



Motors

Wednesday, April 25, 2012

Technical Data Center  
PO Box 2204  
Fort Wayne, IN 46801-2204

### CE PRINTS FOR APPROVAL PACKAGE

Return 'For Approval' prints to the GE Field Sales Engineer or Customer Care Contact. The order is on hold until prints are approved and returned. When approved prints are received by GE, current leadtimes will apply.

Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

<b>Customer Order / Item:</b>	PM294905	<b>Sales Order No:</b>	5200009630
<b>Customer Part:</b>	None	<b>Order Line No:</b>	14.1

<b>MODEL NUMBER:</b>	<b>5KS286SAA163</b>	<b>Estimated Weight:</b>	231.82 Kg
<b>Outline Drawing:</b>	4002B5828PBP5408	<b>Time Rating:</b>	CONT
<b>Connection Diagram:</b>	GEM2034E-FIG109	<b>Enclosure:</b>	TEFC
<b>Instruction Book:</b>	GEI-56128	<b>Encl Construction:</b>	X\$D
<b>Design Code:</b>	28BD0006A	<b>Ambient Max(°C):</b>	40
<b>Type:</b>	KS	<b>Insulation Class:</b>	H
<b>Frame:</b>	286TSC	<b>NEMA Design:</b>	B
<b>Phases:</b>	3	<b>Nominal Efficiency:</b>	92.4%
<b>Poles:</b>	2	<b>Guaranteed Efficiency:</b>	91.7%
<b>Output Power:</b>	30HP 22.4KW	<b>3/4 Load Efficiency:</b>	93.6%
<b>RPM:</b>	3545	<b>KVA Code:</b>	G
<b>Voltage:</b>	230/460	<b>Max KVAR:</b>	4.0
<b>Hertz:</b>	60	<b>Power Factor:</b>	93.0
<b>Amps - FL:</b>	65.4/32.7	<b>Bearing - DE:</b>	6310ZC3
<b>Service Factor:</b>	1.15	<b>Bearing - ODE:</b>	6310ZC3
<b>Alt Service Factor:</b>	--		

**Enclosure is Totally Enclosed Fan-Cooled**

**Stamped Nameplate Notes:**

ALTERNATE RATING FOR PWM CONTROL: 1.0SF 40C AMB  
 INVERTER DUTY CONSTANT TORQUE RANGE:15-60 HZ  
 ROT CW FACING ODE LEAD/PH SEQUENCE U-V-W/U-V-W  
 THERMOSTAT LEADS PC-PC  
 STAMP NP235A3521AA AS FOLLOWS  
 KW 22.371 ; DUTY S1 ; IC411 ; IP55 ; IM B34  
 MASS 232 KG ; MIN AMB -15 DEG C ; MAX ALT 1000 M  
 MFG YEAR XXXX; GE ORDER# XXXXXXXXXX  
 NOTE TO MFG: STAMP NP WITH CURRENT YEAR  
 NOTE TO MFG: STAMP NP WITH GE ORDER#  
 EN60034-1,5,6,7,8,9

**Additional Information:**

2P - TS EXTN  
 C/BOX 137 CU IN-1.50 NPT



Motors

Wednesday, April 25, 2012

Technical Data Center  
PO Box 2204  
Fort Wayne, IN 46801-2204

## CE PRINTS FOR APPROVAL PACKAGE

Return 'For Approval' prints to the GE Field Sales Engineer or Customer Care Contact. The order is on hold until prints are approved and returned. When approved prints are received by GE, current leadtimes will apply.

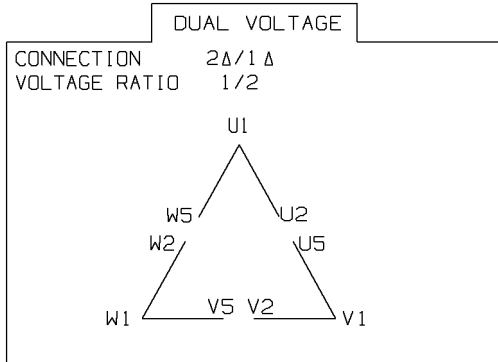
Approved by: \_\_\_\_\_

Date: \_\_\_\_\_

F1 CONDUIT BOX MOUNTING  
THERMOSTAT LEADS EXIT WITH MOTOR LEADS  
"C" FACE AT DE ENDSHIELD AK=10 1/2"  
LEADS NUMBERED U,V,W - CW ROTN FROM ODE  
CE MARK MOTOR  
OIL RESISTANT SLEEVING ON LEADS  
THOMAS & BETTS TERMINALS ON LEADS  
UTDR FOR 5KS286LAA121 EXCEPT BUILT IN ULTRA.  
NOTE TO MANUFACTURING:  
STAMP EXTRA MAIN NAME PLATE NP249A5570AF AS PER MODEL -  
5KS286SAA164 AND PLACE EXTRA NAME PLATE ON FAN COVER

