

# ABB BALDOR RELIANCE III

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## Customer information packet

### DRX40144T

100HP, 1785RPM, 3PH, 60HZ, 405T, TEFC, F1

Class - CLI GP C,D

Division - Division I

**Specifications**

|                               |                                            |
|-------------------------------|--------------------------------------------|
| Enclosure                     | TEFC                                       |
| Frame                         | 405T                                       |
| Frame Material                | Iron                                       |
| Frequency                     | 60.00 Hz                                   |
| Haz Area Class and Group      | CLI GP C,D                                 |
| Haz Area Division             | Division I                                 |
| Motor Letter Type             | Three Phase                                |
| Output @ Frequency            | 100.000 HP @ 60 HZ                         |
| Phase                         | 3                                          |
| Synchronous Speed @ Frequency | 1800 RPM @ 60 HZ                           |
| Voltage @ Frequency           | 230.0 V @ 60 HZ<br>460.0 V @ 60 HZ         |
| Agency Approvals              | UL<br>CSA<br>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             | 112.000 A @ 460.0 V<br>224.000 A @ 230.0 V |
| Design Code                   | B                                          |
| Drip Cover                    | No Drip Cover                              |
| Duty Rating                   | CONT                                       |
| Efficiency @ 100% Load        | 95.4 %                                     |
| Feedback Device               | NO FEEDBACK                                |
| Haz Area Temp Code            | T3C                                        |
| Heater Indicator              | No Heater                                  |
| High Voltage Full Load Amps   | 112.0 a                                    |
| Insulation Class              | F                                          |
| Inverter Code                 | Inverter Ready                             |

**Part Detail**

|              |            |
|--------------|------------|
| Revision     | A          |
| Type         | AC         |
| Mech. spec.  |            |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | A40WG0692  |
| Layout       | 617433-608 |
| Eff. date    | 05-06-2024 |
| CD Diagram   | 416820-002 |
| Poles        | 04         |
| Leads        | 3#2,6#4    |
| Proprietary  | False      |
| Created date | 03-08-2019 |

|                                      |                            |
|--------------------------------------|----------------------------|
| <b>IP Rating</b>                     | NONE                       |
| <b>KVA Code</b>                      | G                          |
| <b>Max Speed</b>                     | 3600 rpm                   |
| <b>Motor Lead Quantity/Wire Size</b> | 3 @ 2 AWG                  |
| <b>Motor Standards</b>               | NEMA                       |
| <b>Motor Type</b>                    | A40064M                    |
| <b>Mounting Arrangement</b>          | F1                         |
| <b>Number of Poles</b>               | 4                          |
| <b>Overall Length</b>                | 38.22 IN                   |
| <b>Power Factor</b>                  | 87                         |
| <b>Product Family</b>                | General Industrial         |
| <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>       | Shaft 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>      | Normally Closed Thermostat |

**Nameplate**

|                  |  |
|------------------|--|
| NP2496L          |  |
| MOBIL POLYREX EM |  |

|                     |       |     |
|---------------------|-------|-----|
| 000613006PC         |       |     |
| CLASS I GROUP       | C D X | NO. |
| CLASS II GROUP      | X X X |     |
| OPERATING TEMP CODE | T3C   |     |

