

# ABB BALDOR RELIANCE III

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## Customer information packet

### VDRX18344T

3HP, 1755//1465RPM, 3PH, 60/50HZ, 182TC, XPFC

Class - CLI GP C,D

Division - Division I

**Specifications**

|                                       |                                                                                  |
|---------------------------------------|----------------------------------------------------------------------------------|
| <b>Enclosure</b>                      | XPFC                                                                             |
| <b>Frame</b>                          | 182TC                                                                            |
| <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>             | 3.000 HP @ 60 HZ<br>2.000 HP @ 50 HZ                                             |
| <b>Phase</b>                          | 3                                                                                |
| <b>Synchronous Speed @ Frequency</b>  | 1800 RPM @ 60 HZ                                                                 |
| <b>Voltage @ Frequency</b>            | 460.0 V @ 60 HZ<br>190.0 V @ 50 HZ<br>230.0 V @ 60 HZ<br>380.0 V @ 50 HZ         |
| <b>Agency Approvals</b>               | UL<br>CSA EEV                                                                    |
| <b>Ambient Temperature</b>            | 40 °C                                                                            |
| <b>Auxiliary Box</b>                  | NO AUXILLARY BOX                                                                 |
| <b>Auxiliary Box Lead Termination</b> | None                                                                             |
| <b>Base Indicator</b>                 | No Mounting                                                                      |
| <b>Bearing Grease Type</b>            | Polyrex EM (-20F +300F)                                                          |
| <b>Blower</b>                         | None                                                                             |
| <b>Constant Torque Speed Range</b>    | 6                                                                                |
| <b>Current @ Voltage</b>              | 3.500 A @ 380.0 V<br>4.100 A @ 460.0 V<br>7.000 A @ 190.0 V<br>8.200 A @ 230.0 V |
| <b>Design Code</b>                    | B                                                                                |
| <b>Drip Cover</b>                     | No Drip Cover                                                                    |
| <b>Duty Rating</b>                    | CONT                                                                             |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | B          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  |            |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 06WGX181   |
| <b>Layout</b>       | 06LYG594   |
| <b>Eff. date</b>    | 05-23-2023 |
| <b>CD Diagram</b>   | CD0005     |
| <b>Poles</b>        | 04         |
| <b>Leads</b>        | 9#16       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 06-20-2019 |

|                                      |                            |
|--------------------------------------|----------------------------|
| <b>Efficiency @ 100% Load</b>        | 89.5 %                     |
| <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>   | 3.5 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>                     | 2700 rpm                   |
| <b>Motor Lead Termination</b>        | Flying Leads               |
| <b>Motor Standards</b>               | NEMA                       |
| <b>Motor Type</b>                    | 0632M                      |
| <b>Mounting Arrangement</b>          | F1                         |
| <b>Number of Poles</b>               | 4                          |
| <b>Overall Length</b>                | 18.31 IN                   |
| <b>Power Factor</b>                  | 77                         |
| <b>Product Family</b>                | General Purpose            |
| <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>                | 1.125 IN                   |
| <b>Shaft Ground Indicator</b>        | No Shaft Grounding         |
| <b>Shaft Rotation</b>                | Reversible                 |
| <b>Speed</b>                         | 1755 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 |
| <b>Vibration Sensor Indicator</b>    | No Vibration Sensor        |

|                   |      |
|-------------------|------|
| Winding Thermal 1 | None |
| Winding Thermal 2 | None |

