



**GE INDUSTRIAL MOTORS**  
a **WOLONG** company

# Product Technical Information

June 23, 2020

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

|                            |                       |
|----------------------------|-----------------------|
| <b>Model Number:</b>       | <b>5KS145XAA2010B</b> |
| <b>Catalog Number:</b>     | <b>M9406</b>          |
| <b>Instruction Manual:</b> | GEI-56128             |
| <b>Connection Diagram:</b> | GEM2034E-FIG1         |
| <b>Outline Drawing:</b>    | 4002B5814PDP5310      |

## 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>5KS145XAA2010B</b> | <b>Estimated Weight:</b>      | 50 Lbs  |
| <b>Outline Drawing:</b>    | 4002B5814PDP5310      | <b>Time Rating:</b>           | CONT    |
| <b>Connection Diagram:</b> | GEM2034E-FIG1         | <b>Enclosure:</b>             | TEFC    |
| <b>Instruction Book:</b>   | GEI-56128             | <b>Encl Construction:</b>     | 841     |
| <b>Design Code:</b>        | 14BD1093A             | <b>Ambient Max(°C):</b>       | 40      |
| <b>Type:</b>               | KS                    | <b>Alt Ambient Max(°C):</b>   | --      |
| <b>Frame:</b>              | 145TC                 | <b>Insulation Class:</b>      | H       |
| <b>Phases:</b>             | 3                     | <b>NEMA Design:</b>           | B       |
| <b>Poles:</b>              | 4                     | <b>Nominal Efficiency:</b>    | 86.5 %  |
| <b>Output Power:</b>       | 2HP 1.5KW             | <b>Guaranteed Efficiency:</b> | 85.5 %  |
| <b>RPM:</b>                | 1735                  | <b>3/4 Load Efficiency:</b>   | 87.0 %  |
| <b>Voltage:</b>            | 460                   | <b>KVA Code:</b>              | L       |
| <b>Hertz:</b>              | 60                    | <b>Max KVAR:</b>              | 1.0     |
| <b>Amps - FL:</b>          | 2.7                   | <b>Power Factor:</b>          | 79.0    |
| <b>Service Factor:</b>     | 1.15                  | <b>Bearing - DE:</b>          | 6206ZC3 |
| <b>Alt Service Factor:</b> | --                    | <b>Bearing - ODE:</b>         | 6205ZC3 |

Enclosure is Totally Enclosed Fan-Cooled

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Stamped Nameplate Notes:

IEEE-STD-841-2009  
 DE BRG 30BC02JP30 ODE BRG 25BC02JP30  
 STAMP NP249A5564P051 AS BELOW:  
 MODEL:5KS145XAA2010B S/N: XXX  
 CSA CERTIFIED CSA09.2216219 FOR EX NA IIC 200 C GC  
 CL1 ZONE2 AEXNAIIC 200C FOR CL1DIV2 GRP ABCD 200C  
 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 3-60 HZ, CHP 60-90 HZ.

Additional Information:

4P - T EXTN  
 C/BOX 30 CU IN-0.75 NPT  
 "C" FACE AT DE ENDSHIELD ROUND FRAME  
 VERTICAL MOUNT SHAFT DOWN WITH DRIPCOVER  
 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  
 BURNDY SERVIT POST ON FRAME  
 SHAFT RUNOUT LIMIT .001" 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: 14BD1093A**

