ABB BALDOR RELIANCE

# Customer information packet

## EM4406TS-4

150HP, 1785RPM, 3PH, 60HZ, 445TS, A4488M, TEFC
Class - None
Division - Not Applicable

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## Specifications

| | |
|---|---|
| **Enclosure** | TEFC |
| **Frame** | 445TS |
| **Frame Material** | Iron |
| **Frequency** | 60.00 Hz |
| **Haz Area Class and Group** | None |
| **Haz Area Division** | Not Applicable |
| **Motor Letter Type** | Three Phase |
| **Output @ Frequency** | 150.000 HP @ 60 HZ |
| **Phase** | 3 |
| **Synchronous Speed @ Frequency** | 1800 RPM @ 60 HZ |
| **Voltage @ Frequency** | 460.0 V @ 60 HZ |
| **Agency Approvals** | CCSAUSEEV |
| | CURUSEEV |
| **Ambient Temperature** | 40 °C |
| **Auxiliary Box** | NO AUXILLARY BOX |
| **Base Indicator** | Rigid |
| **Bearing Grease Type** | Polyrex EM (-20F +300F) |
| **Current @ Voltage** | 169.000 A @ 460.0 V |
| **Design Code** | B |
| **Drip Cover** | No Drip Cover |
| **Duty Rating** | CONT |
| **Efficiency @ 100% Load** | 95.8 % |
| **Enclosure Modification** | Severe Duty Features |
| **Feedback Device** | NO FEEDBACK |
| **Heater Indicator** | No Heater |
| **High Voltage Full Load Amps** | 169.0 a |
| **Insulation Class** | F |
| **Inverter Code** | Inverter Ready |
| **KVA Code** | F |
| **Lifting Lugs** | Standard Lifting Lugs |
| **Motor Lead Quantity/Wire Size** | 3 @ 1/0 AWG |
| **Motor Standards** | NEMA |

## Part Detail

| | |
|---|---|
| **Revision** | S |
| **Type** | AC |
| **Mech. spec.** | |
| **Base** | |
| **Status** | PRD/A |
| **Elec. spec.** | A44WG3335 |
| **Layout** | 617435-049 |
| **Eff. date** | 10-06-2025 |
| **CD Diagram** | 416820-036 |
| **Poles** | 04 |
| **Leads** | 3#1/0 Y |
| **Proprietary** | False |
| **Created date** | 08-13-2012 |

| | |
|---|---|
| **Motor Type** | A4488M |
| **Mounting Arrangement** | F1 |
| **Number of Poles** | 4 |
| **Overall Length** | 41.08 IN |
| **Power Factor** | 86 |
| **Product Family** | Other |
| **Pulley End Bearing Type** | Ball |
| **Pulley Face Code** | Standard |
| **Service Factor** | 1.15 |
| **Shaft Diameter** | 2.375 IN |
| **Shaft Ground Indicator** | No Shaft Grounding |
| **Shaft Rotation** | Reversible |
| **Shaft Slinger Indicator** | No Slinger |
| **Speed** | 1785 rpm |
| **Speed Code** | Single Speed |
| **Starting Method** | Direct on line |
| **Thermal Device - Bearing** | None |
| **Thermal Device - Winding** | None |

**Nameplate**

**NP2349L**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SPEC NO.** | P44G3909 | | **CAT.NO.** | EM4406TS-4 | | | | | **FRAME** | 445TS | | |
| **HP** | 150 | **VOLTS** | 460 | | **PHASE** | 3 | **DESIGN** | B | **TYPE** | P | | |
| **RPM** | 1785 | **AMPS** | 169 | | **HZ** | 60 | **AMB** | 40 | **SF** | 1.15 | | |
| **DRIVE END BEARING** | 90BC03J30X | | **DUTY** | CONT | | | **INSUL.CLASS** | F | | | | |
| **OPP D.E. BEARING** | 90BC03J30X | | **ENCL** | TEFC | **CODE** | F | | | | | | |
| **SER.NO.** | | | **POWER FACTOR** | 86 | | | **NEMA-NOM-EFFICIENCY** | 95.8 | | | | |
| | | | | | | | **MAX CORR KVAR** | 30.0 | **GUARANTEED EFFICIENCY** | 95.0 | | |
| | | | | | | | **NEMA NOM/CSA QUOTED EFF** | | | | | |
| | | | | | | | | | **MOTOR WEIGHT** | 2071 | | |

