

# Product Information Packet

November 9, 2016

Data shown is for the current revision model #. Ensure your nameplate model # matches.

|                            |                       |
|----------------------------|-----------------------|
| <b>Model Number:</b>       | <b>5KS286XAA300D3</b> |
| <b>Catalog Number:</b>     | <b>M8922</b>          |
| <b>Instruction Manual:</b> | GEI-56128             |
| <b>Connection Diagram:</b> | GEM2034E-FIG7         |
| <b>Outline Drawing:</b>    | 4002B5828PBP5311      |

| <b>Accessory Connection Diagrams</b> |      |                              |      |
|--------------------------------------|------|------------------------------|------|
| <b>Bearing Thermocouple:</b>         | None | <b>Heater:</b>               | None |
| <b>RTD:</b>                          | None | <b>Thermistor:</b>           | None |
| <b>Thermostat:</b>                   | None | <b>Winding Thermocouple:</b> | None |
| <b>Bearing RTD:</b>                  | None |                              |      |

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**Marks:**

|                            |                       |                               |         |
|----------------------------|-----------------------|-------------------------------|---------|
| <b>MODEL NUMBER:</b>       | <b>5KS286XAA300D3</b> | <b>Estimated Weight:</b>      | 510 Lbs |
| <b>Outline Drawing:</b>    | 4002B5828PBP5311      | <b>Time Rating:</b>           | CONT    |
| <b>Connection Diagram:</b> | GEM2034E-FIG7         | <b>Enclosure:</b>             | TEFC    |
| <b>Instruction Book:</b>   | GEI-56128             | <b>Encl Construction:</b>     | 841     |
| <b>Design Code:</b>        | 28BD3094A             | <b>Ambient Max(°C):</b>       | 40      |
| <b>Type:</b>               | KS                    | <b>Alt Ambient Max(°C):</b>   | --      |
| <b>Frame:</b>              | 286TC                 | <b>Insulation Class:</b>      | H       |
| <b>Phases:</b>             | 3                     | <b>NEMA Design:</b>           | B       |
| <b>Poles:</b>              | 6                     | <b>Nominal Efficiency:</b>    | 91.7 %  |
| <b>Output Power:</b>       | 20HP 14.8KW           | <b>Guaranteed Efficiency:</b> | 91.0    |
| <b>RPM:</b>                | 1180                  | <b>3/4 Load Efficiency:</b>   | 92.4    |
| <b>Voltage:</b>            | 460                   | <b>KVA Code:</b>              | G       |
| <b>Hertz:</b>              | 60                    | <b>Max KVAR:</b>              | 8.6     |
| <b>Amps - FL:</b>          | 26.2                  | <b>Power Factor:</b>          | 78.0    |
| <b>Service Factor:</b>     | 1.15                  | <b>Bearing - DE:</b>          | 6310ZC3 |
| <b>Alt Service Factor:</b> | --                    | <b>Bearing - ODE:</b>         | 6310ZC3 |

**Enclosure is Totally Enclosed Fan-Cooled**

**Stamped Nameplate Notes:**

IEEE-STD-841-2009  
 DE BRG 50BC03JP30 ODE BRG 50BC03JP30  
 STAMP NP249A5564P051 AS BELOW:  
 MODEL:5KS286XAA300D3 S/N: XXX  
 CSA CERTIFIED CSA09.2216219 FOR EX NA IIC 200C GC  
 CL 1 ZONE2 AEX NA IIC 200C;CL 1 DIV2 GRP ABCD 200C  
 IN -25C <= AMB <= 40C, 1.0 SF ON SINE-WAVE PWR  
 SURF TEMP 200C AT 1.15SF ON SINE-WAVE PWR  
 OR 200 C VT OR 215 C CT OR 200 C CHP PWM CONTROL  
 ALTERNATE RATING FOR PWM CONTROL 1.0SF 40C AMB  
 VT 0-60 HZ, CT 7.5-60 HZ, CHP 60-90 HZ.