**Marks:**

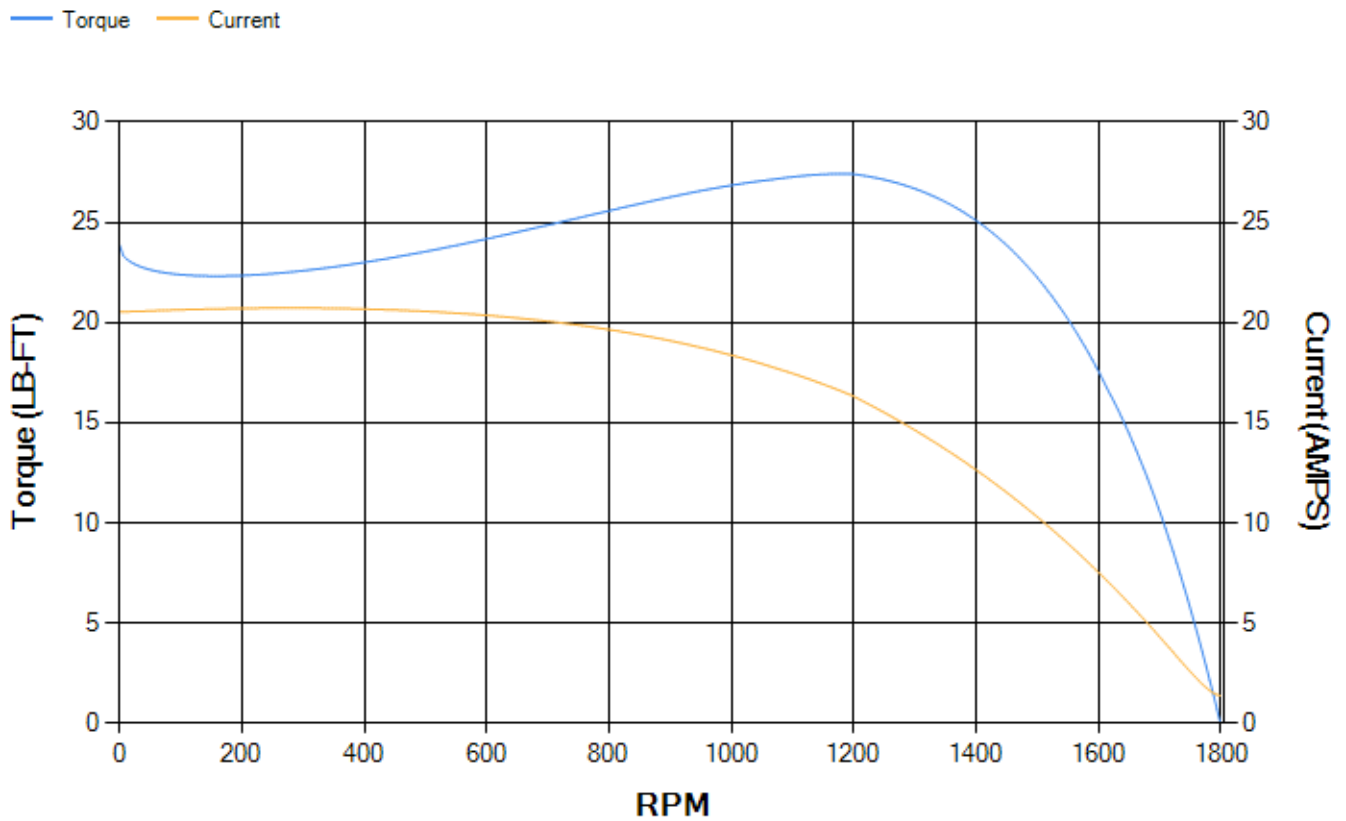
| LOAD % | 125.0 | 115.0 | 100.0 | 75.0  | 50.0  | 25.0  | 0.0  |
|--------|-------|-------|-------|-------|-------|-------|------|
| % EFF  | 85.06 | 85.68 | 86.62 | 86.99 | 85.95 | 79.66 | 0.00 |
| % PF   | 83.3  | 81.76 | 80.21 | 71.16 | 58.19 | 36.97 | 7.22 |
| AMPS   | 3.3   | 3.07  | 2.68  | 2.27  | 1.87  | 1.59  | 1.37 |

|             |       |             |        |             |        |
|-------------|-------|-------------|--------|-------------|--------|
| TORQ(FL)#FT | 6.05  | TORQ(LR)%FL | 394.27 | TORQ(BD)%FL | 436.52 |
| AMPS(LR)    | 20.52 | PF AT START | 0.68   |             |        |

