

# ABB BALDOR RELIANCE III

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## Customer information packet

### ECTM3770T-G

7.5HP, 1770RPM, 3PH, 60HZ, 213T, 0738M, 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>  | 1800 RPM @ 60 HZ                                              |
| <b>Voltage @ Frequency</b>            | 230.0 V @ 60 HZ<br>460.0 V @ 60 HZ                            |
| <b>Agency Approvals</b>               | CSA EEV<br>NEMA PREMIUM<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>              | 9.500 A @ 460.0 V<br>20.000 A @ 208.0 V<br>19.000 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>         | 91.7 %                                                        |
| <b>Electrically Isolated Bearing</b>  | Not Electrically Isolated                                     |
| <b>Feedback Device</b>                | NO FEEDBACK                                                   |
| <b>Front Shaft Indicator</b>          | None                                                          |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | B          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 07D718     |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 07WGT510   |
| <b>Layout</b>       | 07LYD718   |
| <b>Eff. date</b>    | 06-08-2023 |
| <b>CD Diagram</b>   | CD0005     |
| <b>Poles</b>        | 04         |
| <b>Leads</b>        | 9#14       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 04-20-2022 |

|                               |                              |
|-------------------------------|------------------------------|
| Heater Indicator              | Heater Included, 115 V       |
| High Voltage Full Load Amps   | 9.5 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                    | 0738M                        |
| Mounting Arrangement          | F1                           |
| Number of Poles               | 4                            |
| Overall Length                | 19.58 IN                     |
| Power Factor                  | 81                           |
| Product Family                | Chemical Processing (Not DC) |
| Pulley End Bearing Type       | Sealed Bearing               |
| Pulley Face Code              | Standard                     |
| Pulley Shaft Indicator        | Tapped & Key                 |
| Rodent Screen                 | None                         |
| RoHS Status                   | ROHS COMPLIANT               |
| Service Factor                | 1.15                         |
| Shaft Diameter                | 1.375 IN                     |
| Shaft Ground Indicator        | Shaft Grounding              |
| Shaft Rotation                | Reversible                   |
| Shaft Slinger Indicator       | Shaft Slinger                |
| Speed                         | 1770 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**

| NP1260       |                  |      |  |      |     |  |   |    |   |
|--------------|------------------|------|--|------|-----|--|---|----|---|
| CAT.NO.      | ECTM3770T-G      |      |  |      |     |  |   |    |   |
| SPEC.        | 07D718T510G1     |      |  |      |     |  |   |    |   |
| HP           | 7.5              |      |  |      |     |  |   |    |   |
| VOLTS        | 230/460          |      |  |      |     |  |   |    |   |
| AMP          | 19/9.5           |      |  |      |     |  |   |    |   |
| RPM          | 1770             |      |  |      |     |  |   |    |   |
| FRAME        | 213T             | HZ   |  | 60   | PH  |  | 3 |    |   |
| SER.F.       | 1.15             | CODE |  | J    | DES |  | A | CL | F |
| NEMA-NOM-EFF | 91.7             | PF   |  | 81   |     |  |   |    |   |
| RATING       | 40C AMB-CONT     |      |  |      |     |  |   |    |   |
| CC           |                  |      |  |      |     |  |   |    |   |
| DE           | 6307             | ODE  |  | 6206 |     |  |   |    |   |
| ENCL         | TEFC             | SN   |  |      |     |  |   |    |   |
|              | INV DUTY 20:1 VT |      |  |      |     |  |   |    |   |

**AC Induction Motor Performance Data**

Record # 85534

Preliminary Data Sheet

| Winding: 07WGT510-R001 |    |              |              | Type: 0738M                              |  | Enclosure: TEFC |  |
|------------------------|----|--------------|--------------|------------------------------------------|--|-----------------|--|
| Nameplate Data         |    |              |              | 460 V, 60 Hz:<br>High Voltage Connection |  |                 |  |
| Rated Output (HP)      |    | 7.5          |              | Full Load Torque                         |  | 22.3 LB-FT      |  |
| Volts                  |    | 230/460      |              | Start Configuration                      |  | direct on line  |  |
| Full Load Amps         |    | 19/9.5       |              | Breakdown Torque                         |  | 69.1 LB-FT      |  |
| R.P.M.                 |    | 1770         |              | Pull-up Torque                           |  | 28.7 LB-FT      |  |
| Hz                     | 60 | Phase        | 3            | Locked-rotor Torque                      |  | 39.1 LB-FT      |  |
| NEMA Design Code       |    | A            | KVA Code     | Starting Current                         |  | 67.4 A          |  |
| Service Factor (S.F.)  |    | 1.15         |              | No-load Current                          |  | 4.07 A          |  |
| NEMA Nom. Eff.         |    | 91.7         | Power Factor | Line-line Res. @ 25°C                    |  | 1.55 Ω          |  |
| Rating - Duty          |    | 40C AMB-CONT |              | Temp. Rise @ Rated Load                  |  | 48°C            |  |
| S.F. Amps              |    | 21.4/10.7    |              | Temp. Rise @ S.F. Load                   |  | 62°C            |  |
|                        |    |              |              | Locked-rotor Power Factor                |  | 41.2            |  |
|                        |    |              |              | Rotor inertia                            |  | 0.934 lb-ft²    |  |

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

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 44   | 66   | 76   | 81   | 84   | 85   | 83   |
| Efficiency      | 88   | 91.7 | 92.2 | 91.7 | 90.7 | 89.3 | 90.9 |
| Speed           | 1792 | 1785 | 1777 | 1769 | 1759 | 1749 | 1761 |
| Line amperes    | 4.61 | 5.85 | 7.48 | 9.43 | 11.6 | 13.9 | 10.7 |

ABB Motors and Mechanical Inc.

WINDING # 07WGT510

Typical performance - not guaranteed values.

7.5 HP 3 PH 60 HZ 1770 RPM 460 V 0738M

TORQUES (LB-FT): PO=69.1 PU=28.7 LR=39.1 LRA=67.4





