GE INDUSTRIAL MOTORS
a WOLONG company

Product Technical Information

July 17, 2020

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

Model Number:	**5KE404DAJ6020C**
Catalog Number:	**VF109**
Instruction Manual:	GEI-M1045
Connection Diagram:	GEM2034E-FIG254
Outline Drawing:	148CB40VMHKCCAA0001

Accessory Connection Diagrams

Bearing Thermocouple:	None	**Heater:**	None
RTD:	None	**Thermistor:**	None
Thermostat:	None	**Winding Thermocouple:**	None
Bearing RTD:	None		

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Marks:

MODEL NUMBER:	**5KE404DAJ6020C**	**Estimated Weight:**	1160 Lbs
Outline Drawing:	148CB40VMHKCCAA0001	**Time Rating:**	CONT
Connection Diagram:	GEM2034E-FIG254	**Enclosure:**	WPI
Instruction Book:	GEI-M1045	**Encl Construction:**	OPEN
Design Code:	40BD1195A	**Ambient Max(°C):**	40
Type:	KE	**Alt Ambient Max(°C):**	--
Frame:	L404TP16	**Insulation Class:**	H
Phases:	3	**NEMA Design:**	B
Poles:	4	**Nominal Efficiency:**	94.1 %
Output Power:	100HP 74KW	**Guaranteed Efficiency:**	93.0 %
RPM:	1780	**3/4 Load Efficiency:**	--
Voltage:	230/460	**KVA Code:**	G
Hertz:	60	**Max KVAR:**	30.5
Amps - FL:	234.0/117.0	**Power Factor:**	84.5
Service Factor:	1.15	**Bearing - DE:**	6215C3
Alt Service Factor:	--	**Bearing - ODE:**	235A2532AA01

Enclosure is Weather Protected One

Stamped Nameplate Notes:

NEMA ENCLOSURE WP-I, CSA ENCL DP
ROT CCW FACING TOP LEAD/PH SEQ 1-2-3/1-2-3
INVERTER DUTY PER NEMA MG1 PART 31
ALTERNATE RATING FOR PWM CONTROL:1.0SF 40C AMBIENT
VAR TORQUE RANGE 5 -60 HZ
UPPER BRG LUBE OIL: 6 QTS
0 DEG C TO 40 DEG C : ISO 32(MINERAL OR SYNTHETIC)
-15 DEG C TO 0 DEG C : ISO 32 SYNTHETIC

Additional Information:

4P, VERT HOLLOW SHAFT HIGH THRUST (1D)
C/BOX 700 CU IN - 3.00" NPT
OIL RESISTANT SLEEVING ON LEADS
BEARING LIFE 8760 HRS AT 7539 LB THRUST
CG:18.50 IN FROM P-BASE FACE,STAT DEF:0.0032 IN
RCF:3240 CPM AT C/BOX SIDE, 3360 CPM AT
90 DEG FROM C/ BOX SIDE
NON-REVERSE BALL CARRIER,
BOLTED COUPLING, BX = 1.501, EW=0.375
FIRE PUMP MOTOR, UL FILE # 47088, VOL 22
WYE START DELTA RUN AT BOTH VOLTAGES
PART WINDING START AT LOW VOLTAGE ONLY
"CONNECTIONS TO BE VERIFIED BEFORE USING THIS MODEL"
ISAAC#19-0371 MADHAVA T

