



GE INDUSTRIAL MOTORS
a **WOLONG** company

Product Technical Information

April 1, 2021

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

| | |
|----------------------------|-----------------------|
| Model Number: | 5KS284SAA205D4 |
| Catalog Number: | M9157 |
| Instruction Manual: | GEI-56128 |
| Connection Diagram: | GEM2034E-FIG9 |
| Outline Drawing: | 4002B5828PAP5943 |

Accessory Connection Diagrams

| | | | |
|------------------------------|------|------------------------------|------|
| Bearing Thermocouple: | None | Heater: | None |
| RTD: | None | Thermistor: | None |
| Thermostat: | None | Winding Thermocouple: | None |
| Bearing RTD: | None | | |

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Marks:

| | | | |
|----------------------------|-----------------------|-------------------------------|---------|
| MODEL NUMBER: | 5KS284SAA205D4 | Estimated Weight: | 460 Lbs |
| Outline Drawing: | 4002B5828PAP5943 | Time Rating: | CONT |
| Connection Diagram: | GEM2034E-FIG9 | Enclosure: | TEFC |
| Instruction Book: | GEI-56128 | Encl Construction: | 841 |
| Design Code: | 28BD1162A | Ambient Max(°C): | 40 |
| Type: | KS | Alt Ambient Max(°C): | -- |
| Frame: | 284T | Insulation Class: | H |
| Phases: | 3 | NEMA Design: | B |
| Poles: | 4 | Nominal Efficiency: | 93.6 % |
| Output Power: | 25HP 18.5KW | Guaranteed Efficiency: | 93.0 % |
| RPM: | 1780 | 3/4 Load Efficiency: | -- |
| Voltage: | 230/460 | KVA Code: | G |
| Hertz: | 60 | Max KVAR: | 7.0 |
| Amps - FL: | 58.2/29.1 | Power Factor: | 86.0 |
| Service Factor: | 1.15 | Bearing - DE: | 6310ZC3 |
| Alt Service Factor: | -- | Bearing - ODE: | 6310ZC3 |

Enclosure is Totally Enclosed Fan-Cooled

Stamped Nameplate Notes:

DE BRG 50BC03JP30 ODE BRG 50BC03JP30
 EXCEPTION TO IEEE-STD-841-2009: DUAL VOLTAGE
 STAMP NP249A5564P051 AS BELOW:
 MODEL:5KS284SAA205D4 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 200C AT 1.15SF ON SINE-WAVE PWR
 OR 200C VT OR 200C CT OR 200C CHP PWM CONTROL
 ALTERNATE RATING FOR PWM CONTROL 1.0SF 40C AMB
 VT 0-60 HZ, CT 3-60 HZ, CHP 60-90 HZ.



Additional Information:

4P - T EXTN
STANDARD FLOOR MOUNT
C/BOX 137 CU IN-1.50 NPT
F1 CONDUIT BOX MOUNTING
PAINTED FRAME ID & SHAFT,
FAN COVER INSIDE & ODE E/S OUTSIDE
ROUTINE AND 5 POINT VIBRATION TESTS INCL IN C/BOX
GROUND SCREW ON FRAME
SHAFT RUNOUT LIMIT .0015" TIR
OIL RESISTANT SLEEVING ON LEADS



Performance Characteristics

1st Winding 1st Connection

Design: 28BD1162A

Marks:

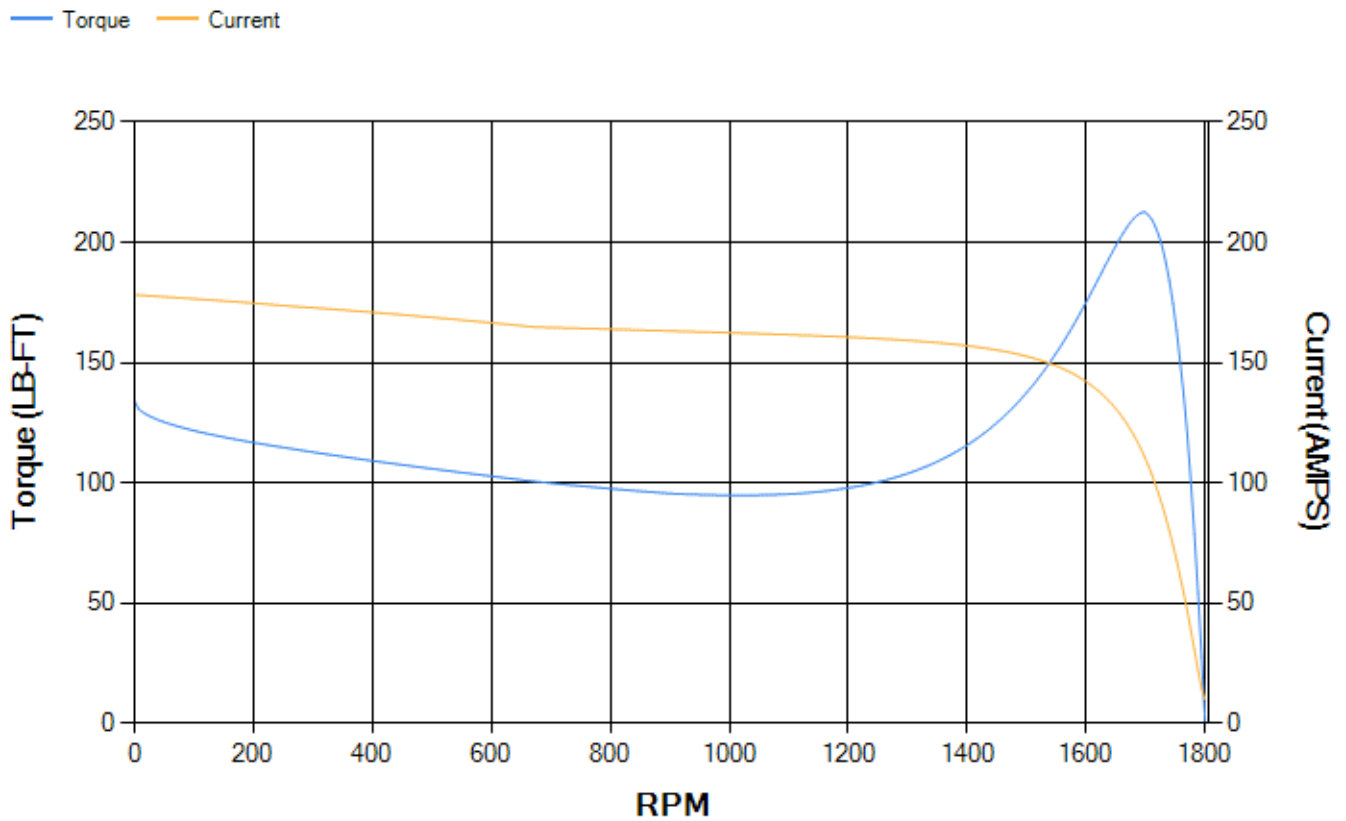
| LOAD % | 125.0 | 115.0 | 100.0 | 75.0 | 50.0 | 25.0 | 0.0 |
|--------|-------|-------|-------|-------|-------|-------|------|
| % EFF | 92.51 | 92.93 | 93.67 | 94.08 | 94.02 | 91.68 | 0.00 |
| % PF | 86.95 | 86.71 | 85.9 | 82.65 | 74.39 | 52.87 | 4.42 |
| AMPS | 36.36 | 33.39 | 29.06 | 22.57 | 16.73 | 12.07 | 9.81 |

| | | | | | |
|--------------------|--------|--------------------|--------|--------------------|--------|
| TORQ(FL)#FT | 73.83 | TORQ(LR)%FL | 181.27 | TORQ(BD)%FL | 286.95 |
| AMPS(LR) | 178.14 | PF AT START | 0.38 | | |

This motor is capable of two cold or one hot start with a maximum connected load inertia of 887 Lb-Ft Sq (37.34 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 56 seconds. Safe stall time at 100% voltage is 100 seconds cold, 67 seconds hot. Rotor inertia is 4.88 Lb-Ft Sq (0.21 Kg-meter Sq).

