

Technical Documentation

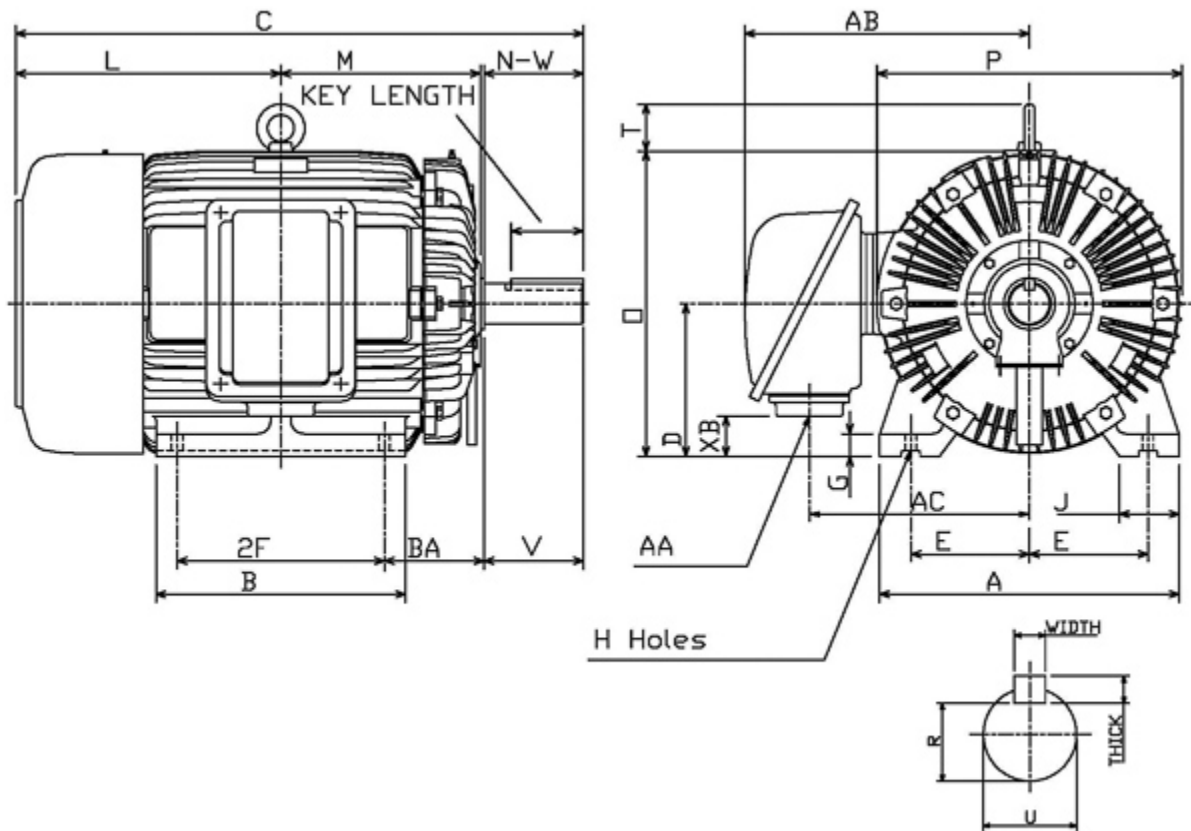
PDH0508

Optim TEFC | AEHH8N

Date: November 30, 2016

Dimensional Drawing

Catalogue	Model	HP	Pole	kW	Rating	Voltage	Hz	RPM
PDH0508	AEHH8N	50	8	37	Continuous	230 / 460 V	60	900



Frame Size		Mounting					A	B	C	CD	D
		E	2F	2F2	H	BA					
404T		8	12.25		0.81	6.62	19.7	15.15	36.3		10

G	J	K	L	M	O	P	T	Key			Keyseat
								Width	Thick	Length	R
1.55	3.95		16.3	12.52	20.04	20.08	2.76	0.75	0.75	5.65	2.45

Terminal Housing				Aux Box		C/D Flange					
AA	AB	AC	XB	AE	AX	BB	AH	AK	BD	AJ	BF
3 NPT	19.37	14.76	1.81								

Shaft Extension			Bearings		Approx. Weight Lbs	SPL dBA/3ft	Ins. Class	S.F.	Drive Method	Dimensions
N-W	U	V	DE	NDE						
7.25	2.875	7.15	6317	6313	1232	73	F	1.15	Direct Coupling / Belt Drive	Inches

