

# ABB BALDOR RELIANCE III

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## Customer information packet

### ECP4404TR-4

75HP, 1185RPM, 3PH, 60HZ, 405T, TEFC, F1

Class - CLI GP A,B,C,D

Division - Division II

**Specifications**

|                               |                             |
|-------------------------------|-----------------------------|
| Enclosure                     | TEFC                        |
| Frame                         | 405T                        |
| Frame Material                | Iron                        |
| Frequency                     | 60.00 Hz                    |
| Haz Area Class and Group      | CLI GP A,B,C,D              |
| Haz Area Division             | Division II                 |
| Motor Letter Type             | Three Phase                 |
| Output @ Frequency            | 75.000 HP @ 60 HZ           |
| Phase                         | 3                           |
| Synchronous Speed @ Frequency | 1200 RPM @ 60 HZ            |
| Voltage @ Frequency           | 460.0 V @ 60 HZ             |
| Agency Approvals              | CCSAUSEEV                   |
| Ambient Temperature           | 40 °C                       |
| Auxiliary Box                 | NO AUXILLARY BOX            |
| Base Indicator                | Rigid                       |
| Bearing Grease Type           | Mobil SHC 220 (Athens Only) |
| Constant Torque Speed Range   | 10-60                       |
| Current @ Voltage             | 86.500 A @ 460.0 V          |
| Design Code                   | B                           |
| Drip Cover                    | No Drip Cover               |
| Duty Rating                   | CONT                        |
| Efficiency @ 100% Load        | 94.5 %                      |
| Feedback Device               | NO FEEDBACK                 |
| Haz Area Temp Code            | T3                          |
| Heater Indicator              | No Heater                   |
| High Voltage Full Load Amps   | 86.5 a                      |
| Insulation Class              | F                           |
| Inverter Code                 | Inverter Ready              |
| KVA Code                      | G                           |
| Lifting Lugs                  | Standard Lifting Lugs       |
| Motor Lead Quantity/Wire Size | 3 @ 4 AWG                   |
| Motor Standards               | NEMA                        |

**Part Detail**

|              |            |
|--------------|------------|
| Revision     | L          |
| Type         | AC         |
| Mech. spec.  |            |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | A40WG1239  |
| Layout       | 617429-501 |
| Eff. date    | 10-24-2024 |
| CD Diagram   | 416820-036 |
| Poles        | 06         |
| Leads        | 3#4        |
| Proprietary  | False      |
| Created date | 12-11-2013 |

|                                 |                    |
|---------------------------------|--------------------|
| <b>Motor Type</b>               | A4072M             |
| <b>Mounting Arrangement</b>     | F1                 |
| <b>Number of Poles</b>          | 6                  |
| <b>Overall Length</b>           | 38.20 IN           |
| <b>Power Factor</b>             | 86                 |
| <b>Product Family</b>           | General Industrial |
| <b>Pulley End Bearing Type</b>  | Roller             |
| <b>Pulley Face Code</b>         | Standard           |
| <b>Service Factor</b>           | 1.15               |
| <b>Shaft Diameter</b>           | 2.875 IN           |
| <b>Shaft Ground Indicator</b>   | No Shaft Grounding |
| <b>Shaft Rotation</b>           | Reversible         |
| <b>Shaft Slinger Indicator</b>  | Shaft Slinger      |
| <b>Speed</b>                    | 1185 rpm           |
| <b>Speed Code</b>               | Single Speed       |
| <b>Starting Method</b>          | Direct on line     |
| <b>Thermal Device - Bearing</b> | None               |
| <b>Thermal Device - Winding</b> | None               |

