

Product Information Packet

January 12, 2017

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

Model Number:	5KS511XAA158A
Catalog Number:	Q8101
Instruction Manual:	GEI-56128
Connection Diagram:	GEM2034E-FIG20
Outline Drawing:	239C6B00JY

Accessory Connection Diagrams			
Bearing Thermocouple:	None	Heater:	3027JE-1
RTD:	235A3027WN	Thermistor:	None
Thermostat:	None	Winding Thermocouple:	None
Bearing RTD:	235A3027NA		

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Marks:

MODEL NUMBER:	5KS511XAA158A	Estimated Weight:	4985 Lbs
Outline Drawing:	239C6B00JY	Time Rating:	CONT
Connection Diagram:	GEM2034E-FIG20	Enclosure:	TEFC
Instruction Book:	GEI-56128	Encl Construction:	841
Design Code:	50BD0174A	Ambient Max(°C):	40
Type:	KS	Alt Ambient Max(°C):	--
Frame:	5011LS	Insulation Class:	F
Phases:	3	NEMA Design:	B
Poles:	2	Nominal Efficiency:	95.8 %
Output Power:	400HP 296KW	Guaranteed Efficiency:	95.0
RPM:	3570	3/4 Load Efficiency:	95.9
Voltage:	460	KVA Code:	G
Hertz:	60	Max KVAR:	50.1
Amps - FL:	418.0	Power Factor:	93.5
Service Factor:	1.15	Bearing - DE:	6315ZC3
Alt Service Factor:	--	Bearing - ODE:	6315ZC3

Enclosure is Totally Enclosed Fan-Cooled

Stamped Nameplate Notes:

EXCEPTION TO IEEE-STD-841-2009: SOUND POWER 94 DBA
 TSTAT HTR LDS H 115V 200W
 DE BRG 75BC03XP3, ODE BRG 75BC03XP3
 ROT CCW FACING ODE LEAD/PH SEQUENCE 3-2-1/1-2-3
 INVERTER DUTY PER NEMA MG1 PART 31
 ALTERNATE RATING FOR PWM CONTROL:1.0SF 40C AMBIENT
 VAR TORQUE RANGE 0-60 HZ
 MAXIMUM EXPOSED INTERNAL AND EXTERNAL SURFACE
 TEMPERATURES DO NOT EXCEED 200C UNDER USUAL
 SERVICE CONDITIONS AT 1.0SF
 MAXIMUM SPACE HEATER SURFACE TEMPERATURE FOR
 NORMAL OPERATION AT RATED CONDITIONS 160C
 STAMP NP249A5499AP AS BELOW:
 MODEL:5KS511XAA158A S/N: XXX
 EX NA IIC T3 GC CSA.09.2216219
 CLASS I, ZONE 2, AEX NA IIC T3
 CLASS I, DIV 2, GROUPS A, B, C, D T3
 -25C <= TAMB <= 40C
 FOR DIRECT COUPLED LOAD ONLY

Additional Information:

2P - LS EXTN - SPLIT LEAD
 PAINTED FRAME ID & SHAFT, FAN COVER INSIDE &
 ODE E/S OUTSIDE
 CCW ROTATION FACING OPPOSITE DRIVE END
 2500 CU IN - 2(4.00" NPT)
 C/B GRD PLATE

INPRO SEAL BOTH ENDS
OIL RESISTANT SLEEVING ON LEADS
.0015" TIR SHAFT RUNOUT
ROUTINE TEST REPORT AND 5 POINT VIBRATION TEST
REPORT INCLUDED IN C/B
COPPER WASHER UNDER HEADS OF BEARING CAP BOLTS,
APPLY TITE-SEAL (A50CD427A) ON BEARING CAP SCREWS,
RABBETS AND PLUG THREADS.
100 OHM WINDING RTD LEADS TO AUX C/BOX OPP MAIN C/BOX
SUGGESTED WINDING RTD SETTINGS
ALARM 165C TRIP 175C
115V TSTAT CTRLD HTR LDS TO AUX BOX OPP MAIN CONDUIT BOX
SPACE HEATER CAUTION NAMEPLATE
BEARING RTD 100 OHM ON BOTH ENDS
SUGGESTED BEARING RTD SETTINGS
ALARM 115C TRIP 125C
NEMA TYPE GRD PAD
F1 MOUNTING

