

# Product Information Packet

November 9, 2016

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

<b>Model Number:</b>	<b>5KS284XAE6421D</b>
<b>Catalog Number:</b>	<b>V862</b>
<b>Instruction Manual:</b>	GEK-95351
<b>Connection Diagram:</b>	GEM2034E-FIG7
<b>Outline Drawing:</b>	4002B5828PNP5364

<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>5KS284XAE6421D</b>	<b>Estimated Weight:</b>	460 Lbs
<b>Outline Drawing:</b>	4002B5828PNP5364	<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>	28BD1193A	<b>Ambient Max(°C):</b>	40
<b>Type:</b>	KS	<b>Alt Ambient Max(°C):</b>	--
<b>Frame:</b>	L284VP10	<b>Insulation Class:</b>	H
<b>Phases:</b>	3	<b>NEMA Design:</b>	B
<b>Poles:</b>	4	<b>Nominal Efficiency:</b>	93.6 %
<b>Output Power:</b>	25HP 18.5KW	<b>Guaranteed Efficiency:</b>	92.4
<b>RPM:</b>	1780	<b>3/4 Load Efficiency:</b>	94.2
<b>Voltage:</b>	460	<b>KVA Code:</b>	G
<b>Hertz:</b>	60	<b>Max KVAR:</b>	7.0
<b>Amps - FL:</b>	29.1	<b>Power Factor:</b>	86.0
<b>Service Factor:</b>	1.15	<b>Bearing - DE:</b>	7310
<b>Alt Service Factor:</b>	--	<b>Bearing - ODE:</b>	6310-2ZC3

**Enclosure is Totally Enclosed Fan-Cooled**

**Stamped Nameplate Notes:**

VERTICAL-841  
 PREMIUM EFFICIENT MOTOR  
 DE BRG 50BT03XP3 ODE BRG 50BC03JP3  
 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  
 STAMP NP249A5564P051 AS BELOW:  
 MODEL:5KS284XAE6421D S/N: XXX  
 CSA CERTIFIED CSA09.2216219 FOR EX NA IIC 200C GC  
 CL 1 ZONE2 AEX NA IIC 200C;CL 1 DIV2 GRP ABCD 200C  
 IN -25C <= AMB <= 40C, 1.0 SF ON SINE-WAVE PWR  
 SURF TEMP 200C AT 1.15SF ON SINE-WAVE PWR  
 OR 200C VT OR 200C CT OR 200C CHP PWM CONTROL  
 ALTERNATE RATING FOR PWM CONTROL 1.0SF 40C AMB  
 VT 0-60 HZ, CT 3-60 HZ, CHP 60-90 HZ.

**Additional Information:**

4P - VP EXTN  
 C/BOX 137 CU IN-1.50 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 12.00 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 2000 LB THRUST

