

# ABB BALDOR RELIANCE III

---

## Customer information packet

### CECP3581T

1HP, 1770RPM, 3PH, 60HZ, 143TC, 0522M, TEFC, F1

Class - CLI GP A,B,C,D

Division - Division II

**Specifications**

|                                |                                                                                  |
|--------------------------------|----------------------------------------------------------------------------------|
| Enclosure                      | TEFC                                                                             |
| Frame                          | 143TC                                                                            |
| Frame Material                 | Iron                                                                             |
| Frequency                      | 60.00 Hz                                                                         |
| Haz Area Class and Group       | CLI GP A,B,C,D                                                                   |
| Haz Area Division              | Division II                                                                      |
| Motor Letter Type              | Three Phase                                                                      |
| Output @ Frequency             | 1.000 HP @ 60 HZ                                                                 |
| Phase                          | 3                                                                                |
| Synchronous Speed @ Frequency  | 1800 RPM @ 60 HZ                                                                 |
| Voltage @ Frequency            | 460.0 V @ 60 HZ<br>230.0 V @ 60 HZ<br>208.0 V @ 60 HZ                            |
| Agency Approvals               | CCSA US<br>CSA EEV<br>NEMA PREMIUM<br>NEMA_PREMIUM<br>UR                         |
| Ambient Temperature            | 40 °C                                                                            |
| Auxiliary Box                  | NO AUXILLARY BOX                                                                 |
| Auxiliary Box Lead Termination | None                                                                             |
| Base Indicator                 | Rigid                                                                            |
| Bearing Grease Type            | Polyrex EM (-20F +300F)                                                          |
| Blower                         | None                                                                             |
| Constant Torque Speed Range    | 1.2                                                                              |
| Current @ Voltage              | 3.400 A @ 230.0 V<br>3.300 A @ 208.0 V<br>3.200 A @ 208.0 V<br>1.700 A @ 460.0 V |
| Design Code                    | B                                                                                |
| Drip Cover                     | No Drip Cover                                                                    |
| Duty Rating                    | CONT                                                                             |

**Part Detail**

|              |            |
|--------------|------------|
| Revision     | C          |
| Type         | AC         |
| Mech. spec.  | 05F007     |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 05WGX903   |
| Layout       | 05LYF007   |
| Eff. date    | 06-11-2024 |
| CD Diagram   | CD0005     |
| Poles        | 04         |
| Leads        | 9#18 Y     |
| Proprietary  | False      |
| Created date | 07-21-2022 |

|                                      |                              |
|--------------------------------------|------------------------------|
| <b>Efficiency @ 100% Load</b>        | 85.5 %                       |
| <b>Electrically Isolated Bearing</b> | Not Electrically Isolated    |
| <b>Feedback Device</b>               | NO FEEDBACK                  |
| <b>Front Shaft Indicator</b>         | None                         |
| <b>Haz Area Temp Code</b>            | T4                           |
| <b>Heater Indicator</b>              | No Heater                    |
| <b>High Voltage Full Load Amps</b>   | 1.7 a                        |
| <b>Insulation Class</b>              | F                            |
| <b>Inverter Code</b>                 | Inverter Ready               |
| <b>KVA Code</b>                      | N                            |
| <b>Lifting Lugs</b>                  | Standard Lifting Lugs        |
| <b>Locked Bearing Indicator</b>      | Locked Bearing               |
| <b>Max Speed</b>                     | 2700 rpm                     |
| <b>Motor Lead Quantity/Wire Size</b> | 9 @ 18 AWG                   |
| <b>Motor Lead Termination</b>        | Flying Leads                 |
| <b>Motor Standards</b>               | NEMA                         |
| <b>Motor Type</b>                    | 0522M                        |
| <b>Mounting Arrangement</b>          | F1                           |
| <b>Number of Poles</b>               | 4                            |
| <b>Overall Length</b>                | 13.38 IN                     |
| <b>Power Factor</b>                  | 69                           |
| <b>Product Family</b>                | Chemical Processing (Not DC) |
| <b>Pulley End Bearing Type</b>       | Ball                         |
| <b>Pulley Face Code</b>              | C-Face                       |
| <b>Pulley Shaft Indicator</b>        | Standard                     |
| <b>Rodent Screen</b>                 | None                         |
| <b>Service Factor</b>                | 1.15                         |
| <b>Shaft Diameter</b>                | 0.875 IN                     |
| <b>Shaft Ground Indicator</b>        | No Shaft Grounding           |
| <b>Shaft Rotation</b>                | Reversible                   |
| <b>Shaft Slinger Indicator</b>       | Shaft Slinger                |
| <b>Speed</b>                         | 1770 rpm                     |
| <b>Speed Code</b>                    | Single Speed                 |
| <b>Starting Method</b>               | Direct on line               |

