

# ABB BALDOR RELIANCE III

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## Customer information packet

### VPECP4314T

60HP, 1780RPM, 3PH, 60HZ, 364VP, A3658M, TEFC

Class - None

Division - Division II

**Specifications**

|                               |                                                                  |
|-------------------------------|------------------------------------------------------------------|
| Enclosure                     | TEFC                                                             |
| Frame                         | 364VP                                                            |
| Frame Material                | Iron                                                             |
| Frequency                     | 60.00 Hz                                                         |
| Haz Area Class and Group      | None                                                             |
| Haz Area Division             | Division II                                                      |
| Motor Letter Type             | Three Phase                                                      |
| Output @ Frequency            | 60.000 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              | CSA EEV                                                          |
| Ambient Temperature           | 40 °C                                                            |
| Auxiliary Box                 | NO AUXILLARY BOX                                                 |
| Base Indicator                | No Mounting                                                      |
| Bearing Grease Type           | Polyrex EM (-20F +300F)                                          |
| Constant Torque Speed Range   | 10-60                                                            |
| Current @ Voltage             | 140.000 A @ 230.0 V<br>152.000 A @ 208.0 V<br>70.000 A @ 460.0 V |
| Design Code                   | B                                                                |
| Drip Cover                    | Drip Cover                                                       |
| Duty Rating                   | CONT                                                             |
| Efficiency @ 100% Load        | 95.0 %                                                           |
| Enclosure Modification        | Severe Duty Features                                             |
| Feedback Device               | NO FEEDBACK                                                      |
| Haz Area Temp Code            | T3                                                               |
| Heater Indicator              | No Heater                                                        |
| High Voltage Full Load Amps   | 70.0 a                                                           |
| Insulation Class              | F                                                                |
| Inverter Code                 | Inverter Ready                                                   |

**Part Detail**

|              |            |
|--------------|------------|
| Revision     | H          |
| Type         | AC         |
| Mech. spec.  |            |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | A36WG4075  |
| Layout       | 616555-992 |
| Eff. date    | 02-13-2025 |
| CD Diagram   | CD0180     |
| Poles        | 04         |
| Leads        | 3#4,6#6    |
| Proprietary  | False      |
| Created date | 06-06-2019 |

|                                      |                       |
|--------------------------------------|-----------------------|
| <b>IP Rating</b>                     | IP55                  |
| <b>KVA Code</b>                      | G                     |
| <b>Lifting Lugs</b>                  | Vertical Lifting Lugs |
| <b>Motor Lead Quantity/Wire Size</b> | 3 @ 4 AWG             |
| <b>Motor Standards</b>               | NEMA                  |
| <b>Motor Type</b>                    | A3658M                |
| <b>Mounting Arrangement</b>          | V1                    |
| <b>Number of Poles</b>               | 4                     |
| <b>Overall Length</b>                | 37.25 IN              |
| <b>Power Factor</b>                  | 84                    |
| <b>Product Family</b>                | General Industrial    |
| <b>Pulley End Bearing Type</b>       | Ball                  |
| <b>Pulley Face Code</b>              | P-Base                |
| <b>Service Factor</b>                | 1.15                  |
| <b>Shaft Diameter</b>                | 1.625 IN              |
| <b>Shaft Ground Indicator</b>        | No Shaft Grounding    |
| <b>Shaft Rotation</b>                | Reversible            |
| <b>Shaft Slinger Indicator</b>       | Shaft Slinger         |
| <b>Speed</b>                         | 1780 rpm              |
| <b>Speed Code</b>                    | Single Speed          |
| <b>Starting Method</b>               | Direct on line        |
| <b>Thermal Device - Bearing</b>      | None                  |

