

# ABB BALDOR RELIANCE III

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## Customer information packet

### EM4400T-5

100HP, 1785RPM, 3PH, 60HZ, 405T, A40064M, TEFC

Class - None

Division - Not Applicable

**Specifications**

|                                      |                                  |
|--------------------------------------|----------------------------------|
| <b>Enclosure</b>                     | TEFC                             |
| <b>Frame</b>                         | 405T                             |
| <b>Frame Material</b>                | Iron                             |
| <b>Frequency</b>                     | 60.00 Hz                         |
| <b>Haz Area Class and Group</b>      | None                             |
| <b>Haz Area Division</b>             | Not Applicable                   |
| <b>Motor Letter Type</b>             | Three Phase                      |
| <b>Output @ Frequency</b>            | 100.000 HP @ 60 HZ               |
| <b>Phase</b>                         | 3                                |
| <b>Synchronous Speed @ Frequency</b> | 1800 RPM @ 60 HZ                 |
| <b>Voltage @ Frequency</b>           | 575.0 V @ 60 HZ                  |
| <b>Agency Approvals</b>              | CCSA US<br>CCSAUSEEV<br>CURUSEEV |
| <b>Ambient Temperature</b>           | 40 °C                            |
| <b>Auxiliary Box</b>                 | NO AUXILLARY BOX                 |
| <b>Base Indicator</b>                | Rigid                            |
| <b>Bearing Grease Type</b>           | Polyrex EM (-20F +300F)          |
| <b>Current @ Voltage</b>             | 89.600 A @ 575.0 V               |
| <b>Design Code</b>                   | B                                |
| <b>Drip Cover</b>                    | No Drip Cover                    |
| <b>Duty Rating</b>                   | CONT                             |
| <b>Efficiency @ 100% Load</b>        | 95.4 %                           |
| <b>Enclosure Modification</b>        | 841                              |
| <b>Feedback Device</b>               | NO FEEDBACK                      |
| <b>Heater Indicator</b>              | No Heater                        |
| <b>High Voltage Full Load Amps</b>   | 89.6 a                           |
| <b>Insulation Class</b>              | F                                |
| <b>Inverter Code</b>                 | Inverter Ready                   |
| <b>KVA Code</b>                      | G                                |
| <b>Lifting Lugs</b>                  | Standard Lifting Lugs            |
| <b>Motor Lead Quantity/Wire Size</b> | 3 @ 2 AWG                        |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | M          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  |            |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | A40WG0080  |
| <b>Layout</b>       | 617429-001 |
| <b>Eff. date</b>    | 09-04-2024 |
| <b>CD Diagram</b>   | 416820-036 |
| <b>Poles</b>        | 04         |
| <b>Leads</b>        | 3#2        |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 07-17-2013 |

|                                 |                    |
|---------------------------------|--------------------|
| <b>Motor Standards</b>          | <b>NEMA</b>        |
| <b>Motor Type</b>               | A40064M            |
| <b>Mounting Arrangement</b>     | F1                 |
| <b>Number of Poles</b>          | 4                  |
| <b>Overall Length</b>           | 38.19 IN           |
| <b>Power Factor</b>             | 87                 |
| <b>Pulley End Bearing Type</b>  | Ball               |
| <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>  | No Slinger         |
| <b>Speed</b>                    | 1785 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**