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

**Nameplate**

| NP3258       |              |      |     |      |    |  |    |  |   |
|--------------|--------------|------|-----|------|----|--|----|--|---|
| CAT.NO.      | CECP3581T    |      |     |      |    |  |    |  |   |
| SPEC.        | 05F007X903G1 |      |     |      |    |  |    |  |   |
| HP           | 1 TE         |      |     |      |    |  |    |  |   |
| VOLTS        | 208-230/460  |      |     |      |    |  |    |  |   |
| AMP          | 3.3-3.4/1.7  |      |     |      |    |  |    |  |   |
| RPM          | 1770         |      |     |      |    |  |    |  |   |
| FRAME        | 143TC        | HZ   | 60  |      | PH |  | 3  |  |   |
| SER.F.       | 1.15         | CODE | N   | DES  | B  |  | CL |  | F |
| RATING       | 40C AMB-CONT |      |     |      |    |  |    |  |   |
| SN           |              |      |     |      |    |  |    |  |   |
| DE           | 6205         | ODE  |     | 6205 |    |  |    |  |   |
| NEMA-NOM-EFF | 85.5         | PF   | 69  |      |    |  |    |  |   |
| G.MIN.EFF    | 82.5         | CC   |     | 010A |    |  |    |  |   |
| T. CODE      | T4           | T=   | 135 |      |    |  |    |  |   |

| NP3261      |              |                         |      |
|-------------|--------------|-------------------------|------|
| SPEC.       | 05F007X903G1 |                         |      |
| D.E. BRG.   | 25BC02XP30X  |                         |      |
| O.D.E. BRG. | 25BC02XP30X  |                         |      |
| GREASE      | POLYREX EM   |                         |      |
| RPM MAX     | 2700         | MAX. KVAR               | 0.49 |
| BLANK       | SFA 3.6/1.8  |                         |      |
| INV.TYPE    | PWM          |                         |      |
| T=          | 135          |                         |      |
| C HP FR     | 60           | C HP TO                 | 90   |
| CT HZ FROM  | 1.2          | CT HZ TO                | 60   |
| VT HZ FROM  | -0           | VT HZ TO                | 60   |
| HTR-VOLTS   |              | HTR-AMPS                |      |
| HTR-WATTS   |              | MAX. SPACE HEATER TEMP. |      |

**Parts List**

| Part number  | Description                              | Quantity |
|--------------|------------------------------------------|----------|
| SA409025     | SA 05F007X903G1                          | 1.000 ea |
| RA400572     | RA 05F007X903G1                          | 1.000 ea |
| 34FN3002B01  | EXTERNAL FAN, PLASTIC, .637/.639 HUB W/  | 1.000 ea |
| HW3201A05    | 3/8-16 EYEBOLT                           | 1.000 ea |
| 06CB1000A02G | CONDUIT BOX, MACH GRAY                   | 1.000 ea |
| RM1016       | LEAD SEPARATOR GASKET - 305/306 C.P.MOTO | 1.000 ea |
| 51XW2520A12  | SCREW, HEX SER SLT HD, ZN, 1/4-20 X .75  | 2.000 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 |
| 10XN2520S06  | 1/4 20X3/8 HX HD CAP S.S.                | 1.000 ea |
| WD1000B16    | T&B CX70TN OR L70P TERMINAL LUG          | 1.000 ea |
| 35EP1102B03G | FREP TEFC 205 BRG,GRSR,RLF,.125 NPT DRAI | 1.000 ea |
| HW4500A17    | 317400 ALEMITE GREASE RELIEF             | 1.000 ea |
| HA4054       | SHORT T-DRAIN FITTING, .125" N.P.T.      | 1.000 ea |
| HW5100A05    | WVY WSHR F/205 & 304 BRGS                | 1.000 ea |
| 35EP1329A16G | PUEP ENCL 143-5TC 205 BRG,GRSR,RLF,NPT D | 1.000 ea |
| HW4500A17    | 317400 ALEMITE GREASE RELIEF             | 1.000 ea |
| HA4054       | SHORT T-DRAIN FITTING, .125" N.P.T.      | 1.000 ea |
| 51XN1032A20  | 10-32 X 1 1/4 HX WS SL SR                | 2.000 ea |
| HA3100A28    | THRUBOLT 10-32 X 8.187                   | 4.000 ea |
| 51XB1214A16  | 12-14X1.00 HXWSSLD SERTYB                | 1.000 ea |
| 35FH1000A01G | 35FH1000A01 W/GRAY FLUIDIZ               | 1.000 ea |
| 10XN2520A16  | 1/4-20 X 1 HEX HEAD CAP SCR, ZINC PLATED | 3.000 ea |
| HW1001A25    | LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I | 3.000 ea |
| WD4100A03    | DE-750 HEYCO PLUG 62MP0750 MICRO PLASTIC | 1.000 ea |
| 06CB1502G    | LIPPED CONDUIT BOX LID CAST, GRAY EPOXY  | 1.000 ea |
| 06GS1003     | GASKET, KOBX LID, 1/8" THICK BLACK NEOPR | 1.000 ea |
| 10XN2520A12  | 1/4-20 X 3/4 HEX HEAD CAP                | 2.000 ea |
| HW1001A25    | LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I | 2.000 ea |
| HW4600B32SP  | V-RING SLINGER 1.000 X 1.540 X .24 VITON | 1.000 ea |
| HA1005A03SP  | SLINGER, OD 1.750, ID .938, 205 BRG      | 1.000 ea |