**Nameplate**

|                       |  |
|-----------------------|--|
| NP2496L               |  |
| MOBIL SHC -220 GREASE |  |

**NP3238**

|                    |             |        |                 |              |       |               |      |                       |                     |      |      |             |   |
|--------------------|-------------|--------|-----------------|--------------|-------|---------------|------|-----------------------|---------------------|------|------|-------------|---|
| CAT NO             | ECP4404TR-4 |        |                 | SPEC NO.     |       | A40-4853-1239 |      |                       |                     |      |      |             |   |
| HP                 | 75          | AMPS   | 86.5            |              | VOLTS |               | 460  |                       | DESIGN              | B    |      |             |   |
| FRAME              | 405T        | RPM    | 1185            | HZ           | 60    | AMB           | 40   | SF                    | 1.15                |      |      |             |   |
| D.E. BRG.DATA      | NU316       |        | O.D.E. BRG.DATA |              |       | 6316          |      | PH                    | 3                   | DUTY | CONT | INSUL.CLASS | F |
| D.E. BRG.          | 80RU03M30X  |        |                 | TYPE         | P     | ENCL          | TEFC | CODE                  | G                   |      |      |             |   |
| O.D.E. BRG.        | 80BC03J30X  |        |                 | POWER FACTOR |       |               | 86   |                       | NEMA NOM EFFICIENCY |      |      | 94.5        |   |
| 3/4 LOAD EFF.      | 94.8        |        | MAX CORR KVAR   |              |       | 15.0          |      | GUARANTEED EFFICIENCY |                     |      | 93.6 |             |   |
| TEMP CODE          | T3          | TEMP = |                 | 200          |       |               |      |                       |                     |      |      |             |   |
| CHP HZ             | 60-90       |        | CT HZ           | 10-60        |       | VT HZ         | 0-60 |                       |                     |      |      |             |   |
| INVERTER-TEMP-CODE | T3          |        |                 |              |       |               |      |                       |                     |      |      |             |   |
| SER.NO.            |             |        |                 | MOTOR WEIGHT |       |               |      |                       |                     |      |      |             |   |

**Parts List**

| Part number | Description                              | Quantity |
|-------------|------------------------------------------|----------|
| SA273378    | SA A40-4853-1239                         | 1.000 ea |
| RA259977    | RA A40-4853-1239                         | 1.000 ea |
| 421948051   | LABEL, MYLAR                             | 1.000 ea |
| 000692000FF | N/P                                      | 1.000 ea |
| NP2496L     | MOTOR LUBE NAMEPLATE                     | 1.000 ea |
| 000613006PU | N/P (RELEASE QTY 10,000) UL CSA LABEL    | 1.000 ea |
| 000692000RT | N/P                                      | 1.000 ea |
| 000692000VD | LABEL WARNING                            | 1.000 ea |
| NP3238      | SS CP XEX SEVERE DUTY MAIN NP,CURUS EEV  | 1.000 ea |
| 089412501A  | BRKT FTMT G400 FIN MACH 6316 89412500WCA | 1.000 ea |
| 415072001B  | CLAMP                                    | 1.000 ea |
| 083198101A  | G400 STD FAN COVER MACHINING             | 1.000 ea |
| 034180012DA | KEY 1X4X1/4X1-1/2 L                      | 1.000 ea |
| 412118006A  | DRAIN                                    | 2.000 ea |
| 078550001H  | FAN KB 120/60 360                        | 1.000 ea |
| 004824015AP | GREASE MOBILITH SHC 220                  | 0.880 lb |
| 032018020EK | HHCS 5/8-11X2-1/2 PLTD.                  | 4.000 ea |
| 032018008CK | HHCS 3/8-16X1L PLATED                    | 4.000 ea |
| 032018026CK | HHCS 3/8-16X3-1/4 PLTD.                  | 3.000 ea |
| 415096002A  | CPLG 1/8 HEX TYPE                        | 1.000 ea |
| 415045002B  | SLGR                                     | 1.000 ea |
| 047174001AS | EXT SNAP RING(400)                       | 1.000 ea |
| 035000001G  | GREASE RELIEF FITTING, ALEMITE 317400    | 1.000 ea |
| 034000014AB | WSH ID.406 OD.812 TH.065                 | 4.000 ea |
| 034530060AB | P/NIP 1/8X7-1/2 GALV.                    | 1.000 ea |
| 034530056BB | P/NIP 1/4X7 SCHED 40                     | 1.000 ea |
| 034600001AA | BUSH 1/4TO1/8 BLACK                      | 1.000 ea |
| 034692005AA | P PLUG 3/4"BLK.                          | 1.000 ea |
| 034600001AA | BUSH 1/4TO1/8 BLACK                      | 1.000 ea |
| 089412501A  | BRKT FTMT G400 FIN MACH 6316 89412500WCA | 1.000 ea |
| 032018020EK | HHCS 5/8-11X2-1/2 PLTD.                  | 4.000 ea |