Performance Characteristics

1st Winding 1st Connection

Design: 50BD0174A

Marks:

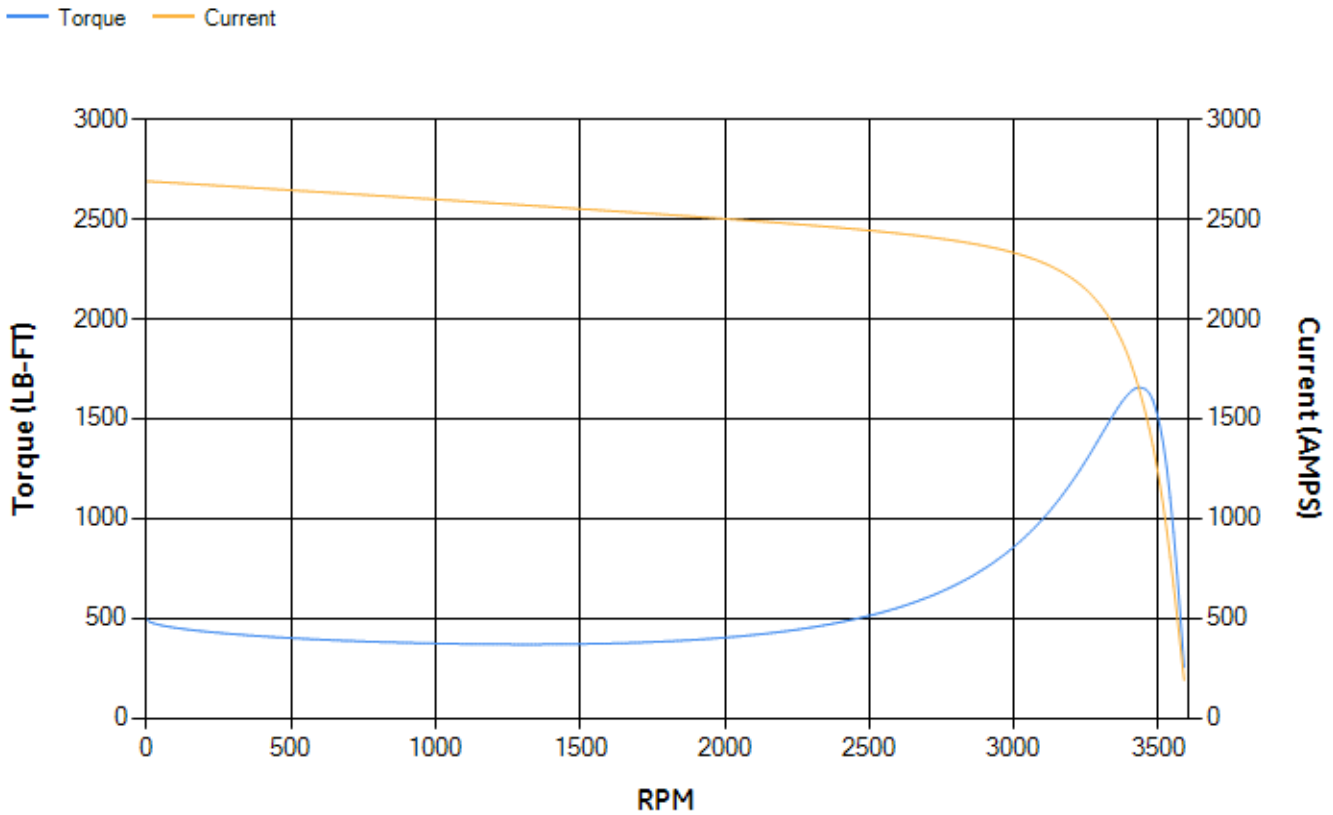
LOAD %	125.0	115.0	100.0	75.0	50.0	25.0	0.0
% EFF	95.38	95.56	95.97	95.92	95.54	93.25	0.00
% PF	93.32	93.56	93.72	93.29	90.84	79.68	8.18
AMPS	525.73	481.56	415.6	313.77	215.69	125.97	69.67

