GE
Power Conversion

Product Information Packet

January 12, 2017

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

Model Number:	**5KS511XAA253A**
Catalog Number:	**Q8106**
Instruction Manual:	GEI-56128
Connection Diagram:	GEM2034E-FIG20
Outline Drawing:	239C6B00LA

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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imagination at work

Marks:

MODEL NUMBER:	**5KS511XAA253A**	**Estimated Weight:**	5073 Lbs
Outline Drawing:	239C6B00LA	**Time Rating:**	CONT
Connection Diagram:	GEM2034E-FIG20	**Enclosure:**	TEFC
Instruction Book:	GEI-56128	**Encl Construction:**	841
Design Code:	50BD1169A	**Ambient Max(°C):**	40
Type:	KS	**Alt Ambient Max(°C):**	--
Frame:	5011LL	**Insulation Class:**	F
Phases:	3	**NEMA Design:**	B
Poles:	4	**Nominal Efficiency:**	96.2 %
Output Power:	450HP 333KW	**Guaranteed Efficiency:**	95.4
RPM:	1785	**3/4 Load Efficiency:**	96.7
Voltage:	460	**KVA Code:**	G
Hertz:	60	**Max KVAR:**	91.0
Amps - FL:	489.0	**Power Factor:**	89.5
Service Factor:	1.15	**Bearing - DE:**	6320ZC3
Alt Service Factor:	--	**Bearing - ODE:**	6315ZC3

Enclosure is Totally Enclosed Fan-Cooled

Stamped Nameplate Notes:

EXCEPTION TO IEEE-STD-841-2009: SOUND POWER 92 DBA
TSTAT HTR LDS H 115V 200W
DE BRG 100BC03XP3, ODE BRG 75BC03XP3
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:5KS511XAA253A 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:

4P - LL EXTN - SPLIT LEAD
PAINTED FRAME ID & SHAFT, FAN COVER INSIDE &
ODE E/S OUTSIDE
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 0HM 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: 50BD1169A**

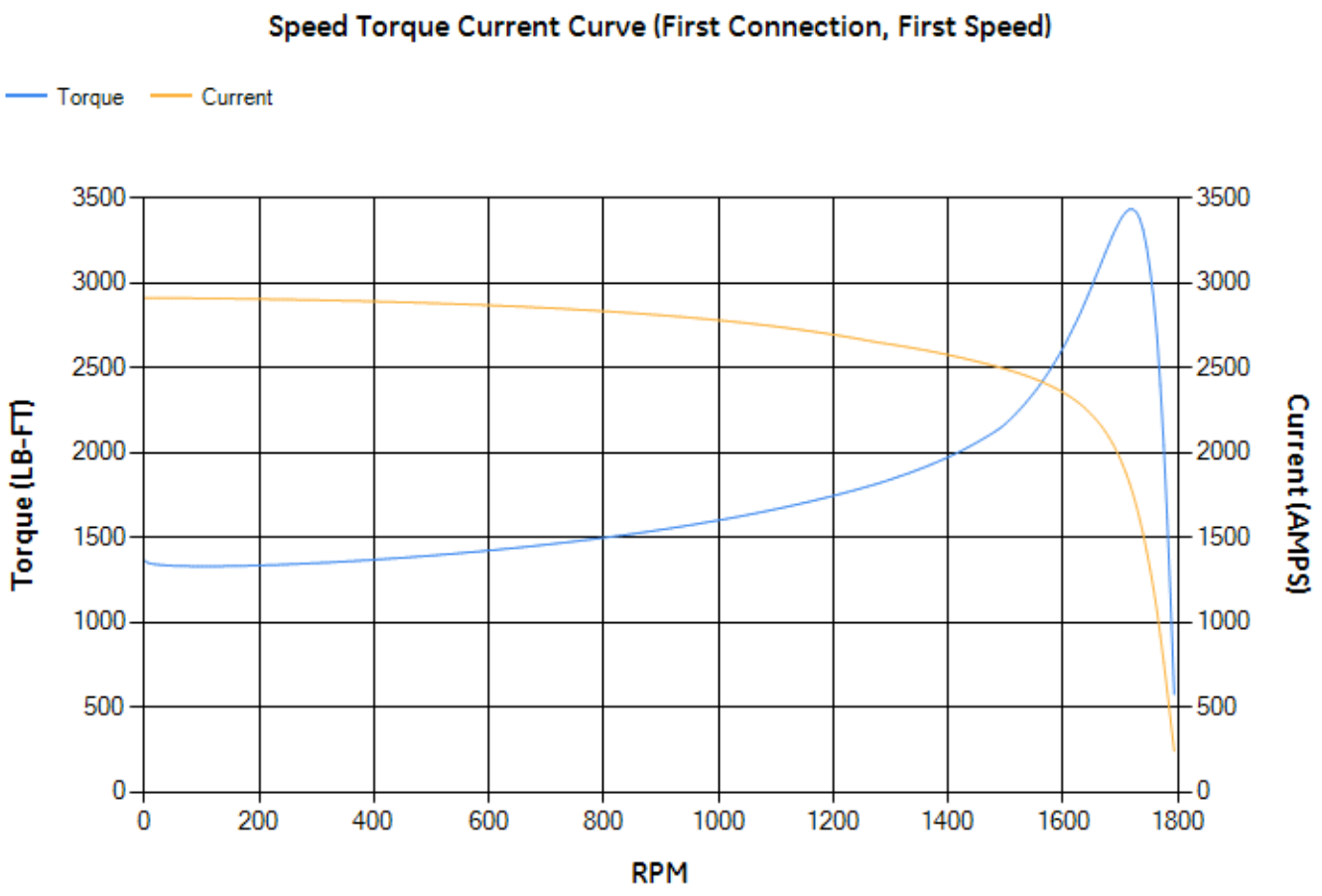
Marks:

LOAD %	125.0	115.0	100.0	75.0	50.0	25.0	0.0
% EFF	96.13	96.3	96.7	96.66	96.41	94.65	0.00
% PF	89.53	89.6	89.39	87.69	82.22	63.89	4.11
AMPS	611.69	561.32	487.62	372.63	265.66	174.13	126.46

TORQ(FL)#FT	1323.6	**TORQ(LR)%FL**	103.01	**TORQ(BD)%FL**	259.23
AMPS(LR)	2910.26	**PF AT START**	0.22		

This motor is capable of two cold or one hot start with a maximum connected load inertia of 9791 Lb-Ft Sq (412.2 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 45 seconds. Safe stall time at 100% voltage is 87 seconds cold, 54 seconds hot. Rotor inertia is 155.62 Lb-Ft Sq (6.55 Kg-meter Sq).

Open Circuit A-C:	1.218	**Short Circuit D-C:**	0.043
Short Circuit A-C:	0.048	**X/R Ratio:**	16.262
Stator Slots:	72	**Rotor Slots:**	58



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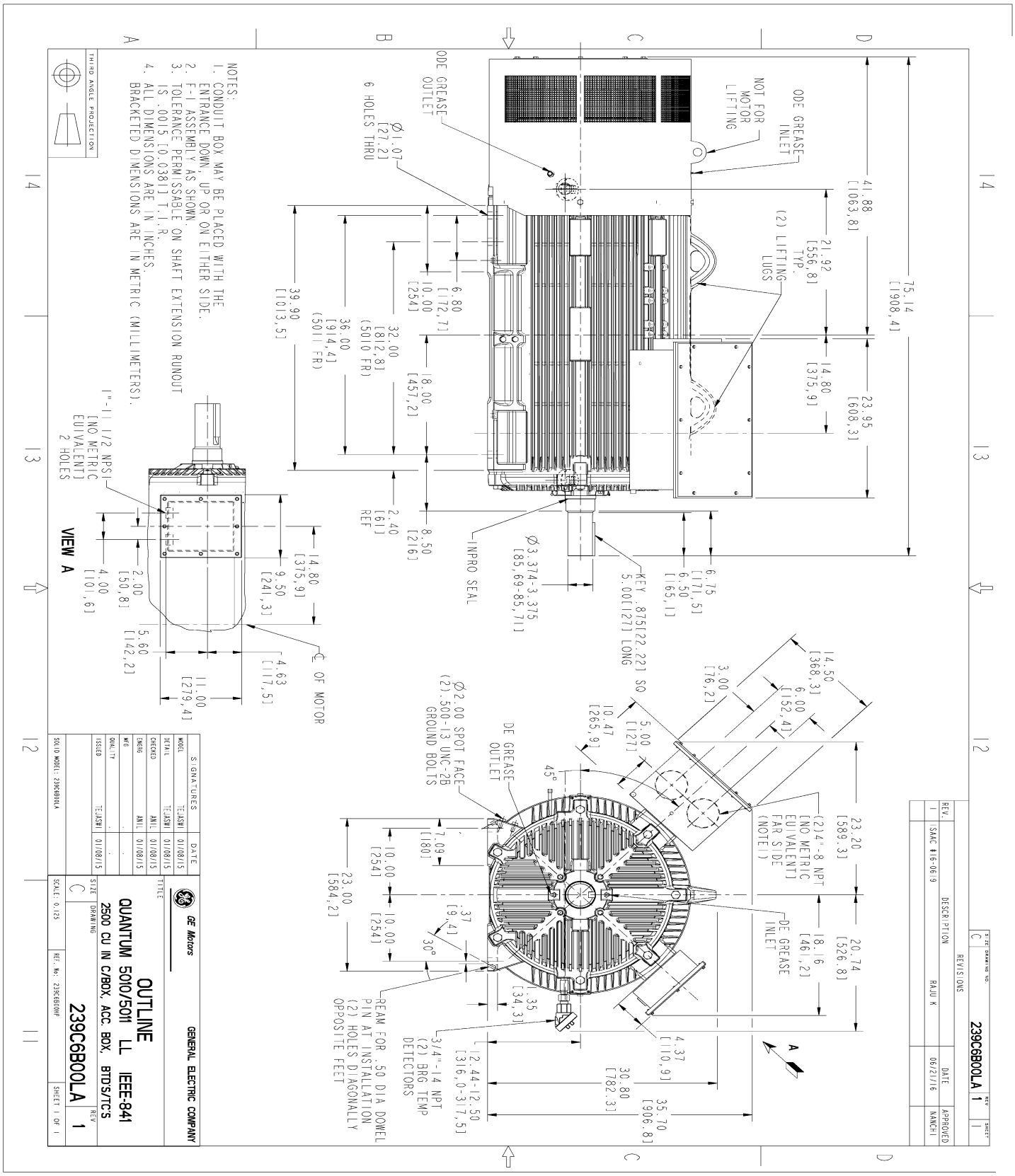
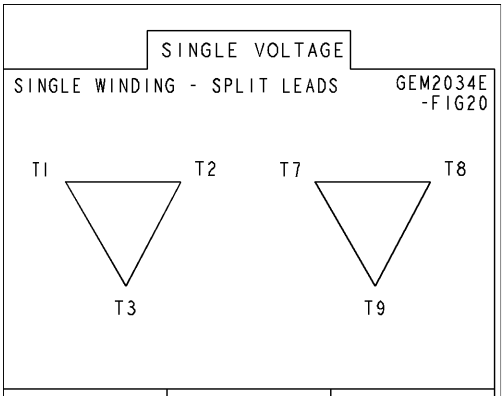

