

# ABB BALDOR RELIANCE III

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## Customer information packet

### ZDWNM3707T

5HP, 1770RPM, 3PH, 60HZ, 213TC, 3734M, TENV, F1

Class - None

Division - Not Applicable

**Specifications**

|                                |                                         |
|--------------------------------|-----------------------------------------|
| Enclosure                      | TENV                                    |
| Frame                          | 213TC                                   |
| Frame Material                 | Steel                                   |
| Frequency                      | 60.00 Hz                                |
| Haz Area Class and Group       | None                                    |
| Haz Area Division              | Not Applicable                          |
| Motor Letter Type              | Three Phase                             |
| Output @ Frequency             | 5.000 HP @ 60 HZ                        |
| Phase                          | 3                                       |
| Synchronous Speed @ Frequency  | 1800 RPM @ 60 HZ                        |
| Voltage @ Frequency            | 230.0 V @ 60 HZ<br>460.0 V @ 60 HZ      |
| Agency Approvals               | UR<br>CSA                               |
| Ambient Temperature            | 40 °C                                   |
| Auxiliary Box                  | NO AUXILLARY BOX                        |
| Auxiliary Box Lead Termination | None                                    |
| Base Indicator                 | Rigid                                   |
| Bearing Grease Type            | Polyrex EM (-20F +300F)                 |
| Blower                         | None                                    |
| Current @ Voltage              | 12.400 A @ 230.0 V<br>6.200 A @ 460.0 V |
| Design Code                    | B                                       |
| Drip Cover                     | No Drip Cover                           |
| Duty Rating                    | CONT                                    |
| Efficiency @ 100% Load         | 89.5 %                                  |
| Electrically Isolated Bearing  | Not Electrically Isolated               |
| Feedback Device                | ENCODER                                 |
| Front Shaft Indicator          | None                                    |
| Heater Indicator               | No Heater                               |
| High Voltage Full Load Amps    | 6.2 a                                   |
| Insulation Class               | H                                       |

**Part Detail**

|              |            |
|--------------|------------|
| Revision     | B          |
| Type         | AC         |
| Mech. spec.  | 37H311     |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 37WGR177   |
| Layout       | 37LYH311   |
| Eff. date    | 12-03-2025 |
| CD Diagram   | CD0005     |
| Poles        | 04         |
| Leads        | 9#14       |
| Proprietary  | False      |
| Created date | 11-19-2020 |

|                                      |                                   |
|--------------------------------------|-----------------------------------|
| <b>Inverter Code</b>                 | <b>Inverter Duty</b>              |
| <b>KVA Code</b>                      | <b>J</b>                          |
| <b>Lifting Lugs</b>                  | <b>Standard Lifting Lugs</b>      |
| <b>Locked Bearing Indicator</b>      | <b>Locked Bearing</b>             |
| <b>Max Speed</b>                     | <b>4000 rpm</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>3734M</b>                      |
| <b>Mounting Arrangement</b>          | <b>F1</b>                         |
| <b>Number of Poles</b>               | <b>4</b>                          |
| <b>Overall Length</b>                | <b>19.84 IN</b>                   |
| <b>Power Factor</b>                  | <b>82</b>                         |
| <b>Product Family</b>                | <b>Wash Down</b>                  |
| <b>Pulley End Bearing Type</b>       | <b>Sealed Bearing</b>             |
| <b>Pulley Face Code</b>              | <b>C-Face</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>1.00</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>Shaft Slinger</b>              |
| <b>Speed</b>                         | <b>1770 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>Normally Closed Thermostat</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**

| NP1609L      |              |        |         |         |      |          |      |  |  |
|--------------|--------------|--------|---------|---------|------|----------|------|--|--|
| CAT NO       | ZDWNM3707T   |        |         |         |      |          |      |  |  |
| SPEC.        | 37H311R177Z2 |        |         |         |      |          |      |  |  |
| FRAME        | 213TC        |        |         | HP      | 5 TE |          |      |  |  |
| VOLTS        | 230/460      |        |         |         |      |          |      |  |  |
| MAG CUR      | 5.8/2.9      |        |         |         | FLA  | 12.4/6.2 |      |  |  |
| RPM          | 1770         |        |         | RPM MAX |      |          | 4000 |  |  |
| HZ           | 60           |        | PH      | 3       |      | CLASS    | H    |  |  |
| SER.F.       | 1.00         |        | DES     | B       |      | SL HZ    | 1.2  |  |  |
| NEMA-NOM-EFF | 89.5         |        | WK2     | 0.836   |      |          |      |  |  |
| BLWR V       |              | PH     |         | HZ      |      | A        |      |  |  |
| RATING       | 40C AMB-CONT |        |         |         |      |          |      |  |  |
| DE BRG       | 6307         |        | ODE BRG |         |      | 6206     |      |  |  |
| CC           | 010A         | SER.NO |         |         |      |          |      |  |  |

**AC Induction Motor Performance Data**

Record # 85505

Typical performance - not guaranteed values

| Winding: 37WGR177-R007 |    |          | Type: 3734M         |                                          | Enclosure: TENV         |              |         |
|------------------------|----|----------|---------------------|------------------------------------------|-------------------------|--------------|---------|
| Nameplate Data         |    |          |                     | 460 V, 60 Hz:<br>High Voltage Connection |                         |              |         |
| Rated Output (HP)      |    | 5        | Full Load Torque    |                                          | 14.76 LB-FT             |              |         |
| Volts                  |    | 230/460  | Start Configuration |                                          | direct on line          |              |         |
| Full Load Amps         |    | 12.4/6.2 | Breakdown Torque    |                                          | 47.48 LB-FT             |              |         |
| R.P.M.                 |    | 1770     | Pull-up Torque      |                                          | 22.38 LB-FT             |              |         |
| Hz                     | 60 | Phase    | 3                   | Locked-rotor Torque                      |                         | 28.3 LB-FT   |         |
| NEMA Design Code       |    | B        | KVA Code            | J                                        | Starting Current        |              | 49.16 A |
| Service Factor (S.F.)  |    | 1        | No-load Current     |                                          | 2.83 A                  |              |         |
| NEMA Nom. Eff.         |    | 89.5     | Power Factor        | 82                                       | Line-line Res. @ 25°C   |              | 2.12 Ω  |
| Rating - Duty          |    | 40C      | AMB-CONT            |                                          | Temp. Rise @ Rated Load |              | 56°C    |
|                        |    |          |                     | Locked-rotor Power Factor                |                         | 37.5         |         |
|                        |    |          |                     | Rotor inertia                            |                         | 0.836 lb-ft² |         |

**Load Characteristics 460 V, 60 Hz, 5 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  |
|-----------------|------|------|------|------|------|------|
| Power Factor    | 41   | 64   | 77   | 83   | 85   | 85   |
| Efficiency      | 86.4 | 90.8 | 91.4 | 91.3 | 90.7 | 89.3 |
| Speed           | 1793 | 1787 | 1779 | 1772 | 1762 | 1753 |
| Line amperes    | 3.28 | 3.99 | 5    | 6.18 | 7.6  | 9.19 |

ABB Motors and Mechanical Inc.

WINDING # 37WGR177

Typical performance - not guaranteed values.

5 HP 3 PH 60 HZ 1770 RPM 460 V 3734M

TORQUES (LB-FT) : PO=47.48 PU=22.38 LR=28.3 LRA=49.16