**Parts List**

| Part number | Description | Quantity |
|---|---|---|
| SA249403 | SA P44G3909 | 1.000 ea |
| RA236268 | RA P44G3909 | 1.000 ea |
| 421948051 | LABEL, MYLAR | 1.000 ea |
| 000613006PU | N/P (RELEASE QTY 10,000) UL CSA LABEL | 1.000 ea |
| 000692000FF | N/P | 1.000 ea |
| 000692000VD | LABEL WARNING | 1.000 ea |
| NP2349L | SUPER-E ,SS, CURUS EEV, CC, LASER | 1.000 ea |
| 412118006A | DRAIN | 2.000 ea |
| 089490099A | G28 BRKT 089490098WCA KB | 1.000 ea |
| 415072001B | CLAMP | 1.000 ea |
| 083199126RA | G28 MOLDED FAN COVER W/BAFFLE ASSEMBLY | 1.000 ea |
| 034180014DA | KEY 1/4X1/4X1-3/4 L | 1.000 ea |
| 078548001R | FAN KB 234/150 (84) 400 | 1.000 ea |
| 004824015A | GREASE POLYREX EM | 1.160 lb |
| 032018020FK | HHCS 3/4-10X2-1/2 PLTD. | 4.000 ea |
| 032018008CK | HHCS 3/8-16X1L PLATED | 4.000 ea |
| 032018030DK | HHCS 1/2-13X3-3/4 PLTD. | 3.000 ea |
| 032018030DK | HHCS 1/2-13X3-3/4 PLTD. | 3.000 ea |
| 415096002A | CPLG 1/8 HEX TYPE | 1.000 ea |
| 410700004A | WSHR | 1.000 ea |
| 034017014AB | LCKW 3/8 STD. PLATED | 4.000 ea |
| 034530064AB | P/NIP 1/8 X 8" L Pipe Nipple | 1.000 ea |
| 089490099A | G28 BRKT 089490098WCA KB | 1.000 ea |
| 032018020FK | HHCS 3/4-10X2-1/2 PLTD. | 4.000 ea |
| 702658001A | CONDUIT BOX, E440 | 1.000 ea |
| 702658002A | +C/BOX CVR, PAINTED 440 | 1.000 ea |
| 415915007G | GASK, LAC | 1.000 ft |
| 406056008A | GASKET, TERBD 440 | 1.000 ea |
| 418153001A | GASK 440 | 1.000 ea |
| 032018008DK | HHCS 1/2-13X1 PLATED | 4.000 ea |
| 033512006LB | HHTTS 1/4-20X3/4 PLTD. | 8.000 ea |

| | | |
|---|---|---|
| 406099000A | PLUG - FAN COVER 320-440 | 1.000 ea |
| 415000115H | T/LUG #2AWG-4/0AWG | 1.000 ea |
| 032018005DL | 1/2-13 X 5/8 SILICON BRONZE HHCS | 1.000 ea |
| MG1025Y17 | WILKOFAST, 789.701, SUPER E PEARL GOLD | 0.250 ga |
| 033775004EA | DRSCR #6-1/4 304 S.S. | 2.000 ea |
| 034180024HA | KEY 5/8X5/8X3 L | 1.000 ea |
| 035000001A | ALFTG 1/8" 1610-BL | 1.000 ea |
| 034690002AB | PPLG 1/4" PLTD. | 1.000 ea |
| 034690005AB | PPLG 3/4 PLATED | 2.000 ea |
| 032018004BK | HHCS 5/16-18X1/2 PLATED | 3.000 ea |
| 035000001A | ALFTG 1/8" 1610-BL | 1.000 ea |
| 415096002A | CPLG 1/8 HEX TYPE | 1.000 ea |
| 702623013A | THERMAL BARRIER -- G28 -- BRACKET MTD | 1.000 ea |
| 034017013AB | LCKW 5/16 STD. PLATED | 3.000 ea |
| 034690002AB | PPLG 1/4" PLTD. | 1.000 ea |
| 034530044AB | P/NIP 1/8X5-1/2L GALV. | 1.000 ea |
| 032620016LA | SOCKET SET SCREW-449 | 3.000 ea |
| PK5004A09 | BASE 48 X 39-1/4 WITH STACKED 2X4 RUUNER | 1.000 ea |