| NP2349L           |            |       |  |              |  |           |                         |             |        |                     |                       |      |      |      |  |  |
|-------------------|------------|-------|--|--------------|--|-----------|-------------------------|-------------|--------|---------------------|-----------------------|------|------|------|--|--|
| SPEC NO.          | P40G3926   |       |  | CAT.NO.      |  | EM4400T-5 |                         |             |        | FRAME               |                       | 405T |      |      |  |  |
| HP                | 100        | VOLTS |  | 575          |  | PHASE     |                         | 3           | DESIGN |                     | B                     | TYPE | P    |      |  |  |
| RPM               | 1785       | AMPS  |  | 89.6         |  | HZ        |                         | 60          | AMB    |                     | 40                    | SF   | 1.15 |      |  |  |
| DRIVE END BEARING | 80BC03J30X |       |  | DUTY         |  | CONT      |                         | INSUL.CLASS |        |                     | F                     |      |      |      |  |  |
| OPP D.E. BEARING  | 80BC03J30X |       |  | ENCL         |  | TEFC      |                         | CODE        |        | G                   |                       |      |      |      |  |  |
| SER.NO.           |            |       |  | POWER FACTOR |  |           |                         | 87          |        | NEMA-NOM-EFFICIENCY |                       |      |      | 95.4 |  |  |
|                   |            |       |  |              |  |           | MAX CORR KVAR           |             | 18     |                     | GUARANTEED EFFICIENCY |      | 94.5 |      |  |  |
|                   |            |       |  |              |  |           | NEMA NOM/CSA QUOTED EFF |             |        |                     |                       |      |      |      |  |  |
|                   |            |       |  |              |  |           | MOTOR WEIGHT            |             |        |                     |                       |      |      |      |  |  |

|                                                                                                                                               |              |                      |                       |                                                                     |                 |       |
|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------------------|-----------------------|---------------------------------------------------------------------|-----------------|-------|
| REL.<br>S.O.                                                                                                                                  | FRAME        | HP                   | TYPE                  | PHASE/<br>HERTZ                                                     | RPM             | VOLTS |
|                                                                                                                                               | 405T         | 100                  | P                     | 3/60                                                                | 1785            | 575   |
| AMPS                                                                                                                                          | DUTY         | AMB °C/<br>INSUL.    | S.F.                  | NEMA<br>DESIGN                                                      | CODE<br>LETTER  | ENCL. |
| 89.6                                                                                                                                          | 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)                           |                 |       |
| 496079                                                                                                                                        | 418142-33-RE | ---                  | ---                   | .0770                                                               |                 |       |
| PERFORMANCE                                                                                                                                   |              |                      |                       |                                                                     |                 |       |
| LOAD                                                                                                                                          | HP           | AMPERES              | RPM                   | %<br>POWER FACTOR                                                   | %<br>EFFICIENCY |       |
| NO LOAD                                                                                                                                       | 0            | 22.9                 | 1800                  | 5.48                                                                | 0               |       |
| 1/4                                                                                                                                           | 25.0         | 31.3                 | 1796                  | 64.3                                                                | 93.0            |       |
