



GE INDUSTRIAL MOTORS
a **WOLONG** company

Product Technical Information

June 24, 2020

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

| | |
|----------------------------|-----------------------|
| Model Number: | 5KS286XAA204D2 |
| Catalog Number: | M9580 |
| Instruction Manual: | GEI-56128 |
| Connection Diagram: | GEM2034E-FIG7 |
| Outline Drawing: | 4002B5828PAP5311 |

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: | 5KS286XAA204D2 | Estimated Weight: | 510 Lbs |
| Outline Drawing: | 4002B5828PAP5311 | Time Rating: | CONT |
| Connection Diagram: | GEM2034E-FIG7 | Enclosure: | TEFC |
| Instruction Book: | GEI-56128 | Encl Construction: | 841 |
| Design Code: | 28BD1157B | Ambient Max(°C): | 40 |
| Type: | KS | Alt Ambient Max(°C): | -- |
| Frame: | 286T | Insulation Class: | H |
| Phases: | 3 | NEMA Design: | B |
| Poles: | 4 | Nominal Efficiency: | 93.6 % |
| Output Power: | 30HP 22.2KW | Guaranteed Efficiency: | 93.0 % |
| RPM: | 1775 | 3/4 Load Efficiency: | 94.1 % |
| Voltage: | 575 | KVA Code: | G |
| Hertz: | 60 | Max KVAR: | 8.2 |
| Amps - FL: | 27.9 | 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:

IEEE-STD-841-2009
 DE BRG 50BC03JP30 ODE BRG 50BC03JP30
 STAMP NP249A5564P051 AS BELOW:
 MODEL:5KS286XAA204D2 S/N: XXX
 CSA CERTIFIED CSA09.2216219 FOR EX NA IIC 200 C GC
 CL1ZONE2 AEXNAIIC 200 C; CL1DIV2 GRP ABCD 200 C
 IN -25C <= AMB <= 40C, 1.0 SF ON SINE-WAVE PWR
 SURF TEMP 200 C AT 1.15 SF ON SINE-WAVE PWR
 OR 200 C VT OR 200 C CT OR 200 C CHP PWM CONTROL
 ALTERNATE RATING FOR PWM CONTROL 1.0 SF 40 C AMB
 VT 0-60 HZ, CT 6-60 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
INPRO SEAL BOTH ENDS
GROUND SCREW ON FRAME
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: 28BD1157B

Marks:

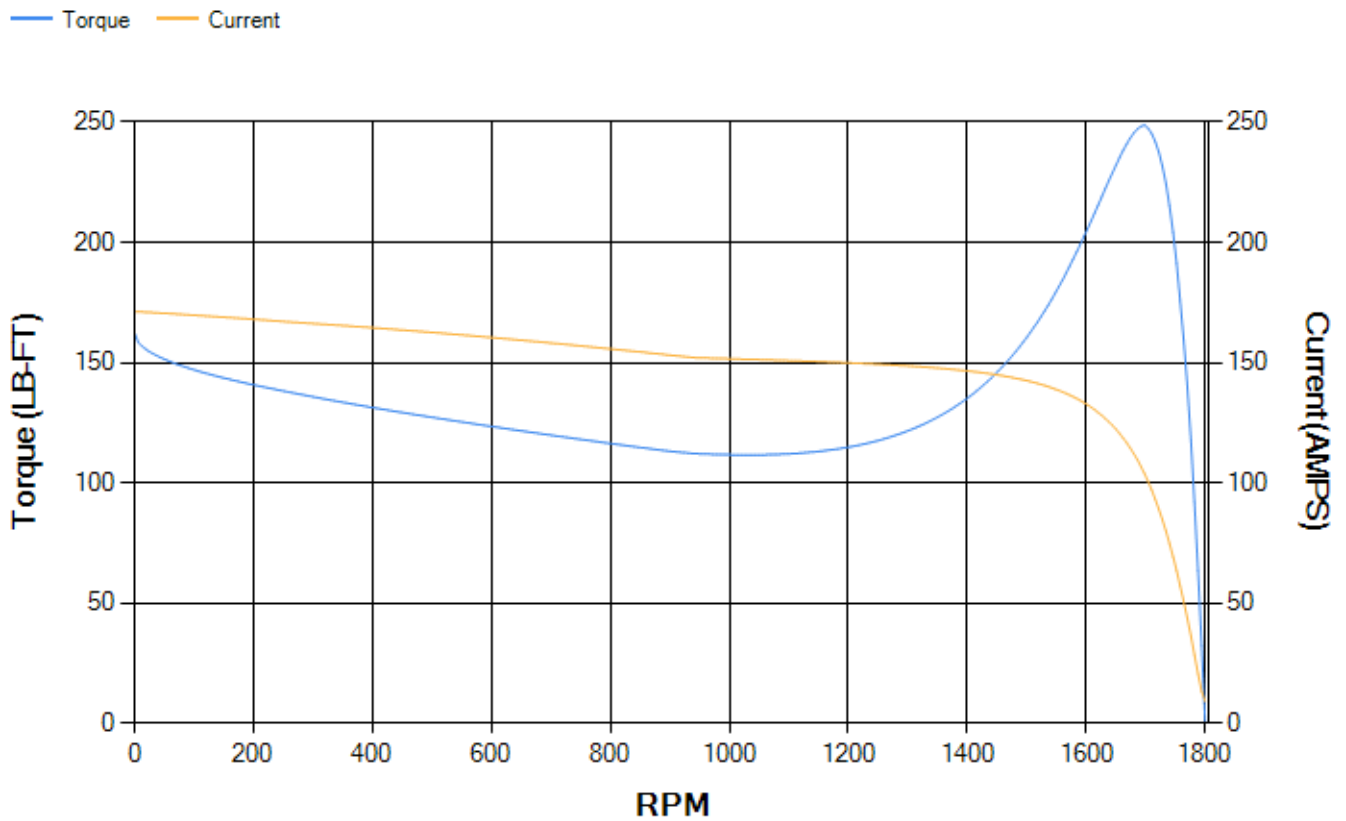
| LOAD % | 125.0 | 115.0 | 100.0 | 75.0 | 50.0 | 25.0 | 0.0 |
|--------|-------|-------|-------|-------|-------|-------|------|
| % EFF | 92.44 | 92.88 | 93.64 | 94.07 | 94.05 | 91.76 | 0.00 |
| % PF | 86.94 | 86.79 | 86.1 | 83.09 | 75.2 | 53.99 | 4.51 |
| AMPS | 34.94 | 32.05 | 27.85 | 21.55 | 15.88 | 11.34 | 9.12 |

