**NIDEC MOTOR CORPORATION**
8050 WEST FLORISSANT AVE.
ST. LOUIS, MO 63136

**DATE:** 2/22/2017

**P.O. NO.:** DN77
**Order/Line NO.:** 21847 MN 100

**TO:**

**Model Number:** DN77
**Catalog Number:**
Horiz. XP Premium Eff. Config.
CONF,MOTOR,HORIZ XP PRE EFF

**REVISIONS:**
(NONE)

**ALL DOCUMENTS HEREIN ARE CONSIDERED CERTIFIED BY NIDEC MOTOR CORPORATION.**
**THANK YOU FOR YOUR ORDER AND THE OPPORTUNITY TO SERVE YOU.**

**Features:**

```
Horsepower ..............  00040.00 ~ KW: 29.84
Enclosure ...............  TEFC
Poles ...................  06 ~ RPM: 1200
Frame Size ..............  364~T
Phase/Frequency/Voltage..  3~060~230/460 ~ Random Wound
Service Factor ..........  1.15
Insulation Class ........  Class "F" ~ Insulife 2000
Altitude In Feet (Max) ..  3300 Ft.(1000 M)
Ambient In Degree C (Max)  +40 C
Assembly Position .......  "F-1" Assembly Position
Efficiency Class ........  Premium Efficiency
Application .............  Unknown
Customer Part Number ....
Hazardous Location Info:
Division 1 ~ Class I ~ Group D
Class II N/A ~ Group N/A ~ T2B Temp Code
"AK" Dimension (Inches).. NA
Temperature Rise (Sine Wave): "B" Rise @ 1.0 SF (Resist)
Starting Method .........  Direct-On-Line Start
Duty Cycle ..............  Continuous Duty
Efficiency Value ........  94.1 % ~ Typical
Load Inertia (lb-ft2): NEMA ~ NEMA Inertia: 503.00 ~ 1.00
Number Of Starts Per Hour: NEMA
Motor Type Code .........  LCE
Rotor Inertia (LB-FT²)        20.6 LB-FT²
Qty. of Bearings PE (Shaft)   1
Qty. of Bearings SE (OPP)     1
Bearing Number PE (Shaft)     6313-J/C3
Bearing Number SE (OPP)       6212-J/C3
```

Nidec trademarks followed by the ® symbol are registered with the U.S. Patent and Trademark Office.

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**Accessories:**
Corro-Duty
.
Standard Leadtime: NA
Est. Weight (lbs ea): 725 ~ F.O.B.:
PRIMARY GROUND
LOCATED IN MAIN
CONDUIT BOX

**USE THE DATA PROVIDED BELOW TO SELECT THE APPROPRIATE DIMENSION PRINT**

| | |
|---|---|
| **Horsepower** | 40 |
| **Pole(s)** | 06 |
| **Voltage(s)** | 460-230 |
| **Frame Size** | 364T |
| **Shaft U Diameter** | 2.375 |
| **Outlet Box AF** | 4.56 |
| **Outlet Box AA** | 3.00 |

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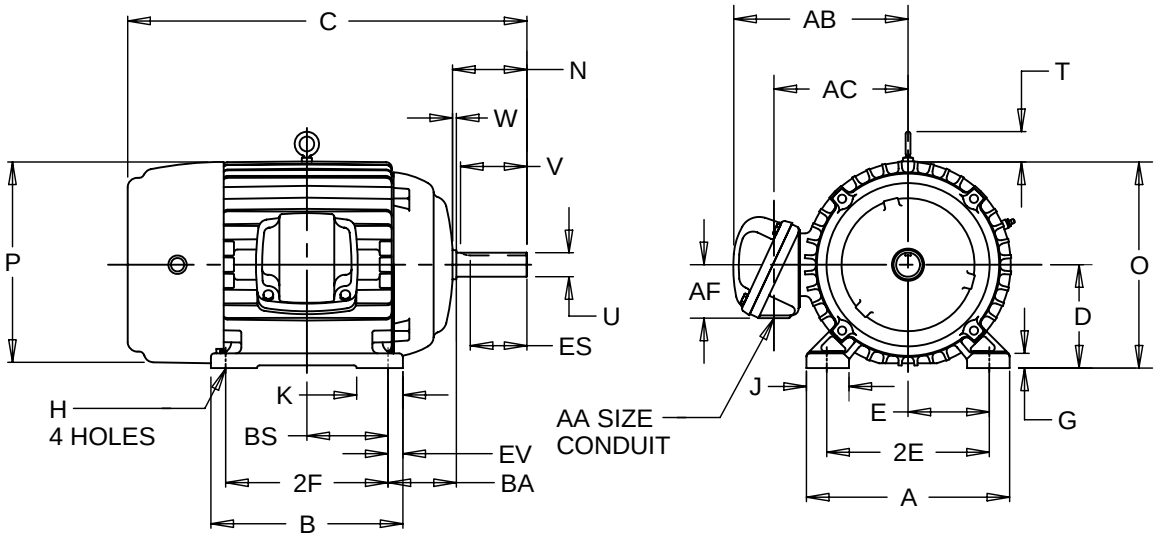
| EFFECTIVE: 04-APR-11 | HORIZONTAL MOTORS<br>TEFC - EXPLOSION PROOF<br>FRAME: 364, 365T<br>BASIC TYPE: LC, NC | PRINT: 07-2732 |
|---|---|---|
| SUPERSEDES: 20-OCT-08 | | SHEET: 1 OF 1 |




