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# Customer information packet

## CEM3583T

1.5HP, 3500RPM, 3PH, 60HZ, 143TC, 0520M, TEFC

Class - None

Division - Not Applicable

## Specifications

|                                |                                                             |
|--------------------------------|-------------------------------------------------------------|
| Enclosure                      | TEFC                                                        |
| Frame                          | 143TC                                                       |
| 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             | 1.500 HP @ 60 HZ                                            |
| Phase                          | 3                                                           |
| Synchronous Speed @ Frequency  | 3600 RPM @ 60 HZ                                            |
| Voltage @ Frequency            | 230.0 V @ 60 HZ<br>460.0 V @ 60 HZ                          |
| Agency Approvals               | CSA EEV<br>CURUSEEV<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              | 3.800 A @ 230.0 V<br>4.000 A @ 208.0 V<br>1.900 A @ 460.0 V |
| Design Code                    | B                                                           |
| Drip Cover                     | No Drip Cover                                               |
| Duty Rating                    | CONT                                                        |
| Efficiency @ 100% Load         | 84.0 %                                                      |
| Electrically Isolated Bearing  | Not Electrically Isolated                                   |
| Feedback Device                | NO FEEDBACK                                                 |

## Part detail

|              |            |
|--------------|------------|
| Revision     | U          |
| Type         | AC         |
| Mech. spec.  | 05C052     |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 05WGX102   |
| Layout       | 05LYC052   |
| Eff. date    | 04-29-2024 |
| CD Diagram   | CD0005     |
| Poles        | 02         |
| Leads        | 9#18       |
| Proprietary  | False      |
| Created date | 05-21-2010 |

|                               |                       |
|-------------------------------|-----------------------|
| Front Face Code               | Standard              |
| Front Shaft Indicator         | None                  |
| Heater Indicator              | No Heater             |
| High Voltage Full Load Amps   | 1.9 a                 |
| Insulation Class              | F                     |
| Inverter Code                 | Inverter Ready        |
| KVA Code                      | L                     |
| Lifting Lugs                  | Standard Lifting Lugs |
| Locked Bearing Indicator      | Locked Bearing        |
| Motor Lead Exit               | Ko Box                |
| Motor Lead Quantity/Wire Size | 9 @ 18 AWG            |
| Motor Lead Termination        | Flying Leads          |
| Motor Standards               | NEMA                  |
| Motor Type                    | 0520M                 |
| Mounting Arrangement          | F1                    |
| Number of Poles               | 2                     |
| Overall Length                | 13.04 IN              |
| Power Factor                  | 85                    |
| 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                | 0.875 IN              |
| Shaft Extension Location      | Pulley End            |
| Shaft Ground Indicator        | No Shaft Grounding    |
| Shaft Rotation                | Reversible            |
| Shaft Slinger Indicator       | No Slinger            |
| Speed                         | 3500 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.                   | CEM3583T                     |  |      |      |     |   |       |   |       |  |
| SPEC                      | 05C052X102G1                 |  |      |      |     |   |       |   |       |  |
| HP                        | 1.5                          |  |      |      |     |   |       |   |       |  |
| VOLTS                     | 230/460                      |  |      |      |     |   |       |   |       |  |
| AMPS                      | 3.8/1.9                      |  |      |      |     |   |       |   |       |  |
| RPM                       | 3500                         |  |      |      |     |   |       |   |       |  |
| FRAME                     | 143TC                        |  | HZ   | 60   |     |   | PH    | 3 |       |  |
| SF                        | 1.15                         |  | CODE | L    | DES | B | CLASS | F |       |  |
| NEMA NOM. EFF             | 84                           |  | PF   | 85   |     |   |       |   |       |  |
| RATING                    | 40C AMB-CONT                 |  |      |      |     |   |       |   |       |  |
| CC                        | 010A                         |  |      |      |     |   |       |   |       |  |
| ENCL                      | TEFC                         |  | SER  |      |     |   |       |   |       |  |
| DE                        | 6205                         |  | ODE  | 6203 |     |   |       |   |       |  |
| VPWM INVERTER READY       |                              |  |      |      |     |   |       |   |       |  |
| CT6-60H(10:1)VT3-60H(20:1 |                              |  |      |      |     |   |       |   |       |  |
|                           | 50HZ 1.5HP 190/380V 4.6/2.3A |  |      |      |     |   |       |   | SF1.0 |  |

## AC Induction Motor Performance Data

Record # 53119

Typical performance - not guaranteed values

| Winding: 05WGX102-R008 |    |              | Type: 0520M                              |                           | Enclosure: TEFC       |               |        |
|------------------------|----|--------------|------------------------------------------|---------------------------|-----------------------|---------------|--------|
| Nameplate Data         |    |              | 460 V, 60 Hz:<br>High Voltage Connection |                           |                       |               |        |
| Rated Output (HP)      |    | 1.5          | Full Load Torque                         |                           | 2.22 LB-FT            |               |        |
| Volts                  |    | 230/460      | Start Configuration                      |                           | direct on line        |               |        |
| Full Load Amps         |    | 3.8/1.9      | Breakdown Torque                         |                           | 9.49 LB-FT            |               |        |
| R.P.M.                 |    | 3500         | Pull-up Torque                           |                           | 3.61 LB-FT            |               |        |
| Hz                     | 60 | Phase        | 3                                        | Locked-rotor Torque       |                       | 7.35 LB-FT    |        |
| NEMA Design Code       |    | B            | KVA Code                                 | L                         | Starting Current      |               | 17.9 A |
| Service Factor (S.F.)  |    | 1.15         | No-load Current                          |                           | 0.932 A               |               |        |
| NEMA Nom. Eff.         |    | 84           | Power Factor                             | 85                        | Line-line Res. @ 25°C |               | 12.2 Ω |
| Rating - Duty          |    | 40C AMB-CONT |                                          | Temp. Rise @ Rated Load   |                       | 43°C          |        |
| S.F. Amps              |    |              |                                          | Temp. Rise @ S.F. Load    |                       | 50°C          |        |
|                        |    |              |                                          | Locked-rotor Power Factor |                       | 60.1          |        |
|                        |    |              |                                          | Rotor inertia             |                       | 0.0553 LB-FT2 |        |

## Load Characteristics 460 V, 60 Hz, 1.5 HP

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 45   | 67   | 79   | 85   | 89   | 90   | 87   |
| Efficiency      | 72.3 | 82.2 | 84.4 | 84.8 | 84.3 | 82.8 | 84.5 |
| Speed           | 3575 | 3551 | 3526 | 3498 | 3466 | 3433 | 3479 |
| Line amperes    | 1.03 | 1.25 | 1.55 | 1.91 | 2.31 | 2.79 | 2.15 |

ABB Motors and Mechanical Inc.

WINDING # 05WGX102

Typical performance - not guaranteed values.

1.5 HP 3 PH 60 HZ 3500 RPM 460 V 0520M

TORQUES (LB-FT): PO=9.49 PU=3.61 LR=7.35 LRA=17.9