|             |                                        |          |
|-------------|----------------------------------------|----------|
| 032018026CK | HHCS 3/8-16X3-1/4 PLTD.                | 3.000 ea |
| 415045002B  | SLGR                                   | 1.000 ea |
| 034530040BB | P/NIP 1/4X5                            | 1.000 ea |
| 034530040AB | P/NIP 1/8X5 GALV.                      | 1.000 ea |
| 415096002A  | CPLG 1/8 HEX TYPE                      | 1.000 ea |
| 035000001G  | GREASE RELIEF FITTING, ALEMITE 317400  | 1.000 ea |
| 076708000BB | CONDUIT BOX-360                        | 1.000 ea |
| 415039016A  | TERBD, 360-400                         | 1.000 ea |
| 076709000A  | C/B Cover - 360                        | 1.000 ea |
| 067053000B  | GASK 320-400                           | 1.000 ea |
| 418150003A  | GREASE FITTING CAP                     | 1.000 ea |
| 032018010CK | HHCS 3/8-16X1-1/4 PLTD. 032018010CR    | 4.000 ea |
| 035000001A  | ALFTG 1/8" 1610-BL                     | 1.000 ea |
| 415000115H  | T/LUG #2AWG-4/0AWG                     | 1.000 ea |
| 033512008LB | HHTTS 1/4-20X1 PLATED                  | 4.000 ea |
| 406099000A  | PLUG - FAN COVER 320-440               | 1.000 ea |
| 034000014AB | WSH ID.406 OD.812 TH.065               | 4.000 ea |
| 035000001A  | ALFTG 1/8" 1610-BL                     | 1.000 ea |
| 418150003A  | GREASE FITTING CAP                     | 1.000 ea |
| MG1025N19   | WILKO 778.50 BLUE GREEN - 55 GAL DRUMS | 0.380 ga |
| 033775004EA | DRSCR #6-1/4 304 S.S.                  | 4.000 ea |
| 034180044JA | KEY 3/4X3/4X5-1/2 L                    | 1.000 ea |
| 604797045   | STD. 400 FRAME SKID                    | 1.000 ea |
| 032510024D  | CARRIAGE BOLT - 444                    | 2.000 ea |
| 034001016AB | WSHR .562ID 1.375OD .109               | 2.000 ea |
| 034001014AB | FLAT WASHER 3/8"PLATED                 | 2.000 ea |
| LB1449      | DIV-2/NEC WARNING LABEL                | 1.000 ea |
| 033300014AC | HEX NUT, SHIPPING - 400                | 2.000 ea |
| 604799003C  | PLASTIC BAG 42X32X46                   | 1.000 ea |
| 604797013R  | 447 FR. ROLLER BEARING MOTOR SHAFT     | 1.000 ea |
| 032018024CK | HHCS 3/8-16X3 PLTD.                    | 1.000 ea |
| 415070001A  | RUBBER MOUNT 3X3X1 THICK               | 1.000 ea |
| 034001016AB | WSHR .562ID 1.375OD .109               | 1.000 ea |
| 034001014AB | FLAT WASHER 3/8"PLATED                 | 1.000 ea |