| 2/4                                                                                                                                           | 50.0         | 47.5                 | 1792                  | 82.6                                                                | 95.4            |       |
| 3/4                                                                                                                                           | 75.0         | 67.5                 | 1788                  | 86.9                                                                | 95.7            |       |
| 4/4                                                                                                                                           | 100          | 89.6                 | 1783                  | 87.6                                                                | 95.4            |       |
| 5/4                                                                                                                                           | 125          | 113                  | 1778                  | 87.4                                                                | 94.9            |       |
|                                                                                                                                               |              |                      |                       |                                                                     |                 |       |
| SPEED TORQUE                                                                                                                                  |              |                      |                       |                                                                     |                 |       |
|                                                                                                                                               |              | RPM                  | TORQUE<br>% FULL LOAD | TORQUE<br>LB. - FT.                                                 | AMPERES         |       |
| LOCKED ROTOR                                                                                                                                  |              | 0                    | 151                   | 445                                                                 | 580             |       |
| PULL UP                                                                                                                                       |              | 360                  | 136                   | 400                                                                 | 565             |       |
| BREAKDOWN                                                                                                                                     |              | 1721                 | 250                   | 735                                                                 | 306             |       |
| FULL LOAD                                                                                                                                     |              | 1783                 | 100                   | 295                                                                 | 89.6            |       |
| AMPERES SHOWN FOR 575. VOLT CONNECTION. IF OTHER VOLTAGE CONNECTIONS ARE AVAILABLE, THE<br>AMPERES WILL VARY INVERSELY WITH THE RATED VOLTAGE |              |                      |                       |                                                                     |                 |       |
| REMARKS: TYPICAL DATA<br>XE MOTOR-DATA-NEMA NOM. EFF. 95.4 PCT<br>GURANTEED MIN EFF. 95.0 PCT                                                 |              |                      |                       |                                                                     |                 |       |
|                                                            |              | DR. BY P.B. GREENE   |                       | A-C MOTOR<br>PERFORMANCE DATA A40WG0080-R003<br>ISSUE DATE 06/07/18 |                 |       |
|                                                                                                                                               |              | CK. BY K.W. KANOUFF  |                       |                                                                     |                 |       |
|                                                                                                                                               |              | APP. BY K.W. KANOUFF |                       |                                                                     |                 |       |
|                                                                                                                                               |              | DATE 12/02/94        |                       |                                                                     |                 |       |
| Page 5 of 5                                                                                                                                   |              |                      |                       |                                                                     |                 |       |

