

# Product Information Packet

November 9, 2016

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

|                            |                       |
|----------------------------|-----------------------|
| <b>Model Number:</b>       | <b>5KS449SAA202D4</b> |
| <b>Catalog Number:</b>     | <b>M9989</b>          |
| <b>Instruction Manual:</b> | GEI-56128             |
| <b>Connection Diagram:</b> | GEM2034E-FIG20        |
| <b>Outline Drawing:</b>    | 239C6800AA            |

| Accessory Connection Diagrams |      |                              |      |
|-------------------------------|------|------------------------------|------|
| <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>5KS449SAA202D4</b> | <b>Estimated Weight:</b>      | 3100 Lbs |
| <b>Outline Drawing:</b>    | 239C6800AA            | <b>Time Rating:</b>           | CONT     |
| <b>Connection Diagram:</b> | GEM2034E-FIG20        | <b>Enclosure:</b>             | TEFC     |
| <b>Instruction Book:</b>   | GEI-56128             | <b>Encl Construction:</b>     | X\$D     |
| <b>Design Code:</b>        | 49BD1241B             | <b>Ambient Max(°C):</b>       | 40       |
| <b>Type:</b>               | KS                    | <b>Alt Ambient Max(°C):</b>   | 60       |
| <b>Frame:</b>              | 449T                  | <b>Insulation Class:</b>      | H        |
| <b>Phases:</b>             | 3                     | <b>NEMA Design:</b>           | B        |
| <b>Poles:</b>              | 4                     | <b>Nominal Efficiency:</b>    | 96.5 %   |
| <b>Output Power:</b>       | 250HP 185KW           | <b>Guaranteed Efficiency:</b> | 96.2     |
| <b>RPM:</b>                | 1790                  | <b>3/4 Load Efficiency:</b>   | 96.9     |
| <b>Voltage:</b>            | 575                   | <b>KVA Code:</b>              | G        |
| <b>Hertz:</b>              | 60                    | <b>Max KVAR:</b>              | 52.4     |
| <b>Amps - FL:</b>          | 218.0                 | <b>Power Factor:</b>          | 89.0     |
| <b>Service Factor:</b>     | 1.15                  | <b>Bearing - DE:</b>          | 6318ZC3  |
| <b>Alt Service Factor:</b> | 1.00                  | <b>Bearing - ODE:</b>         | 6318ZC3  |

**Enclosure is Totally Enclosed Fan-Cooled**

**Stamped Nameplate Notes:**

FOR DIRECT COUPLED LOAD ONLY  
 STAMP NP249A5564P051 AS BELOW:  
 MODEL:5KS449SAA202D4 S/N: XXX  
 CSA CERTIFIED CSA09.2216219 FOR EX NA IIC 200 C GC  
 CL 1 ZONE2 AEX NA IIC 200C;CL 1 DIV2 GRP ABCD 200C  
 IN -40C <= AMB <= 40C, 1.0 SF ON SINE-WAVE PWR  
 SURF TEMP 260C AT 1.15SF ON SINE-WAVE PWR  
 OR 200 C VT OR 230 C CT OR 200 C CHP PWM CONTROL  
 ALTERNATE RATING FOR PWM CONTROL 1.0SF 40C AMB  
 VT 0-60 HZ, CT 30-60 HZ, CHP 60-75 HZ.

