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# Customer information packet

## CEM31115-G

1HP, 3500RPM, 3PH, 60HZ, 56C, OPSB, F1

Class - None

Division - Not Applicable

## Specifications

|                                |                                        |
|--------------------------------|----------------------------------------|
| Enclosure                      | OPSB                                   |
| Frame                          | 56C                                    |
| 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             | 1.000 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<br>CSA EEV<br>NEMA PREMIUM<br>UR   |
| Ambient Temperature            | 40 °C                                  |
| Auxillary Box                  | No Auxillary Box                       |
| Auxillary Box Lead Termination | None                                   |
| Base Indicator                 | Rigid                                  |
| Bearing Grease Type            | Polyrex EM (-20F +300F)                |
| Blower                         | None                                   |
| Current @ Voltage              | 2.900 A @ 230.0 V<br>1.450 A @ 460.0 V |
| Design Code                    | B                                      |
| Drip Cover                     | No Drip Cover                          |
| Duty Rating                    | CONT                                   |
| Efficiency @ 100% Load         | 78.5 %                                 |
| Electrically Isolated Bearing  | Not Electrically Isolated              |
| Feedback Device                | NO FEEDBACK                            |
| Heater Indicator               | No Heater                              |
| High Voltage Full Load Amps    | 1.5 a                                  |

## Part detail

|              |            |
|--------------|------------|
| Revision     | C          |
| Type         | AC         |
| Mech. spec.  |            |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 35WGP987   |
| Layout       | 35LYZ614   |
| Eff. date    | 06-11-2024 |
| CD Diagram   | CD0005     |
| Poles        | 02         |
| Leads        | 9#18       |
| Proprietary  | False      |
| Created date | 03-09-2020 |

|                                   |                     |
|-----------------------------------|---------------------|
| <b>Insulation Class</b>           | H                   |
| <b>Inverter Code</b>              | Inverter Ready      |
| <b>IP Rating</b>                  | NONE                |
| <b>KVA Code</b>                   | K                   |
| <b>Lifting Lugs</b>               | No Lifting Lugs     |
| <b>Locked Bearing Indicator</b>   | Locked Bearing      |
| <b>Motor Lead Termination</b>     | Flying Leads        |
| <b>Motor Standards</b>            | NEMA                |
| <b>Motor Type</b>                 | 3512M               |
| <b>Mounting Arrangement</b>       | F1                  |
| <b>Number of Poles</b>            | 2                   |
| <b>Overall Length</b>             | 11.06 IN            |
| <b>Power Factor</b>               | 80                  |
| <b>Product Family</b>             | General Purpose     |
| <b>Pulley Face Code</b>           | C-Face              |
| <b>Rodent Screen</b>              | None                |
| <b>Service Factor</b>             | 1.15                |
| <b>Shaft Diameter</b>             | 0.625 IN            |
| <b>Shaft Ground Indicator</b>     | Shaft Grounding     |
| <b>Shaft Rotation</b>             | Reversible          |
| <b>Speed</b>                      | 3500 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                |
| <b>Vibration Sensor Indicator</b> | No Vibration Sensor |
| <b>Winding Thermal 1</b>          | None                |
| <b>Winding Thermal 2</b>          | None                |

## Nameplate

## NP3553LUA

|                           |                            |      |     |      |   |       |       |
|---------------------------|----------------------------|------|-----|------|---|-------|-------|
| CAT.NO.                   | CEM31115-G                 |      |     |      |   |       |       |
| SPEC.                     | 35-0000-0669               |      |     |      |   |       |       |
| HP                        | 1                          |      |     |      |   |       |       |
| VOLTS                     | 230/460                    |      |     |      |   |       |       |
| AMPS                      | 2.9/1.45                   |      |     |      |   |       |       |
| RPM                       | 3500                       |      |     |      |   |       |       |
| FRAME                     | 56C                        |      | HZ  | 60   |   | PH    | 3     |
| SF                        | 1.15                       | CODE | K   | DES  | B | CLASS | H     |
| NEMA NOM. EFF             | 78.5                       | PF   | 80  |      |   |       |       |
| RATING                    | 40C AMB-CONT               |      |     |      |   |       |       |
| CC                        | 010A                       |      |     |      |   |       |       |
| ENCL                      | OPSB                       | SN   |     |      |   |       |       |
| DE                        | 6205                       |      | ODE | 6203 |   |       |       |
| VPWM INVERTER READY       |                            |      |     |      |   |       |       |
| CT30-60(2:1) VT3-60(20:1) |                            |      |     |      |   |       |       |
| USABLE AT                 | 50HZ 1HP 190/380V 3.4/1.9A |      |     |      |   |       | SF1.0 |

## AC Induction Motor Performance Data

Record # 81806

Typical performance - not guaranteed values

| Winding: 35WGP987-R008 |  |          | Type: 3512M                              |  | Enclosure: OPEN         |                       |            |
|------------------------|--|----------|------------------------------------------|--|-------------------------|-----------------------|------------|
| Nameplate Data         |  |          | 460 V, 60 Hz:<br>High Voltage Connection |  |                         |                       |            |
| Rated Output (HP)      |  | 1        | Full Load Torque                         |  | 1.47 LB-FT              |                       |            |
| Volts                  |  | 230/460  | Start Configuration                      |  | direct on line          |                       |            |
| Full Load Amps         |  | 2.9/1.45 | Breakdown Torque                         |  | 6.11 LB-FT              |                       |            |
| R.P.M.                 |  | 3500     | Pull-up Torque                           |  | 2.3 LB-FT               |                       |            |
| Hz                     |  | 60       | Phase                                    |  | 3                       | Locked-rotor Torque   | 3.86 LB-FT |
| NEMA Design Code       |  | B        | KVA Code                                 |  | K                       | Starting Current      | 10.8 A     |
| Service Factor (S.F.)  |  | 1.15     | No-load Current                          |  | 0.883 A                 |                       |            |
| NEMA Nom. Eff.         |  | 78.5     | Power Factor                             |  | 80                      | Line-line Res. @ 25°C | 19.3 Ω     |
| Rating - Duty          |  | 40C      | AMB-CONT                                 |  | Temp. Rise @ Rated Load |                       | 31°C       |
| S.F. Amps              |  |          | Temp. Rise @ S.F. Load                   |  | 35°C                    |                       |            |
|                        |  |          | Locked-rotor Power Factor                |  | 66                      |                       |            |
|                        |  |          | Rotor inertia                            |  | 0.0332 LB-FT2           |                       |            |

## Load Characteristics 460 V, 60 Hz, 1 HP

| % of Rated Load | 25    | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|-------|------|------|------|------|------|------|
| Power Factor    | 39    | 58   | 72   | 80   | 85   | 88   | 83   |
| Efficiency      | 62.2  | 74.4 | 78.5 | 79.2 | 79.4 | 78.1 | 79.3 |
| Speed           | 3575  | 3552 | 3527 | 3499 | 3464 | 3429 | 3478 |
| Line amperes    | 0.931 | 1.04 | 1.22 | 1.44 | 1.72 | 2.03 | 1.61 |

ABB Motors and Mechanical Inc.

WINDING # 35WGP987

Typical performance - not guaranteed values.

1 HP 3 PH 60 HZ 3500 RPM 460 V 3512M

TORQUES (LB-FT): PO=6.11 PU=2.3 LR=3.86 LRA=10.8