**Accessories**

| Part number | Description | Multiplier |
|---|---|---|
| 089490106A | G28 C-FACE BRKT MACH-6318 089490105WCA | P1 |
| 089490110A | D-FLANGE BRKT, G28 089490109WCA | P1 |

| S/O | FRAME | HP | TYPE | PHASE/ HERTZ | RPM | VOLTS |
|---|---|---|---|---|---|---|
| | 445T | 150 | P | 3/60 | 1785 | 460 |

| AMPS | DUTY | AMB °C/ INSUL | S.F. | NEMA DESIGN | CODE LETTER | ENCLOSURE |
|---|---|---|---|---|---|---|
| 169 | CONT | 40/F | 1.15 | B | F | TEFC |

| E/S | ROTOR | TEST S.O. | TEST DATE | STATOR RES. @25 °C OHMS (BETWEEN LINES) |
|---|---|---|---|---|
| 498808 | 418143053AE | --- | --- | .0298 |

**PERFORMANCE**

| LOAD | HP | AMPERES | RPM | % POWER FACTOR | % EFFICIENCY |
|---|---|---|---|---|---|
| NO LOAD | 0 | 48.9 | 1800 | 4.26 | 0 |
| 1/4 | 37.6 | 69.1 | 1796 | 54.3 | 93.6 |
| 2/4 | 75.0 | 97.1 | 1792 | 75.6 | 95.7 |
| 3/4 | 112 | 131 | 1788 | 83.4 | 96.0 |
| 4/4 | 150 | 169 | 1784 | 86.5 | 95.8 |
| 5/4 | 188 | 210 | 1779 | 87.6 | 95.3 |
| | | | | | |

**SPEED TORQUE**

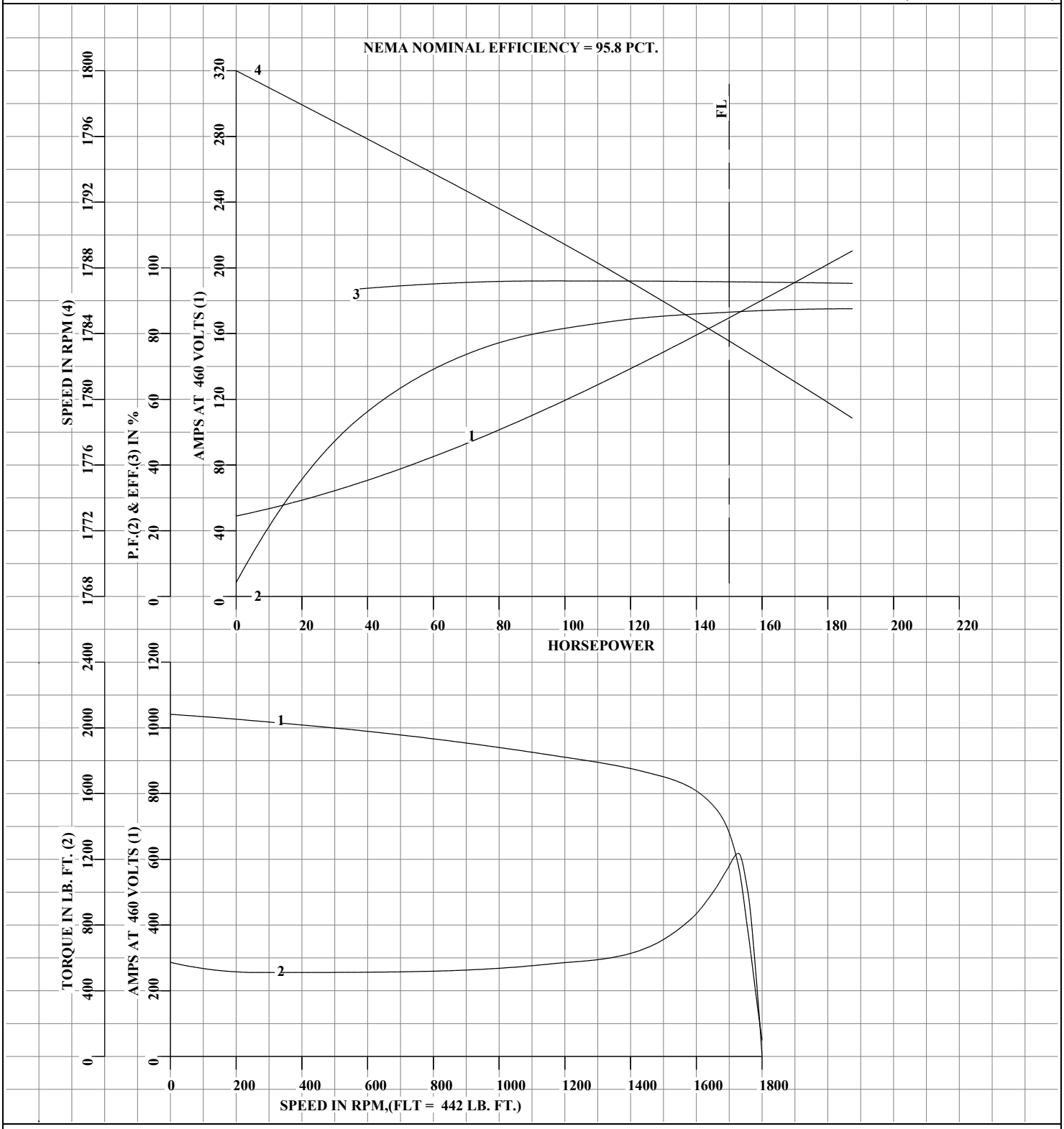
| | RPM | TORQUE % FULL LOAD | TORQUE LB.-FT. | AMPERES |
|---|---|---|---|---|
| LOCKED ROTOR | 0 | 130 | 572 | 1041 |
| PULL UP | 270 | 116 | 511 | 1020 |
| BREAKDOWN | 1729 | 280 | 1237 | 579 |
| FULL LOAD | 1784 | 100 | 442 | 169 |