Performance Characteristics 1st Winding 1st Connection **Design: 40BD1195A**

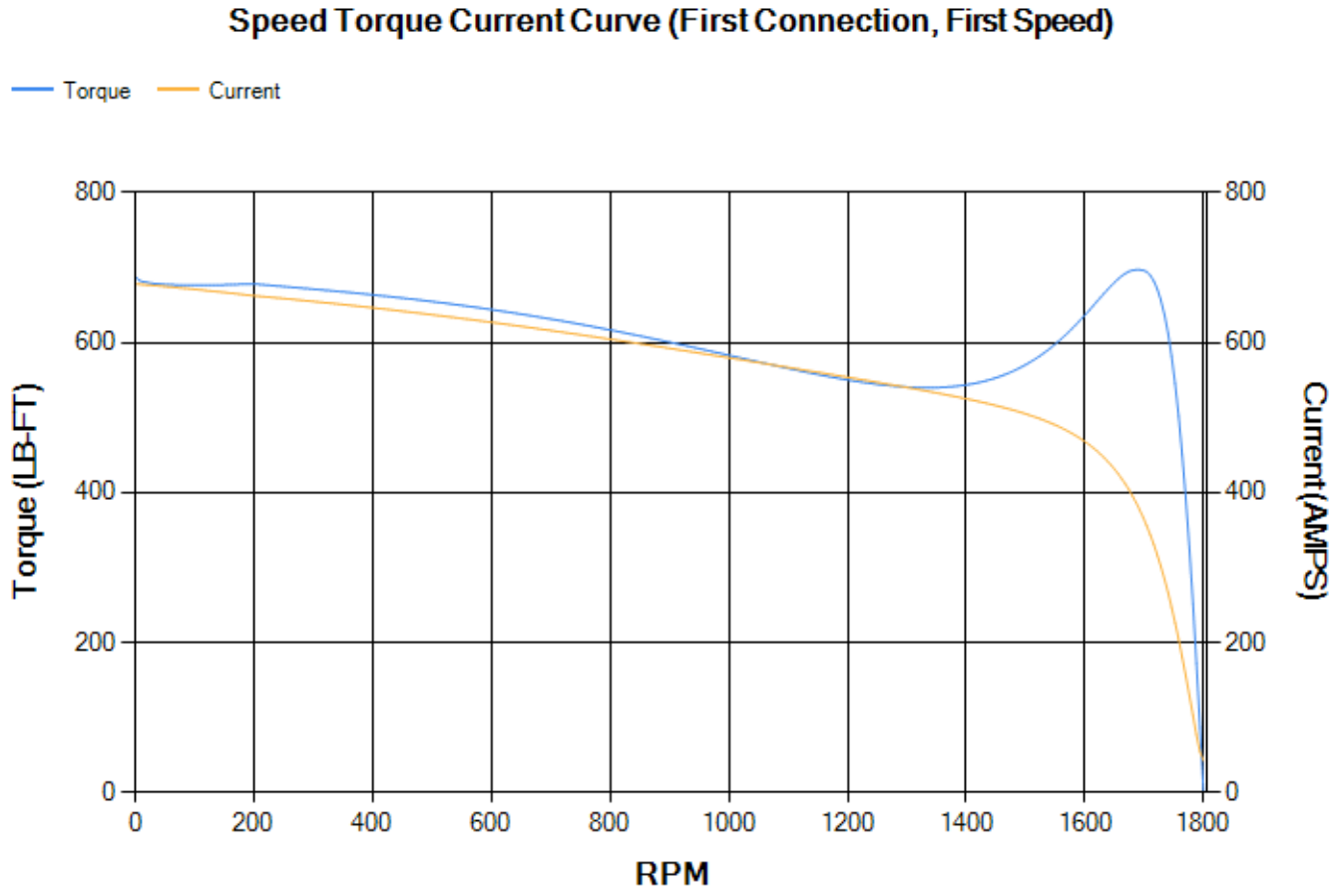
Marks:

LOAD %	125.0	115.0	100.0	75.0	50.0	25.0	0.0
% EFF	93.84	94.11	94.64	94.68	94.25	91.39	0.00
% PF	85.45	85.17	84.25	80.67	71.86	50.07	4.44
AMPS	145.89	134.28	117.39	91.9	69.1	51.13	42.61

TORQ(FL)#FT	295.31	**TORQ(LR)%FL**	233.12	**TORQ(BD)%FL**	235.69
AMPS(LR)	678.32	**PF AT START**	0.43		

This motor is capable of two cold or one hot start with a maximum connected load inertia of 1778 Lb-Ft Sq (74.85 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 20 seconds. Safe stall time at 100% voltage is 40 seconds cold, 24 seconds hot. Rotor inertia is 22.33 Lb-Ft Sq (0.94 Kg-meter Sq).

