

# ABB BALDOR RELIANCE III

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## Customer information packet

### EM4408T-4

250HP, 1785RPM, 3PH, 60HZ, 449T, TEFC, F1

Class - None

Division - Not Applicable

**Specifications**

|                                      |                         |
|--------------------------------------|-------------------------|
| <b>Enclosure</b>                     | TEFC                    |
| <b>Frame</b>                         | 449T                    |
| <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>            | 250.000 HP @ 60 HZ      |
| <b>Phase</b>                         | 3                       |
| <b>Synchronous Speed @ Frequency</b> | 1800 RPM @ 60 HZ        |
| <b>Voltage @ Frequency</b>           | 460.0 V @ 60 HZ         |
| <b>Agency Approvals</b>              | 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>             | 276.000 A @ 460.0 V     |
| <b>Design Code</b>                   | B                       |
| <b>Drip Cover</b>                    | No Drip Cover           |
| <b>Duty Rating</b>                   | CONT                    |
| <b>Efficiency @ 100% Load</b>        | 96.2 %                  |
| <b>Feedback Device</b>               | NO FEEDBACK             |
| <b>Heater Indicator</b>              | No Heater               |
| <b>High Voltage Full Load Amps</b>   | 276.0 a                 |
| <b>Insulation Class</b>              | F                       |
| <b>Inverter Code</b>                 | Inverter Ready          |
| <b>IP Rating</b>                     | NONE                    |
| <b>KVA Code</b>                      | G                       |
| <b>Motor Lead Quantity/Wire Size</b> | 6 @ 2/0 AWG             |
| <b>Motor Standards</b>               | NEMA                    |
| <b>Motor Type</b>                    | A44144M                 |
| <b>Mounting Arrangement</b>          | F1                      |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | F          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  |            |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | A44WG4245  |
| <b>Layout</b>       | 617427-209 |
| <b>Eff. date</b>    | 09-25-2025 |
| <b>CD Diagram</b>   | 416820-008 |
| <b>Poles</b>        | 04         |
| <b>Leads</b>        | 6#2/0      |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 04-13-2015 |

|                                 |                              |
|---------------------------------|------------------------------|
| <b>Number of Poles</b>          | <b>4</b>                     |
| <b>Overall Length</b>           | <b>53.21 IN</b>              |
| <b>Power Factor</b>             | <b>88</b>                    |
| <b>Product Family</b>           | <b>General Industrial</b>    |
| <b>Pulley End Bearing Type</b>  | <b>Ball</b>                  |
| <b>Pulley Face Code</b>         | <b>Standard</b>              |
| <b>Service Factor</b>           | <b>1.15</b>                  |
| <b>Shaft Diameter</b>           | <b>3.375 IN</b>              |
| <b>Shaft Ground Indicator</b>   | <b>No Shaft Grounding</b>    |
| <b>Shaft Rotation</b>           | <b>Reversible</b>            |
| <b>Shaft Slinger Indicator</b>  | <b>No Slinger</b>            |
| <b>Speed</b>                    | <b>1785 rpm</b>              |
| <b>Speed Code</b>               | <b>Single Speed</b>          |
| <b>Starting Method</b>          | <b>Wye Start - Delta Run</b> |
| <b>Thermal Device - Bearing</b> | <b>None</b>                  |
| <b>Thermal Device - Winding</b> | <b>None</b>                  |

