

# ABB BALDOR RELIANCE III

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## Customer information packet

### VXM21742T

7.5//5HP, 1770//1470RPM, 3PH, 60//50HZ, 213T

Class - CLI GP D; CLII GP F,G

Division - Division I

**Specifications**

|                                |                                                                                    |
|--------------------------------|------------------------------------------------------------------------------------|
| Enclosure                      | XPFC                                                                               |
| Frame                          | 213TC                                                                              |
| Frame Material                 | Steel                                                                              |
| Frequency                      | 50.00 Hz<br>60.00 Hz                                                               |
| Haz Area Class and Group       | CLI GP D; CLII GP F,G                                                              |
| Haz Area Division              | Division I                                                                         |
| Motor Letter Type              | Three Phase                                                                        |
| Output @ Frequency             | 7.500 HP @ 60 HZ<br>5.000 HP @ 50 HZ                                               |
| Phase                          | 3                                                                                  |
| Synchronous Speed @ Frequency  | 1800 RPM @ 60 HZ                                                                   |
| Voltage @ Frequency            | 460.0 V @ 60 HZ<br>190.0 V @ 50 HZ<br>230.0 V @ 60 HZ<br>380.0 V @ 50 HZ           |
| Agency Approvals               | UL<br>CSA EEV                                                                      |
| Ambient Temperature            | 40 °C                                                                              |
| Auxiliary Box                  | NO AUXILLARY BOX                                                                   |
| Auxiliary Box Lead Termination | None                                                                               |
| Base Indicator                 | No Mounting                                                                        |
| Bearing Grease Type            | Polyrex EM (-20F +300F)                                                            |
| Blower                         | None                                                                               |
| Constant Torque Speed Range    | 6                                                                                  |
| Current @ Voltage              | 16.200 A @ 190.0 V<br>19.000 A @ 230.0 V<br>8.100 A @ 380.0 V<br>9.500 A @ 460.0 V |
| Design Code                    | A                                                                                  |
| Drip Cover                     | No Drip Cover                                                                      |
| Duty Rating                    | CONT                                                                               |

**Part Detail**

|              |              |
|--------------|--------------|
| Revision     | A            |
| Type         | AC           |
| Mech. spec.  |              |
| Base         |              |
| Status       | PRD/A        |
| Elec. spec.  | 37WGR872     |
| Layout       | 37LY-000-164 |
| Eff. date    | 12-09-2021   |
| CD Diagram   | CD0005       |
| Poles        | 04           |
| Leads        | 9#14         |
| Proprietary  | False        |
| Created date | 03-05-2021   |

|                               |                            |
|-------------------------------|----------------------------|
| Efficiency @ 100% Load        | 91.7 %                     |
| Electrically Isolated Bearing | Not Electrically Isolated  |
| Feedback Device               | NO FEEDBACK                |
| Haz Area Temp Code            | T3C                        |
| Heater Indicator              | No Heater                  |
| High Voltage Full Load Amps   | 8.1 a                      |
| Insulation Class              | F                          |
| Inverter Code                 | Inverter Duty              |
| IP Rating                     | NONE                       |
| KVA Code                      | J                          |
| Lifting Lugs                  | Standard Lifting Lugs      |
| Locked Bearing Indicator      | Locked Bearing             |
| Max Speed                     | 2700 rpm                   |
| Motor Lead Termination        | Flying Leads               |
| Motor Standards               | NEMA                       |
| Motor Type                    | 3738M                      |
| Mounting Arrangement          | F1                         |
| Number of Poles               | 4                          |
| Overall Length                | 20.32 IN                   |
| Power Factor                  | 80                         |
| Product Family                | General Purpose            |
| Pulley Face Code              | C-Face                     |
| Rodent Screen                 | None                       |
| Service Factor                | 1.00                       |
| Shaft Diameter                | 1.375 IN                   |
| Shaft Ground Indicator        | No Shaft Grounding         |
| Shaft Rotation                | Reversible                 |
| Speed                         | 1770 rpm                   |
| Speed Code                    | Single Speed               |
| Starting Method               | Direct on line             |
| Thermal Device - Bearing      | None                       |
| Thermal Device - Winding      | Normally Closed Thermostat |
| Vibration Sensor Indicator    | No Vibration Sensor        |
| Winding Thermal 1             | None                       |