032018005DL

1/2-13 X 5/8 SILICON BRONZE HHCS

1.000 ea

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|                                                                                                                                                                                                                    |             |                                                                                    |                   |                                                                     |                 |       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------------------------------------------------------------|-------------------|---------------------------------------------------------------------|-----------------|-------|
| REL.<br>S.O.                                                                                                                                                                                                       | FRAME       | HP                                                                                 | TYPE              | PHASE/<br>HERTZ                                                     | RPM             | VOLTS |
|                                                                                                                                                                                                                    | 405T        | 75                                                                                 | P                 | 3/60                                                                | 1185            | 460   |
| AMPS                                                                                                                                                                                                               | DUTY        | AMB °C/<br>INSUL.                                                                  | S.F.              | NEMA<br>DESIGN                                                      | CODE<br>LETTER  | ENCL. |
| 86.5                                                                                                                                                                                                               | CONT        | 40/F                                                                               | 1.15              | B                                                                   | G               | FCXE  |
| E/S                                                                                                                                                                                                                | ROTOR       | TEST<br>S.O.                                                                       | TEST<br>DATE      | STATOR RES. @25 °C<br>OHMS (BETWEEN LINES)                          |                 |       |
| -                                                                                                                                                                                                                  | 418142073FE | ---                                                                                | ---               | .0899                                                               |                 |       |
| PERFORMANCE                                                                                                                                                                                                        |             |                                                                                    |                   |                                                                     |                 |       |
| LOAD                                                                                                                                                                                                               | HP          | AMPERES                                                                            | RPM               | %<br>POWER FACTOR                                                   | %<br>EFFICIENCY |       |
| NO LOAD                                                                                                                                                                                                            | 0           | 25.9                                                                               | 1200              | 5.51                                                                | 0               |       |
| 1/4                                                                                                                                                                                                                | 18.8        | 33.3                                                                               | 1197              | 57.6                                                                | 91.7            |       |
| 2/4                                                                                                                                                                                                                | 37.5        | 48.0                                                                               | 1194              | 77.5                                                                | 94.4            |       |
| 3/4                                                                                                                                                                                                                | 56.2        | 66.2                                                                               | 1190              | 83.8                                                                | 94.8            |       |
| 4/4                                                                                                                                                                                                                | 75.0        | 86.5                                                                               | 1186              | 86.0                                                                | 94.5            |       |
| 5/4                                                                                                                                                                                                                | 93.8        | 108                                                                                | 1182              | 86.9                                                                | 93.8            |       |
| SPEED TORQUE                                                                                                                                                                                                       |             |                                                                                    |                   |                                                                     |                 |       |
|                                                                                                                                                                                                                    | RPM         | TORQUE<br>% FULL LOAD                                                              | TORQUE<br>LB.-FT. | AMPERES                                                             |                 |       |
| LOCKED ROTOR                                                                                                                                                                                                       | 0           | 168                                                                                | 557               | 542                                                                 |                 |       |
| PULL UP                                                                                                                                                                                                            | 240         | 157                                                                                | 520               | 515                                                                 |                 |       |
| BREAKDOWN                                                                                                                                                                                                          | 1134        | 246                                                                                | 818               | 291                                                                 |                 |       |
| FULL LOAD                                                                                                                                                                                                          | 1186        | 100                                                                                | 332               | 86.5                                                                |                 |       |
| AMPERES SHOWN FOR 460. VOLT CONNECTION. IF OTHER VOLTAGE CONNECTIONS ARE AVAILABLE, THE<br>AMPERES WILL VARY INVERSELY WITH THE RATED VOLTAGE<br><br>REMARKS: CALCULATED DATA<br>XE MOTOR-NEMA NOM. EFF. 94.5 PCT. |             |                                                                                    |                   |                                                                     |                 |       |
|                                                                                                                                 |             | DR. BY W. L. SMITH<br>CK. BY C. E. JAMISON<br>APP. BY W. L. SMITH<br>DATE 12/10/13 |                   | A-C MOTOR<br>PERFORMANCE DATA A40WG1239-R001<br>ISSUE DATE 12/10/13 |                 |       |

REL S.O.

