

PRODUCT INFORMATION PACKET



Model No: 193331.60
Catalog No: 193331.60
50 HP General Purpose, 3 phase, 1800 RPM, 230/460 V, 225S Frame, TEFC
Cast Iron Motors



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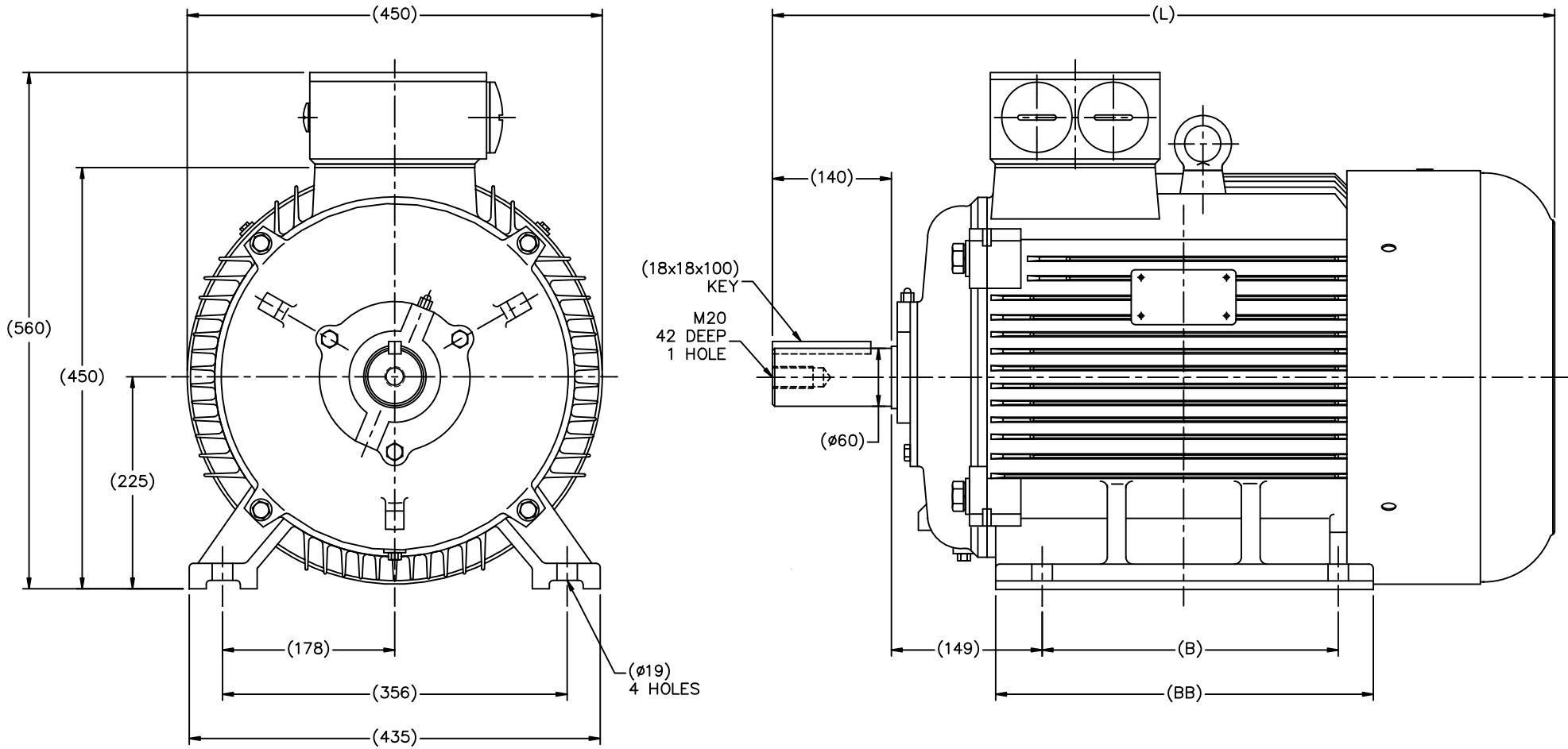
Nameplate Specifications

Output HP	50 Hp	Output KW	37.0 kW
Frequency	60 Hz	Voltage	230/460 V
Current	118.0/59.0 A	Speed	1785 rpm
Service Factor	1.15	Phase	3
Efficiency	94.5 %	Power Factor	84
Duty	Continuous	Insulation Class	F
Design Code	B	KVA Code	G
Frame	225S	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	Thermostats (N/C)	Ambient Temperature	40 °C
Drive End Bearing Size	6313	Opp Drive End Bearing Size	6313
UL	Recognized	CSA	Y
CE	Y	IP Code	55
Number of Speeds	1		

Technical Specifications

Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Wye Start Delta Run Or Inverter
Poles	4	Rotation	Reversible
Resistance Main	0 Ohms	Mounting	Rigid Base
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	IEC	Overall Length	31.96 in
Shaft Diameter	2.187 in	Shaft Extension	4.33 in
Assembly/Box Mounting	F3		
Outline Drawing	B-SS622241	Connection Drawing	004172.01

