

# ABB BALDOR RELIANCE III

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## Customer information packet

VDRX141544T

1.5//1HP, 1770//1475RPM, 3PH, 60//50HZ, 145T

Class - CLI GP C,D

Division - Division I

**Specifications**

|                                |                                                                                                       |
|--------------------------------|-------------------------------------------------------------------------------------------------------|
| Enclosure                      | XPFC                                                                                                  |
| Frame                          | 145TC                                                                                                 |
| Frame Material                 | Steel                                                                                                 |
| Frequency                      | 50.00 Hz<br>60.00 Hz                                                                                  |
| Haz Area Class and Group       | CLI GP C,D                                                                                            |
| Haz Area Division              | Division I                                                                                            |
| Motor Letter Type              | Three Phase                                                                                           |
| Output @ Frequency             | 1.500 HP @ 60 HZ<br>1.000 HP @ 50 HZ                                                                  |
| Phase                          | 3                                                                                                     |
| Synchronous Speed @ Frequency  | 1800 RPM @ 60 HZ                                                                                      |
| Voltage @ Frequency            | 190.0 V @ 50 HZ<br>230.0 V @ 60 HZ<br>380.0 V @ 50 HZ<br>460.0 V @ 60 HZ                              |
| Agency Approvals               | CSA EEV<br>UL                                                                                         |
| 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                                                                                                  |
| Current @ Voltage              | 4.640 A @ 208.0 V<br>4.600 A @ 230.0 V<br>4.000 A @ 190.0 V<br>2.300 A @ 460.0 V<br>2.000 A @ 380.0 V |
| Design Code                    | B                                                                                                     |
| Drip Cover                     | No Drip Cover                                                                                         |
| Duty Rating                    | CONT                                                                                                  |

**Part Detail**

|              |            |
|--------------|------------|
| Revision     | D          |
| Type         | AC         |
| Mech. spec.  | 35X734     |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 35WGL955   |
| Layout       | 35LYX734   |
| Eff. date    | 05-05-2026 |
| CD Diagram   | CD0005     |
| Poles        | 04         |
| Leads        | 9#18       |
| Proprietary  | False      |
| Created date | 02-23-2023 |

|                               |                           |
|-------------------------------|---------------------------|
| Efficiency @ 100% Load        | 86.5 %                    |
| Electrically Isolated Bearing | Not Electrically Isolated |
| Feedback Device               | NO FEEDBACK               |
| Front Shaft Indicator         | None                      |
| Heater Indicator              | No Heater                 |
| High Voltage Full Load Amps   | 2.0 a                     |
| Insulation Class              | F                         |
| Inverter Code                 | Inverter Duty             |
| KVA Code                      | M                         |
| Lifting Lugs                  | No Lifting Lugs           |
| Locked Bearing Indicator      | Locked Bearing            |
| Max Speed                     | 2700 rpm                  |
| Motor Lead Quantity/Wire Size | 9 @ 18 AWG                |
| Motor Lead Termination        | Flying Leads              |
| Motor Standards               | NEMA                      |
| Motor Type                    | 3526M                     |
| Mounting Arrangement          | F1                        |
| Number of Poles               | 4                         |
| Overall Length                | 15.21 IN                  |
| Power Factor                  | 72                        |
| Product Family                | Hazardous Location Motor  |
| Pulley End Bearing Type       | Ball                      |
| Pulley Face Code              | C-Face                    |
| Pulley Shaft Indicator        | Standard                  |
| Rodent Screen                 | None                      |
| RoHS Status                   | ROHS NON-COMPLIANT        |
| Service Factor                | 1.00                      |
| Shaft Diameter                | 0.875 IN                  |
| Shaft Ground Indicator        | No Shaft Grounding        |
| Shaft Rotation                | Reversible                |
| Speed                         | 1475 rpm<br>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                       |