**Nameplate**

| NP4033LUA               |  |               |  |        |  |                  |  |                            |  |               |  |             |  |       |  |        |  |               |  |          |  |       |  |
|-------------------------|--|---------------|--|--------|--|------------------|--|----------------------------|--|---------------|--|-------------|--|-------|--|--------|--|---------------|--|----------|--|-------|--|
| CAT #                   |  | VPECP4314T    |  |        |  | SER              |  |                            |  | CC            |  | 010A        |  |       |  |        |  |               |  |          |  |       |  |
| SPEC                    |  | A36-6173-4075 |  |        |  | RATING           |  | 40C AMB-CONT               |  |               |  |             |  |       |  |        |  |               |  |          |  |       |  |
| HZ                      |  | VOLTS         |  | AMPS   |  | RPM              |  | HP                         |  | CODE          |  | SF          |  | DES   |  | PF     |  | NEMA NOM. EFF |  |          |  |       |  |
| 60                      |  | 230/460       |  | 140/70 |  | 1780             |  | 60                         |  | G             |  | 1.15        |  | B     |  | 84     |  | % 95 %        |  |          |  |       |  |
|                         |  |               |  |        |  |                  |  |                            |  |               |  |             |  |       |  | % %    |  |               |  |          |  |       |  |
| PH                      |  | 3             |  | CL F   |  | MAX RPM          |  | 2700                       |  | MAX CORR KVAR |  | 15          |  |       |  |        |  |               |  |          |  |       |  |
| BRG                     |  | DE            |  | 6313   |  | ODE              |  | 7310                       |  | ENCL          |  | TEFC        |  | FR    |  | 364VP  |  | IP 55         |  |          |  |       |  |
| GREASE                  |  | POLYREX EM    |  |        |  |                  |  |                            |  | MTR WT        |  | 910         |  | LBS   |  |        |  |               |  |          |  |       |  |
| CL I DIV 2 GRPS A,B,C,D |  |               |  |        |  | CL I ZONE 2 GRPS |  |                            |  |               |  | IIA,IIB,IIC |  |       |  | TEMP T |  | 200 C         |  |          |  |       |  |
| INV READY               |  | CT            |  | 15-60  |  | HZ               |  | 4:1                        |  | VT            |  | 3-60        |  | HZ    |  | 20:1   |  | CHP           |  | 60-90 HZ |  | 1.5:1 |  |
| INV TEMP CL             |  | 200           |  | C      |  | USABLE AT        |  | 50HZ 50HP 190/380V 138/69A |  |               |  |             |  | SF1.0 |  |        |  |               |  |          |  |       |  |
|                         |  |               |  |        |  |                  |  |                            |  |               |  |             |  |       |  |        |  |               |  |          |  |       |  |

**Parts List**

| Part number | Description                             | Quantity |
|-------------|-----------------------------------------|----------|
| SA372964    | SA A36-6173-4075                        | 1.000 ea |
| RA362735    | RA A36-6173-4075                        | 1.000 ea |
| 421948032   | LABEL, MYLAR                            | 1.000 ea |
| NP4033LUA   | SS SUPER-E SD XEX, CLI DIV2, CURUS-EEV, | 1.000 ea |
| 000692000FF | N/P                                     | 1.000 ea |
| 000692000VD | LABEL WARNING                           | 1.000 ea |
| LB1449      | DIV-2/NEC WARNING LABEL                 | 1.000 ea |
| 418185012FL | B/BRG ANGULAR SET - 360                 | 1.000 pr |
| 035051010AA | BBLCW W-10                              | 1.000 ea |
| 085922097A  | BRKT 360 087793066WCC                   | 1.000 ea |
| 415072001B  | CLAMP                                   | 1.000 ea |
| 078559035AA | F/C 360 078559035WCC                    | 1.000 ea |
| 034180008FA | KEY 3/8X3/8X1L - 320                    | 1.000 ea |
| 702676001A  | FAN 250                                 | 1.000 ea |
| 004824015A  | GREASE POLYREX EM                       | 0.540 lb |
| 032018016DK | HHCS 1/2-13X2L PLTD                     | 4.000 ea |
| 032018010CK | HHCS 3/8-16X1-1/4 PLTD. 032018010CR     | 4.000 ea |
| 032018030CK | HHCS 3/8-16X3-3/4 PLATED                | 3.000 ea |
| 034630002AB | CPLG 1/4" PLATED                        | 1.000 ea |
| 415096002A  | CPLG 1/8 HEX TYPE                       | 1.000 ea |
| 415045002H  | SLGR                                    | 1.000 ea |
| 034017014AB | LCKW 3/8 STD. PLATED                    | 4.000 ea |
| 034017014AB | LCKW 3/8 STD. PLATED                    | 3.000 ea |
| 034530052AB | P/NIP 1/8X6-1/2 Zinc                    | 1.000 ea |
| 034530016BC | P/NIP 1/4X2 GALV. - 320                 | 1.000 ea |
| 034690002AB | PPLG 1/4" PLTD.                         | 1.000 ea |
| 034690001AB | 1/8" NPT SQHDPLG                        | 1.000 ea |
| 034690002AB | PPLG 1/4" PLTD.                         | 1.000 ea |
| 089495002A  | BRKT 360 089495001WCA                   | 1.000 ea |
| 032018012DK | HHCS 1/2-13X1-1/2 PLTD. 032018012DR     | 4.000 ea |
| 032018030CK | HHCS 3/8-16X3-3/4 PLATED                | 3.000 ea |