**NP3140L**

|                   |                             |       |         |              |             |              |        |      |      |      |       |      |
|-------------------|-----------------------------|-------|---------|--------------|-------------|--------------|--------|------|------|------|-------|------|
| SPEC NO.          | A40-7255-0692               |       |         | CAT.NO.      |             | DRX40144T    |        |      |      |      | FRAME | 405T |
| HP                | 100                         | VOLTS | 230/460 |              | PHASE       | 3            | DESIGN | B    | TYPE | P    |       |      |
| RPM               | 1785                        | AMPS  | 224/112 |              | HZ          | 60           | AMB    | 40   | SF   | 1.00 |       |      |
| DRIVE END BEARING | 80BC03J30X                  |       | DUTY    | CONT         | INSUL.CLASS |              |        | F    |      |      |       |      |
| OPP D.E. BEARING  | 80BC03J30X                  |       | ENCL    | TEFC         | CODE        | G            |        |      |      |      |       |      |
| SF                | 1.15                        | WK2   | 26.346  | MAG CUR      | 28.6        | RPM MAX      |        | 3600 |      |      |       |      |
| CT HZ             | 6-60                        | VT HZ | 0-60    | CHP HZ       | 60-90       | NEMA-NOM-EFF |        |      | 95.4 |      |       |      |
|                   | SUIT FOR 55C AMB AT 1.00 SF |       |         |              |             | IP55         |        |      |      |      |       |      |
| SER.NO.           |                             |       |         | MOTOR WEIGHT |             |              |        |      |      |      |       |      |

**Parts List**

| Part number | Description                               | Quantity |
|-------------|-------------------------------------------|----------|
| SA367505    | SA A40-7255-0692                          | 1.000 ea |
| RA356965    | RA A40-7255-0692                          | 1.000 ea |
| 421948032   | LABEL, MYLAR                              | 1.000 ea |
| NP2496L     | MOTOR LUBE NAMEPLATE                      | 1.000 ea |
| 000692000VD | LABEL WARNING                             | 1.000 ea |
| LB1073      | ALUM XP CAUTION LABEL                     | 1.000 ea |
| 000613006PC | N/P U/L (REL QTY 500)                     | 1.000 ea |
| NP3140L     | INVERTER DUTY, SS, CC, CSA-C US, CSA EEV  | 1.000 ea |
| HW4506A02   | BREATHING/DRAIN-EXP PROOF-.125-27 NPTF AI | 2.000 ea |
| 609158001E  | SLGR - 400                                | 1.000 ea |
| 603284001Y  | SLGR - 400                                | 1.000 ea |
| 089416503A  | G400 STD BRKT MACHINING 6316 BE OR FE     | 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 |
| 078548001R  | FAN KB 234/150 (84) 400                   | 1.000 ea |
| 004824015A  | GREASE POLYREX EM                         | 0.880 lb |
| 032130022GB | HHCS 7/8-9X2-3/4 PLTD.                    | 4.000 ea |
| 032018008CK | HHCS 3/8-16X1L PLATED                     | 4.000 ea |
| 032018030CK | HHCS 3/8-16X3-3/4 PLATED                  | 3.000 ea |
| 415096002A  | CPLG 1/8 HEX TYPE                         | 1.000 ea |
| 415045002B  | SLGR                                      | 1.000 ea |
| 410700000DA | WAVY SPRING WASHER                        | 1.000 ea |
| 035000001G  | GREASE RELIEF FITTING, ALEMITE 317400     | 1.000 ea |
| 034000014AB | WSH ID.406 OD.812 TH.065                  | 4.000 ea |
| 034530052AB | P/NIP 1/8X6-1/2 Zinc                      | 1.000 ea |
| 034530056BB | P/NIP 1/4X7 SCHED 40                      | 1.000 ea |
| 034631002AB | BUSH 1/4 TO 1/8 PLTD.                     | 1.000 ea |
| 034600001AA | BUSH 1/4TO1/8 BLACK                       | 1.000 ea |
| 034600001AA | BUSH 1/4TO1/8 BLACK                       | 1.000 ea |
| 089416503A  | G400 STD BRKT MACHINING 6316 BE OR FE     | 1.000 ea |