**Nameplate**

| NP1401XPSLEV |                  |        |              |       |     |          |                     |         |          |    |  |  |
|--------------|------------------|--------|--------------|-------|-----|----------|---------------------|---------|----------|----|--|--|
| NO.          |                  |        |              |       |     |          | CC                  | 010A    |          |    |  |  |
| S/N          |                  |        |              |       |     |          | TEMP CODE           | T3C     |          |    |  |  |
| SPEC.        | 06-0000-0144     |        |              |       |     |          | INV.TYPE            | PWM     |          |    |  |  |
| CAT.NO.      | VDRX18344T       |        |              |       |     |          | C HP FR             | 60      | C HP TO  | 90 |  |  |
| HP           | 3//2             |        |              |       |     |          | CT HZ FROM          | 6       | CT HZ TO | 60 |  |  |
| VOLTS        | 230/460//190/380 |        |              |       |     |          | VT HZ FROM          | 6       | VT HZ TO | 60 |  |  |
| AMPS         | 8.2/4.1//7/3.5   |        |              |       |     |          | MAG CUR             | 4.2/2.1 |          |    |  |  |
| RPM          | 1755//1465       |        |              |       |     |          | MX RPM              | 2700    |          |    |  |  |
| HZ           | 60//50           | PH     | 3            | CL    | F   | NOM.EFF. | 89.5                |         |          |    |  |  |
| SER.F.       | 1.00             | DES    | B            | SL HZ | 1.5 | WK2      | 0.3                 |         |          |    |  |  |
| FRAME        | 182TC            | RATING | 40C AMB-CONT |       |     |          |                     |         |          |    |  |  |
|              | 55C AMB @ 1.0 SF |        |              |       |     |          |                     |         |          |    |  |  |
|              | 1.15 SF SINEWAVE |        |              |       |     |          | NEMA MG-1 PT 5,IP55 |         |          |    |  |  |

**Parts List**

| Part number  | Description                              | Quantity |
|--------------|------------------------------------------|----------|
| SA371146     | SA 06-0000-0144                          | 1.000 ea |
| RA360826     | RA 06-0000-0144                          | 1.000 ea |
| LB1624       | COMBINED WARNING LABEL, ISO/ANSI PICTOGR | 1.000 ea |
| LC0145B01    | CONNECTION LABEL                         | 1.000 ea |
| PK3082       | STYROFOAM CRADLE                         | 1.000 ea |
| NP1401XPSLEV | SS XP INV UL CSA-EEV CC CL-I GP-C&D      | 1.000 ea |
| 85XU0407S04  | 4X1/4 U DRIVE PIN STAINLESS              | 2.000 ea |
| 85XU0407S04  | 4X1/4 U DRIVE PIN STAINLESS              | 4.000 ea |
| MN416A01     | TAG-INSTAL-MAINT no wire (2500 bx)11/25  | 1.000 ea |
| LB1081F      | ALUM XP CAUTION LABEL (FS PLANT ONLY-    | 1.000 ea |
| HW3201A05    | 3/8-16 EYEBOLT                           | 1.000 ea |
| 06FH1003A06  | FH, XP W/GRSR                            | 1.000 ea |
| 51XN1032A14  | 10-32 X 0.875 HX WS SL SR                | 4.000 ea |
| 34FN3002A02  | EXTERNAL FAN, PLASTIC, .905/.907 HUB W/  | 1.000 ea |
| 51XB0818A12  | 8-18X3/4 HXWSSLD SERTYB                  | 1.000 ea |
| MJ1000A02    | GREASE, POLYREX EM EXXON                 | 0.050 lb |
| 06EP1709A07  | FREP XPFC 205 BRG GRP C W/DRAIN (HW4506A | 1.000 ea |
| 10XN3118K20  | 5/16-18 X 1 1/4 GRADE 5 STEEL ZC PLATED  | 4.000 ea |
| HA2071A01    | SLINGER ALUM (AUTO)                      | 1.000 ea |
| HW1001A31    | LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I | 4.000 ea |
| HW5100A05    | WVY WSHR F/205 & 304 BRGS                | 1.000 ea |
| HW4500A01    | 1641B(ALEMITE)400 UNIV, GREASE FITT      | 1.000 ea |
| HW4500A19    | 1/4-28X1/4 SLOTTED PLUG F/S              | 1.000 ea |
| HW4506A02    | BREATHER/DRAIN-EXP PROOF-.125-27 NPTF AI | 1.000 ea |
| HW3022E05    | .125 DIA X .500 ROLLED SPRING PIN        | 1.000 ea |
| 06EP1707A17  | PUEP 182-4TC M GRP-C DRAIN(HW4506A02)    | 1.000 ea |
| HW1001A31    | LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I | 4.000 ea |
| 10XN3118K20  | 5/16-18 X 1 1/4 GRADE 5 STEEL ZC PLATED  | 4.000 ea |
| 80XN1032J06  | 10-32 X 3/8 SET SCREW, HEX SOC, CUP PT   | 1.000 ea |
| 51XN1032A20  | 10-32 X 1 1/4 HX WS SL SR                | 2.000 ea |
| HW4001A01    | 1/4 HX SOC PIPE PLG (F/S) ALLOY STEEL W/ | 2.000 ea |