**Additional Information:**

6P - T EXTN  
 STANDARD FLOOR MOUNT  
 C/BOX 137 CU IN-1.50 NPT  
 F1 CONDUIT BOX MOUNTING  
 "C" FACE AT DE ENDSHIELD  
 PAINTED FRAME ID & SHAFT,  
 FAN COVER INSIDE & ODE E/S OUTSIDE  
 ROUTINE AND 5 POINT VIBRATION TESTS INCL IN C/BOX  
 INPRO SEAL BOTH ENDS  
 GROUND SCREW ON FRAME  
 ROTATE D.E. E/SHIELD 90 DEG. PER OUTLINE  
 SHAFT RUNOUT LIMIT .0015" TIR  
 COPPER WASHER UNDER HEADS OF BEARING CAP BOLTS  
 APPLY TITE-SEAL (A50CD427A) ON BEARING CAP SCREWS, RABBETS,



AND PLUG THREADS  
OIL RESISTANT SLEEVING ON LEADS

**Performance Characteristics**

1st Winding 1st Connection

**Design: 28BD3094A**

**Marks:**

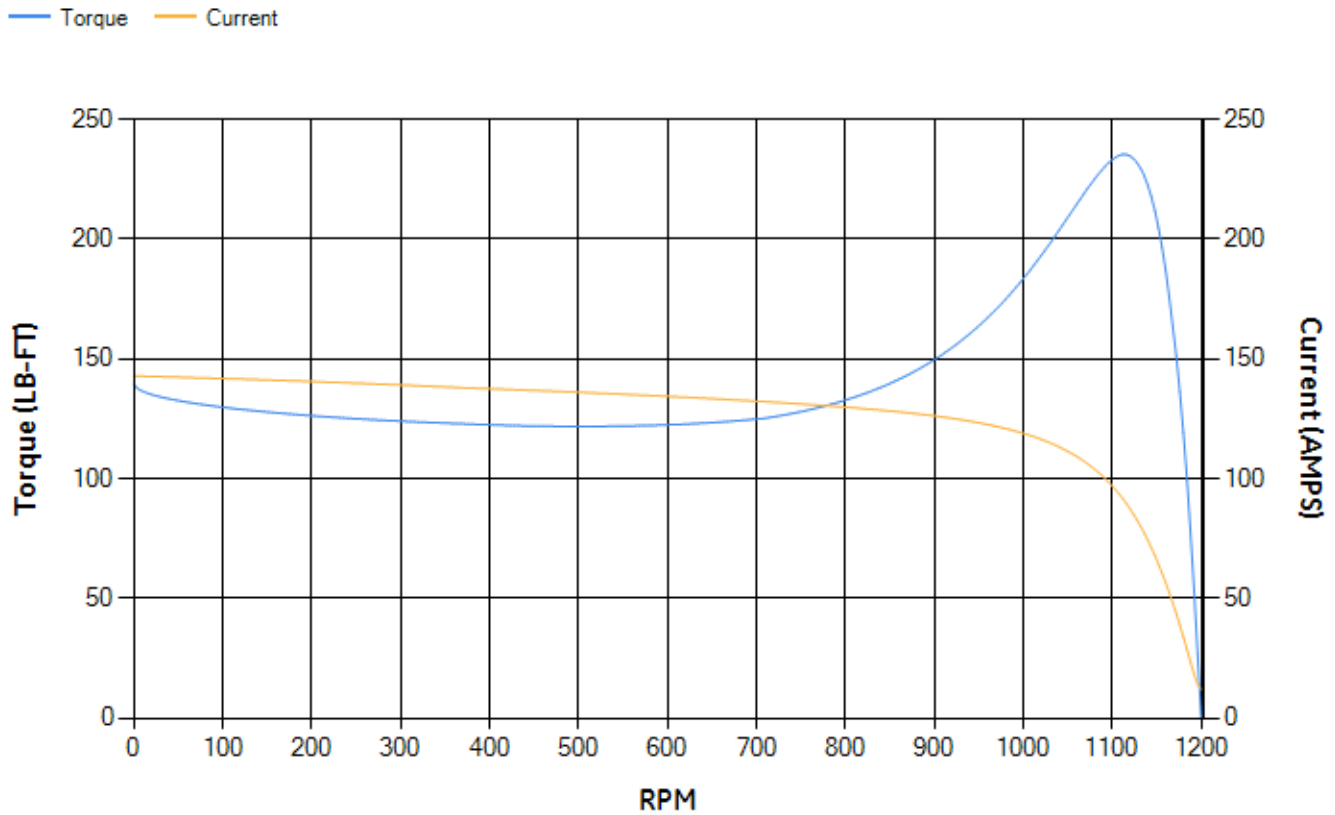
| LOAD % | 125.0 | 115.0 | 100.0 | 75.0  | 50.0  | 25.0  | 0.0   |
|--------|-------|-------|-------|-------|-------|-------|-------|
| % EFF  | 90.77 | 91.26 | 92.06 | 92.43 | 92.06 | 88.54 | 0.00  |
| % PF   | 80.3  | 79.62 | 77.92 | 72.45 | 61.19 | 39.34 | 4.17  |
| AMPS   | 32.1  | 29.63 | 26.12 | 20.97 | 16.61 | 13.44 | 12.03 |

