

# ABB BALDOR RELIANCE III

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## Customer information packet

### EM2237

7.5HP, 1775RPM, 3PH, 60HZ, 254U, 0936M, TEFC, F

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                                               |
|---------------------------------------|---------------------------------------------------------------|
| <b>Enclosure</b>                      | TEFC                                                          |
| <b>Frame</b>                          | 254U                                                          |
| <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>            | 460.0 V @ 60 HZ<br>230.0 V @ 60 HZ                            |
| <b>Agency Approvals</b>               | CSA<br>CSA EEV<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>              | 20.000 A @ 208.0 V<br>9.400 A @ 460.0 V<br>18.800 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 Face Code</b>                | Standard                                                      |
| <b>Front Shaft Indicator</b>          | None                                                          |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | T          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 09C111     |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 09WGT178   |
| <b>Layout</b>       | 09LYC111   |
| <b>Eff. date</b>    | 11-14-2023 |
| <b>CD Diagram</b>   | CD0005     |
| <b>Poles</b>        | 04         |
| <b>Leads</b>        | 9#12       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 02-23-2015 |

|                                      |                       |
|--------------------------------------|-----------------------|
| <b>Heater Indicator</b>              | No Heater             |
| <b>High Voltage Full Load Amps</b>   | 9.4 a                 |
| <b>Insulation Class</b>              | F                     |
| <b>Inverter Code</b>                 | Inverter Ready        |
| <b>KVA Code</b>                      | K                     |
| <b>Lifting Lugs</b>                  | Standard Lifting Lugs |
| <b>Locked Bearing Indicator</b>      | Locked Bearing        |
| <b>Motor Lead Exit</b>               | Ko Box                |
| <b>Motor Lead Quantity/Wire Size</b> | 9 @ 12 AWG            |
| <b>Motor Lead Termination</b>        | Flying Leads          |
| <b>Motor Standards</b>               | NEMA                  |
| <b>Motor Type</b>                    | 0936M                 |
| <b>Mounting Arrangement</b>          | F1                    |
| <b>Number of Poles</b>               | 4                     |
| <b>Overall Length</b>                | 23.03 IN              |
| <b>Power Factor</b>                  | 78                    |
| <b>Product Family</b>                | General Purpose       |
| <b>Pulley End Bearing Type</b>       | Ball                  |
| <b>Pulley Face Code</b>              | Standard              |
| <b>Pulley Shaft Indicator</b>        | Standard              |
| <b>Rodent Screen</b>                 | None                  |
| <b>Service Factor</b>                | 1.15                  |
| <b>Shaft Diameter</b>                | 1.375 IN              |
| <b>Shaft Extension Location</b>      | Pulley End            |
| <b>Shaft Ground Indicator</b>        | No Shaft Grounding    |
| <b>Shaft Rotation</b>                | Reversible            |
| <b>Shaft Slinger Indicator</b>       | Shaft Slinger         |
| <b>Speed</b>                         | 1775 rpm              |
| <b>Speed Code</b>                    | Single Speed          |
| <b>Starting Method</b>               | Direct on line        |
| <b>Thermal Device - Bearing</b>      | None                  |
| <b>Thermal Device - Winding</b>      | None                  |
| <b>Vibration Sensor Indicator</b>    | No Vibration Sensor   |
| <b>Winding Thermal 1</b>             | None                  |

Winding Thermal 2

None

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**Nameplate**

| NP1259L      |              |  |      |      |     |   |  |    |   |  |  |
|--------------|--------------|--|------|------|-----|---|--|----|---|--|--|
| CAT.NO.      | EM2237       |  |      |      |     |   |  |    |   |  |  |
| SPEC.        | 09C111T178G1 |  |      |      |     |   |  |    |   |  |  |
| HP           | 7.5          |  |      |      |     |   |  |    |   |  |  |
| VOLTS        | 230/460      |  |      |      |     |   |  |    |   |  |  |
| AMP          | 18.8/9.4     |  |      |      |     |   |  |    |   |  |  |
| RPM          | 1775         |  |      |      |     |   |  |    |   |  |  |
| FRAME        | 254U         |  | HZ   | 60   |     |   |  | PH | 3 |  |  |
| SER.F.       | 1.15         |  | CODE | K    | DES | A |  | CL | F |  |  |
| NEMA-NOM-EFF | 91.7         |  | PF   | 78   |     |   |  |    |   |  |  |
| RATING       | 40C AMB-CONT |  |      |      |     |   |  |    |   |  |  |
| CC           | 010A         |  |      |      |     |   |  |    |   |  |  |
| DE           | 6309         |  | ODE  | 6208 |     |   |  |    |   |  |  |
| ENCL         | TEFC         |  | SN   |      |     |   |  |    |   |  |  |

**AC Induction Motor Performance Data**

Record # 49384

Typical performance - not guaranteed values

| Winding: 09WGT178-R001 |    |          | Type: 0936M                              |                     | Enclosure: TEFC           |          |             |
|------------------------|----|----------|------------------------------------------|---------------------|---------------------------|----------|-------------|
| Nameplate Data         |    |          | 460 V, 60 Hz:<br>High Voltage Connection |                     |                           |          |             |
| Rated Output (HP)      |    | 7.5      | Full Load Torque                         |                     | 22.1 LB-FT                |          |             |
| Volts                  |    | 230/460  | Start Configuration                      |                     | direct on line            |          |             |
| Full Load Amps         |    | 18.8/9.4 | Breakdown Torque                         |                     | 96.4 LB-FT                |          |             |
| R.P.M.                 |    | 1775     | Pull-up Torque                           |                     | 39.6 LB-FT                |          |             |
| Hz                     | 60 | Phase    | 3                                        | Locked-rotor Torque |                           | 50 LB-FT |             |
| NEMA Design Code       |    | A        | KVA Code                                 | K                   | Starting Current          |          | 75.6 A      |
| Service Factor (S.F.)  |    | 1.15     | No-load Current                          |                     | 4.39 A                    |          |             |
| NEMA Nom. Eff.         |    | 91.7     | Power Factor                             | 78                  | Line-line Res. @ 25°C     |          | 0.976 Ω     |
| Rating - Duty          |    | 40C      | AMB-CONT                                 |                     | Temp. Rise @ Rated Load   |          | 23°C        |
| S.F. Amps              |    |          |                                          |                     | Temp. Rise @ S.F. Load    |          | 27°C        |
|                        |    |          |                                          |                     | Locked-rotor Power Factor |          | 34.7        |
|                        |    |          |                                          |                     | Rotor inertia             |          | 1.57 LB-FT2 |

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

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 42   | 65   | 76   | 81   | 84   | 85   | 83   |
| Efficiency      | 83   | 89.5 | 91.7 | 91.9 | 91.5 | 91   | 91.7 |
| Speed           | 1795 | 1789 | 1783 | 1776 | 1769 | 1762 | 1772 |
| Line amperes    | 4.87 | 6    | 7.51 | 9.43 | 11.4 | 13.5 | 10.6 |

ABB Motors and Mechanical Inc.

WINDING # 09WGT178

Typical performance - not guaranteed values.

7.5 HP 3 PH 60 HZ 1775 RPM 460 V 0936M

TORQUES (LB-FT): PO=96.4 PU=39.6 LR=50 LRA=75.6





