

# ABB BALDOR RELIANCE III

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## Customer information packet

### EM44156T-4

150HP, 1190RPM, 3PH, 60HZ, 447T, A44120M, TEFC

Class - None

Division - Not Applicable

**Specifications**

|                               |                         |
|-------------------------------|-------------------------|
| Enclosure                     | TEFC                    |
| Frame                         | 447T                    |
| 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 | 1200 RPM @ 60 HZ        |
| Voltage @ Frequency           | 460.0 V @ 60 HZ         |
| Agency Approvals              | CURUSEEV<br>CCSAUSEEV   |
| Ambient Temperature           | 40 °C                   |
| Auxiliary Box                 | NO AUXILLARY BOX        |
| Base Indicator                | Rigid                   |
| Bearing Grease Type           | Polyrex EM (-20F +300F) |
| Current @ Voltage             | 170.000 A @ 460.0 V     |
| Design Code                   | B                       |
| Drip Cover                    | No Drip Cover           |
| Duty Rating                   | CONT                    |
| Efficiency @ 100% Load        | 95.8 %                  |
| Feedback Device               | NO FEEDBACK             |
| Heater Indicator              | No Heater               |
| High Voltage Full Load Amps   | 170.0 a                 |
| Insulation Class              | F                       |
| Inverter Code                 | Inverter Ready          |
| KVA Code                      | F                       |
| Lifting Lugs                  | No Lifting Lugs         |
| Motor Lead Quantity/Wire Size | 6 @ 2 AWG               |
| Motor Standards               | NEMA                    |
| Motor Type                    | A44120M                 |

**Part Detail**

|              |            |
|--------------|------------|
| Revision     | N          |
| Type         | AC         |
| Mech. spec.  |            |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | A44WG1555  |
| Layout       | 617427-002 |
| Eff. date    | 09-04-2024 |
| CD Diagram   | 416820-008 |
| Poles        | 06         |
| Leads        | 6#2        |
| Proprietary  | False      |
| Created date | 08-14-2012 |

|                                 |                              |
|---------------------------------|------------------------------|
| <b>Mounting Arrangement</b>     | <b>F1</b>                    |
| <b>Number of Poles</b>          | <b>6</b>                     |
| <b>Overall Length</b>           | <b>48.24 IN</b>              |
| <b>Power Factor</b>             | <b>86</b>                    |
| <b>Pulley End Bearing Type</b>  | <b>Ball</b>                  |
| <b>Pulley Face Code</b>         | <b>Standard</b>              |
| <b>Service Factor</b>           | <b>1.15</b>                  |
| <b>Shaft Diameter</b>           | <b>3.375 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>Shaft Slinger</b>         |
| <b>Speed</b>                    | <b>1190 rpm</b>              |
| <b>Speed Code</b>               | <b>Single Speed</b>          |
| <b>Starting Method</b>          | <b>Wye Start - Delta Run</b> |
| <b>Thermal Device - Bearing</b> | <b>None</b>                  |
| <b>Thermal Device - Winding</b> | <b>None</b>                  |

**Nameplate**

| NP2349L           |            |       |  |              |       |            |                         |                     |      |                       |      |      |  |
|-------------------|------------|-------|--|--------------|-------|------------|-------------------------|---------------------|------|-----------------------|------|------|--|
| SPEC NO.          | P44G3910   |       |  | CAT.NO.      |       | EM44156T-4 |                         |                     |      | FRAME                 |      | 447T |  |
| HP                | 150        | VOLTS |  | 460          | PHASE |            | 3                       | DESIGN              |      | B                     | TYPE | P    |  |
| RPM               | 1190       | AMPS  |  | 170          | 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           |                     | 25.0 | GUARANTEED EFFICIENCY |      | 95.0 |  |
|                   |            |       |  |              |       |            | NEMA NOM/CSA QUOTED EFF |                     |      |                       |      |      |  |
|                   |            |       |  |              |       |            | MOTOR WEIGHT            |                     |      |                       |      |      |  |

