

**BALDOR • RELIANCE**

---

# Customer information packet

## CEM4314T

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

Class - None

Division - Not Applicable

Copyright © All product information within this document is subject to ABB Motors and Mechanical Inc. copyright © protection, unless otherwise noted.

12/28/2022 11:57:18 AM

## Specifications

|                               |  |
|-------------------------------|--|
| Enclosure                     | TEFC   |
| Frame                         | 364TC  |
| Frame Material                | Iron   |
| Frequency                     | 60.00 Hz   |
| 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                               |
| XP Class and Group            | None   |
| XP Division                   | Not Applicable   |
| Agency Approvals              | CCSA US<br>CSA EEV<br>UR   |
| Ambient Temperature           | 40 °C  |
| Auxillary Box                 | No Auxillary Box   |
| Base Indicator                | Rigid  |
| Bearing Grease Type           | Polyrex EM (-20F +300F)  |
| Current @ Voltage             | 70.000 A @ 460.0 V<br>152.000 A @ 208.0 V<br>140.000 A @ 230.0 V |
| Design Code                   | B  |
| Drip Cover                    | No Drip Cover  |
| Duty Rating                   | CONT   |
| Efficiency @ 100% Load        | 95.0 %   |
| Feedback Device               | NO FEEDBACK  |
| Heater Indicator              | No Heater  |
| High Voltage Full Load Amps   | 70.0 a   |
| Insulation Class              | F  |
| Inverter Code                 | Inverter Duty  |
| KVA Code                      | G  |

## Part detail

|              |            |
|--------------|------------|
| Revision     | S          |
| Type         | AC         |
| Mech. spec.  |            |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | A36WG4075  |
| Layout       | 617428-019 |
| Eff. date    | 07-21-2021 |
| CD Diagram   | CD0180     |
| Poles        | 04         |
| Leads        | 3#4,6#6    |
| Proprietary  | False      |
| Created date | 10-19-2010 |

| <b>Lifting Lugs</b>                  | <b>No Lifting Lugs</b> |
|--------------------------------------|------------------------|
| <b>Max Speed</b>                     | 2700 rpm               |
| <b>Motor Lead Quantity/Wire Size</b> | 3 @ 4 AWG              |
| <b>Motor Standards</b>               | NEMA                   |
| <b>Motor Type</b>                    | A3658M                 |
| <b>Mounting Arrangement</b>          | F1                     |
| <b>Number of Poles</b>               | 4                      |
| <b>Overall Length</b>                | 33.44 IN               |
| <b>Power Factor</b>                  | 84                     |
| <b>Pulley End Bearing Type</b>       | Ball                   |
| <b>Pulley Face Code</b>              | P-Base                 |
| <b>Service Factor</b>                | 1.15                   |
| <b>Shaft Diameter</b>                | 2.375 IN               |
| <b>Shaft Ground Indicator</b>        | No Shaft Grounding     |
| <b>Shaft Rotation</b>                | Reversible             |
| <b>Shaft Slinger Indicator</b>       | No 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                   |
| <b>Thermal Device - Winding</b>      | None                   |

**Nameplate**

**NP3979LUA**

|                      |                            |           |               |                      |               |                       |             |            |            |                      |           |       |                    |
|----------------------|----------------------------|-----------|---------------|----------------------|---------------|-----------------------|-------------|------------|------------|----------------------|-----------|-------|--------------------|
| <b>CAT #</b>         | CEM4314T                   |           | <b>SER</b>    |                      |               | <b>CC</b>             | 010A        |            |            |                      |           |       |                    |
| <b>SPEC</b>          | P36G4663                   |           | <b>RATING</b> | 40C AMB-CONT         |               |                       |             |            |            |                      |           |       |                    |
| <b>HZ</b>            | <b>VOLTS</b>               |           | <b>AMPS</b>   | <b>RPM</b>           | <b>HP</b>     | <b>CODE</b>           | <b>- SF</b> | <b>DES</b> | <b>PF</b>  | <b>NEMA NOM. EFF</b> |           |       |                    |
| 60                   | 230/460                    |           | 140/70        | 1780                 | 60            | G                     | 1.15        | B          | 84 %       | 95 %                 |           |       |                    |
|                      | -                          |           |               |                      |               |                       |             |            | %          | %                    |           |       |                    |
| <b>PH</b>            | 3                          | <b>CL</b> | F             | <b>MAX CORR KVAR</b> | 15            | <b>USABLE AT 208V</b> | 152         | <b>A</b>   |            |                      |           |       |                    |
| <b>BRG</b>           | <b>DE</b>                  | 6313      | <b>ODE</b>    | 6313                 | <b>ENCL</b>   | TEFC                  | <b>FR</b>   | 364TC      |            |                      |           |       |                    |
| <b>GREASE</b>        | POLYREX EM                 |           |               |                      | <b>MTR WT</b> | 854                   | <b>LBS</b>  |            |            |                      |           |       |                    |
| <b>USABLE AT</b>     | 50HZ 50HP 190/380V 138/69A |           |               |                      | <b>SF1.0</b>  |                       |             |            |            |                      |           |       |                    |
| <b>INVERTER DUTY</b> | <b>CT</b>                  | 15-60     | <b>HZ</b>     | 4:1                  | <b>VT</b>     | 3-60                  | <b>HZ</b>   | 20:1       | <b>CHP</b> | 60-90                | <b>HZ</b> | 1.5:1 | <b>1.0 SF VPWM</b> |
| <b>MAX RPM</b>       | 2700                       |           |               |                      |               |                       |             |            |            |                      |           |       |                    |