RPM 1185

S.F. 1.15

ROTOR 418142073FE

FRAME 405T

VOLTS 460

NEMA DESIGN B

TEST S.O. CALCULATED DATA

HP 75

AMPS 86.5

CODE LETTER G

TEST DATE ---

TYPE P

DUTY CONT

ENCLOSURE FCXE

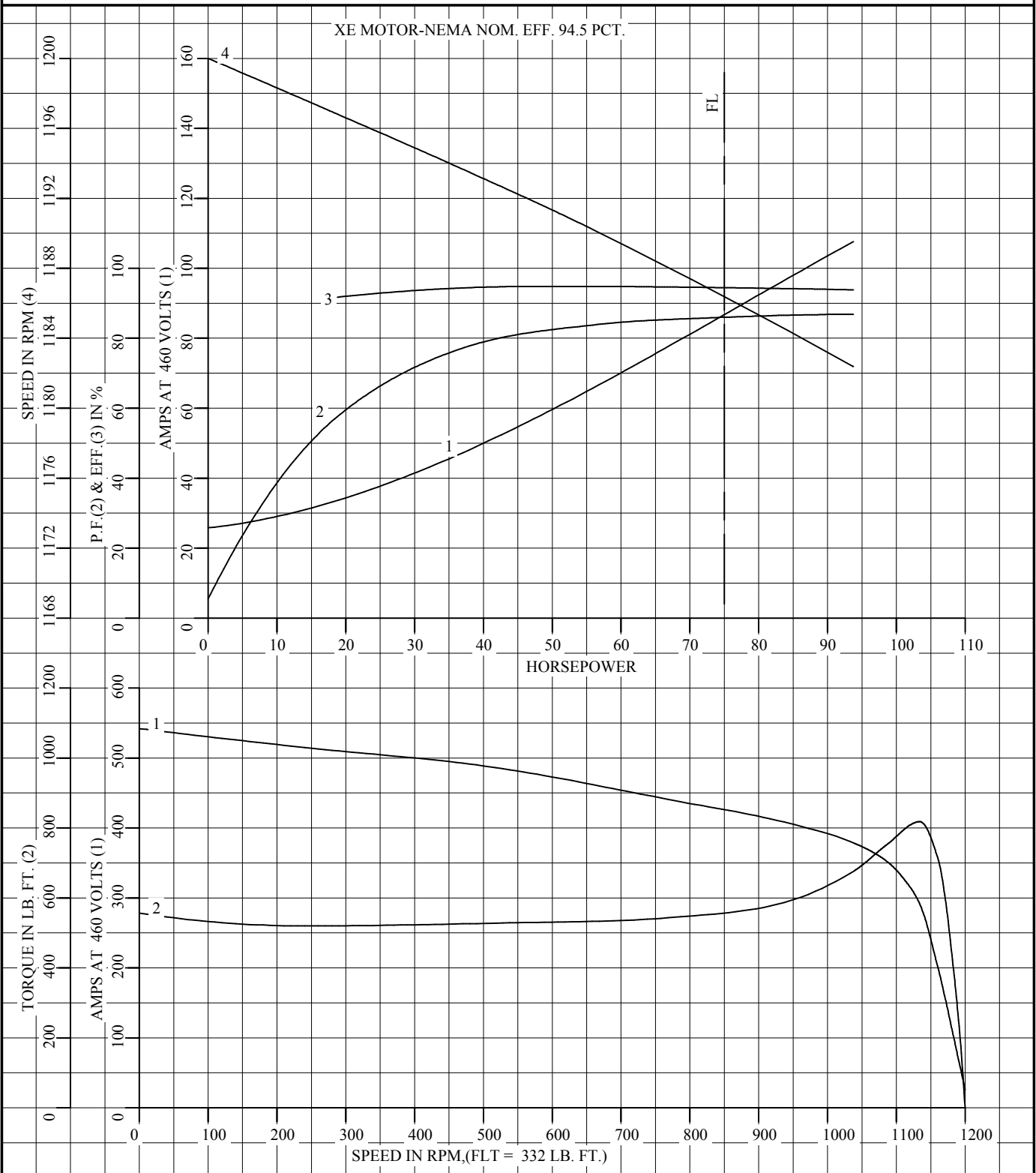
STATOR RES. @ 25 °C .0899

PHASE/HERTZ 3/60

AMB °C/INSUL 40/F

E/S -

OHMS (BETWEEN LINES)



