

# ABB BALDOR RELIANCE III

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## Customer information packet

### EWDM4404T

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

Class - None

Division - Not Applicable

**Specifications**

|                               |                                           |
|-------------------------------|-------------------------------------------|
| Enclosure                     | TEFC                                      |
| Frame                         | 405T                                      |
| 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            | 75.000 HP @ 60 HZ                         |
| Phase                         | 3                                         |
| Synchronous Speed @ Frequency | 1200 RPM @ 60 HZ                          |
| Voltage @ Frequency           | 230.0 V @ 60 HZ<br>460.0 V @ 60 HZ        |
| Agency Approvals              | CSA EEV<br>CCSA US                        |
| Ambient Temperature           | 40 °C                                     |
| Auxiliary Box                 | NO AUXILLARY BOX                          |
| Base Indicator                | Rigid                                     |
| Bearing Grease Type           | Polyrex EM (-20F +300F)                   |
| Current @ Voltage             | 174.000 A @ 230.0 V<br>87.000 A @ 460.0 V |
| Design Code                   | B                                         |
| Drip Cover                    | No Drip Cover                             |
| Duty Rating                   | CONT                                      |
| Efficiency @ 100% Load        | 94.5 %                                    |
| Enclosure Modification        | Severe Duty Features                      |
| Feedback Device               | NO FEEDBACK                               |
| Heater Indicator              | No Heater                                 |
| High Voltage Full Load Amps   | 87.0 a                                    |
| Insulation Class              | F                                         |
| Inverter Code                 | Inverter Ready                            |
| IP Rating                     | IP55                                      |
| KVA Code                      | G                                         |

**Part Detail**

|              |            |
|--------------|------------|
| Revision     | A          |
| Type         | AC         |
| Mech. spec.  |            |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | A40WG0770  |
| Layout       | 617429-533 |
| Eff. date    | 10-22-2021 |
| CD Diagram   | 416820-002 |
| Poles        | 06         |
| Leads        | 3#2,6#4    |
| Proprietary  | False      |
| Created date | 09-11-2019 |

|                                      |                    |
|--------------------------------------|--------------------|
| <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>               | 6                  |
| <b>Overall Length</b>                | 38.19 IN           |
| <b>Power Factor</b>                  | 85                 |
| <b>Product Family</b>                | Washdown Features  |
| <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>                         | 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 POLYREX EM |  |

**NP2428L**

|                   |                                |       |         |              |       |                         |                     |    |                       |       |      |  |
|-------------------|--------------------------------|-------|---------|--------------|-------|-------------------------|---------------------|----|-----------------------|-------|------|--|
| SPEC NO.          | A40-7204-0770                  |       |         | CAT.NO.      |       | EWDM4404T               |                     |    |                       | FRAME | 405T |  |
| HP                | 75                             | VOLTS | 230/460 |              | PHASE | 3                       | DESIGN              | B  | TYPE                  | P     |      |  |
| RPM               | 1185                           | AMPS  | 174/87  |              | HZ    | 60                      | AMB                 | 40 | SF                    | 1.15  |      |  |
| DRIVE END BEARING | 80BC03JPP30A                   |       |         | DUTY         | CONT  | INSUL.CLASS             |                     | F  |                       |       |      |  |
| OPP D.E. BEARING  | 80BC03JPP30A                   |       |         | ENCL         | TEFC  | CODE                    | G                   |    |                       |       |      |  |
| SER.NO.           |                                |       |         | POWER FACTOR |       | 85                      | NEMA-NOM-EFFICIENCY |    |                       |       | 94.5 |  |
|                   |                                |       |         |              |       | MAX CORR KVAR           |                     | 15 | GUARANTEED EFFICIENCY |       | 93.6 |  |
|                   | IP55                           |       |         |              |       | NEMA NOM/CSA QUOTED EFF |                     |    |                       |       |      |  |
|                   | 6:1CT AND 6:1VT ON VPWM INVERT |       |         |              |       | ER, 1.00SF              |                     |    | MOTOR WEIGHT          |       |      |  |

