

# ABB BALDOR RELIANCE III

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## Customer information packet

### EM3116T-BG

1HP, 1770RPM, 3PH, 60HZ, 143T, 3522M, OPSB, F1

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                        |
|---------------------------------------|----------------------------------------|
| <b>Enclosure</b>                      | OPSB                                   |
| <b>Frame</b>                          | 143T                                   |
| <b>Frame Material</b>                 | Steel                                  |
| <b>Frequency</b>                      | 60.00 Hz                               |
| <b>Haz Area Class and Group</b>       | None                                   |
| <b>Haz Area Division</b>              | Not Applicable                         |
| <b>Motor Letter Type</b>              | Three Phase                            |
| <b>Output @ Frequency</b>             | 1.000 HP @ 60 HZ                       |
| <b>Phase</b>                          | 3                                      |
| <b>Synchronous Speed @ Frequency</b>  | 1800 RPM @ 60 HZ                       |
| <b>Voltage @ Frequency</b>            | 230.0 V @ 60 HZ<br>460.0 V @ 60 HZ     |
| <b>Agency Approvals</b>               | NEMA PREMIUM<br>CURUSEEV               |
| <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>Current @ Voltage</b>              | 1.700 A @ 460.0 V<br>3.400 A @ 230.0 V |
| <b>Design Code</b>                    | B                                      |
| <b>Drip Cover</b>                     | No Drip Cover                          |
| <b>Duty Rating</b>                    | CONT                                   |
| <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>Heater Indicator</b>               | No Heater                              |
| <b>High Voltage Full Load Amps</b>    | 1.7 a                                  |
| <b>Insulation Class</b>               | H                                      |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | A          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 35E2261    |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 35WGZ805   |
| <b>Layout</b>       | 35LYE2261  |
| <b>Eff. date</b>    | 06-15-2026 |
| <b>CD Diagram</b>   | CD0005     |
| <b>Poles</b>        | 04         |
| <b>Leads</b>        | 9#18       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 10-03-2024 |

|                                      |                              |
|--------------------------------------|------------------------------|
| <b>Inverter Code</b>                 | <b>Inverter Ready</b>        |
| <b>KVA Code</b>                      | <b>N</b>                     |
| <b>Lifting Lugs</b>                  | <b>Standard Lifting Lugs</b> |
| <b>Locked Bearing Indicator</b>      | <b>Locked Bearing</b>        |
| <b>Motor Lead Quantity/Wire Size</b> | <b>9 @ 18 AWG</b>            |
| <b>Motor Lead Termination</b>        | <b>Flying Leads</b>          |
| <b>Motor Standards</b>               | <b>NEMA</b>                  |
| <b>Motor Type</b>                    | <b>3522M</b>                 |
| <b>Mounting Arrangement</b>          | <b>F1</b>                    |
| <b>Number of Poles</b>               | <b>4</b>                     |
| <b>Overall Length</b>                | <b>11.63 IN</b>              |
| <b>Power Factor</b>                  | <b>66</b>                    |
| <b>Product Family</b>                | <b>General Purpose</b>       |
| <b>Pulley End Bearing Type</b>       | <b>Ball</b>                  |
| <b>Pulley Face Code</b>              | <b>Standard</b>              |
| <b>Pulley Shaft Indicator</b>        | <b>Standard</b>              |
| <b>Rodent Screen</b>                 | <b>None</b>                  |
| <b>RoHS Status</b>                   | <b>ROHS COMPLIANT</b>        |
| <b>Service Factor</b>                | <b>1.15</b>                  |
| <b>Shaft Diameter</b>                | <b>0.875 IN</b>              |
| <b>Shaft Ground Indicator</b>        | <b>Shaft Grounding</b>       |
| <b>Shaft Rotation</b>                | <b>Reversible</b>            |
| <b>Shaft Slinger Indicator</b>       | <b>No Slinger</b>            |
| <b>Speed</b>                         | <b>1770 rpm</b>              |
| <b>Speed Code</b>                    | <b>Single Speed</b>          |
| <b>Starting Method</b>               | <b>Direct on line</b>        |
| <b>Thermal Device - Bearing</b>      | <b>None</b>                  |
| <b>Thermal Device - Winding</b>      | <b>None</b>                  |
| <b>Vibration Sensor Indicator</b>    | <b>No Vibration Sensor</b>   |
| <b>Winding Thermal 1</b>             | <b>None</b>                  |
| <b>Winding Thermal 2</b>             | <b>None</b>                  |

Nameplate

| NP3553LUA                 |              |             |     |      |   |       |    |   |  |
|---------------------------|--------------|-------------|-----|------|---|-------|----|---|--|
| CAT.NO.                   | EM3116T-BG   |             |     |      |   |       |    |   |  |
| SPEC.                     | 35E2261Z805  |             |     |      |   |       |    |   |  |
| HP                        | 1            |             |     |      |   |       |    |   |  |
| VOLTS                     | 230/460      |             |     |      |   |       |    |   |  |
| AMPS                      | 3.4/1.7      |             |     |      |   |       |    |   |  |
| RPM                       | 1770         |             |     |      |   |       |    |   |  |
| FRAME                     | 143T         |             | HZ  | 60   |   |       | PH | 3 |  |
| SF                        | 1.15         | CODE        | N   | DES  | B | CLASS | H  |   |  |
| NEMA NOM. EFF             | 85.5         | PF          | 66  |      |   |       |    |   |  |
| RATING                    | 40C AMB-CONT |             |     |      |   |       |    |   |  |
| CC                        | 010A         |             |     |      |   |       |    |   |  |
| ENCL                      | OPSB         | SN          |     |      |   |       |    |   |  |
| DE                        | 6205         |             | ODE | 6203 |   |       |    |   |  |
| VPWM INVERTER READY       |              | SFA 3.6/1.8 |     |      |   |       |    |   |  |
| CT30-60(2:1) VT3-60(20:1) |              |             |     |      |   |       |    |   |  |
| USABLE AT                 |              |             |     |      |   |       |    |   |  |