|             |                                          |          |
|-------------|------------------------------------------|----------|
| 63XN1032A07 | 10-32 X 7/16 TRUSS HEAD,TORX SERRATED ZN | 2.000 ea |
| HW4506A02   | BREATHER/DRAIN-EXP PROOF-.125-27 NPTF AI | 1.000 ea |
| HW3022E05   | .125 DIA X .500 ROLLED SPRING PIN        | 1.000 ea |
| 07CB1000A02 | CONDUIT BOX, MODEL 306,EXP. PROOF        | 1.000 ea |
| 84XN2520J16 | 1/4-20 X 1 SOC HD CAP SCREW              | 4.000 ea |
| HW1001A25   | LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I | 4.000 ea |
| WD1000B17   | T&B CX35TN OR L35P TERMINAL LUG          | 1.000 ea |
| 11XW1032G06 | 10-32 X .38, TAPTITE II, HEX WSHR SLTD U | 1.000 ea |
| 07CB1502A01 | CONDUIT BOX LID MACH (DUCTILE IRON)      | 1.000 ea |
| 84XN2520J16 | 1/4-20 X 1 SOC HD CAP SCREW              | 4.000 ea |
| HW1001A25   | LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I | 4.000 ea |
| MG1500Y02   | WILKOPON PRIMER YELLOW                   | 0.022 ga |
| MG1025G29   | WILKOFAS, 789.229, DARK CHARCOAL GRAY    | 0.022 ga |
| 37PA1074    | PALLET PACK GRP, PRINT BOX PK1026A06     | 1.000 ea |
| HW2501E17   | .250 SQUARE X 1.875 LONG LOW CARBON STEE | 1.000 ea |
| HA7000A02   | KEY RETAINER RING, 1 1/8 DIA, 1 3/8 DIA  | 1.000 ea |

**AC Induction Motor Performance Data**

Record # 72220

Typical performance - not guaranteed values

| Winding: 06WGX181-R087 |  |                  |  | Type: 0632M                              |  | Enclosure: XPFC |  |
|------------------------|--|------------------|--|------------------------------------------|--|-----------------|--|
| Nameplate Data         |  |                  |  | 460 V, 60 Hz:<br>High Voltage Connection |  |                 |  |
| Rated Output (HP)      |  | 3//2             |  | Full Load Torque                         |  | 9.08 LB-FT      |  |
| Volts                  |  | 230/460//190/380 |  | Start Configuration                      |  | direct on line  |  |
| Full Load Amps         |  | 8.2/4.1//7/3.5   |  | Breakdown Torque                         |  | 33.1 LB-FT      |  |
| R.P.M.                 |  | 1755//1465       |  | Pull-up Torque                           |  | 18.2 LB-FT      |  |
| Hz                     |  | 60//50           |  | Phase                                    |  | 3               |  |
| NEMA Design Code       |  | B                |  | KVA Code                                 |  | J               |  |
| Service Factor (S.F.)  |  | 1                |  | No-load Current                          |  | 2.14 A          |  |
| NEMA Nom. Eff.         |  | 89.5             |  | Power Factor                             |  | 77              |  |
| Rating - Duty          |  | 40C              |  | AMB-CONT                                 |  |                 |  |
| S.F. Amps              |  |                  |  | Temp. Rise @ Rated Load                  |  | 35°C            |  |
|                        |  |                  |  | Temp. Rise @ S.F. Load                   |  | 42°C            |  |
|                        |  |                  |  | Locked-rotor Power Factor                |  | 41.4            |  |
|                        |  |                  |  | Rotor inertia                            |  | 0.298 LB-FT2    |  |

