

# ABB BALDOR RELIANCE III

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## Customer information packet

### VENM3546T

1HP, 1770RPM, 3PH, 60HZ, 143TC, 3522M, TENV, F1

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                                             |
|---------------------------------------|-------------------------------------------------------------|
| <b>Enclosure</b>                      | TENV                                                        |
| <b>Frame</b>                          | 143TC                                                       |
| <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>               | CURUSEEV<br>NEMA PREMIUM                                    |
| <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>Current @ Voltage</b>              | 1.670 A @ 460.0 V<br>3.300 A @ 208.0 V<br>3.340 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                                                       |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | E          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 35E016     |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 35WZ818    |
| <b>Layout</b>       | 35LYE016   |
| <b>Eff. date</b>    | 01-05-2026 |
| <b>CD Diagram</b>   | CD0005     |
| <b>Poles</b>        | 04         |
| <b>Leads</b>        | 9#18       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 01-10-2022 |

|                                      |                            |
|--------------------------------------|----------------------------|
| <b>Insulation Class</b>              | <b>F</b>                   |
| <b>Inverter Code</b>                 | <b>Inverter Ready</b>      |
| <b>KVA Code</b>                      | <b>M</b>                   |
| <b>Lifting Lugs</b>                  | <b>No 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>12.12 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>C-Face</b>              |
| <b>Pulley Shaft Indicator</b>        | <b>Standard</b>            |
| <b>Rodent Screen</b>                 | <b>None</b>                |
| <b>Service Factor</b>                | <b>1.15</b>                |
| <b>Shaft Diameter</b>                | <b>0.875 IN</b>            |
| <b>Shaft Ground Indicator</b>        | <b>No 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

| NP3441LUA                 |                             |  |              |      |     |   |       |   |       |
|---------------------------|-----------------------------|--|--------------|------|-----|---|-------|---|-------|
| CAT.NO.                   | VENM3546T                   |  |              |      |     |   |       |   |       |
| SPEC                      | 35E016Z818G1                |  |              |      |     |   |       |   |       |
| HP                        | 1                           |  |              |      |     |   |       |   |       |
| VOLTS                     | 230/460                     |  |              |      |     |   |       |   |       |
| AMPS                      | 3.34/1.67                   |  |              |      |     |   |       |   |       |
| RPM                       | 1770                        |  |              |      |     |   |       |   |       |
| FRAME                     | 143TC                       |  | HZ           | 60   |     |   | PH    | 3 |       |
| SF                        | 1.15                        |  | CODE         | M    | DES | B | CLASS | F |       |
| NEMA NOM. EFF             | 85.5                        |  | PF           | 66   |     |   |       |   |       |
| RATING                    | 40C AMB-CONT                |  |              |      |     |   |       |   |       |
| CC                        | 010A                        |  |              |      |     |   |       |   |       |
| ENCL                      | TENV                        |  | SER          |      |     |   |       |   |       |
| DE                        | 6205                        |  | ODE          | 6203 |     |   |       |   |       |
| VPWM INVERTER READY       |                             |  | SFA 3.5/1.75 |      |     |   |       |   |       |
| CT6-60H(10:1)VT3-60H(20:1 |                             |  |              |      |     |   |       |   |       |
|                           | 1HP 50HZ 190/380V 3.7/1.85A |  |              |      |     |   |       |   | SF1.0 |

**AC Induction Motor Performance Data**

Record # 89784

Typical performance - not guaranteed values

| Winding: 35WGZ818-R002 |    |           | Type: 3522M                              |                     | Enclosure: TENV         |             |        |
|------------------------|----|-----------|------------------------------------------|---------------------|-------------------------|-------------|--------|
| Nameplate Data         |    |           | 460 V, 60 Hz:<br>High Voltage Connection |                     |                         |             |        |
| Rated Output (HP)      |    | 1         | Full Load Torque                         |                     | 2.99 LB-FT              |             |        |
| Volts                  |    | 230/460   | Start Configuration                      |                     | direct on line          |             |        |
| Full Load Amps         |    | 3.34/1.67 | Breakdown Torque                         |                     | 16.6 LB-FT              |             |        |
| R.P.M.                 |    | 1770      | Pull-up Torque                           |                     | 7.42 LB-FT              |             |        |
| Hz                     | 60 | Phase     | 3                                        | Locked-rotor Torque |                         | 10.32 LB-FT |        |
| NEMA Design Code       |    | B         | KVA Code                                 | M                   | Starting Current        |             | 16.1 A |
| Service Factor (S.F.)  |    | 1.15      | No-load Current                          |                     | 1.23 A                  |             |        |
| NEMA Nom. Eff.         |    | 85.5      | Power Factor                             | 66                  | Line-line Res. @ 25°C   |             | 14.4 Ω |
| Rating - Duty          |    | 40C       | AMB-CONT                                 |                     | Temp. Rise @ Rated Load |             | 63°C   |
| S.F. Amps              |    | 3.5/1.75  | Temp. Rise @ S.F. Load                   |                     | 71°C                    |             |        |
|                        |    |           | Locked-rotor Power Factor                |                     | 60.4724                 |             |        |
|                        |    |           | 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   | 66   | 73   | 78   | 72   |
| Efficiency      | 70.8 | 81.2 | 84.5 | 85.9 | 85.8 | 85.2 | 85.5 |
| Speed           | 1793 | 1786 | 1781 | 1773 | 1766 | 1758 | 1768 |
| Line amperes    | 1.25 | 1.34 | 1.49 | 1.67 | 1.87 | 2.12 | 1.75 |

ABB Motors and Mechanical Inc.

WINDING # 35WGZ818

Typical performance - not guaranteed values.

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

TORQUES (LB-FT): PO=16.6 PU=7.42 LR=10.32 LRA=16.1





