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# Customer information packet

## EM3309T-BG

5HP, 1160RPM, 3PH, 60HZ, 215T, 3744M, OPSB, F1

Class - None

Division - Not Applicable

## Specifications

|                                |                                         |
|--------------------------------|-----------------------------------------|
| Enclosure                      | OPSB                                    |
| Frame                          | 215T                                    |
| 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  | 1200 RPM @ 60 HZ                        |
| Voltage @ Frequency            | 230.0 V @ 60 HZ<br>460.0 V @ 60 HZ      |
| Agency Approvals               | UR<br>CSA<br>CSA EEV                    |
| 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              | 7.400 A @ 460.0 V<br>14.800 A @ 230.0 V |
| Design Code                    | A                                       |
| Drip Cover                     | No Drip Cover                           |
| Duty Rating                    | CONT                                    |
| Efficiency @ 100% Load         | 89.5 %                                  |
| Electrically Isolated Bearing  | Not Electrically Isolated               |
| Feedback Device                | NO FEEDBACK                             |
| Front Face Code                | Standard                                |
| Front Shaft Indicator          | None                                    |
| Heater Indicator               | No Heater                               |

## Part detail

|              |            |
|--------------|------------|
| Revision     | N          |
| Type         | AC         |
| Mech. spec.  | 37N346     |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 37WGS521   |
| Layout       | 37LYN346   |
| Eff. date    | 06-11-2024 |
| CD Diagram   | CD0005     |
| Poles        | 06         |
| Leads        | 9#14       |
| Proprietary  | False      |
| Created date | 10-28-2013 |

|                               |                       |
|-------------------------------|-----------------------|
| High Voltage Full Load Amps   | 7.4 a                 |
| Insulation Class              | H                     |
| Inverter Code                 | Inverter Ready        |
| KVA Code                      | K                     |
| Lifting Lugs                  | Standard Lifting Lugs |
| Locked Bearing Indicator      | Locked Bearing        |
| Motor Lead Exit               | Ko Box                |
| Motor Lead Quantity/Wire Size | 9 @ 14 AWG            |
| Motor Lead Termination        | Flying Leads          |
| Motor Standards               | NEMA                  |
| Motor Type                    | 3744M                 |
| Mounting Arrangement          | F1                    |
| Number of Poles               | 6                     |
| Overall Length                | 17.45 IN              |
| Power Factor                  | 71                    |
| Product Family                | General Purpose       |
| Pulley End Bearing Type       | Ball                  |
| Pulley Face Code              | Standard              |
| Pulley Shaft Indicator        | Standard              |
| Rodent Screen                 | None                  |
| Service Factor                | 1.15                  |
| Shaft Diameter                | 1.375 IN              |
| Shaft Extension Location      | Pulley End            |
| Shaft Ground Indicator        | Shaft Grounding       |
| Shaft Rotation                | Reversible            |
| Shaft Slinger Indicator       | No Slinger            |
| Speed                         | 1160 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

## NP3553LUA

|                           |                             |      |     |      |   |       |       |
|---------------------------|-----------------------------|------|-----|------|---|-------|-------|
| CAT.NO.                   | EM3309T-BG                  |      |     |      |   |       |       |
| SPEC.                     | 37N346S521G1                |      |     |      |   |       |       |
| HP                        | 5                           |      |     |      |   |       |       |
| VOLTS                     | 230/460                     |      |     |      |   |       |       |
| AMPS                      | 14.8/7.4                    |      |     |      |   |       |       |
| RPM                       | 1160                        |      |     |      |   |       |       |
| FRAME                     | 215T                        |      | HZ  | 60   |   | PH    | 3     |
| SF                        | 1.15                        | CODE | K   | DES  | A | CLASS | H     |
| NEMA NOM. EFF             | 89.5                        | PF   | 71  |      |   |       |       |
| RATING                    | 40C AMB-CONT                |      |     |      |   |       |       |
| CC                        | 010A                        |      |     |      |   |       |       |
| ENCL                      | OPSB                        | SN   |     |      |   |       |       |
| DE                        | 6307                        |      | ODE | 6206 |   |       |       |
| VPWM INVERTER READY       |                             |      |     |      |   |       |       |
| CT30-60(2:1) VT3-60(20:1) |                             |      |     |      |   |       |       |
| USABLE AT                 | 50Hz 5HP 190/380V 17.2/8.6A |      |     |      |   |       | SF1.0 |

**AC Induction Motor Performance Data**

Record # 62644

Typical performance - not guaranteed values

| Winding: 37WGS521-R002 |    |              | Type: 3744M                              |                           | Enclosure: OPSB  |                       |      |        |
|------------------------|----|--------------|------------------------------------------|---------------------------|------------------|-----------------------|------|--------|
| Nameplate Data         |    |              | 460 V, 60 Hz:<br>High Voltage Connection |                           |                  |                       |      |        |
| Rated Output (HP)      |    | 5            | Full Load Torque                         |                           | 22.5 LB-FT       |                       |      |        |
| Volts                  |    | 230/460      | Start Configuration                      |                           | direct on line   |                       |      |        |
| Full Load Amps         |    | 14.8/7.4     | Breakdown Torque                         |                           | 77.9 LB-FT       |                       |      |        |
| R.P.M.                 |    | 1160         | Pull-up Torque                           |                           | 47.4 LB-FT       |                       |      |        |
| Hz                     | 60 | Phase        | 3                                        | Locked-rotor Torque       |                  | 54.8 LB-FT            |      |        |
| NEMA Design Code       |    | A            | KVA Code                                 | K                         | Starting Current |                       | 53 A |        |
| Service Factor (S.F.)  |    | 1.15         |                                          | No-load Current           |                  | 3.84 A                |      |        |
| NEMA Nom. Eff.         |    | 89.5         | Power Factor                             |                           | 71               | Line-line Res. @ 25°C |      | 1.74 Ω |
| Rating - Duty          |    | 40C AMB-CONT |                                          | Temp. Rise @ Rated Load   |                  | 33°C                  |      |        |
| S.F. Amps              |    |              |                                          | Temp. Rise @ S.F. Load    |                  | 40°C                  |      |        |
|                        |    |              |                                          | Locked-rotor Power Factor |                  | 22.7                  |      |        |
|                        |    |              |                                          | Rotor inertia             |                  | 1.09 LB-FT2           |      |        |

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

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 33   | 53   | 65   | 71   | 75   | 76   | 73   |
| Efficiency      | 84.7 | 89.4 | 89.7 | 89.7 | 88.5 | 86.5 | 89   |
| Speed           | 1192 | 1184 | 1174 | 1165 | 1154 | 1139 | 1158 |
| Line amperes    | 4.14 | 4.95 | 6.08 | 7.36 | 8.92 | 10.7 | 8.3  |

ABB Motors and Mechanical Inc.

WINDING # 37WGS521

Typical performance - not guaranteed values.

5 HP 3 PH 60 HZ 1160 RPM 460 V 3744M

TORQUES (LB-FT): PO=77.9 PU=47.4 LR=54.8 LRA=53