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

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  |
|-----------------|------|------|------|------|------|------|
| Power Factor    | 38   | 58   | 70   | 77   | 81   | 83   |
| Efficiency      | 83.5 | 88.9 | 90   | 89.8 | 89.1 | 87.7 |
| Speed           | 1790 | 1779 | 1769 | 1757 | 1744 | 1730 |
| Line amperes    | 2.34 | 2.79 | 3.39 | 4.1  | 4.91 | 5.86 |

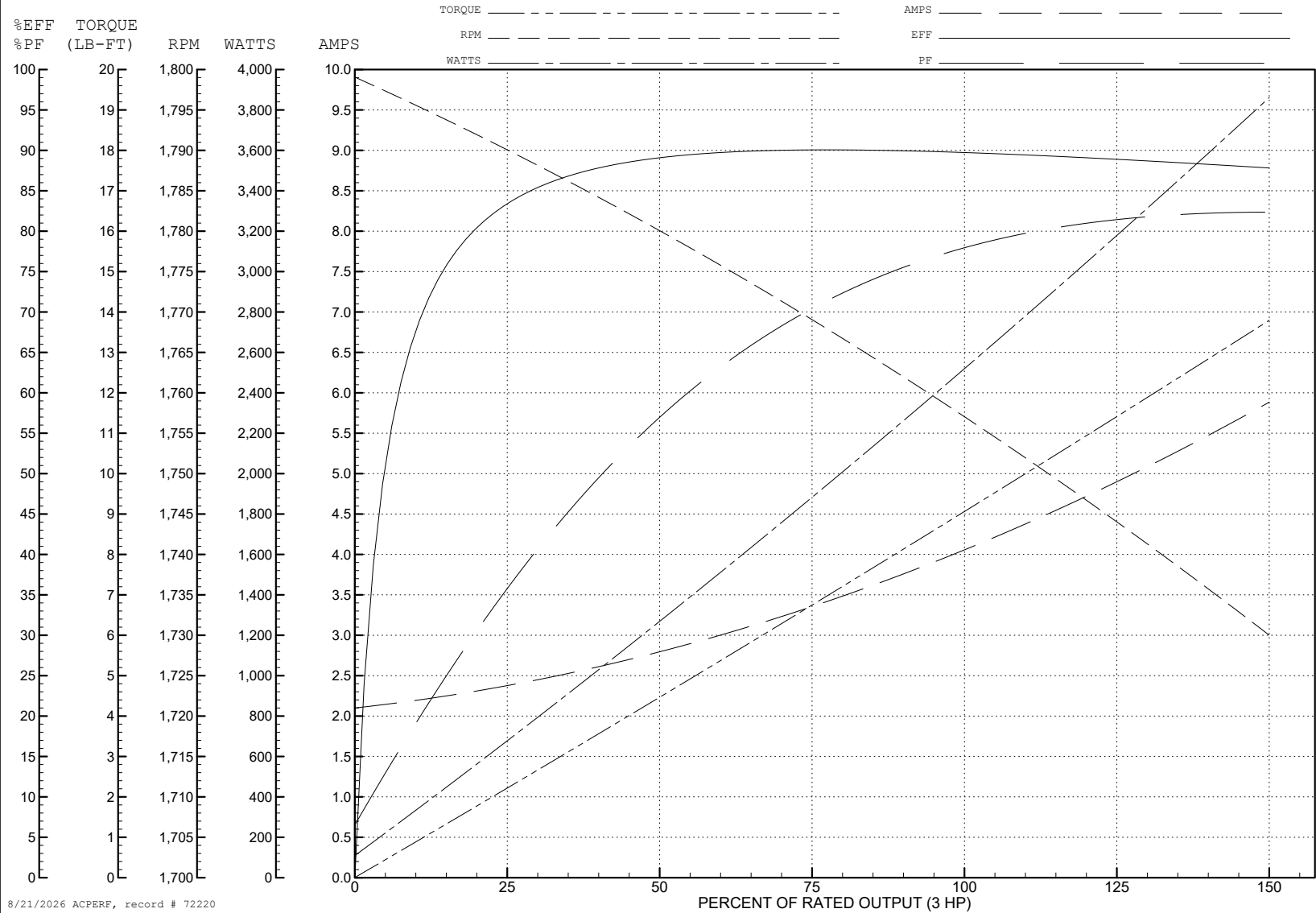
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WINDING # 06WGX181