**Diagrams for Model: 5KS286SAA163**

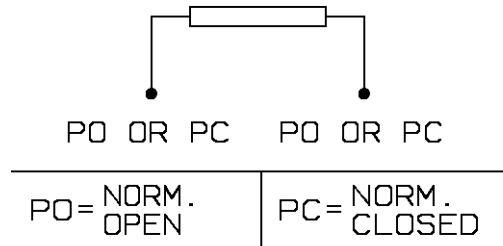
**Connection Diagram  
GEM2034E-FIG109**



	VOLTS	L1	L2	L3	TOGETHER
2Δ	LOW	U1-W2 U5	V1-U2 V5	W1-V2 W5	
1Δ	HIGH	U1	V1	W1	U2-U5, V2-V5, W2-W5

**Thermostat Connection  
3027JE-2**

FIG. 2  
THERMOSTAT CONN.



**Performance Characteristics**

1st Winding 1st Connection

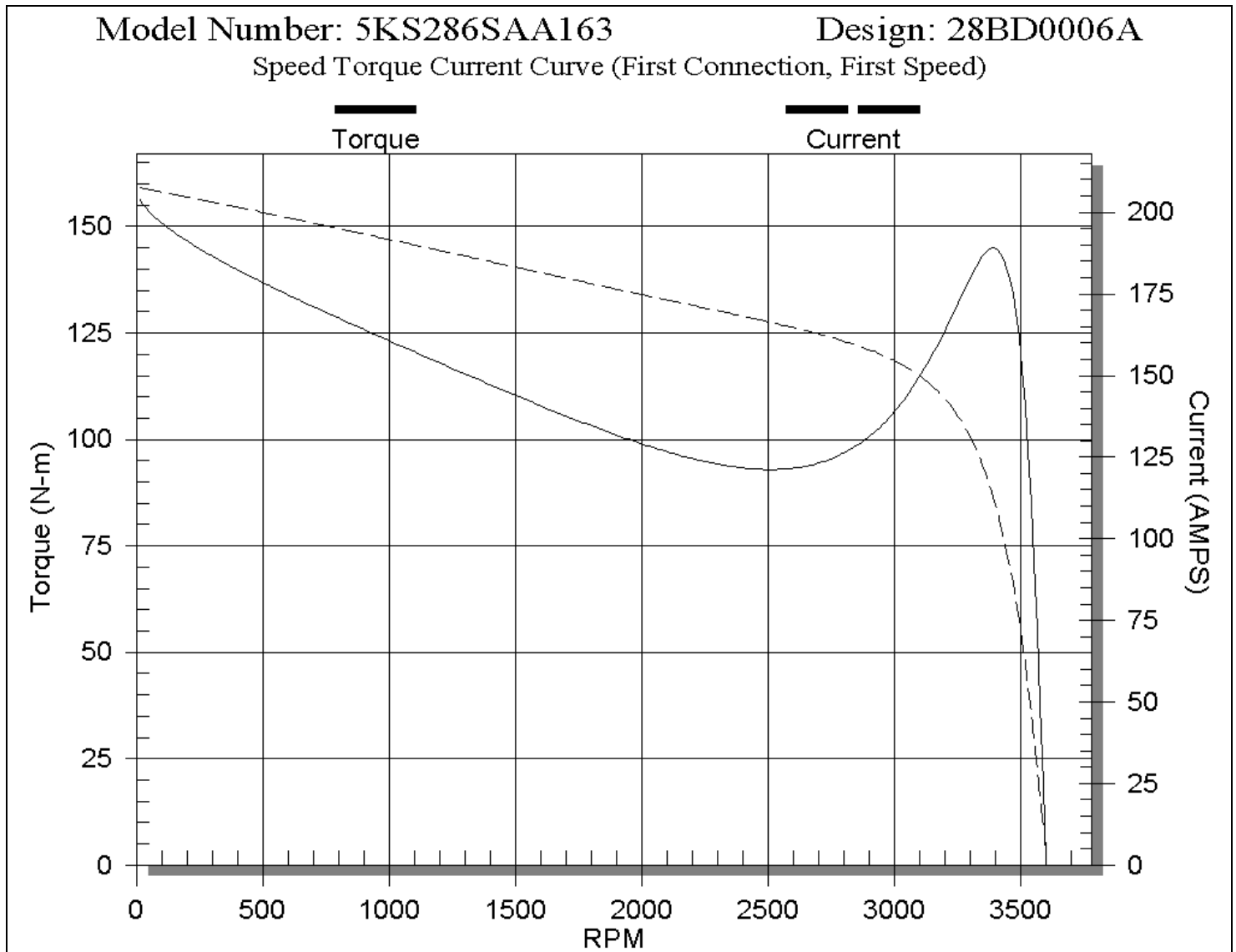
**Design: 28BD0006A**

LOAD %	125.0	115.0	100.0	75.0	50.0	25.0	0.0
% EFF	91.81	92.29	92.40	93.62	93.62	91.22	0.00
% PF	92.28	92.62	93.00	92.53	89.93	78.24	9.99
