

# ABB BALDOR RELIANCE III

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## Customer information packet

### CDRX25764T

7.5HP, 1180//980RPM, 3PH, 60/50HZ, 254TC, XPF

Class - CLI GP C,D

Division - Division I

**Specifications**

|                                       |                                                                                                           |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------|
| <b>Enclosure</b>                      | XPFC                                                                                                      |
| <b>Frame</b>                          | 254TC                                                                                                     |
| <b>Frame Material</b>                 | Iron                                                                                                      |
| <b>Frequency</b>                      | 50.00 Hz<br>60.00 Hz                                                                                      |
| <b>Haz Area Class and Group</b>       | CLI GP C,D                                                                                                |
| <b>Haz Area Division</b>              | Division I                                                                                                |
| <b>Motor Letter Type</b>              | Three Phase                                                                                               |
| <b>Output @ Frequency</b>             | 5.000 HP @ 50 HZ<br>7.500 HP @ 60 HZ                                                                      |
| <b>Phase</b>                          | 3                                                                                                         |
| <b>Synchronous Speed @ Frequency</b>  | 1200 RPM @ 60 HZ                                                                                          |
| <b>Voltage @ Frequency</b>            | 380.0 V @ 50 HZ<br>230.0 V @ 60 HZ<br>190.0 V @ 50 HZ<br>460.0 V @ 60 HZ                                  |
| <b>Agency Approvals</b>               | CSA EEV<br>UL                                                                                             |
| <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>Constant Torque Speed Range</b>    | 6                                                                                                         |
| <b>Current @ Voltage</b>              | 9.600 A @ 380.0 V<br>23.000 A @ 208.0 V<br>22.000 A @ 230.0 V<br>19.200 A @ 190.0 V<br>11.000 A @ 460.0 V |
| <b>Design Code</b>                    | A                                                                                                         |
| <b>Drip Cover</b>                     | No Drip Cover                                                                                             |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | H          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  |            |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 09WGT118   |
| <b>Layout</b>       | 09LYF368   |
| <b>Eff. date</b>    | 02-14-2024 |
| <b>CD Diagram</b>   | CD0005     |
| <b>Poles</b>        | 06         |
| <b>Leads</b>        | 9#12       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 06-04-2019 |

|                                      |                            |
|--------------------------------------|----------------------------|
| <b>Duty Rating</b>                   | CONT                       |
| <b>Efficiency @ 100% Load</b>        | 91.0 %                     |
| <b>Electrically Isolated Bearing</b> | Not Electrically Isolated  |
| <b>Feedback Device</b>               | NO FEEDBACK                |
| <b>Haz Area Temp Code</b>            | T3C                        |
| <b>Heater Indicator</b>              | No Heater                  |
| <b>High Voltage Full Load Amps</b>   | 9.6 a                      |
| <b>Insulation Class</b>              | F                          |
| <b>Inverter Code</b>                 | Inverter Duty              |
| <b>IP Rating</b>                     | NONE                       |
| <b>KVA Code</b>                      | J                          |
| <b>Lifting Lugs</b>                  | Standard Lifting Lugs      |
| <b>Locked Bearing Indicator</b>      | Locked Bearing             |
| <b>Max Speed</b>                     | 1800 rpm                   |
| <b>Motor Lead Termination</b>        | Flying Leads               |
| <b>Motor Standards</b>               | NEMA                       |
| <b>Motor Type</b>                    | 0954M                      |
| <b>Mounting Arrangement</b>          | F1                         |
| <b>Number of Poles</b>               | 6                          |
| <b>Overall Length</b>                | 26.00 IN                   |
| <b>Power Factor</b>                  | 70                         |
| <b>Product Family</b>                | Hazardous Location Motor   |
| <b>Pulley Face Code</b>              | C-Face                     |
| <b>Rodent Screen</b>                 | None                       |
| <b>RoHS Status</b>                   | ROHS NON-COMPLIANT         |
| <b>Service Factor</b>                | 1.00                       |
| <b>Shaft Diameter</b>                | 1.625 IN                   |
| <b>Shaft Ground Indicator</b>        | No Shaft Grounding         |
| <b>Shaft Rotation</b>                | Reversible                 |
| <b>Speed</b>                         | 1180 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>      | Normally Closed Thermostat |

