

Product Information Packet

November 8, 2016

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

| | |
|----------------------------|----------------------|
| Model Number: | 5KS286SAA104D |
| Catalog Number: | M9180 |
| Instruction Manual: | GEI-56128 |
| Connection Diagram: | GEM2034E-FIG7 |
| Outline Drawing: | 4002B5828PAP5201 |

| Accessory Connection Diagrams | | | |
|-------------------------------|------|------------------------------|------|
| Bearing Thermocouple: | None | Heater: | None |
| RTD: | None | Thermistor: | None |
| Thermostat: | None | Winding Thermocouple: | None |
| Bearing RTD: | None | | |

Table of Contents

| | |
|-----------------------------|----|
| Specification | 01 |
| Performance Characteristics | 02 |
| Outline Drawing | 03 |
| Connection Drawing(s) | 04 |
| Spare parts | 05 |



Marks:

| | | | |
|----------------------------|----------------------|-------------------------------|---------|
| MODEL NUMBER: | 5KS286SAA104D | Estimated Weight: | 510 Lbs |
| Outline Drawing: | 4002B5828PAP5201 | Time Rating: | CONT |
| Connection Diagram: | GEM2034E-FIG7 | Enclosure: | TEFC |
| Instruction Book: | GEI-56128 | Encl Construction: | X\$D |
| Design Code: | 28BD0153B | Ambient Max(°C): | 40 |
| Type: | KS | Alt Ambient Max(°C): | 60 |
| Frame: | 286T | Insulation Class: | H |
| Phases: | 3 | NEMA Design: | B |
| Poles: | 2 | Nominal Efficiency: | 92.4 % |
| Output Power: | 30HP 22.2KW | Guaranteed Efficiency: | 91.7 |
| RPM: | 3545 | 3/4 Load Efficiency: | 93.4 |
| Voltage: | 575 | KVA Code: | G |
| Hertz: | 60 | Max KVAR: | 4.2 |
| Amps - FL: | 26.1 | Power Factor: | 93.0 |
| Service Factor: | 1.15 | Bearing - DE: | 6310ZC3 |
| Alt Service Factor: | 1.00 | Bearing - ODE: | 6310ZC3 |

Enclosure is Totally Enclosed Fan-Cooled

Stamped Nameplate Notes:

STAMP NP249A5564P051 AS BELOW:
 MODEL:5KS286SAA104D 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 -40C <= AMB <= 40C, 1.0 SF ON SINE-WAVE PWR
 SURF TEMP 260C AT 1.15SF ON SINE-WAVE PWR
 OR 200C VT OR 215C CT OR 215C CHP PWM CONTROL
 ALTERNATE RATING FOR PWM CONTROL 1.0SF 40C AMB
 VT 0 - 60 HZ, CT 15-60 HZ, CHP 60-90 HZ.

Additional Information:

2P - T EXTN
 STANDARD FLOOR MOUNT
 C/BOX 137 CU IN-1.50 NPT
 F1 CONDUIT BOX MOUNTING
 OIL RESISTANT SLEEVING ON LEADS



Performance Characteristics

1st Winding 1st Connection

Design: 28BD0153B

Marks:

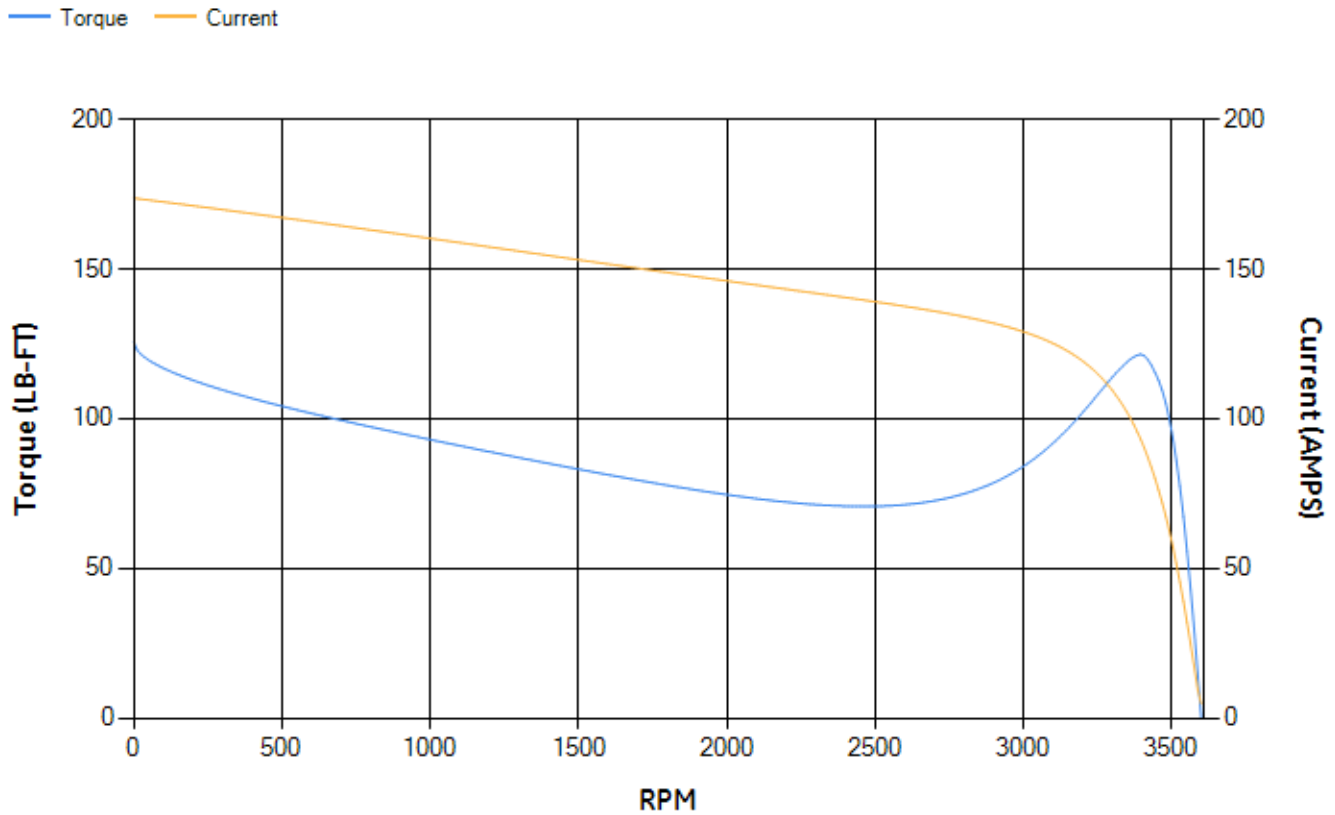
| LOAD % | 125.0 | 115.0 | 100.0 | 75.0 | 50.0 | 25.0 | 0.0 |
|--------|-------|-------|-------|-------|-------|-------|------|
| % EFF | 91.41 | 91.93 | 92.79 | 93.37 | 93.42 | 91.05 | 0.00 |
| % PF | 92.41 | 92.7 | 92.9 | 92.37 | 89.5 | 77.14 | 9.72 |
| AMPS | 33.24 | 30.31 | 26.06 | 19.53 | 13.43 | 8 | 4.7 |

| | | | | | |
|--------------------|--------|--------------------|--------|--------------------|--------|
| TORQ(FL)#FT | 44.4 | TORQ(LR)%FL | 283.26 | TORQ(BD)%FL | 272.51 |
| AMPS(LR) | 173.68 | PF AT START | 0.43 | | |

This motor is capable of two cold or one hot start with a maximum connected load inertia of 111 Lb-Ft Sq (4.67 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 18 seconds. Safe stall time at 100% voltage is 38 seconds cold, 21 seconds hot. Rotor inertia is 3.25 Lb-Ft Sq (0.14 Kg-meter Sq).

