

# ABB BALDOR RELIANCE III

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## Customer information packet

### CEM3309T-G

5HP, 1160RPM, 3PH, 60HZ, 215TC, OPSB, F1

Class - None

Division - Not Applicable

**Specifications**

|                                |                                         |
|--------------------------------|-----------------------------------------|
| Enclosure                      | OPSB                                    |
| Frame                          | 215TC                                   |
| 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               | CSA<br>CSA EEV<br>NEMA PREMIUM<br>UR    |
| 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                             |
| Heater Indicator               | No Heater                               |
| High Voltage Full Load Amps    | 7.4 a                                   |

**Part Detail**

|              |            |
|--------------|------------|
| Revision     | G          |
| Type         | AC         |
| Mech. spec.  |            |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 37WGS521   |
| Layout       | 37LYK447   |
| Eff. date    | 06-11-2024 |
| CD Diagram   | CD0005     |
| Poles        | 06         |
| Leads        | 9#14       |
| Proprietary  | False      |
| Created date | 02-24-2020 |

|                                   |                       |
|-----------------------------------|-----------------------|
| <b>Insulation Class</b>           | H                     |
| <b>Inverter Code</b>              | Inverter Ready        |
| <b>IP Rating</b>                  | NONE                  |
| <b>KVA Code</b>                   | K                     |
| <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>                 | 3744M                 |
| <b>Mounting Arrangement</b>       | F1                    |
| <b>Number of Poles</b>            | 6                     |
| <b>Overall Length</b>             | 18.19 IN              |
| <b>Power Factor</b>               | 71                    |
| <b>Product Family</b>             | General Purpose       |
| <b>Pulley Face Code</b>           | C-Face                |
| <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>                      | 1160 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                  |
| <b>Winding Thermal 2</b>          | None                  |

**Nameplate**

| NP3553LUA                        |                             |             |            |            |   |              |       |  |  |
|----------------------------------|-----------------------------|-------------|------------|------------|---|--------------|-------|--|--|
| <b>CAT.NO.</b>                   | CEM3309T-G                  |             |            |            |   |              |       |  |  |
| <b>SPEC.</b>                     | 37-0000-0219                |             |            |            |   |              |       |  |  |
| <b>HP</b>                        | 5                           |             |            |            |   |              |       |  |  |
| <b>VOLTS</b>                     | 230/460                     |             |            |            |   |              |       |  |  |
| <b>AMPS</b>                      | 14.8/7.4                    |             |            |            |   |              |       |  |  |
| <b>RPM</b>                       | 1160                        |             |            |            |   |              |       |  |  |
| <b>FRAME</b>                     | 215TC                       |             | <b>HZ</b>  | 60         |   | <b>PH</b>    | 3     |  |  |
| <b>SF</b>                        | 1.15                        | <b>CODE</b> | K          | <b>DES</b> | A | <b>CLASS</b> | H     |  |  |
| <b>NEMA NOM. EFF</b>             | 89.5                        | <b>PF</b>   | 71         |            |   |              |       |  |  |
| <b>RATING</b>                    | 40C AMB-CONT                |             |            |            |   |              |       |  |  |
| <b>CC</b>                        | 010A                        |             |            |            |   |              |       |  |  |
| <b>ENCL</b>                      | OPSB                        | <b>SN</b>   |            |            |   |              |       |  |  |
| <b>DE</b>                        | 6307                        |             | <b>ODE</b> | 6206       |   |              |       |  |  |
| <b>VPWM INVERTER READY</b>       |                             |             |            |            |   |              |       |  |  |
| <b>CT30-60(2:1) VT3-60(20:1)</b> |                             |             |            |            |   |              |       |  |  |
| <b>USABLE AT</b>                 | 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  |