|                                                                                                                                                                                                                                                           |              |                   |                                              |                                            |                 |         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------|----------------------------------------------|--------------------------------------------|-----------------|---------|
| REL.<br>S.O.                                                                                                                                                                                                                                              | FRAME        | HP                | TYPE                                         | PHASE/<br>HERTZ                            | RPM             | VOLTS   |
|                                                                                                                                                                                                                                                           | 405TZ        | 75                | P                                            | 3/60                                       | 1185            | 230/460 |
| AMPS                                                                                                                                                                                                                                                      | DUTY         | AMB °C/<br>INSUL. | S.F.                                         | NEMA<br>DESIGN                             | CODE<br>LETTER  | ENCL.   |
| 174/87                                                                                                                                                                                                                                                    | 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) |                 |         |
| 496234                                                                                                                                                                                                                                                    | 418142-71-EE | ---               | ---                                          | .0215/.0860                                |                 |         |
| PERFORMANCE                                                                                                                                                                                                                                               |              |                   |                                              |                                            |                 |         |
| LOAD                                                                                                                                                                                                                                                      | HP           | AMPERES           | RPM                                          | %<br>POWER FACTOR                          | %<br>EFFICIENCY |         |
| NO LOAD                                                                                                                                                                                                                                                   | 0            | 31.0              | 1200                                         | 4.76                                       | 0               |         |
| 1/4                                                                                                                                                                                                                                                       | 18.8         | 37.3              | 1197                                         | 51.5                                       | 91.5            |         |
| 2/4                                                                                                                                                                                                                                                       | 37.5         | 50.8              | 1193                                         | 73.2                                       | 94.4            |         |
| 3/4                                                                                                                                                                                                                                                       | 56.2         | 67.8              | 1190                                         | 81.8                                       | 94.9            |         |
| 4/4                                                                                                                                                                                                                                                       | 75.0         | 87.0              | 1186                                         | 85.3                                       | 94.6            |         |
| 5/4                                                                                                                                                                                                                                                       | 93.8         | 108               | 1182                                         | 86.4                                       | 94.1            |         |
|                                                                                                                                                                                                                                                           |              |                   |                                              |                                            |                 |         |
| SPEED TORQUE                                                                                                                                                                                                                                              |              |                   |                                              |                                            |                 |         |
|                                                                                                                                                                                                                                                           |              | RPM               | TORQUE<br>% FULL LOAD                        | TORQUE<br>LB.-FT.                          | AMPERES         |         |
| LOCKED ROTOR                                                                                                                                                                                                                                              |              | 0                 | 166                                          | 552                                        | 537             |         |
| PULL UP                                                                                                                                                                                                                                                   |              | 400               | 158                                          | 524                                        | 506             |         |
| BREAKDOWN                                                                                                                                                                                                                                                 |              | 1128              | 243                                          | 808                                        | 302             |         |
| FULL LOAD                                                                                                                                                                                                                                                 |              | 1186              | 100                                          | 332                                        | 87.0            |         |
| 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-TYPICAL DATA-NEMA NOM EFF 94.5 PCT<br>GUARANTEED MIN EFF. 93.6 PCT |              |                   |                                              |                                            |                 |         |
|                                                                                                                                                                        |              | DR. BY            | C.E. JAMISON                                 | <b>A-C MOTOR<br/>PERFORMANCE DATA</b>      |                 |         |
|                                                                                                                                                                                                                                                           |              | CK. BY            | W.L. SMITH                                   |                                            |                 |         |
|                                                                                                                                                                                                                                                           |              | APP. BY           | C.E. JAMISON                                 |                                            |                 |         |
|                                                                                                                                                                                                                                                           |              | DATE              | 11/04/16                                     |                                            |                 |         |
|                                                                                                                                                                                                                                                           |              |                   | <b>A40WG0770-R015</b><br>ISSUE DATE 03/29/21 |                                            |                 |         |

REL S.O.