|             |                                        |          |
|-------------|----------------------------------------|----------|
| 415045002E  | SLGR                                   | 1.000 ea |
| 034017014AB | LCKW 3/8 STD. PLATED                   | 3.000 ea |
| 412118006A  | DRAIN                                  | 1.000 ea |
| 410700004F  | WSHR                                   | 1.000 ea |
| 076708000BB | CONDUIT BOX-360                        | 1.000 ea |
| 065776000C  | GASKET,MAIN CBOX, 320-400              | 1.000 ea |
| 076709000A  | C/B Cover - 360                        | 1.000 ea |
| 067053000B  | GASK 320-400                           | 1.000 ea |
| 418150003A  | GREASE FITTING CAP                     | 1.000 ea |
| 032018010CK | HHCS 3/8-16X1-1/4 PLTD. 032018010CR    | 4.000 ea |
| 032018022CK | HHCS 3/8-16X2-3/4 PLTD                 | 4.000 ea |
| 405851012AN | SPACE                                  | 4.000 ea |
| 702641041A  | D/CVR 360 SUB PAINT                    | 1.000 ea |
| 034017014AB | LCKW 3/8 STD. PLATED                   | 4.000 ea |
| 035000001A  | ALFTG 1/8" 1610-BL                     | 1.000 ea |
| 415000115H  | T/LUG #2AWG-4/0AWG                     | 1.000 ea |
| 033512008LB | HHTTS 1/4-20X1 PLATED                  | 4.000 ea |
| 032018005DL | 1/2-13 X 5/8 SILICON BRONZE HHCS       | 1.000 ea |
| 034000014AB | WSH ID.406 OD.812 TH.065               | 4.000 ea |
| 034000014AB | WSH ID.406 OD.812 TH.065               | 4.000 ea |
| 406055001B  | GRFTG - XP                             | 1.000 ea |
| 035000001A  | ALFTG 1/8" 1610-BL                     | 1.000 ea |
| 418150003A  | GREASE FITTING CAP                     | 1.000 ea |
| MG1025N19   | WILKO 778.50 BLUE GREEN - 55 GAL DRUMS | 0.250 ga |
| 033775004EA | DRSCR #6-1/4 304 S.S.                  | 4.000 ea |
| 609013011C  | LFT/P - 360 - LIFTING PLATE            | 2.000 ea |
| 032018012EK | HHCS 5/8-11X1-1/2L PLTD. - SCREW       | 4.000 ea |
| 034017018AB | 5/8 MED LOCK WASHER ZP (034017018AF)   | 4.000 ea |
| 034180024FA | KEY 3/8X3/8X3 L                        | 1.000 ea |
| 034017018AB | 5/8 MED LOCK WASHER ZP (034017018AF)   | 2.000 ea |
| 14PA1000    | PACKAGING 314 GROUP COMBINED PRINT     | 1.000 ea |
| 033102018AG | NUT 5/8-11 PLATED                      | 2.000 ea |
| 032018012EK | HHCS 5/8-11X1-1/2L PLTD. - SCREW       | 2.000 ea |
| 415038030   | BANDING - SIGNODE                      | 9.000 lb |

|            |                           |          |
|------------|---------------------------|----------|
| 604797064C | 2"X4"-24"                 | 2.000 ea |
| 604797064C | 2"X4"-24"                 | 1.000 ea |
| 604797064C | 2"X4"-24"                 | 1.000 ea |
| 604797064C | 2"X4"-24"                 | 1.000 ea |
| 415038031  | SLEEVE, BANDING           | 9.000 ft |
| 415038028A | BLOCK,SHIPPING            | 1.000 ea |
| 415038028B | BLOCK,SHIPPING            | 1.000 ea |
| 415038032A | SILICON PAPER             | 1.000 ea |
| 418151063  | SL HEX WSH HD TYPE A TAPP | 4.000 ea |