TORQ(FL)#FT	588.2	TORQ(LR)%FL	84.28	TORQ(BD)%FL	280.82
AMPS(LR)	2690.21	PF AT START	0.14		

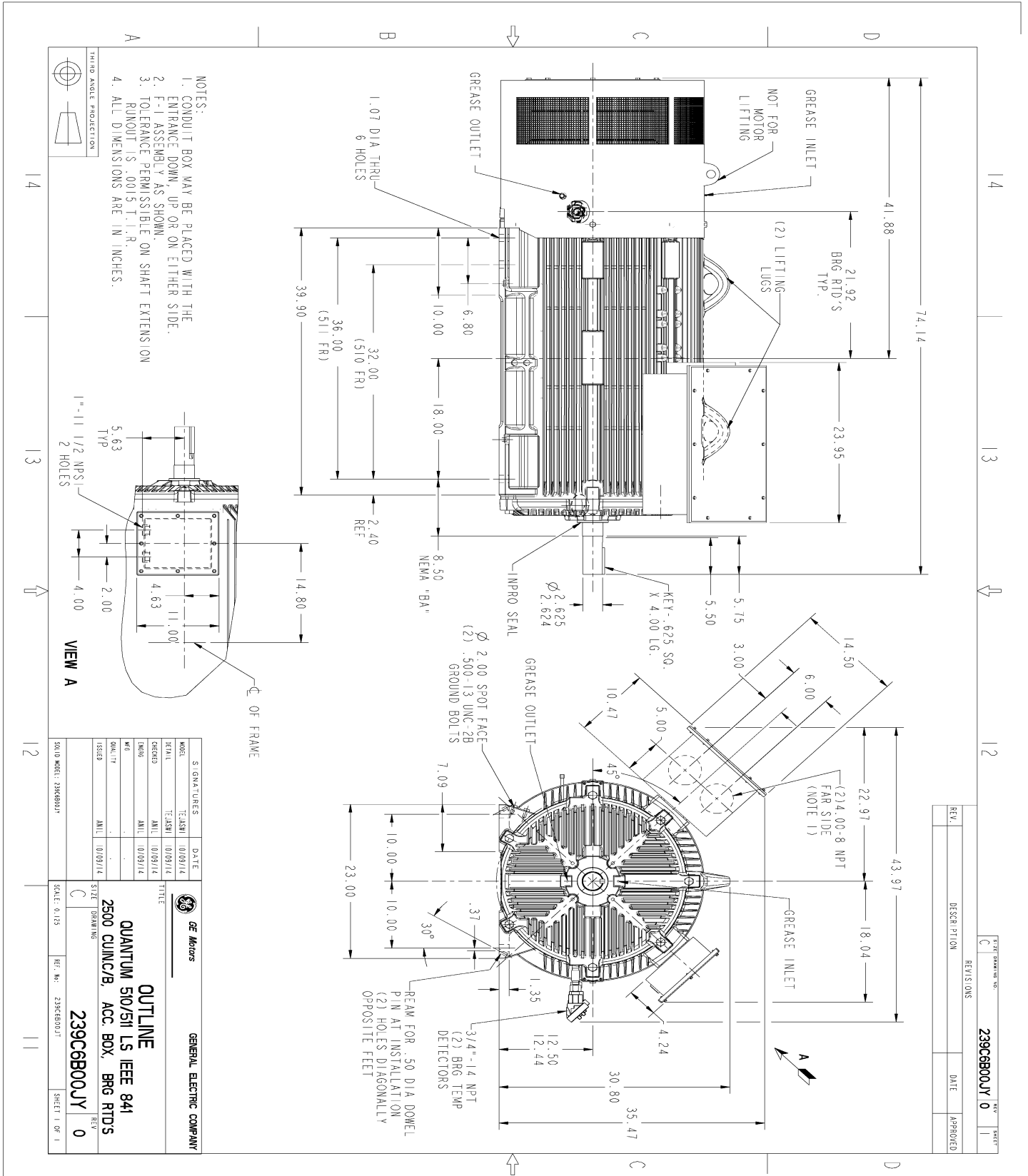
This motor is capable of two cold or one hot start with a maximum connected load inertia of 990 Lb-Ft Sq (41.68 Kg-meter Sq)at 100% voltage, where the load torque varies with the square of the speed. Acceleration time with maximum inertia and the above load type is 33 seconds. Safe stall time at 100% voltage is 63 seconds cold, 40 seconds hot. Rotor inertia is 89.68 Lb-Ft Sq (3.78 Kg-meter Sq).

