

# Product Information Packet

January 12, 2017

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

<b>Model Number:</b>	<b>5KS509AAG302A</b>
<b>Catalog Number:</b>	<b>P155</b>
<b>Instruction Manual:</b>	GEI-100351
<b>Connection Diagram:</b>	GEM2034E-FIG2
<b>Outline Drawing:</b>	50DP2100G001DBT

<b>Accessory Connection Diagrams</b>			
<b>Bearing Thermocouple:</b>	None	<b>Heater:</b>	3027JE-1C
<b>RTD:</b>	235A3027XC	<b>Thermistor:</b>	None
<b>Thermostat:</b>	None	<b>Winding Thermocouple:</b>	None
<b>Bearing RTD:</b>	None		

## Table of Contents

Specification	01
Performance Characteristics	02
Outline Drawing	03
Connection Drawing(s)	04
Spare parts	05



**Marks:**

<b>MODEL NUMBER:</b>	<b>5KS509AAG302A</b>	<b>Estimated Weight:</b>	3400 Lbs
<b>Outline Drawing:</b>	50DP2100G001DBT	<b>Time Rating:</b>	CONT
<b>Connection Diagram:</b>	GEM2034E-FIG2	<b>Enclosure:</b>	WPI
<b>Instruction Book:</b>	GEI-100351	<b>Encl Construction:</b>	OPEN
<b>Design Code:</b>	50ED3259E	<b>Ambient Max(°C):</b>	40
<b>Type:</b>	KS	<b>Alt Ambient Max(°C):</b>	XX
<b>Frame:</b>	509LL	<b>Insulation Class:</b>	F
<b>Phases:</b>	3	<b>NEMA Design:</b>	B
<b>Poles:</b>	6	<b>Nominal Efficiency:</b>	95.0 %
<b>Output Power:</b>	250HP 185KW	<b>Guaranteed Efficiency:</b>	94.1
<b>RPM:</b>	1190	<b>3/4 Load Efficiency:</b>	95.6
<b>Voltage:</b>	2300/4000	<b>KVA Code:</b>	G
<b>Hertz:</b>	60	<b>Max KVAR:</b>	62.7
<b>Amps - FL:</b>	57.6/33.1	<b>Power Factor:</b>	85.5
<b>Service Factor:</b>	1.15	<b>Bearing - DE:</b>	6318ZC3
<b>Alt Service Factor:</b>	XX	<b>Bearing - ODE:</b>	6315ZC3

**Enclosure is Weather Protected One**

**Stamped Nameplate Notes:**

NEMA ENCLOSURE WP-I, CSA ENCL DP  
 GE SELF DECLARED CLASS I DIV 2 MOTOR  
 MAX EXPOSED INTERNAL AND EXTERNAL SURFACE  
 TEMPERATURES UNDER USUAL SERVICE CONDITION  
 AT 1.00 S.F. DO NOT EXCEED 200 DEG C  
 VIBRATION LIMIT = 0.150 IN/SEC  
 TEMP CONTRL HTR LDS HE1-HE2 115V 200W  
 OFFSET CORE - DO NOT ASSEMBLE F2  
 MAXIMUM SPACE HEATER SURFACE  
 TEMPERATURE 160 DEG C

**Additional Information:**

6 POLE, LL SHAFT EXTN  
 FORMED COIL  
 (2)GROUND BOLTS ON FRAME  
 TEMP CONTRL 115V HEATER LEADS TO ACC BOX  
 100 OHM WINDING RTD LEADS TO ACC BOX  
 SUGGESTED WINDING RTD SETTINGS  
 ALARM 165C TRIP 175C  
 PROVISION FOR BTDS BOTH ENDS  
 SUGGESTED BEARING RTD SETTINGS,IF PROVIDED  
 ALARM 115C TRIP 125C  
 2500 Cu. In. CBOX  
 PROVISION FOR JACK SCREWS