## AC Induction Motor performance data

Record #72794 - Typical performance - not guaranteed values

|           |           |
|-----------|-----------|
| Winding   | A36WG4075 |
| Type      | A3658M    |
| Enclosure | TEFC      |

## Nameplate data

|                |           |              |    |
|----------------|-----------|--------------|----|
| Rated Output   | 60        |              |    |
| Volts          | 230 / 460 |              |    |
| Full Load Amps | 140 / 70  |              |    |
| R.P.M.         | 1780      |              |    |
| Hz             | 60        | Phase        | 3  |
| KVA Code       | G         |              |    |
| S.F.           | 1.15      |              |    |
| NEMA Nom. Eff. | 95        | Power Factor | 84 |
| Duty           | CONT      |              |    |
| S.F. Amps      |           |              |    |

## 460 V. 60 Hz:

## High Voltage Connection

|                           |                |
|---------------------------|----------------|
| Full Load Torque          | 176.4 LB-FT    |
| Start Configuration       | direct on line |
| Breakdown Torque          | 422 LB-FT      |
| Pull-up Torque            | 276 LB-FT      |
| Locked-rotor Torque       | 352 LB-FT      |
| Starting Current          | 462 A          |
| No-load Current           | 24.8           |
| Line-line Res. @ 25°C     | 0.10816 Ω      |
| Temp. Rise @ Rated Load   | 56°C           |
| Temp. Rise @ S.F. Load    | 70°C           |
| Locked-rotor Power Factor | 32.3           |
| Rotor inertia             | 0              |

## Load Characteristics 460 V, 60 Hz, 60 HP

|                 |        |        |        |      |        |        |        |      |
|-----------------|--------|--------|--------|------|--------|--------|--------|------|
| % of Rated Load | NL     | 25     | 50     | 75   | 100    | 125    | 150    | SF   |
| Power Factor    | 4      | 51     | 73     | 81   | 84     | 86     | 85     | 85   |
| Efficiency      | 0      | 92.6   | 95.1   | 95.4 | 95.2   | 94.6   | 93.8   | 94.8 |
| Speed           | 1798.9 | 1796.4 | 1792.4 | 1788 | 1783.7 | 1778.3 | 1772.3 | 1780 |
| Line amperes    | 24.8   | 29.7   | 40.7   | 54.4 | 69.7   | 86.6   | 105    | 79.8 |