**Performance Characteristics**

1st Winding 1st Connection

**Design: 28BD1193A**

**Marks:**

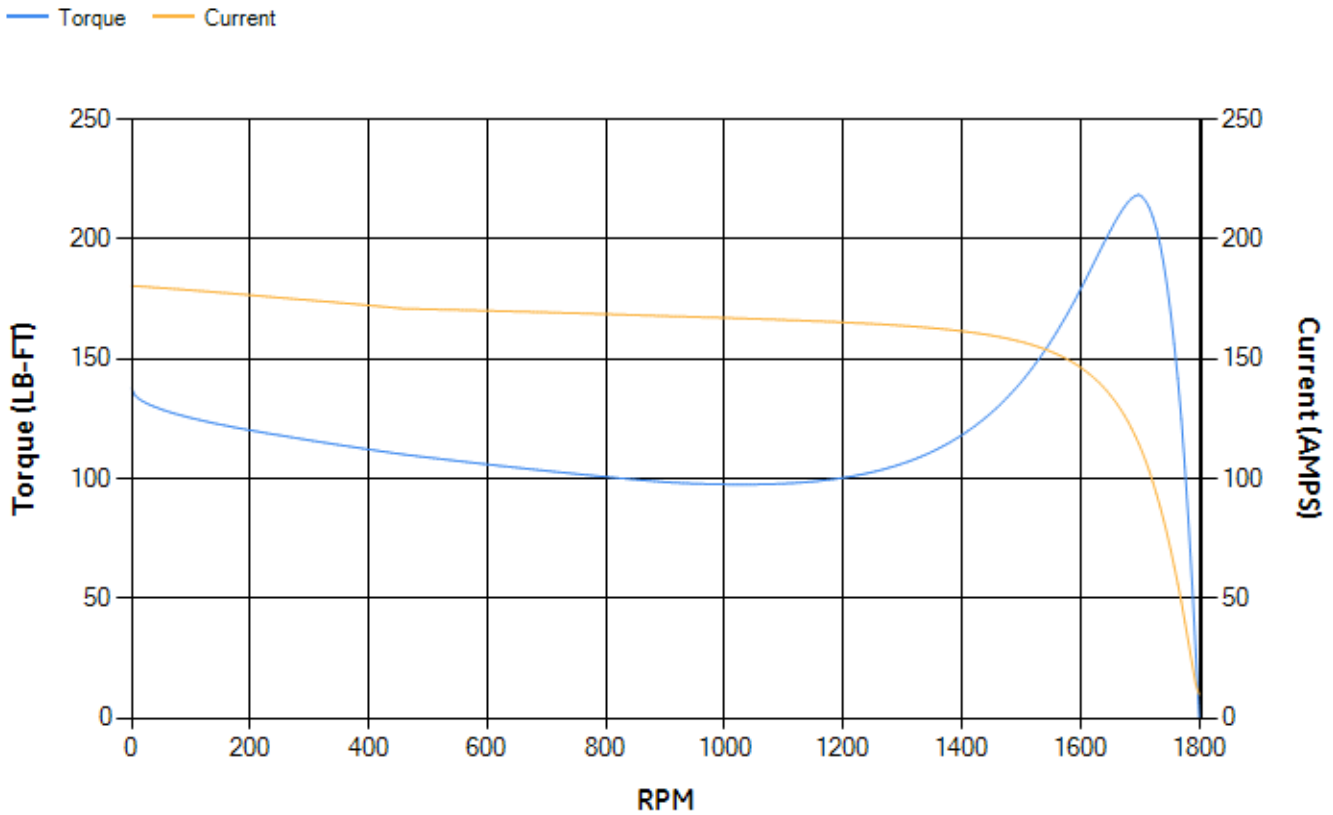
LOAD %	125.0	115.0	100.0	75.0	50.0	25.0	0.0
% EFF	92.81	93.2	93.89	94.23	94.11	91.7	0.00
% PF	87.27	87	86.16	82.89	74.66	53.19	4.49
AMPS	36.11	33.18	28.91	22.47	16.65	11.99	9.72

<b>TORQ(FL)#FT</b>	73.77	<b>TORQ(LR)%FL</b>	186.54	<b>TORQ(BD)%FL</b>	295.17
<b>AMPS(LR)</b>	180.48	<b>PF AT START</b>	0.38		