|             |                                          |          |
|-------------|------------------------------------------|----------|
| 032018024CK | HHCS 3/8-16X3 PLTD.                      | 3.000 ea |
| 415045002B  | SLGR                                     | 1.000 ea |
| 034017014AB | LCKW 3/8 STD. PLATED                     | 3.000 ea |
| 034530024AB | PNIPL 1/8X3L PLATED                      | 1.000 ea |
| 415096002A  | CPLG 1/8 HEX TYPE                        | 1.000 ea |
| 032130024GB | HSHCS 7/8-9NC X 3" LONG PLATED           | 4.000 ea |
| 035000001G  | GREASE RELIEF FITTING, ALEMITE 317400    | 1.000 ea |
| 16CB1001A01 | CONDUIT BOX MACH GRP C MTRS 16CB1001     | 1.000 ea |
| 16CB1501A01 | CONDUIT BOX LID MACH.GRP C MTRS 16CB1501 | 1.000 ea |
| 418150003A  | GREASE FITTING CAP                       | 1.000 ea |
| 034017018AB | 5/8 MED LOCK WASHER ZP (034017018AF)     | 8.000 ea |
| 034017014AB | LCKW 3/8 STD. PLATED                     | 4.000 ea |
| 035000001A  | ALFTG 1/8" 1610-BL                       | 1.000 ea |
| 032130016EB | HSHCS 5/8-11X2 PLTD.                     | 8.000 ea |
| 415000115H  | T/LUG #2AWG-4/0AWG                       | 1.000 ea |
| 406099000A  | PLUG - FAN COVER 320-440                 | 1.000 ea |
| 032018008DK | HHCS 1/2-13X1 PLATED                     | 1.000 ea |
| 034017016AB | LCKW 1/2" PLATED                         | 1.000 ea |
| 032130014CB | HSHCS 3/8-16X1-3/4 PLTD.                 | 4.000 ea |
| 035000001A  | ALFTG 1/8" 1610-BL                       | 1.000 ea |
| 418150003A  | GREASE FITTING CAP                       | 1.000 ea |
| MG1025G29   | WILKOFAS, 789.229, DARK CHARCOAL GRAY    | 0.380 ga |
| 033775004EA | DRSCR #6-1/4 304 S.S.                    | 8.000 ea |
| 034180045JA | KEY,DE                                   | 1.000 ea |
| 604797045   | STD. 400 FRAME SKID                      | 1.000 ea |
| 032510024D  | CARRIAGE BOLT - 444                      | 2.000 ea |
| 034001014AB | FLAT WASHER 3/8"PLATED                   | 2.000 ea |
| 034001016AB | WSHR .562ID 1.375OD .109                 | 2.000 ea |
| 033300014AC | HEX NUT, SHIPPING - 400                  | 2.000 ea |
| 604799003C  | PLASTIC BAG 42X32X46                     | 1.000 ea |

