

# ABB BALDOR RELIANCE III

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## Customer information packet

### ZDWNM3554T

1.5HP, 1770RPM, 3PH, 60HZ, 145TC, 3530M, TENV

Class - None

Division - Not Applicable

**Specifications**

|                                |                                        |
|--------------------------------|----------------------------------------|
| Enclosure                      | TENV                                   |
| Frame                          | 145TC                                  |
| Frame Material                 | Steel                                  |
| Frequency                      | 60.00 Hz                               |
| Haz Area Class and Group       | None                                   |
| Haz Area Division              | Not Applicable                         |
| Motor Letter Type              | Three Phase                            |
| Output @ Frequency             | 1.500 HP @ 60 HZ                       |
| Phase                          | 3                                      |
| Synchronous Speed @ Frequency  | 1800 RPM @ 60 HZ                       |
| Voltage @ Frequency            | 230.0 V @ 60 HZ<br>460.0 V @ 60 HZ     |
| Agency Approvals               | CSA<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                                   |
| Current @ Voltage              | 4.600 A @ 230.0 V<br>2.300 A @ 460.0 V |
| Design Code                    | B                                      |
| Drip Cover                     | No Drip Cover                          |
| Duty Rating                    | CONT                                   |
| Efficiency @ 100% Load         | 86.5 %                                 |
| Electrically Isolated Bearing  | Not Electrically Isolated              |
| Feedback Device                | ENCODER                                |
| Front Shaft Indicator          | None                                   |
| Heater Indicator               | No Heater                              |
| High Voltage Full Load Amps    | 2.3 a                                  |
| Insulation Class               | H                                      |

**Part Detail**

|              |            |
|--------------|------------|
| Revision     | C          |
| Type         | AC         |
| Mech. spec.  | 35RR179    |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 35WGG178   |
| Layout       | 35LYRR179  |
| Eff. date    | 06-22-2023 |
| CD Diagram   | CD0005     |
| Poles        | 04         |
| Leads        | 9#18       |
| Proprietary  | False      |
| Created date | 01-10-2022 |

|                                      |                            |
|--------------------------------------|----------------------------|
| <b>Inverter Code</b>                 | Not Inverter               |
| <b>KVA Code</b>                      | M                          |
| <b>Lifting Lugs</b>                  | No Lifting Lugs            |
| <b>Locked Bearing Indicator</b>      | Locked Bearing             |
| <b>Max Speed</b>                     | 4500 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>                    | 3530M                      |
| <b>Mounting Arrangement</b>          | F1                         |
| <b>Number of Poles</b>               | 4                          |
| <b>Overall Length</b>                | 14.90 IN                   |
| <b>Power Factor</b>                  | 72                         |
| <b>Product Family</b>                | Wash Down                  |
| <b>Pulley End Bearing Type</b>       | Sealed Bearing             |
| <b>Pulley Face Code</b>              | C-Face                     |
| <b>Pulley Shaft Indicator</b>        | Standard                   |
| <b>Rodent Screen</b>                 | None                       |
| <b>Service Factor</b>                | 1.00                       |
| <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             |
| <b>Thermal Device - Bearing</b>      | None                       |
| <b>Thermal Device - Winding</b>      | Normally Closed Thermostat |
| <b>Vibration Sensor Indicator</b>    | No Vibration Sensor        |
| <b>Winding Thermal 1</b>             | None                       |
| <b>Winding Thermal 2</b>             | None                       |

**Nameplate**

| NP1609L      |               |         |       |         |         |   |  |  |  |
|--------------|---------------|---------|-------|---------|---------|---|--|--|--|
| CAT NO       | ZDWNM3554T    |         |       |         |         |   |  |  |  |
| SPEC.        | 35RR179G178G1 |         |       |         |         |   |  |  |  |
| FRAME        | 145TC         |         |       | HP      | 1.5 TE  |   |  |  |  |
| VOLTS        | 230/460       |         |       |         |         |   |  |  |  |
| MAG CUR      | 2.6/1.3       |         |       | FLA     | 4.6/2.3 |   |  |  |  |
| RPM          | 1770          |         |       | RPM MAX | 4500    |   |  |  |  |
| HZ           | 60            | PH      | 3     | CLASS   | H       |   |  |  |  |
| SER.F.       | 1.00          | DES     | B     | SL HZ   | 1       |   |  |  |  |
| NEMA-NOM-EFF | 86.5          | WK2     | 0.217 |         |         |   |  |  |  |
| BLWR V       |               | PH      |       | HZ      |         | A |  |  |  |
| RATING       | 40C AMB-CONT  |         |       |         |         |   |  |  |  |
| DE BRG       | 6205          | ODE BRG |       |         | 6203    |   |  |  |  |
| CC           | 010A          | SER.NO  |       |         |         |   |  |  |  |

**AC Induction Motor Performance Data**

Record # 87056

Typical performance - not guaranteed values

| Winding: 35WGG178-R003 |    |         | Type: 3530M                              |                     | Enclosure: TENV           |                       |              |        |
|------------------------|----|---------|------------------------------------------|---------------------|---------------------------|-----------------------|--------------|--------|
| Nameplate Data         |    |         | 460 V, 60 Hz:<br>High Voltage Connection |                     |                           |                       |              |        |
| Rated Output (HP)      |    | 1.5     | Full Load Torque                         |                     | 4.48 LB-FT                |                       |              |        |
| Volts                  |    | 230/460 | Start Configuration                      |                     | direct on line            |                       |              |        |
| Full Load Amps         |    | 4.6/2.3 | Breakdown Torque                         |                     | 21.02 LB-FT               |                       |              |        |
| R.P.M.                 |    | 1770    | Pull-up Torque                           |                     | 12.29 LB-FT               |                       |              |        |
| Hz                     | 60 | Phase   | 3                                        | Locked-rotor Torque |                           | 14.9 LB-FT            |              |        |
| NEMA Design Code       |    | B       | KVA Code                                 | M                   | Starting Current          |                       | 21.32 A      |        |
| Service Factor (S.F.)  |    | 1       | No-load Current                          |                     | 1.29 A                    |                       |              |        |
| NEMA Nom. Eff.         |    | 86.5    | Power Factor                             |                     | 72                        | Line-line Res. @ 25°C |              | 10.1 Ω |
| Rating - Duty          |    | 40C     | AMB-CONT                                 |                     | Temp. Rise @ Rated Load   |                       | 80°C         |        |
|                        |    |         |                                          |                     | Locked-rotor Power Factor |                       | 55.5         |        |
|                        |    |         |                                          |                     | Rotor inertia             |                       | 0.217 lb-ft² |        |

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

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  |
|-----------------|------|------|------|------|------|------|
| Power Factor    | 33   | 54   | 68   | 76   | 81   | 84   |
| Efficiency      | 79.1 | 86.3 | 88.1 | 88.3 | 87.6 | 86.6 |
| Speed           | 1790 | 1783 | 1776 | 1769 | 1761 | 1752 |
| Line amperes    | 1.35 | 1.52 | 1.78 | 2.11 | 2.47 | 2.89 |

ABB Motors and Mechanical Inc.

WINDING # 35WGG178

Typical performance - not guaranteed values.

1.5 HP 3 PH 60 HZ 1770 RPM 460 V 3530M

TORQUES (LB-FT): PO=21.02 PU=12.29 LR=14.9 LRA=21.32





