



**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.

<b>Model Number:</b>	<b>5KS286XAA168D1</b>
<b>Catalog Number:</b>	<b>M9522</b>
<b>Instruction Manual:</b>	GEI-56128
<b>Connection Diagram:</b>	GEM2034E-FIG7
<b>Outline Drawing:</b>	4002B5828PDP5390

## 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:

**MODEL NUMBER:** 5KS286XAA168D1  
**Outline Drawing:** 4002B5828PDP5390  
**Connection Diagram:** GEM2034E-FIG7  
**Instruction Book:** GEI-56128  
**Design Code:** 28BD0153A  
**Type:** KS  
**Frame:** 286TSC  
**Phases:** 3  
**Poles:** 2  
**Output Power:** 30HP 22.2KW  
**RPM:** 3545  
**Voltage:** 460  
**Hertz:** 60  
**Amps - FL:** 32.7  
**Service Factor:** 1.15  
**Alt Service Factor:** --

**Estimated Weight:** 510 Lbs  
**Time Rating:** CONT  
**Enclosure:** TEFC  
**Encl Construction:** 841  
**Ambient Max(°C):** 40  
**Alt Ambient Max(°C):** --  
**Insulation Class:** H  
**NEMA Design:** B  
**Nominal Efficiency:** 92.4 %  
**Guaranteed Efficiency:** 91.7 %  
**3/4 Load Efficiency:** 93.4 %  
**KVA Code:** G  
**Max KVAR:** 4.2  
**Power Factor:** 93.0  
**Bearing - DE:** 6310ZC3  
**Bearing - ODE:** 6310ZC3

Enclosure is Totally Enclosed Fan-Cooled

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Stamped Nameplate Notes:

IEEE-STD-841-2009  
 DE BRG 50BC03JP30 ODE BRG 50BC03JP30  
 STAMP NP249A5564P051 AS BELOW:  
 MODEL:5KS286XAA168D1 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 -25C <= 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 15-60HZ, CHP 60-90HZ.



**Additional Information:**

2P - TS EXTN  
C/BOX 137 CU IN-1.50 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  
E/SHLD GROUND STUD MTD ON DE C/BOX SIDE NEAR FOOT  
ROTATE D.E. E/SHIELD 90 DEG. PER OUTLINE  
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: 28BD0153A**

