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# Customer information packet

## CEM3710T

7.5HP, 1770RPM, 3PH, 60HZ, 213TC, 3738M, TEFC

Class - None

Division - Not Applicable

## Specifications

|                                |                                                               |
|--------------------------------|---------------------------------------------------------------|
| Enclosure                      | TEFC                                                          |
| Frame                          | 213TC                                                         |
| Frame Material                 | Steel                                                         |
| Frequency                      | 60.00 Hz                                                      |
| Haz Area Class and Group       | None                                                          |
| Haz Area Division              | Not Applicable                                                |
| Motor Letter Type              | Three Phase                                                   |
| Output @ Frequency             | 7.500 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<br>NEMA PREMIUM<br>NEMA_PREMIUM<br>UR                 |
| Ambient Temperature            | 40 °C                                                         |
| Auxiliary Box                  | NO AUXILLARY BOX                                              |
| Auxiliary Box Lead Termination | None                                                          |
| Base Indicator                 | Rigid                                                         |
| Bearing Grease Type            | Polyrex EM (-20F +300F)                                       |
| Blower                         | None                                                          |
| Current @ Voltage              | 9.500 A @ 460.0 V<br>20.000 A @ 208.0 V<br>19.000 A @ 230.0 V |
| Design Code                    | A                                                             |
| Drip Cover                     | No Drip Cover                                                 |
| Duty Rating                    | CONT                                                          |
| Efficiency @ 100% Load         | 91.7 %                                                        |
| Electrically Isolated Bearing  | Not Electrically Isolated                                     |
| Feedback Device                | NO FEEDBACK                                                   |
| Front Shaft Indicator          | None                                                          |

## Part detail

|              |            |
|--------------|------------|
| Revision     | B          |
| Type         | AC         |
| Mech. spec.  | 37G814     |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 37WGL864   |
| Layout       | 37LYG814   |
| Eff. date    | 05-02-2024 |
| CD Diagram   | CD0005     |
| Poles        | 04         |
| Leads        | 9#14       |
| Proprietary  | False      |
| Created date | 11-11-2020 |

|                               |                       |
|-------------------------------|-----------------------|
| Heater Indicator              | No Heater             |
| High Voltage Full Load Amps   | 9.5 a                 |
| Insulation Class              | F                     |
| Inverter Code                 | Inverter Ready        |
| KVA Code                      | J                     |
| Lifting Lugs                  | Standard Lifting Lugs |
| Locked Bearing Indicator      | Locked Bearing        |
| Motor Lead Quantity/Wire Size | 9 @ 14 AWG            |
| Motor Lead Termination        | Flying Leads          |
| Motor Standards               | NEMA                  |
| Motor Type                    | 3738M                 |
| Mounting Arrangement          | F1                    |
| Number of Poles               | 4                     |
| Overall Length                | 19.76 IN              |
| Power Factor                  | 80                    |
| Product Family                | General Purpose       |
| Pulley End Bearing Type       | Ball                  |
| Pulley Face Code              | C-Face                |
| Pulley Shaft Indicator        | Standard              |
| Rodent Screen                 | None                  |
| RoHS Status                   | ROHS COMPLIANT        |
| Service Factor                | 1.15                  |
| Shaft Diameter                | 1.375 IN              |
| Shaft Ground Indicator        | No Shaft Grounding    |
| Shaft Rotation                | Reversible            |
| Shaft Slinger Indicator       | No Slinger            |
| Speed                         | 1770 rpm              |
| Speed Code                    | Single Speed          |
| Starting Method               | Direct on line        |
| Thermal Device - Bearing      | None                  |
| Thermal Device - Winding      | None                  |
| Vibration Sensor Indicator    | No Vibration Sensor   |
| Winding Thermal 1             | None                  |
| Winding Thermal 2             | None                  |