 RPM **1185**

 S.F. **1.15**

 ROTOR **418142-71-EE**

 FRAME **405TZ**

 VOLTS **230/460**

 NEMA DESIGN **B**

 TEST S.O. **TYPICAL DATA**

 HP **75**

 AMPS **174/87**

 CODE LETTER **G**

 TEST DATE **---**

 TYPE **P**

 DUTY **CONT**

 ENCLOSURE **TEFC**

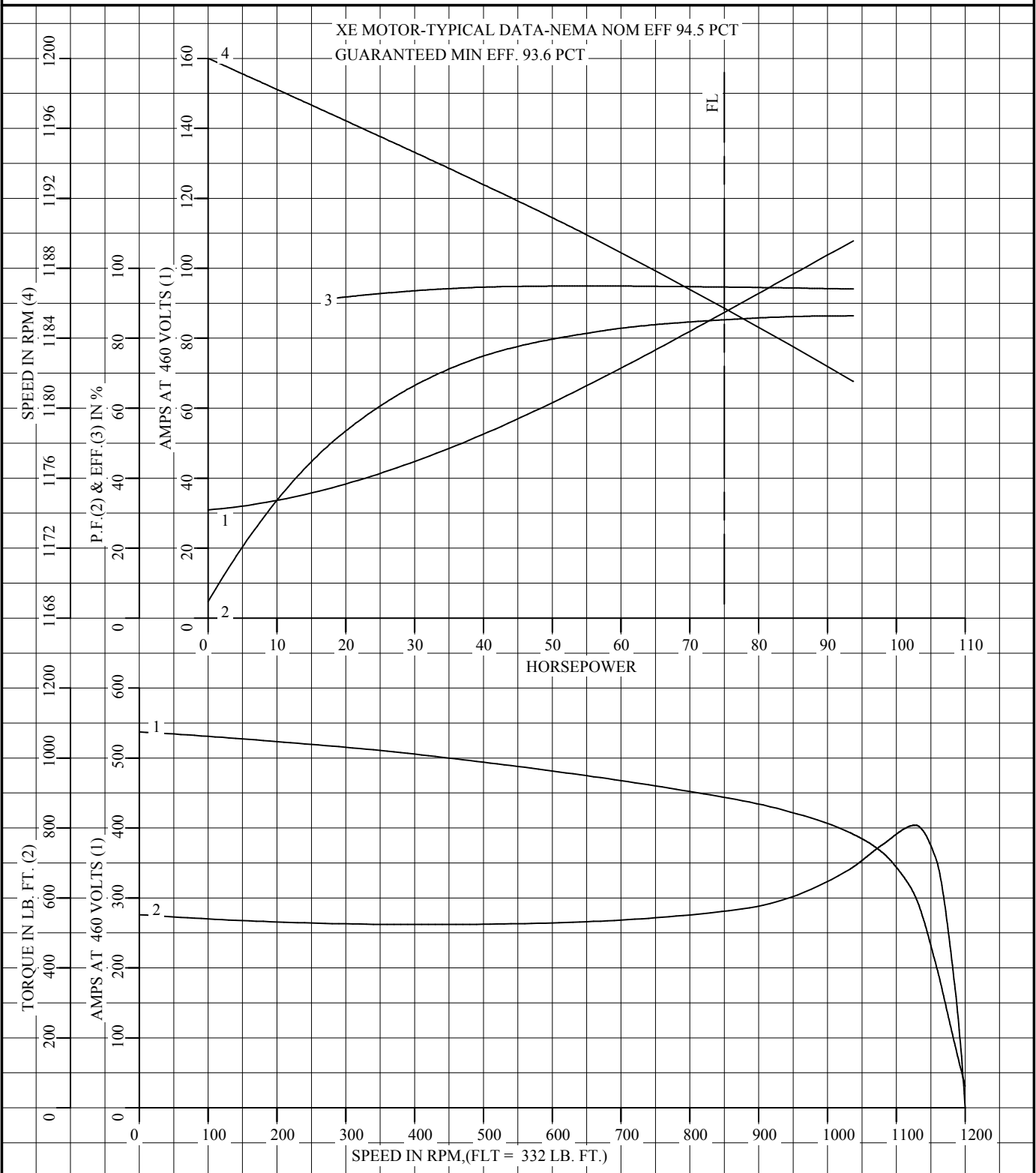
 STATOR RES. @ 25 °C **.0215/.0860**

 PHASE/HERTZ **3/60**

 AMB °C/INSUL **40/F**

 E/S **496234**

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 C.E. JAMISON  
 CK. BY W.L. SMITH  
 APP. BY C.E. JAMISON  
 DATE 11/04/16