|                    |        |                    |        |                    |        |
|--------------------|--------|--------------------|--------|--------------------|--------|
| <b>TORQ(FL)#FT</b> | 88.9   | <b>TORQ(LR)%FL</b> | 157.12 | <b>TORQ(BD)%FL</b> | 264.09 |
| <b>AMPS(LR)</b>    | 142.83 | <b>PF AT START</b> | 0.36   |                    |        |

This motor is capable of two cold or one hot start with a maximum connected load inertia of 1029 Lb-Ft Sq (43.32 Kg-meter Sq)at 100% voltage, where the load torque varies with the square of the speed. Acceleration time with maximum inertia and the above load type is 35 seconds. Safe stall time at 100% voltage is 89 seconds cold, 52 seconds hot. Rotor inertia is 6.17 Lb-Ft Sq (0.26 Kg-meter Sq).

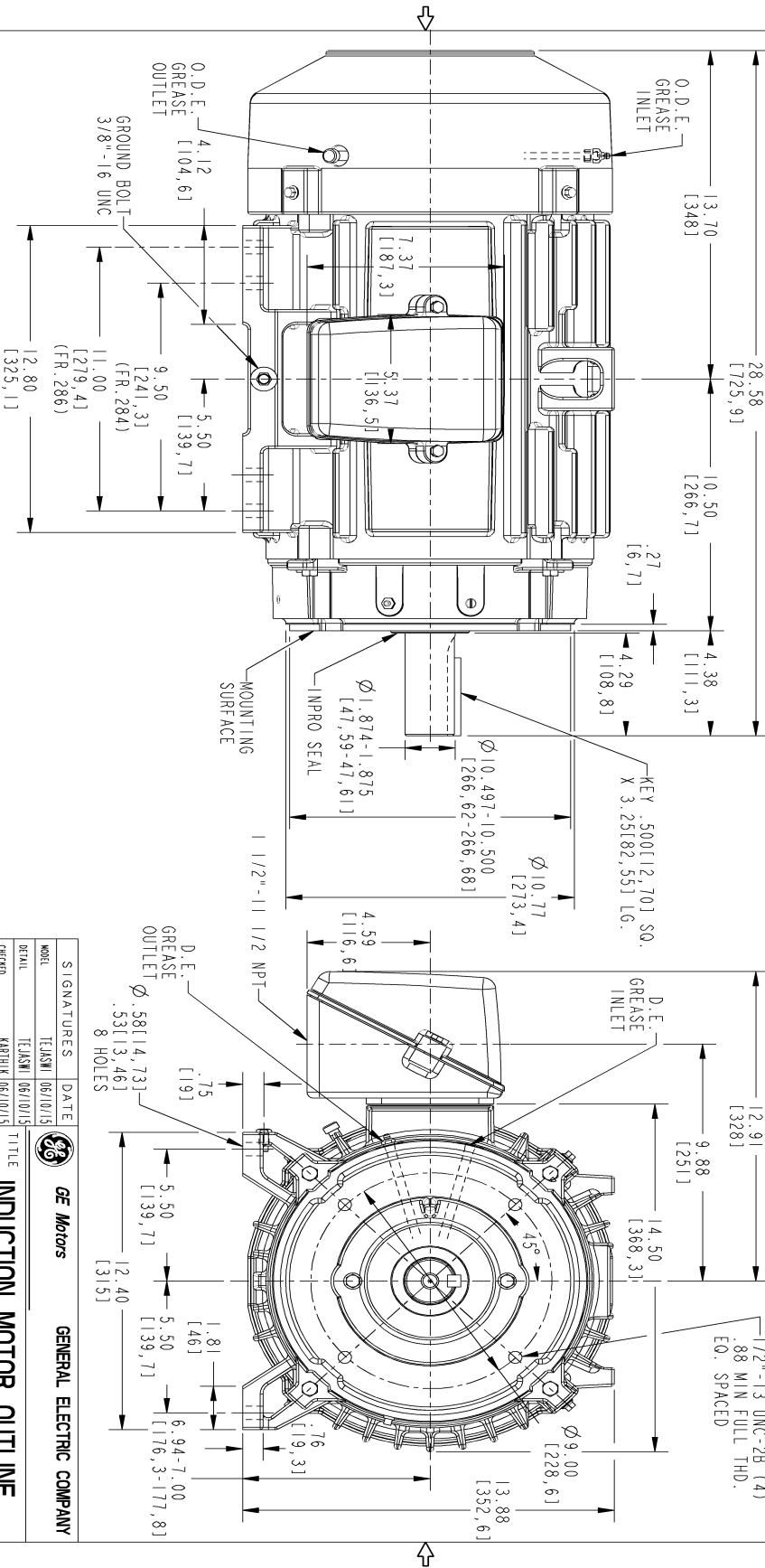
|                           |       |                           |       |
|---------------------------|-------|---------------------------|-------|
| <b>Open Circuit A-C:</b>  | 0.346 | <b>Short Circuit D-C:</b> | 0.013 |
| <b>Short Circuit A-C:</b> | 0.026 | <b>X/R Ratio:</b>         | 4.937 |
| <b>Stator Slots:</b>      | 54    | <b>Rotor Slots:</b>       | 42    |

