

# Product Information Packet

May 26, 2017

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

<b>Model Number:</b>	<b>5KAF405SAA331A</b>
<b>Catalog Number:</b>	<b>M9335</b>
<b>Instruction Manual:</b>	GEI-56128
<b>Connection Diagram:</b>	GEM2034E-FIG3
<b>Outline Drawing:</b>	239C7400AA

## Accessory Connection Diagrams

<b>Bearing Thermocouple:</b>	None	<b>Heater:</b>	None
<b>RTD:</b>	None	<b>Thermistor:</b>	None
<b>Thermostat:</b>	3027JE-2A	<b>Winding Thermocouple:</b>	None
<b>Bearing RTD:</b>	None		

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imagination at work

**Marks:**

<b>MODEL NUMBER:</b>	<b>5KAF405SAA331A</b>		
<b>Outline Drawing:</b>	239C7400AA	<b>Service Factor:</b>	1.15
<b>Connection Diagram:</b>	GEM2034E-FIG3	<b>Alt Service Factor:</b>	--
<b>Instruction Book:</b>	GEI-56128	<b>ASD Type:</b>	PWM
<b>Design Code:</b>	40BD3057A	<b>Time Rating:</b>	CONT
<b>Type:</b>	KAF	<b>Enclosure:</b>	TEBV
<b>Frame:</b>	405T	<b>Encl Construction:</b>	A\$D
<b>Phases:</b>	3	<b>Ambient Max (°C):</b>	40
<b>Poles:</b>	6	<b>Alt Ambient Max(°C):</b>	--
<b>Output Power:</b>	75HP 55.5KW	<b>Insulation Class:</b>	H
<b>Output Power (2):</b>	75HP 55.5KW	<b>NEMA Design:</b>	-
<b>Output Power (3):</b>		<b>Nominal Efficiency:</b>	94.5 %
<b>RPM:</b>	1781	<b>Guaranteed Efficiency:</b>	93.6 %
<b>RPM (2):</b>	1190	<b>3/4 Load Efficiency:</b>	94.9 %
<b>RPM (3):</b>	-	<b>KVA Code:</b>	H
<b>Voltage:</b>	230/460	<b>Max KVAR:</b>	27.2
<b>Voltage (2):</b>	230/460	<b>Power Factor:</b>	82.5
<b>Voltage (3):</b>	6.5/13.0	<b>Service Factor SINE:</b>	1.15
<b>Hertz:</b>	90	<b>Service Factor ASD:</b>	1
<b>Hertz – 2:</b>	60	<b>Min Supply Wires:</b>	75 C
<b>Hertz – 3:</b>	0.5	<b>IP:</b>	55
<b>Amps – FL:</b>	169.4/84.7	<b>Vibration Limit:</b>	0.04 mm/s
<b>Amps – FL- 2:</b>	180.0/90.0	<b>Bearing Lubrication:</b>	NULL
<b>Amps - FL- 3:</b>	180.0/90.0	<b>Bearing - DE:</b>	6316ZC3
<b>Speed Range RPM:</b>	1-1190	<b>Bearing - ODE:</b>	6316ZC3
<b>Const HP RPM:</b>	1190-1781	<b>Estimated Weight:</b>	1390 Lbs

**Totally Enclosed Blower-Ventilated****Stamped Nameplate Notes:**

ALTERNATE RATING FOR PWM CONTROL: 1.0SF 40C AMB  
 INVERTER DUTY CONSTANT TORQUE RANGE: 0-60HZ  
 THERMOSTAT LEADS TB1-TB2 TRIP  
 IP 55  
 CLASS H INS WITH CLASS F RISE AT 1.00SF,  
 INVERTER DUTY PER NEMA MG1 PART 31  
 WITH PWM CONTROL

**Additional Information:**

6P - T EXTN  
 C/BOX 700 CU IN - 3.00" NPT  
 E/S GROUND BOLT MTD ON DE C/BOX SIDE NEAR FOOT  
 OIL RESISTANT SLEEVING ON LEADS  
 TACH PROVISION MOTOR