Technical Data Sheet

Motor Type: AEHH8N

Catalogue No: PDH0508

Nameplate Information

HP	Pole	RPM	Frame	Voltage	Hz	Phase
50	8	885	404T	230 / 460	60	3
Enclosure	Ins. Class	Service Factor	Time Rating	NEMA Design	Rated Amb.	Rated Altitude
TEFC	F	1.15	Continuous	B	-40 to 40 °C	<3300 ft

Typical Performance

Efficiency (%)				Power Factor (%)		
Full Load		3/4 Load	1/2 Load	Full Load	3/4 Load	1/2 Load
Nom.	Min.					
93.0	91.7	93.6	93.0	80.5	77.0	67.5
Torque				Current (A)		
Full Load (lb-ft)	Locked Rotor (% FLT)	Pull Up (% FLT)	Break Down (% FLT)	No Load	Full Load	Locked Rotor
296.60	200	175	230	48.9 / 24.4	125.0 / 62.5	725 / 363
NEMA KVA Code	Inertia (WR ²)			Safe Stall Time (s)		Noise Level Sound Press. dB(A)
	Rotor (lb-ft ²)	NEMA Load (lb-ft ²)	Max. Allowable (lb-ft ²)	Cold	Hot	
G	31.465	1241.0	2666.0	36	25	73

VFD Duty Information

Speed Range			VFD		S.F.
Constant Torque	Variable Torque	Constant Power	Carrier	Type	
6-60Hz	3-60Hz	60-120Hz	≤ 5 kHz	VPWM or CPWM	1.0 Only

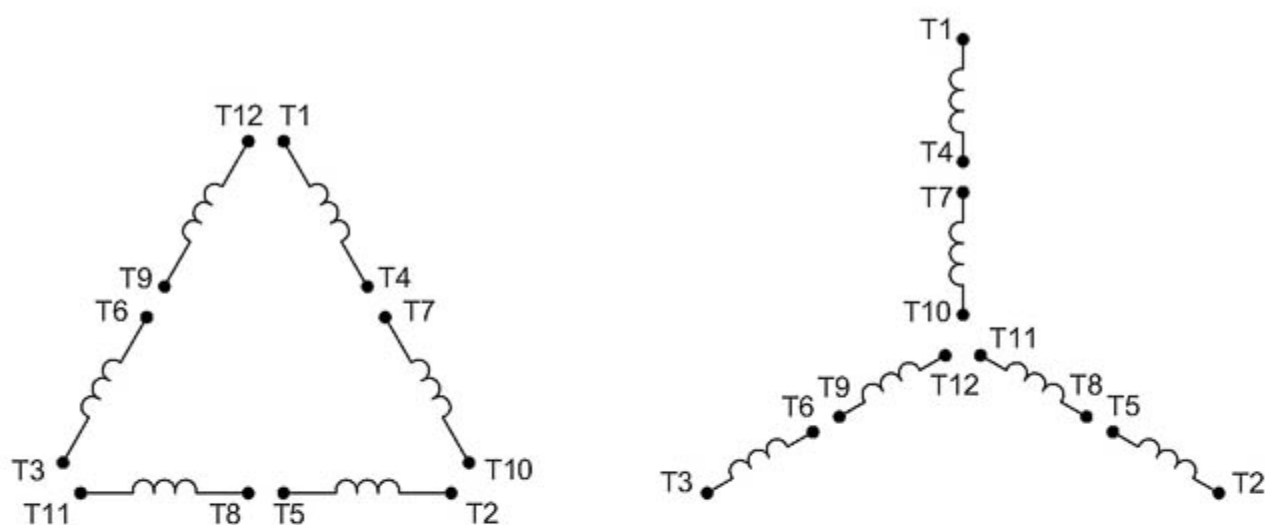
Additional Information

Bearings		Approx. Weight
DE	NDE	lbs
6317	6313	1232

Hazardous Locations Information

CSA Certified	
Class I, Div 2, Groups B, C & D Class I, Zone 2, Groups IIB+H2, IIB & IIA	
Temp Code (Sinewave / VFD)	T3A / T3A