ALL DIMENSIONS ARE IN INCHES AND MILLIMETERS

| | UNITS | A | B | C | D -.06 | E | 2E ±.03 | G | H +.05 | J | K | N |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | IN | 17.75 | 15.25 | 33.06 | 9.00 | 7.00 | 14.00 | 1.25 | .66 | 3.75 | 4.38 | 6.31 |
| | MM | 451 | 387 | 840 | 229 | 178 | 356 | 32 | 17 | 95 | 111 | 160 |

| | UNITS | O | P [2] | T | U -.001 | V MIN | W | AA | AB | AC | AF | BA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | IN | 18.28 | 18.56 | 2.50 | 2.375 | 5.63 | .44 | 3.00 NPT | 17.53 | 12.50 | 4.56 | 5.88 |
| | MM | 464 | 472 | 64 | 60.33 | 143 | 11 | | 445 | 318 | 116 | 149 |

| | UNITS | BS | ES MIN | EV | SQ KEY |
|---|---|---|---|---|---|
| | IN | 6.13 | 4.28 | 1.50 | .625 |
| | MM | 156 | 109 | 38 | 15.88 |

| | FRAME | UNITS | 2F ±.03 |
|---|---|---|---|
| | 364T | IN | 11.25 |
| | | MM | 286 |
| | 365T | IN | 12.25 |
| | | MM | 311 |

1: ALL ROUGH CASTING DIMENSIONS MAY VARY BY .25" DUE TO CASTING AND/OR FABRICATION VARIATIONS.
2: LARGEST MOTOR WIDTH.
3: TOLERANCES SHOWN ARE IN INCHES ONLY.

4: STANDARD ASSEMBLY POSITION F-1 IS SHOWN F-2 IS PROVIDED WHEN SPECIFIED. CONDUIT OPENINGS MAY BE LOCATED IN STEPS OF 90 DEGREES REGARDLESS OF LOCATION. STANDARD AS SHOWN WITH CONDUIT OPENING DOWN.



**Nidec Motor Corporation**
**St. Louis, Missouri**

INFORMATION DISCLOSED ON THIS DOCUMENT IS CONSIDERED PROPRIETARY AND SHALL NOT BE REPRODUCED OR DISCLOSED WITHOUT WRITTEN CONSENT OF NIDEC MOTOR CORPORATION

| ISSUED BY | ECO 46275-00 |
|---|---|
| R. KING | |
| APPROVED BY | |
| K. POTTER | |

IHP_DP_NMCA (MAR-2011) SOLIDEDGE

# NAMEPLATE DATA

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CATALOG NUMBER: | | | | NAMEPLATE PART #: | 2022000-002 | | |
| MODEL | DN77 | FR | 364T | TYPE | LCE | ENCL | TEFC |
| SHAFT END BRG | 6313-J/C3 - QTY 1 | | | OPP END BRG | 6212-J/C3 - QTY 1 | | |
| PH | 3 | MAX AMB | 40 C | ID# | | | |
| INSUL CLASS | F | Asm. Pos. | F1 | DUTY | CONT | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| HP | 40 | | RPM | 1190 | | HP | | RPM | |
| VOLTS | 460 | 230 | | | | VOLTS | | | |
| FL AMPS | 46.0 | 92.0 | | | | FL AMPS | | | |
| SF AMPS | 54.0 | 107.0 | | | | SF AMPS | | | |
| SF | 1.15 | DESIGN | B | CODE | G | SF | | DESIGN | CODE |
| NEMA NOM EFFICIENCY | 94.1 | NOM PF | 86.2 | KiloWatt | 29.8 | NEMA NOM EFFICIENCY | | NOM PF | |
| GUARANTEED EFFICIENCY | 93.0 | MAX KVAR | 7.8 | HZ | 60 | GUARANTEED EFFICIENCY | | MAX KVAR | HZ |

