GE
Power Conversion

Product Information Packet

January 21, 2017

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

Model Number:	**5KS509DAE6030D**
Catalog Number:	**V952**
Instruction Manual:	GEK-95352
Connection Diagram:	GEM2034E-FIG19
Outline Drawing:	148CA59VMKKFGAA0001

Accessory Connection Diagrams

Bearing Thermocouple:	None	**Heater:**	3027JE-1C
RTD:	None	**Thermistor:**	None
Thermostat:	None	**Winding Thermocouple:**	None
Bearing RTD:	None		

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imagination at work

Marks:

MODEL NUMBER:	**5KS509DAE6030D**	**Estimated Weight:**	3620 Lbs
Outline Drawing:	148CA59VMKKFGAA0001	**Time Rating:**	CONT
Connection Diagram:	GEM2034E-FIG19	**Enclosure:**	WPI
Instruction Book:	GEK-95352	**Encl Construction:**	OPEN
Design Code:	50ED1309AD	**Ambient Max(°C):**	40
Type:	KS	**Alt Ambient Max(°C):**	--
Frame:	L509TP24	**Insulation Class:**	F
Phases:	3	**NEMA Design:**	B
Poles:	4	**Nominal Efficiency:**	96.2 %
Output Power:	500HP 370KW	**Guaranteed Efficiency:**	95.4
RPM:	1785	**3/4 Load Efficiency:**	--
Voltage:	460	**KVA Code:**	G
Hertz:	60	**Max KVAR:**	91.4
Amps - FL:	556.0	**Power Factor:**	89.0
Service Factor:	1.15	**Bearing - DE:**	6219ZC3
Alt Service Factor:	--	**Bearing - ODE:**	235A2537AA01

Enclosure is Weather Protected One

Stamped Nameplate Notes:

CC009A
NEMA ENCLOSURE WP-I, CSA ENCL DP
VIBRATION LIMIT = 0.100 IN/SEC
THERMOSTAT LEADS TB1-TB2:TRIP
HTR LDS HE1-HE2 115V 350W
UPPER OIL: 12.0 QTS ISO 150
LOWER OIL: 2.5 QTS ISO 32
5600 LBS MIN CONTINUOUS DOWNTHRUST REQ"D
STAMP NP249A5564P009 AS FOLLOWS:
REQUIRED COOLING WATER:2.0 GPM
MAXIMUM COOLING WATER:3.5 GPM
MAXIMUM PRESSURE:100 PSI
MAXIMUM WATER INLET TEMP :95 DEG F
PREMIUM EFFICIENT MOTOR
INVERTER DUTY PER NEMA MG1 PART 31
ALTERNATE RATING FOR PWM CONTROL
1.0 SF. VAR TORQUE RANGE 0-60 HZ
SUITABLE FOR 400 HP, 380V, 50 HZ WITH
532 AMPS AND 1485 RPM AT 1.0 S.F

Additional Information:

4 POLE,VERT HOLLOW SHAFT HIGH THRUST ( )
ACTUAL EFFICIENCY = 94.5
SELF-RELEASE COUPLING,BX=2.188
PART WINDING START
SPECIAL BALANCE
(3) NC THERMOSTAT LEADS TO MAIN C/BOX

115V HEATER LEADS TO MAIN C/BOX
RCF=2070 CPM CG=27.0 IN STAT DEF=0.0082 IN
C/B GRD PLATE
BEARING LIFE 8760 HOURS AT 45304 LB THRUST
2500 Cu. In. CBOX
AEGIS SHAFT GROUNDING RING ON LOWER END
INSULATED LOWER HALF COUPLING FOR TOP BRG

