

# Product Information Packet

November 9, 2016

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

<b>Model Number:</b>	<b>5KS256XAE5420A</b>
<b>Catalog Number:</b>	<b>V858</b>
<b>Instruction Manual:</b>	GEK-95351
<b>Connection Diagram:</b>	GEM2034E-FIG7
<b>Outline Drawing:</b>	4002B5825PNP5323

Accessory Connection Diagrams			
<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>5KS256XAE5420A</b>	<b>Estimated Weight:</b>	350 Lbs
<b>Outline Drawing:</b>	4002B5825PNP5323	<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>	25BD0065A	<b>Ambient Max(°C):</b>	40
<b>Type:</b>	KS	<b>Alt Ambient Max(°C):</b>	--
<b>Frame:</b>	L256VP10	<b>Insulation Class:</b>	H
<b>Phases:</b>	3	<b>NEMA Design:</b>	B
<b>Poles:</b>	2	<b>Nominal Efficiency:</b>	91 %
<b>Output Power:</b>	20HP 14.8KW	<b>Guaranteed Efficiency:</b>	90.2
<b>RPM:</b>	3540	<b>3/4 Load Efficiency:</b>	92.6
<b>Voltage:</b>	460	<b>KVA Code:</b>	G
<b>Hertz:</b>	60	<b>Max KVAR:</b>	2.3
<b>Amps - FL:</b>	22.6	<b>Power Factor:</b>	91.0
<b>Service Factor:</b>	1.15	<b>Bearing - DE:</b>	7309
<b>Alt Service Factor:</b>	--	<b>Bearing - ODE:</b>	6309-2ZC3

**Enclosure is Totally Enclosed Fan-Cooled**

**Stamped Nameplate Notes:**

VERTICAL-841  
 PREMIUM EFFICIENT MOTOR  
 DE BRG 45BT03XP3 ODE BRG 45BC03JP3  
 SEVERE DUTY  
 EXCEPTION TO IEEE-STD-841-2009:THRUST BRG ON DE  
 INVERTER DUTY PER NEMA MG1 PART 31  
 ALTERNATE RATING FOR PWM CONTROL:  
 1.0 SF VAR TORQUE RANGE 0-60 HZ  
 MAX EXPOSED INTERNAL AND EXTERNAL SURFACE  
 TEMPERATURES UNDER USUAL SERVICE CONDITIONS  
 AT 1.00 S.F. DO NOT EXCEED 200 DEG C  
 STAMP NP249A5499AP AS BELOW:  
 MODEL:5KS256XAE5420A 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

**Additional Information:**

2P - VP EXTN  
 C/BOX 137 CU IN-1.25 NPT  
 PAINTED FRAME ID & SHAFT,  
 FAN COVER INSIDE & ODE E/S OUTSIDE  
 ROUTINE AND 5 POINT VIBRATION TESTS INCL IN C/BOX  
 INPRO SEAL BOTH ENDS  
 E/SHLD GROUND STUD MTD ON DE C/BOX SIDE  
 SHAFT RUNOUT LIMIT .001" TIR

RCF 5000 CPM, STATIC DEFLECTION .0014 INCHES &  
CENTER OF GRAVITY 10.75 INCHES  
SOLID SHAFT HIGH THRUST  
COPPER WASHER UNDER HEADS OF BEARING CAP BOLTS  
APPLY TITE-SEAL (A50CD427A) ON BEARING CAP SCREWS, RABBETS,  
AND PLUG THREADS  
OIL RESISTANT SLEEVING ON LEADS  
BEARING LIFE 26280 HOURS AT 1389 LB THRUST  
UTD REPLACEMENT FOR 5KS256XAE5420  
IEEE 841 NEMSCO 02/23/2015  
ENGINEERED BY: BALASUBRAMANIANH