**HAZARDOUS LOCATION DATA (IF APPLICABLE):**

| | | | | | |
|---|---|---|---|---|---|
| DIVISION | 1 | CLASS I | I | GROUP I | D |
| TEMP CODE | T2B | CLASS II | | GROUP II | |

**VFD DATA (IF APPLICABLE):**

| | | | |
|---|---|---|---|
| VOLTS | | | |
| AMPS | | | |
| TORQUE 1 | | TORQUE 2 | |
| VFD LOAD TYPE 1 | | VFD LOAD TYPE 2 | |
| VFD HERTZ RANGE 1 | | VFD HERTZ RANGE 2 | |
| VFD SPEED RANGE 1 | | VFD SPEED RANGE 2 | |
| SERVICE FACTOR | | FL SLIP | |
| NO. POLES | 6 | MAGNETIZING AMPS | 11.5 |
| VECTOR MAX RPM | | Encoder PPR | |
| Radians / Seconds | | Encoder Volts | |

**TEAO DATA (IF APPLICABLE):**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| HP (AIR OVER) | | HP (AIR OVER M/S) | | RPM (AIR OVER) | | RPM (AIR OVER M/S) | |
| FPM AIR VELOCITY | | FPM AIR VELOCITY M/S | | FPM AIR VELOCITY SEC | | | |

**ADDITIONAL NAMEPLATE DATA:**

| | | | |
|---|---|---|---|
| Decal / Plate | WD=158803 | Customer PN | |
| Notes | | Non Rev Ratchet | |
| Max Temp Rise | 80C RISE/RES@1.00SF | OPP/Upper Oil Cap | GREASE |
| Thermal (WDG) | | SHAFT/Lower Oil Cap | GREASE |
| Altitude | | | |
| Regulatory Notes | | Regulatory Compliance | |
| COS | | Marine Duty | |
| Balance | | Arctic Duty | |
| 3/4 Load Eff. | 94.8 | Inrush Limit | |
| Motor Weight (LBS) | 329.15 KG | Direction of Rotation | |
| Sound Level | | Special Note 1 | |
| Vertical Thrust (LBS) | | Special Note 2 | |
| Thrust Percentage | | Special Note 3 | |
| Bearing Life | | Special Note 4 | |
| Starting Method | | Special Note 5 | |
| Number of Starts | | Special Note 6 | |
| 200/208V 60Hz Max Amps | | SH Max. Temp. | |
| 190V 50 hz Max Amps | | SH Voltage | |
| 380V 50 Hz Max Amps | | SH Watts | |
| NEMA Inertia | | Load Inertia | |
| Sumpheater Voltage | | Sumpheater Wattage | |
| Special Accessory Note 1 | | Special Accessory Note 16 | |
| Special Accessory Note 2 | | Special Accessory Note 17 | |
| Special Accessory Note 3 | | Special Accessory Note 18 | |
| Special Accessory Note 4 | | Special Accessory Note 19 | |
| Special Accessory Note 5 | | Special Accessory Note 20 | |
| Special Accessory Note 6 | | Special Accessory Note 21 | |
| Special Accessory Note 7 | | Special Accessory Note 22 | |
| Special Accessory Note 8 | | Special Accessory Note 23 | |
| Special Accessory Note 9 | | Special Accessory Note 24 | |
| Special Accessory Note 10 | | Special Accessory Note 25 | |
| Special Accessory Note 11 | | Special Accessory Note 26 | |
| Special Accessory Note 12 | | Special Accessory Note 27 | |
| Special Accessory Note 13 | | Special Accessory Note 28 | |
| Special Accessory Note 14 | | Special Accessory Note 29 | |
| Special Accessory Note 15 | | Special Accessory Note 30 | |
| Heater in C/B Voltage | | Heater in C/B Watts | |
| Zone 2 Group | | Division 2 Service Factor | |