Performance Characteristics 1st Winding 1st Connection **Design: 50ED1309AD**

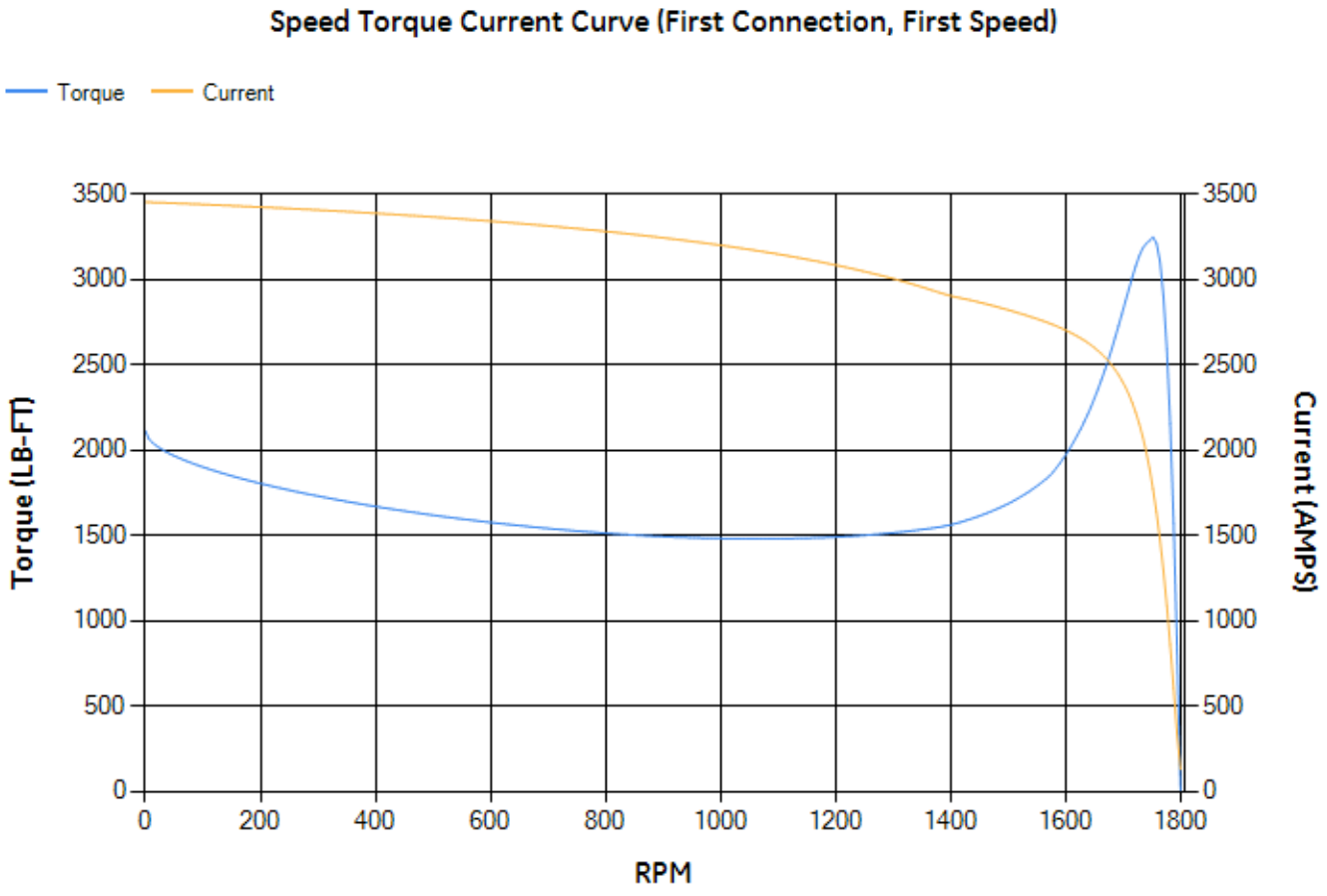
Marks:

LOAD %	125.0	115.0	100.0	75.0	50.0	25.0	0.0
% EFF	94.52	94.65	94.97	94.63	93.67	89.79	0.00
% PF	88.73	89.01	89.96	87.97	83.43	67.2	9.27
AMPS	697.5	638.77	546.96	421.62	299.42	193.9	127.41

TORQ(FL)#FT	1469.84	**TORQ(LR)%FL**	143.68	**TORQ(BD)%FL**	218.2
AMPS(LR)	3452.15	**PF AT START**	0.21		

This motor is capable of two cold or one hot start with a maximum connected load inertia of 6098 Lb-Ft Sq (256.73 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 30 seconds. Safe stall time at 100% voltage is 56 seconds cold, 35 seconds hot. Rotor inertia is 156.72 Lb-Ft Sq (6.6 Kg-meter Sq).

Open Circuit A-C:	1.472	**Short Circuit D-C:**	0.039
Short Circuit A-C:	0.051	**X/R Ratio:**	14.724
Stator Slots:	72	**Rotor Slots:**	56



