

# ABB BALDOR RELIANCE III

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## Customer information packet

### EBM3704TY

3HP, 1160RPM, 3PH, 60HZ, 213T, 3738M, TEFC, F1

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                                             |
|---------------------------------------|-------------------------------------------------------------|
| <b>Enclosure</b>                      | TEFC                                                        |
| <b>Frame</b>                          | 213T                                                        |
| <b>Frame Material</b>                 | Steel                                                       |
| <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>             | 3.000 HP @ 60 HZ                                            |
| <b>Phase</b>                          | 3                                                           |
| <b>Synchronous Speed @ Frequency</b>  | 1200 RPM @ 60 HZ                                            |
| <b>Voltage @ Frequency</b>            | 230.0 V @ 60 HZ<br>460.0 V @ 60 HZ                          |
| <b>Agency Approvals</b>               | NEMA PREMIUM<br>CURUSEEV                                    |
| <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>Brake Torque</b>                   | 35.0 lb-ft                                                  |
| <b>Current @ Voltage</b>              | 4.600 A @ 460.0 V<br>9.200 A @ 230.0 V<br>9.600 A @ 208.0 V |
| <b>Design Code</b>                    | B                                                           |
| <b>Drip Cover</b>                     | No Drip Cover                                               |
| <b>Duty Rating</b>                    | CONT                                                        |
| <b>Efficiency @ 100% Load</b>         | 89.5 %                                                      |
| <b>Electrically Isolated Bearing</b>  | Not Electrically Isolated                                   |
| <b>Feedback Device</b>                | NO FEEDBACK                                                 |
| <b>Front Face Code</b>                | Brake Mounting                                              |
| <b>Front Shaft Indicator</b>          | None                                                        |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | H          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 37A021     |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 37WGS519   |
| <b>Layout</b>       | 37LYA021   |
| <b>Eff. date</b>    | 05-01-2024 |
| <b>CD Diagram</b>   | CD0005     |
| <b>Poles</b>        | 06         |
| <b>Leads</b>        | 9#14       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 10-01-2010 |

|                                      |                       |
|--------------------------------------|-----------------------|
| <b>Heater Indicator</b>              | No Heater             |
| <b>High Voltage Full Load Amps</b>   | 4.6 a                 |
| <b>Insulation Class</b>              | F                     |
| <b>Inverter Code</b>                 | Inverter Ready        |
| <b>IP Rating</b>                     | NONE                  |
| <b>KVA Code</b>                      | L                     |
| <b>Lifting Lugs</b>                  | Standard Lifting Lugs |
| <b>Locked Bearing Indicator</b>      | No Locked Bearing     |
| <b>Motor Lead Exit</b>               | Ko Box                |
| <b>Motor Lead Quantity/Wire Size</b> | 9 @ 14 AWG            |
| <b>Motor Lead Termination</b>        | Flying Leads          |
| <b>Motor Standards</b>               | NEMA                  |
| <b>Motor Type</b>                    | 3738M                 |
| <b>Mounting Arrangement</b>          | F1                    |
| <b>Number of Poles</b>               | 6                     |
| <b>Overall Length</b>                | 27.01 IN              |
| <b>Power Factor</b>                  | 68                    |
| <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>RoHS Status</b>                   | ROHS COMPLIANT        |
| <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>       | No Slinger            |
| <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                  |

| Vibration Sensor Indicator | No Vibration Sensor |
|----------------------------|---------------------|
| Winding Thermal 1          | None                |
| Winding Thermal 2          | None                |

**Nameplate**

| NP1259L      |              |      |     |      |   |    |   |    |   |  |  |
|--------------|--------------|------|-----|------|---|----|---|----|---|--|--|
| CAT.NO.      | EBM3704TY    |      |     |      |   |    |   |    |   |  |  |
| SPEC.        | 37A021S519G2 |      |     |      |   |    |   |    |   |  |  |
| HP           | 3            |      |     |      |   |    |   |    |   |  |  |
| VOLTS        | 230/460      |      |     |      |   |    |   |    |   |  |  |
| AMP          | 9.2/4.6      |      |     |      |   |    |   |    |   |  |  |
| RPM          | 1160         |      |     |      |   |    |   |    |   |  |  |
| FRAME        | 213T         |      | HZ  | 60   |   |    |   | PH | 3 |  |  |
| SER.F.       | 1.15         | CODE | L   | DES  | B | CL | F |    |   |  |  |
| NEMA-NOM-EFF | 89.5         | PF   | 68  |      |   |    |   |    |   |  |  |
| RATING       | 40C AMB-CONT |      |     |      |   |    |   |    |   |  |  |
| CC           | 010A         |      |     |      |   |    |   |    |   |  |  |
| DE           | 6307         |      | ODE | 6306 |   |    |   |    |   |  |  |
| ENCL         | TEFC         | SN   |     |      |   |    |   |    |   |  |  |