N.C. TRIP TSTAT LDS TO MAIN CONDUIT BOX  
F1 MOUNTING  
BLOWER MOTOR 208-230/460V, 1.7-2.0/1.0AMPS, 0.5HP  
BLOWER MOTOR 60/50HZ, RPM 1725/1426  
PAINTED ODE ACCESSORY RABBET  
SHAFT GROUNDING RING MOUNTED ON DE BRG CAP



**Performance Characteristics**

1st Winding 1st Connection

**Design: 40BD3057A****Marks:**

LOAD %	125.0	115.0	100.0	75.0	50.0	25.0	0.0
% EFF	93.62	93.96	94.6	94.9	94.86	92.86	0.00
% PF	84.94	84.24	82.63	77.6	66.8	43.7	2.69
AMPS	110.34	101.99	89.61	71.49	55.39	43.25	37.77

TORQ(FL)#FT 331.44  
AMPS(LR) 600.01

TORQ(LR)%FL 124.61  
PF AT START 0.33

TORQ(BD)%FL 296.05

This motor is capable of two cold or one hot start with a maximum connected load inertia of 2656 Lb-Ft Sq (111.82 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 24 seconds. Safe stall time at 100% voltage is 66 seconds cold, 36 seconds hot. Rotor inertia is 26.19 Lb-Ft Sq (1.1 Kg-meter Sq).

