ABB BALDOR RELIANCE

# Customer information packet

## ECP4402T-4

100HP, 3565RPM, 3PH, 60HZ, 405TS, A40060M, TEF
Class - CLI GP A,B,C,D
Division - Division II

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## Specifications

| | |
|---|---|
| **Enclosure** | TEFC |
| **Frame** | 405TS |
| **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** | 100.000 HP @ 60 HZ |
| **Phase** | 3 |
| **Synchronous Speed @ Frequency** | 3600 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** | Polyrex EM (-20F +300F) |
| **Constant Torque Speed Range** | 6-60 |
| **Current @ Voltage** | 110.000 A @ 460.0 V |
| **Design Code** | B |
| **Drip Cover** | No Drip Cover |
| **Duty Rating** | CONT |
| **Efficiency @ 100% Load** | 95.0 % |
| **Feedback Device** | NO FEEDBACK |
| **Haz Area Temp Code** | T3 |
| **Heater Indicator** | No Heater |
| **High Voltage Full Load Amps** | 110.0 a |
| **Insulation Class** | F |
| **Inverter Code** | Inverter Ready |
| **KVA Code** | F |
| **Lifting Lugs** | Standard Lifting Lugs |
| **Motor Lead Quantity/Wire Size** | 3 @ 2 AWG |
| **Motor Standards** | NEMA |

## Part Detail

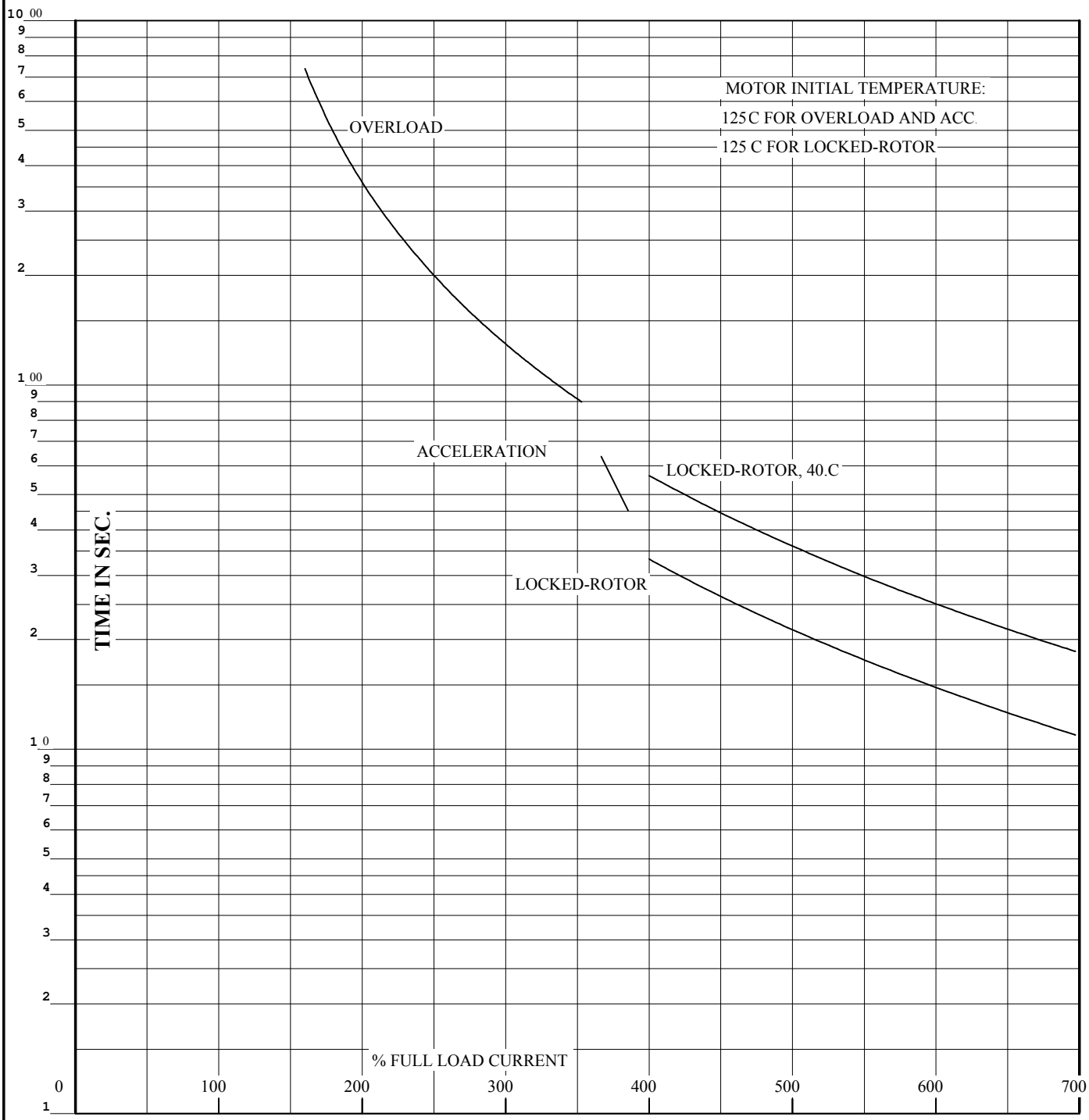
| | |
|---|---|
| **Revision** | N |
| **Type** | AC |
| **Mech. spec.** | |
| **Base** | |
| **Status** | PRD/A |
| **Elec. spec.** | A40WG0061 |
| **Layout** | 617429-502 |
| **Eff. date** | 10-24-2024 |
| **CD Diagram** | 416820-036 |
| **Poles** | 02 |
| **Leads** | 3#2 |
| **Proprietary** | False |
| **Created date** | 07-15-2013 |