# REVIEW

**ABB BALDOR  
RELIANCE III**

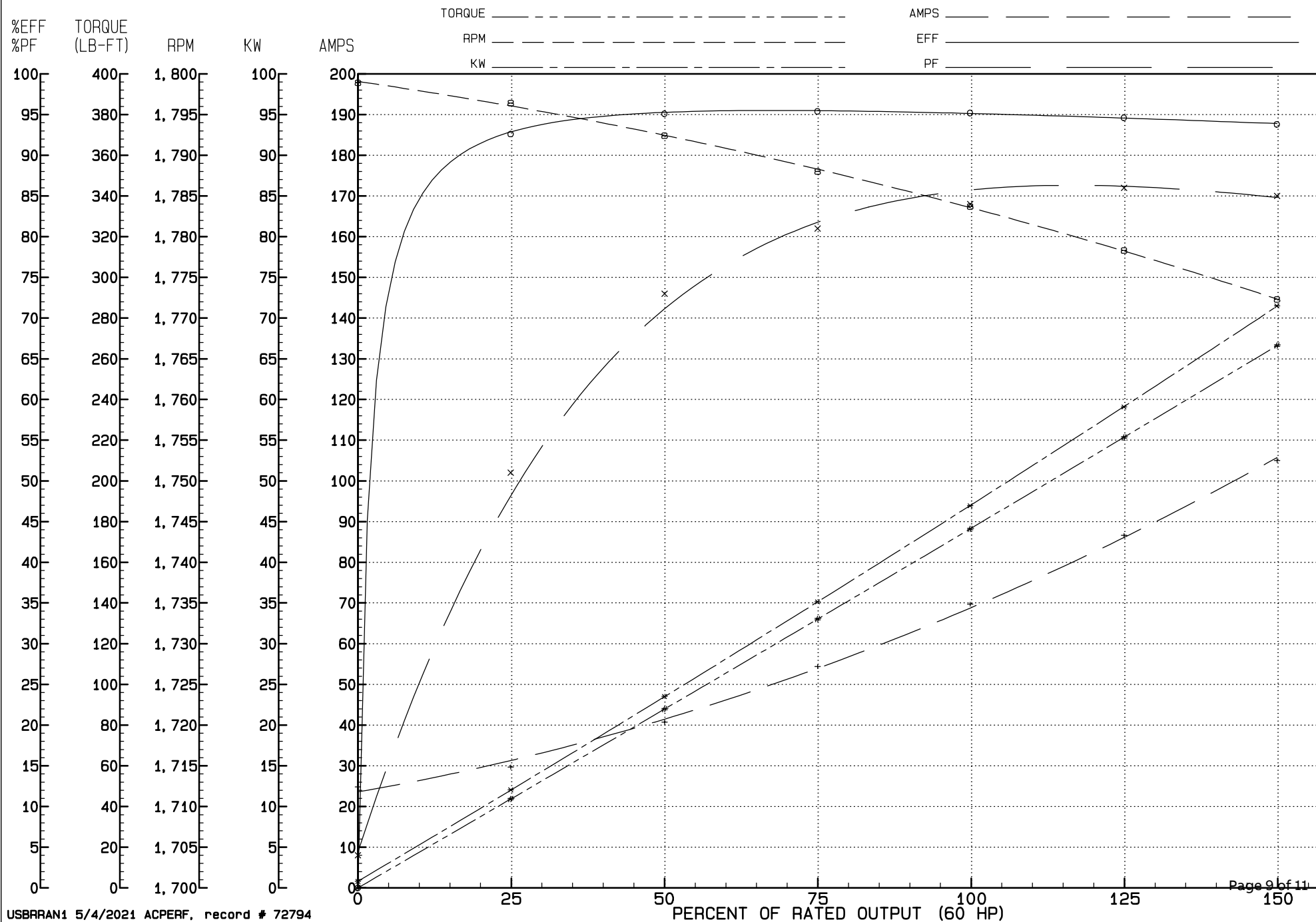
CUSTOMER INFORMATION PACKET

VPEC4314T - 60HP, 1780RPM, 3PH, 60HZ, 364VP, A3658M, TEFC

WINDING # A36WG4075

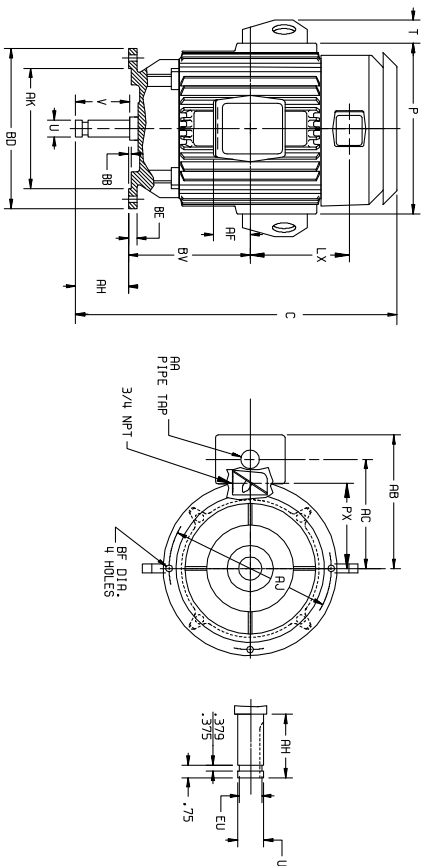
60 HP 3 PH 60 HZ 1780 RPM 460 V A3658M

TORQUES (LB-FT): PO=422.00 PU=276.00 LR=352.00 LRA=462.00



DUTY MASTER ALTERNATING CURRENT MOTORS

ENCLOSURE: TOTALLY ENCLOSED  
SQUIRREL-CAGE INDUCTION  
CAST IRON CONSTRUCTION  
MOUNTING: NEMA VP API THRUST DESIGN - SOLID SHAFT  
FRAMES 250VP THRU 440VP  
COOLING: FAN COOLED