**AMPERES SHOWN FOR 460 VOLT CONNECTION. IF OTHER CONNECTIONS ARE AVAILABLE, THE AMPERES WILL VARY INVERSELY WITH THE RATED VOLTAGE.**

**TYPICAL DATA**
**NEMA NOMINAL EFFICIENCY = 95.8 PCT.**

| | | | |
|---|---|---|---|
| ABB | DRAWN BY: C.B.ATANGANE<br>CHECKED BY: C.E.JAMISON<br>APPROVED BY: C.E.JAMISON<br>DATE: 10/16/23 | AC MOTOR PERFORMANCE DATA | A44WG3335-R001<br>DATE ISSUED 02/03/25 |

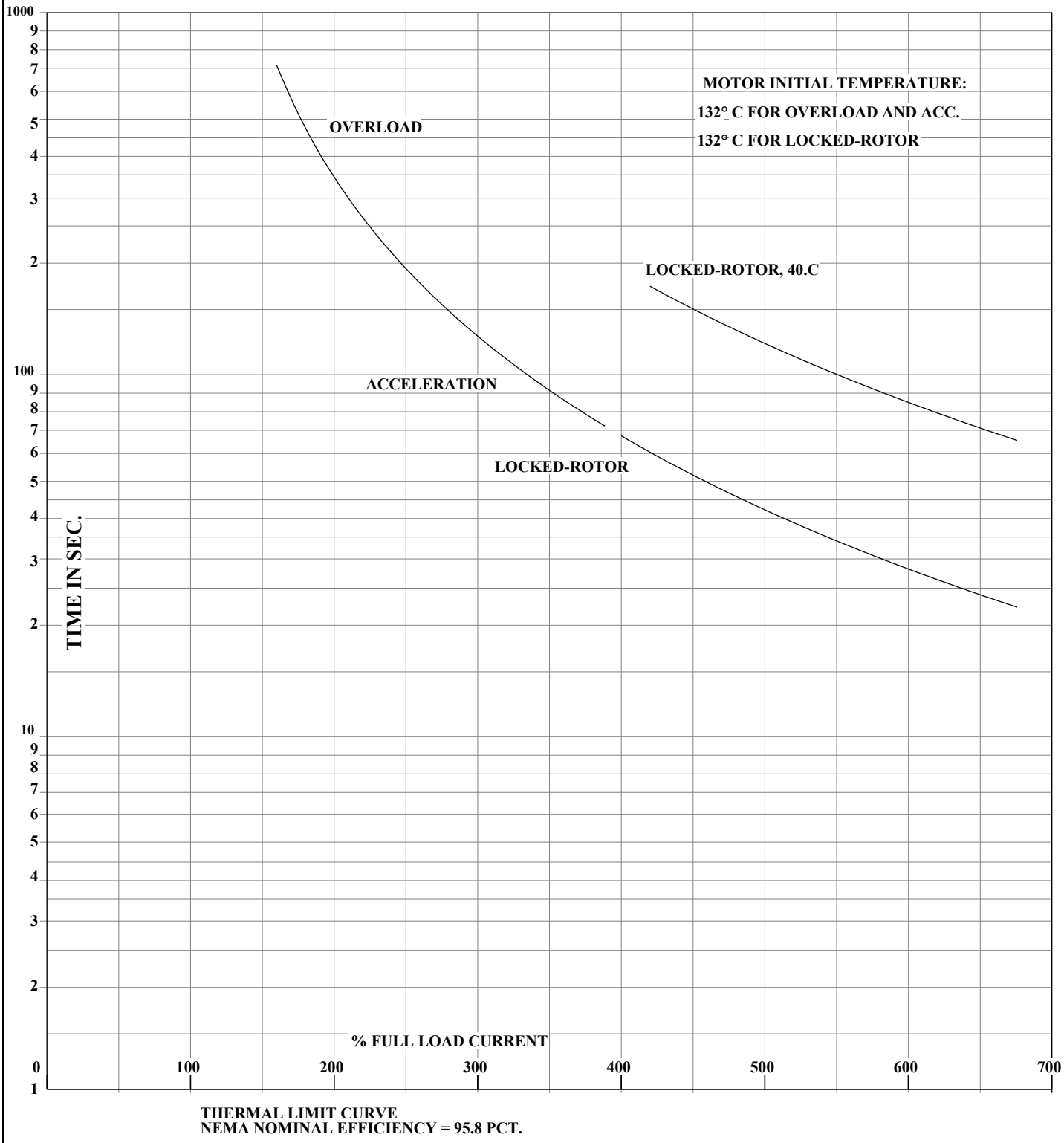
| | | | |
|---|---|---|---|
| FRAME 445T | RPM 1785 | S.F. 1.15 | ROTOR 418143053AE |
| HP 150 | VOLTS 460 | NEMA DESIGN B | TEST S.O. TYPICAL DATA |
| TYPE P | AMPS 169 | CODE LETTER F | TEST DATE --- |
| PHASE / HERTZ 3/60 | DUTY CONT | ENCLOSURE TEFC | STATOR RES. @ 25°C .0298 |
| | AMB °C / INSUL 40/F | E/S 498808 | OHMS (BETWEEN LINES) |




AMPERES SHOWN FOR 460 VOLT CONNECTION, IF OTHER VOLTAGE CONNECTIONS ARE AVAILABLE, THE AMPERES WILL VARY INVERSELY WITH THE RATED VOLTAGE.

| | | | |