**Performance Characteristics**

1st Winding 1st Connection

**Design: 50ED3259E**

**Marks:**

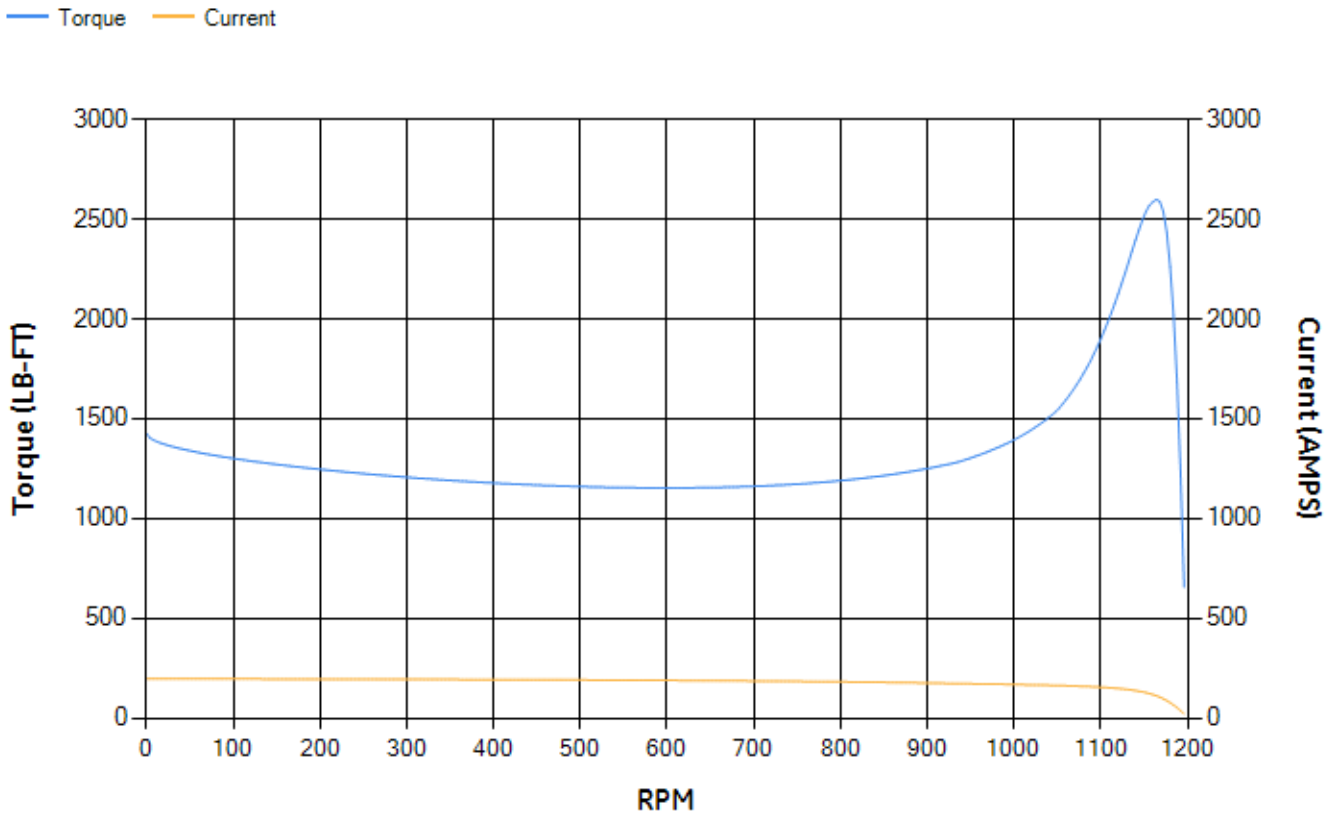
LOAD %	125.0	115.0	100.0	75.0	50.0	25.0	0.0
% EFF	94.71	94.98	95.51	95.64	95.44	93.41	0.00
% PF	85.94	85.88	86.44	82.61	75.08	54.2	3.83
AMPS	41.32	37.94	32.54	25.55	18.78	13.29	10.05