|                                                                                                                                                                                                                                                     |              |                   |                                              |                                            |                 |         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------|----------------------------------------------|--------------------------------------------|-----------------|---------|
| REL.<br>S.O.                                                                                                                                                                                                                                        | FRAME        | HP                | TYPE                                         | PHASE/<br>HERTZ                            | RPM             | VOLTS   |
|                                                                                                                                                                                                                                                     | 405HP        | 100               | P                                            | 3/60                                       | 1785            | 230/460 |
| AMPS                                                                                                                                                                                                                                                | DUTY         | AMB °C/<br>INSUL. | S.F.                                         | NEMA<br>DESIGN                             | CODE<br>LETTER  | ENCL.   |
| 224/112                                                                                                                                                                                                                                             | 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) |                 |         |
| 596956                                                                                                                                                                                                                                              | 418142-33-RE | ---               | ---                                          | .0123/.0492                                |                 |         |
| PERFORMANCE                                                                                                                                                                                                                                         |              |                   |                                              |                                            |                 |         |
| LOAD                                                                                                                                                                                                                                                | HP           | AMPERES           | RPM                                          | %<br>POWER FACTOR                          | %<br>EFFICIENCY |         |
| NO LOAD                                                                                                                                                                                                                                             | 0            | 28.6              | 1800                                         | 5.49                                       | 0               |         |
| 1/4                                                                                                                                                                                                                                                 | 25.0         | 39.2              | 1796                                         | 64.3                                       | 93.0            |         |
| 2/4                                                                                                                                                                                                                                                 | 50.0         | 59.5              | 1792                                         | 82.5                                       | 95.4            |         |
| 3/4                                                                                                                                                                                                                                                 | 75.0         | 84.6              | 1788                                         | 86.7                                       | 95.7            |         |
| 4/4                                                                                                                                                                                                                                                 | 100          | 112               | 1783                                         | 87.4                                       | 95.4            |         |
| 5/4                                                                                                                                                                                                                                                 | 125          | 141               | 1778                                         | 87.3                                       | 94.9            |         |
|                                                                                                                                                                                                                                                     |              |                   |                                              |                                            |                 |         |
| SPEED TORQUE                                                                                                                                                                                                                                        |              |                   |                                              |                                            |                 |         |
|                                                                                                                                                                                                                                                     |              | RPM               | TORQUE<br>% FULL LOAD                        | TORQUE<br>LB.-FT.                          | AMPERES         |         |
| LOCKED ROTOR                                                                                                                                                                                                                                        |              | 0                 | 151                                          | 445                                        | 725             |         |
| PULL UP                                                                                                                                                                                                                                             |              | 360               | 136                                          | 400                                        | 706             |         |
| BREAKDOWN                                                                                                                                                                                                                                           |              | 1721              | 250                                          | 735                                        | 382             |         |
| FULL LOAD                                                                                                                                                                                                                                           |              | 1783              | 100                                          | 295                                        | 112             |         |
| 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: TYPICAL DATA<br>XE MOTOR-DATA-NEMA NOM. EFF. 95.4 PCT<br>GUARANTEED MIN EFF. 94.5 PCT |              |                   |                                              |                                            |                 |         |
|                                                                                                                                                                  |              | DR. BY            | G. R. WEBB                                   | <b>A-C MOTOR<br/>PERFORMANCE DATA</b>      |                 |         |
|                                                                                                                                                                                                                                                     |              | CK. BY            | W. L. SMITH                                  |                                            |                 |         |
|                                                                                                                                                                                                                                                     |              | APP. BY           | W. L. SMITH                                  |                                            |                 |         |
|                                                                                                                                                                                                                                                     |              | DATE              | 01/19/12                                     |                                            |                 |         |
|                                                                                                                                                                                                                                                     |              |                   | <b>A40WG0692-R004</b><br>ISSUE DATE 08/06/20 |                                            |                 |         |

REL S.O.