| | | | | | |
|--------------------|--------|--------------------|--------|--------------------|--------|
| TORQ(FL)#FT | 88.63 | TORQ(LR)%FL | 183.03 | TORQ(BD)%FL | 279.65 |
| AMPS(LR) | 171.25 | PF AT START | 0.38 | | |

This motor is capable of two cold or one hot start with a maximum connected load inertia of 962 Lb-Ft Sq (40.5 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 51 seconds. Safe stall time at 100% voltage is 91 seconds cold, 62 seconds hot. Rotor inertia is 5.39 Lb-Ft Sq (0.23 Kg-meter Sq).

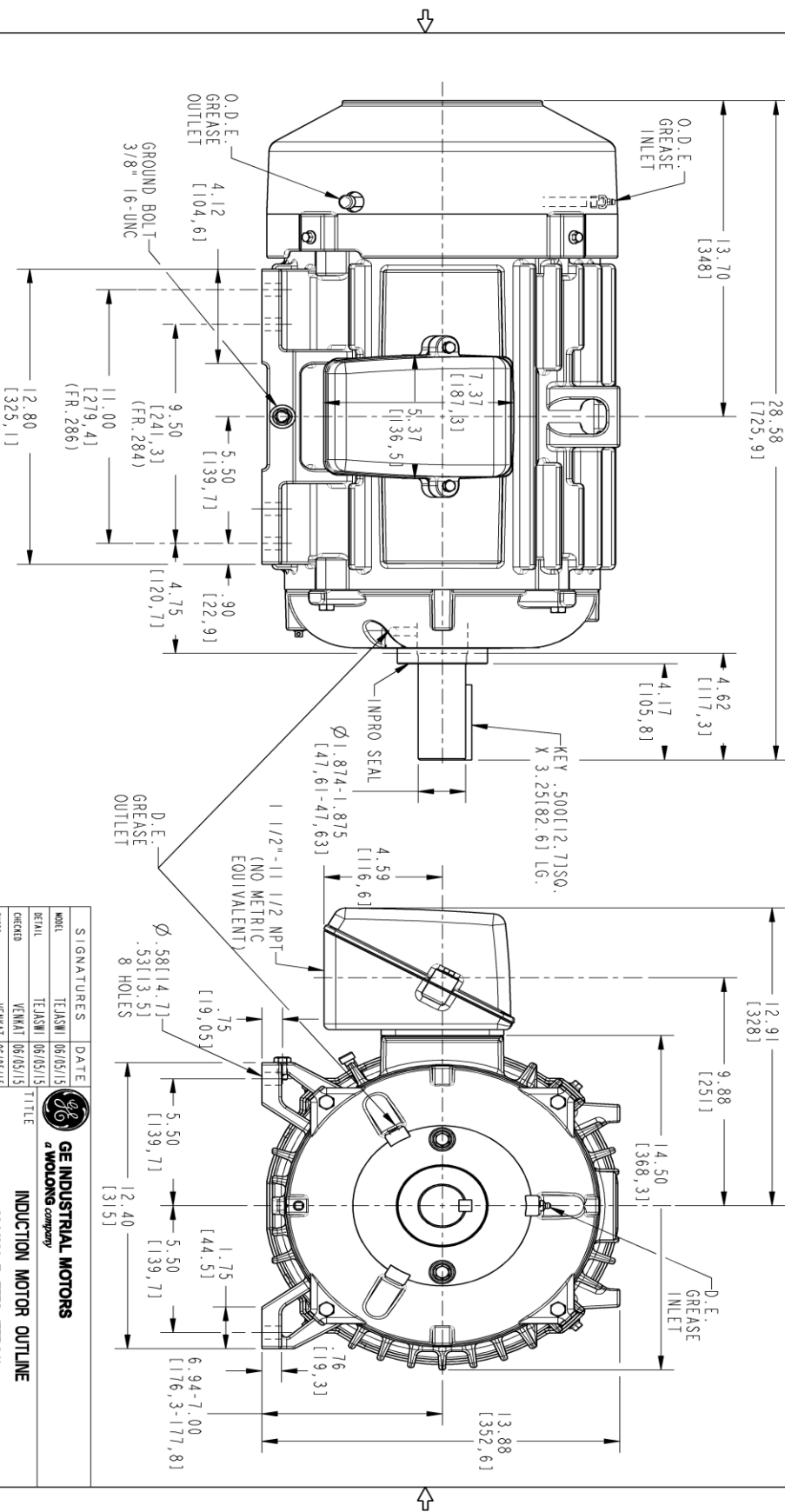
| | | | |
|---------------------------|-------|---------------------------|-------|
| Open Circuit A-C: | 0.635 | Short Circuit D-C: | 0.016 |
| Short Circuit A-C: | 0.027 | X/R Ratio: | 5.902 |
| Stator Slots: | 48 | Rotor Slots: | 40 |