**Accessories**

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

|                                                                                                                                    |  |  |       |  |  |     |                             |  |      |                                                                                                                             |  |                 |  |                                                             |      |  |                       |       |  |                                 |              |  |  |                |  |  |                                            |                                            |  |  |         |  |  |  |                |  |  |  |  |  |  |           |  |  |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------|--|--|-------|--|--|-----|-----------------------------|--|------|-----------------------------------------------------------------------------------------------------------------------------|--|-----------------|--|-------------------------------------------------------------|------|--|-----------------------|-------|--|---------------------------------|--------------|--|--|----------------|--|--|--------------------------------------------|--------------------------------------------|--|--|---------|--|--|--|----------------|--|--|--|--|--|--|-----------|--|--|--|--|--|--|
| ABB BALDOR<br>RELIANCE III                                                                                                         |  |  |       |  |  |     | CUSTOMER INFORMATION PACKET |  |      |                                                                                                                             |  |                 |  | EM44156T-4 - 150HP, 1190RPM, 3PH, 60HZ, 447T, A44120M, TEFC |      |  |                       |       |  |                                 |              |  |  |                |  |  |                                            |                                            |  |  |         |  |  |  |                |  |  |  |  |  |  |           |  |  |  |  |  |  |
| S/O                                                                                                                                |  |  | FRAME |  |  | HP  |                             |  | TYPE |                                                                                                                             |  | PHASE/<br>HERTZ |  |                                                             | RPM  |  |                       | VOLTS |  |                                 |              |  |  |                |  |  |                                            |                                            |  |  |         |  |  |  |                |  |  |  |  |  |  |           |  |  |  |  |  |  |
|                                                                                                                                    |  |  | 447T  |  |  | 150 |                             |  | P    |                                                                                                                             |  | 3/60            |  |                                                             | 1190 |  |                       | 460   |  |                                 |              |  |  |                |  |  |                                            |                                            |  |  |         |  |  |  |                |  |  |  |  |  |  |           |  |  |  |  |  |  |
| AMPS                                                                                                                               |  |  |       |  |  |     | DUTY                        |  |      |                                                                                                                             |  |                 |  | AMB °C/<br>INSUL                                            |      |  |                       |       |  |                                 | S.F.         |  |  |                |  |  |                                            | NEMA<br>DESIGN                             |  |  |         |  |  |  | CODE<br>LETTER |  |  |  |  |  |  | ENCLOSURE |  |  |  |  |  |  |
| 172                                                                                                                                |  |  |       |  |  |     | CONT                        |  |      |                                                                                                                             |  |                 |  | 40/F                                                        |      |  |                       |       |  |                                 | 1.15         |  |  |                |  |  |                                            | B                                          |  |  |         |  |  |  | G              |  |  |  |  |  |  | TEFC      |  |  |  |  |  |  |
| E/S                                                                                                                                |  |  |       |  |  |     | ROTOR                       |  |      |                                                                                                                             |  |                 |  | TEST<br>S.O.                                                |      |  |                       |       |  |                                 | TEST<br>DATE |  |  |                |  |  |                                            | STATOR RES. @25 °C<br>OHMS (BETWEEN LINES) |  |  |         |  |  |  |                |  |  |  |  |  |  |           |  |  |  |  |  |  |
| 833174                                                                                                                             |  |  |       |  |  |     | 418143080ME                 |  |      |                                                                                                                             |  |                 |  | ---                                                         |      |  |                       |       |  |                                 | ---          |  |  |                |  |  |                                            | .0324                                      |  |  |         |  |  |  |                |  |  |  |  |  |  |           |  |  |  |  |  |  |
| PERFORMANCE                                                                                                                        |  |  |       |  |  |     |                             |  |      |                                                                                                                             |  |                 |  |                                                             |      |  |                       |       |  |                                 |              |  |  |                |  |  |                                            |                                            |  |  |         |  |  |  |                |  |  |  |  |  |  |           |  |  |  |  |  |  |
| LOAD                                                                                                                               |  |  |       |  |  |     | HP                          |  |      |                                                                                                                             |  |                 |  | AMPERES                                                     |      |  |                       |       |  |                                 | RPM          |  |  |                |  |  |                                            | % POWER FACTOR                             |  |  |         |  |  |  | % EFFICIENCY   |  |  |  |  |  |  |           |  |  |  |  |  |  |
| NO LOAD                                                                                                                            |  |  |       |  |  |     | 0                           |  |      |                                                                                                                             |  |                 |  | 46.5                                                        |      |  |                       |       |  |                                 | 1200         |  |  |                |  |  |                                            | 3.43                                       |  |  |         |  |  |  | 0              |  |  |  |  |  |  |           |  |  |  |  |  |  |
| 1/4                                                                                                                                |  |  |       |  |  |     | 37.6                        |  |      |                                                                                                                             |  |                 |  | 70.2                                                        |      |  |                       |       |  |                                 | 1197         |  |  |                |  |  |                                            | 52.9                                       |  |  |         |  |  |  | 94.8           |  |  |  |  |  |  |           |  |  |  |  |  |  |
| 2/4                                                                                                                                |  |  |       |  |  |     | 75.1                        |  |      |                                                                                                                             |  |                 |  | 99.7                                                        |      |  |                       |       |  |                                 | 1194         |  |  |                |  |  |                                            | 73.3                                       |  |  |         |  |  |  | 96.2           |  |  |  |  |  |  |           |  |  |  |  |  |  |