<b>TORQ(FL)#FT</b>	1101.5	<b>TORQ(LR)%FL</b>	129.38	<b>TORQ(BD)%FL</b>	234.63
<b>AMPS(LR)</b>	196.2	<b>PF AT START</b>	0.26		

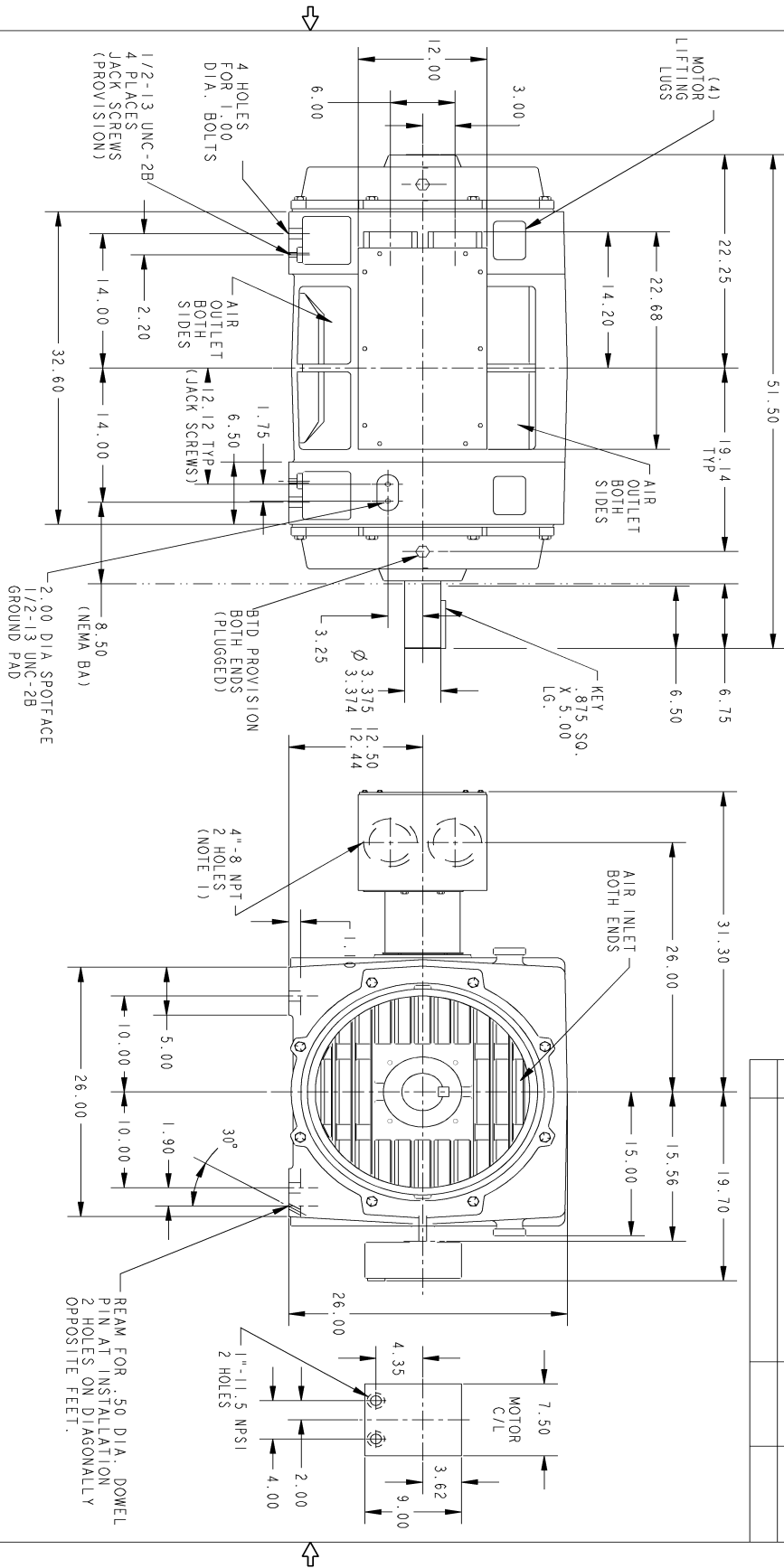
This motor is capable of two cold or one hot start with a maximum connected load inertia of 7760 Lb-Ft Sq (326.7 Kg-meter Sq)at 100% voltage, where the load torque varies with the square of the speed. Acceleration time with maximum inertia and the above load type is 32 seconds. Safe stall time at 100% voltage is 79 seconds cold, 51 seconds hot. Rotor inertia is 182 Lb-Ft Sq (7.66 Kg-meter Sq).

