMIUM<br>CURUSEEV                |
| <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>              | 18.400 A @ 230.0 V<br>9.200 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>         | 89.5 %                                  |
| <b>Electrically Isolated Bearing</b>  | Not Electrically Isolated               |
| <b>Feedback Device</b>                | NO FEEDBACK                             |
| <b>Front Shaft Indicator</b>          | None                                    |
| <b>Heater Indicator</b>               | No Heater                               |
| <b>High Voltage Full Load Amps</b>    | 9.2 a                                   |
| <b>Insulation Class</b>               | F                                       |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | D          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 07H002     |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 07WGT514   |
| <b>Layout</b>       | 07LYH002   |
| <b>Eff. date</b>    | 04-29-2024 |
| <b>CD Diagram</b>   | CD0005     |
| <b>Poles</b>        | 02         |
| <b>Leads</b>        | 9#14       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 01-05-2021 |

|                                      |                              |
|--------------------------------------|------------------------------|
| <b>Inverter Code</b>                 | <b>Inverter Ready</b>        |
| <b>KVA Code</b>                      | <b>H</b>                     |
| <b>Lifting Lugs</b>                  | <b>Standard Lifting Lugs</b> |
| <b>Locked Bearing Indicator</b>      | <b>No Locked Bearing</b>     |
| <b>Motor Lead Quantity/Wire Size</b> | <b>9 @ 14 AWG</b>            |
| <b>Motor Lead Termination</b>        | <b>Flying Leads</b>          |
| <b>Motor Standards</b>               | <b>NEMA</b>                  |
| <b>Motor Type</b>                    | <b>0724M</b>                 |
| <b>Mounting Arrangement</b>          | <b>F1</b>                    |
| <b>Number of Poles</b>               | <b>2</b>                     |
| <b>Overall Length</b>                | <b>18.45 IN</b>              |
| <b>Power Factor</b>                  | <b>84</b>                    |
| <b>Product Family</b>                | <b>General Purpose</b>       |
| <b>Pulley End Bearing Type</b>       | <b>Ball</b>                  |
| <b>Pulley Face Code</b>              | <b>Standard</b>              |
| <b>Pulley Shaft Indicator</b>        | <b>Standard</b>              |
| <b>Rodent Screen</b>                 | <b>None</b>                  |
| <b>RoHS Status</b>                   | <b>ROHS COMPLIANT</b>        |
| <b>Service Factor</b>                | <b>1.15</b>                  |
| <b>Shaft Diameter</b>                | <b>1.375 IN</b>              |
| <b>Shaft Ground Indicator</b>        | <b>No Shaft Grounding</b>    |
| <b>Shaft Rotation</b>                | <b>Reversible</b>            |
| <b>Shaft Slinger Indicator</b>       | <b>No Slinger</b>            |
| <b>Speed</b>                         | <b>3500 rpm</b>              |
| <b>Speed Code</b>                    | <b>Single Speed</b>          |
| <b>Starting Method</b>               | <b>Direct on line</b>        |
| <b>Thermal Device - Bearing</b>      | <b>None</b>                  |
| <b>Thermal Device - Winding</b>      | <b>None</b>                  |
| <b>Vibration Sensor Indicator</b>    | <b>No Vibration Sensor</b>   |
| <b>Winding Thermal 1</b>             | <b>None</b>                  |
| <b>Winding Thermal 2</b>             | <b>None</b>                  |

**Nameplate**

| NP3441LUA                        |              |             |            |            |   |              |   |  |  |
|----------------------------------|--------------|-------------|------------|------------|---|--------------|---|--|--|
| <b>CAT.NO.</b>                   | EM3769T      |             |            |            |   |              |   |  |  |
| <b>SPEC</b>                      | 07H002T514G1 |             |            |            |   |              |   |  |  |
| <b>HP</b>                        | 7.5          |             |            |            |   |              |   |  |  |
| <b>VOLTS</b>                     | 230/460      |             |            |            |   |              |   |  |  |
| <b>AMPS</b>                      | 18.4/9.2     |             |            |            |   |              |   |  |  |
| <b>RPM</b>                       | 3500         |             |            |            |   |              |   |  |  |
| <b>FRAME</b>                     | 213T         |             | <b>HZ</b>  | 60         |   | <b>PH</b>    | 3 |  |  |
| <b>SF</b>                        | 1.15         | <b>CODE</b> | H          | <b>DES</b> | B | <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>                        | 6307         |             | <b>ODE</b> | 6206       |   |              |   |  |  |
| <b>VPWM INVERTER READY</b>       |              |             |            |            |   |              |   |  |  |
| <b>CT6-60H(10:1)VT3-60H(20:1</b> |              |             |            |            |   |              |   |  |  |