**Parts List**

| Part number | Description                              | Quantity |
|-------------|------------------------------------------|----------|
| SA431012    | SA 35E2261Z805                           | 1.000 ea |
| RA423232    | RA 35E2261Z805                           | 1.000 ea |
| 34FN3002B01 | EXTERNAL FAN, PLASTIC, .637/.639 HUB W/  | 1.000 ea |
| HA6362ZP    | LIFTING LUG FOR 36 FRAME MOTORS.         | 2.000 ea |
| NS2512A01   | INSULATOR, CONDUIT BOX X                 | 1.000 ea |
| 35CB3009    | 35 CB W/1.09 DIA. LEAD HOLE @ 6:         | 1.000 ea |
| 51XB1016A07 | 10-16 X 7/16 HXWSSLD SERTYB              | 2.000 ea |
| 11XW1032G06 | 10-32 X .38, TAPTITE II, HEX WSHR SLTD U | 1.000 ea |
| 35EP3209G00 | MASTER ODE,203 BRG                       | 1.000 ea |
| HW5100A03   | WAVY WASHER (W1543-017)                  | 1.000 ea |
| BP5338A02   | SHAFT GRD ASSY, RB4000A08 RETAINER RING  | 1.000 ea |
| 35EP3210C00 | MASTER DE,205 BRG,1.000SH,LCK BRG        | 1.000 ea |
| 51XN1032A18 | 10-32 X 1 1/8 HX WS SL SR (ESKAY)        | 2.000 ea |
| XY1032A02   | 10-32 HEX NUT DIRECTIONAL SERRATION      | 4.000 ea |
| 35CB4521    | 35 LIPPED CB LID (GALV & PHOSPH)         | 1.000 ea |
| 51XW0832A07 | 8-32 X .44, TAPTITE II, HEX WSHR SLTD SE | 4.000 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              | 2.000 ea |
| LB1508      | LABEL "SHAFT GROUNDING BRUSH" 1.50 X .81 | 1.000 ea |
| MJ1000A02   | GREASE, POLYREX EM EXXON                 | 0.050 lb |
| MG1050Y01   | CELEROL BALDOR GOLD *5 GALLON BUCKET*    | 0.017 ga |
| HA3100A45   | THRUBOLT 10-32 X 8.875                   | 4.000 ea |
| 35AD2016A01 | BAFFLE PLATE,MOD 35 OPSB-INT SHAFT GRD   | 1.000 ea |
| 35AD2005A01 | BAFFLE PLATE,MOD 35-SLTD BAND MTRS TDR   | 1.000 ea |
| LC0005      | CONN.DIA.,TY M,9-LD,DUAL VOLT,REVERSING  | 1.000 ea |
| MN416A01    | TAG-INSTAL-MAINT no wire (2500 bx)11/25  | 1.000 ea |
| NP3553LUA   | ALUM SUPER-E VPWM INV READY UL CC NEMA P | 1.000 ea |
| 35PA1066    | PKG GRP, PRINT PK1008A07                 | 1.000 ea |
| LB1624      | COMBINED WARNING LABEL, ISO/ANSI PICTOGR | 1.000 ea |
| FE-0000001  | ZRTG FE ASSEMBLY                         | 1.000 ea |

PE-0000001

ZRTG PE ASSEMBLY

1.000 ea

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**AC Induction Motor Performance Data**

Record # 107042

Preliminary Data Sheet

| Winding: 35WGZ805-R057 |    |         | Type: 3522M                              |                     | Enclosure: OPSB         |            |        |
|------------------------|----|---------|------------------------------------------|---------------------|-------------------------|------------|--------|
| Nameplate Data         |    |         | 460 V, 60 Hz:<br>High Voltage Connection |                     |                         |            |        |
| Rated Output (HP)      |    | 1       | Full Load Torque                         |                     | 2.97 LB-FT              |            |        |
| Volts                  |    | 230/460 | Start Configuration                      |                     | direct on line          |            |        |
| Full Load Amps         |    | 3.4/1.7 | Breakdown Torque                         |                     | 15.9 LB-FT              |            |        |
| R.P.M.                 |    | 1770    | Pull-up Torque                           |                     | 9.1 LB-FT               |            |        |
| Hz                     | 60 | Phase   | 3                                        | Locked-rotor Torque |                         | 10.4 LB-FT |        |
| NEMA Design Code       |    | B       | KVA Code                                 | N                   | Starting Current        |            | 15.7 A |
| Service Factor (S.F.)  |    | 1.15    | No-load Current                          |                     | 1.21 A                  |            |        |
| NEMA Nom. Eff.         |    | 85.5    | Power Factor                             | 66                  | Line-line Res. @ 25°C   |            | 14.6 Ω |
| Rating - Duty          |    | 40C     | AMB-CONT                                 |                     | Temp. Rise @ Rated Load |            | 24°C   |
| S.F. Amps              |    | 3.6/1.8 | Temp. Rise @ S.F. Load                   |                     | 28°C                    |            |        |
|                        |    |         | Locked-rotor Power Factor                |                     | 58.6                    |            |        |
|                        |    |         | 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 # 35WGZ805

Typical performance - not guaranteed values.

1 HP 3 PH 60 HZ 1770 RPM 460 V 3522M

TORQUES (LB-FT): PO=15.9 PU=9.1 LR=10.4 LRA=15.7