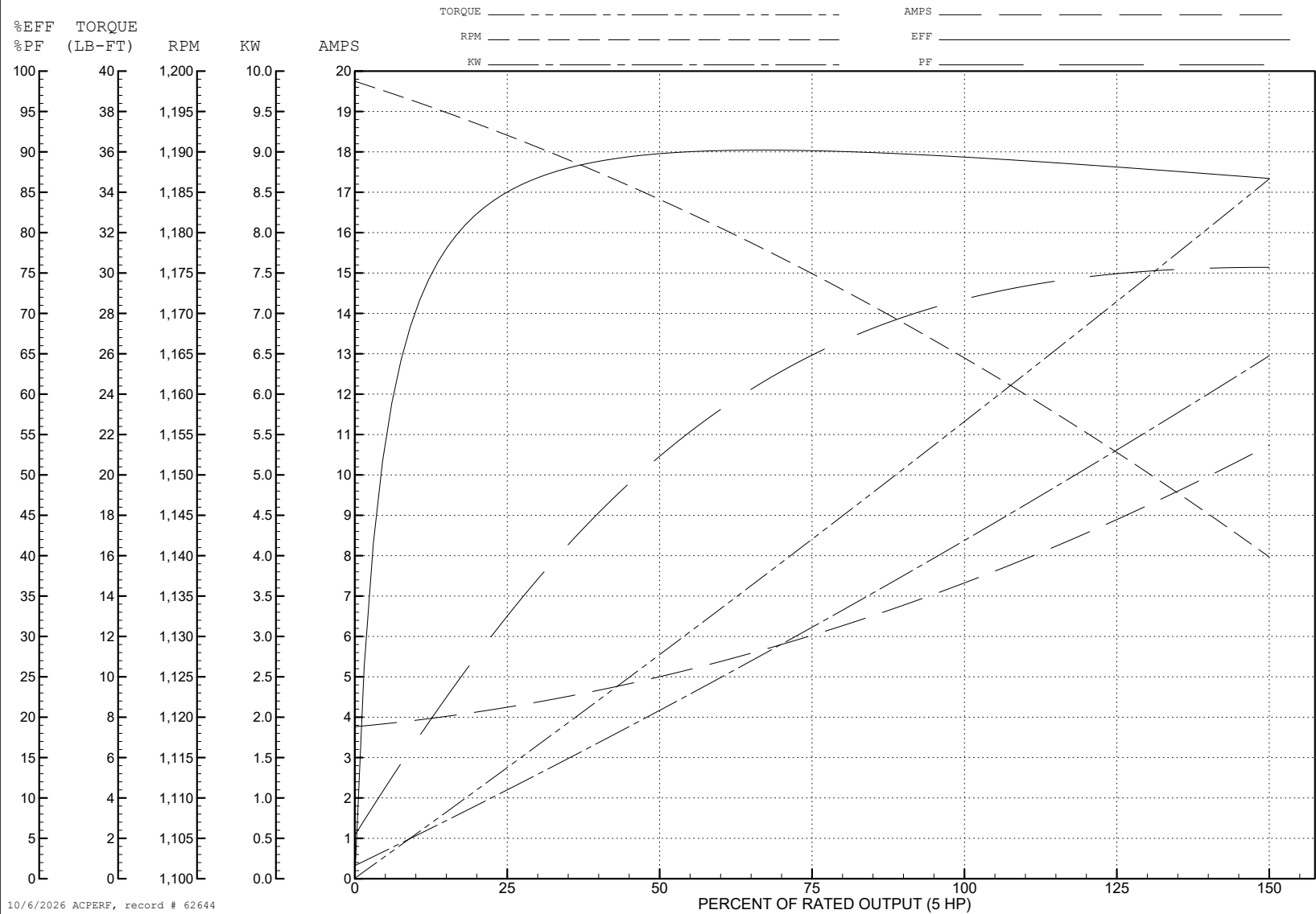
ABB Motors and Mechanical Inc.

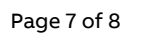
WINDING # 37WGS521

Typical performance - not guaranteed values.

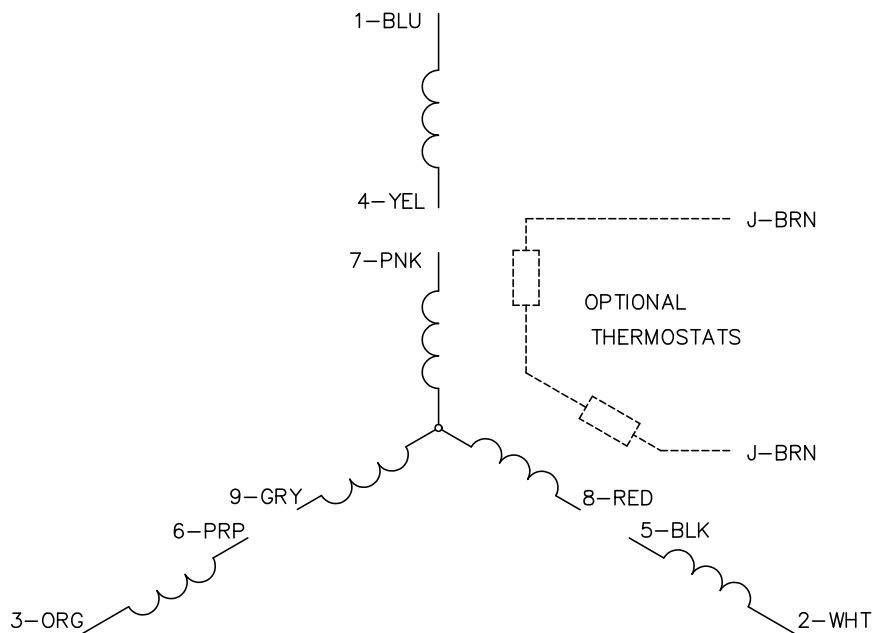
5 HP 3 PH 60 HZ 1160 RPM 460 V 3744M

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

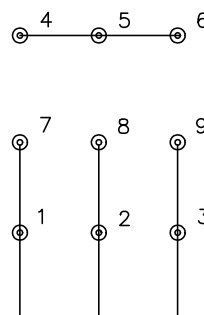




CD0005

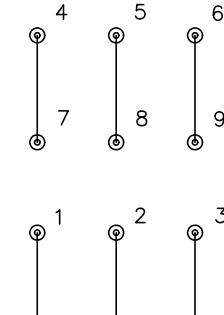


LOW VOLTAGE  
(2Y)



LINE

HIGH VOLTAGE  
(1Y)



LINE

**NOTES:**

1. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
2. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
3. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY BE A MULTIPLE OF THOSE SHOWN ABOVE.
4. LEAD COLORS ARE OPTIONAL. LEADS MUST ALWAYS BE NUMBERED AS SHOWN.

REV. DESC: REVISE TO SHOW OPTIONAL COLORS

REV. LTR: E BY: JLP REVISED: 01/19/99 10:15 TDR: 0171435

900000

FILE: AAA00005140

MDL: -

MTL: -

**BALDOR ELECTRIC Co.**

3PH, DV, 9 LEADS

CD0005