**Additional Information:**

4P - T EXTN - SPLIT LEAD  
 700 CU IN - 3.00" NPT  
 OIL RESISTANT SLEEVING ON LEADS  
 F1 MOUNTING

**Performance Characteristics**

1st Winding 1st Connection

**Design: 49BD1241B**

**Marks:**

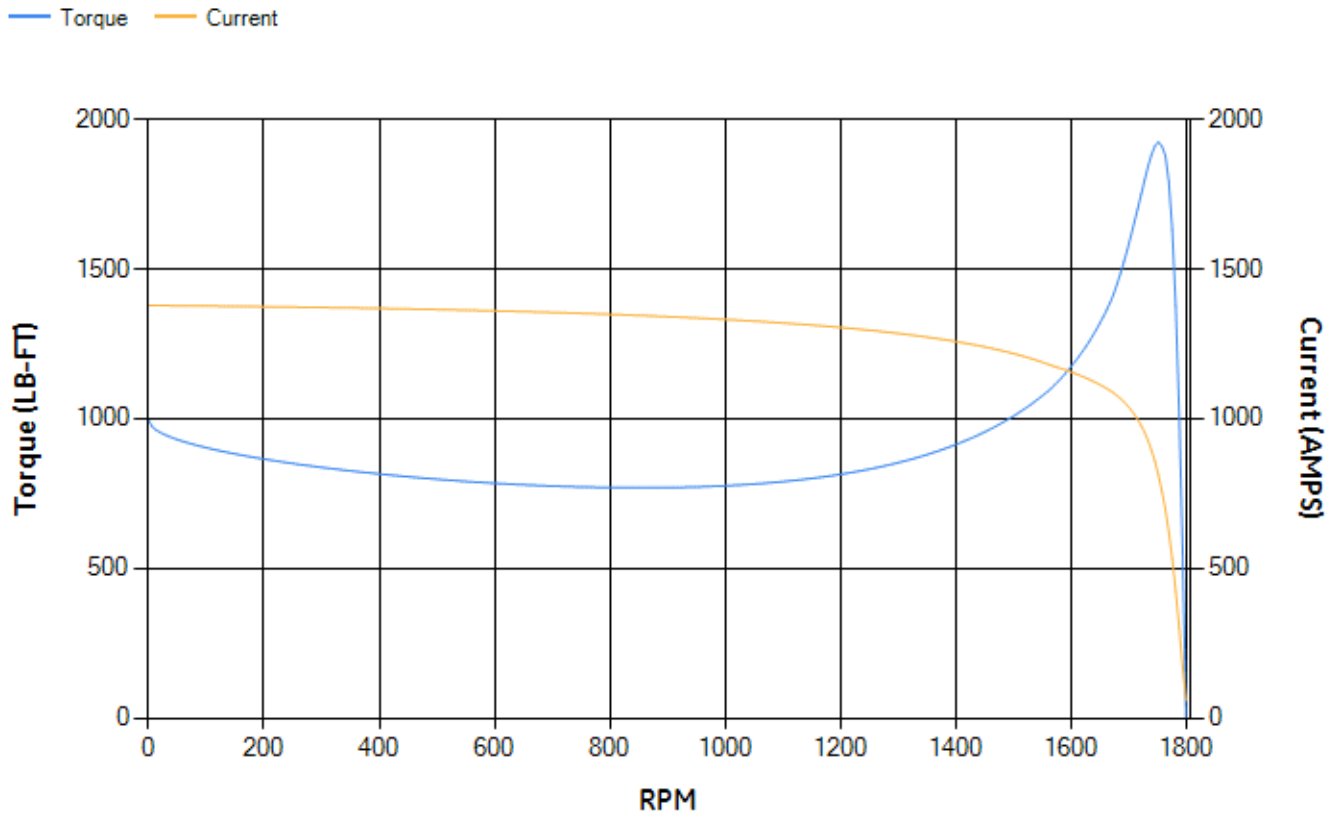
| LOAD % | 125.0  | 115.0 | 100.0  | 75.0   | 50.0   | 25.0  | 0.0   |
|--------|--------|-------|--------|--------|--------|-------|-------|
| % EFF  | 96.2   | 96.38 | 96.82  | 96.88  | 96.78  | 95.41 | 0.00  |
| % PF   | 89.27  | 89.26 | 88.92  | 86.96  | 81.01  | 61.93 | 3.2   |
| AMPS   | 272.48 | 250.2 | 217.41 | 166.65 | 119.37 | 79.2  | 58.45 |

|                    |         |                    |        |                    |        |
|--------------------|---------|--------------------|--------|--------------------|--------|
| <b>TORQ(FL)#FT</b> | 733     | <b>TORQ(LR)%FL</b> | 135.72 | <b>TORQ(BD)%FL</b> | 262.22 |
| <b>AMPS(LR)</b>    | 1378.13 | <b>PF AT START</b> | 0.23   |                    |        |

This motor is capable of two cold or one hot start with a maximum connected load inertia of 8394 Lb-Ft Sq (353.39 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 75 seconds. Safe stall time at 100% voltage is 176 seconds cold, 90 seconds hot. Rotor inertia is 138.63 Lb-Ft Sq (5.84 Kg-meter Sq).