REL S.O.

RPM **1785**

S.F. **1.15**

ROTOR **418142-33-RE**

FRAME **405T**

VOLTS **575**

NEMA DESIGN **B**

TEST S.O. **TYPICAL DATA**

HP **100**

AMPS **89.6**

CODE LETTER **G**

TEST DATE **---**

TYPE **P**

DUTY **CONT**

ENCLOSURE **TEFC**

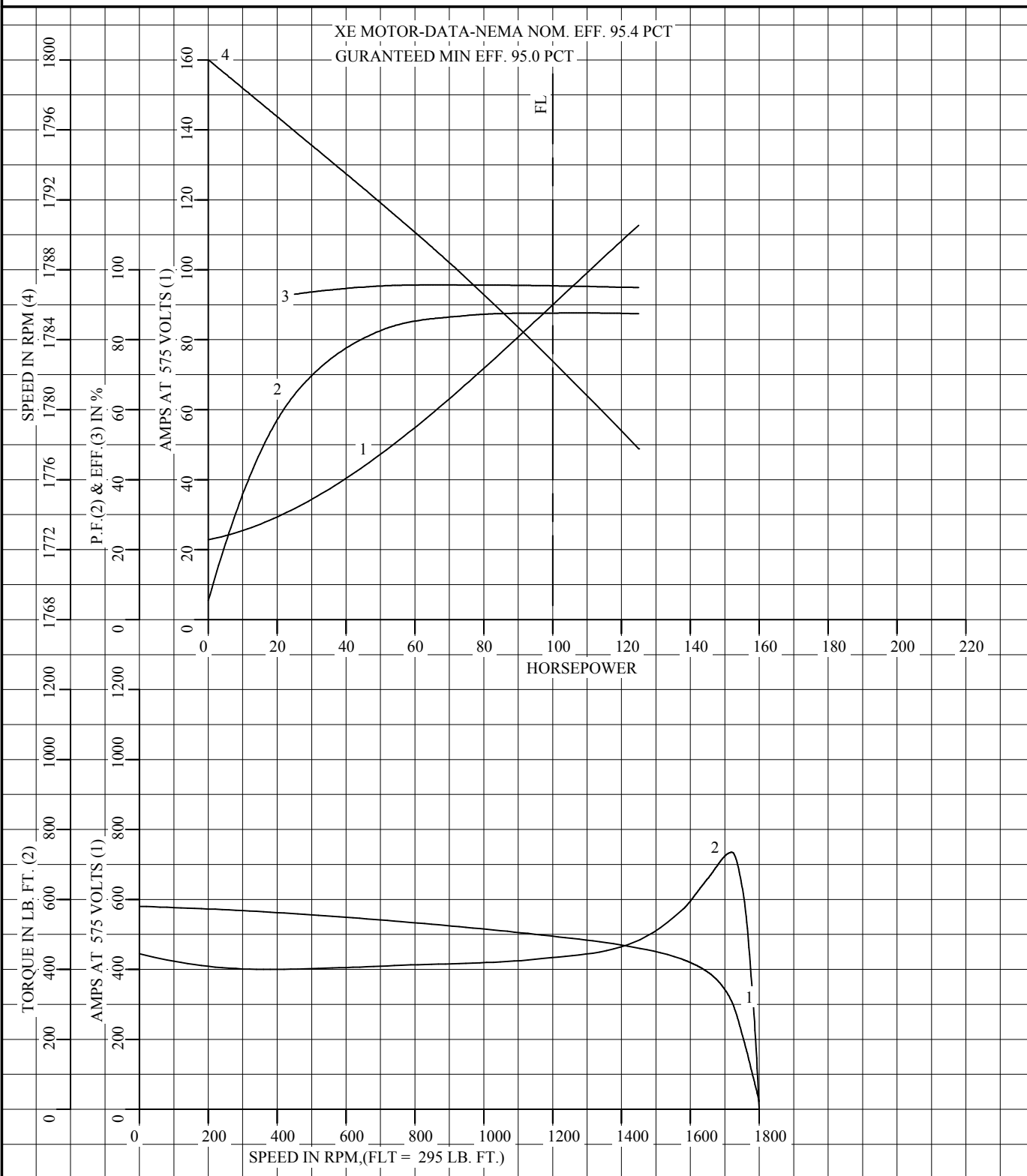
STATOR RES. @ 25 °C **.0770**

PHASE/HERTZ **3/60**

AMB °C/INSUL **40/F**

E/S **496079**

OHMS (BETWEEN LINES)



AMPERES SHOWN FOR 575 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 P.B. GREENE  
CK. BY K.W. KANOUFF  
APP. BY K.W. KANOUFF  
DATE 12/02/94