Typical performance - not guaranteed values.

3 HP 3 PH 60 HZ 1757 RPM 460 V 0632M

TORQUES (LB-FT): PO=33.1 PU=18.2 LR=20.4 LRA=29.8



**AC Induction Motor Performance Data**

Record # 72221

Typical performance - not guaranteed values

| Winding: 06WGX181-R087 |  |                  |  | Type: 0632M                              |  | Enclosure: XPFC     |  |                           |              |
|------------------------|--|------------------|--|------------------------------------------|--|---------------------|--|---------------------------|--------------|
| Nameplate Data         |  |                  |  | 380 V, 50 Hz:<br>High Voltage Connection |  |                     |  |                           |              |
| Rated Output (HP)      |  | 3//2             |  | Full Load Torque                         |  | 7.25 LB-FT          |  |                           |              |
| Volts                  |  | 230/460//190/380 |  | Start Configuration                      |  | direct on line      |  |                           |              |
| Full Load Amps         |  | 8.2/4.1//7/3.5   |  | Breakdown Torque                         |  | 31.25 LB-FT         |  |                           |              |
| R.P.M.                 |  | 1755//1465       |  | Pull-up Torque                           |  | 18.55 LB-FT         |  |                           |              |
| Hz                     |  | 60//50 Phase     |  | 3                                        |  | Locked-rotor Torque |  | 20.79 LB-FT               |              |
| NEMA Design Code       |  | B                |  | KVA Code                                 |  | J                   |  | Starting Current          | 28.72 A      |
| Service Factor (S.F.)  |  | 1                |  |                                          |  |                     |  | No-load Current           | 2.11 A       |
| NEMA Nom. Eff.         |  | 89.5             |  | Power Factor                             |  | 77                  |  | Line-line Res. @ 25°C     | 3.93 Ω       |
| Rating - Duty          |  | 40C AMB-CONT     |  |                                          |  |                     |  | Temp. Rise @ Rated Load   | 28°C         |
| S.F. Amps              |  |                  |  |                                          |  |                     |  | Temp. Rise @ S.F. Load    | 32°C         |
|                        |  |                  |  |                                          |  |                     |  | Locked-rotor Power Factor | 46.1         |
|                        |  |                  |  |                                          |  |                     |  | Rotor inertia             | 0.298 LB-FT2 |

**Load Characteristics 380 V, 50 Hz, 2 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  |
|-----------------|------|------|------|------|------|------|
| Power Factor    | 33   | 52   | 65   | 73   | 78   | 81   |
| Efficiency      | 79.7 | 86.5 | 88.4 | 88.7 | 88.4 | 87.1 |
| Speed           | 1491 | 1483 | 1474 | 1465 | 1455 | 1443 |
| Line amperes    | 2.25 | 2.57 | 3.01 | 3.53 | 4.14 | 4.87 |

ABB Motors and Mechanical Inc.

WINDING # 06WGX181

Typical performance - not guaranteed values.

2 HP 3 PH 50 HZ 1465 RPM 380 V 0632M

TORQUES (LB-FT) : PO=31.25 PU=18.55 LR=20.79 LRA=28.72