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

**BALDOR**  
A MEMBER OF THE ABB GROUP

DR. BY W. L. SMITH  
CK. BY C. E. JAMISON  
APP. BY W. L. SMITH  
DATE 12/10/13

**A-C MOTOR  
PERFORMANCE  
CURVES**

A40WG1239-R001  
ISSUE DATE 12/10/13

## DUTY MASTER ALTERNATING CURRENT MOTORS

### SQUIRREL-CAGE INDUCTION

ENCLOSURE: TOTALLY ENCLOSED

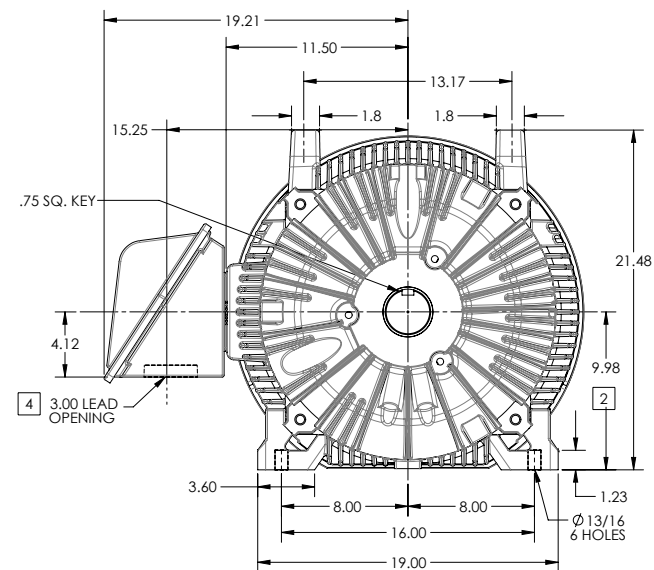
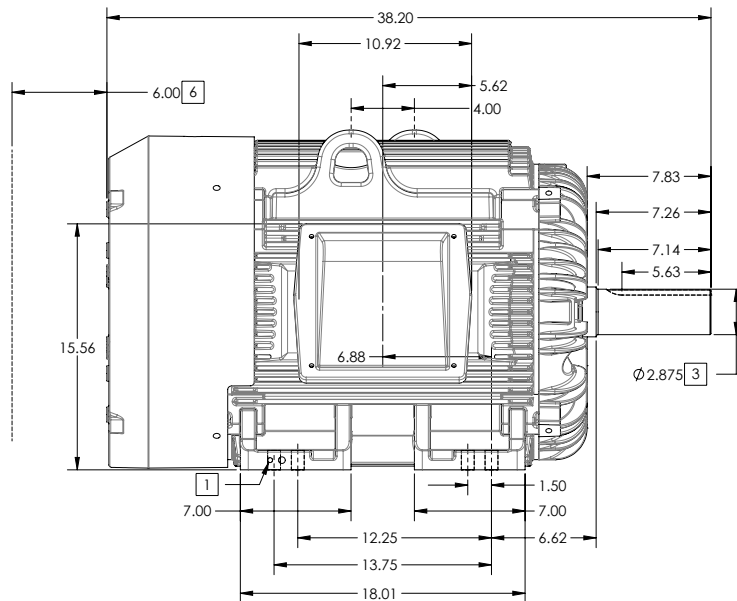
FRAME G405T ABOVE NEMA RATINGS

COOLING: FAN COOLED

MOUNTING: FOOT

INCLUDES 404T FRAME MOUNTING HOLES

XT/ECP SEVERE DUTY ENCLOSURE



1. GROUND HOLES QTY 1 1/2-13 TAP; QTY 1 3/8-16 TAP
2. VARIES +.00,-.06
3. VARIES +.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 NOT ENCROACH ON AIR INLET

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): 1370**

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**

105-627219

|                                        |             |                              |                   |
|----------------------------------------|-------------|------------------------------|-------------------|
| REV. DESC: CHANGE BA FROM 6.76 TO 6.62 |             |                              |                   |
| REV: B                                 | VERSION: 02 | REVISED: 01-11-16 04/14/2014 | TDR: 000000848770 |
| MODEL NO. 617429-501                   |             | REF:                         |                   |
| BY: MGHUMZ2                            |             | Material:                    |                   |