**Marks:**

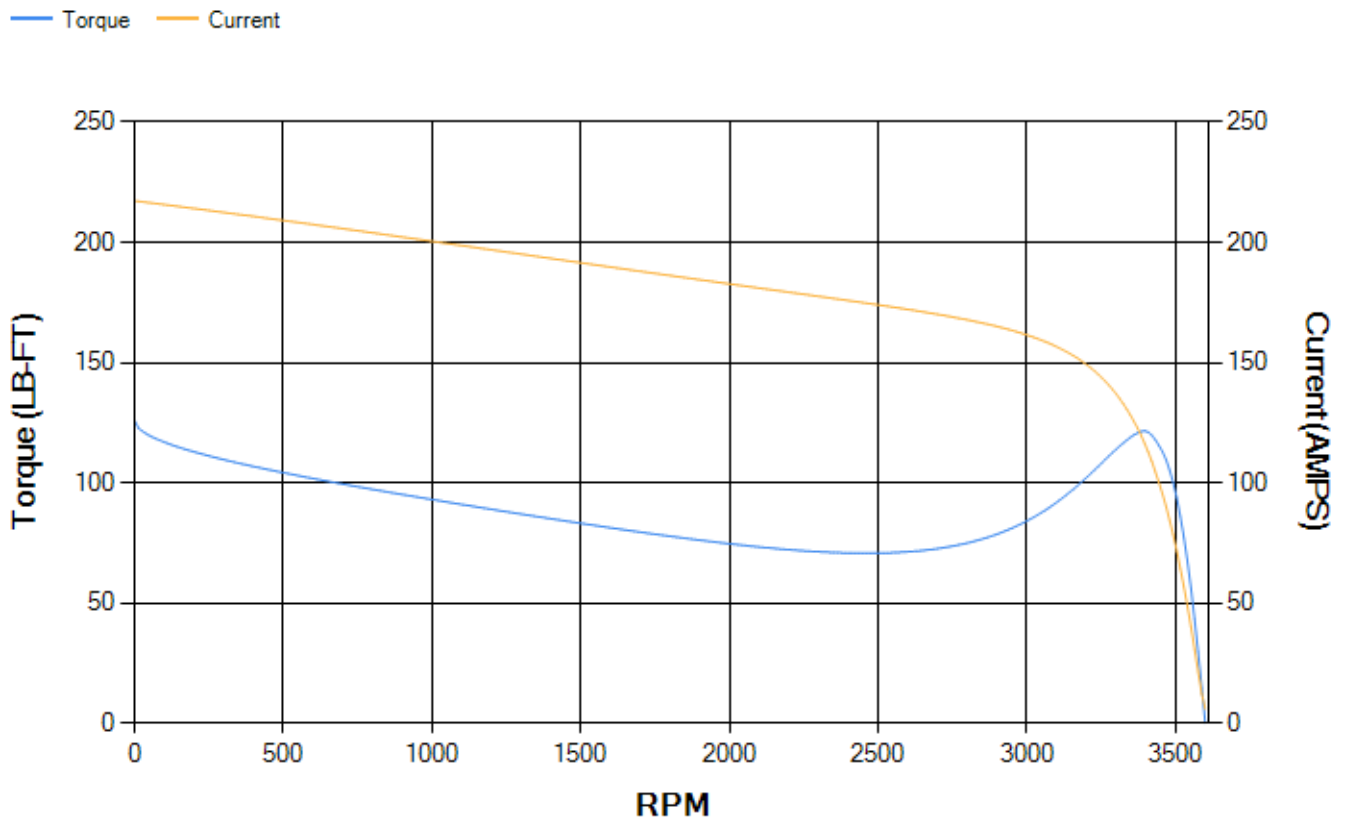
LOAD %	125.0	115.0	100.0	75.0	50.0	25.0	0.0
% EFF	91.42	91.93	92.8	93.37	93.42	91.04	0.00
% PF	92.39	92.67	92.86	92.31	89.4	76.93	9.66
AMPS	41.56	37.9	32.58	24.43	16.81	10.02	5.91

<b>TORQ(FL)#FT</b>	44.4	<b>TORQ(LR)%FL</b>	283.3	<b>TORQ(BD)%FL</b>	272.73
<b>AMPS(LR)</b>	217.28	<b>PF AT START</b>	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 3.21 Lb-Ft Sq (0.14 Kg-meter Sq).

<b>Open Circuit A-C:</b>	1.035	<b>Short Circuit D-C:</b>	0.013
<b>Short Circuit A-C:</b>	0.025	<b>X/R Ratio:</b>	5.017
<b>Stator Slots:</b>	48	<b>Rotor Slots:</b>	38