| 3/4                                                                                                                                |  |  |       |  |  |     | 112                         |  |      |                                                                                                                             |  |                 |  | 135                                                         |      |  |                       |       |  |                                 | 1191         |  |  |                |  |  |                                            | 81.3                                       |  |  |         |  |  |  | 96.2           |  |  |  |  |  |  |           |  |  |  |  |  |  |
| 4/4                                                                                                                                |  |  |       |  |  |     | 150                         |  |      |                                                                                                                             |  |                 |  | 172                                                         |      |  |                       |       |  |                                 | 1188         |  |  |                |  |  |                                            | 85.2                                       |  |  |         |  |  |  | 95.8           |  |  |  |  |  |  |           |  |  |  |  |  |  |
| 5/4                                                                                                                                |  |  |       |  |  |     | 188                         |  |      |                                                                                                                             |  |                 |  | 212                                                         |      |  |                       |       |  |                                 | 1184         |  |  |                |  |  |                                            | 87.2                                       |  |  |         |  |  |  | 95.1           |  |  |  |  |  |  |           |  |  |  |  |  |  |
|                                                                                                                                    |  |  |       |  |  |     |                             |  |      |                                                                                                                             |  |                 |  |                                                             |      |  |                       |       |  |                                 |              |  |  |                |  |  |                                            |                                            |  |  |         |  |  |  |                |  |  |  |  |  |  |           |  |  |  |  |  |  |
| SPEED TORQUE                                                                                                                       |  |  |       |  |  |     |                             |  |      |                                                                                                                             |  |                 |  |                                                             |      |  |                       |       |  |                                 |              |  |  |                |  |  |                                            |                                            |  |  |         |  |  |  |                |  |  |  |  |  |  |           |  |  |  |  |  |  |
|                                                                                                                                    |  |  |       |  |  |     |                             |  |      | RPM                                                                                                                         |  |                 |  |                                                             |      |  | TORQUE<br>% FULL LOAD |       |  |                                 |              |  |  | TORQUE LB.-FT. |  |  |                                            |                                            |  |  | AMPERES |  |  |  |                |  |  |  |  |  |  |           |  |  |  |  |  |  |
| LOCKED ROTOR                                                                                                                       |  |  |       |  |  |     |                             |  |      | 0                                                                                                                           |  |                 |  |                                                             |      |  | 124                   |       |  |                                 |              |  |  | 819            |  |  |                                            |                                            |  |  | 1037    |  |  |  |                |  |  |  |  |  |  |           |  |  |  |  |  |  |
| PULL UP                                                                                                                            |  |  |       |  |  |     |                             |  |      | 180                                                                                                                         |  |                 |  |                                                             |      |  | 99.7                  |       |  |                                 |              |  |  | 660            |  |  |                                            |                                            |  |  | 1014    |  |  |  |                |  |  |  |  |  |  |           |  |  |  |  |  |  |
| BREAKDOWN                                                                                                                          |  |  |       |  |  |     |                             |  |      | 1149                                                                                                                        |  |                 |  |                                                             |      |  | 238                   |       |  |                                 |              |  |  | 1579           |  |  |                                            |                                            |  |  | 599     |  |  |  |                |  |  |  |  |  |  |           |  |  |  |  |  |  |
| FULL LOAD                                                                                                                          |  |  |       |  |  |     |                             |  |      | 1188                                                                                                                        |  |                 |  |                                                             |      |  | 100                   |       |  |                                 |              |  |  | 663            |  |  |                                            |                                            |  |  | 172     |  |  |  |                |  |  |  |  |  |  |           |  |  |  |  |  |  |
| AMPERES SHOWN FOR 460 VOLT CONNECTION. IF OTHER CONNECTIONS ARE AVAILABLE, THE AMPERES WILL VARY INVERSELY WITH THE RATED VOLTAGE. |  |  |       |  |  |     |                             |  |      |                                                                                                                             |  |                 |  |                                                             |      |  |                       |       |  |                                 |              |  |  |                |  |  |                                            |                                            |  |  |         |  |  |  |                |  |  |  |  |  |  |           |  |  |  |  |  |  |
| CALCULATED DATA<br>NEMA NOMINAL EFFICIENCY = 95.8 PCT.                                                                             |  |  |       |  |  |     |                             |  |      |                                                                                                                             |  |                 |  |                                                             |      |  |                       |       |  |                                 |              |  |  |                |  |  |                                            |                                            |  |  |         |  |  |  |                |  |  |  |  |  |  |           |  |  |  |  |  |  |
|                                                 |  |  |       |  |  |     |                             |  |      | DRAWN BY: <u>T.G.KELATI</u><br>CHECKED BY: <u>J.J.HARRISON</u><br>APPROVED BY: <u>T.G.KELATI</u><br>DATE: <u>06/14/2011</u> |  |                 |  |                                                             |      |  |                       |       |  | AC MOTOR<br>PERFORMANCE<br>DATA |              |  |  |                |  |  | A44WG1555-R001<br><br>DATE ISSUED 06/14/20 |                                            |  |  |         |  |  |  |                |  |  |  |  |  |  |           |  |  |  |  |  |  |
|                                                                                                                                    |  |  |       |  |  |     |                             |  |      |                                                                                                                             |  |                 |  |                                                             |      |  |                       |       |  |                                 |              |  |  |                |  |  |                                            |                                            |  |  |         |  |  |  |                |  |  |  |  |  |  |           |  |  |  |  |  |  |

