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# Customer information packet

## VFSWDM3615T-E

5HP, 1750RPM, 3PH, 60HZ, 184TC, 3646M, TEFC, F1

Class - None

Division - Not Applicable

## Specifications

|                                |                                                               |
|--------------------------------|---------------------------------------------------------------|
| Enclosure                      | TEFC                                                          |
| Frame                          | 184TC                                                         |
| Frame Material                 | Stainless Steel                                               |
| Frequency                      | 60.00 Hz                                                      |
| Haz Area Class and Group       | None                                                          |
| Haz Area Division              | Not Applicable                                                |
| Motor Letter Type              | Three Phase                                                   |
| Output @ Frequency             | 5.000 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               | CSA<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                                                          |
| Current @ Voltage              | 13.800 A @ 208.0 V<br>6.500 A @ 460.0 V<br>13.000 A @ 230.0 V |
| Design Code                    | B                                                             |
| Drip Cover                     | No Drip Cover                                                 |
| Duty Rating                    | CONT                                                          |
| Efficiency @ 100% Load         | 89.5 %                                                        |
| Electrically Isolated Bearing  | Not Electrically Isolated                                     |
| Feedback Device                | NO FEEDBACK                                                   |
| Front Face Code                | Standard                                                      |
| Front Shaft Indicator          | None                                                          |

## Part detail

|              |            |
|--------------|------------|
| Revision     | N          |
| Type         | AC         |
| Mech. spec.  | 36R533     |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 36WGS953   |
| Layout       | 36LYR533   |
| Eff. date    | 02-15-2024 |
| CD Diagram   | CD0005     |
| Poles        | 04         |
| Leads        | 9#16       |
| Proprietary  | False      |
| Created date | 07-11-2017 |

|                               |                        |
|-------------------------------|------------------------|
| Heater Indicator              | No Heater              |
| High Voltage Full Load Amps   | 6.5 a                  |
| Insulation Class              | H                      |
| Inverter Code                 | Inverter Ready         |
| KVA Code                      | J                      |
| Lifting Lugs                  | Standard Lifting Lugs  |
| Locked Bearing Indicator      | Locked Bearing         |
| Motor Lead Exit               | Ko Box                 |
| Motor Lead Quantity/Wire Size | 9 @ 16 AWG             |
| Motor Lead Termination        | Flying Leads           |
| Motor Standards               | NEMA                   |
| Motor Type                    | 3646M                  |
| Mounting Arrangement          | F1                     |
| Number of Poles               | 4                      |
| Overall Length                | 18.89 IN               |
| Power Factor                  | 81                     |
| Product Family                | WD All SS Encapsulated |
| Pulley End Bearing Type       | Sealed Bearing         |
| Pulley Face Code              | C-Face                 |
| Pulley Shaft Indicator        | Standard               |
| Rodent Screen                 | None                   |
| RoHS Status                   | ROHS COMPLIANT         |
| Service Factor                | 1.15                   |
| Shaft Diameter                | 1.125 IN               |
| Shaft Extension Location      | Pulley End             |
| Shaft Ground Indicator        | No Shaft Grounding     |
| Shaft Rotation                | Reversible             |
| Shaft Slinger Indicator       | Shaft Slinger          |
| Speed                         | 1750 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