|---|---|---|---|
| ABB | DRAWN BY: C.B.ATANGANE<br>CHECKED BY: C.E.JAMISON<br>APPROVED BY: C.E.JAMISON<br>DATE: 10/16/23 | AC MOTOR PERFORMANCE DATA | A44WG3335-R001<br>ISSUE DATE 02/03/25 |

| | | | |
|---|---|---|---|
| FRAME 445T | RPM 1785 | S.F. 1.15 | ROTOR 418143053AE |
| HP 150 | VOLTS 460 | NEMA DESIGN B | TEST S.O. TYPICAL DATA |
| TYPE P | AMPS 169 | CODE LETTER F | TEST DATE --- |
| PHASE / HERTZ 3/60 | DUTY CONT | ENCLOSURE TEFC | STATOR RES. @ 25°C .0298 |
| | AMB °C / INSUL 40/F | E/S 498808 | OHMS (BETWEEN LINES) |




THERMAL LIMIT CURVE
NEMA NOMINAL EFFICIENCY = 95.8 PCT.

AMPERES SHOWN FOR 460 VOLT CONNECTION, IF OTHER VOLTAGE CONNECTIONS ARE AVAILABLE, THE AMPERES WILL VARY INVERSELY WITH THE RATED VOLTAGE.

| | | | |
|---|---|---|---|
| ABB | DRAWN BY: C.B.ATANGANE<br>CHECKED BY: C.E.JAMISON<br>APPROVED BY: C.E.JAMISON<br>DATE: 10/16/23 | AC MOTOR PERFORMANCE DATA | A44WG3335-R001<br>ISSUE DATE 02/03/25 |