Winding Thermal 2

None

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**Nameplate**

| NP0887XPSLEV |                        |        |   |              |         |          |            |       |     |          |  |    |
|--------------|------------------------|--------|---|--------------|---------|----------|------------|-------|-----|----------|--|----|
| NO.          |                        |        |   |              |         |          | CC         | 010A  |     |          |  |    |
| S/N          |                        |        |   |              |         |          | TEMP CODE  |       | T3C |          |  |    |
| SPEC.        | 37-0000-0327           |        |   |              |         |          | INV.TYPE   |       | PWM |          |  |    |
| CAT.NO.      | VXM21742T              |        |   |              |         |          | C HP FR    |       | 60  | C HP TO  |  | 90 |
| HP           | 7.5//5                 |        |   |              |         |          | CT HZ FROM |       | 6   | CT HZ TO |  | 60 |
| VOLTS        | 230/460//190/380       |        |   |              |         |          | VT HZ FROM |       | 6   | VT HZ TO |  | 60 |
| AMPS         | 19/9.5//16.2/8.1       |        |   |              | MAG CUR |          | 8.6/4.3    |       |     |          |  |    |
| RPM          | 1770//1470             |        |   |              | MX RPM  |          | 2700       |       |     |          |  |    |
| HZ           | 60//50                 | PH     | 3 | CL           | F       | NOM.EFF. |            | 91.7  |     |          |  |    |
| SER.F.       | 1.00                   | DES    | A | SL HZ        |         | 1        | WK2        | 0.934 |     |          |  |    |
| FRAME        | 213TC                  | RATING |   | 40C AMB-CONT |         |          |            |       |     |          |  |    |
|              | NEMA MG-1 PART 5, IP54 |        |   |              |         |          |            |       |     |          |  |    |
|              | 1.15 SF ON SINE WAVE   |        |   |              |         |          |            |       |     |          |  |    |

**AC Induction Motor Performance Data**

Record # 73680

Typical performance - not guaranteed values

| Winding: 37WGR872-R029 |        |                  | Type: 3738M  |                                          | Enclosure: XPFC       |                |        |
|------------------------|--------|------------------|--------------|------------------------------------------|-----------------------|----------------|--------|
| Nameplate Data         |        |                  |              | 460 V, 60 Hz:<br>High Voltage Connection |                       |                |        |
| Rated Output (HP)      |        | 7.5//5           |              | Full Load Torque                         |                       | 22.2 LB-FT     |        |
| Volts                  |        | 230/460//190/380 |              | Start Configuration                      |                       | direct on line |        |
| Full Load Amps         |        | 19/9.5//16.2/8.1 |              | Breakdown Torque                         |                       | 70.9 LB-FT     |        |
| R.P.M.                 |        | 1770//1470       |              | Pull-up Torque                           |                       | 32.6 LB-FT     |        |
| Hz                     | 60//50 | Phase            | 3            | Locked-rotor Torque                      |                       | 43 LB-FT       |        |
| NEMA Design Code       |        | A                | KVA Code     | J                                        | Starting Current      |                | 70.9 A |
| Service Factor (S.F.)  |        | 1                |              | No-load Current                          |                       | 4.31 A         |        |
| NEMA Nom. Eff.         |        | 91.7             | Power Factor | 80                                       | Line-line Res. @ 25°C |                | 1.41 Ω |
| Rating - Duty          |        | 40C AMB-CONT     |              | Temp. Rise @ Rated Load                  |                       | 63°C           |        |
|                        |        |                  |              | Locked-rotor Power Factor                |                       | 37.2           |        |
|                        |        |                  |              | Rotor inertia                            |                       | 0.934 LB-FT2   |        |

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

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  |
|-----------------|------|------|------|------|------|------|
| Power Factor    | 42   | 64   | 75   | 80   | 83   | 84   |
| Efficiency      | 87.1 | 91.5 | 91.9 | 91.9 | 91   | 89.8 |
| Speed           | 1793 | 1786 | 1778 | 1770 | 1760 | 1750 |
| Line amperes    | 4.83 | 6.02 | 7.6  | 9.5  | 11.6 | 13.9 |