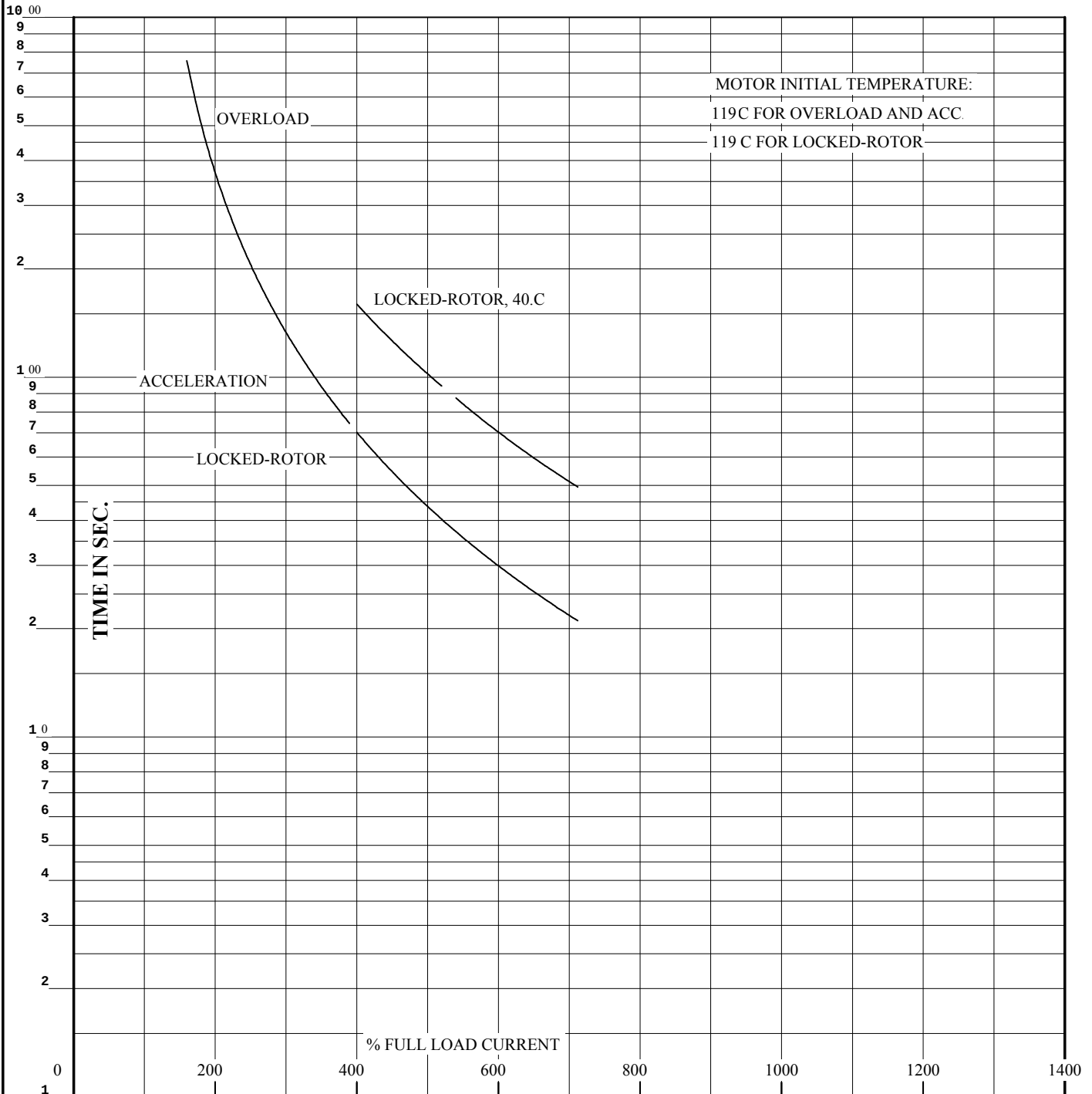
**A-C MOTOR  
PERFORMANCE  
CURVES**

A40WG0080-R003  
ISSUE DATE 06/07/18

REL. S.O.  
 FRAME **405T**  
 HP **100**  
 TYPE **P**  
 PHASE/HERTZ **3/60**

 RPM **1785**  
 VOLTS **575**  
 AMPS **89.6**  
 DUTY **CONT**  
 AMB °C/INSUL **40/F**