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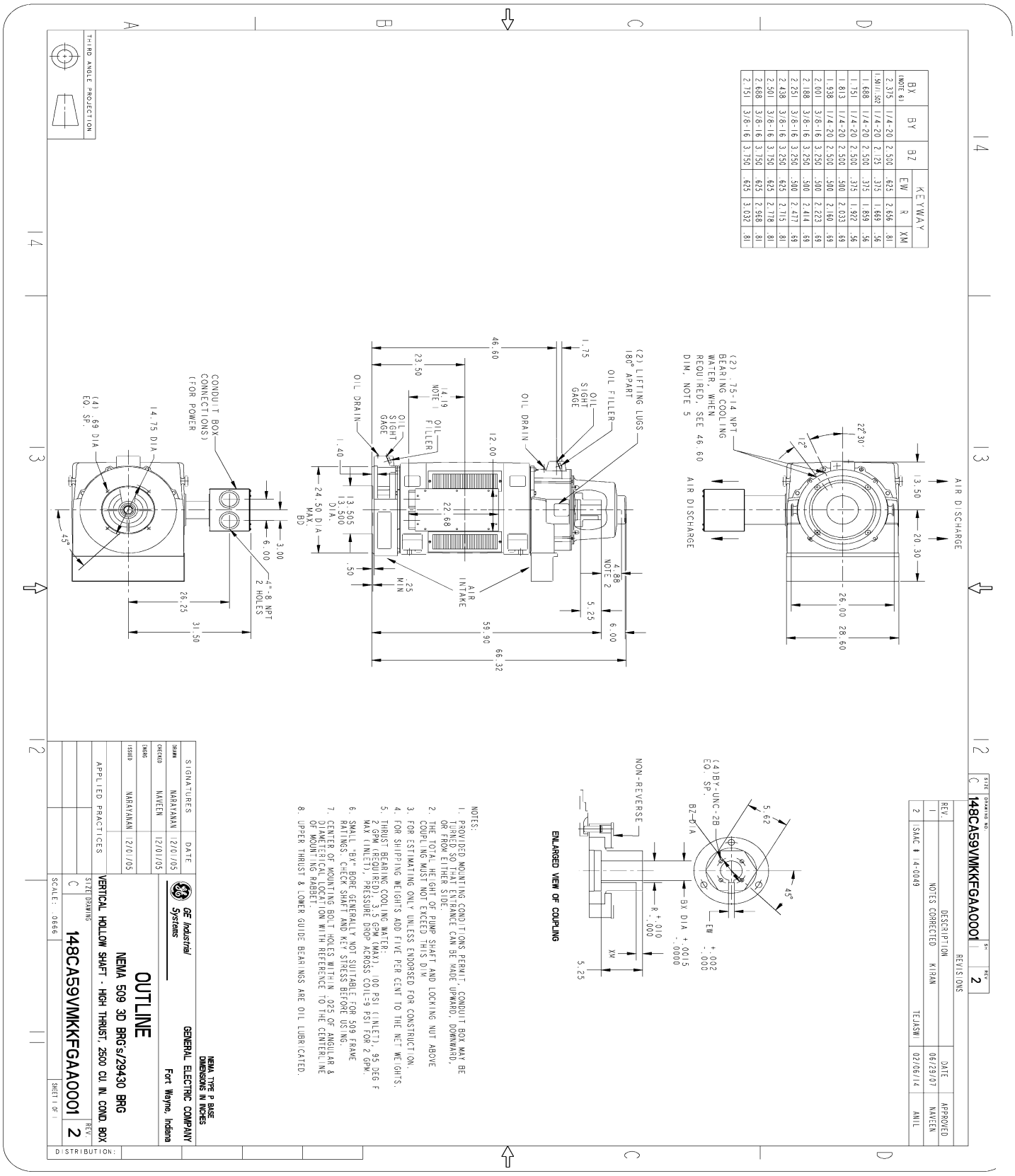
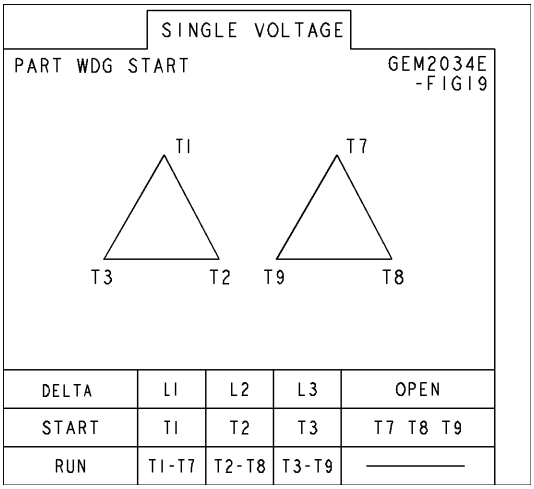