|             |                                          |          |
|-------------|------------------------------------------|----------|
| HW2501D13   | KEY, 3/16 SQ X 1.375                     | 1.000 ea |
| HA7000A01   | KEY RETAINER 7/8" DIA SHAFT              | 1.000 ea |
| MJ5001A27   | 32220KN GRAY SEALER *MIN BUY 4 QTS=1GAL  | 0.001 qt |
| 85XU0407S04 | 4X1/4 U DRIVE PIN STAINLESS              | 2.000 ea |
| LB1624      | COMBINED WARNING LABEL, ISO/ANSI PICTOGR | 1.000 ea |
| MJ1000A02   | GREASE, POLYREX EM EXXON                 | 0.050 lb |
| MG1025N19   | WILKOFAS, 778.50, RELIANCE BLUE-GREEN 8  | 0.022 ga |
| LC0005      | CONN.DIA.,TY M,9-LD,DUAL VOLT,REVERSING  | 1.000 ea |
| LB1449      | DIV-2/NEC WARNING LABEL                  | 1.000 ea |
| NP3258      | SS CP SUPER-E DIV-2 UL CSA-C US EEV CC   | 1.000 ea |
| NP3261      | SS CP SUPER-E AUX DATA INFORMATION       | 1.000 ea |
| 85XU0407S04 | 4X1/4 U DRIVE PIN STAINLESS              | 2.000 ea |
| 36PA1000    | PKG GRP, PRINT PK1016A08                 | 1.000 ea |
| LB1002N     | LABEL,MARINE DUTY (ON ROLLS)             | 1.000 ea |
| MN416A01    | TAG-INSTAL-MAINT no wire (2500 bx)11/25  | 1.000 ea |
| HW4500A19   | 1/4-28X1/4 SLOTTED PLUG F/S              | 1.000 ea |
| HW4500A19   | 1/4-28X1/4 SLOTTED PLUG F/S              | 1.000 ea |
| PE-0000001  | ZRTG PE ASSEMBLY                         | 1.000 ea |



**AC Induction Motor Performance Data**

Record # 87075

Preliminary Data Sheet

| Winding: 05WGX903-R001 |  |             | Type: 0522M                              |  | Enclosure: TEFC         |  |
|------------------------|--|-------------|------------------------------------------|--|-------------------------|--|
| Nameplate Data         |  |             | 460 V, 60 Hz:<br>High Voltage Connection |  |                         |  |
| Rated Output (HP)      |  | 1           | Full Load Torque                         |  | 2.97 LB-FT              |  |
| Volts                  |  | 208-230/460 | Start Configuration                      |  | direct on line          |  |
| Full Load Amps         |  | 3.3-3.4/1.7 | Breakdown Torque                         |  | 15.85 LB-FT             |  |
| R.P.M.                 |  | 1770        | Pull-up Torque                           |  | 9.1 LB-FT               |  |
| Hz                     |  | 60          | Phase                                    |  | 3                       |  |
| NEMA Design Code       |  | B           | KVA Code                                 |  | N                       |  |
| Service Factor (S.F.)  |  | 1.15        | Starting Current                         |  | 15.67 A                 |  |
| NEMA Nom. Eff.         |  | 85.5        | Power Factor                             |  | 69                      |  |
| Rating - Duty          |  | 40C         | AMB-CONT                                 |  | Temp. Rise @ Rated Load |  |
| S.F. Amps              |  | 3.6/1.8     | Temp. Rise @ S.F. Load                   |  | 27°C                    |  |
|                        |  |             | Locked-rotor Power Factor                |  | 60.1                    |  |
|                        |  |             | Rotor inertia                            |  | 0.159 lb-ft²            |  |

**Load Characteristics 460 V, 60 Hz, 1 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 27   | 43   | 56   | 65   | 72   | 76   | 69   |
| Efficiency      | 70.7 | 81   | 84.4 | 85.8 | 85.9 | 85.5 | 85.9 |
| Speed           | 1792 | 1785 | 1778 | 1771 | 1763 | 1755 | 1766 |
| Line amperes    | 1.23 | 1.34 | 1.49 | 1.68 | 1.89 | 2.15 | 1.81 |

ABB Motors and Mechanical Inc.

WINDING # 05WGX903

Typical performance - not guaranteed values.

1 HP 3 PH 60 HZ 1770 RPM 460 V 0522M

TORQUES (LB-FT): PO=15.85 PU=9.1 LR=10.45 LRA=15.67





