

Technical Documentation

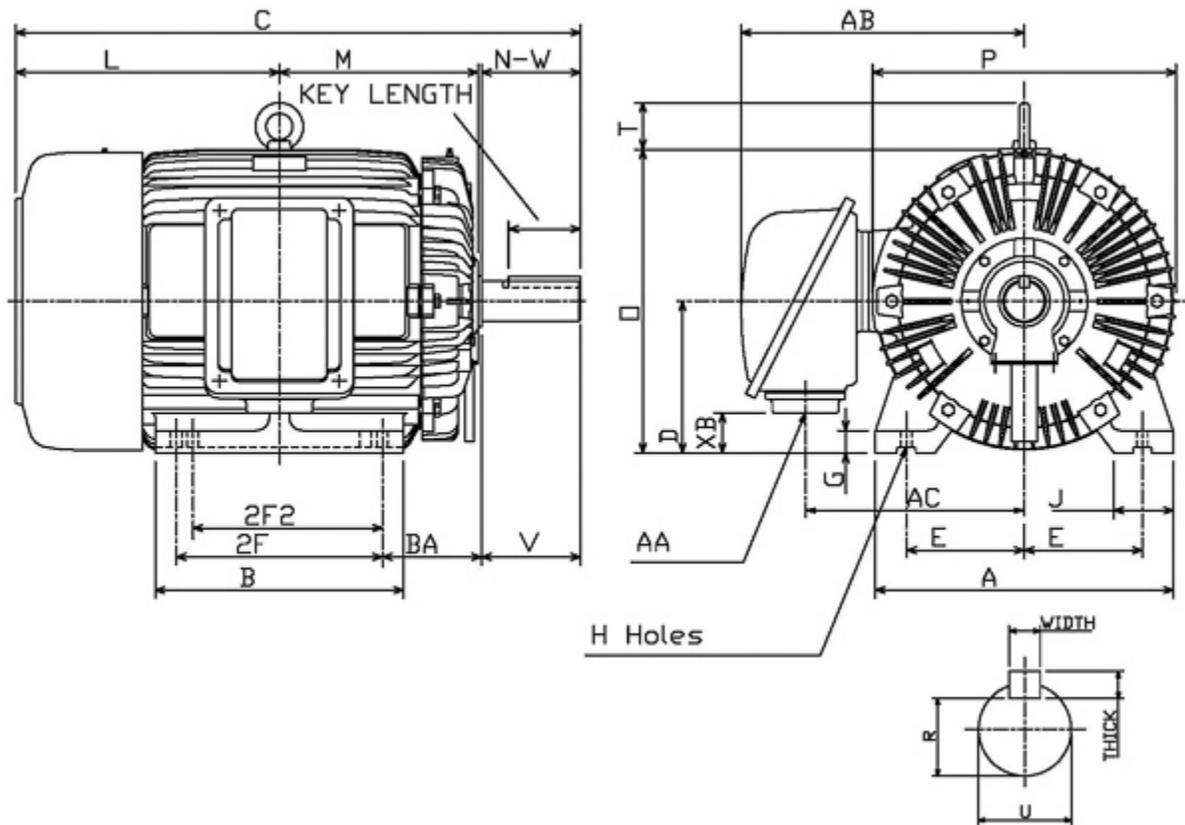
# **PDH0506**

## **Optim TEFC | AEHH8N**

Date: November 30, 2016

**Dimensional Drawing**

Catalogue	Model	HP	Pole	kW	Rating	Voltage	Hz	RPM
PDH0506	AEHH8N	50	6	37	Continuous	230 / 460 V	60	1200



Frame Size	Mounting					A	B	C	CD	D	
	E	2F	2F2	H	BA						
365T	7	12.25	11.25	0.66	5.88	17.7	14.75	33.55		9	
G	J	K	L	M	O	P	T	Key			Keyseat
1.3	3.55		15.67	11.79	18.02	18.03	2.76	Width	Thick	Length	R
								0.625	0.625	4.28	2.021
Terminal Housing			Aux Box			C/D Flange					
AA	AB	AC	XB	AE	AX	BB	AH	AK	BD	AJ	BF
3 NPT	16.81	13	2.39								
Shaft Extension			Bearings		Approx. Weight Lbs	SPL dBA/3ft	Ins. Class	S.F.	Drive Method	Dimensions	
N-W	U	V	DE	NDE							
5.88	2.375	5.75	6313	6213	959	75	F	1.15	Direct Coupling / Belt Drive	Inches	