AMPS	41.43	37.77	32.70	24.31	16.68	9.84	5.62

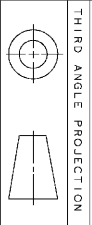
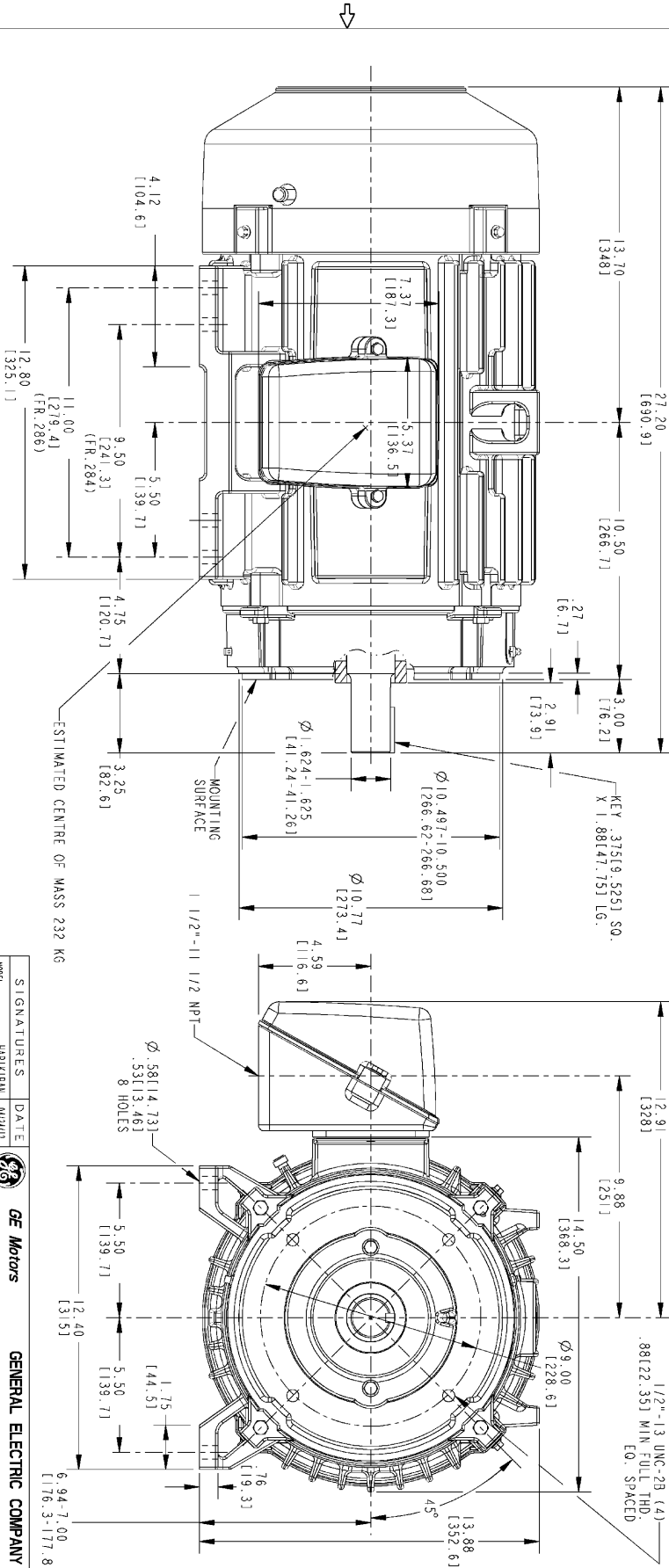
**TORQ(FL)N-m** 60.22      **TORQ(LR)%FL** 264.10      **TORQ(BD)%FL** 240.17  
**AMPS(LR)** 207.68      **PF AT START** 0.43

This motor is capable of two cold or one hot start with a maximum connected load inertia of 136.0 Lb-Ft Sq (5.7 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 23 seconds. Safe stall time at 100% voltage is 39 seconds cold, 30 seconds hot. Rotor inertia is 3.25 Lb-Ft Sq (0.137 Kg-meter Sq).