Speed Torque Current Curve (First Connection, First Speed)



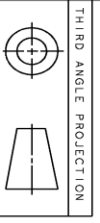
Marks:

NOTE 1: CONDUIT BOX MAY BE ASSEMBLED WITH ENTRANCE UP, DOWN OR TO EITHER SIDE.
 NOTE 2: F1 ASSEMBLY AS SHOWN. F2 ASSEMBLY CONDUIT BOX ON OPPOSITE SIDE FROM SHOWN LOCATION.
 NOTE 3: SHAFT RUNOUT WILL NOT EXCEED .0015 T.I.R.
 NOTE 4: ALL DIMENSIONS ARE IN INCHES. BRACKETED DIMENSIONS ARE IN METRIC (MILLIMETERS).



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| REV. | DESCRIPTION | DATE | APPROVED |
|------|----------------|----------|-----------|
| 1 | ISAAC# 18-0869 | 11/08/18 | PRASHANTH |



| SIGNATURES | DATE |
|-----------------|----------|
| MODEL: TEJASNI | 06/05/19 |
| DETAIL: TEJASNI | 06/05/19 |
| DESIGN: VENKAT | 06/05/19 |
| ENG: VENKAT | 06/05/19 |
| QC: TEJASNI | 06/05/19 |
| ISSUED: B | |

GE INDUSTRIAL MOTORS
 a Wolog company

INDUCTION MOTOR OUTLINE
 284/286 T, TFC, IEE-94I

CBOX 137 CUL - 150 NPT, IMPRO SEAL, GROUND PAD

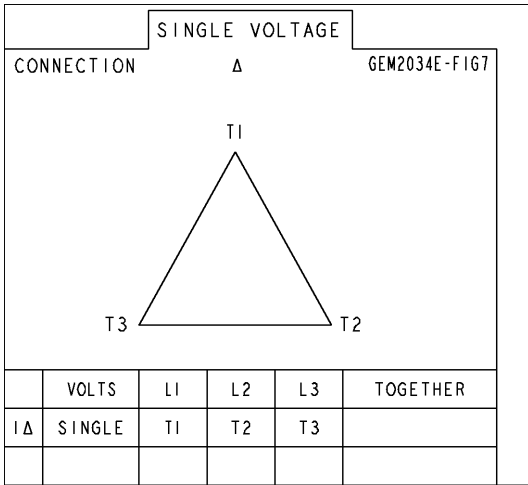
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SCALE: 0.250 REF. No.: 4002B5828PAP5301

SHEET 1 OF 1

Marks:

Connection Diagram
GEM2034E-FIG7



| End shield Assembly | | |
|---------------------|---------------|----------------|
| Part Description | DE Side Part# | ODE Side Part# |
| End Shield | 4004D5284PB1 | 4004D5284SE1 |
| Bearing | 235A2508EC01 | 235A2508EC01 |
| Slinger/Inproseal | 4002B5914AF5 | 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 | |