**Nameplate**

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

**NP2349L**

|                   |               |       |      |              |             |                         |      |                       |       |      |  |
|-------------------|---------------|-------|------|--------------|-------------|-------------------------|------|-----------------------|-------|------|--|
| SPEC NO.          | A44-7125-4245 |       |      | CAT.NO.      | EM4408T-4   |                         |      |                       | FRAME | 449T |  |
| HP                | 250           | VOLTS | 460  | PHASE        | 3           | DESIGN                  | B    | TYPE                  | P     |      |  |
| RPM               | 1785          | AMPS  | 276  | HZ           | 60          | AMB                     | 40   | SF                    | 1.15  |      |  |
| DRIVE END BEARING | 90BC03J30X    |       | DUTY | CONT         | INSUL.CLASS |                         | F    |                       |       |      |  |
| OPP D.E. BEARING  | 90BC03J30X    |       | ENCL | TEFC         | CODE        | G                       |      |                       |       |      |  |
| SER.NO.           |               |       |      | POWER FACTOR | 88          | NEMA-NOM-EFFICIENCY     |      |                       | 96.2  |      |  |
|                   |               |       |      |              |             | MAX CORR KVAR           | 52.4 | GUARANTEED EFFICIENCY |       | 95.4 |  |
|                   |               |       |      |              |             | NEMA NOM/CSA QUOTED EFF |      |                       |       |      |  |
|                   |               |       |      |              |             | MOTOR WEIGHT            |      |                       |       |      |  |

**Parts List**

| Part number | Description                            | Quantity |
|-------------|----------------------------------------|----------|
| SA299260    | SA A44-7125-4245                       | 1.000 ea |
| RA286274    | RA A44-7125-4245                       | 1.000 ea |
| 421948044   | LABEL, MYLAR                           | 1.000 ea |
| NP2496L     | MOTOR LUBE NAMEPLATE                   | 1.000 ea |
| 000613006PU | N/P (RELEASE QTY 10,000) UL CSA LABEL  | 1.000 ea |
| 000692000FF | N/P                                    | 1.000 ea |
| 000692000VD | LABEL WARNING                          | 1.000 ea |
| NP2349L     | SUPER-E ,SS, CURUS EEV, CC, LASER      | 1.000 ea |
| 412118006A  | DRAIN                                  | 2.000 ea |
| 089490099A  | G28 BRKT 089490098WCA KB               | 1.000 ea |
| 415072001B  | CLAMP                                  | 1.000 ea |
| 083199126RA | G28 MOLDED FAN COVER W/BAFFLE ASSEMBLY | 1.000 ea |
| 034180014DA | KEY 1/4X1/4X1-3/4 L                    | 1.000 ea |
| 078548001R  | FAN KB 234/150 (84) 400                | 1.000 ea |
| 004824015A  | GREASE POLYREX EM                      | 1.160 lb |
| 032018020FK | HHCS 3/4-10X2-1/2 PLTD.                | 4.000 ea |
| 032018008CK | HHCS 3/8-16X1L PLATED                  | 4.000 ea |
| 032018030DK | HHCS 1/2-13X3-3/4 PLTD.                | 3.000 ea |
| 415096002A  | CPLG 1/8 HEX TYPE                      | 1.000 ea |
| 034630002AB | CPLG 1/4" PLATED                       | 1.000 ea |
| 410700004A  | WSHR                                   | 1.000 ea |
| 034017014AB | LCKW 3/8 STD. PLATED                   | 4.000 ea |
| 034530064BB | P/NIP 1/4X8 PLATED                     | 1.000 ea |
| 034530064AB | P/NIP 1/8 X 8" L Pipe Nipple           | 1.000 ea |
| 034690005AB | PPLG 3/4 PLATED                        | 1.000 ea |
| 034690002AB | PPLG 1/4" PLTD.                        | 1.000 ea |
| 032620016LA | SOCKET SET SCREW-449                   | 3.000 ea |
| 702623022A  | G28 AIR DEFLECTOR DRIVE END -- PLASTIC | 1.000 ea |
| 418151014G  | RETAIN RING                            | 1.000 ea |
| 034630002AB | CPLG 1/4" PLATED                       | 1.000 ea |
| 034530064BB | P/NIP 1/4X8 PLATED                     | 1.000 ea |