RPM 1785

S.F. 1.15

ROTOR 418142-33-RE

FRAME 405HP

VOLTS 230/460

NEMA DESIGN B

TEST S.O. TYPICAL DATA

HP 100

AMPS 224/112

CODE LETTER G

TEST DATE ---

TYPE P

DUTY CONT

ENCLOSURE TEFC

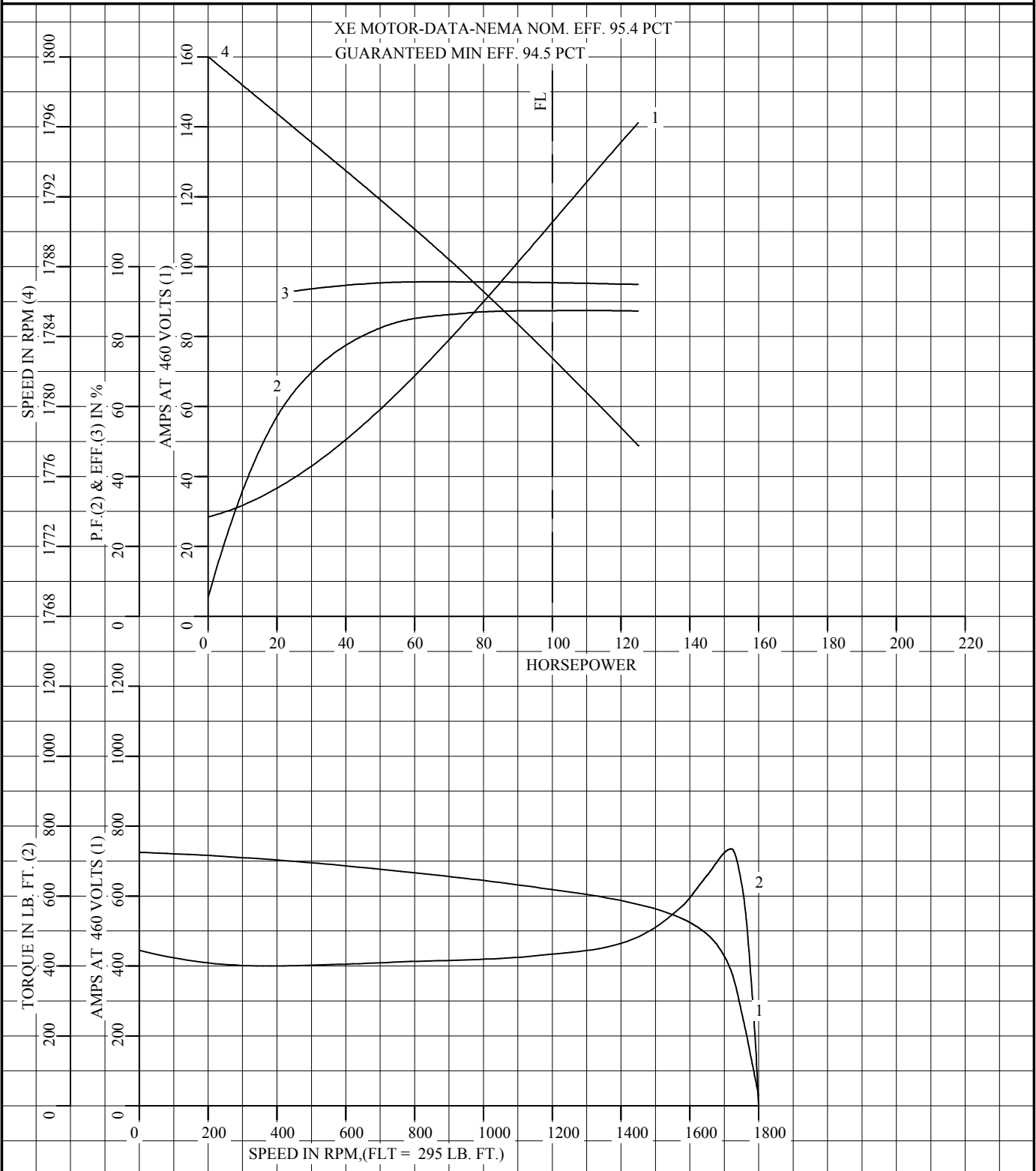
STATOR RES. @ 25 °C .0123/.0492

PHASE/HERTZ 3/60

AMB °C/INSUL 40/F

E/S 596956

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 G. R. WEBB  
 CK. BY W. L. SMITH  
 APP. BY W. L. SMITH  
 DATE 01/19/12

**A-C MOTOR  
PERFORMANCE  
CURVES**

A40WG0692-R004

ISSUE DATE 08/06/20

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REL. S.O.