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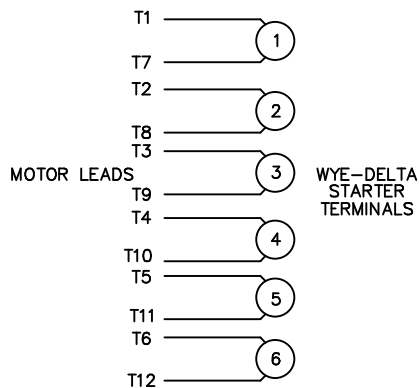
DF225S	193331.60	812	368	286
DF225M	193329.60	837	393	311
FRAME	PART #	L	BB	B

		TOLERANCES UNLESS SPECIFIED				DRAWN MSG 11-17-2010				
		DEC.	METRIC			CHK MJS 11-18-2010				
		.X	±2.5	TITLE OUTLINE - IEC PREMIUM		APPD SB 11-18-2010				
		.XX	±.76	DF225S, M-4, 6		SCALE 1=4				
		.XXX	±.127	MAT'L		REF				
		.XXXX	±.0127			FMF HEBEI				
NO.	REVISION	BY & DATE	CHK	ANG	±7'30"	FINISH	PREV			
THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH OUR WORK ALL RIGHTS OF DESIGN AND INVENTION ARE RESERVED THIS IS AN ELECTRONICALLY GENERATED DOCUMENT - DO NOT SCALE THIS PRINT				RFP	11-18-2010	CAD FILE SS622241	SIZE B	DRAWING NO. SS622241	PAGE OF	REV.

WYE - DELTA STARTING USEABLE ON 2,4 AND 6 POLE MOTORS.

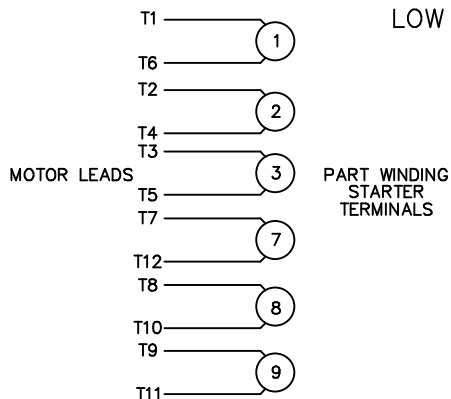
LOW VOLTAGE CONNECTION

HIGH VOLTAGE CONNECTION



REFER TO THE WYE-DELTA STARTER CONNECTION INSTRUCTIONS FOR PROPER CONNECTION OF POWER LINES TO STARTER.

PART WINDING START USABLE ON 4 & 6 POLE MOTORS
LOW VOLTAGE CONNECTION ONLY



REFER TO THE PART WINDING STARTER INSTRUCTIONS FOR PROPER CONNECTION OF POWER LINES TO STARTER.

REFER TO THE CUTLER - HAMMER OR EQUIV. FOR PROPER SELECTION OF OVERLOAD HEATER COILS.



ACROSS THE LINE START & RUN				
	LINE 1	LINE 2	LINE 3	JOIN & INSULATE SEPARATELY
HIGH VOLT	T1, T12	T2, T10	T3, T11	(T4, T7) (T5, T8) (T6, T9)
LOW VOLT	T1, T6 T7, T12	T2, T4 T8, T10	T3, T5 T9, T11	

				TOLERANCES UNLESS SPECIFIED		ELECTRIC MOTORS GEARMOTORS AND DRIVES	DRAWN WLW 09/08/77		
				DEC.	INCHES		CHK RPB 09/12/77		
				.X	±.1		APPD JCW 09/12/77		
03	REV'D LOW VOLTAGE CONN. LEADS PER ELEC.	BJB 06/07/00	.XX	±.01	TITLE DELTA - WYE CONNECTION DIAGRAM		SCALE 1=1		
02	ADDED T-STAT. NOTES PER ELECTRICAL	KMM 06/02/98	.XXX	±.005			REF		
01	REDRAWN TO CAD	DBT 06/02/97	.XXXX	±.0005	MAT'L.		FMF		
NO.	REVISION	BY & DATE	CHK	ANG	±1/2'	FINISH		PREV	
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				DIST					



**1051 CHEYENNE AVE.
GRAFTON, WI 53024
PH. 262-377-8810**

CATALOG #: 193331.60

CONN. DIAGRAM: 004172.01

OUTLINE: B-SS622241

MOUNTING: F3

WINDING #: T18304023 3

TYPICAL MOTOR PERFORMANCE DATA

HP	kW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
50&40	37.0&30.0	1800	1785&1485	225S	TEFC	G	B