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

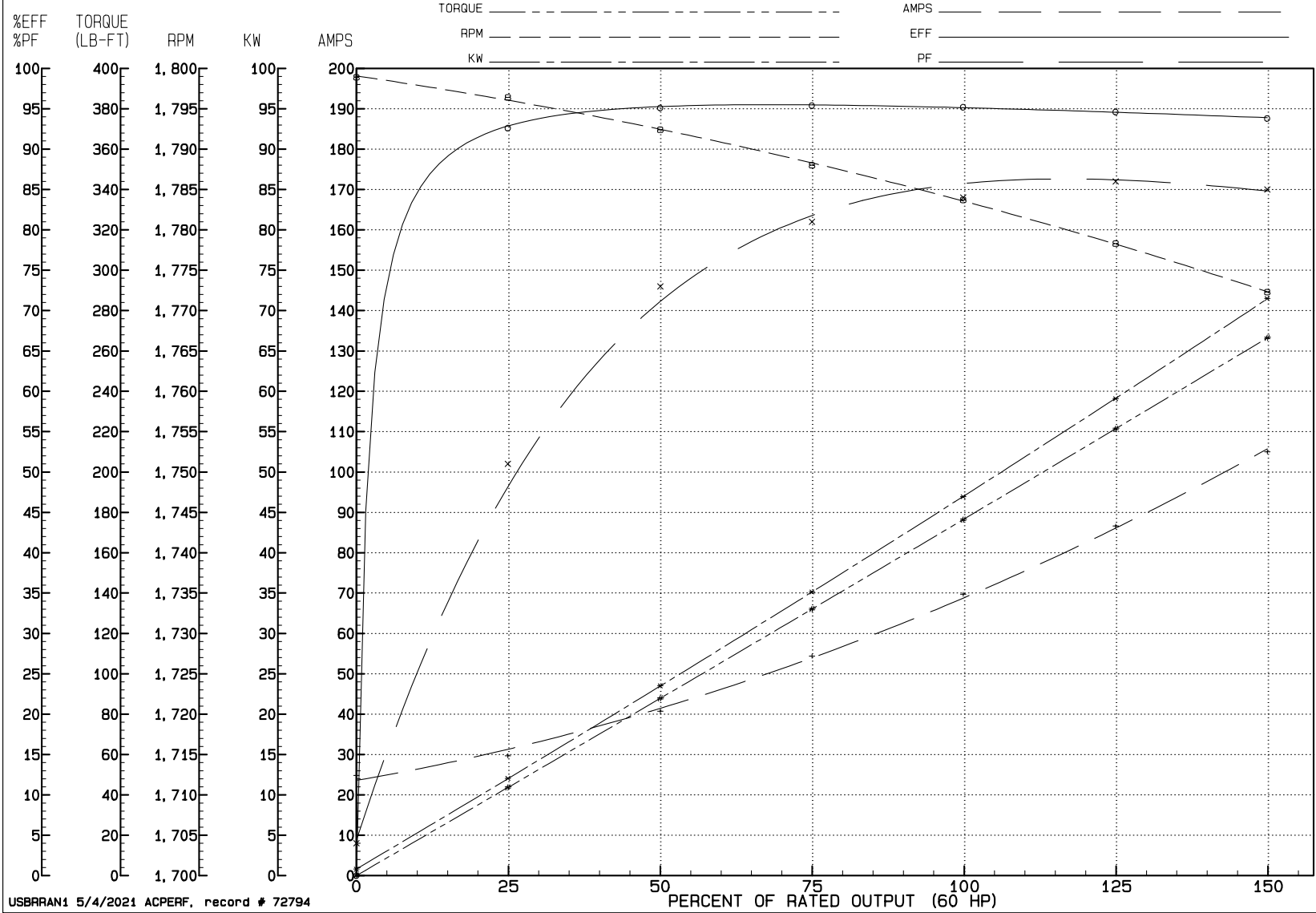
| % of Rated Load | NL     | 25     | 50     | 75   | 100    | 125    | 150    | SF   |
|-----------------|--------|--------|--------|------|--------|--------|--------|------|
| Power Factor    | 4      | 51     | 73     | 81   | 84     | 86     | 85     | 85   |
| Efficiency      | 0      | 92.6   | 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

