

# ABB BALDOR RELIANCE III

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## Customer information packet

### CNEDM3554T

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

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                                             |
|---------------------------------------|-------------------------------------------------------------|
| <b>Enclosure</b>                      | TENV                                                        |
| <b>Frame</b>                          | 145TC                                                       |
| <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>             | 1.500 HP @ 60 HZ                                            |
| <b>Phase</b>                          | 3                                                           |
| <b>Synchronous Speed @ Frequency</b>  | 1800 RPM @ 60 HZ                                            |
| <b>Voltage @ Frequency</b>            | 460.0 V @ 60 HZ<br>230.0 V @ 60 HZ                          |
| <b>Agency Approvals</b>               | CCSA US<br>CSA EEV<br>NEMA PREMIUM<br>NEMA_PREMIUM<br>UR    |
| <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>Constant Torque Speed Range</b>    | 6                                                           |
| <b>Current @ Voltage</b>              | 4.600 A @ 230.0 V<br>4.400 A @ 208.0 V<br>2.300 A @ 460.0 V |
| <b>Design Code</b>                    | B                                                           |
| <b>Drip Cover</b>                     | No Drip Cover                                               |
| <b>Duty Rating</b>                    | CONT                                                        |
| <b>Efficiency @ 100% Load</b>         | 86.5 %                                                      |
| <b>Electrically Isolated Bearing</b>  | Not Electrically Isolated                                   |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | E          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 35E4320    |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 35WGG178   |
| <b>Layout</b>       | 35LYE4320  |
| <b>Eff. date</b>    | 05-03-2024 |
| <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>Feedback Device</b>               | <b>NO FEEDBACK</b>         |
| <b>Front Shaft Indicator</b>         | <b>None</b>                |
| <b>Heater Indicator</b>              | <b>No Heater</b>           |
| <b>High Voltage Full Load Amps</b>   | <b>2.3 a</b>               |
| <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>Max Speed</b>                     | <b>2700 rpm</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>3530M</b>               |
| <b>Mounting Arrangement</b>          | <b>F1</b>                  |
| <b>Number of Poles</b>               | <b>4</b>                   |
| <b>Overall Length</b>                | <b>13.00 IN</b>            |
| <b>Power Factor</b>                  | <b>72</b>                  |
| <b>Product Family</b>                | <b>Dirty Duty Plus</b>     |
| <b>Pulley End Bearing Type</b>       | <b>Sealed Bearing</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> |

|                   |      |
|-------------------|------|
| Winding Thermal 1 | None |
| Winding Thermal 2 | None |

**Nameplate**

| NP3504       |               |          |   |       |      |            |      |    |          |  |    |
|--------------|---------------|----------|---|-------|------|------------|------|----|----------|--|----|
| CAT NO       | CNEDM3554T    |          |   |       |      |            |      |    |          |  |    |
| SPEC.        | 35E4320G178G1 |          |   |       |      | ENCL       | TENV |    |          |  |    |
| FRAME        | 145TC         | HP       |   | 1.5   |      |            |      |    |          |  |    |
| VOLTS        | 230/460       |          |   |       |      |            |      |    |          |  |    |
| FLA          | 4.6/2.3       |          |   | I.P.  |      | 56         |      |    |          |  |    |
| RPM          | 1770          | RPM MAX  |   |       |      | 2700       |      |    |          |  |    |
| HZ           | 60            | PH       | 3 | CLASS |      | F          |      |    |          |  |    |
| SER.F.       | 1.15          | DES      | B | CC    | 010A |            |      |    |          |  |    |
| NEMA-NOM-EFF | 87.5          |          |   |       |      |            |      |    |          |  |    |
| RATING       | 40C AMB-CONT  |          |   |       |      |            |      |    |          |  |    |
| DE BRG       | 6205          | ODE BRG  |   |       |      | 6203       |      |    |          |  |    |
| GREASE       | POLYREX EM    |          |   |       |      |            |      |    |          |  |    |
| INV.TYPE     |               | C HP FR  |   |       | 60   | C HP TO    |      | 90 |          |  |    |
| CT HZ FROM   | 6             | CT HZ TO |   |       | 60   | VT HZ FROM |      | 6  | VT HZ TO |  | 60 |
| SER.NO       | SFA 4.66/2.33 |          |   |       |      |            |      |    |          |  |    |

**AC Induction Motor Performance Data**

Record # 82076

Typical performance - not guaranteed values

| Winding: 35WGG178-R001 |    |         | Type: 3530M                              |                           | Enclosure: TENV         |              |
|------------------------|----|---------|------------------------------------------|---------------------------|-------------------------|--------------|
| Nameplate Data         |    |         | 460 V, 60 Hz:<br>High Voltage Connection |                           |                         |              |
| Rated Output (HP)      |    | 1.5     | Full Load Torque                         |                           | 4.46 LB-FT              |              |
| Volts                  |    | 230/460 | Start Configuration                      |                           | direct on line          |              |
| Full Load Amps         |    | 4.2/2.1 | Breakdown Torque                         |                           | 21 LB-FT                |              |
| R.P.M.                 |    | 1770    | Pull-up Torque                           |                           | 12.2 LB-FT              |              |
| Hz                     | 60 | Phase   | 3                                        | Locked-rotor Torque       |                         | 14.8 LB-FT   |
| NEMA Design Code       |    | B       | KVA Code                                 | M                         | Starting Current        |              |
| Service Factor (S.F.)  |    | 1.15    | No-load Current                          |                           | 1.3 A                   |              |
| NEMA Nom. Eff.         |    | 86.5    | Power Factor                             | 76                        | Line-line Res. @ 25°C   |              |
| Rating - Duty          |    | 40C     | AMB-CONT                                 |                           | Temp. Rise @ Rated Load |              |
| S.F. Amps              |    |         |                                          | Temp. Rise @ S.F. Load    |                         | 95°C         |
|                        |    |         |                                          | Locked-rotor Power Factor |                         | 55.2         |
|                        |    |         |                                          | Rotor inertia             |                         | 0.217 LB-FT2 |

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

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 29   | 49   | 63   | 72   | 78   | 82   | 79   |
| Efficiency      | 78.6 | 86.1 | 87.9 | 88.2 | 87.5 | 86.4 | 87.9 |
| Speed           | 1792 | 1785 | 1778 | 1770 | 1762 | 1753 | 1764 |
| Line amperes    | 1.36 | 1.53 | 1.79 | 2.11 | 2.47 | 2.9  | 2.33 |

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 PU=12.2 LR=14.8 LRA=21.4