**AC Induction Motor Performance Data**

Record # 35282

Typical performance - not guaranteed values

| Winding: 37WGS519-R002 |    |         | Type: 3738M                              |                     | Enclosure: TEFC           |            |              |
|------------------------|----|---------|------------------------------------------|---------------------|---------------------------|------------|--------------|
| Nameplate Data         |    |         | 460 V, 60 Hz:<br>High Voltage Connection |                     |                           |            |              |
| Rated Output (HP)      |    | 3       | Full Load Torque                         |                     | 13.4 LB-FT                |            |              |
| Volts                  |    | 230/460 | Start Configuration                      |                     | direct on line            |            |              |
| Full Load Amps         |    | 9.2/4.6 | Breakdown Torque                         |                     | 50.4 LB-FT                |            |              |
| R.P.M.                 |    | 1160    | Pull-up Torque                           |                     | 31.8 LB-FT                |            |              |
| Hz                     | 60 | Phase   | 3                                        | Locked-rotor Torque |                           | 33.9 LB-FT |              |
| NEMA Design Code       |    | B       | KVA Code                                 | L                   | Starting Current          |            | 34 A         |
| Service Factor (S.F.)  |    | 1.15    | No-load Current                          |                     | 2.56 A                    |            |              |
| NEMA Nom. Eff.         |    | 89.5    | Power Factor                             | 68                  | Line-line Res. @ 25°C     |            | 2.67 Ω       |
| Rating - Duty          |    | 40C     | AMB-CONT                                 |                     | Temp. Rise @ Rated Load   |            | 38°C         |
| S.F. Amps              |    |         |                                          |                     | Temp. Rise @ S.F. Load    |            | 45°C         |
|                        |    |         |                                          |                     | Locked-rotor Power Factor |            | 22.9         |
|                        |    |         |                                          |                     | Rotor inertia             |            | 0.945 LB-FT2 |

**Load Characteristics 460 V, 60 Hz, 3 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 30   | 50   | 62   | 69   | 73   | 75   | 70   |
| Efficiency      | 82.1 | 88.6 | 89.5 | 89.8 | 89.1 | 87.6 | 89.1 |
| Speed           | 1193 | 1186 | 1178 | 1170 | 1160 | 1149 | 1166 |
| Line amperes    | 2.74 | 3.19 | 3.82 | 4.53 | 5.44 | 6.41 | 5.14 |

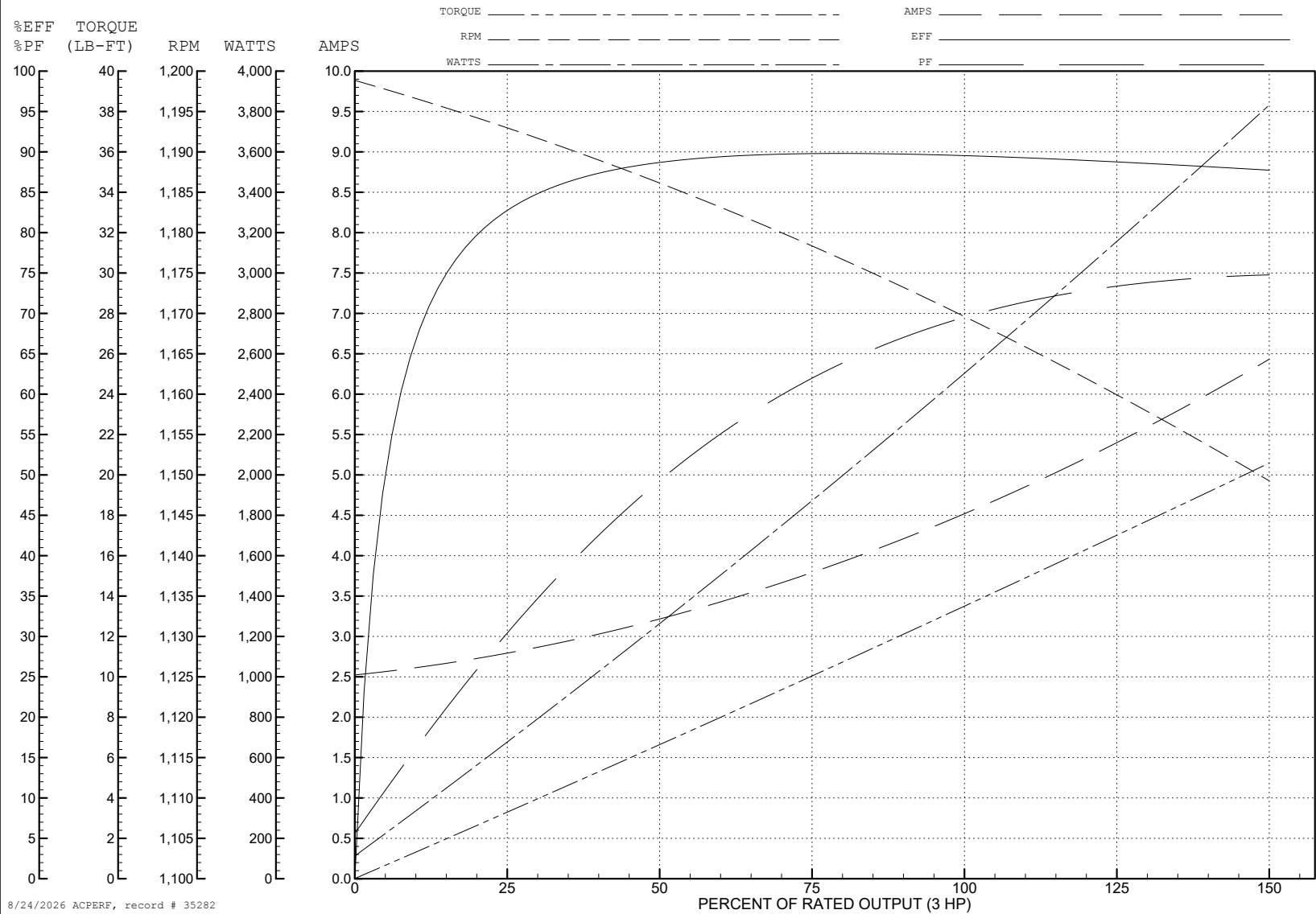
ABB Motors and Mechanical Inc.