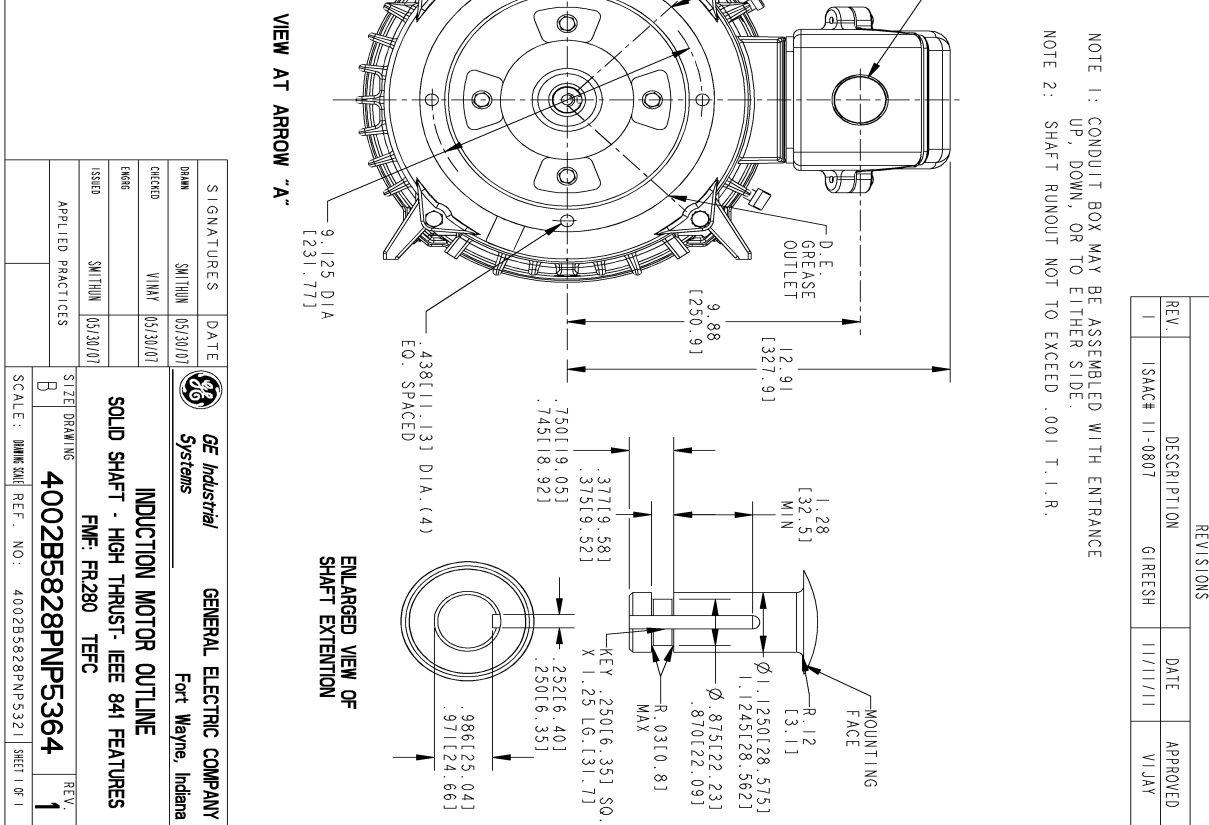
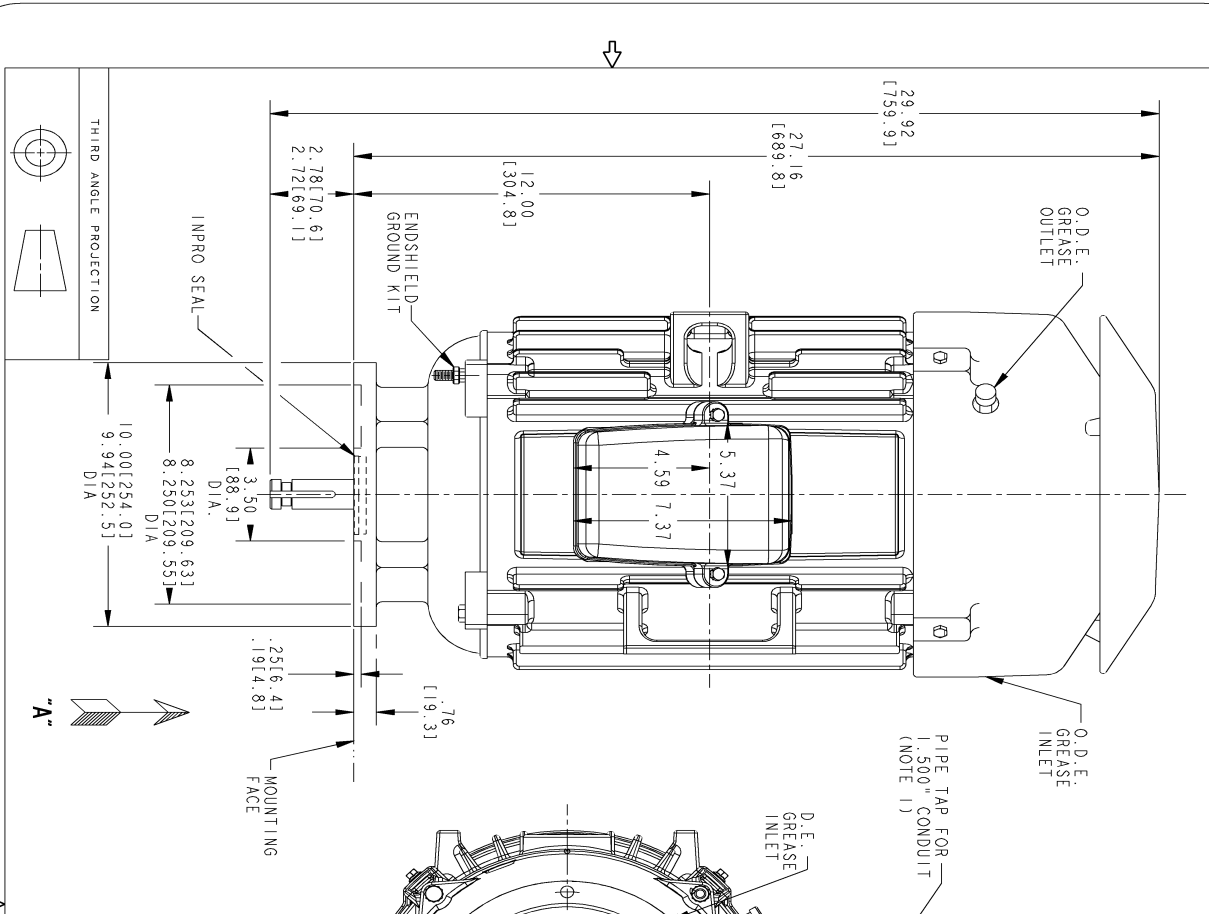
This motor is capable of two cold or one hot start with a maximum connected load inertia of 1015 Lb-Ft Sq (42.73 Kg-meter Sq)at 100% voltage, where the load torque varies with the square of the speed. Acceleration time with maximum inertia and the above load type is 62 seconds. Safe stall time at 100% voltage is 107 seconds cold, 74 seconds hot. Rotor inertia is 5.44 Lb-Ft Sq (0.23 Kg-meter Sq).