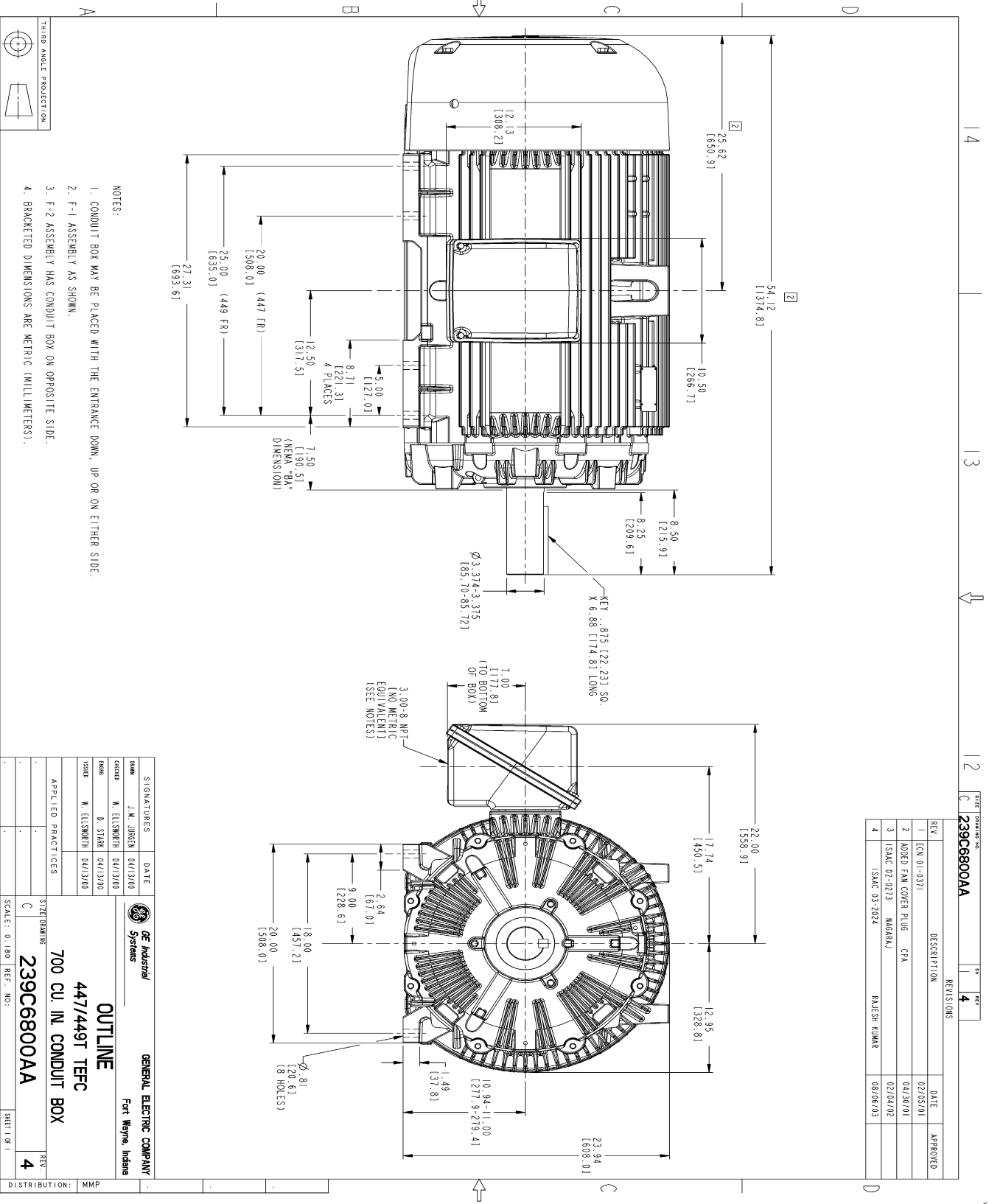
|                           |       |                           |        |
|---------------------------|-------|---------------------------|--------|
| <b>Open Circuit A-C:</b>  | 1.884 | <b>Short Circuit D-C:</b> | 0.04   |
| <b>Short Circuit A-C:</b> | 0.072 | <b>X/R Ratio:</b>         | 14.919 |
| <b>Stator Slots:</b>      | 72    | <b>Rotor Slots:</b>       | 58     |