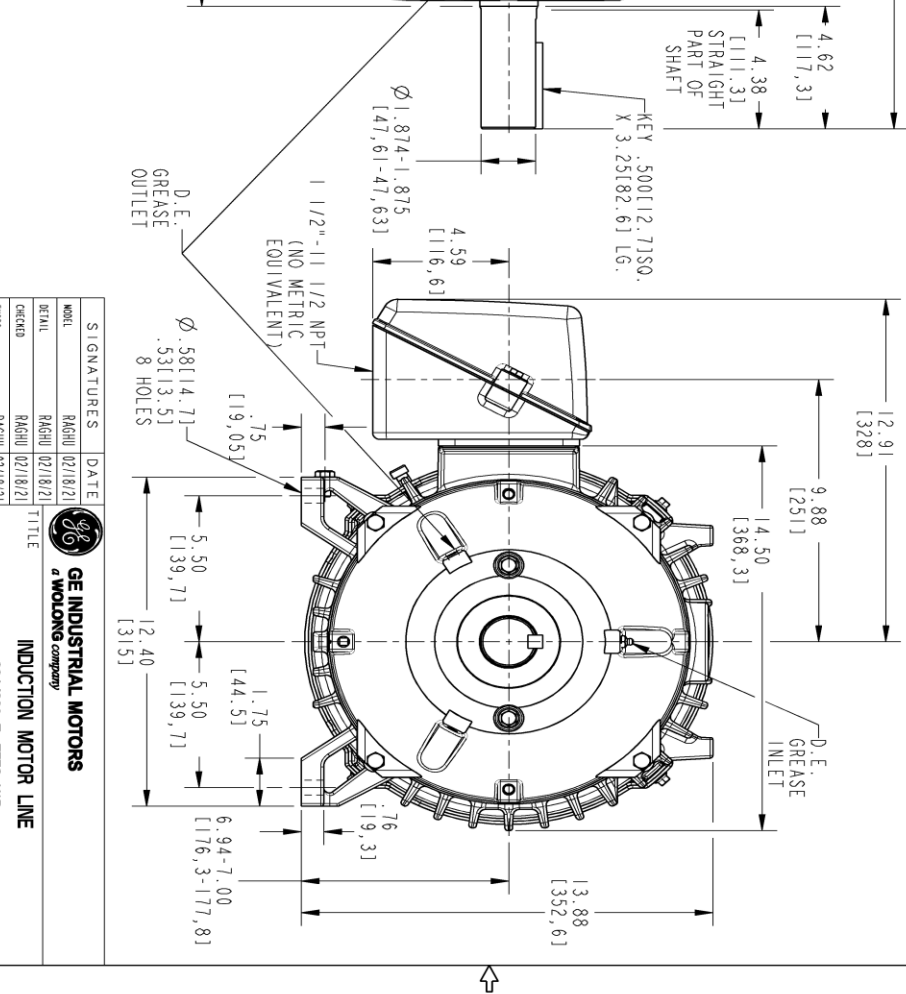
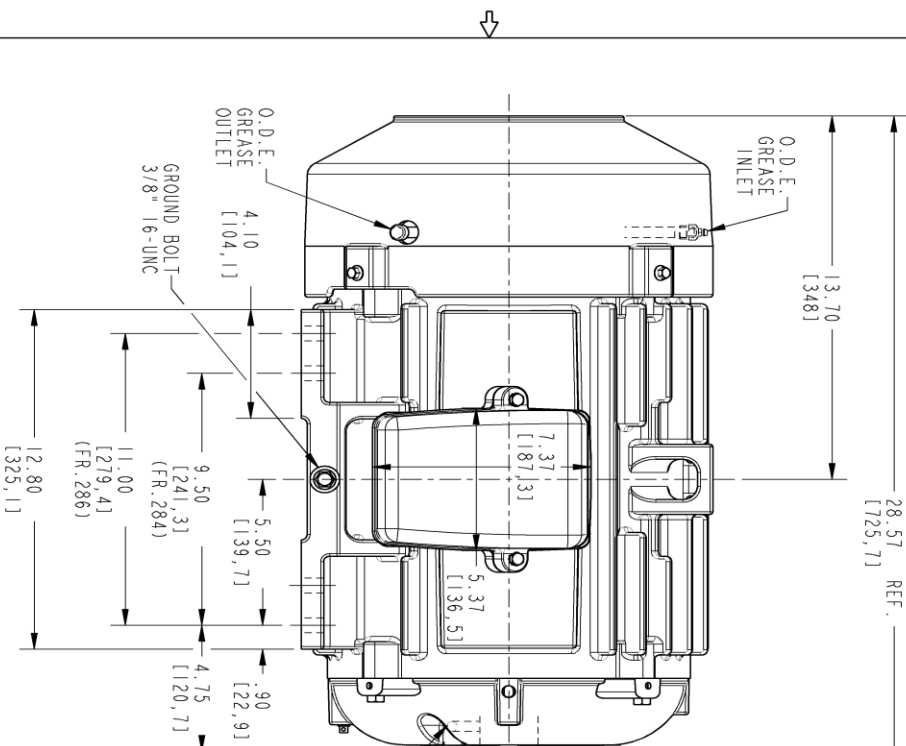
| | | | |
|---------------------------|-------|---------------------------|-------|
| Open Circuit A-C: | 0.626 | Short Circuit D-C: | 0.016 |
| Short Circuit A-C: | 0.028 | X/R Ratio: | 5.887 |
| Stator Slots: | 48 | Rotor Slots: | 40 |

