

# Product Information Packet

July 1, 2017

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

<b>Model Number:</b>	<b>5KS405XAJ5708A</b>
<b>Catalog Number:</b>	<b>V4809</b>
<b>Instruction Manual:</b>	GEK-95351
<b>Connection Diagram:</b>	GEM2034E-FIG7
<b>Outline Drawing:</b>	148CB40IPHRCCCLA0001

<b>Accessory Connection Diagrams</b>			
<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:**

<b>MODEL NUMBER:</b>	<b>5KS405XAJ5708A</b>	<b>Estimated Weight:</b>	1980 Lbs
<b>Outline Drawing:</b>	148CB40IPHRCCLA0001	<b>Time Rating:</b>	CONT
<b>Connection Diagram:</b>	GEM2034E-FIG7	<b>Enclosure:</b>	TEFC
<b>Instruction Book:</b>	GEK-95351	<b>Encl Construction:</b>	841
<b>Design Code:</b>	40BD0052AD	<b>Ambient Max(°C):</b>	40
<b>Type:</b>	KS	<b>Alt Ambient Max(°C):</b>	--
<b>Frame:</b>	L405LP16	<b>Insulation Class:</b>	H
<b>Phases:</b>	3	<b>NEMA Design:</b>	B
<b>Poles:</b>	2	<b>Nominal Efficiency:</b>	94.1 %
<b>Output Power:</b>	100HP 74KW	<b>Guaranteed Efficiency:</b>	93.0 %
<b>RPM:</b>	3565	<b>3/4 Load Efficiency:</b>	95.5 %
<b>Voltage:</b>	460	<b>KVA Code:</b>	G
<b>Hertz:</b>	60	<b>Max KVAR:</b>	17.0
<b>Amps - FL:</b>	109.0	<b>Power Factor:</b>	91.0
<b>Service Factor:</b>	1.15	<b>Bearing - DE:</b>	6215C3
<b>Alt Service Factor:</b>	--	<b>Bearing - ODE:</b>	235A2532AA01

**Enclosure is Totally Enclosed Fan-Cooled**

**Stamped Nameplate Notes:**

EXCEPTIONS TO IEEE-STD-841-2009:  
 ALUMINIUM FAN BACK PLATE  
 VERTICAL 841  
 DE BRG 75BC02J30, ODE BRG 110BT02MD00  
 INVERTER DUTY PER NEMA MG1 PART 31  
 ALTERNATE RATING FOR PWM CONTROL:1.0SF 40C AMBIENT  
 VAR TORQUE RANGE 0-60 HZ  
 GE SELF DECLARED CLASS I DIV 2 MOTOR  
 MAX EXPOSED INTERNAL AND EXTERNAL SURFACE  
 TEMPERATURES UNDER USUAL SERVICE CONDITIONS  
 AT 1.00 S.F. DO NOT EXCEED 200 DEG C  
 API 610 12TH EDITION SHAFT DIMENSIONS  
 INLINE MOTOR

**Additional Information:**

2 POLE,VERT SOLID SHAFT INLINE (1D1U)  
 PAINTED FRAME ID & SHAFT,  
 FAN COVER INSIDE & ODE E/S OUTSIDE  
 700 CU IN - 3.00" NPT  
 BEARING LIFE 8760 HRS AT 5102 LB THRUST  
 BEARING LIFE 26280 HRS AT 3440 LB THRUST  
 INPRO SEAL LOWER END  
 OIL RESISTANT SLEEVING ON LEADS  
 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.  
STAINLESS STEEL T-DRAINS  
FRAME GROUND PAD  
ACTUAL EFFICIENCY = 93.0%  
RCF: 1860 CPM AT C/BOX SIDE, 1860 CPM AT  
90 DEG FROM C/ BOX SIDE  
CG: 21.64 IN FROM P-BASE FACE