Open Circuit A-C:	0.577	**Short Circuit D-C:**	0.021
Short Circuit A-C:	0.029	**X/R Ratio:**	7.911
Stator Slots:	72	**Rotor Slots:**	58



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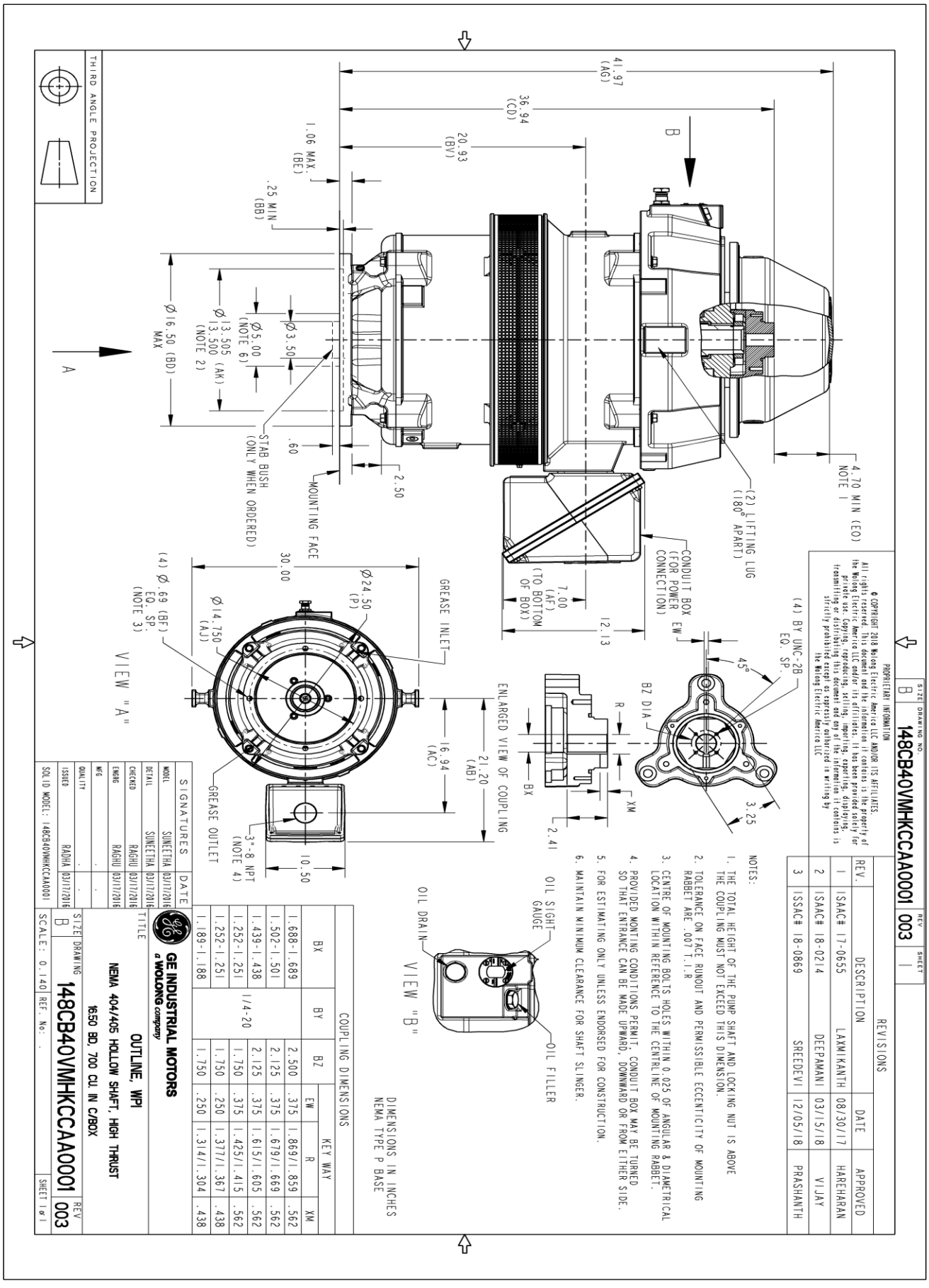

SIZE B | DRAWING NO. 148CB40VMHKCCAA0001 | REV 003 | SHEET 1

REVISIONS

REV.	DESCRIPTION	DATE	APPROVED
1	ISAAC# 17-0655 LAXMIKANTH	08/30/17	HAREHARAN
2	ISAAC# 18-0214 DEEPAMANI	03/15/18	VIJAY
3	ISSAC# 18-0869 SREEDEVI	12/05/18	PRASHANTH