|             |                                       |          |
|-------------|---------------------------------------|----------|
| 034690002AB | PPLG 1/4" PLTD.                       | 1.000 ea |
| 702623013A  | THERMAL BARRIER -- G28 -- BRACKET MTD | 1.000 ea |
| 032018004BK | HHCS 5/16-18X1/2 PLATED               | 3.000 ea |
| 034017013AB | LCKW 5/16 STD. PLATED                 | 3.000 ea |
| 089490099A  | G28 BRKT 089490098WCA KB              | 1.000 ea |
| 032018020FK | HHCS 3/4-10X2-1/2 PLTD.               | 4.000 ea |
| 032018030DK | HHCS 1/2-13X3-3/4 PLTD.               | 3.000 ea |
| 034530064AB | P/NIP 1/8 X 8" L Pipe Nipple          | 1.000 ea |
| 415096002A  | CPLG 1/8 HEX TYPE                     | 1.000 ea |
| 032018006BK | HHCS 5/16-18X3/4 PLATED               | 3.000 ea |
| 034001013AB | FLTW BAFFLE                           | 3.000 ea |
| 415000115H  | T/LUG #2AWG-4/0AWG                    | 1.000 ea |
| 032018005DL | 1/2-13 X 5/8 SILICON BRONZE HHCS      | 1.000 ea |
| 415915007G  | GASK, LAC                             | 1.000 ft |
| 702658001B  | +C/BOX, PAINTED 440                   | 1.000 ea |
| 702658002A  | +C/BOX CVR, PAINTED 440               | 1.000 ea |
| 406056008A  | GASKET, TERBD 440                     | 1.000 ea |
| 418153001A  | GASK 440                              | 1.000 ea |
| 418150003A  | GREASE FITTING CAP                    | 1.000 ea |
| MG1025Y17   | WILKOFAS, 789.701, SUPER E PEARL GOLD | 0.500 ga |
| 032018008DK | HHCS 1/2-13X1 PLATED                  | 4.000 ea |
| 035000001A  | ALFTG 1/8" 1610-BL                    | 1.000 ea |
| 033512006LB | HHTTS 1/4-20X3/4 PLTD.                | 8.000 ea |
| 406099000A  | PLUG - FAN COVER 320-440              | 1.000 ea |
| 035000001A  | ALFTG 1/8" 1610-BL                    | 1.000 ea |
| 418150003A  | GREASE FITTING CAP                    | 1.000 ea |
| 033775004EA | DRSCR #6-1/4 304 S.S.                 | 2.000 ea |
| 034180054KA | 7/8 SQ X 6.75 KEY                     | 1.000 ea |
| 604797056   | 400-447 FRAME 60 X 42                 | 1.000 ea |
| 032510026D  | CARRIAGE BOLT - 440                   | 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 |

| CUSTOMER INFORMATION PACKET | FRAME | HP  | EM4408T-4 - 250HP, 1785RPM, 3PH, 60HZ, 449T, TEFC, F1 | PHASE/<br>HERTZ | RPM  | VOLTS |
|-----------------------------|-------|-----|-------------------------------------------------------|-----------------|------|-------|
|                             | 449T  | 250 | P                                                     | 3/60            | 1785 | 460   |

| AMPS | DUTY | AMB °C/<br>INSUL | S.F. | NEMA<br>DESIGN | CODE<br>LETTER | ENCLOSURE |
|------|------|------------------|------|----------------|----------------|-----------|
| 276  | 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) |
|-----|-------------|--------------|--------------|--------------------------------------------|
| --- | 418143052LE | ---          | ---          | .0128                                      |

#### PERFORMANCE

| LOAD    | HP   | AMPERES | RPM  | % POWER FACTOR | % EFFICIENCY |
|---------|------|---------|------|----------------|--------------|
| NO LOAD | 0    | 71.2    | 1800 | 4.35           | 0            |
| 1/4     | 62.6 | 97.1    | 1796 | 63.9           | 94.4         |
| 2/4     | 125  | 148     | 1792 | 82.4           | 96.2         |
| 3/4     | 187  | 209     | 1788 | 87.1           | 96.4         |
| 4/4     | 250  | 276     | 1783 | 88.3           | 96.2         |
| 5/4     | 313  | 345     | 1778 | 88.7           | 95.7         |
|         |      |         |      |                |              |