**Speed Torque Current Curve (First Connection, First Speed)**



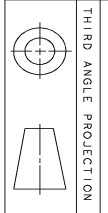
Marks:

- NOTE 1: CONDUIT BOX MAY BE ASSEMBLED WITH ENTRANCE UP, DOWN OR TO EITHER SIDE.
- NOTE 2: F1 ASSEMBLY AS SHOWN. F2 ASSEMBLY CONDUIT BOX ON OPPOSITE SIDE FROM SHOWN LOCATION.
- NOTE 3: MOUNTING SURFACES WILL BE SQUARE AND CONCENTRIC WITH SHAFT WITHIN .004 T.I.R.
- NOTE 4: SHAFT RUNOUT WILL NOT EXCEED .0015 T.I.R.
- NOTE 5: DE ENDSHIELD ROTATED 90° COUNTER CLOCKWISE.
- NOTE 6: ALL DIMENSIONS ARE IN INCHES, BRACKETED DIMENSIONS ARE IN METRIC (MILLIMETERS)



|      |                  |     |       |
|------|------------------|-----|-------|
| SIZE | DRAWING NO.      | REV | SHEET |
| B    | 4002B5828PBP5311 | 0   | 1     |

| REV. | DESCRIPTION | DATE | APPROVED |
|------|-------------|------|----------|
|      |             |      |          |
|      |             |      |          |



THIRD ANGLE PROJECTION

|              |         |                            |                                                                                                          |
|--------------|---------|----------------------------|----------------------------------------------------------------------------------------------------------|
| SIGNATURES   |         | DATE                       | <br><b>GE Motors</b><br>GENERAL ELECTRIC COMPANY                                                         |
| MODEL        | TEJASNI | 06/10/15                   |                                                                                                          |
| DETAIL       | TEJASNI | 06/10/15                   | TITLE<br><b>INDUCTION MOTOR OUTLINE</b><br>IEEE-841 SPEC, "C" FACE AT DE (1050" RABBIT)<br>FR: 284/286TC |
| CHECKED      | KARHIK  | 06/10/15                   |                                                                                                          |
| ENGR         | VENKAT  | 06/10/15                   |                                                                                                          |
| ISSUED       | TEJASNI | 06/10/15                   |                                                                                                          |
| SCALE: 0.250 |         | REF. No.: 4002B5828PBP5301 | SIZE DRAWING<br><b>4002B5828PBP5311</b>                                                                  |
| SHEET 1 OF 1 |         |                            | REV 0                                                                                                    |

Marks:

**Connection Diagram**  
**GEM2034E-FIG7**



| End shield Assembly |               |                |
|---------------------|---------------|----------------|
| Part Description    | DE Side Part# | ODE Side Part# |
| End Shield          | 128D6206PL1   | 4004D5284SE1   |
| Bearing             | 235A2608AA01  | 235A2608AA01   |
| Slinger/Inproseal   | 235A4575GC7   | 4002B5914AG5   |

| Fan & Fan Cover Assembly |              |
|--------------------------|--------------|
| Part Description         | Part#        |
| Fan                      | 159C6900G01  |
| Fan Cover                | 4003C5789PA1 |

| Conduit & Accessories Box Assembly |                 |
|------------------------------------|-----------------|
| Part Description                   | Part#           |
| Conduit Box                        | 4002B5728PA-G01 |

| Mechanical Accessories |       |
|------------------------|-------|
| Part Description       | Part# |
| Brake                  |       |
| Tachometer             |       |