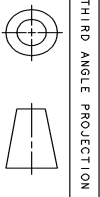
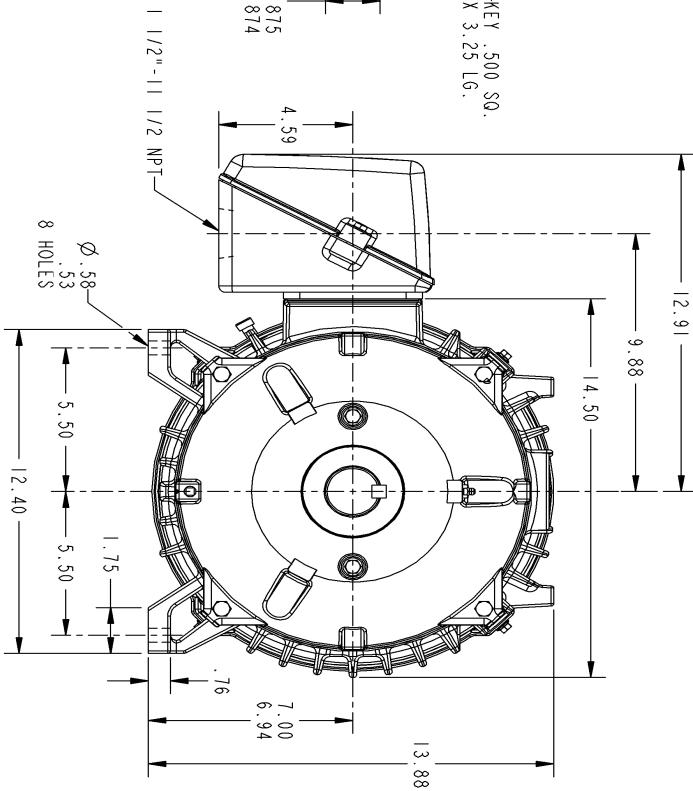
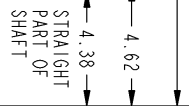
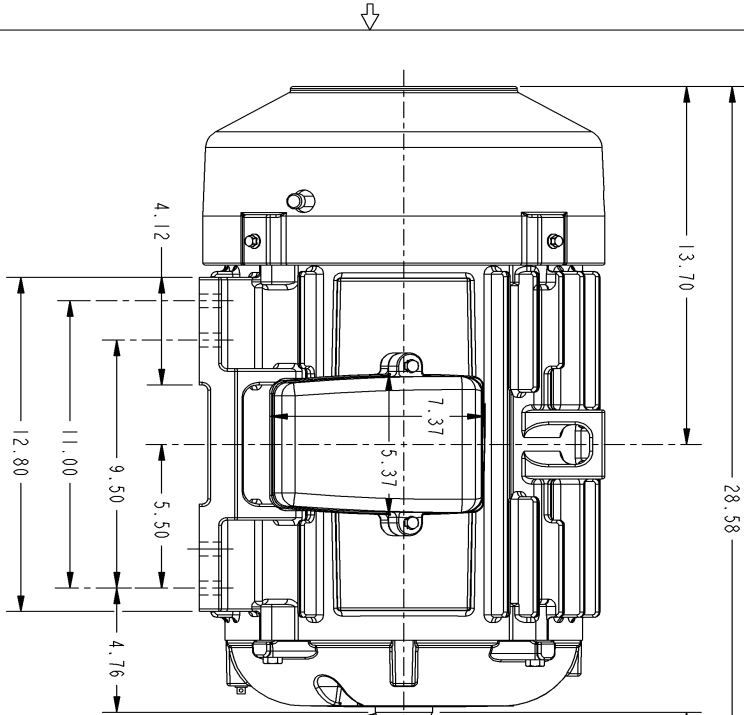
| | | | |
|---------------------------|-------|---------------------------|-------|
| Open Circuit A-C: | 1.041 | Short Circuit D-C: | 0.013 |
| Short Circuit A-C: | 0.025 | X/R Ratio: | 5.016 |
| Stator Slots: | 48 | Rotor Slots: | 38 |

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.



SIZE 0
 4002B5828PAP5201

SM 0
 REV

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

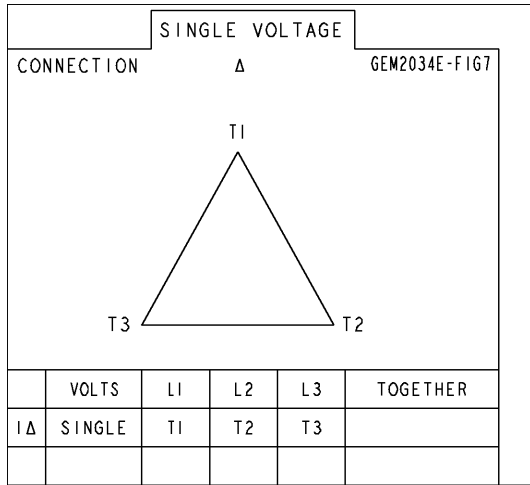
| SIGNATURES | DATE | REV. |
|--------------------------------|------|------|
| DRWN GARY WARDNER DEC 13/01 | | |
| CHECKED GARY WARDNER FEB 28/02 | | |
| ISSUED GARY WARDNER MAR 03/02 | | |
| APPLIED PRACTICES | | |

GE Industrial Systems
GENERAL ELECTRIC COMPANY
 Fort Wayne, Indiana
INDUCTION MOTOR OUTLINE
STANDARD CONSTRUCTION
 F.M.F. FR280T TFC XSD ULTRA
4002B5828PAP5201
 SCALE: 0.250 REF. NO.: 4002B5828PAP5201 SHEET 1 OF 1

DISTRIBUTION: PMP-18K15

Marks:

Connection Diagram
GEM2034E-FIG7



| End shield Assembly | | |
|---------------------|---------------|----------------|
| Part Description | DE Side Part# | ODE Side Part# |
| End Shield | 4004D5284PB1 | 4004D5284SE1 |
| Bearing | 235A2608AA01 | 235A2608AA01 |
| Slinger/Inproseal | 149C4399G03 | 149C4399G03 |

| Fan & Fan Cover Assembly | |
|--------------------------|--------------|
| Part Description | Part# |
| Fan | 159C6704G02 |
| Fan Cover | 4003C5789PA1 |

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

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