#### SPEED TORQUE

|              | RPM  | TORQUE<br>% FULL LOAD | TORQUE LB.-FT. | AMPERES |
|--------------|------|-----------------------|----------------|---------|
| LOCKED ROTOR | 0    | 135                   | 994            | 1807    |
| PULL UP      | 500  | 127                   | 934            | 1719    |
| BREAKDOWN    | 1725 | 237                   | 1747           | 894     |
| FULL LOAD    | 1783 | 100                   | 736            | 276     |

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

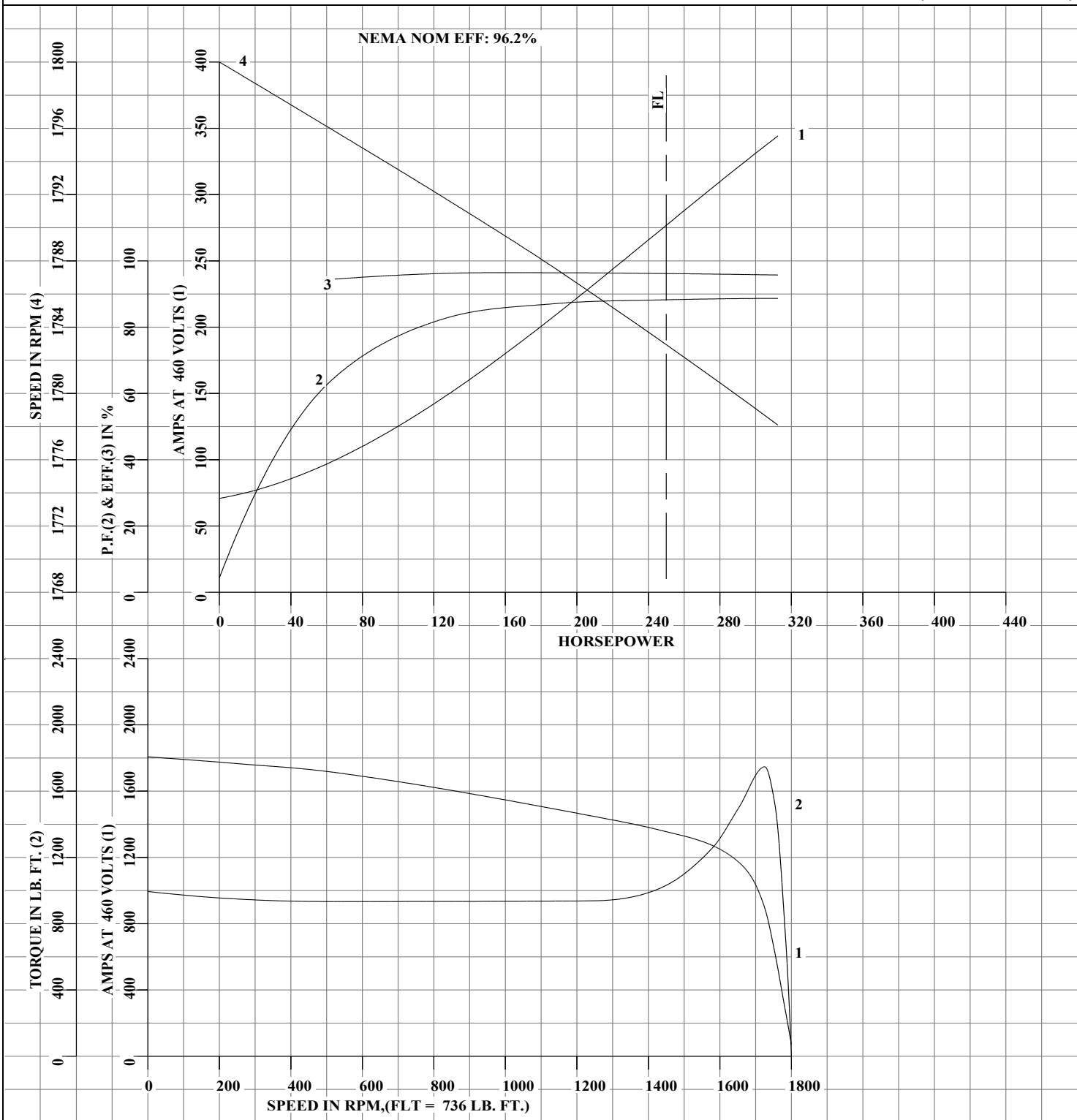
CALCULATED DATA  
NEMA NOM EFF: 96.2%

FRAME 449T  
HP 250  
TYPE P  
PHASE / HERTZ 3/60

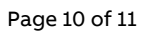
CUSTOMER INFORMATION PACKET  
RPM 1785  
VOLTS 460  
AMPS 276  
DUTY CONT  
AMB °C / INSUL 40/F