**Parts List**

| Part number   | Description                              | Quantity |
|---------------|------------------------------------------|----------|
| SA389295      | SA 07H002T514G1                          | 1.000 ea |
| RA379671      | RA 07H002T514G1                          | 1.000 ea |
| 36FN3000C02SP | EXFN, PLASTIC, 5.25 OD, 1.175 ID         | 1.000 ea |
| HW3201A05     | 3/8-16 EYEBOLT                           | 1.000 ea |
| 09CB3002SP    | CB W/1.38 LEAD HOLE FOR 37, 39, 307 & 30 | 1.000 ea |
| 09GS1000      | GASKET-CONDUIT BOX, 1/16 THICK LEXIDE    | 1.000 ea |
| 51XW2520A12   | .25-20 X .75, TAPTITE II, HEX WSHR SLTD  | 2.000 ea |
| WD1000B16     | T&B CX70TN OR L70P TERMINAL LUG          | 1.000 ea |
| 59XW2520G07   | .25-20X.44,HEX SER WSHR,TAPTITE 2,GREEN  | 1.000 ea |
| 37EP1100A41   | FR ENDPLATE ASSEMBLY FOR ROUTING         | 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 |
| 37PE1101A22   | PU ENDPLATE ASSEMBLY FOR ROUTING         | 1.000 ea |
| HW4500A17     | 317400 ALEMITE GREASE RELIEF             | 1.000 ea |
| HW4500A01     | 1641B(ALEMITE)400 UNIV, GREASE FITT      | 1.000 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 |
| 09CB3501SP    | CONDUIT BOX LID FOR 09CB3001 & 09CB3002  | 1.000 ea |
| 09GS1013SP    | GS FOR 09CB3501, 12CB1500 & 12CB1503 LID | 1.000 ea |
| 51XW2520A12   | .25-20 X .75, TAPTITE II, HEX WSHR SLTD  | 2.000 ea |
| HW2501F21     | KEY, 5/16 SQ X 2.375                     | 1.000 ea |
| HA7000A02     | KEY RETAINER RING, 1 1/8 DIA, 1 3/8 DIA  | 1.000 ea |
| LB1624        | COMBINED WARNING LABEL, ISO/ANSI PICTOGR | 1.000 ea |
| 85XU0407S04   | 4X1/4 U DRIVE PIN STAINLESS              | 2.000 ea |
| MJ1000A02     | GREASE, POLYREX EM EXXON                 | 0.050 lb |
| MG1050Y01     | CELEROL BALDOR GOLD *5 GALLON BUCKET*    | 0.036 ga |
| HA3104A32     | THRUBOLT- 5/16-18 X12.750                | 4.000 ea |
| 51XB1214A20   | 12-14X1.25 HXWSSLD SERTYB                | 1.000 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 |
| 07PA1011  | PKG GRP, 07 CAST IRON PK1181             | 1.000 ea |
| MN416A01  | TAG-INSTAL-MAINT no wire (2500 bx)11/25  | 1.000 ea |

**Accessories**

| Part number | Description | Multiplier |
|-------------|-------------|------------|
| 37-1304     | C FACE KIT  | A8         |

**AC Induction Motor Performance Data**

Record # 86050

Preliminary Data Sheet

| Winding: 07WGT514-R001 |    |              | Type: 0724M  |                                          | Enclosure: TEFC |                |
|------------------------|----|--------------|--------------|------------------------------------------|-----------------|----------------|
| Nameplate Data         |    |              |              | 460 V, 60 Hz:<br>High Voltage Connection |                 |                |
| Rated Output (HP)      |    | 7.5          |              | Full Load Torque                         |                 | 11.3 LB-FT     |
| Volts                  |    | 230/460      |              | Start Configuration                      |                 | direct on line |
| Full Load Amps         |    | 18.4/9.2     |              | Breakdown Torque                         |                 | 42.8 LB-FT     |
| R.P.M.                 |    | 3500         |              | Pull-up Torque                           |                 | 15.3 LB-FT     |
| Hz                     | 60 | Phase        | 3            | Locked-rotor Torque                      |                 | 20.6 LB-FT     |
| NEMA Design Code       |    | B            | KVA Code     | Starting Current                         |                 | 62.1 A         |
| Service Factor (S.F.)  |    | 1.15         |              | No-load Current                          |                 | 3.85 A         |
| NEMA Nom. Eff.         |    | 89.5         | Power Factor | Line-line Res. @ 25°C                    |                 | 1.57 Ω         |
| Rating - Duty          |    | 40C AMB-CONT |              | Temp. Rise @ Rated Load                  |                 | 62°C           |
| S.F. Amps              |    | 20.6/10.3    |              | Temp. Rise @ S.F. Load                   |                 | 82°C           |
|                        |    |              |              | Locked-rotor Power Factor                |                 | 43             |
|                        |    |              |              | Rotor inertia                            |                 | 0.219 lb-ft²   |

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

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 47   | 69   | 79   | 84   | 87   | 88   | 86   |
| Efficiency      | 83.9 | 89.3 | 90.1 | 89.7 | 88.6 | 87   | 89.1 |
| Speed           | 3575 | 3552 | 3526 | 3498 | 3468 | 3435 | 3483 |
| Line amperes    | 4.39 | 5.65 | 7.32 | 9.24 | 11.4 | 13.7 | 10.3 |

ABB Motors and Mechanical Inc.

WINDING # 07WGT514

Typical performance - not guaranteed values.

7.5 HP 3 PH 60 HZ 3500 RPM 460 V 0724M

TORQUES (LB-FT): PO=42.8 PU=15.3 LR=20.6 LRA=62.1