**Performance Characteristics**

1st Winding 1st Connection

**Design: 25BD0065A**

**Marks:**

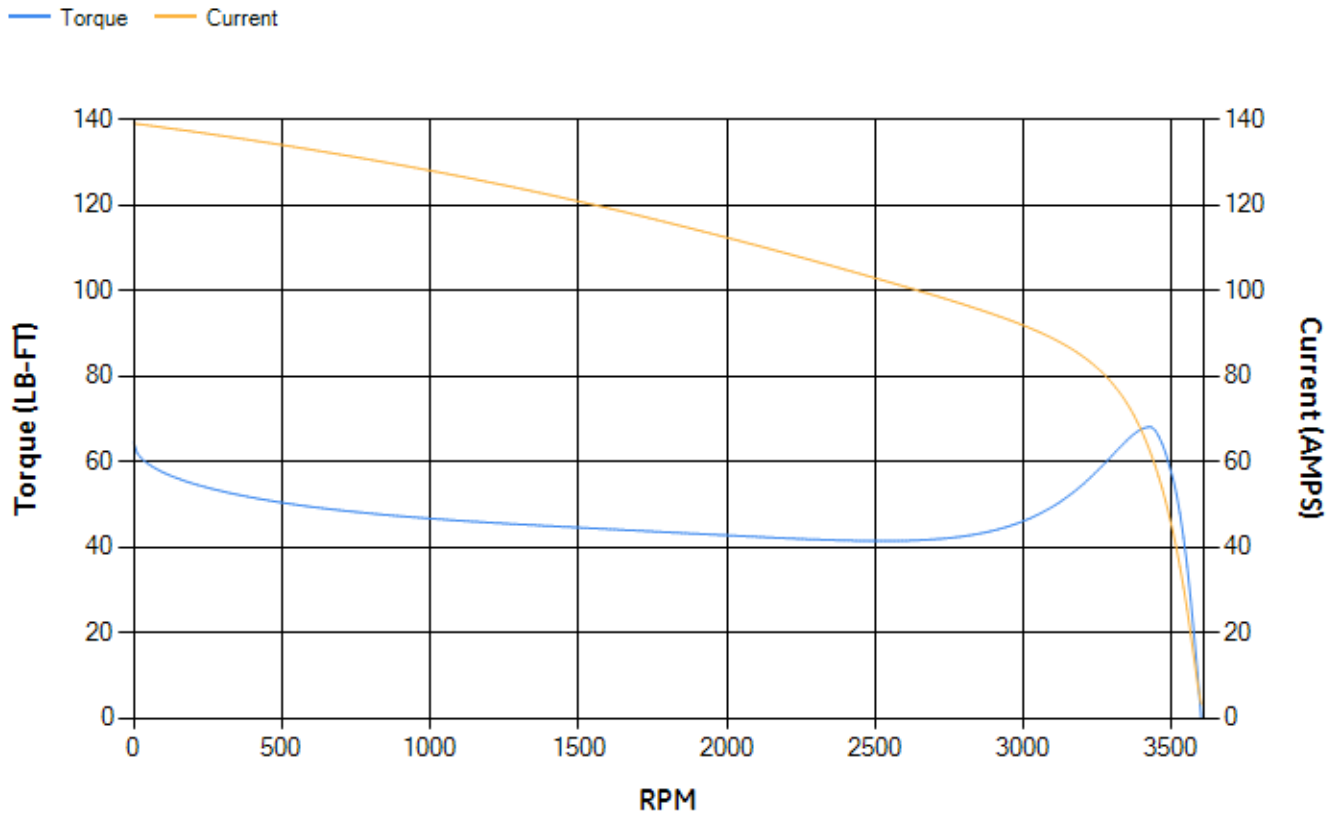
LOAD %	125.0	115.0	100.0	75.0	50.0	25.0	0.0
% EFF	89.27	90.16	91.45	92.55	93.01	91.04	0.00
% PF	88.89	89.91	91.01	91.73	90.36	81.34	11.6
AMPS	29.49	26.56	22.49	16.54	11.14	6.32	3.17

