

# ABB BALDOR RELIANCE III

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## Customer information packet

### EM3774T-BG

10HP, 1760RPM, 3PH, 60HZ, 215T, TEFC, F1

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                          |
|---------------------------------------|------------------------------------------|
| <b>Enclosure</b>                      | TEFC                                     |
| <b>Frame</b>                          | 215T                                     |
| <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>             | 10.000 HP @ 60 HZ                        |
| <b>Phase</b>                          | 3                                        |
| <b>Synchronous Speed @ Frequency</b>  | 1800 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>              | 24.400 A @ 230.0 V<br>12.200 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>         | 91.7 %                                   |
| <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>    | 12.2 a                                   |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | F          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  |            |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 07WGY179   |
| <b>Layout</b>       | 07LYN555   |
| <b>Eff. date</b>    | 04-29-2024 |
| <b>CD Diagram</b>   | CD0005     |
| <b>Poles</b>        | 04         |
| <b>Leads</b>        | 9#14       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 04-12-2019 |

|                                   |                       |
|-----------------------------------|-----------------------|
| <b>Insulation Class</b>           | H                     |
| <b>Inverter Code</b>              | Inverter Ready        |
| <b>IP Rating</b>                  | NONE                  |
| <b>KVA Code</b>                   | H                     |
| <b>Lifting Lugs</b>               | Standard Lifting Lugs |
| <b>Locked Bearing Indicator</b>   | Locked Bearing        |
| <b>Motor Lead Termination</b>     | Flying Leads          |
| <b>Motor Standards</b>            | NEMA                  |
| <b>Motor Type</b>                 | 0748M                 |
| <b>Mounting Arrangement</b>       | F1                    |
| <b>Number of Poles</b>            | 4                     |
| <b>Overall Length</b>             | 18.45 IN              |
| <b>Power Factor</b>               | 83                    |
| <b>Product Family</b>             | General Purpose       |
| <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>     | Shaft Grounding       |
| <b>Shaft Rotation</b>             | Reversible            |
| <b>Speed</b>                      | 1760 rpm              |
| <b>Speed Code</b>                 | Single Speed          |
| <b>Starting Method</b>            | Direct on line        |
| <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

| NP1259L      |              |      |     |      |   |    |    |   |  |
|--------------|--------------|------|-----|------|---|----|----|---|--|
| CAT.NO.      | EM3774T-BG   |      |     |      |   |    |    |   |  |
| SPEC.        | 07-0000-0091 |      |     |      |   |    |    |   |  |
| HP           | 10           |      |     |      |   |    |    |   |  |
| VOLTS        | 230/460      |      |     |      |   |    |    |   |  |
| AMP          | 24.4/12.2    |      |     |      |   |    |    |   |  |
| RPM          | 1760         |      |     |      |   |    |    |   |  |
| FRAME        | 215T         |      | HZ  | 60   |   |    | PH | 3 |  |
| SER.F.       | 1.15         | CODE | H   | DES  | B | CL | H  |   |  |
| NEMA-NOM-EFF | 91.7         | PF   | 83  |      |   |    |    |   |  |
| RATING       | 40C AMB-CONT |      |     |      |   |    |    |   |  |
| CC           | 010A         |      |     |      |   |    |    |   |  |
| DE           | 6307         |      | ODE | 6307 |   |    |    |   |  |
| ENCL         | TEFC         | SN   |     |      |   |    |    |   |  |