### Technical Data Sheet

Motor Type: AEHH8N

Catalogue No: PDH0506

#### Nameplate Information

HP	Pole	RPM	Frame	Voltage	Hz	Phase
50	6	1180	365T	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.					
94.1	93.0	94.5	93.6	86.0	83.0	75.5
Torque				Current (A)		
Full Load (lb-ft)	Locked Rotor (% FLT)	Pull Up (% FLT)	Break Down (% FLT)	No Load	Full Load	Locked Rotor
222.50	225	170	240	41.8 / 20.9	115.6 / 57.9	726 / 363
NEMA KVA Code	Inertia (WR <sup>2</sup> )			Safe Stall Time (s)		Noise Level Sound Press. dB(A)
	Rotor (lb-ft <sup>2</sup> )	NEMA Load (lb-ft <sup>2</sup> )	Max. Allowable (lb-ft <sup>2</sup> )	Cold	Hot	
G	21.380	620.0	1385.0	29	20	75

#### 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

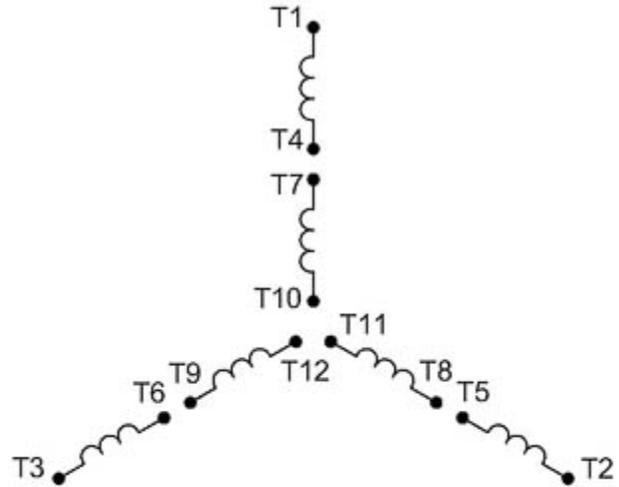
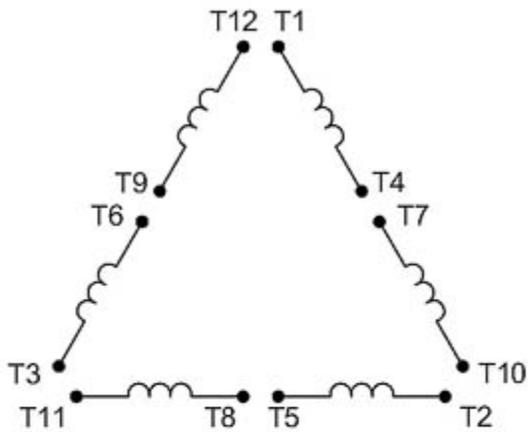
#### Additional Information