| | |
|---|---|
| **Motor Type** | A40060M |
| **Mounting Arrangement** | F1 |
| **Number of Poles** | 2 |
| **Overall Length** | 35.04 IN |
| **Power Factor** | 90 |
| **Pulley End Bearing Type** | Ball |
| **Pulley Face Code** | Standard |
| **Service Factor** | 1.15 |
| **Shaft Diameter** | 2.125 IN |
| **Shaft Ground Indicator** | No Shaft Grounding |
| **Shaft Rotation** | Reversible |
| **Shaft Slinger Indicator** | Shaft Slinger |
| **Speed** | 3565 rpm |
| **Speed Code** | Single Speed |
| **Starting Method** | Direct on line |
| **Thermal Device - Bearing** | None |
| **Thermal Device - Winding** | None |

**Nameplate**

| NP3238 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **CAT NO** | ECP4402T-4 | **SPEC NO.** | P40G3906 | | | | | | | | |
| **HP** | 100 | **AMPS** | 110 | **VOLTS** | 460 | **DESIGN** | B | | | | |
| **FRAME** | 405TS | **RPM** | 3565 | **HZ** | 60 | **AMB** | 40 | **SF** | 1.15 | | |
| **D.E. BRG.DATA** | 6313 | **O.D.E. BRG.DATA** | 6313 | **PH** | 3 | **DUTY** | CONT | **INSUL.CLASS** | F | | |
| **D.E. BRG.** | 65BC03J30X | **TYPE** | P | **ENCL** | TEFC | **CODE** | F | | | | |
| **O.D.E. BRG.** | 65BC03J30X | **POWER FACTOR** | 90 | **NEMA NOM EFFICIENCY** | 95 | | | | | | |
| **3/4 LOAD EFF.** | 95.1 | **MAX CORR KVAR** | 10.0 | **GUARANTEED EFFICIENCY** | 94.1 | | | | | | |
| **TEMP CODE** | T3 | **TEMP =** | 200 | | | | | | | | |
| **CHP HZ** | 60-75 | **CT HZ** | 6-60 | **VT HZ** | 0-60 | | | | | | |
| **INVERTER-TEMP-CODE** | T3 | | | | | | | | | | |
| **SER.NO.** | | **MOTOR WEIGHT** | | | | | | | | | |

| | | | |
|---|---|---|---|
| REL. S.O. | RPM 3565 | S.F. 1.15 | ROTOR 418142005PE |
| FRAME 405TS | VOLTS 460 | NEMA DESIGN B | TEST S.O. TYPICAL DATA |
| HP 100 | AMPS 110 | CODE LETTER F | TEST DATE --- |
| TYPE P | DUTY CONT | ENCLOSURE TEFC | STATOR RES.@ 25 ℃.0526 |
| PHASE/HERTZ 3/60 | AMB ℃/INSUL 40/F | E/S 596930 | OHMS (BETWEEN LINES) |




REMARKS:

THERMAL LIMIT CURVE

XE MOTOR-NEMA NOM. EFF. 95.0 %

GUARANTEED MIN. EFF. 94.5%

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 | G. R. WEBB |
| APP. BY | D. M. BYRD |
| DATE | 01/23/02 |

A-C MOTOR PERFORMANCE CURVES

A40WG0061-R001

ISSUE DATE 03/04/2014

| REL. S.O. | FRAME | HP | TYPE | PHASE/ HERTZ | RPM | VOLTS |
|---|---|---|---|---|---|---|
| | 405TS | 100 | P | 3/60 | 3565 | 460 |

| AMPS | DUTY | AMB °C/ INSUL. | S.F. | NEMA DESIGN | CODE LETTER | ENCL. |
|---|---|---|---|---|---|---|
| 110 | CONT | 40/F | 1.15 | B | F | TEFC |

| E/S | ROTOR | TEST S.O. | TEST DATE | STATOR RES.@25 °C OHMS (BETWEEN LINES) |
|---|---|---|---|---|
| 596930 | 418142005PE | --- | --- | .0526 |

PERFORMANCE

| LOAD | HP | AMPERES | RPM | % POWER FACTOR | % EFFICIENCY |
|---|---|---|---|---|---|
| NO LOAD | 0 | 25.6 | 3600 | 7.57 | 0 |
| 1/4 | 25.0 | 36.7 | 3591 | 69.7 | 91.7 |
| 2/4 | 50.0 | 57.7 | 3582 | 85.8 | 94.6 |
| 3/4 | 75.1 | 82.7 | 3572 | 89.3 | 95.1 |
| 4/4 | 100 | 110 | 3563 | 89.9 | 95.0 |
| 5/4 | 125 | 137 | 3552 | 90.2 | 94.6 |
| | | | | | |

SPEED TORQUE

| | RPM | TORQUE % FULL LOAD | TORQUE LB.-FT. | AMPERES |
|---|---|---|---|---|
| LOCKED ROTOR | 0 | 203 | 299 | 695 |
| PULL UP | 1545 | 182 | 269 | 632 |
| BREAKDOWN | 3408 | 256 | 377 | 387 |
| FULL LOAD | 3563 | 100 | 147 | 110 |

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

REMARKS: TYPICAL DATA
XE MOTOR-NEMA NOM. EFF. 95.0 %
GUARANTEED MIN. EFF. 94.5%

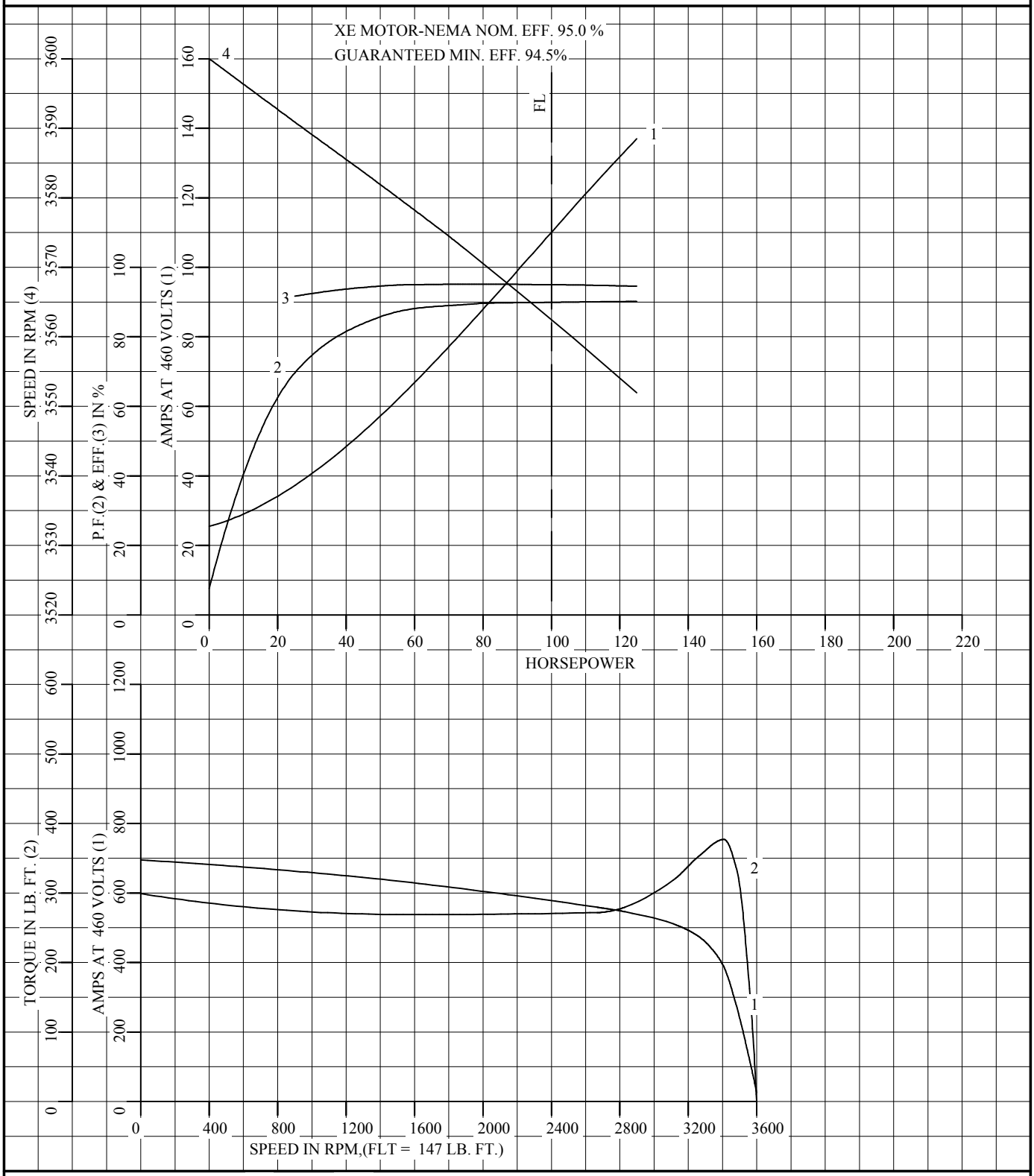
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DATE 01/23/02

