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# Customer information packet

## VNEDM3546T

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

Class - None

Division - Not Applicable

## Specifications

|                                |                                                             |
|--------------------------------|-------------------------------------------------------------|
| Enclosure                      | TENV                                                        |
| Frame                          | 143TC                                                       |
| 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             | 1.000 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                          |
| Agency Approvals               | CCSA US<br>CSA EEV<br>NEMA PREMIUM<br>NEMA_PREMIUM<br>UR    |
| Ambient Temperature            | 40 °C                                                       |
| Auxillary Box                  | No Auxillary Box                                            |
| Auxillary Box Lead Termination | None                                                        |
| Base Indicator                 | No Mounting                                                 |
| Bearing Grease Type            | Polyrex EM (-20F +300F)                                     |
| Blower                         | None                                                        |
| Constant Torque Speed Range    | 6                                                           |
| Current @ Voltage              | 3.340 A @ 230.0 V<br>3.300 A @ 208.0 V<br>1.670 A @ 460.0 V |
| Design Code                    | B                                                           |
| Drip Cover                     | No Drip Cover                                               |
| Duty Rating                    | CONT                                                        |
| Efficiency @ 100% Load         | 85.5 %                                                      |
| Electrically Isolated Bearing  | Not Electrically Isolated                                   |

## Part detail

|              |            |
|--------------|------------|
| Revision     | B          |
| Type         | AC         |
| Mech. spec.  | 35E4321    |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 35WGZ818   |
| Layout       | 35LYE4321  |
| Eff. date    | 07-14-2022 |
| CD Diagram   | CD0005     |
| Poles        | 04         |
| Leads        | 9#18       |
| Proprietary  | False      |
| Created date | 01-10-2022 |

|                               |                    |
|-------------------------------|--------------------|
| Feedback Device               | NO FEEDBACK        |
| Front Shaft Indicator         | None               |
| Heater Indicator              | No Heater          |
| High Voltage Full Load Amps   | 1.7 a              |
| Insulation Class              | F                  |
| Inverter Code                 | Inverter Ready     |
| KVA Code                      | M                  |
| Lifting Lugs                  | No Lifting Lugs    |
| Locked Bearing Indicator      | Locked Bearing     |
| Max Speed                     | 2700 rpm           |
| Motor Finish                  | UNPAINTED          |
| Motor Lead Quantity/Wire Size | 9 @ 18 AWG         |
| Motor Lead Termination        | Flying Leads       |
| Motor Standards               | NEMA               |
| Motor Type                    | 3522M              |
| Mounting Arrangement          | F1                 |
| Number of Poles               | 4                  |
| Overall Length                | 12.12 IN           |
| Power Factor                  | 66                 |
| Product Family                | Dirty Duty Plus    |
| Pulley End Bearing Type       | Sealed Bearing     |
| Pulley Face Code              | C-Face             |
| Pulley Shaft Indicator        | Standard           |
| Rodent Screen                 | None               |
| Service Factor                | 1.15               |
| Shaft Diameter                | 0.875 IN           |
| Shaft Ground Indicator        | No Shaft Grounding |
| Shaft Rotation                | Reversible         |
| Shaft Slinger Indicator       | No Slinger         |
| Speed                         | 1770 rpm           |
| Speed Code                    | Single Speed       |
| Starting Method               | 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

## NP3504

|              |               |          |   |       |      |            |      |   |          |  |    |
|--------------|---------------|----------|---|-------|------|------------|------|---|----------|--|----|
| CAT NO       | VNEDM3546T    |          |   |       |      |            |      |   |          |  |    |
| SPEC.        | 35E4321Z818G1 |          |   |       |      | ENCL       | TENV |   |          |  |    |
| FRAME        | 143TC         | HP       | 1 |       |      |            |      |   |          |  |    |
| VOLTS        | 230/460       |          |   |       |      |            |      |   |          |  |    |
| FLA          | 3.34/1.67     |          |   | 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 | 85.5          |          |   |       |      |            |      |   |          |  |    |
| RATING       | 40C AMB-CONT  |          |   |       |      |            |      |   |          |  |    |
| DE BRG       | 6205          | ODE BRG  |   |       | 6203 |            |      |   |          |  |    |
| GREASE       | POLYREX EM    |          |   |       |      |            |      |   |          |  |    |
| 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 3.5/1.75  |          |   |       |      |            |      |   |          |  |    |

**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