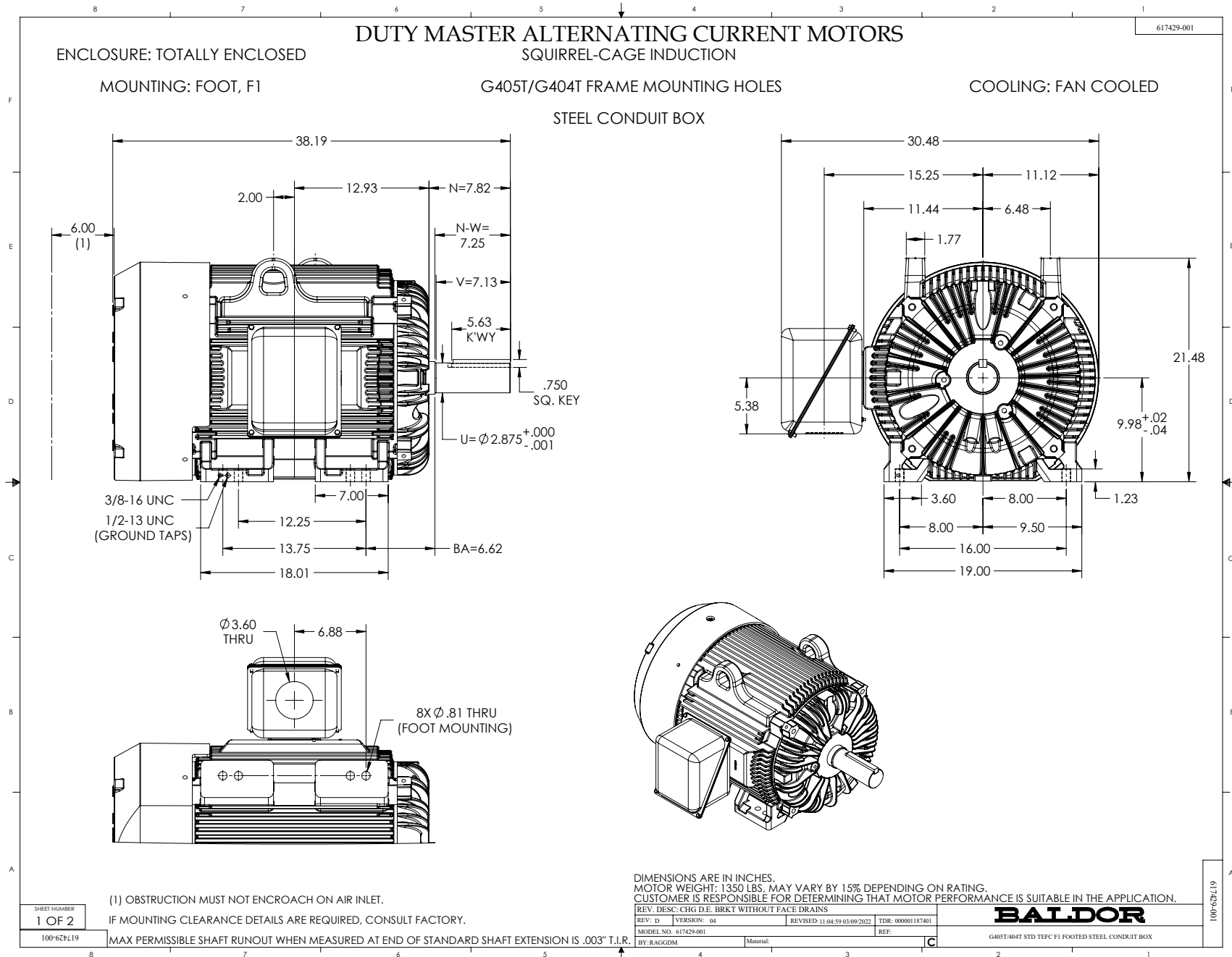
 S.F. **1.15**  
 NEMA DESIGN **B**  
 CODE LETTER **G**  
 ENCLOSURE **TEFC**  
 E/S **496079**

 ROTOR **418142-33-RE**  
 TEST S.O. **TYPICAL DATA**  
 TEST DATE **---**  
 STATOR RES. @ 25 °C **.0770**  
 OHMS (BETWEEN LINES)