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



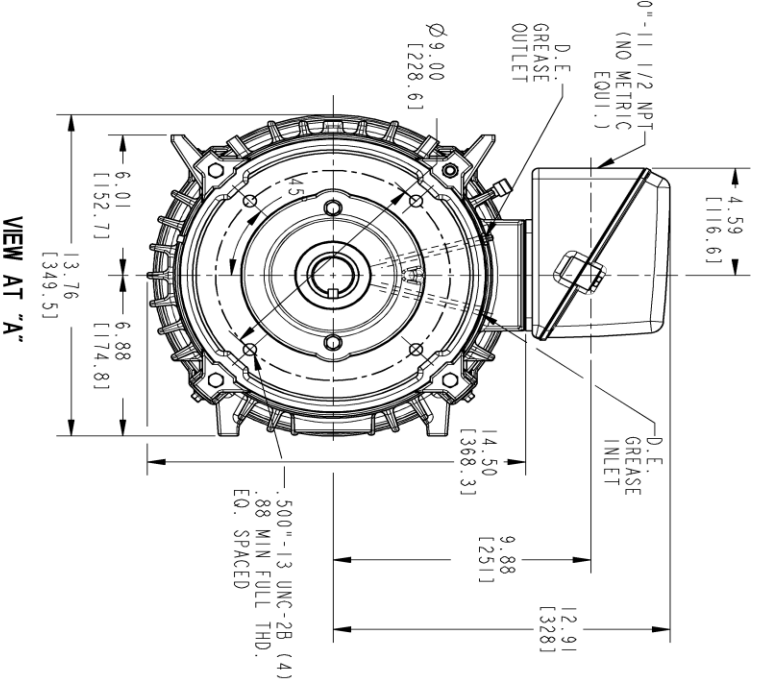
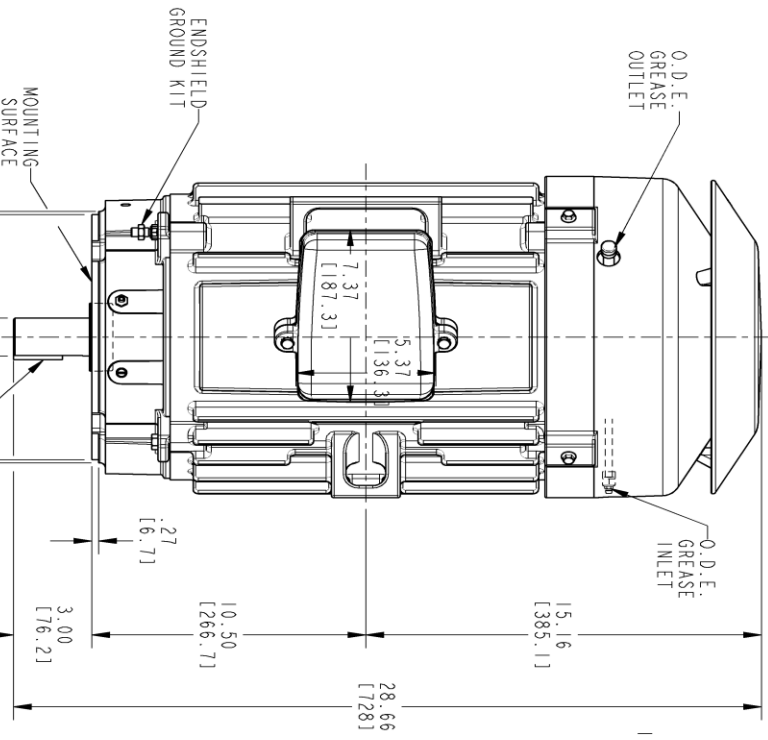
Marks:

- 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.  
 NOTE 3: MOUNTING SURFACES TO BE SQUARE AND CONCENTRIC WITH SHAFT WITHIN .004 T.I.R.  
 NOTE 4: SHAFT RUNOUT WILL NOT EXCEED .001 T.I.R.  
 NOTE 5: ALL DIMENSIONS ARE IN INCHES. BRACKETED DIMENSIONS ARE IN METRIC (MILLIMETERS)

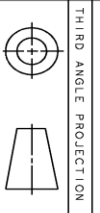
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REV.	DESCRIPTION	DATE	APPROVED
1	ISSAC# 18-0869	11/26/18	PRASHANTH

SIZE	DRAWING NO.	REV	SHEET
B	4002B5828PDP5390	001	1



VIEW AT "A"



SIGNATURES	DATE	<p><b>GE INDUSTRIAL MOTORS</b>                  a Wolog company</p> <p><b>INDUCTION MOTOR OUTLINE</b>                  137 CU. IN. BOX, DRIP COVER, EXT                  FMK5280TSC TERC "C" FACE FOOTLESS IEEE841</p> <p>SCALE: 0.220 REF. No.: 4002B5828PDP5390</p>
MODEL: LAKHAKANTH [02/10/20]		
DETAIL: LAKHAKANTH [02/10/20]		
DESIGN: PIVUSH [02/10/20]		
ENG: PIVUSH [02/10/20]		
QUALITY: LAKHAKANTH [02/10/20]		SIZE/DRAWING
ISSUED: B		4002B5828PDP5390
SOLID MODEL: 4002B5828PDP5390		REV
		001
		SHEET 1 of 1

Marks:

**Connection Diagram**  
**GEM2034E-FIG7**



End shield Assembly		
Part Description	DE Side Part#	ODE Side Part#
End Shield	128D6206RF1	4004D5284SE1
Bearing	235A2508EC01	235A2508EC01
Slinger/Inproseal	4002B5914GF4	4002B5914AG5

Fan & Fan Cover Assembly	
Part Description	Part#
Fan	159C6704G02
Fan Cover	4003C5528BN-G01

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

Mechanical Accessories	
Part Description	Part#
Brake	
Tachometer	