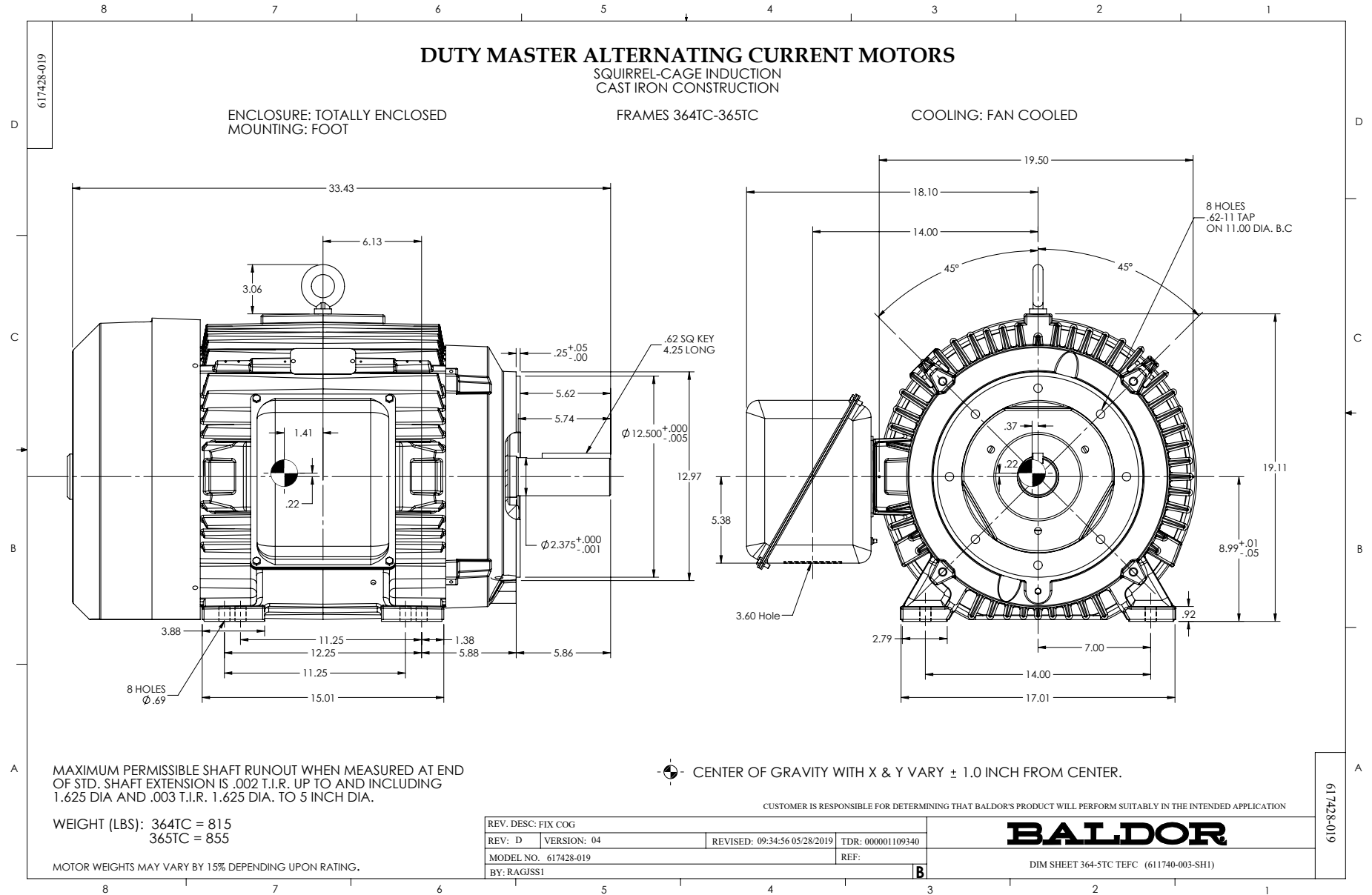
WINDING # A36WG4075

60 HP 3 PH 60 HZ 1780 RPM 460 V A3658M

TORQUES (LB-FT): P0=422.00 PU=276.00 LR=352.00 LRA=462.00



USBRRAN1 5/4/2021 ACPERF, record # 72794



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