Open Circuit A-C: 0.597

Short Circuit D-C: 0.015

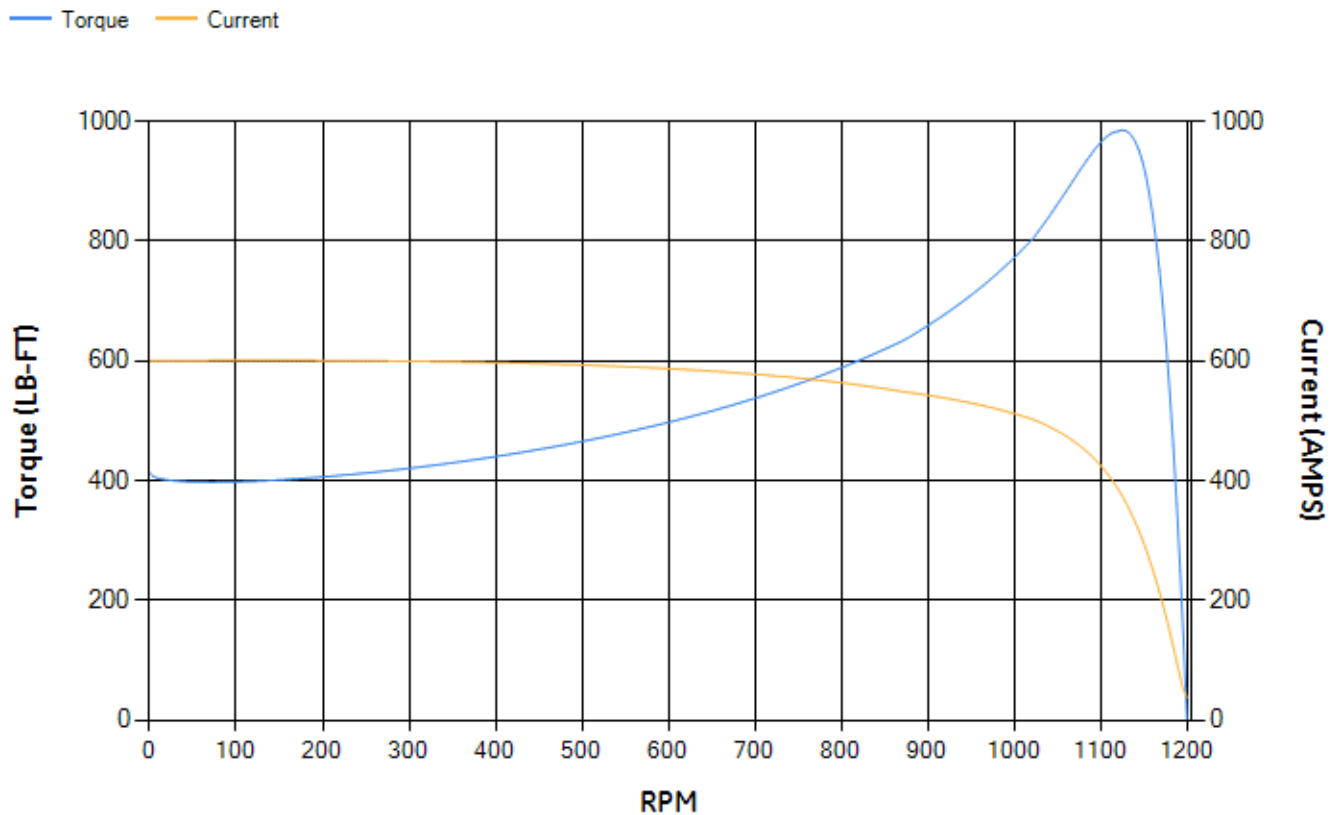
Short Circuit A-C: 0.032

X/R Ratio: 5.531

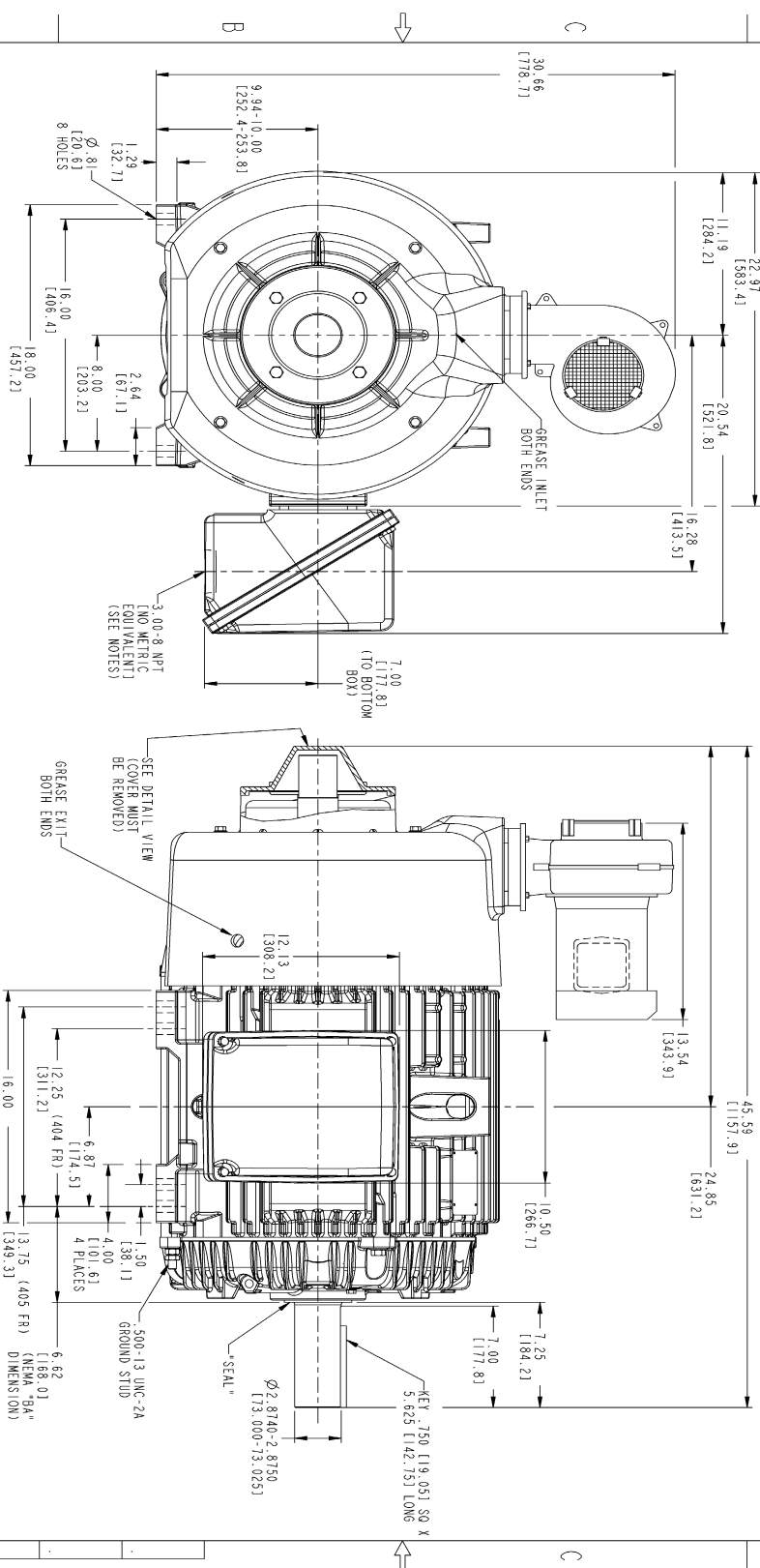
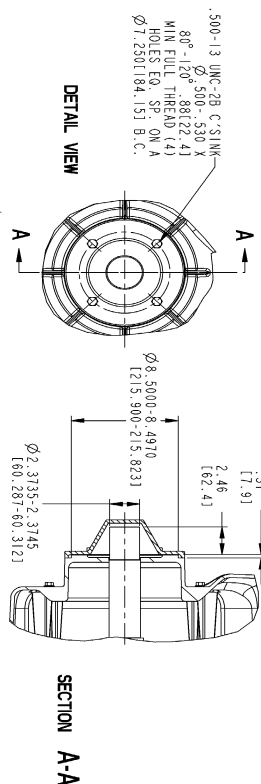
Stator Slots: 72