FRAME 447T

RPM 1190

S.F. 1.15

ROTOR 418143080ME

HP 150

VOLTS 460

NEMA DESIGN B

TEST S.O. CALCULATED DATA

TYPE P

AMPS 172

CODE LETTER G

TEST DATE ---

PHASE / HERTZ 3/60

DUTY CONT

ENCLOSURE TEFC

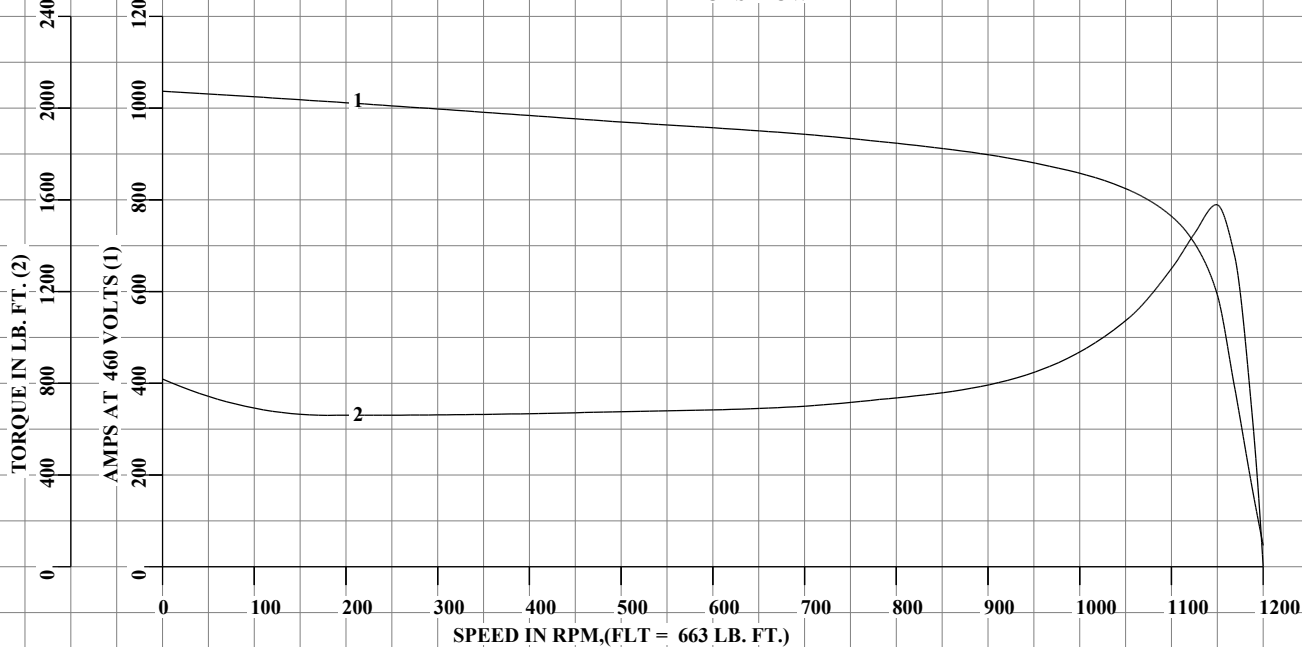
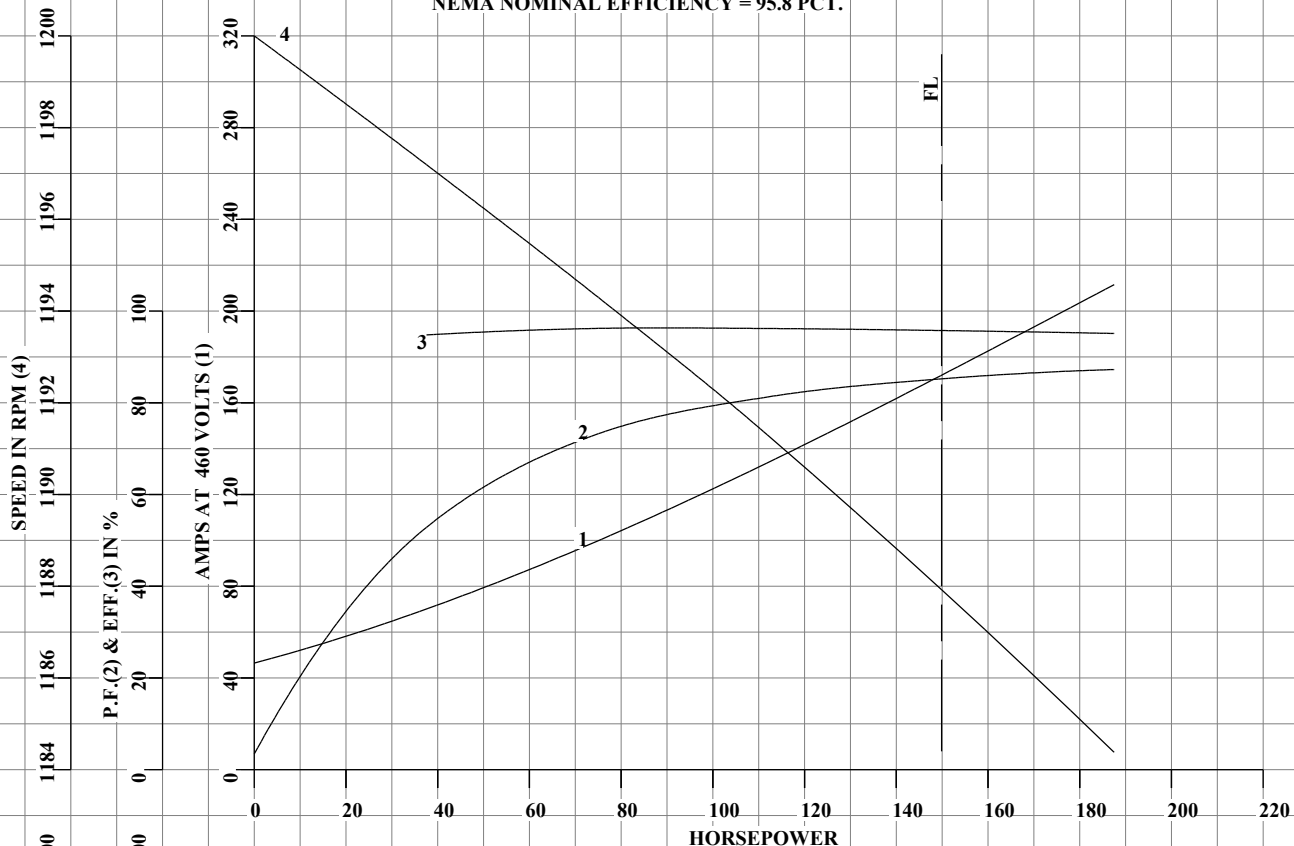
STATOR RES. @ 25°C .0324

AMB °C / INSUL 40/F

E/S 833174

OHMS (BETWEEN LINES)

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.