**Nameplate**

| NP1401XPSL |                  |        |   |              |         |                     |            |     |          |    |  |  |
|------------|------------------|--------|---|--------------|---------|---------------------|------------|-----|----------|----|--|--|
| NO.        |                  |        |   |              |         |                     | CC         |     |          |    |  |  |
| S/N        |                  |        |   |              |         |                     | TEMP CODE  | T3C |          |    |  |  |
| SPEC.      | 35X734L955       |        |   |              |         |                     | INV.TYPE   | PWM |          |    |  |  |
| CAT.NO.    | VDRX141544T      |        |   |              |         |                     | C HP FR    | 60  | C HP TO  | 90 |  |  |
| HP         | 1.5//1           |        |   |              |         |                     | CT HZ FROM | 6   | CT HZ TO | 60 |  |  |
| VOLTS      | 230/460//190/380 |        |   |              |         |                     | VT HZ FROM | 6   | VT HZ TO | 60 |  |  |
| AMPS       | 4.6/2.3//4/2     |        |   |              | MAG CUR |                     | 3/1.5      |     |          |    |  |  |
| RPM        | 1770//1475       |        |   |              | MX RPM  |                     | 2700       |     |          |    |  |  |
| HZ         | 60//50           | PH     | 3 | CL           | F       | NOM.EFF.            | 86.5       |     |          |    |  |  |
| SER.F.     | 1.00             | DES    | B | SL HZ        | 1       | WK2                 | 0.174      |     |          |    |  |  |
| FRAME      | 145TC            | 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 |
|---------------|------------------------------------------|----------|
| SA414998      | SA 35X734L955                            | 1.000 ea |
| RA406767      | RA 35X734L955                            | 1.000 ea |
| 34FN3002B01   | EXTERNAL FAN, PLASTIC, .637/.639 HUB W/  | 1.000 ea |
| 35CB1005A01   | CONDUIT BOX,MACH - GROUP "C" MTRS        | 1.000 ea |
| 11XW1032G06   | 10-32 X .38, TAPTITE II, HEX WSHR SLTD U | 1.000 ea |
| HW3001B01     | BRASS CUP WASHER, FOR #10 SCREW          | 1.000 ea |
| 35EP3700B07   | FR ENDPLATE, XPFC - GROUP C, W/ DRAIN    | 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 |
| HW5100A03     | WAVY WASHER (W1543-017)                  | 1.000 ea |
| 35EP1704A40   | PUEP 205 BRG XP,GP C,ALUM SLINGER,DRAIN  | 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 |
| 84XN1032J20   | SCREW, SOC 10-32 X 1 1/4"BMH4602         | 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 |
| XY3118A12     | 5/16-18 HEX NUT DIRECTIONAL SERRATION    | 4.000 ea |
| 35FH4005A01SP | IEC FH NO GREASER W/PRIMED               | 1.000 ea |
| 51XW1032A06   | 10-32 X .38, TAPTITE II, HEX WSHR SLTD S | 3.000 ea |
| 35CB1501A01   | CONDUIT BOX LID, MACH. - GROUP "C" MTRS  | 1.000 ea |
| RM1020A41     | O-RING, -150 BUNA-N, .103 CS X 2.862 ID  | 1.000 ea |
| HA2071A02     | ALUM SLINGER 205 BRG DRILL RIG MOTOR     | 1.000 ea |
| 80XN1032J04   | 10-32 X 1/4 SET SCREW, HEX SOC, CUP PT   | 1.000 ea |
| HW2501D13     | KEY, 3/16 SQ X 1.375                     | 1.000 ea |
| HA7000A01     | KEY RETAINER 7/8" DIA SHAFT              | 1.000 ea |
| 85XU0407S04   | 4X1/4 U DRIVE PIN STAINLESS              | 6.000 ea |
| LB1359F       | ALUM XP CAUTION LABEL                    | 1.000 ea |
| HA1025A21     | WSHR,FELT .125" THK                      | 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 |

|            |                                         |          |
|------------|-----------------------------------------|----------|
| NP1401XPSL | SS XP INV UL CSA CC CL-I GP-C&D         | 1.000 ea |
| MN416A01   | TAG-INSTAL-MAINT no wire (2500 bx)11/25 | 1.000 ea |
| MJ1000A02  | GREASE, POLYREX EM EXXON                | 0.050 lb |
| HA3104A08  | THRUBOLT 5/16-18 X 9.375 X              | 4.000 ea |
| MG1500Y02  | WILKOPON PRIMER YELLOW                  | 0.022 ga |
| MG1025G29  | WILKOFAS, 789.229, DARK CHARCOAL GRAY   | 0.022 ga |
| 36PA1001   | PKG GRP, PRINT PK1017A07                | 1.000 ea |

**AC Induction Motor Performance Data**

Record # 73666

Typical performance - not guaranteed values

| Winding: 35WGL155-R039 |        |                  | Type: 3526M  |                                          | Enclosure: XPFC       |                |        |
|------------------------|--------|------------------|--------------|------------------------------------------|-----------------------|----------------|--------|
| Nameplate Data         |        |                  |              | 460 V, 60 Hz:<br>High Voltage Connection |                       |                |        |
| Rated Output (HP)      |        | 1.5//1           |              | Full Load Torque                         |                       | 4.46 LB-FT     |        |
| Volts                  |        | 230/460//190/380 |              | Start Configuration                      |                       | direct on line |        |
| Full Load Amps         |        | 4.4/2.2//4/2     |              | Breakdown Torque                         |                       | 20.6 LB-FT     |        |
| R.P.M.                 |        | 1760//1460       |              | Pull-up Torque                           |                       | 10.1 LB-FT     |        |
| Hz                     | 60//50 | Phase            | 3            | Locked-rotor Torque                      |                       | 14.4 LB-FT     |        |
| NEMA Design Code       |        | B                | KVA Code     | M                                        | Starting Current      |                | 19.3 A |
| Service Factor (S.F.)  |        | 1                |              | No-load Current                          |                       | 1.46 A         |        |
| NEMA Nom. Eff.         |        | 86.5             | Power Factor | 71                                       | Line-line Res. @ 25°C |                | 8.81 Ω |
| Rating - Duty          |        | 40C AMB-CONT     |              | Temp. Rise @ Rated Load                  |                       | 42°C           |        |
|                        |        |                  |              | Locked-rotor Power Factor                |                       | 49.6           |        |
|                        |        |                  |              | Rotor inertia                            |                       | 0.154 LB-FT2   |        |

**Load Characteristics 460 V, 60 Hz, 1.5 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  |
|-----------------|------|------|------|------|------|------|
| Power Factor    | 30   | 49   | 63   | 71   | 77   | 82   |
| Efficiency      | 76.3 | 84.6 | 87   | 87.5 | 87   | 86   |
| Speed           | 1791 | 1782 | 1772 | 1762 | 1750 | 1738 |
| Line amperes    | 1.53 | 1.68 | 1.92 | 2.24 | 2.62 | 3    |

ABB Motors and Mechanical Inc.

WINDING # 35WGL155

Typical performance - not guaranteed values.

1.5 HP 3 PH 60 HZ 1762 RPM 460 V 3526M

TORQUES (LB-FT): PO=20.6 PU=10.1 LR=14.4 LRA=19.3