Rotor Slots: 58

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



**Marks:**



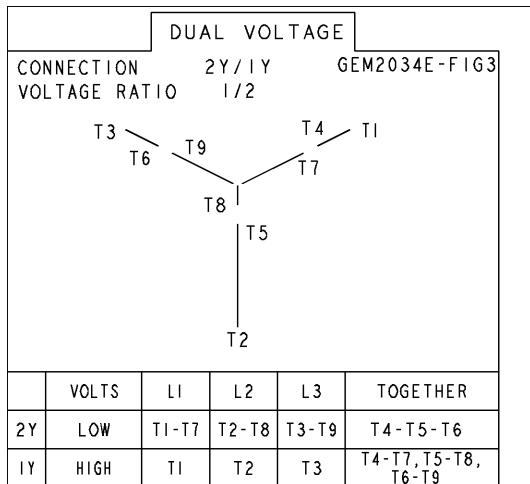
1. CONDUIT BOX MAY BE PLACED WITH THE ENTRANCE DOWN, UP OR ON EITHER SIDE.
2. F-1 ASSEMBLY AS SHOWN.
3. F-2 ASSEMBLY CONDUIT BOX ON OPPOSITE SIDE.
4. BRACKETED DIMENSIONS ARE METRIC (MILLIMETERS).

	C	239C7400AA	0	1
<b>REVISIONS</b>				
REV.	DESCRIPTION	DATE	APPROVE	

MODEL	SIGNATURES	DATE
DETAIL	SMITHIN	04/15/08
CHECKED	TREKAI	04/15/08
DRAWN	-	-
WFG	-	-
QUALITY	-	-
ISSUED	SMITHIN	04/15/08
TITLE		
700 CU. IN. CBOX. PROV. FOR TACH. BLOWER KIT		
SCALE: 9/320	REF. NO.	SHEET 1 OF 1
DISTRIBUTION : MMP		

Marks:

**Connection Diagram**  
**GEM2034E-FIG3**



**Thermostat Connection**  
**3027JE-2A**