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

**Nameplate**

| NP1401XPSLEV |                            |        |              |       |   |                     |      |          |    |  |  |
|--------------|----------------------------|--------|--------------|-------|---|---------------------|------|----------|----|--|--|
| NO.          |                            |        |              |       |   | CC                  | 010A |          |    |  |  |
| S/N          |                            |        |              |       |   | TEMP CODE           | T3C  |          |    |  |  |
| SPEC.        | 09-0000-1446               |        |              |       |   | INV.TYPE            | PWM  |          |    |  |  |
| CAT.NO.      | CDRX25764T                 |        |              |       |   | 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         | 22/11//19.2/9.6            |        |              |       |   | MAG CUR             |      |          |    |  |  |
| RPM          | 1180//980                  |        |              |       |   | MX RPM              | 1800 |          |    |  |  |
| HZ           | 60//50                     | PH     | 3            | CL    | F | NOM.EFF.            | 91   |          |    |  |  |
| SER.F.       | 1.00                       | DES    | A            | SL HZ | 1 | WK2                 | 4.34 |          |    |  |  |
| FRAME        | 254TC                      | RATING | 40C AMB-CONT |       |   |                     |      |          |    |  |  |
|              | 55C AMB @ 1.0 SF, 60C RISE |        |              |       |   |                     |      |          |    |  |  |
|              | 1.15SF ON SINEWAVE         |        |              |       |   | NEMA MG-1 PT.5,IP55 |      |          |    |  |  |

**AC Induction Motor Performance Data**

Record # 57230

Typical performance - not guaranteed values

| Winding: 09WGT118-R011 |    |              | Type: 0954M                              |                           | Enclosure: XPFC       |             |         |
|------------------------|----|--------------|------------------------------------------|---------------------------|-----------------------|-------------|---------|
| Nameplate Data         |    |              | 460 V, 60 Hz:<br>High Voltage Connection |                           |                       |             |         |
| Rated Output (HP)      |    | 7.5          | Full Load Torque                         |                           | 33.3 LB-FT            |             |         |
| Volts                  |    | 230/460      | Start Configuration                      |                           | direct on line        |             |         |
| Full Load Amps         |    | 22/11        | Breakdown Torque                         |                           | 106 LB-FT             |             |         |
| R.P.M.                 |    | 1180         | Pull-up Torque                           |                           | 41.4 LB-FT            |             |         |
| Hz                     | 60 | Phase        | 3                                        | Locked-rotor Torque       |                       | 62.8 LB-FT  |         |
| NEMA Design Code       |    | A            | KVA Code                                 | J                         | Starting Current      |             | 75.7 A  |
| Service Factor (S.F.)  |    |              | 1                                        | No-load Current           |                       | 5.97 A      |         |
| NEMA Nom. Eff.         |    | 91           | Power Factor                             | 70                        | Line-line Res. @ 25°C |             | 0.895 Ω |
| Rating - Duty          |    | 40C AMB-CONT |                                          | Temp. Rise @ Rated Load   |                       | 41°C        |         |
|                        |    |              |                                          | Locked-rotor Power Factor |                       | 25.8        |         |
|                        |    |              |                                          | Rotor inertia             |                       | 4.34 LB-FT2 |         |

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

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  |
|-----------------|------|------|------|------|------|------|
| Power Factor    | 34   | 53   | 64   | 70   | 74   | 75   |
| Efficiency      | 81.3 | 88   | 89.6 | 89.7 | 89.4 | 88.3 |
| Speed           | 1196 | 1192 | 1187 | 1183 | 1177 | 1171 |
| Line amperes    | 6.46 | 7.57 | 9.19 | 11.2 | 13.3 | 15.9 |