148CA59VMKKFGAA0001
REV 2
REVISIONS
REV. DESCRIPTION DATE APPROVED
1 NOTES CORRECTED KIRAN 06/29/07 NAVEEN
2 SAAC # 14-0049 TEJASWI 02/06/14 ANIL
BX BY BZ KEYWAY
(NOTE 6) EW R XM
2.375 1/4-20 2.500 .625 2.656 .81
1.9375/1.932 1/4-20 2.125 .375 1.859 .56
1.688 1/4-20 2.500 .375 1.859 .56
1.751 1/4-20 2.500 .375 1.922 .56
1.813 1/4-20 2.500 .500 2.033 .69
1.938 1/4-20 2.500 .500 2.160 .69
2.001 3/8-16 3.250 .500 2.223 .69
2.188 3/8-16 3.250 .500 2.414 .69
2.251 3/8-16 3.250 .500 2.477 .69
2.438 3/8-16 3.250 .625 2.715 .81
2.501 3/8-16 3.750 .625 2.778 .81
2.688 3/8-16 3.750 .625 2.968 .81
2.751 3/8-16 3.750 .625 3.032 .81
AIR DISCHARGE
22°30'
12°
13.50
20.30
26.00
28.60
(2) .75-14 NPT BEARING COOLING WATER, WHEN REQUIRED, SEE 46.60 DIM, NOTE 5
AIR DISCHARGE
(2) LIFTING LUGS 180° APART
OIL FILLER
OIL SIGHT GAGE
1.75
46.60
OIL DRAIN
12.00
23.50
14.19 NOTE 1
OIL FILLER
OIL SIGHT GAGE
OIL DRAIN
1.40
13.505
13.500 DIA.
24.50 DIA MAX BO
22.68
4.88 NOTE 2
5.25
6.00
.50
.25 MIN
AIR INTAKE
59.90
66.32
CONDUIT BOX CONNECTIONS (FOR POWER
(4) .69 DIA EQ. SP.
14.75 DIA
45°
3.00
6.00
4"-8 NPT 2 HOLES
26.25
31.50
(4) BY-UNC-2B EQ. SP.
BZ-BIA
5.62
45°
EW +.002 -.000
BX DIA +.0015 -.0000
R +.010 -.000
XM
5.25
NON-REVERSE
ENLARGED VIEW OF COUPLING
NOTES:
1. PROVIDED MOUNTING CONDITIONS PERMIT, CONDUIT BOX MAY BE TURNED SO THAT ENTRANCE CAN BE MADE UPWARD, DOWNWARD, OR FROM EITHER SIDE.
2. THE TOTAL HEIGHT OF PUMP SHAFT AND LOCKING NUT ABOVE COUPLING MUST NOT EXCEED THIS DIM.
3. FOR ESTIMATING ONLY UNLESS ENDORSED FOR CONSTRUCTION.
4. FOR SHIPPING WEIGHTS ADD FIVE PER CENT TO THE NET WEIGHTS.
5. THRUST BEARING COOLING WATER: 2 GPM (REQUIRED), 3.5 GPM (MAX), 100 PSI (INLET), 95 DEG F MAX (INLET), PRESSURE DROP ACROSS COIL-9 PSI FOR 2 GPM.
6. SMALL "BX" BORE GENERALLY NOT SUITABLE FOR 509 FRAME RATINGS. CHECK SHAFT AND KEY STRESS BEFORE USING.
7. CENTER OF MOUNTING BOLT HOLES WITHIN .025 OF ANGULAR & DIAMETERICAL LOCATION WITH REFERENCE TO THE CENTERLINE OF MOUNTING RABBET.
8. UPPER THRUST & LOWER GUIDE BEARINGS ARE OIL LUBRICATED.
THIRD ANGLE PROJECTION
SIGNATURES DATE
DRAWN NARAYANAN 12/01/05
CHECKED NAVEEN 12/01/05
ENGRG
ISSUED NARAYANAN 12/01/05
APPLIED PRACTICES
NEMA TYPE P BASE DIMENSIONS IN INCHES
GE Industrial Systems
GENERAL ELECTRIC COMPANY
Fort Wayne, Indiana
OUTLINE
NEMA 509 3D BRG's/29430 BRG
VERTICAL HOLLOW SHAFT - HIGH THRUST, 2500 CU. IN. COND. BOX
SIZE DRAWING C
148CA59VMKKFGAA0001 REV 2
SCALE: 0666
SHEET 1 OF 1
DISTRIBUTION:

Marks:

Connection Diagram
GEM2034E-FIG19



DELTA	L1	L2	L3	OPEN
START	T1	T2	T3	T7 T8 T9
RUN	T1-T7	T2-T8	T3-T9	———

Heater Connection
3027JE-1C

SUPPLY VOLTAGE LEADS	L1	L2
HEATER LEADS	HE1	HE2

End shield Assembly		
Part Description	DE Side Part#	ODE Side Part#
End Shield	119D2111AA-G01	119D2113AG-G01
Bearing	235A2525AD01	235A2537AA01
Slinger/Inproseal		

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	