PH	Hz	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB°C
3	60/50	230/460&200/400	118/59&111/55.5	Y START D RUN OR INV	CONTINUOUS	F5	1.15/1.15	40

FULL LOAD EFF:	94.5&94.1	3/4 LOAD EFF:	94.5	1/2 LOAD EFF:	94.1	GTD. EFF		ELEC. TYPE	
FULL LOAD PF:	84&82.5	3/4 LOAD PF:	81.5	1/2 LOAD PF:	74.5	93.6		SQ CAGE INV RATED	

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B,D. TORQUE	F.L. RISE°C
147 LB-FT	710 / 355	221 LB-FT 150 %	406 LB-FT 276 %	65

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS / HOUR	APPROX. MOTOR WGT
57 dBA	67 dBA	- LB-FT^2	- LB-FT^2	20 SEC.	-	712 LBS.

***** SUPPLEMENTAL INFORMATION *****

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
STANDARD	STANDARD	RIGID	HORIZONTAL	PREMIUM SEVERE DUTY	NONE	FALSE	NONE	BLUE - LEESON (ENAMEL)

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	ODE						
BALL	BALL	POLYREX EM	STANDARD IEC	NONE	NONE	AISI 1045 (C-240)	CAST IRON
6313	6313						

THERMO-PROTECTORS				THERMISTORS	CONTROL	SPACE HEATERS
THERMOSTATS	PROTECTORS	WDG RTDs	BRG RTDs			
TSTATS (N/C)	NOT	NONE	NONE	NONE	FALSE	NONE VOLTS

*
N
O
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E

INVERTER TORQUE: CONSTANT 10:1
INV. HP SPEED RANGE: NONE
ENCODER: NONE NONE NONE NONE NONE PPR
BRAKE: NONE NONE NONE P/N NONE NONE NONE NONE FT-LB NONE V NONE Hz

Data Sheet

Date: 1/19/2018

193331.60



Data @ **460 V**

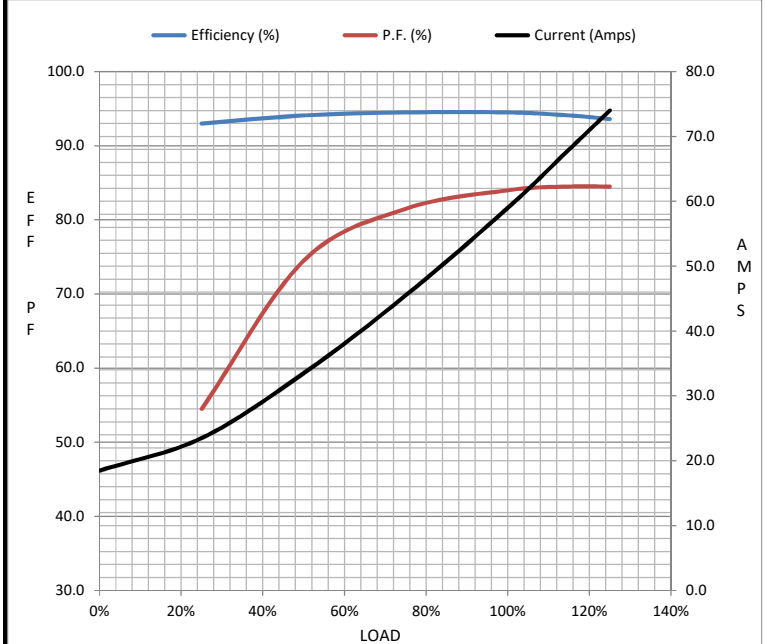
Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	18.5	23.5	33.5	45.5	59.0	68.0	74.0	355
Torque (ft-lb)	0.00	36.5	73.0	110	147	170	185	221
RPM	1800	1796	1794	1790	1785	1.780	1779	0
Efficiency (%)		93.0	94.1	94.5	94.5	94.1	93.6	
P.F. (%)	5.5	54.5	74.5	81.5	84.0	84.5	84.5	30.0

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	900	1730	1785	1800
Current (Amps)	355	316	216	59.0	18.5
Torque (ft-lb)	221	173	406	147	0.00

Information Block				
HP	50.0			
Sync. RPM	1800			
Frame	225			
Enclosure	TEFC			
Construction	TFC			
Voltage	230/460#200/400 V			
Frequency	60 Hz			
Design	B			
LR Code letter	G			
Service Factor	1.15			
Temp Rise @ FL	65 °C			
Duty	CONT			
Ambient	40 °C			
Elevation	1,000 feet			
Rotor/Shaft wk ²	0.00 Lb-Ft ²			
Ref Wdg	T18304023 NONE			
Sound Pressure @ 1M	57 dBA			
VFD Rating	CONSTANT 10:1			
Outline Dwg	B-SS622241			
Conn. Diag	004172.01			
Additional Specifications:				
0				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.0000	0.0000	0.0000	0.0000	0.0000



Speed - Torque Curve