NOTES:
1. THE TOTAL HEIGHT OF THE PUMP SHAFT AND LOCKING NUT IS ABOVE THE COUPLING MUST NOT EXCEED THIS DIMENSION.
2. TOLERANCE ON FACE RUNOUT AND PERMISSIBLE ECCENTICITY OF MOUNTING RABBET ARE .007 T.I.R
3. CENTRE OF MOUNTING BOLTS HOLES WITHIN 0.025 OF ANGULAR & DIAMETRICAL LOCATION WITHIN REFERENCE TO THE CENTRELINE OF MOUNTING RABBET.
4. PROVIDED MONTING CONDITIONS PERMIT, CONDUIT BOX MAY BE TURNED SO THAT ENTRANCE CAN BE MADE UPWARD, DOWNWARD OR FROM EITHER SIDE.
5. FOR ESTIMATING ONLY UNLESS ENDORSED FOR CONSTRUCTION.
6. MAINTAIN MINIMUM CLEARANCE FOR SHAFT SLINGER.

DIMENSIONS IN INCHES
NEMA TYPE P BASE

COUPLING DIMENSIONS

BX	BY	KEY WAY EW	KEY WAY R	XM
1.688-1.689	2.500	.375	1.869/1.859	.562
1.502-1.501	2.125	.375	1.679/1.669	.562
1.439-1.438	2.125	.375	1.615/1.605	.562
1.252-1.251	1.750	.375	1.425/1.415	.562
1.252-1.251	1.750	.250	1.377/1.367	.438
1.189-1.188	1.750	.250	1.314/1.304	.438

1/4-20

SIGNATURES		DATE
MODEL	SUNEETHA	03/17/2016
DETAIL	SUNEETHA	03/17/2016
CHECKED	RAGHU	03/17/2016
ENGRG	RAGHU	03/17/2016
MFG		
QUALITY		
ISSUED	RADHA	03/17/2016

SOLID MODEL: 148CB40VMHKCCAA0001

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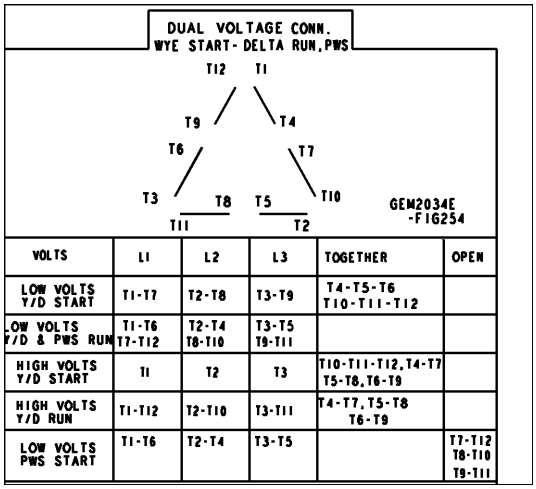
TITLE
OUTLINE, WPI
NEMA 404/405 HOLLOW SHAFT, HIGH THRUST
1650 BD, 700 CU. IN C/BOX

SIZE B | DRAWING 148CB40VMHKCCAA0001 | REV 003
SCALE: 0.140 | REF. No: . | SHEET 1 of 1

Marks:

Connection Diagram

GEM2034E-FIG254



VOLTS	L1	L2	L3	TOGETHER	OPEN
LOW VOLTS Y/D START	T1-T7	T2-T8	T3-T9	T4-T5-T6 T10-T11-T12	
LOW VOLTS Y/D & PWS RUN	T1-T6 T7-T12	T2-T4 T8-T10	T3-T5 T9-T11		
HIGH VOLTS Y/D START	T1	T2	T3	T10-T11-T12, T4-T7 T5-T8, T6-T9	
HIGH VOLTS Y/D RUN	T1-T12	T2-T10	T3-T11	T4-T7, T5-T8 T6-T9	
LOW VOLTS PWS START	T1-T6	T2-T4	T3-T5		T7-T12 T8-T10 T9-T11

End shield Assembly		
Part Description	DE Side Part#	ODE Side Part#
End Shield	115E7306AC1	115E7310LJ1
Bearing	235A2513AL01	235A2532AA01
Slinger/Inproseal	235A2300HW1	

Fan & Fan Cover Assembly	
Part Description	Part#
Fan	
Fan Cover	161C1054AA1

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

Mechanical Accessories	
Part Description	Part#
Brake	
Tachometer	