Open Circuit A-C:	1.947	Short Circuit D-C:	0.046
Short Circuit A-C:	0.054	X/R Ratio:	17.298
Stator Slots:	48	Rotor Slots:	40

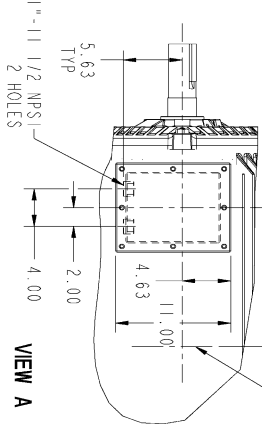
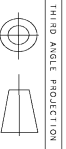
Speed Torque Current Curve (First Connection, First Speed)



Marks:



- NOTES:
1. CONDUIT BOX MAY BE PLACED WITH THE ENTRANCE DOWN, UP OR ON EITHER SIDE.
 2. F-I ASSEMBLY AS SHOWN.
 3. TOLERANCE PERMISSIBLE ON SHAFT EXTENSION RUNOUT IS .0015 T.I.R.
 4. ALL DIMENSIONS ARE IN INCHES.

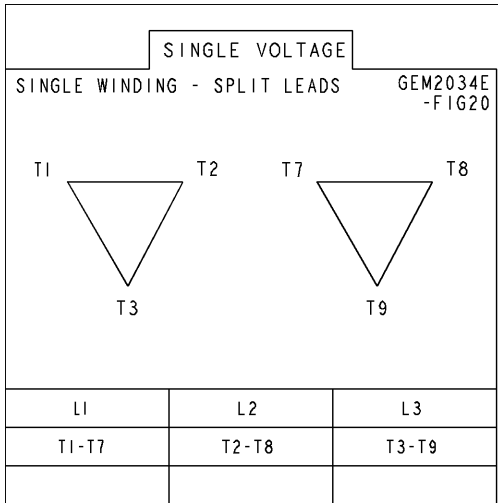


SIGNATURES		DATE	
DESIGN	TECHNICAL	01/09/14	
DRAWN	ANIL	01/09/14	
CHECKED	ANIL	01/09/14	
DATE	ANIL	01/09/14	
ISSUED	ANIL	01/09/14	

SCALE: 0.125	REV. NO.: 239C6B00J1
GENERAL ELECTRIC COMPANY	
OUTLINE	
QUANTUM 510/511 LS IEEE 841	
2500 CUINC/B, ACC. BOX, BRG RTD'S	
SIZE: DRAWING	REV: 0
239C6B00J1	0
SHEET 1 OF 1	

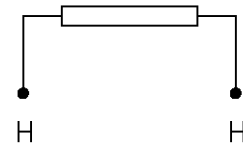
Marks:

Connection Diagram
GEM2034E-FIG20



Heater Connection
3027JE-1

FIG. 1
HEATER CONN.