# DUTY MASTER ALTERNATING CURRENT MOTORS

617435-049

ENCLOSURE: TOTALLY ENCLOSED

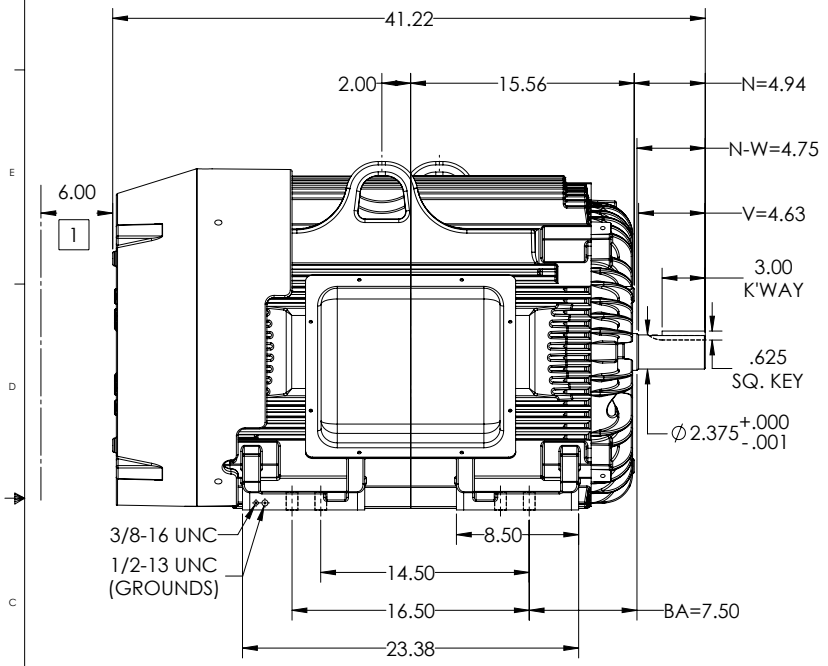
SQUIRREL-CAGE INDUCTION

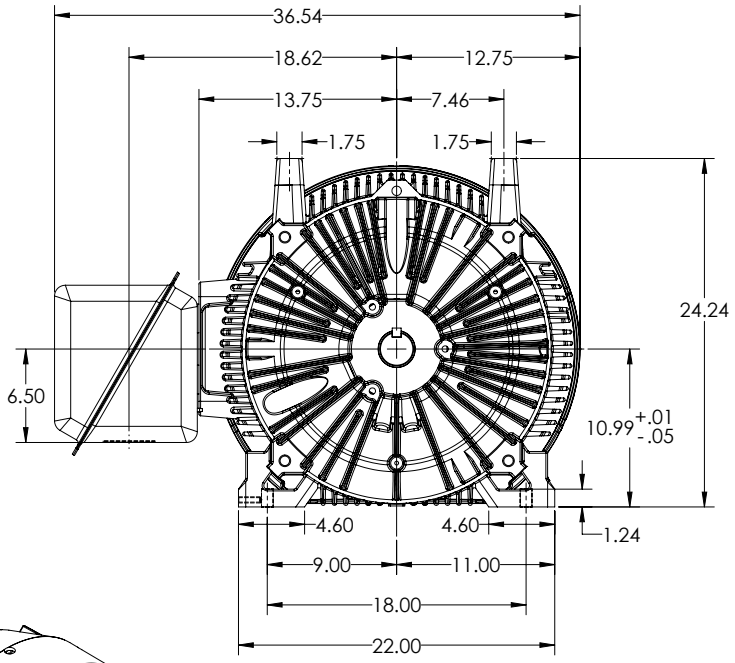
MOUNTING: FOOT, F-1 SIDE

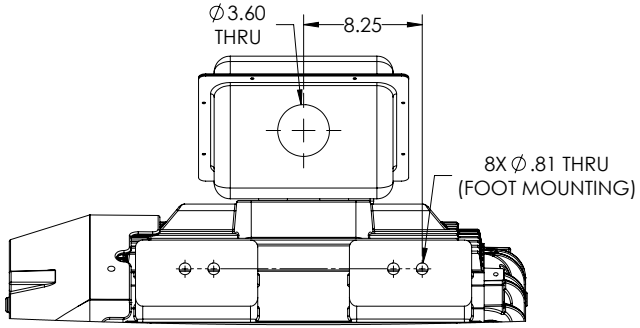
G445TS/G444TS FRAME MOUNTING HOLES

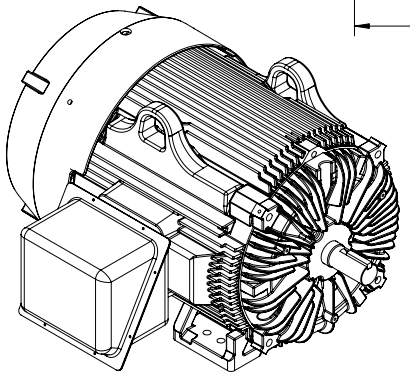
COOLING: FAN COOLED

STEEL CONDUIT BOX



DIMENSIONS ARE IN INCHES
WEIGHT (LBS): 2130, MOTOR WEIGHTS MAY VARY BY 15% DEPENDING ON RATING.
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT MOTOR PERFORMANCE IS SUITABLE IN THE APPLICATION.

SHEET NUMBER 1 OF 2

617435-049

1 OBSTRUCTION MUST NOT ENCROACH ON AIR INLET

IF MOUNTING CLEARANCE DETAILS ARE REQUIRED, CONSULT FACTORY.
MAX PERMISSIBLE SHAFT RUNOUT WHEN MEASURED AT END OF STANDARD SHAFT EXTENSION IS .003" T.I.R.

| | | | |
|---|---|---|---|
| REV. DESC: UPDATE DS QUALITY/ADD METRIC DS | | | |
| REV: A | VERSION: 01 | REVISED: 11:45:13 09/22/2021 | TDR: 000001177991 |
| MODEL NO. 617435-049 | | | REF: |
| BY: USJEDIL | Material: | | C |