**THERMAL LIMIT CURVE**

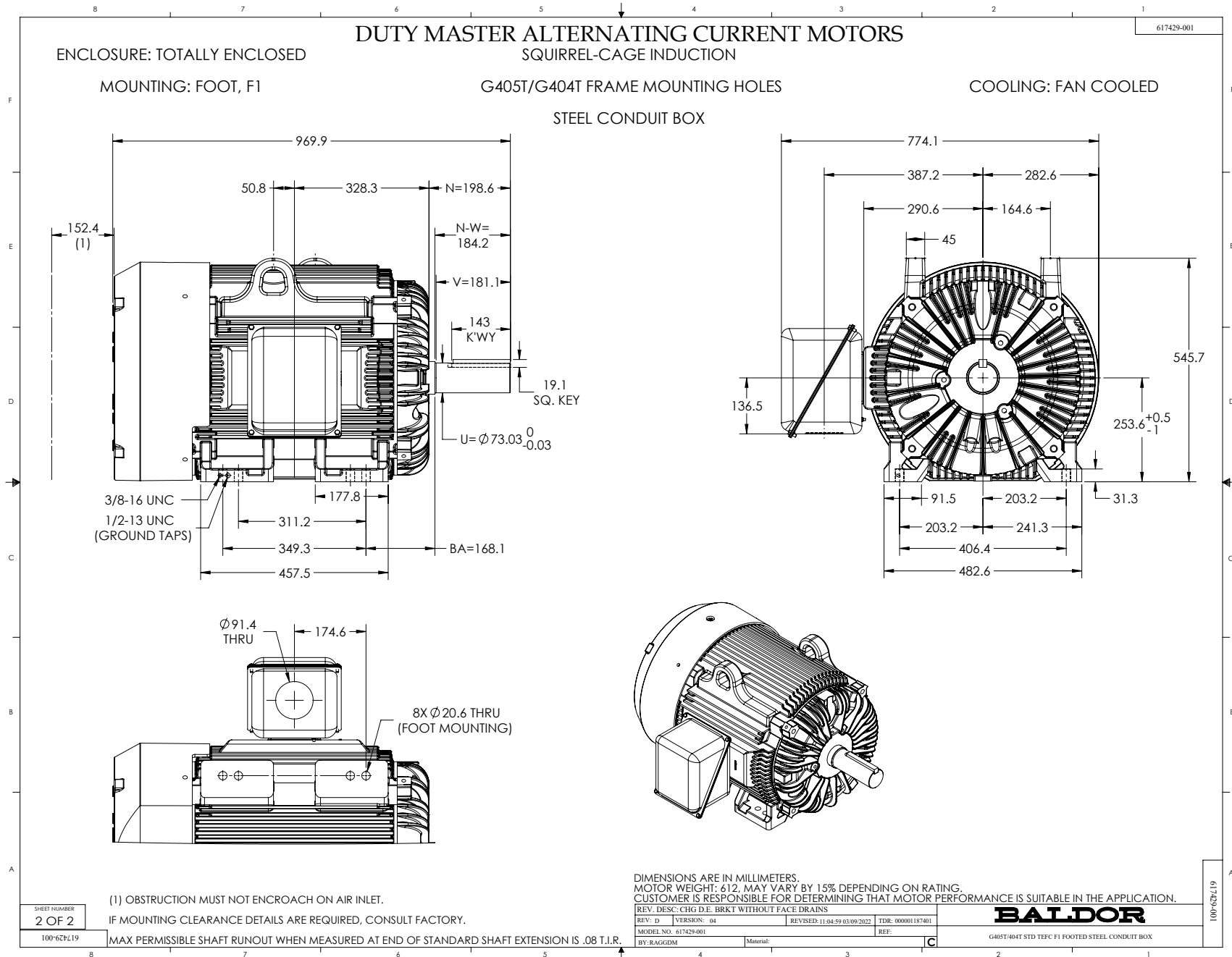
 REMARKS:  
 XE MOTOR-DATA-NEMA NOM. EFF. 95.4 PCT  
 GURANTEED MIN EFF. 95.0 PCT

 AMPERES SHOWN FOR 575 VOLT CONNECTION, IF OTHER VOLTAGE CONNECTIONS ARE AVAILABLE, THE  
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 DR. BY P.B. GREENE  
 CK. BY K.W. KANOUFF  
 APP. BY K.W. KANOUFF  
 DATE 12/02/94
**A-C MOTOR  
PERFORMANCE  
CURVES**
**A40WG0080-R003**  
 ISSUE DATE 06/07/18 Page 7 of 10

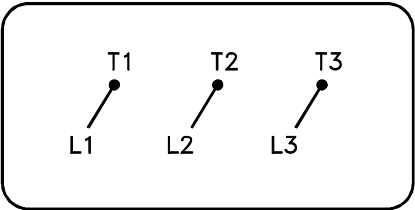






416820-036

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