**Open Circuit A-C:** 1.062      **Short Circuit D-C:** 0.014  
**Short Circuit A-C:** 0.025      **X/R Ratio:** 5.179  
**Stator Slots:** 48      **Rotor Slots:** 38



NOTE 1: CONDUIT BOX MAY BE ASSEMBLED WITH ENTRANCE UP, DOWN OR TO EITHER SIDE.  
 NOTE 2: F1 ASSEMBLY AS SHOWN. F2 ASSEMBLY CONDUIT BOX ON OPPOSITE SIDE FROM SHOWN LOCATION.  
 NOTE 3: MOUNTING SURFACES WILL BE SQUARE AND CONCENTRIC WITH SHAFT WITHIN .004 T.I.R.  
 NOTE 4: SHAFT RUNOUT WILL NOT EXCEED .002 T.I.R.



DEGREE OF PROTECTION	IP 55
METHOD OF COOLING	IC411
MOUNTING ORIENTATION	IM B34

SIGNATURES	DATE	<p><b>GENERAL ELECTRIC COMPANY</b></p>
MODEL	HA/KIRAN 04/2012	
DRAWN	HA/KIRAN 04/2012	
CHECKED	VIJAY 04/2012	
ENGINEER	HA/KIRAN 04/2012	
DATE	04/2012	
QUALITY	HA/KIRAN 04/2012	
ISSUED	HA/KIRAN 04/2012	
SOLID MODEL: 4002B5828PBP5408		
SCALE: 0.250	REF. No: 4002B5828PBP5221	
SIZE DRAWING	REV	
<b>4002B5828PBP5408</b>	<b>0</b>	
TITLE	INDUCTION MOTOR OUTLINE	
DESCRIPTION	"C" FACE AT DRIVE END (0.50" RABBIT) CE MARK	
MODEL	FMF-FR280TSC TEFC XSD ULTRA	
SHEET 1 OF 1		



## Manufacturer's Declaration of Conformity

*Manufacturer's Name and Address:*

### GE Motors

General Electric Company  
1030 Swinney Avenue  
Fort Wayne, IN 46802

We declare, under our sole responsibility, products identified in this declaration are in conformity with the essential requirements of Council Directives listed below:

The electrical apparatus for which this declaration is issued, GE Motor Model number **5KS286SAA163**, manufactured in the year **2012** is in conformity with the instructions of (2006/95/EC) Low Voltage. The conformity with the instructions of this directive is provided by compliance with the essential health and safety requirements of the following European standards:

- EN60034-1: 2006-06 Rotating Electrical Machines - Part 1: Rating and Performance
- EN60034-5: 2007-01 Rotating electrical machines - Part 5: Degrees of protection provided by the integral design of rotating electrical machines (IP Code) - Classification.
- EN60034-6: 1994 Rotating electrical machines- Part 6: Methods of cooling (IC Code)
- EN60034-7: 1993 Rotating electrical machines - Part 7: Classification of types of constructions, mounting arrangements and terminal box position (IM Code) (Amended to A1: 2000)
- EN60034-9: 2005 Rotating electrical machines - Part 9: Noise limits (Amended to A1: 2007)

The Technical Construction File is maintained on behalf of the manufacturer by:

Name: Alessandro Venturi  
Title: Region Manager Europe, Middle East, Africa  
Address: General Electric International  
Via Roberto Lepetit 8/10  
20124 Milano, Italy  
Phone/Email: +39 0267335705 / alex.venturi3@ge.com

The Responsible Person, based within the European Community is:

Name: Alessandro Venturi  
Title: Region Manager Europe, Middle East, Africa  
Address: General Electric International  
Via Roberto Lepetit 8/10  
20124 Milano, Italy  
Phone/Email: +39 0267335705 / alex.venturi3@ge.com

The Authorized Signatory to this declaration, on behalf of the manufacturer, is:

Name: Pat Morello  
Title: General Manager, Motors and Controls  
Address: General Electric Company  
1635 Broadway

Fort Wayne, IN 46801 USA

Phone /Email: 260-402-0937 / [Pat.morello@ge.com](mailto:Pat.morello@ge.com)

Signature: \_\_\_\_\_

Date: \_\_\_\_\_ Wednesday, April 25, 2012