NOTES:
1. CONDUIT BOX MAY BE PLACED WITH THE ENTRANCE DOWN, UP OR ON EITHER SIDE.
2. F-I ASSEMBLY AS SHOWN.
3. TOLERANCE PERM SSABLE ON SHAFT EXTENSION RUNOUT IS .0015 [0.038] T.I.R.
4. ALL DIMENSIONS ARE IN INCHES. BRACKETED DIMENSIONS ARE IN METRIC (MILLIMETERS).
THIRD ANGLE PROJECTION
DE GREASE OUTLET
Ø1.07 [27.2] 6 HOLES THRU
NOT FOR MOTOR LIFTING
DE GREASE INLET
41.88 [1063.8]
21.92 [556.8] TYP. (2) LIFTING LUGS
75.14 [1908.4]
14.80 [375.9]
23.95 [608.3]
6.80 [172.7]
10.00 [254]
39.90 [1013.5]
36.00 [914.4] (5011 FR)
32.00 [812.8] (5010 FR)
18.00 [457.2]
2.40 [61] REF
8.50 [216]
INPRO SEAL
Ø3.374-3.375 [85.69-85.71]
KEY .875[22.22] SQ 5.00[127] LONG
6.75 [171.5]
6.50 [165.1]
1"-11 1/2 NPS [NO METRIC EQUIVALENT] 2 HOLES
VIEW A
14.80 [375.9]
9.50 [241.3]
4.00 [101.6]
2.00 [50.8]
5.60 [142.2]
4.63 [117.5]
11.00 [279.4]
OF MOTOR
14.50 [368.3]
3.00 [76.2]
6.00 [152.4]
10.47 [265.9]
5.00 [127]
Ø2.00 SPOT FACE (2).500-13 UNC-2B GROUND BOLTS
DE GREASE OUTLET
45°
23.20 [589.3]
(2)1"-8 NPT [NO METRIC EQUIVALENT] FAR SIDE (NOTE 1)
20.74 [526.8]
18.16 [461.2]
DE GREASE INLET
7.09 [180]
10.00 [254]
23.00 [584.2]
.37 [9.4]
30°
10.00 [254]
.35 [34.3]
REAM FOR .50 DIA DOWEL PIN AT INSTALLATION (2) HOLES DIAGONALLY OPPOSITE FEET
4.37 [110.9]
12.44-12.50 [316.0-317.5]
3/4"-14 NPT (2) BRG TEMP DETECTORS
30.80 [782.3]
35.70 [906.8]
A
REVISIONS
REV. 1 | DESCRIPTION: ISAAC #16-06-9 | RAJU K | DATE: 06/21/16 | APPROVED: NANCH
SIZE C | DRAWING NO. 239C6800LA | REV 1 | SHEET 1
SIGNATURES
MODEL TE.ASW1 01/08/15
DETAIL TE.ASW1 01/08/15
CHECKED ANIL 01/08/15
ENGRG ANIL 01/08/15
MFG . .
QUALITY . .
ISSUED TE.ASW1 01/08/15
SOLID MODEL: 239C6800LA
GE Motors
GENERAL ELECTRIC COMPANY
TITLE
OUTLINE
QUANTUM 5010/5011 LL IEEE-841
2500 CU IN C/BOX, ACC. BOX, BTDS/TC'S
SIZE C | DRAWING 239C6800LA | REV 1
SCALE: 0.125 | REF. No: 239C6800HF | SHEET 1 OF 1

Marks:

Connection Diagram

GEM2034E-FIG20

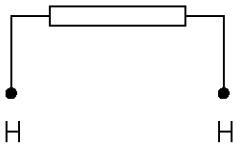


L1	L2	L3
T1-T7	T2-T8	T3-T9

Heater Connection

3027JE-1

FIG. 1
HEATER CONN.