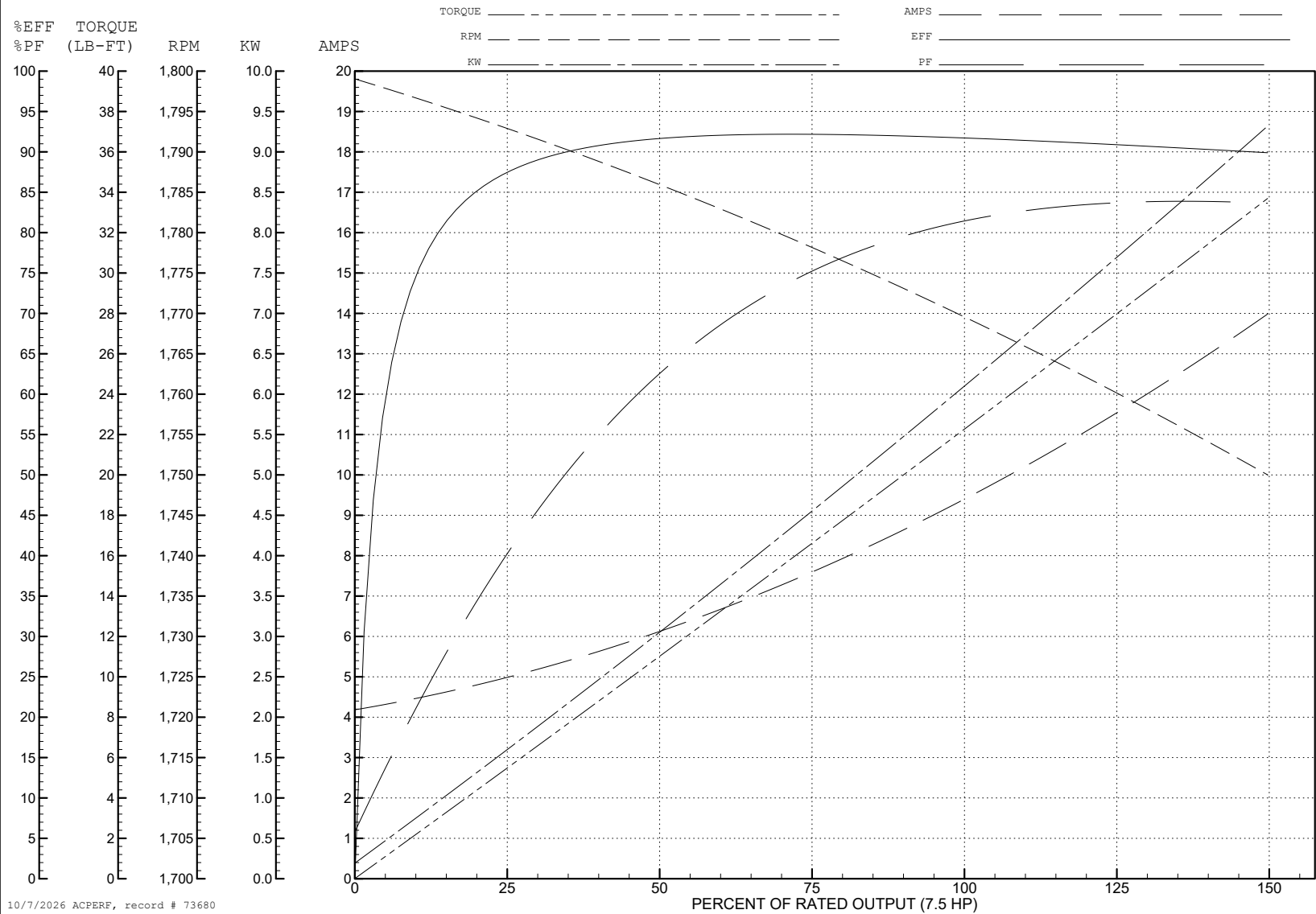
ABB Motors and Mechanical Inc.

WINDING # 37WGR872

Typical performance - not guaranteed values.

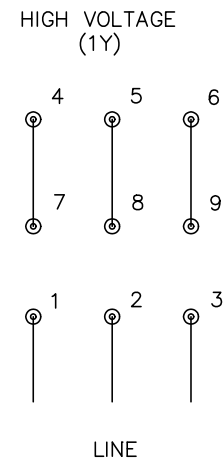
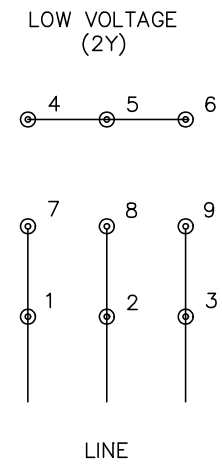
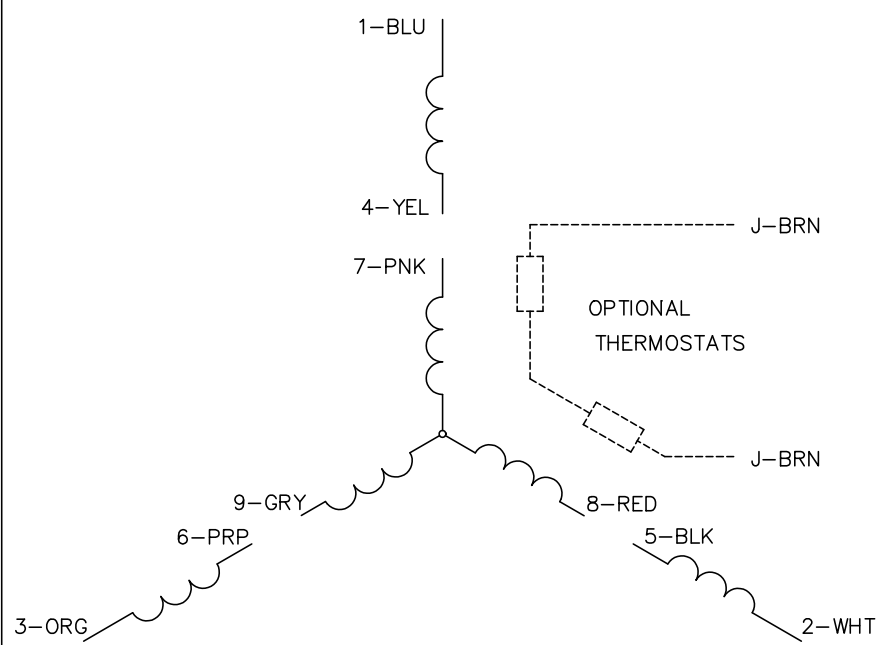
7.5 HP 3 PH 60 HZ 1770 RPM 460 V 3738M

TORQUES (LB-FT): PO=70.9 PU=32.6 LR=43 LRA=70.9





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