A-C MOTOR PERFORMANCE DATA

A40WG0061-R001
ISSUE DATE 03/04/20

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| REL S.O. | | RPM | 3565 | S.F. | 1.15 | ROTOR | 418142005PE |
| FRAME | 405TS | VOLTS | 460 | NEMA DESIGN | B | TEST S.O. | TYPICAL DATA |
| HP | 100 | AMPS | 110 | CODE LETTER | F | TEST DATE | --- |
| TYPE | P | DUTY | CONT | ENCLOSURE | TEFC | STATOR RES.@ 25 °C | .0526 |
| PHASE/HERTZ | 3/60 | AMB °C/INSUL | 40/F | E/S | 596930 | | OHMS (BETWEEN LINES) |




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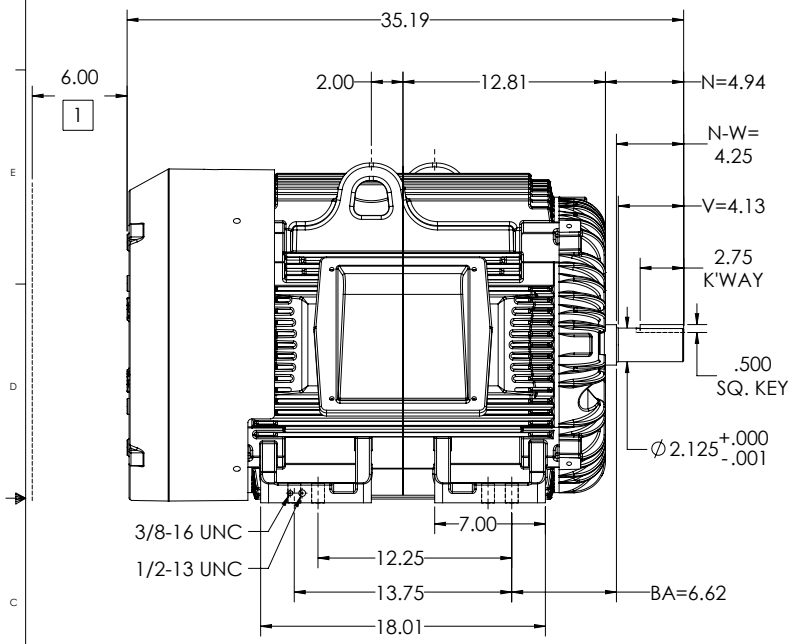
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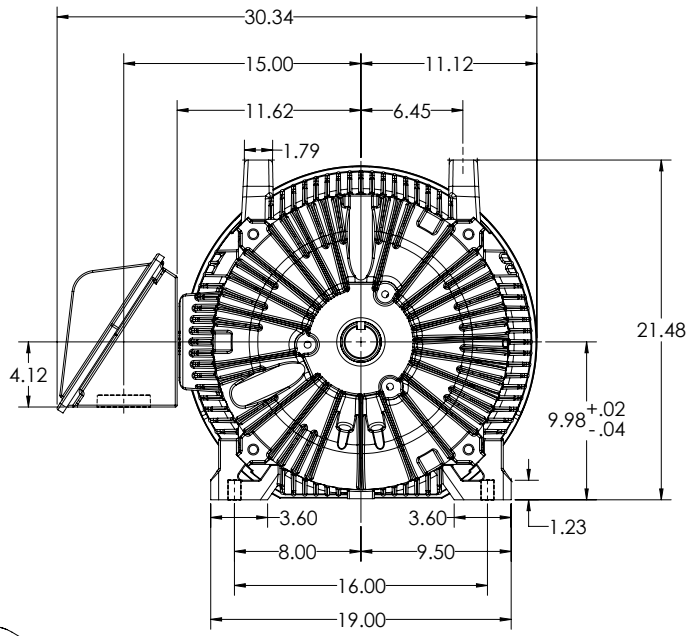
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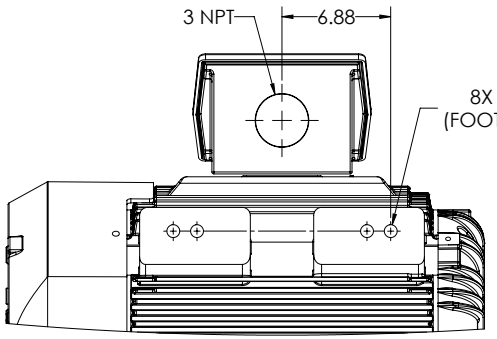
617429-502

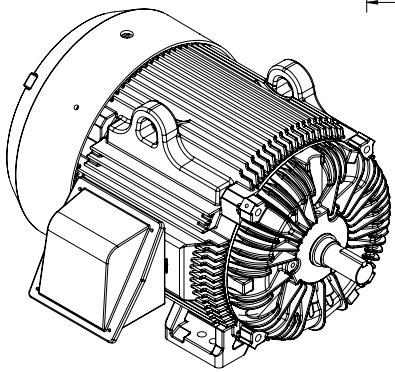
ENCLOSURE: TOTALLY ENCLOSED | SQUIRREL-CAGE INDUCTION | COOLING: FAN COOLED

MOUNTING: FOOT, F-1 | G405TS/G404TS FRAME MOUNTING | ENCLOSURE ENHANCEMENT: SEVERE DUTY



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.

DIMENSIONS ARE IN INCHES; SEE SHEET 2 FOR DIMENSIONS IN MILLIMETERS.
WEIGHT (LBS): 1160, 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

617429-502

| | | | |
|---|---|---|---|
| REV. DESC: UPDATE DS QUALITY | | | |
| REV: C | VERSION: 03 | REVISED: 09:15:12 06/28/2017 | TDR: 000001033374 |
| MODEL NO. 617429-502 | | | REF: |
| BY: USJEDIL | Material: | C | BALDOR |