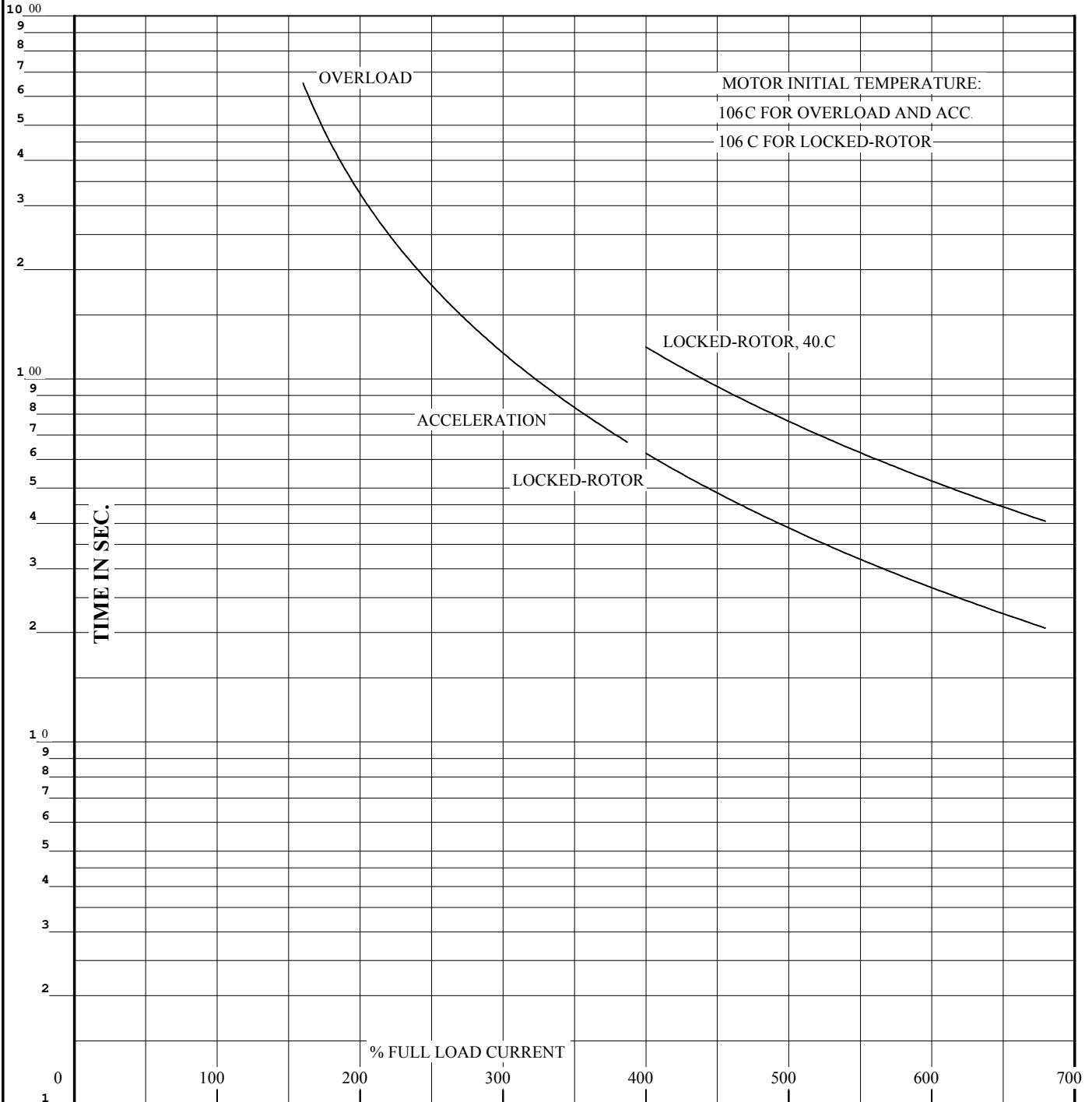
**A-C MOTOR  
PERFORMANCE  
CURVES**

**A40WG0770-R015**

ISSUE DATE **03/29/21**

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|                         |                          |                       |                                        |
|-------------------------|--------------------------|-----------------------|----------------------------------------|
| REL. S.O.               | RPM <b>1185</b>          | S.F. <b>1.15</b>      | ROTOR <b>418142-71-EE</b>              |
| FRAME <b>405TZ</b>      | VOLTS <b>230/460</b>     | NEMA DESIGN <b>B</b>  | TEST S.O. <b>TYPICAL DATA</b>          |
| HP <b>75</b>            | AMPS <b>174/87</b>       | CODE LETTER <b>G</b>  | TEST DATE <b>---</b>                   |
| TYPE <b>P</b>           | DUTY <b>CONT</b>         | ENCLOSURE <b>TEFC</b> | STATOR RES. @ 25 °C <b>.0215/.0860</b> |
| PHASE/HERTZ <b>3/60</b> | AMB °C/INSUL <b>40/F</b> | E/S <b>496234</b>     | OHMS (BETWEEN LINES)                   |



**THERMAL LIMIT CURVE**

REMARKS: XE MOTOR-TYPICAL DATA-NEMA NOM EFF 94.5 PCT  