## Nameplate

## NP3441LUA

|                           |                                |  |      |      |     |   |       |   |       |  |
|---------------------------|--------------------------------|--|------|------|-----|---|-------|---|-------|--|
| CAT.NO.                   | CEM3710T                       |  |      |      |     |   |       |   |       |  |
| SPEC                      | 37G814L864G1                   |  |      |      |     |   |       |   |       |  |
| HP                        | 7.5                            |  |      |      |     |   |       |   |       |  |
| VOLTS                     | 230/460                        |  |      |      |     |   |       |   |       |  |
| AMPS                      | 19/9.5                         |  |      |      |     |   |       |   |       |  |
| RPM                       | 1770                           |  |      |      |     |   |       |   |       |  |
| FRAME                     | 213TC                          |  | HZ   | 60   |     |   | PH    | 3 |       |  |
| SF                        | 1.15                           |  | CODE | J    | DES | A | CLASS | F |       |  |
| NEMA NOM. EFF             | 91.7                           |  | PF   | 80   |     |   |       |   |       |  |
| RATING                    | 40C AMB-CONT                   |  |      |      |     |   |       |   |       |  |
| CC                        | 010A                           |  |      |      |     |   |       |   |       |  |
| ENCL                      | TEFC                           |  | SER  |      |     |   |       |   |       |  |
| DE                        | 6307                           |  | ODE  | 6206 |     |   |       |   |       |  |
| VPWM INVERTER READY       |                                |  |      |      |     |   |       |   |       |  |
| CT6-60H(10:1)VT3-60H(20:1 |                                |  |      |      |     |   |       |   |       |  |
|                           | 50HZ 7.5HP 190/380V 22.4/11.2A |  |      |      |     |   |       |   | SF1.0 |  |

## AC Induction Motor Performance Data

Record # 85467

Preliminary Data Sheet

| Winding: 37WGL864-R001 |    |              | Type: 3738M  |                                          | Enclosure: TEFC       |                |        |
|------------------------|----|--------------|--------------|------------------------------------------|-----------------------|----------------|--------|
| Nameplate Data         |    |              |              | 460 V, 60 Hz:<br>High Voltage Connection |                       |                |        |
| Rated Output (HP)      |    | 7.5          |              | Full Load Torque                         |                       | 22.2 LB-FT     |        |
| Volts                  |    | 230/460      |              | Start Configuration                      |                       | direct on line |        |
| Full Load Amps         |    | 19.0/9.5     |              | Breakdown Torque                         |                       | 69.8 LB-FT     |        |
| R.P.M.                 |    | 1770         |              | Pull-up Torque                           |                       | 31.5 LB-FT     |        |
| Hz                     | 60 | Phase        | 3            | Locked-rotor Torque                      |                       | 41 LB-FT       |        |
| NEMA Design Code       |    | A            | KVA Code     | J                                        | Starting Current      |                | 70.7 A |
| Service Factor (S.F.)  |    | 1.15         |              | No-load Current                          |                       | 4.32 A         |        |
| NEMA Nom. Eff.         |    | 91.7         | Power Factor | 80                                       | Line-line Res. @ 25°C |                | 1.48 Ω |
| Rating - Duty          |    | 40C AMB-CONT |              | Temp. Rise @ Rated Load                  |                       | 64°C           |        |
| S.F. Amps              |    | 21.4/10.7    |              | Temp. Rise @ S.F. Load                   |                       | 84°C           |        |
|                        |    |              |              | Locked-rotor Power Factor                |                       | 41.9           |        |
|                        |    |              |              | Rotor inertia                            |                       | 0.934 lb-ft²   |        |

## Load Characteristics 460 V, 60 Hz, 7.5 HP

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 42   | 64   | 75   | 80   | 83   | 84   | 83   |
| Efficiency      | 87.1 | 91.4 | 92   | 91.7 | 90.7 | 89.6 | 90.7 |
| Speed           | 1793 | 1786 | 1778 | 1770 | 1760 | 1750 | 1761 |
| Line amperes    | 4.83 | 6.03 | 7.64 | 9.5  | 11.6 | 13.9 | 10.7 |

ABB Motors and Mechanical Inc.

WINDING # 37WGL864

Typical performance - not guaranteed values.

7.5 HP 3 PH 60 HZ 1770 RPM 460 V 3738M

TORQUES (LB-FT): PO=69.8 PU=31.5 LR=41 LRA=70.7