G405TS/404TS TEFC F1 FOOT CAST IRON CONDUIT BOX/SEVERE DUTY

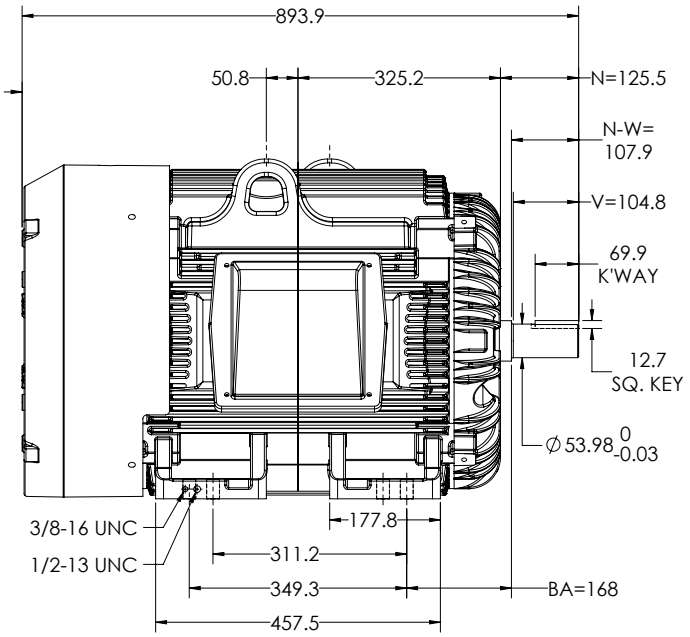
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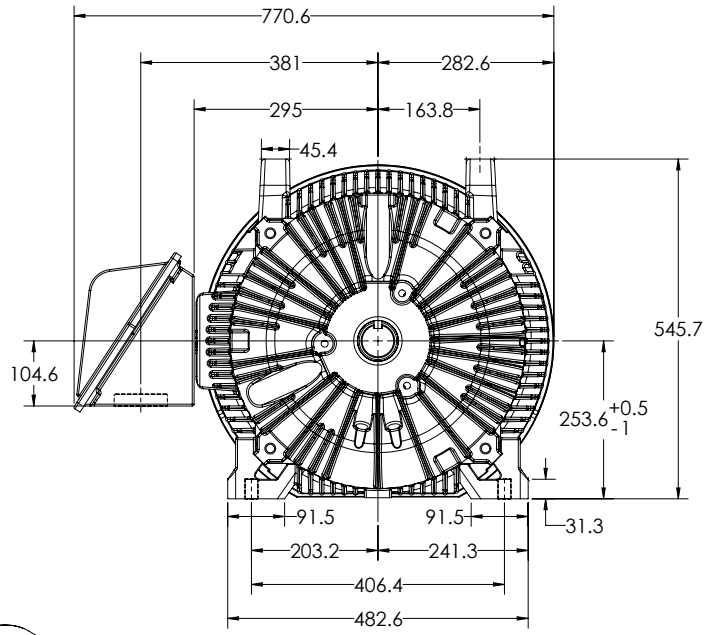
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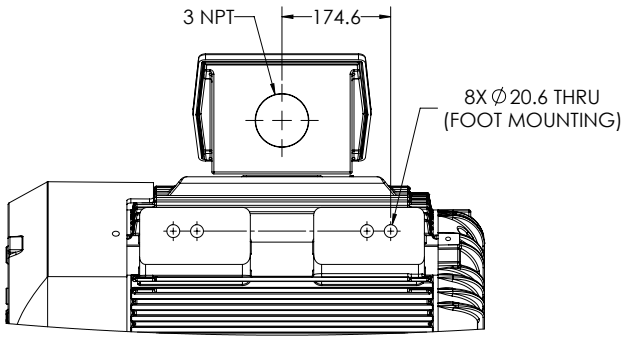
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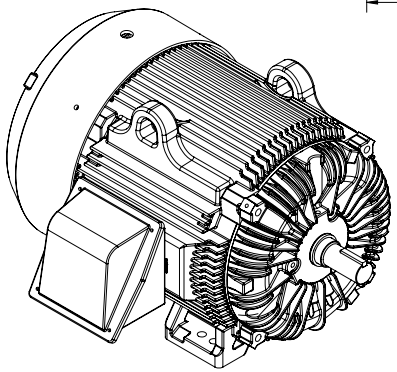
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MOUNTING: FOOT, F-1 | G405TS/G404TS FRAME MOUNTING | ENCLOSURE ENHANCEMENT: SEVERE DUTY



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.

DIMENSIONS ARE IN MILLIMETERS.
WEIGHT (KGS): 530, 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

617429-502

| | | | |
|---|---|---|---|
| REV. DESC: UPDATE DS QUALITY | | | |
| REV: C | VERSION: 03 | REVISED: 09:15:12 06/28/2017 | TDR: 000001033374 |
| MODEL NO. 617429-502 | | | REF: |
| BY: USJEDIL | Material: | | C |

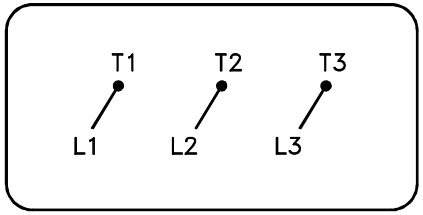
BALDOR

G405TS/404TS TEFC F1 FOOT CAST IRON CONDUIT BOX/SEVERE DUTY

617429-502

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 |