DRAWN BY: T.G.KELATI  
CHECKED BY: J.J.HARRISON  
APPROVED BY: T.G.KELATI  
DATE: 06/14/2011

AC MOTOR  
PERFORMANCE  
DATA

A44WG1555-R001

ISSUE DATE 06/14/2011

## DUTY MASTER ALTERNATING CURRENT MOTORS

### SQUIRREL-CAGE INDUCTION

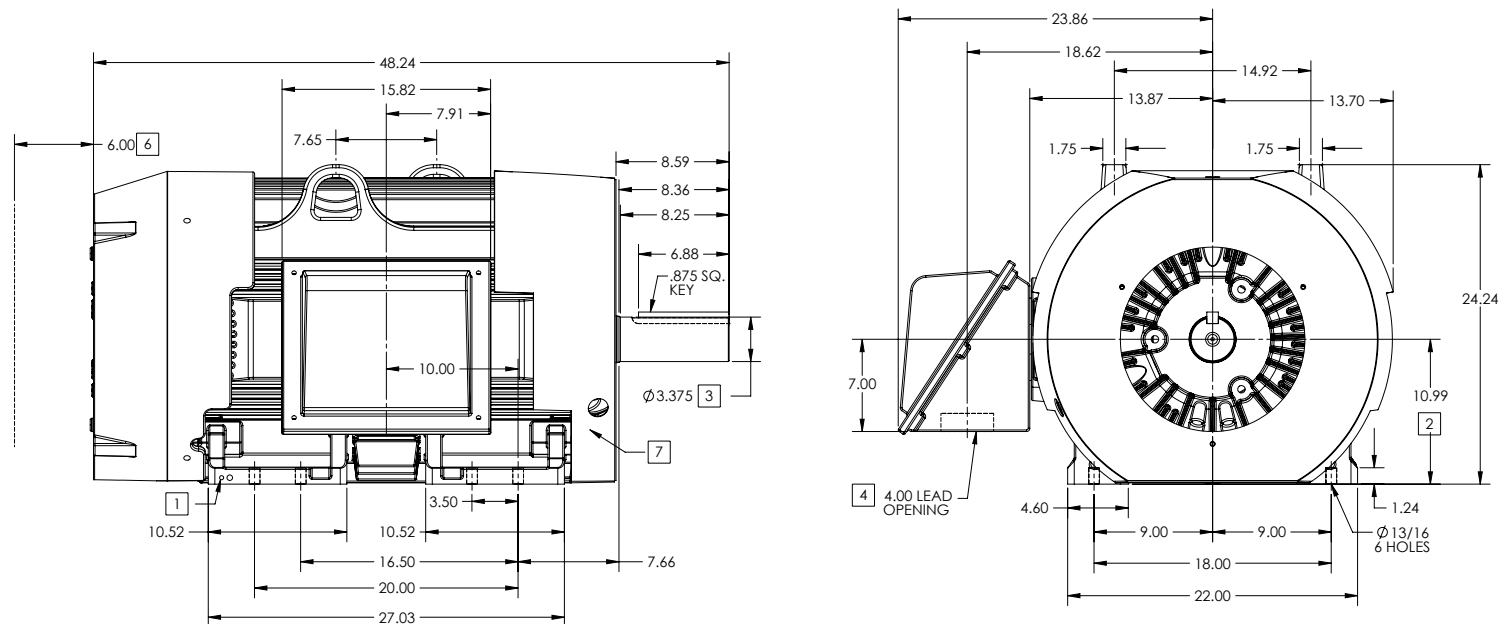
ENCLOSURE: TOTALLY ENCLOSED

FRAME G447T ABOVE NEMA RATINGS

COOLING: FAN COOLED

MOUNTING: FOOT

INCLUDES 445T FRAME MOUNTING HOLES



1. GROUND HOLES QTY 1 1/2-13 TAP; QTY 1 3/8-16 TAP
2. VARIES  $\pm .00$ ,  $-.06$
3. VARIES  $\pm .000$ ,  $-.001$
4. ON STANDARD MOTORS THIS IS CONDUIT SIZE. ON XT AND CORROSION PROOF MOTOR THIS IS PIPE TAP.
5. MOTOR WEIGHTS MAY VARY BY 15% DEPENDING ON RATING.
6. OBSTRUCTION MUST NO ENCROACH ON AIR INLET.
7. AIR DEFLECTOR INSTALLED WHEN REQUIRED.