Connection Diagram

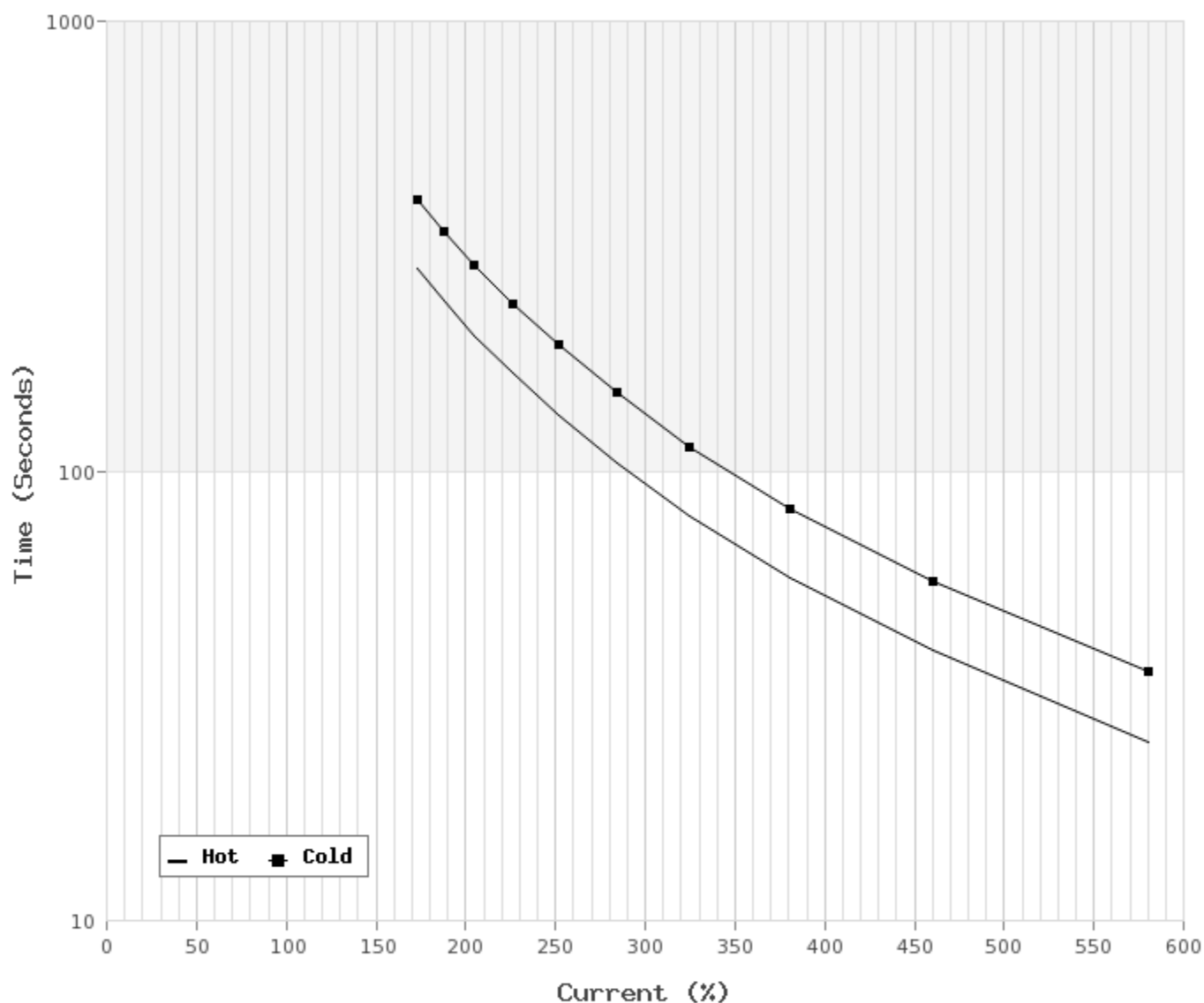


12 LEAD DUAL VOLTAGE WYE/DELTA						
VOLTAGE	CONNECTION		L1	L2	L3	JOIN
HIGH	START	WYE	1	2	3	4&7,5&8,6&9 10&11&12
	RUN	DELTA	1,12	2,10	3,11	4&7,5&8,6&9
LOW	START	2 WYE	1,7	2,8	3,9	4&5&6 10&11&12
	RUN	2 DELTA	1,6,7 12	2,4,8 10	3,5,9 11	

WD_12YD

Thermal Limit Curves

Motor Type: AEHH8N		Catalogue No: PDH0508		Family: Optim TEFC	
HP	50	Safe Stall Time		Full Load A	125.0 / 62.5 A
Voltage	230 / 460V 60Hz	Hot	25 s	Locked Rotor A	580 / 580 %
RPM	900	Cold	36 s	Locked Rotor A	725.0 / 363 A



T-N and I-N Curves

Motor Type: AEHH8N		Catalogue No: PDH0508		Family: Optim TEFC	
HP	50	Full Load T	296.60 lb-ft	Full Load A	125.0 / 62.5 A
Voltage	230 / 460V 60Hz	Locked Rotor T	200 %	Locked Rotor A	725.0 / 363.0 A
RPM	900	Pull Up T	175 %	Break Down T	230 %