**Performance Characteristics**

1st Winding 1st Connection

**Design: 40BD0052AD**

**Marks:**

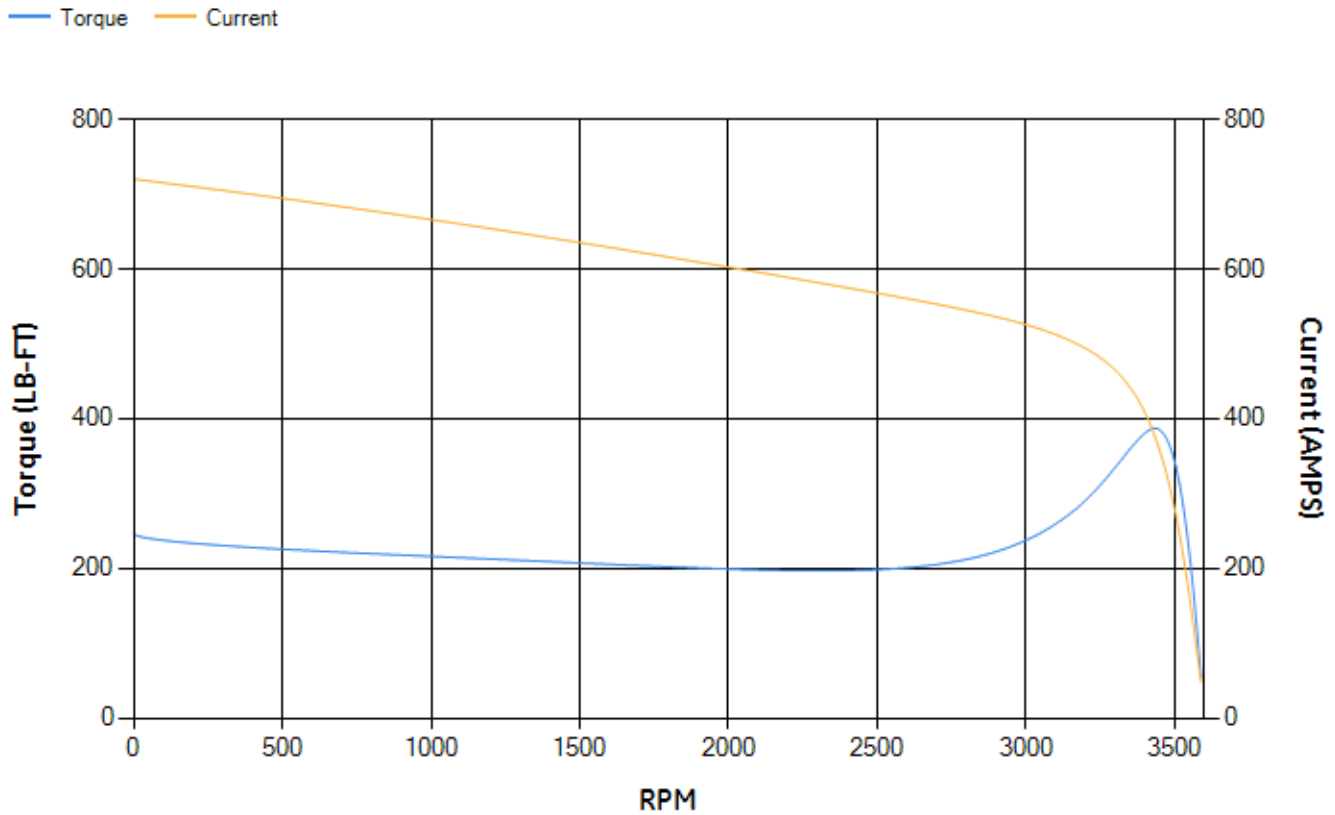
LOAD %	125.0	115.0	100.0	75.0	50.0	25.0	0.0
% EFF	92.7	92.77	92.95	92.23	90.46	84.37	0.00
% PF	90.87	91.1	91.17	90.29	86.69	73.35	17.02
AMPS	138.88	127.36	110.45	84.29	59.68	37.81	23.71

TORQ(FL)#FT	147.38	TORQ(LR)%FL	167.44	TORQ(BD)%FL	262.71
AMPS(LR)	720.22	PF AT START	0.25		

This motor is capable of two cold or one hot start with a maximum connected load inertia of 342 Lb-Ft Sq (14.4 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 23 seconds. Safe stall time at 100% voltage is 58 seconds cold, 28 seconds hot. Rotor inertia is 15.17 Lb-Ft Sq (0.64 Kg-meter Sq).