BALDOR

G445/444TS TEFC FOOT F1/STEEL BOX

617435-049

# DUTY MASTER ALTERNATING CURRENT MOTORS

617435-049

ENCLOSURE: TOTALLY ENCLOSED

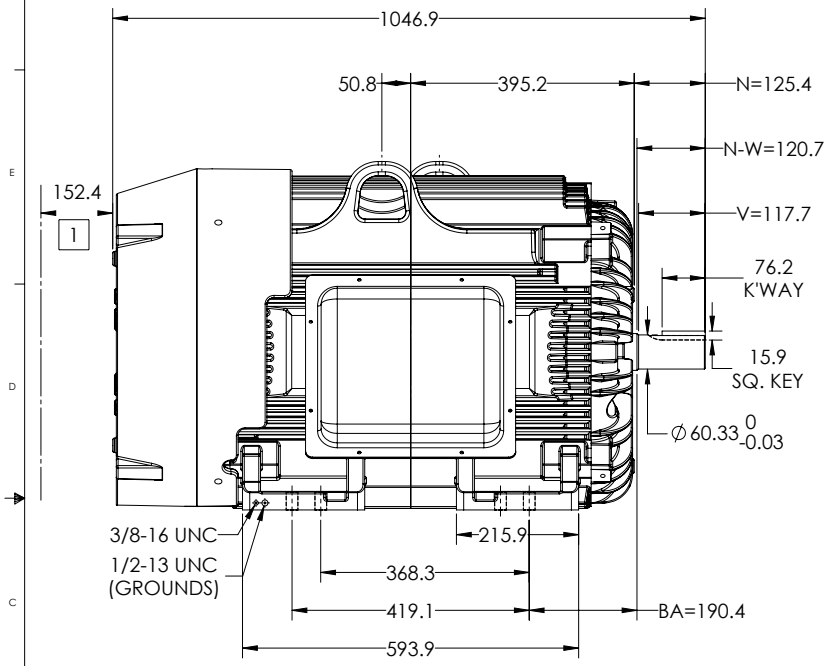
SQUIRREL-CAGE INDUCTION

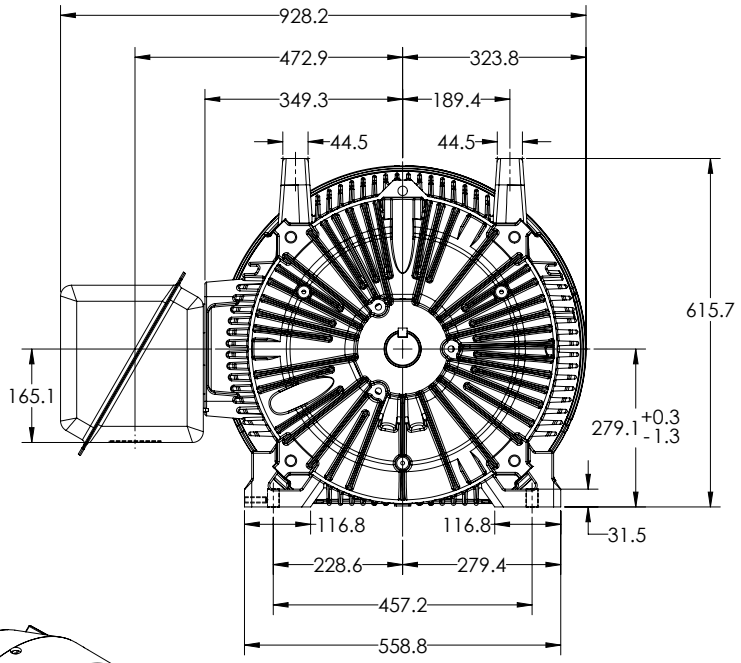
MOUNTING: FOOT, F-1 SIDE

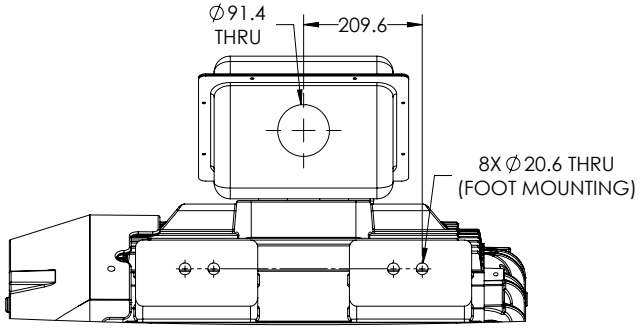
G445TS/G444TS FRAME MOUNTING HOLES

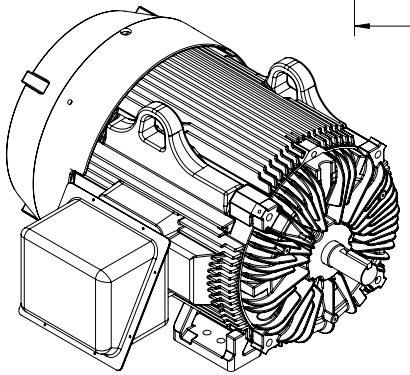
COOLING: FAN COOLED

STEEL CONDUIT BOX



DIMENSIONS ARE IN MILLIMETERS.
WEIGHT (KG): 966. MOTOR WEIGHTS MAY VARY BY 15% DEPENDING ON RATING.
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT MOTOR PERFORMANCE IS SUITABLE IN THE APPLICATION.

SHEET NUMBER 2 OF 2

617435-049

1 OBSTRUCTION MUST NOT ENCROACH ON AIR INLET

IF MOUNTING CLEARANCE DETAILS ARE REQUIRED, CONSULT FACTORY.