DIMENSIONS ARE IN INCHES. SEE SHEET 2 FOR DIMENSIONS IN MILLIMETERS.

| FRAME       | P     | T    | AA    | AB    | AC    | AF   | BB  | BD    | BE   | BF  | AJ    | AK     | RECOM. BOLT | LX    | PX    |
|-------------|-------|------|-------|-------|-------|------|-----|-------|------|-----|-------|--------|-------------|-------|-------|
| 254VP-256VP | 14.00 | 2.25 | 1-1/4 | 10.81 | 8.61  | 2.50 | .19 | 10.00 | .62  | .44 | 9.12  | 8.250  | 3/8 X 1.50  | 6.31  | 10.50 |
| 284VP-286VP | 15.50 | 2.25 | 1-1/2 | 12.62 | 10.19 | 3.00 | .19 | 10.00 | .69  | .44 | 9.12  | 8.250  | 3/8 X 1.50  | 6.88  | 11.00 |
| 324VP-326VP | 17.38 | 2.25 | 2     | 15.44 | 11.69 | 3.62 | .25 | 16.50 | .88  | .69 | 14.75 | 13.500 | 5/8 X 2.00  | 8.00  | 12.00 |
| 364VP-365VP | 20.25 | 2.25 | 3     | 18.00 | 13.81 | 4.12 | .25 | 16.50 | .88  | .69 | 14.75 | 13.500 | 5/8 X 2.00  | 8.38  | 13.00 |
| 404VP-405VP | 22.62 | 2.50 | 3     | 19.25 | 15.06 | 4.12 | .25 | 16.50 | .94  | .69 | 14.75 | 13.500 | 5/8 X 2.00  | 9.62  | 14.75 |
| 444VP-445VP | 25.25 | 2.50 | 3     | 22.19 | 17.44 | 6.00 | .25 | 16.50 | 1.06 | .69 | 14.75 | 13.500 | 5/8 X 2.25  | 11.12 | 15.56 |

| FRAME SIZE | C     | BV    | AH(6) | V    | U(2)   | EU(5) | SO   | LGTH. | WEIGHT (LB.) |
|------------|-------|-------|-------|------|--------|-------|------|-------|--------------|
| 254VP      | 28.10 | 9.44  | 2.750 | 2.75 | 1.1250 | .875  | .250 | 1.25  | 330          |
| 256VP      | 28.10 | 9.44  | 2.750 | 2.75 | 1.1250 | .875  | .250 | 1.25  | 340          |
| 284VP      | 30.66 | 10.44 | 2.750 | 2.75 | 1.1250 | .875  | .250 | 1.25  | 475          |
| 286VP      | 30.66 | 10.44 | 2.750 | 2.75 | 1.1250 | .875  | .250 | 1.25  | 475          |
| 324VP      | 34.60 | 11.75 | 4.500 | 4.50 | 1.6250 | 1.250 | .375 | 3.00  | 610          |
| 326VP      | 34.60 | 11.75 | 4.500 | 4.50 | 1.6250 | 1.250 | .375 | 3.00  | 650          |
| 364VP      | 37.45 | 12.75 | 4.500 | 4.50 | 1.6250 | 1.250 | .375 | 3.00  | 980          |
| 365VP      | 37.45 | 12.75 | 4.500 | 4.50 | 1.6250 | 1.250 | .375 | 3.00  | 980          |
| 404VP      | 41.75 | 14.62 | 4.500 | 4.50 | 1.6250 | 1.250 | .375 | 3.00  | 1310         |
| 405VP      | 41.75 | 14.62 | 4.500 | 4.50 | 1.6250 | 1.250 | .375 | 3.00  | 1310         |
| 444VP      | 47.57 | 17.50 | 4.500 | 4.50 | 2.125  | 1.750 | .500 | 3.00  | 1880         |
| 445VP      | 47.57 | 17.50 | 4.500 | 4.50 | 2.125  | 1.750 | .500 | 3.00  | 1880         |