<b>Open Circuit A-C:</b>	1.216	<b>Short Circuit D-C:</b>	0.024
<b>Short Circuit A-C:</b>	0.057	<b>X/R Ratio:</b>	8.904
<b>Stator Slots:</b>	72	<b>Rotor Slots:</b>	86

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



Marks:

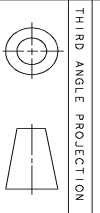


- NOTES:
1. CONDUIT BOX MAY BE TURNED SO THAT ENTRANCE CAN BE MADE UPWARDS, DOWNWARDS, OR FROM EITHER SIDE. WHEN DOWNWARDS, ENTRANCE IS BELOW THE FEET.
  2. F1 ASSEMBLY AS SHOWN, F2 ASSEMBLY WILL HAVE CONDUIT BOX ON OPPOSITE SIDE

DIMENSIONS ARE IN INCHES

REV.	DESCRIPTION	DATE	APPROVED

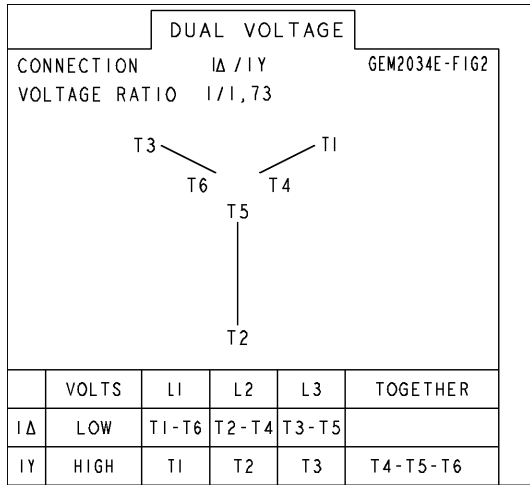
SIZE DRAWING NO. B 50DP2100G001DBT 0 SHEET



SIGNATURES	DATE	GE Motors GENERAL ELECTRIC COMPANY	
MODEL	MANCH 09/29/16	TITLE	
DETAIL	ADJ 09/29/16	OUTLINE	
CHECKED		509 DP/WPI LL 2500 CU/NC/B JACK SCREWS PROV	
ENGRS		ACC C/B BRG RIDS'S PROV. IZ GROUND PADS	
QUALITY		SIZE DRAWING	
ISSUED	MANCH 09/29/16	50DP2100G001DBT	
SCALE: .10	REF.: 50DP2100G001DBA	REV 0	
		SHEET 1 OF 1	

Marks:

**Connection Diagram**  
**GEM2034E-FIG2**



**Heater Connection**  
**3027JE-1C**

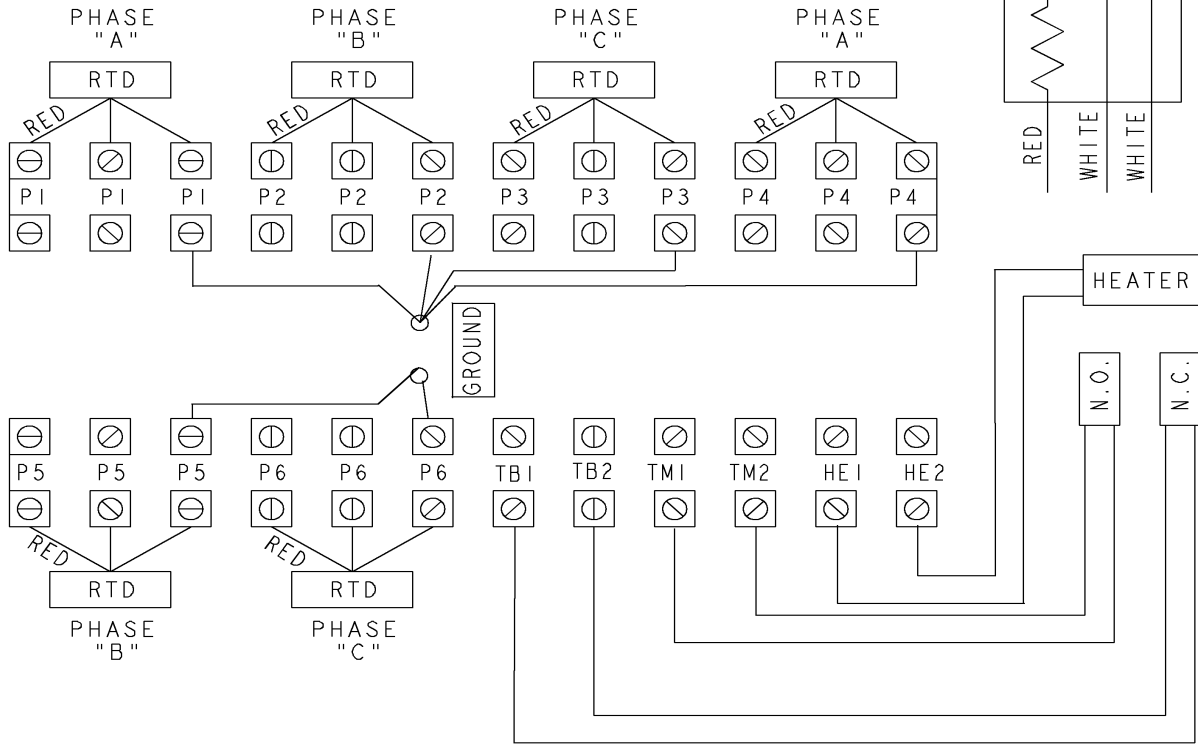
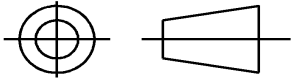


SHEET 0  
REV 0  
235A3027XC  
SIZE DRAWING NO. A

**GE PROPRIETARY INFORMATION**  
This document is the property of General Electric Company ("GE") and contains proprietary information of GE. This document is loaned on the express condition that neither it nor the information contained therein shall be disclosed to others without the express written consent of GE Industrial Systems, and that the information shall be used by the recipient only as approved expressly by GE Industrial Systems. This document shall be returned to GE upon its request. This document may be subject to certain restrictions under U.S. export control laws and regulations.

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		
DIMENSIONS ARE IN INCHES		
TOLERANCE ON:		
1 PL DECIMALS ± 0.1		
2 PL DECIMALS ± 0.02		
3 PL DECIMALS ± 0.005		
ANGLES ± 0.5		
FRACTIONS ±		
FINISH ✓		
MATERIAL	SOLID MODEL: MODEL NAME	

**GE Motors** GENERAL ELECTRIC COMPANY

TITLE: **CONNECTION DIAGRAM**  
IEC  
WINDING RTD'S & T'STATS & HEATERS

SIZE DRAWING: A  
235A3027XC  
REV 0

SCALE: NA  
SHEET 1 of 1

End shield Assembly		
Part Description	DE Side Part#	ODE Side Part#
End Shield	119D1850AT1	119D1853AW1
Bearing	235A2514AG01	235A2513AG01
Slinger/Inproseal	235A2300FR1	

Fan & Fan Cover Assembly	
Part Description	Part#
Fan	
Fan Cover	

Conduit & Accessories Box Assembly	
Part Description	Part#
Conduit Box	179B9025G01

Mechanical Accessories	
Part Description	Part#
Brake	
Tachometer	