MAX PERMISSIBLE SHAFT RUNOUT WHEN MEASURED AT END OF STANDARD SHAFT EXTENSION IS .08 T.I.R.

| | | | |
|---|---|---|---|
| REV. DESC: UPDATE DS QUALITY/ADD METRIC DS | | | |
| REV: A | VERSION: 01 | REVISED: 11:45:13 09/22/2021 | TDR: 000001177991 |
| MODEL NO. 617435-049 | | | REF: |
| BY: USJEDIL | Material: | | C |

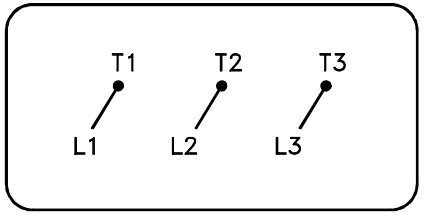
BALDOR

G445/444TS TEFC FOOT F1/STEEL BOX

617435-049

416820–036

# A–C MOTOR
# CONNECTION DIAGRAM
## STANDARD 3 LEAD CONNECTED




(N.P. 1575–BA)

416820–036

| | | | |
|---|---|---|---|
| REV. DESC: LOADED TO BUS, C/R 335225 | | | BALDOR |
| REV. LTR: – | VERSION: 00 | TDR: 000000538207 | |
| FILE: \MGA\00000\682 | | REVISED: 11:54:06 04/30/2010 | CONN DIAG – STANDARD 3 LEAD |
| MTL: – | | BY: RAGRA | SH 1 of 1 |