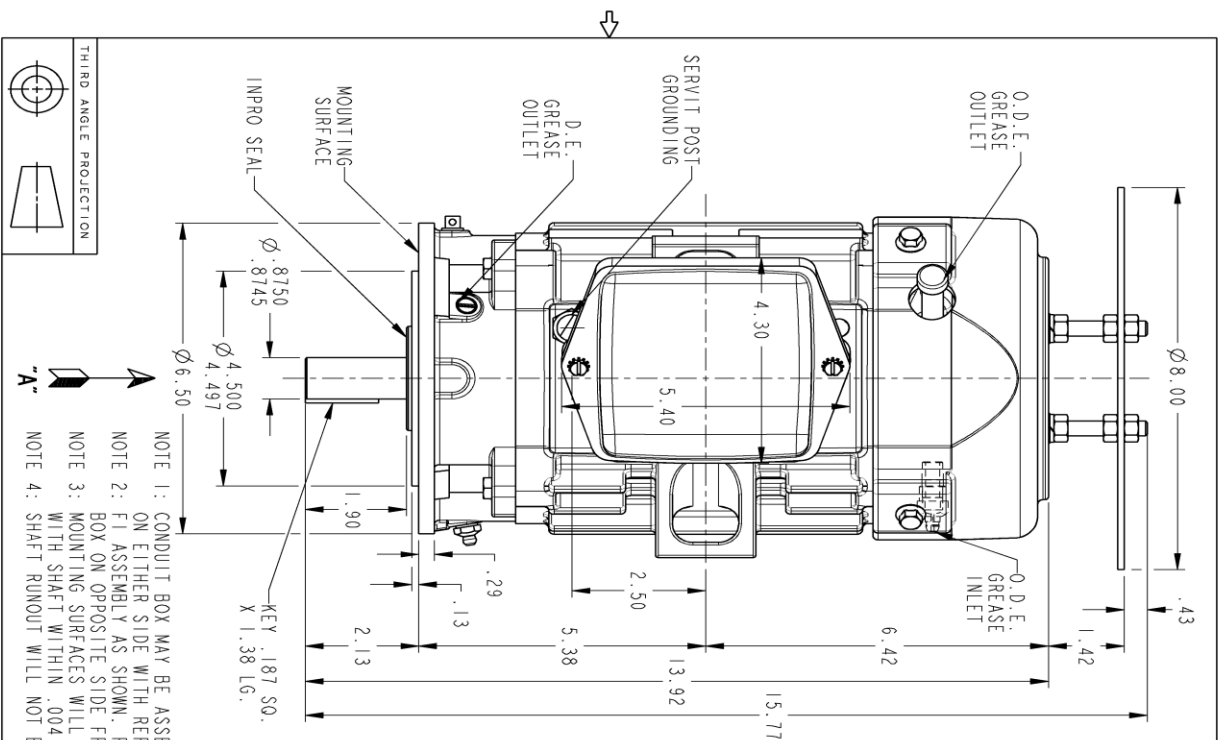
This motor is capable of two cold or one hot start with a maximum connected load inertia of 105 Lb-Ft Sq (4.42 Kg-meter Sq)at 100% voltage, where the load torque varies with the square of the speed. Acceleration time with maximum inertia and the above load type is 28 seconds. Safe stall time at 100% voltage is 59 seconds cold, 44 seconds hot. Rotor inertia is 0.12 Lb-Ft Sq (0.01 Kg-meter Sq).

|                    |       |                    |       |
|--------------------|-------|--------------------|-------|
| Open Circuit A-C:  | 0.129 | Short Circuit D-C: | 0.005 |
| Short Circuit A-C: | 0.005 | X/R Ratio:         | 1.753 |
| Stator Slots:      | 36    | Rotor Slots:       | 48    |

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



Marks:



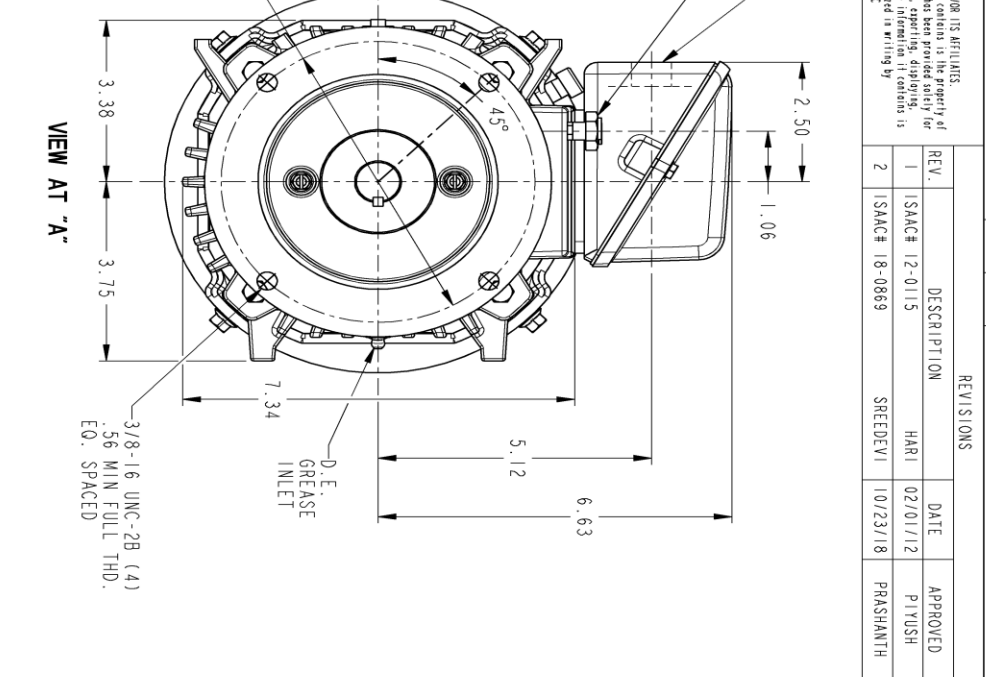
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SIZE: DRAWING NO. 4002B5814PDP5310 002  
 REV. SHEET 1

| SIGNATURES   | DATE                 |
|--------------|----------------------|
| MODEL        |                      |
| DETAIL       | N PRASAD 05/10/05    |
| DESIGN       | ADINARAYANA 05/10/05 |
| ENGR         |                      |
| QC           |                      |
| ISSUED       | N PRASAD 05/10/05    |
| SOLID MODEL: | 4002B5814PDP5310     |

| REV. | DESCRIPTION   | DATE     | APPROVED  |
|------|---------------|----------|-----------|
| 1    | ISAC# 12-0115 | 02/01/12 | P IVUSH   |
| 2    | ISAC# 18-0869 | 10/23/18 | PRASHANTH |



VIEW AT "A"

GE INDUSTRIAL MOTORS  
 a Wolog company

INDUCTION MOTOR OUTLINE  
 IEEE-941 SPEC WITH CONDUIT BOX & DRIP COVER  
 FAN-140TC TFC "C" FACE 1450 RABBET, FOOTLESS

4002B5814PDP5310 002

SCALE: 0.450 REF. No. SHEET 1 OF 1

**Marks:**

**Connection Diagram**  
**GEM2034E-FIG1**



| End shield Assembly |               |                |
|---------------------|---------------|----------------|
| Part Description    | DE Side Part# | ODE Side Part# |
| End Shield          | 4004D5289PB1  | 4004D5280SG1   |
| Bearing             | 235A2502AM01  | 235A2500AF01   |
| Slinger/Inproseal   | 4002B5914AM1  | 4002B5914AG1   |

| Fan & Fan Cover Assembly |                 |
|--------------------------|-----------------|
| Part Description         | Part#           |
| Fan                      | 4001A5914AM-G01 |
| Fan Cover                | 4003C5514BN-G01 |

| Conduit & Accessories Box Assembly |                 |
|------------------------------------|-----------------|
| Part Description                   | Part#           |
| Conduit Box                        | 4002B5718PA-G01 |

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