GUARANTEED MIN EFF. 93.6 PCT

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

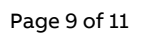


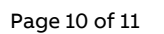
|         |              |
|---------|--------------|
| DR. BY  | C.E. JAMISON |
| CK. BY  | W.L. SMITH   |
| APP. BY | C.E. JAMISON |
| DATE    | 11/04/16     |

**A-C MOTOR  
PERFORMANCE  
CURVES**

**A40WG0770-R015**  
ISSUE DATE 03/29/21 Page 8 of 11

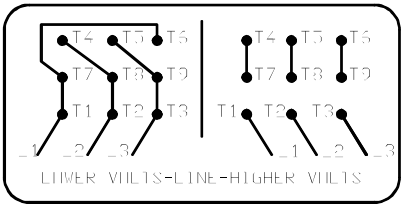
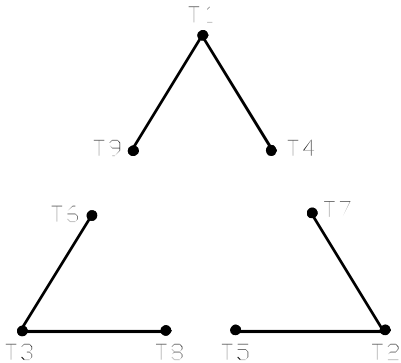






416820-002

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



(N.P. 1575-B)

|                                           |                              |                   |
|-------------------------------------------|------------------------------|-------------------|
| REV. DESC: FONT CHANGE FOR PDF SEARCHABLE |                              |                   |
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| MTL: —                                    |                              |                   |

**BALDOR - RELIANCE®**

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

416820-002