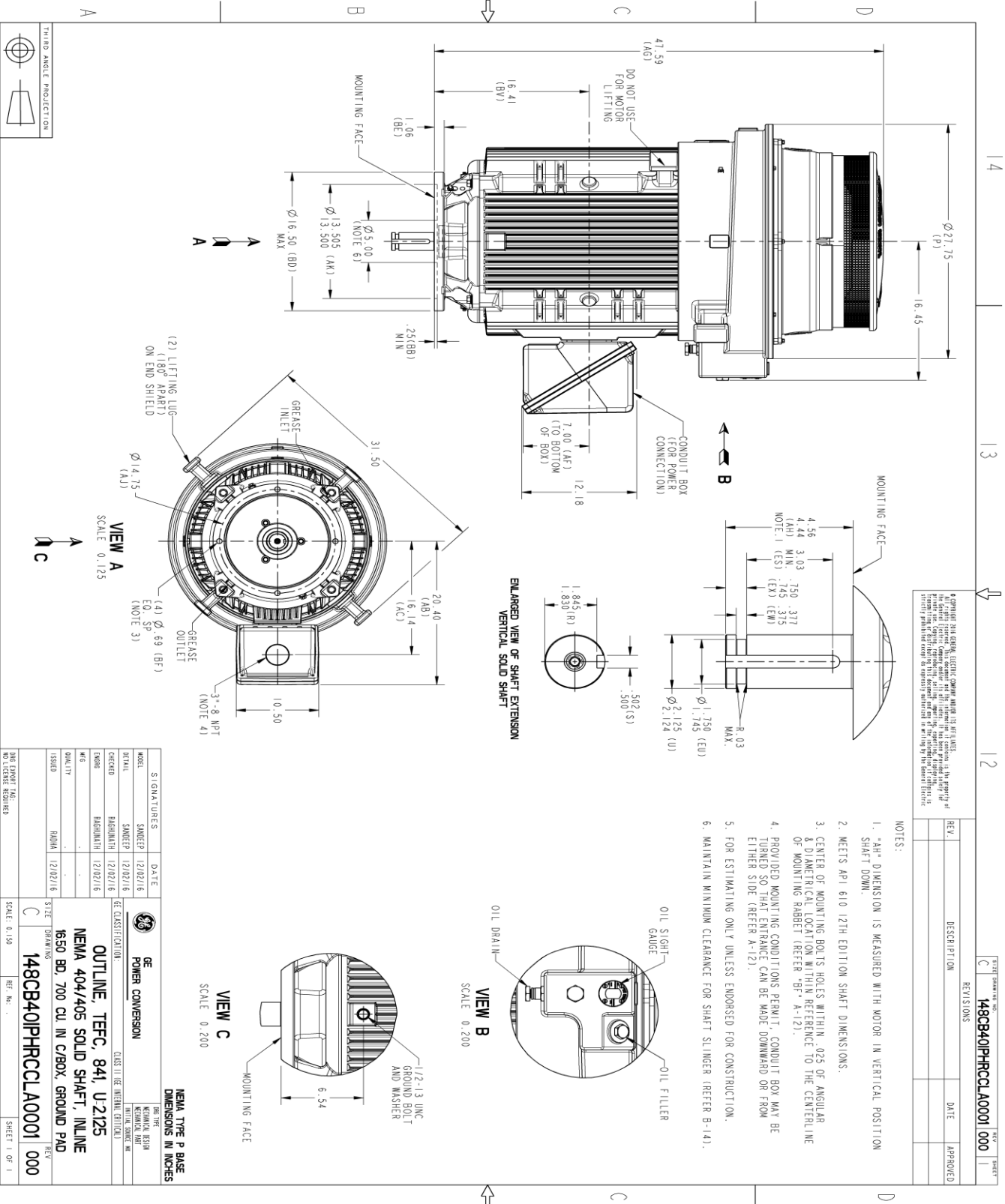
Open Circuit A-C:	1.197	Short Circuit D-C:	0.03
Short Circuit A-C:	0.043	X/R Ratio:	11.276
Stator Slots:	48	Rotor Slots:	38

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



Marks:

SOLID MODEL: 148CB401PHRCLLA0001



CONDUIT BOX (FOR POWER CONNECTION)

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NOTES:

- "AH" DIMENSION IS MEASURED WITH MOTOR IN VERTICAL POSITION SHAFT DOWN.
- MEETS API 610 12TH EDITION SHAFT DIMENSIONS.
- CENTER OF MOUNTING BOLTS WITHIN .025 OF ANGULAR 8° DIAL INDICATOR LOCATION WITHIN REFERENCE TO THE CENTERLINE OF MOUNTING HUBBET (REFER TO A-12).
- PROVIDED MOUNTING CONDITIONS PERMIT, CONDUIT BOX MAY BE TURNED SO THAT ENTRANCE CAN BE MADE DOWNWARD OR FROM EITHER SIDE (REFER A-12).
- FOR ESTIMATING ONLY UNLESS ENDORSED FOR CONSTRUCTION.
- MAINTAIN MINIMUM CLEARANCE FOR SHAFT SLINGER (REFER B-14).

REV.	DESCRIPTION	DATE	APPROVED

148CB401PHRCLLA0001 000	REV. 1 OF 1
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SIGNATURES	DATE	DESCRIPTION
DESIGNED BY: SMOEY	12/02/16	DESIGN
CHECKED BY: HARRINGTON	12/02/16	CHECK
ENGINEER BY: HARRINGTON	12/02/16	ENGINEER
QUALITY BY: BODIN	12/02/16	QUALITY

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CHECKED BY: HARRINGTON	12/02/16
ENGINEER BY: HARRINGTON	12/02/16
QUALITY BY: BODIN	12/02/16

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Marks:

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



End shield Assembly		
Part Description	DE Side Part#	ODE Side Part#
End Shield	115E8306AC1	115E8310LA1
Bearing	235A2513AL01	235A2532AA01
Slinger/Inproseal	235A4575GC44	

Fan & Fan Cover Assembly	
Part Description	Part#
Fan	153B1885G01
Fan Cover	128D6845AA1

Conduit & Accessories Box Assembly	
Part Description	Part#
Conduit Box	118D4408AD2

Mechanical Accessories	
Part Description	Part#
Brake	
Tachometer	