CONDUIT BOX LOCATED ON OPPOSITE SIDE WHEN F-2.  
IF MOUNTING CLEARANCE DETAILS ARE REQUIRED, CONSULT FACTORY.  
MAXIMUM PERMISSIBLE SHAFT RUNOUT WHEN MEASURED AT END OF  
STANDARD SHAFT EXTENSION IS .003" T.I.R. TO 5 INCH DIA.

**[5] WEIGHT (LBS): 2515**

DRIVE END AIR DEFLECTOR IS ONLY INCLUDED WHEN NECESSARY.

DIMENSIONS ARE IN INCHES; SEE SHEET 2 FOR DIMENSIONS IN MILLIMETERS

CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT MOTOR PERFORMANCE IS SUITABLE IN THE APPLICATION.

SHEET NUMBER  
1 OF 2

0007-27-119

REV. DESC: CHANGING ENCLOSURE TO "TOTALLY ENCLOSED" WAS "UL..."  
REV: A VERSION: 01 REVISED: 08/25/13 02/15/2013 TDR: 000000786306  
MODEL NO. 617427-002 REF:  
BY: MGHWC Material:

**BALDOR**

G447T/445T STD - FOOTED - SIDE/CENTER C/B

617427-002

# DUTY MASTER ALTERNATING CURRENT MOTORS

## SQUIRREL-CAGE INDUCTION

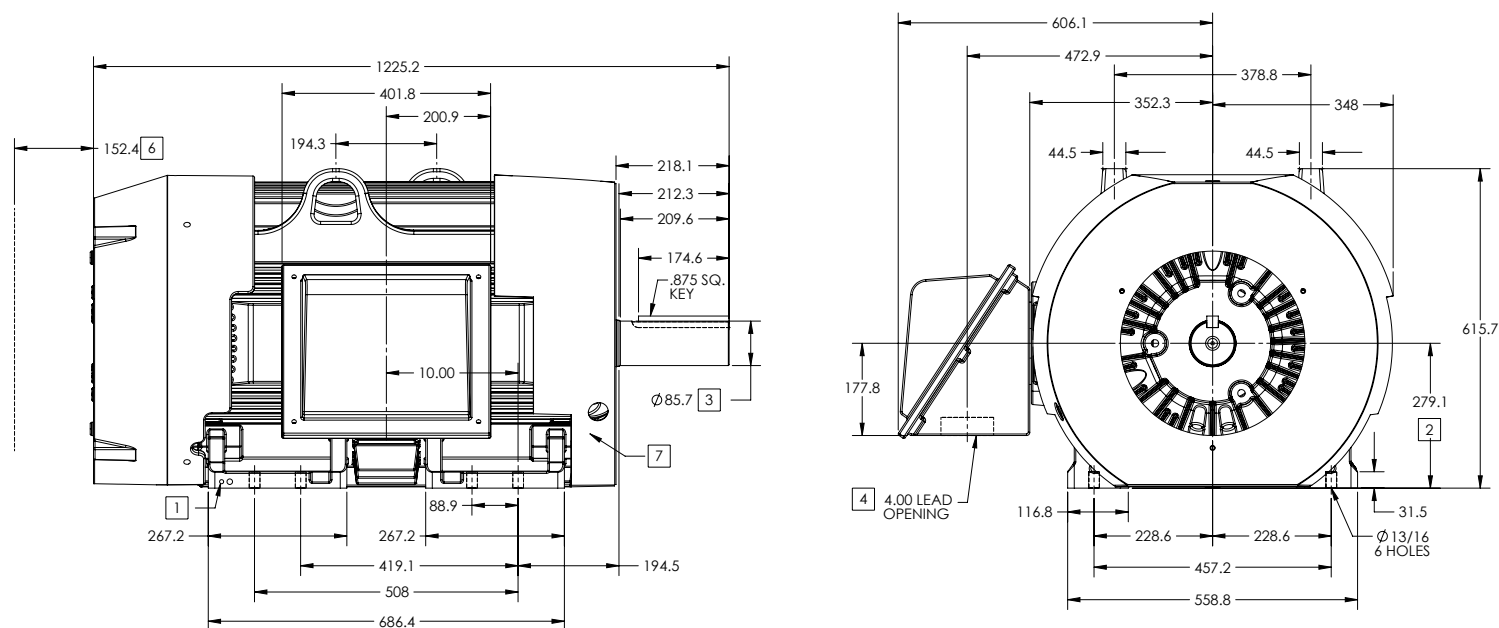
ENCLOSURE: TOTALLY ENCLOSED

FRAME G447T ABOVE NEMA RATINGS

COOLING: FAN COOLED

MOUNTING: FOOT

INCLUDES 445T FRAME MOUNTING HOLES



1. GROUND HOLES QTY 1 1/2-13 TAP; QTY 1 3/8-16 TAP
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6. OBSTRUCTION MUST NO ENCROACH ON AIR INLET.
7. AIR DEFLECTOR INSTALLED WHEN REQUIRED.

CONDUIT BOX LOCATED ON OPPOSITE SIDE WHEN F-2.  