TORQ(FL)#FT	29.65	TORQ(LR)%FL	217.28	TORQ(BD)%FL	228.31
AMPS(LR)	139.04	PF AT START	0.33		

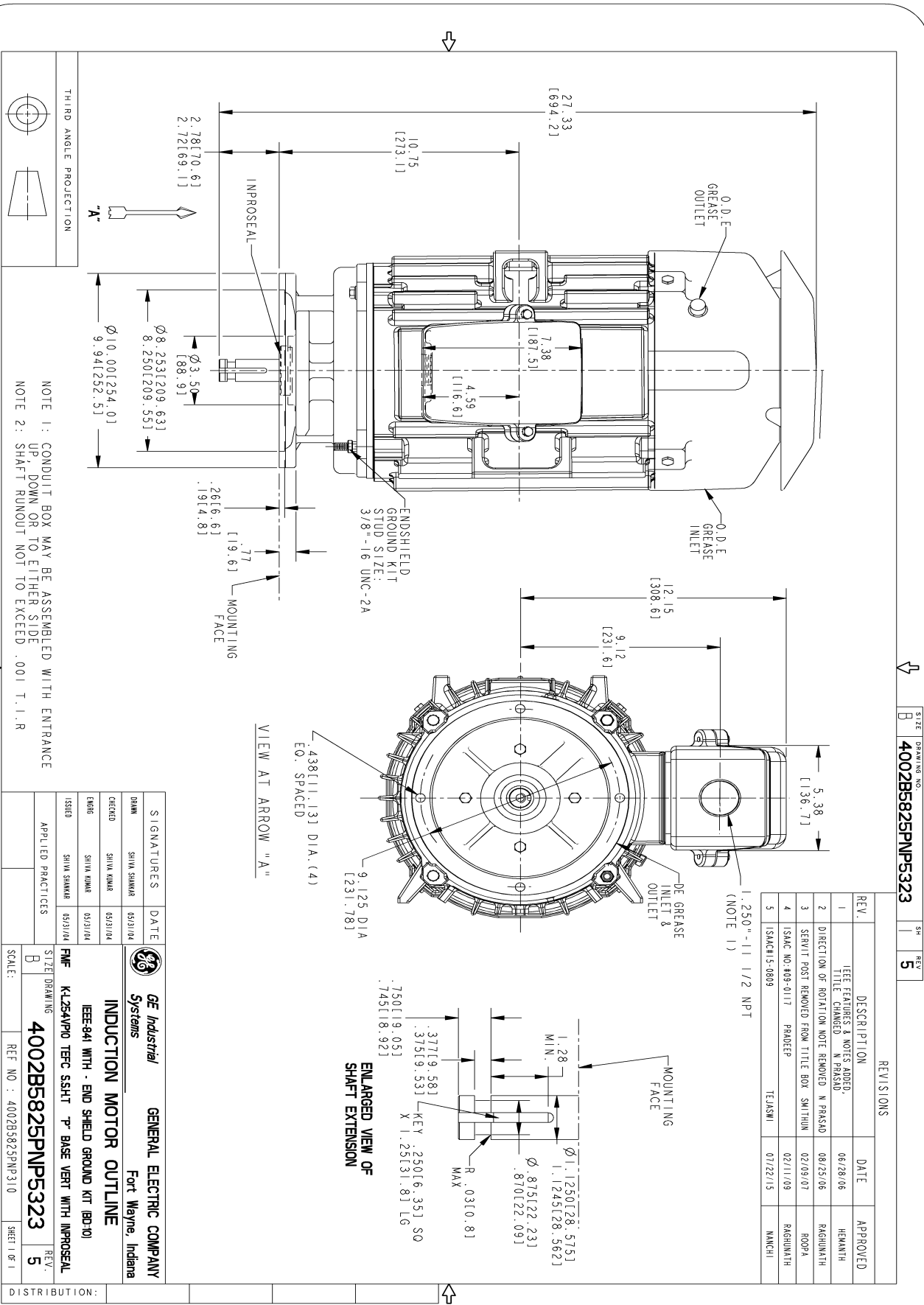
This motor is capable of two cold or one hot start with a maximum connected load inertia of 143 Lb-Ft Sq (6.02 Kg-meter Sq)at 100% voltage, where the load torque varies with the square of the speed. Acceleration time with maximum inertia and the above load type is 44 seconds. Safe stall time at 100% voltage is 94 seconds cold, 55 seconds hot. Rotor inertia is 1.9 Lb-Ft Sq (0.08 Kg-meter Sq).

Open Circuit A-C:	1.254	Short Circuit D-C:	0.013
Short Circuit A-C:	0.028	X/R Ratio:	4.893
Stator Slots:	36	Rotor Slots:	26

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



Marks:



SIZE: DRAWING NO. 4002B5825PMP5323 5H REV 5

REV.	DESCRIPTION	DATE	APPROVED
1	IEEE FEATURES & NOTES ADDED. TITLE CHANGED. N.P.R.S.D.	06/28/06	HEMANTH
2	DIRECTION OF ROTATION NOTE REMOVED. N.P.R.S.D.	08/23/06	RAJAGHATH
3	SERVIT POST REMOVED FROM TITLE BOX. SMITHUN	02/09/07	ROOPA
4	ISAC NO. 409-0117. PRADEEP	02/11/09	RAJAGHATH
5	ISACH 15-0809	07/22/15	MANCHI

SIGNATURES	DATE
DRAM SHIVA SHANKAR	03/31/14
DESIGNED SHIVA KUMAR	03/31/14
ENGR SHIVA KUMAR	03/31/14
ISSUED SHIVA SHANKAR	03/31/14

**GE Industrial Systems**  
**GENERAL ELECTRIC COMPANY**  
 Fort Wayne, Indiana

**INDUCTION MOTOR OUTLINE**  
 IEEE-94 WITH - END SHIELD GROUND KIT (BD-10)  
 K1254V10 TERC 55HT "P" BASE VERT WITH IMPROSEAL

SCALE: B  
 REF NO: 4002B5825PMP310  
 SHEET 1 OF 1

APPLIED PRACTICES: FIVE  
 SIZE DRAWING: 4002B5825PMP5323  
 REV: 5

DISTRIBUTION:

Marks:

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



End shield Assembly		
Part Description	DE Side Part#	ODE Side Part#
End Shield	128D6129PJ1	4004D5283SK1
Bearing		
Slinger/Inproseal		

Fan & Fan Cover Assembly	
Part Description	Part#
Fan	159C6704G02
Fan Cover	

Conduit & Accessories Box Assembly	
Part Description	Part#
Conduit Box	4002B5728PA-G04

Mechanical Accessories	
Part Description	Part#
Brake	
Tachometer	