Bearings		Approx. Weight
DE	NDE	lbs
6313	6213	959

#### 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)	T3C / T3

**Connection Diagram**

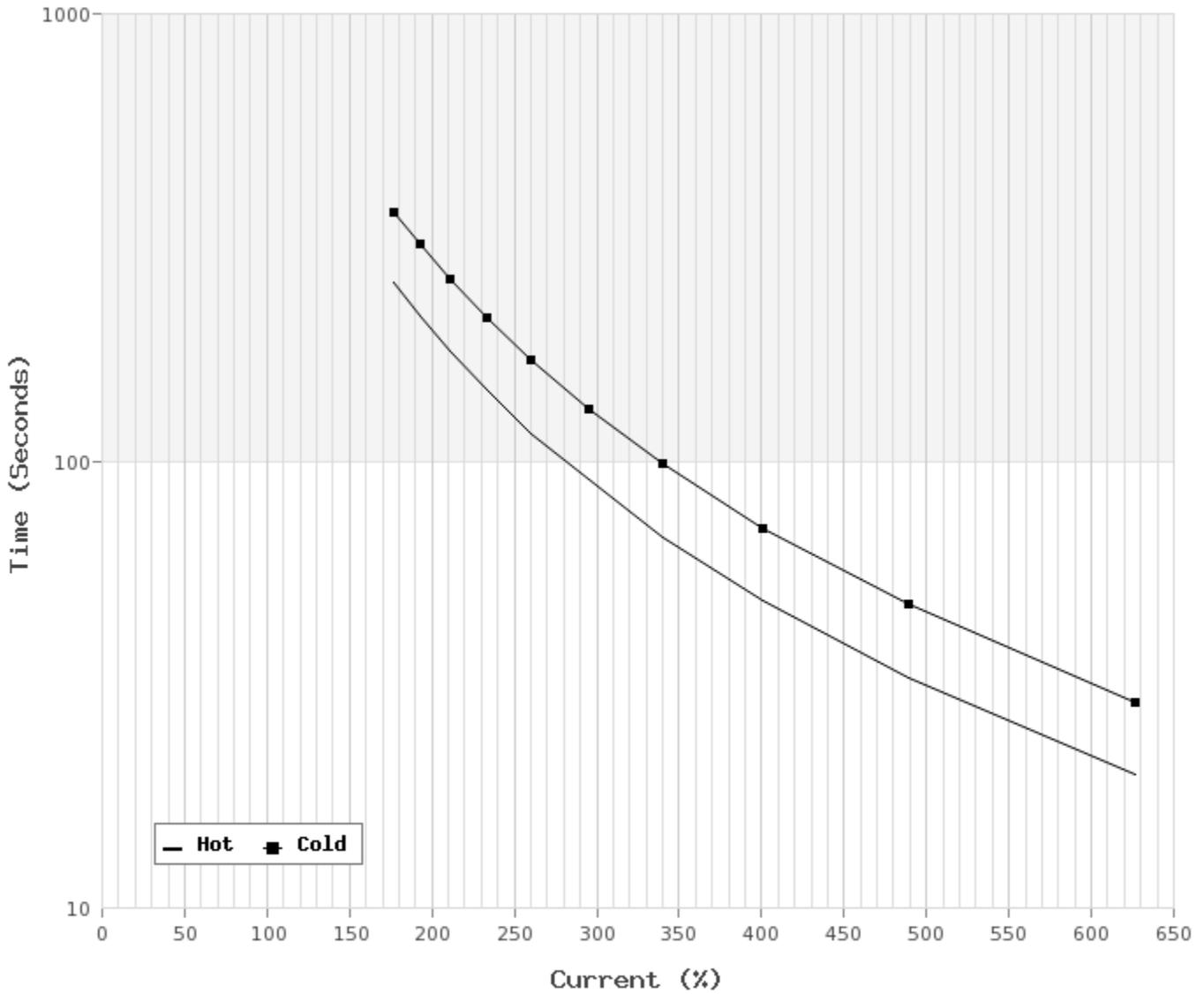


12 LEAD DUAL VOLTAGE WYE/DELTA						
VOLTAGE	CONNECTION		L1	L2	L3	JOIN
HIGH	START	WYE	1	2	3	4&7,5&8,6&9 10&11&12
	RUN	DELTA	1,12	2,10	3,11	4&7,5&8,6&9
LOW	START	2 WYE	1,7	2,8	3,9	4&5&6 10&11&12
	RUN	2 DELTA	1,6,7 12	2,4,8 10	3,5,9 11	

WD\_12YD

**Thermal Limit Curves**

Motor Type: AEHH8N		Catalogue No: PDH0506		Family: Optim TEFC	
HP	50	Safe Stall Time		Full Load A	115.6 / 57.9 A
Voltage	230 / 460V 60Hz	Hot	20 s	Locked Rotor A	628 / 627 %
RPM	1200	Cold	29 s	Locked Rotor A	726.0 / 363 A



**T-N and I-N Curves**

Motor Type: AEHH8N		Catalogue No: PDH0506		Family: Optim TEFC	
HP	50	Full Load T	222.50 lb-ft	Full Load A	115.6 / 57.9 A
Voltage	230 / 460V 60Hz	Locked Rotor T	225 %	Locked Rotor A	726.0 / 363.0 A
RPM	1200	Pull Up T	170 %	Break Down T	240 %