- (1) SPECIAL DIMENSIONS APPLYING TO THIS ORDER ON THIS LINE. IF MOUNTING CLEARANCE DETAILS ARE REQUIRED, CONSULT FACTORY.
- (2) "U" VARIES UP TO 2.125 DIA. +.0000, -.0005  
2.125 AND LARGER +.000, -.001. MAXIMUM PERMISSIBLE SHAFT RUNOUT WHEN MEASURED AT END OF SHAFT EXTENSION IS .001 MAX. T.I.R.
- (3) MOTOR WEIGHTS MAY VARY BY 1% DEPENDING UPON RATING. FACE RUNOUT AND 250VP - 440VP .004 MAX. T.I.R. ECCENTRICITY
- (4) "AK" VARIES 250VP - 280VP +.003, -.000  
320VP - 440VP +.005, -.000
- (5) "EU" VARIES +.000, -.005
- (6) "AH" VARIES +.030, -.030
- (7) AUXILIARY CONDUIT BOX SUPPLIED ONLY WHEN SPECIFIED.

FRAME- TYPE- CERTIFIED FOR-  
ORDER- ITEM- HP- RPM- PH- HZ VOLTS  
SALES ORDER- APPROVED BY- DATE

266-955919

CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION.

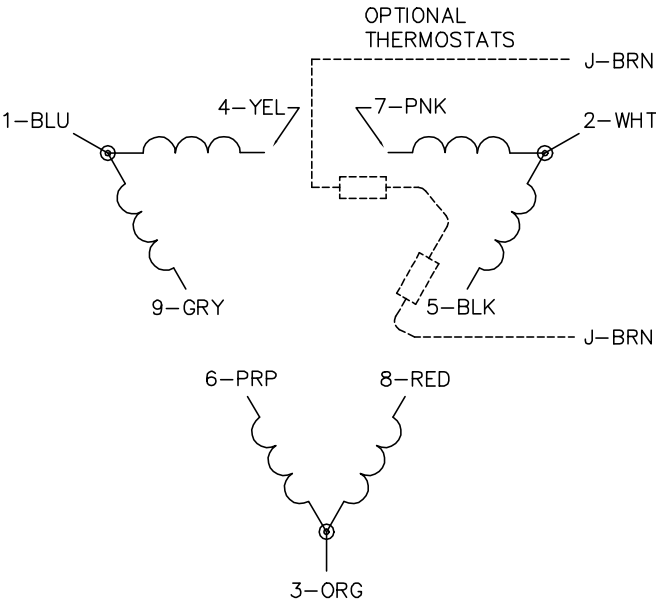
|                                               |                              |                   |
|-----------------------------------------------|------------------------------|-------------------|
| REV. DESC: REMOVED "AG" AND ADD "C" DIMENSION | VERSION: 03                  | TDR: 000000821455 |
| REV. LTR: C                                   | REVISED: 03:31:17 10/08/2013 | BY: RAG/SJS1      |
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| MTL: -                                        |                              |                   |

BALDOR

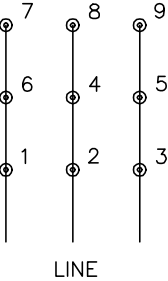
DIM SHT 250-440VP TEFC API THRUST DESIGN CAST IRON CBOX

SH 1 of 1

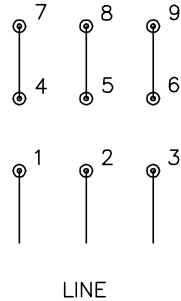
CD0180



LOW VOLTAGE  
(2D)



HIGH VOLTAGE  
(1D)



- NOTES:
- 1. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
  - 2. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
  - 3. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY BE A MULTIPLE OF THOSE SHOWN ABOVE.
  - 4. LEAD COLORS ARE OPTIONAL. LEADS MUST ALWAYS BE NUMBERED AS SHOWN.

CD0180

|                                   |                                |                   |
|-----------------------------------|--------------------------------|-------------------|
| REV. DESC: ADD CLASS CONN00000007 |                                |                   |
| REV. LTR: D                       | VERSION: 01                    | TDR: 000001099922 |
| FILE: \AAA\00005\148              | REVISED: 10: 25: 29 02/19/2019 | BY: ENBRIRO       |
| MTL: —                            |                                |                   |

**BALDOR - RELIANCE®**

3PH, DV, 9 LEADS, DELTA CONNECTION  
SH 1 of 1