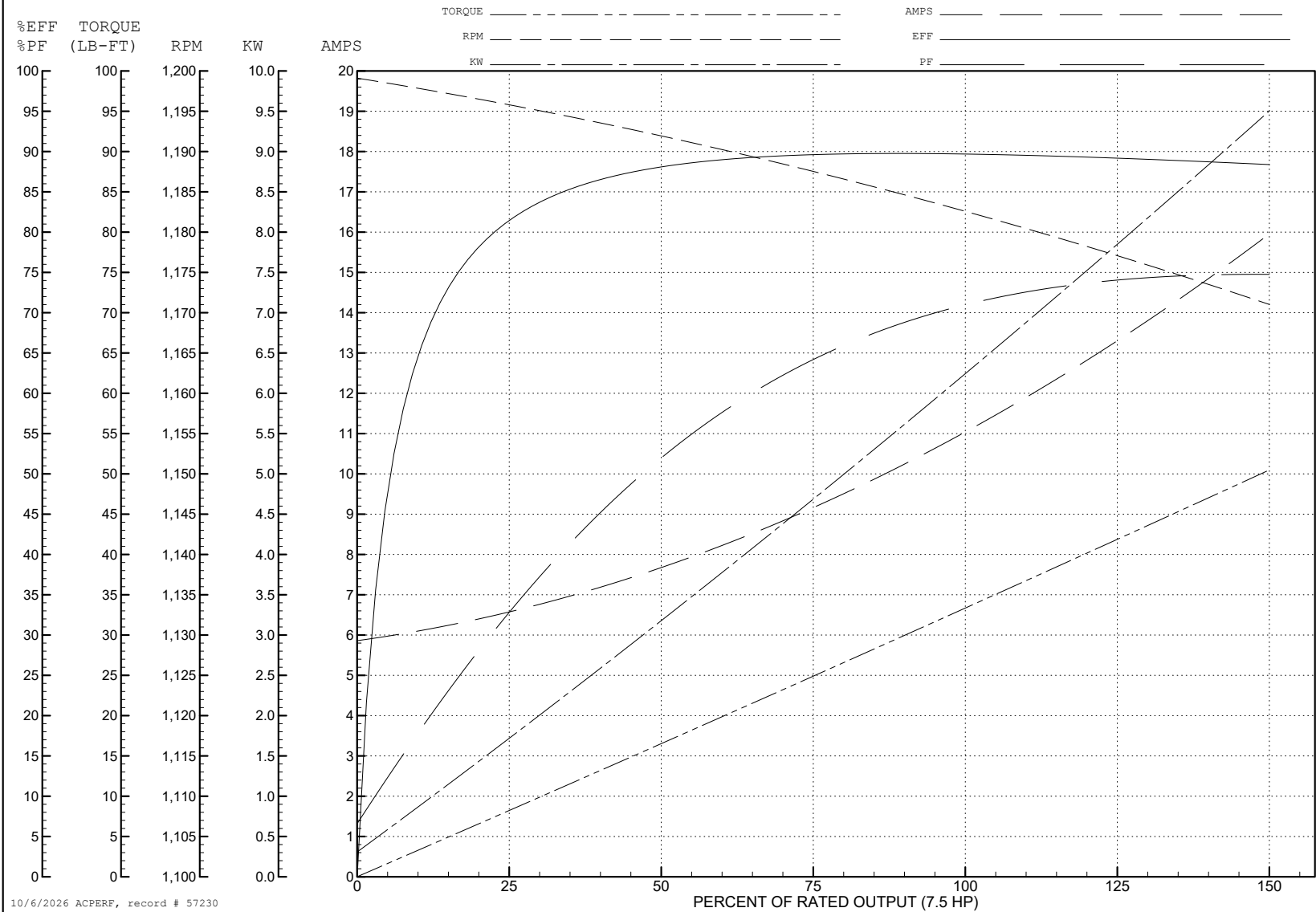
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WINDING # 09WGT118

Typical performance - not guaranteed values.

7.5 HP 3 PH 60 HZ 1180 RPM 460 V 0954M

TORQUES (LB-FT): PO=106 PU=41.4 LR=62.8 LRA=75.7



**AC Induction Motor Performance Data**

Record # 75705

Typical performance - not guaranteed values

| Winding: 09WGT118-R007 |        |                  |              | Type: 0954M                              |                       | Enclosure: XPFC |         |
|------------------------|--------|------------------|--------------|------------------------------------------|-----------------------|-----------------|---------|
| Nameplate Data         |        |                  |              | 380 V, 50 Hz:<br>High Voltage Connection |                       |                 |         |
| Rated Output (HP)      |        | 7.5//5           |              | Full Load Torque                         |                       | 26.49 LB-FT     |         |
| Volts                  |        | 230/460//190/380 |              | Start Configuration                      |                       | direct on line  |         |
| Full Load Amps         |        | 22/11//19.2/9.6  |              | Breakdown Torque                         |                       | 109 LB-FT       |         |
| R.P.M.                 |        | 1180//980        |              | Pull-up Torque                           |                       | 43.5 LB-FT      |         |
| Hz                     | 60//50 | Phase            | 3            | Locked-rotor Torque                      |                       | 60.46 LB-FT     |         |
| NEMA Design Code       |        | A                | KVA Code     | J                                        | Starting Current      |                 | 73.36 A |
| Service Factor (S.F.)  |        | 1                |              | No-load Current                          |                       | 6 A             |         |
| NEMA Nom. Eff.         |        | 91               | Power Factor | 70                                       | Line-line Res. @ 25°C |                 | 0.895 Ω |
| Rating - Duty          |        | 40C AMB-CONT     |              | Temp. Rise @ Rated Load                  |                       | 28°C            |         |
| S.F. Amps              |        |                  |              | Temp. Rise @ S.F. Load                   |                       | 34°C            |         |
|                        |        |                  |              | Locked-rotor Power Factor                |                       | 28.9            |         |
|                        |        |                  |              | Rotor inertia                            |                       | 4.34 LB-FT2     |         |

**Load Characteristics 380 V, 50 Hz, 5 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125   | 150   |
|-----------------|------|------|------|------|-------|-------|
| Power Factor    | 28   | 46   | 58   | 65   | 71    | 74    |
| Efficiency      | 81.2 | 87.9 | 90.1 | 90.6 | 90.3  | 89.6  |
| Speed           | 997  | 994  | 990  | 987  | 983   | 979   |
| Line amperes    | 6.29 | 7.06 | 8.13 | 9.52 | 11.08 | 12.87 |

ABB Motors and Mechanical Inc.

WINDING # 09WGT118

Typical performance - not guaranteed values.

5 HP 3 PH 50 HZ 987 RPM 380 V 0954M

TORQUES (LB-FT): PO=109 PU=43.5 LR=60.46 LRA=73.36