 RPM **1785**

 S.F. **1.15**

 ROTOR **418142-33-RE**

 FRAME **405HP**

 VOLTS **230/460**

 NEMA DESIGN **B**

 TEST S.O. **TYPICAL DATA**

 HP **100**

 AMPS **224/112**

 CODE LETTER **G**

 TEST DATE **---**

 TYPE **P**

 DUTY **CONT**

 ENCLOSURE **TEFC**

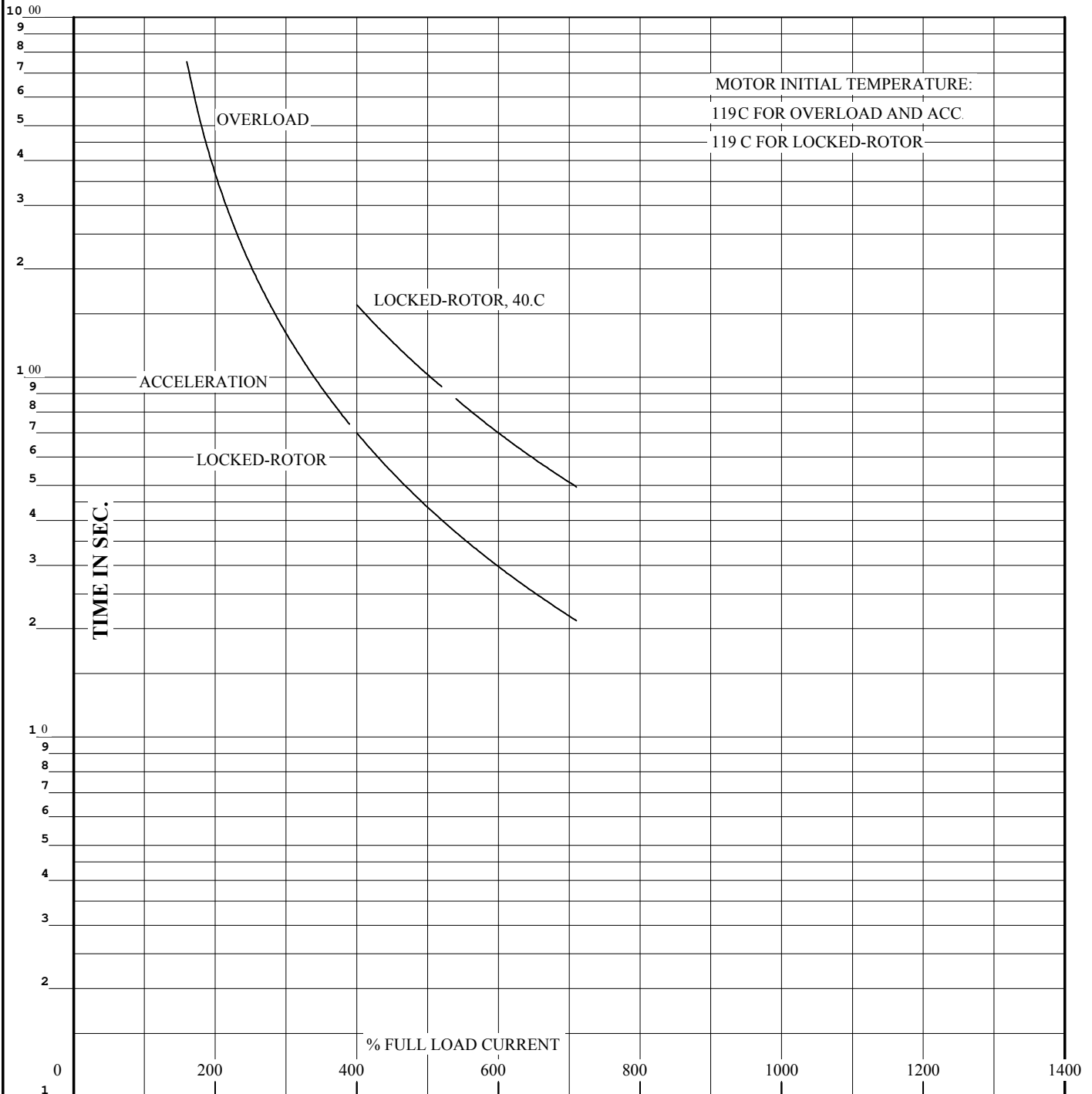
 STATOR RES. @ 25 °C **.0123/.0492**

 PHASE/HERTZ **3/60**

 AMB °C/INSUL **40/F**

 E/S **596956**

OHMS (BETWEEN LINES)