**BALDOR**

G405T/404T STD - FOOTED - XT/ECP SEVERE DUTY ENCLOSURE

617429-501

## DUTY MASTER ALTERNATING CURRENT MOTORS

### SQUIRREL-CAGE INDUCTION

ENCLOSURE: TOTALLY ENCLOSED

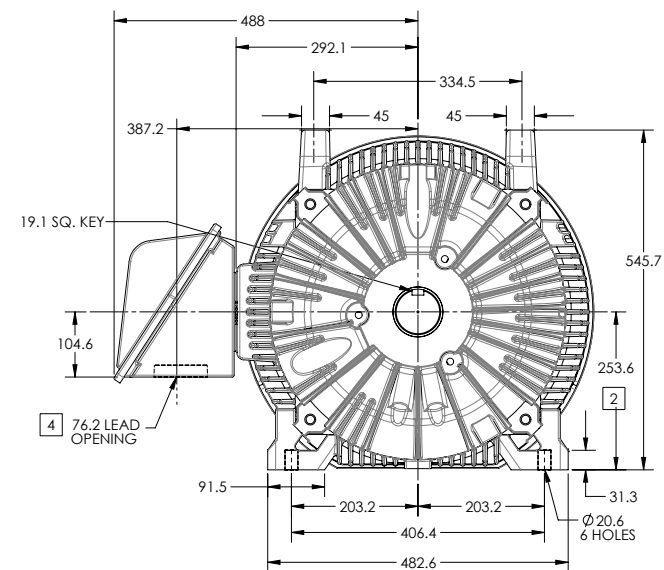
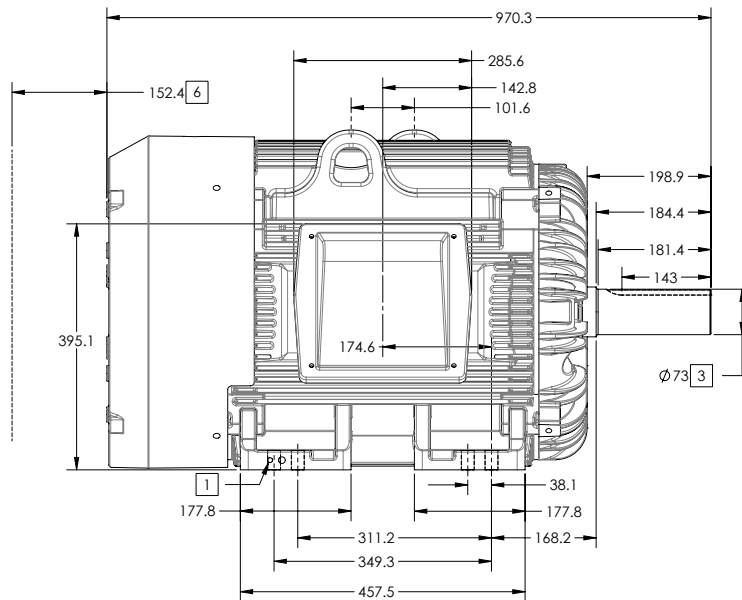
FRAME G405T ABOVE NEMA RATINGS

COOLING: FAN COOLED

MOUNTING: FOOT

INCLUDES 404T FRAME MOUNTING HOLES

XT/ECP SEVERE DUTY ENCLOSURE



1. GROUND HOLES QTY 1 1/2-13 TAP; QTY 1 3/8-16 TAP
2. VARIES +0,-1.5
3. VARIES +00,-.03
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 NOT ENCROACH ON AIR INLET

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): 630**

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

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

SHEET NUMBER  
**2 OF 2**

105-627219

|                                        |                              |
|----------------------------------------|------------------------------|
| REV. DESC: CHANGE BA FROM 6.76 TO 6.62 | TDR: 000000848770            |
| REV: B VERSION: 02                     | REVISED: 01-11-16 04/14/2014 |
| MODEL NO. 617429-501                   | REF:                         |
| BY: MGHUMZ2                            | Material:                    |

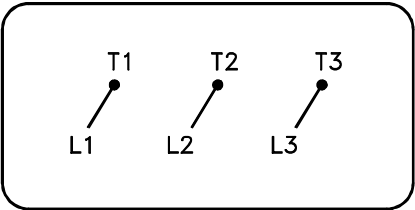
**BALDOR**

G405T/404T STD - FOOTED - XT/ECP SEVERE DUTY ENCLOSURE

617429-501

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 |             |                                |
| REV. LTR: -                          | VERSION: 00 | TDR: 000000538207              |
| FILE: \MGA\00000\682                 |             | REVISED: 11: 54: 06 04/30/2010 |
| MTL: -                               |             | BY: RAGRA                      |

**BALDOR**

CONN DIAG - STANDARD 3 LEAD  
SH 1 of 1