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



NAME: 103016807 OBJECT: 239C6800AA DATE: 08-Aug-03 12:01:27

Marks:

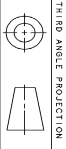


| REV. | DESCRIPTION               | DATE     | APPROVED |
|------|---------------------------|----------|----------|
| 1    | ECN 01-0371               | 02/05/01 |          |
| 2    | CODED FAN COVER PLUG CFA  | 04/30/01 |          |
| 3    | ISAC 02-0213 MARGAJ       | 02/04/02 |          |
| 4    | ISAC 03-2024 RAJESH KUMAR | 08/06/03 |          |

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NOTES:

1. CONDUIT BOX MAY BE PLACED WITH THE ENTRANCE DOWN, UP OR ON EITHER SIDE.
2. F-1 ASSEMBLY AS SHOWN.
3. F-2 ASSEMBLY HAS CONDUIT BOX ON OPPOSITE SIDE.
4. BRACKETED DIMENSIONS ARE METRIC (MILLIMETERS).



| SIGNATURES             | DATE     | GENERAL ELECTRIC COMPANY |
|------------------------|----------|--------------------------|
| DESIGNER: J.M. JOHNSON | 04/13/00 | Fort Wayne, Indiana      |
| CHECKED: W. ELLSWORTH  | 04/13/00 |                          |
| DRAWN: D. STARK        | 04/13/00 |                          |
| ISSUED: W. ELLSWORTH   | 04/13/00 |                          |

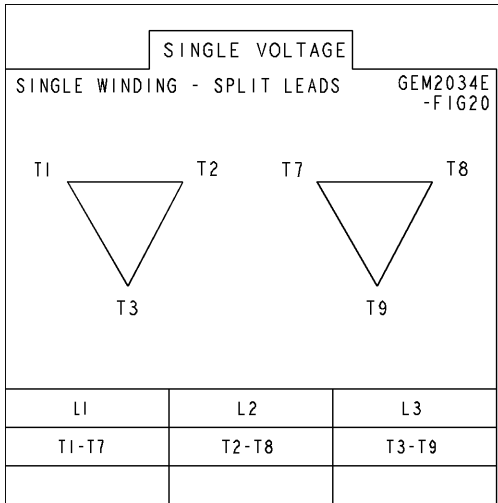
**OUTLINE**  
**447/449T TEFC**  
**700 CU. IN. CONDUIT BOX**  
**239C6800AA**

SCALE: 0.180 REF. NO.:  
 SHEET 1 OF 1

DISTRIBUTION: MMP

Marks:

**Connection Diagram**  
**GEM2034E-FIG20**



| End shield Assembly |               |                |
|---------------------|---------------|----------------|
| Part Description    | DE Side Part# | ODE Side Part# |
| End Shield          | 115E4355AA1   | 115E4355LM1    |
| Bearing             | 235A2514AG01  | 235A2514AG01   |
| Slinger/Inproseal   | 149C4399G07   | 149C4399G07    |

| Fan & Fan Cover Assembly |             |
|--------------------------|-------------|
| Part Description         | Part#       |
| Fan                      | 159C7100AA2 |
| Fan Cover                | 128D6841AA1 |

| Conduit & Accessories Box Assembly |             |
|------------------------------------|-------------|
| Part Description                   | Part#       |
| Conduit Box                        | 118D4408AD2 |

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