THERMAL LIMIT CURVE

REMARKS:

XE MOTOR-DATA-NEMA NOM. EFF. 95.4 PCT

GUARANTEED MIN EFF. 94.5 PCT

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


|         |             |
|---------|-------------|
| DR. BY  | G. R. WEBB  |
| CK. BY  | W. L. SMITH |
| APP. BY | W. L. SMITH |
| DATE    | 01/19/12    |

**A-C MOTOR  
PERFORMANCE  
CURVES**

**A40WG0692-R004**

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CONNECTION DIAGRAM  
ACCESSORIES

| MOTOR WINDING THERMOSTATS |                       |                   |
|---------------------------|-----------------------|-------------------|
| CONTACTS                  | _____ @ _____ ° C     |                   |
| FIGURE NUMBER             | _____                 |                   |
| CONTACT RATING            |                       |                   |
| VOLTS                     | CONTINUOUS<br>AMPERES | INRUSH<br>AMPERES |
| 110-120                   | 3. 0                  | 30                |
| 220-240                   | 1. 5                  | 15                |
| 440-480                   | 0. 75                 | 7. 5              |
| 550-600                   | 0. 60                 | 6. 0              |

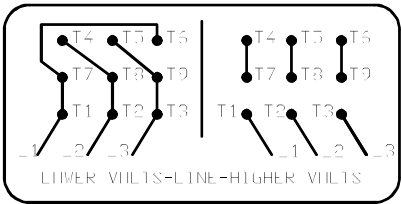
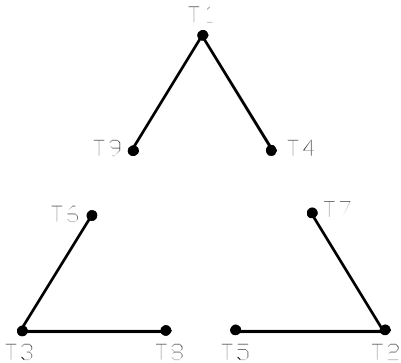
| THERMOSTATS     |                 |
|-----------------|-----------------|
| NORMALLY CLOSED | NORMALLY OPEN   |
| <p>FIGURE 1</p> | <p>FIGURE 4</p> |
| <p>FIGURE 2</p> | <p>FIGURE 5</p> |
| <p>FIGURE 3</p> | <p>FIGURE 6</p> |
| <p>FIGURE 7</p> | <p>FIGURE 8</p> |

CUSTOMER \_\_\_\_\_ CUSTOMER ORDER NO. \_\_\_\_\_ S.O. NO. \_\_\_\_\_

|                          |                              |                   |
|--------------------------|------------------------------|-------------------|
| REV. DESC: LOADED TO BUS |                              |                   |
| REV. LTR: A              | VERSION: 01                  | TDR: 000000570390 |
| FILE: \RAG\00013\849     | REVISED: 10:16:21 12/07/2010 | BY: RAGDRF        |
| MTL: -                   |                              |                   |

416820-002

A-C MOTOR  
CONNECTION DIAGRAM  
STANDARD 9 LEAD      DELTA-CONNECTED



(N.P. 1575-B)

|                                           |                              |                   |
|-------------------------------------------|------------------------------|-------------------|
| REV. DESC: FONT CHANGE FOR PDF SEARCHABLE |                              |                   |
| REV. LTR: A                               | VERSION: 01                  | TDR: 000001009382 |
| FILE: \MGA\00000\661                      | REVISED: 02:46:19 02/13/2020 | BY: MGHMTT        |
| MTL: —                                    |                              |                   |

**BALDOR - RELIANCE®**

CONN DIAG — STANDARD 9 LEAD, DELTA-CONNECTED  
SH 1 of 1

416820-002