IF MOUNTING CLEARANCE DETAILS ARE REQUIRED, CONSULT FACTORY.  
MAXIMUM PERMISSIBLE SHAFT RUNOUT WHEN MEASURED AT END OF  
STANDARD SHAFT EXTENSION IS .08 MM T.I.R. TO 127 MM DIA.

**5 WEIGHT (KGS): 1140**

DRIVE END AIR DEFLECTOR IS ONLY INCLUDED WHEN NECESSARY.

DIMENSIONS ARE IN MILLIMETERS; SEE SHEET 1 FOR DIMENSIONS IN INCHES

CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT MOTOR PERFORMANCE IS SUITABLE IN THE APPLICATION.

|                      |             |                              |                   |
|----------------------|-------------|------------------------------|-------------------|
| REV. A               | VERSION: 01 | REVISED: 08/25/13 02/15/2013 | TDR: 000000786306 |
| MODEL NO. 617427-002 | BY: MGHWC   | Material:                    | REF:              |

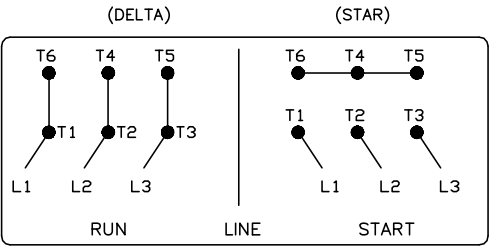
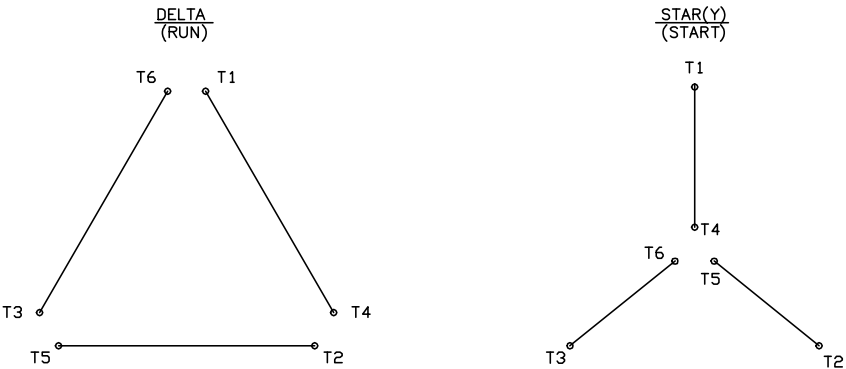
**BALDOR**

G447T/445T STD - FOOTED - SIDE/CENTER C/B

416820-008

A-C MOTOR  
CONNECTION DIAGRAM

STANDARD 6 LEAD      Y START – DELTA RUN



(N. P. 1767-DC)

REV. DESC: ADDED T4 TO Y CONNECT DIAGRAM

REV. LTR: D

VERSION: 04

TDR: 000000847713

FILE: \RAG\00001\808

REVISED: 10: 41: 26 04/08/2014

BY: RAGJSS1

MTL: -

**BALDOR**

CONNECT DIAGRAM STD 6 LEAD Y START DELTA RUN

SH 1 of 1

416820-008