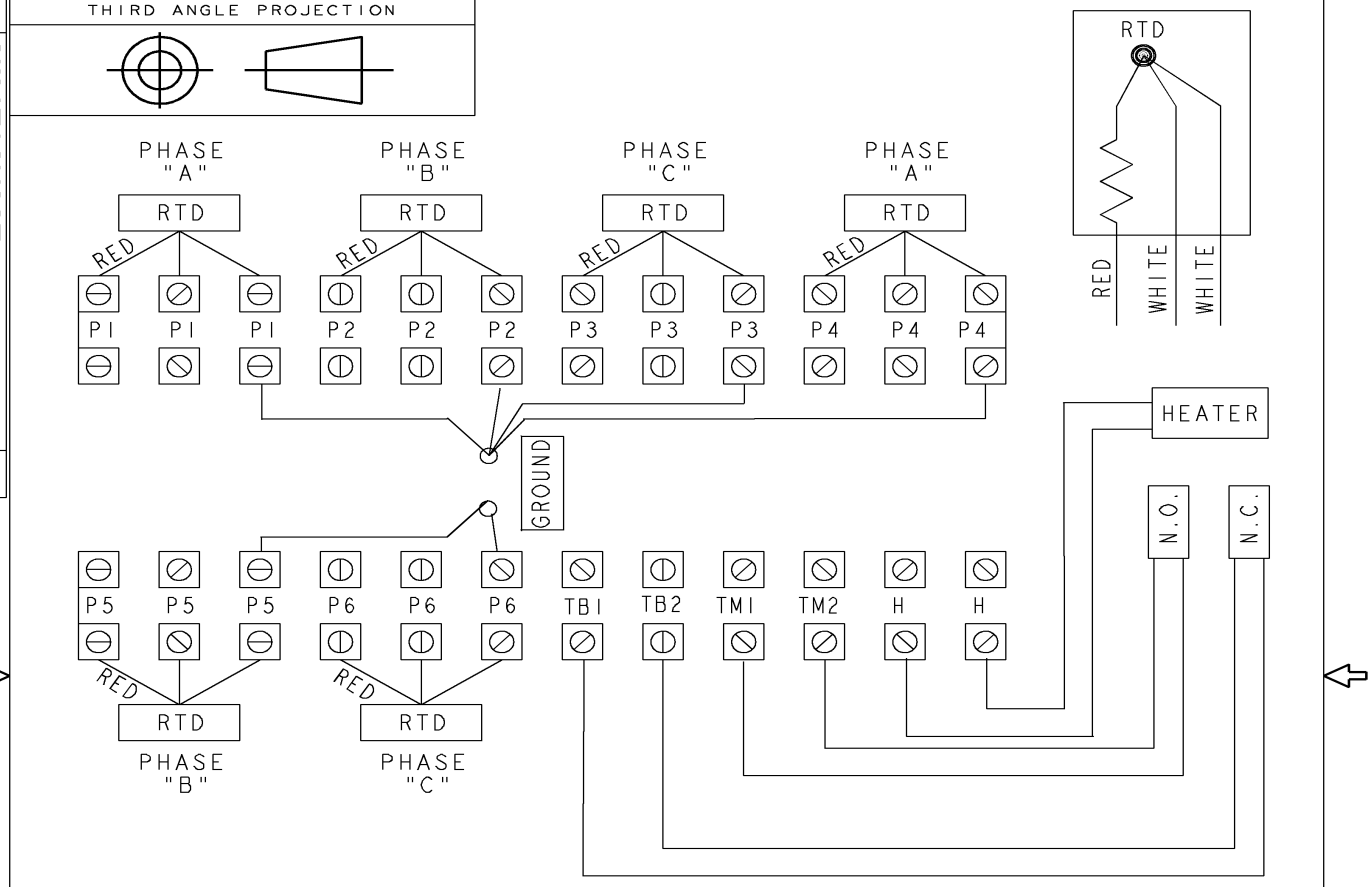


CONTROL	L1	L2
VOLTAGE ONLY	H	H

SHEET —
REV. 0
235A3027WN
DRAWING NO.
SIZE A

THIRD ANGLE PROJECTION

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



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	REV
A	235A3027WN	0

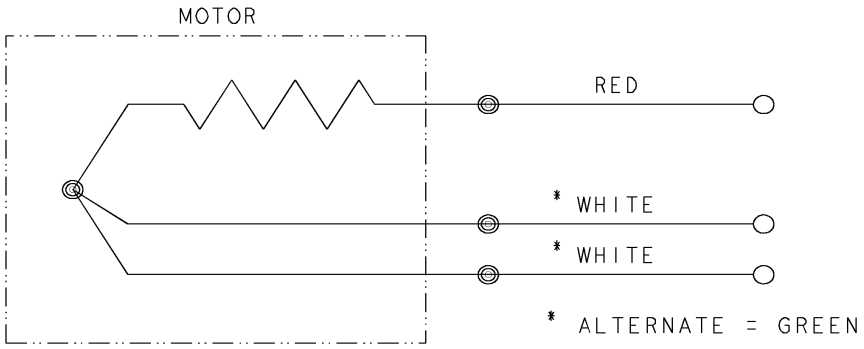
SCALE: NA | SHEET 1 of 1

REV I | SH I | DWG NO 235A3027NA | SIZE A

THIRD ANGLE PROJECTION

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
I	ISAAC #12-1124 HARI	11/19/12	KARTHIK

BEARING RTDS



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

GE Motors — Fort Wayne, Indiana

CONNECTION DIAGRAM

BEARING RTDS

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