**NIDEC MOTOR CORPORATION**

ST. LOUIS, MO

TYPICAL NAMEPLATE DATA
ACTUAL MOTOR NAMEPLATE LAYOUT MAY VARY
SOME FIELDS MAY BE OMITTED

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# MOTOR PERFORMANCE

| MODEL NO. | CATALOG NO. | PHASE | TYPE | FRAME |
|---|---|---|---|---|
| DN77 | NA | 3 | LCE | 364T |

| ORDER NO. | 21847 | LINE NO. | |
|---|---|---|---|

| | | |
|---|---|---|
| MPI: | 141789 | 141790 |
| HP: | 40 | 40 |
| POLES: | 6 | 6 |
| VOLTS: | 460 | 230 |
| HZ: | 60 | 60 |
| SERVICE FACTOR: | 1.15 | 1.15 |
| EFFICIENCY (%): | | |
| S.F. | 93.5 | 93.5 |
| FULL | 94.1 | 94.1 |
| 3/4 | 94.8 | 94.8 |
| 1/2 | 94.7 | 94.7 |
| 1/4 | 92.3 | 92.3 |
| POWER FACTOR (%): | | |
| S.F. | 86 | 86 |
| FULL | 86.2 | 86.2 |
| 3/4 | 85.1 | 85.1 |
| 1/2 | 80.1 | 80.1 |
| 1/4 | 63.7 | 63.7 |
| NO LOAD | 5.7 | 5.7 |
| LOCKED ROTOR | 33.8 | 33.8 |
| AMPS: | | |
| S.F. | 54 | 107 |
| FULL | 46 | 92 |
| 3/4 | 35 | 70 |
| 1/2 | 24.7 | 49 |
| 1/4 | 15.9 | 32 |
| NO LOAD | 11.5 | 23.1 |
| LOCKED ROTOR | 290 | 580 |
| NEMA CODE LETTER | G | G |
| NEMA DESIGN LETTER | B | B |
| FULL LOAD RPM | 1190 | 1190 |
| NEMA NOMINAL / EFFICIENCY (%) | 94.1 | 94.1 |
| GUARANTEED EFFICIENCY (%) | 93 | 93 |
| MAX KVAR | 7.8 | 7.8 |
| AMBIENT (°C) | 40 | 40 |
| ALTITUDE (FASL) | 3300 | 3300 |
| SAFE STALL TIME-HOT (SEC) | 30 | 30 |
| SOUND PRESSURE (DBA @ 1M) | 72 | 72 |
| TORQUES: | | |
| BREAKDOWN{% F.L.} | 218 | 218 |
| LOCKED ROTOR{% F.L.} | 151 | 151 |
| FULL LOAD{LB-FT} | 176.7 | 176.7 |

NEMA Nominal and Guaranteed Efficiencies are up to 3,300 feet above sea level and 25 ° C ambient

The Above Data Is Typical, Sinewave Power Unless Noted Otherwise

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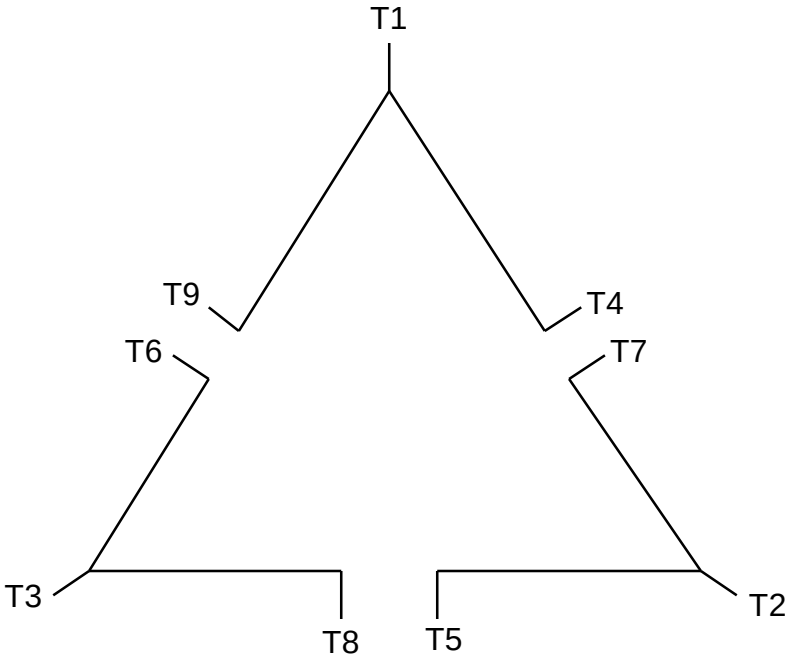
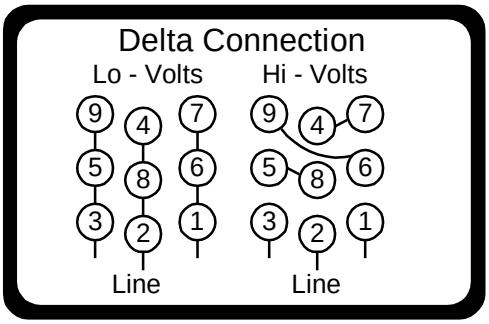
# A109145

## Motor Wiring Diagram

### 9 Lead, Dual Voltage (DELTA Conn.)




To reverse direction of rotation interchange connections L1 and L2.

Each lead may have one or more cables comprising that lead.
In such case each cable will be marked with the appropriate lead number.

*Connection Plate: A109145*
*Connection Decal: 344122*