CONTROL	L1	L2
VOLTAGE ONLY	H	H

SHEET

REV

235A3027WN

SIZE DRAWING NO. A

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REVISIONS

REV.	DESCRIPTION	DATE	APPROVED

THIRD ANGLE PROJECTION



- NOTE 1: TERMINAL LABELS ARE PROVIDED FOR ACCESSORIES THAT MAY OR MAY NOT BE INCLUDED WITH THE MOTOR.
- NOTE 2: SPARE RTDS (P7 & P8) FURNISHED IN CASE OF FAILURE IN OTHER RTDS (P1-P6). PHASE LOCATION WILL DEPEND UPON NUMBER OF POLES WINDING CONFIGURATION.
- NOTE 3: IT IS RECOMMENDED THAT RTDS BE GROUNDED AT EITHER THE MACHINE OR CONNECTED TO A GROUNDED CONTROL CIRCUIT. FOR PROPER OPERATION DO NOT GROUND AT THE MACHINE IF CONNECTED TO A GROUND CIRCUIT AT THE CONTROL.

Part must conform to SI 900000 Sect. 4, Toxicity Procedure

FOR ADDITIONAL INFO REFER TO:	SIGNATURES	DATE
APPLIED PRACTICES	MODEL	
DIMENSIONS ARE IN INCHES	DETAIL VIVEK	07/19/13
TOLERANCE ON:	CHECKED VIJAY	07/19/13
1 PL DECIMALS ± 0.1	ENGRG	
2 PL DECIMALS ± 0.02	MFG	
3 PL DECIMALS ± 0.005	QUALITY	
ANGLES ± 0.5	ISSUED VIVEK	07/19/13
FRACTIONS ±		
FINISH ✓		
MATERIAL	SOLID MODEL: MODEL NAME	

GE Motors GENERAL ELECTRIC COMPANY

TITLE
CONNECTION DIAGRAM
WINDING RTD'S & T'STATS & HEATERS

SIZE DRAWING: **A** **235A3027WN** REV **0**

SCALE: NA SHEET 1 of 1

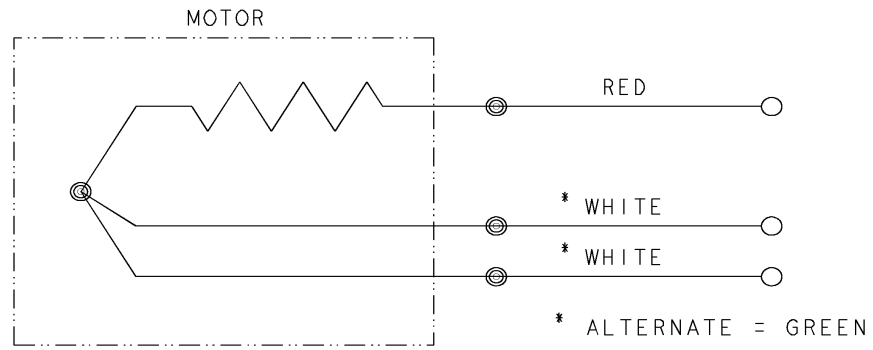


REV SH 1 1	THIRD ANGLE PROJECTION		REVISIONS		
		REV	DESCRIPTION	DATE	APPROVED
	1	ISAAC #12-1124	HARI	11/19/12	KARTHIK

SIZE DWG NO 235A3027NA
 A

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BEARING RTDS



UNLESS OTHERWISE SPECIFIED	SIGNATURES	DATE
DIMENSIONS ARE IN INCHES	DRAWN D.E. BAIR	12/16/92
TOLERANCES ON:	CHECKED D.E. BAIR	12/16/92
2 PL DECIMALS ±	ENGRG K. DESAI	12/16/92
3 PL DECIMALS ±	ISSUED D.E. BAIR	12/16/92
ANGLES ±		
FRACTIONS ±		
MATERIAL:		
APPLIED PRACTICES:	CAD NO. F500:235A3027NA	

GE Motors

Fort Wayne, Indiana

CONNECTION DIAGRAM

BEARING RTDS

SIZE A	FSCM NO	DWG NO 235A3027NA
SCALE 1/1	SHEET 1 OF 1	

DISTR TO