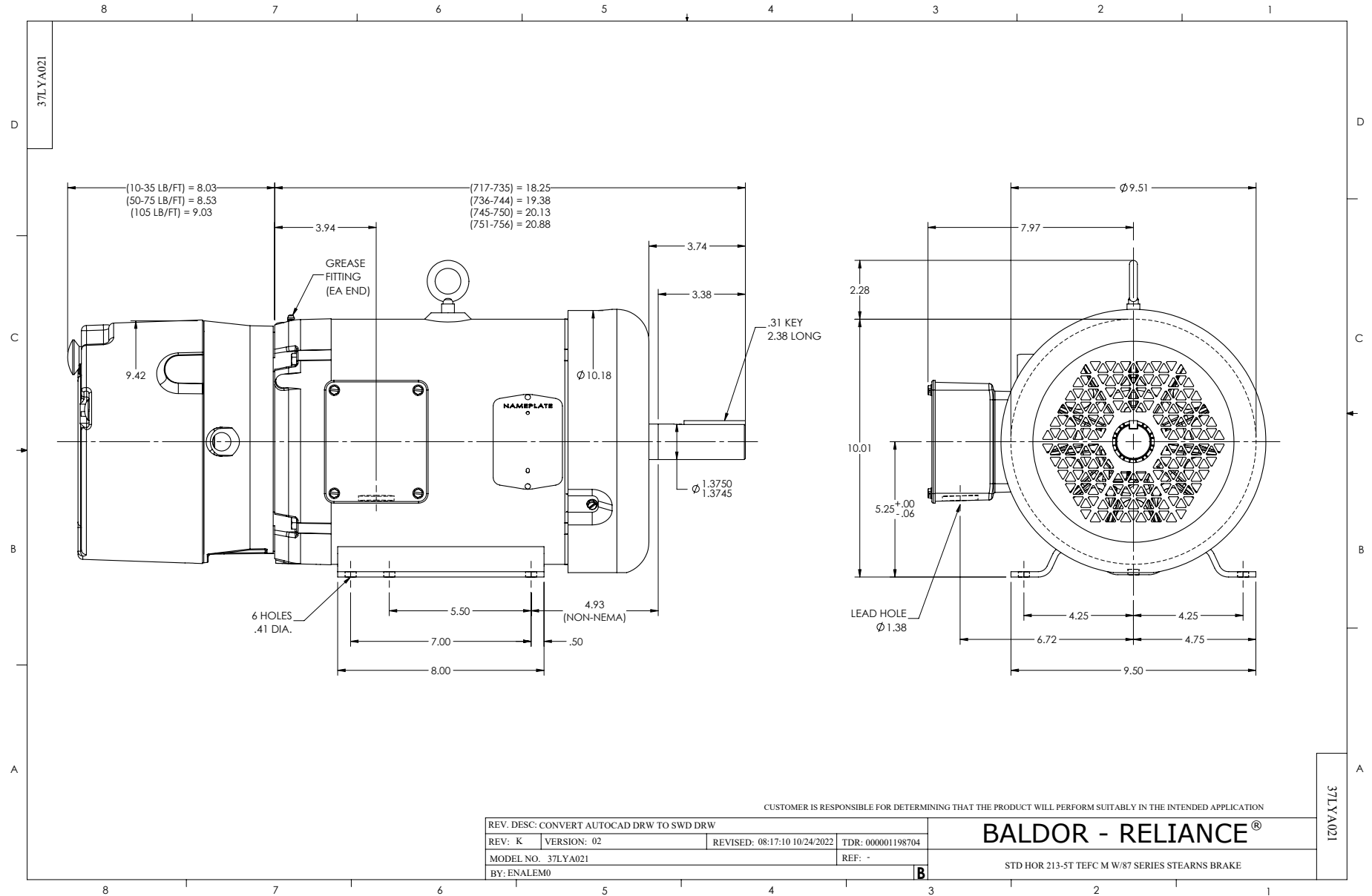
WINDING # 37WGS519

Typical performance - not guaranteed values.

3 HP 3 PH 60 HZ 1160 RPM 460 V 3738M

TORQUES (LB-FT): PO=50.4 PU=31.8 LR=33.9 LRA=34





CD0005



- 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