EM4408T-4 - 250HP, 1785RPM, 3PH, 60HZ, 449T, TEFC, F1  
S.F. 1.15  
NEMA DESIGN B  
CODE LETTER G  
ENCLOSURE TEFC  
E/S ---

ROTOR 418143052LE  
TEST S.O. CALCULATED DATA  
TEST DATE ---  
STATOR RES. @ 25°C .0128  
OHMS (BETWEEN LINES)



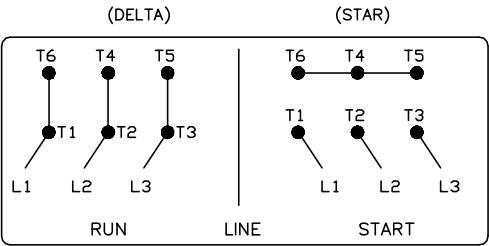
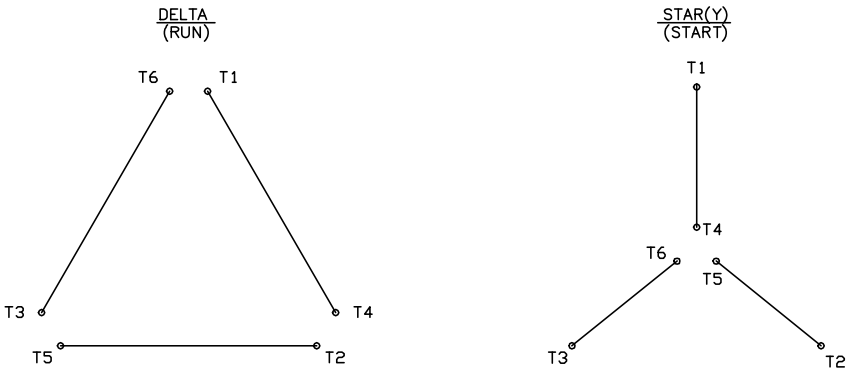
AMPERES SHOWN FOR 460 VOLT CONNECTION, IF OTHER VOLTAGE CONNECTIONS ARE AVAILABLE, THE AMPERES WILL VARY INVERSELY WITH THE RATED VOLTAGE.



416820-008

A-C MOTOR  
CONNECTION DIAGRAM

STANDARD 6 LEAD      Y START – DELTA RUN



(N. P. 1767-DC)

REV. DESC: ADDED T4 TO Y CONNECT DIAGRAM

REV. LTR: D

VERSION: 04

TDR: 000000847713

FILE: \RAG\00001\808

REVISED: 10: 41: 26 04/08/2014

BY: RAGJSS1

MTL: -

**BALDOR**

CONNECT DIAGRAM STD 6 LEAD Y START DELTA RUN

SH 1 of 1

416820-008