<b>Open Circuit A-C:</b>	0.67	<b>Short Circuit D-C:</b>	0.016
<b>Short Circuit A-C:</b>	0.029	<b>X/R Ratio:</b>	6.073
<b>Stator Slots:</b>	48	<b>Rotor Slots:</b>	40

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



Marks:



NOTE 1: CONDUIT BOX MAY BE ASSEMBLED WITH ENTRANCE UP, DOWN, OR TO EITHER SIDE.  
 NOTE 2: SHAFT RUNOUT NOT TO EXCEED .001 T.I.R.

SIZE DRAWING NO. 4002B5828PNP5364

REV.	DESCRIPTION	DATE	APPROVED
1	ISAC# 11-0807 GIREESH	11/11/11	VJAY

SIGNATURES	DATE
DRAWN SWITHUN 05/30/01	
CHECKED VINAY 05/30/01	
ENGRD SWITHUN 05/30/01	
ISSUED SWITHUN 05/30/01	

APPLIED PRACTICES

SCALE: DIMENSIONS REF. NO: 4002B5828PNP5321 SHEET 1 OF 1

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

**INDUCTION MOTOR OUTLINE**  
**SOLID SHAFT - HIGH THRUST - IEEE 841 FEATURES**  
 FWF: FR280 TEFC

SIZE DRAWING 4002B5828PNP5364  
 REV. 1

DISTRIBUTION:

Marks:

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



End shield Assembly		
Part Description	DE Side Part#	ODE Side Part#
End Shield	128D6229PH1	4004D5284SZ1
Bearing	235A2508ET01	235A2508EB01
Slinger/Inproseal	4002B5918CD4	4002B5914AG5

Fan & Fan Cover Assembly	
Part Description	Part#
Fan	159C6700G02
Fan Cover	4003C5528BN-G01

Conduit & Accessories Box Assembly	
Part Description	Part#
Conduit Box	4002B5728PA-G01

Mechanical Accessories	
Part Description	Part#
Brake	
Tachometer	