Speed Torque Current Curve (First Connection, First Speed)



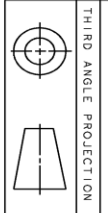
Marks:

NOTE 1: CONDUIT BOX MAY BE ASSEMBLED WITH ENTRANCE UP, DOWN OR TO EITHER SIDE.
 NOTE 2: FIT ASSEMBLY AS SHOWN.
 NOTE 3: ALL DIMENSIONS ARE IN INCHES, BRACKETED DIMENSIONS ARE IN METRIC (MILLIMETERS).



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



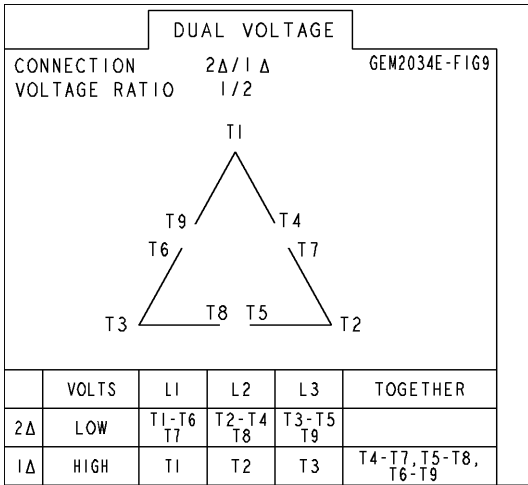
| SIGNATURES | DATE |
|--------------|------------------|
| MODEL | 02/18/21 |
| DETAIL | 02/18/21 |
| DESIGN | 02/18/21 |
| ENG | 02/18/21 |
| QC | |
| ISSUED | 02/18/21 |
| SOLID MODEL: | 4002B5828PAP5943 |

GE INDUSTRIAL MOTORS
 a Wolog company
INDUCTION MOTOR LINE
 284/286 T, TEFC XSD
 C/BOX 137 CUIN GROUND PAD
4002B5828PAP5943
 SCALE: 0.250 REF. No.: 4002B5828PAP5311

| REV | DESCRIPTION |
|-----|-------------|
| 000 | |

Marks:

Connection Diagram
GEM2034E-FIG9



| End shield Assembly | | |
|---------------------|---------------|----------------|
| Part Description | DE Side Part# | ODE Side Part# |
| End Shield | 4004D5284PB1 | 4004D5284SE1 |
| Bearing | 235A2508EC01 | 235A2508EC01 |
| Slinger/Inproseal | 149C4399G03 | 149C4399G03 |

| Fan & Fan Cover Assembly | |
|--------------------------|--------------|
| Part Description | Part# |
| Fan | 159C6700G02 |
| Fan Cover | 4003C5789PA1 |

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

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