| NP4427AAA01 |                  |        |         |      |      |               |        |      |     |    |       |  |  |
|-------------|------------------|--------|---------|------|------|---------------|--------|------|-----|----|-------|--|--|
| CAT #       | VFSWDM3615T-E    |        |         |      |      | WT            | 101    |      | LBS |    |       |  |  |
| SPEC        | 36R533S953G1     |        |         |      |      | ENCL          | TEFC   |      |     |    |       |  |  |
| SER #       |                  |        |         |      |      | CC            | 010A   |      | IP  | 69 |       |  |  |
| HP          | 5                |        | MAG CUR |      |      |               |        |      |     |    |       |  |  |
| VOLTS       | 230/460          |        |         |      |      | NEMA NOM. EFF |        |      |     |    | 89.5  |  |  |
| AMPS        | 13/6.5           |        |         |      |      | PF            | 81     |      |     |    |       |  |  |
| RATING      | 40C AMB-CONT     |        |         |      |      |               |        |      |     |    |       |  |  |
| RPM         | 1750             |        |         |      |      | MAX RPM       |        | 2700 |     |    |       |  |  |
| FRAME       | 184TC            | HZ     | 60      |      | CODE | J             | CLASS  |      | H   |    |       |  |  |
| SER.F.      | 1.15             | SF AMP |         |      |      |               | PH     | 3    | DES | B  |       |  |  |
| DE          | 6206             |        | ODE     | 6206 |      |               |        |      |     |    |       |  |  |
| LUBRICATION | POLYREX EM       |        |         |      |      |               |        |      |     |    |       |  |  |
| ID LOGO     | INVERTER TYPE    |        | VPWM    |      | CHP  | 60            |        | TO   | 90  |    | 1.5:1 |  |  |
| ID LOGO     | WK2              | 0.428  | CT      | 3    | TO   | 60            | 20:1   |      |     |    |       |  |  |
| ID LOGO     | SL HZ            |        | VT      |      | TO   | 60            | 1000:1 |      |     |    |       |  |  |
|             |                  |        |         |      |      |               |        |      |     |    |       |  |  |
|             | 1.15 SF SINEWAVE |        |         |      |      |               |        |      |     |    |       |  |  |
|             |                  |        |         |      |      |               |        |      |     |    |       |  |  |
|             |                  |        |         |      |      |               |        |      |     |    |       |  |  |
|             |                  |        |         |      |      |               |        |      |     |    |       |  |  |
|             |                  |        |         |      |      |               | QR     |      |     |    |       |  |  |
| YR          |                  |        |         |      |      |               |        |      |     |    |       |  |  |

**AC Induction Motor Performance Data**

Record # 57384

Typical performance - not guaranteed values

| Winding: 36WGS953-R006 |    |              | Type: 3646M                              | Enclosure: TEFC           |                       |              |        |
|------------------------|----|--------------|------------------------------------------|---------------------------|-----------------------|--------------|--------|
| Nameplate Data         |    |              | 460 V, 60 Hz:<br>High Voltage Connection |                           |                       |              |        |
| Rated Output (HP)      |    | 5            | Full Load Torque                         |                           | 15.03 LB-FT           |              |        |
| Volts                  |    | 230/460      | Start Configuration                      |                           | direct on line        |              |        |
| Full Load Amps         |    | 13/6.5       | Breakdown Torque                         |                           | 57.4 LB-FT            |              |        |
| R.P.M.                 |    | 1750         | Pull-up Torque                           |                           | 28.9 LB-FT            |              |        |
| Hz                     | 60 | Phase        | 3                                        | Locked-rotor Torque       |                       | 32.3 LB-FT   |        |
| NEMA Design Code       |    | B            | KVA Code                                 | J                         | Starting Current      |              | 47.9 A |
| Service Factor (S.F.)  |    | 1.15         |                                          | No-load Current           |                       | 2.91 A       |        |
| NEMA Nom. Eff.         |    | 89.5         | Power Factor                             | 81                        | Line-line Res. @ 25°C |              | 2.34 Ω |
| Rating - Duty          |    | 40C AMB-CONT |                                          | Temp. Rise @ Rated Load   |                       | 75°C         |        |
| S.F. Amps              |    |              |                                          | Temp. Rise @ S.F. Load    |                       | 91°C         |        |
|                        |    |              |                                          | Locked-rotor Power Factor |                       | 39           |        |
|                        |    |              |                                          | Rotor inertia             |                       | 0.428 lb-ft² |        |

**Load Characteristics 460 V, 60 Hz, 5 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 42   | 64   | 75   | 90   | 83   | 84   | 86   |
| Efficiency      | 86.7 | 90.5 | 90.8 | 89.3 | 88.4 | 86.6 | 88.8 |
| Speed           | 1788 | 1776 | 1763 | 1748 | 1732 | 1714 | 1738 |
| Line amperes    | 3.27 | 4.1  | 5.2  | 6.53 | 8.02 | 9.69 | 7.42 |

ABB Motors and Mechanical Inc.

WINDING # 36WGS953

Typical performance - not guaranteed values.

5 HP 3 PH 60 HZ 1750 RPM 460 V 3646M

TORQUES (LB-FT): PO=57.4 PU=28.9 LR=32.3 LRA=47.9