**Parts List**

| Part number   | Description                              | Quantity |
|---------------|------------------------------------------|----------|
| SA368439      | SA 07-0000-0091                          | 1.000 ea |
| RA357950      | RA 07-0000-0091                          | 1.000 ea |
| LB1624        | COMBINED WARNING LABEL, ISO/ANSI PICTOGR | 1.000 ea |
| LC0005        | CONN.DIA.,TY M,9-LD,DUAL VOLT,REVERSING  | 1.000 ea |
| NP1259L       | ALUM SUPER-E UL CC NEMA PREMIUM A60      | 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 |
| HW3201A05     | 3/8-16 EYEBOLT                           | 1.000 ea |
| 07FH4007SP    | PRIMED                                   | 1.000 ea |
| 51XW1032A06   | 10-32 X .38, TAPTITE II, HEX WSHR SLTD S | 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 |
| HA3104A32     | THRUBOLT- 5/16-18 X12.750                | 4.000 ea |
| LB1508        | LABEL "SHAFT GROUNDING BRUSH" 1.50 X .81 | 1.000 ea |
| XY3118A12     | 5/16-18 HEX NUT DIRECTIONAL SERRATION    | 4.000 ea |
| 37EP1101A71   | FR TEFC 37M 307 BRG W/ /GREASER, RELIEF, | 1.000 ea |
| HW5100A08     | W3118-035 WVY WSHR (WB)                  | 1.000 ea |
| HW4500A01     | 1641B(ALEMITE)400 UNIV, GREASE FITT      | 1.000 ea |
| HW4500A17     | 317400 ALEMITE GREASE RELIEF             | 1.000 ea |
| 37EP1101A119  | PUEP LOCKED 307 BRG, GREASER, RELIEF     | 1.000 ea |
| 10XN2520A28   | 1/4-20X 1 3/4 HEX HD                     | 4.000 ea |
| HW4500A01     | 1641B(ALEMITE)400 UNIV, GREASE FITT      | 1.000 ea |
| HW4500A17     | 317400 ALEMITE GREASE RELIEF             | 1.000 ea |
| BP5338A07     | SHAFT GRD ASSY, RB3000A25 RETAINER RING  | 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 |
| MG1050Y01     | CELEROL BALDOR GOLD *5 GALLON BUCKET*    | 0.022 ga |
| WD1000B16     | T&B CX70TN OR L70P TERMINAL LUG          | 1.000 ea |
| 59XW2520G07   | .25-20X.44,HEX SER WSHR,TAPTITE 2,GREEN  | 1.000 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 |
| 07PA1011    | PKG GRP, 07 CAST IRON PK1181             | 1.000 ea |
| 10XL3807A28 | 3/8-7 X 1 3/4" LAG SCREW                 | 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 |

**AC Induction Motor Performance Data**

Record # 58730

Typical performance - not guaranteed values

| Winding: 07WGY179-R008 |    |           | Type: 0748M                              |                     | Enclosure: TEFC           |            |             |
|------------------------|----|-----------|------------------------------------------|---------------------|---------------------------|------------|-------------|
| Nameplate Data         |    |           | 460 V, 60 Hz:<br>High Voltage Connection |                     |                           |            |             |
| Rated Output (HP)      |    | 10        | Full Load Torque                         |                     | 29.8 LB-FT                |            |             |
| Volts                  |    | 230/460   | Start Configuration                      |                     | direct on line            |            |             |
| Full Load Amps         |    | 24.4/12.2 | Breakdown Torque                         |                     | 80.9 LB-FT                |            |             |
| R.P.M.                 |    | 1760      | Pull-up Torque                           |                     | 40.2 LB-FT                |            |             |
| Hz                     | 60 | Phase     | 3                                        | Locked-rotor Torque |                           | 52.6 LB-FT |             |
| NEMA Design Code       |    | B         | KVA Code                                 | H                   | Starting Current          |            | 81 A        |
| Service Factor (S.F.)  |    | 1.15      | No-load Current                          |                     | 4.44 A                    |            |             |
| NEMA Nom. Eff.         |    | 91.7      | Power Factor                             | 83                  | Line-line Res. @ 25°C     |            | 1.08 Ω      |
| Rating - Duty          |    | 40C       | AMB-CONT                                 |                     | Temp. Rise @ Rated Load   |            | 64°C        |
| S.F. Amps              |    |           |                                          |                     | Temp. Rise @ S.F. Load    |            | 80°C        |
|                        |    |           |                                          |                     | Locked-rotor Power Factor |            | 35.1        |
|                        |    |           |                                          |                     | Rotor inertia             |            | 1.18 LB-FT2 |

**Load Characteristics 460 V, 60 Hz, 10 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 50   | 71   | 80   | 83   | 85   | 85   | 84   |
| Efficiency      | 90.4 | 92.5 | 92.9 | 92.4 | 91   | 89.1 | 91.6 |
| Speed           | 1791 | 1782 | 1774 | 1763 | 1751 | 1737 | 1756 |
| Line amperes    | 5.24 | 7.1  | 9.42 | 12.2 | 15.2 | 18.7 | 14   |

ABB Motors and Mechanical Inc.

WINDING # 07WGY179

Typical performance - not guaranteed values.

10 HP 3 PH 60 HZ 1760 RPM 460 V 0748M

TORQUES (LB-FT): PO=80.9 PU=40.2 LR=52.6 LRA=81





