

Technical Documentation

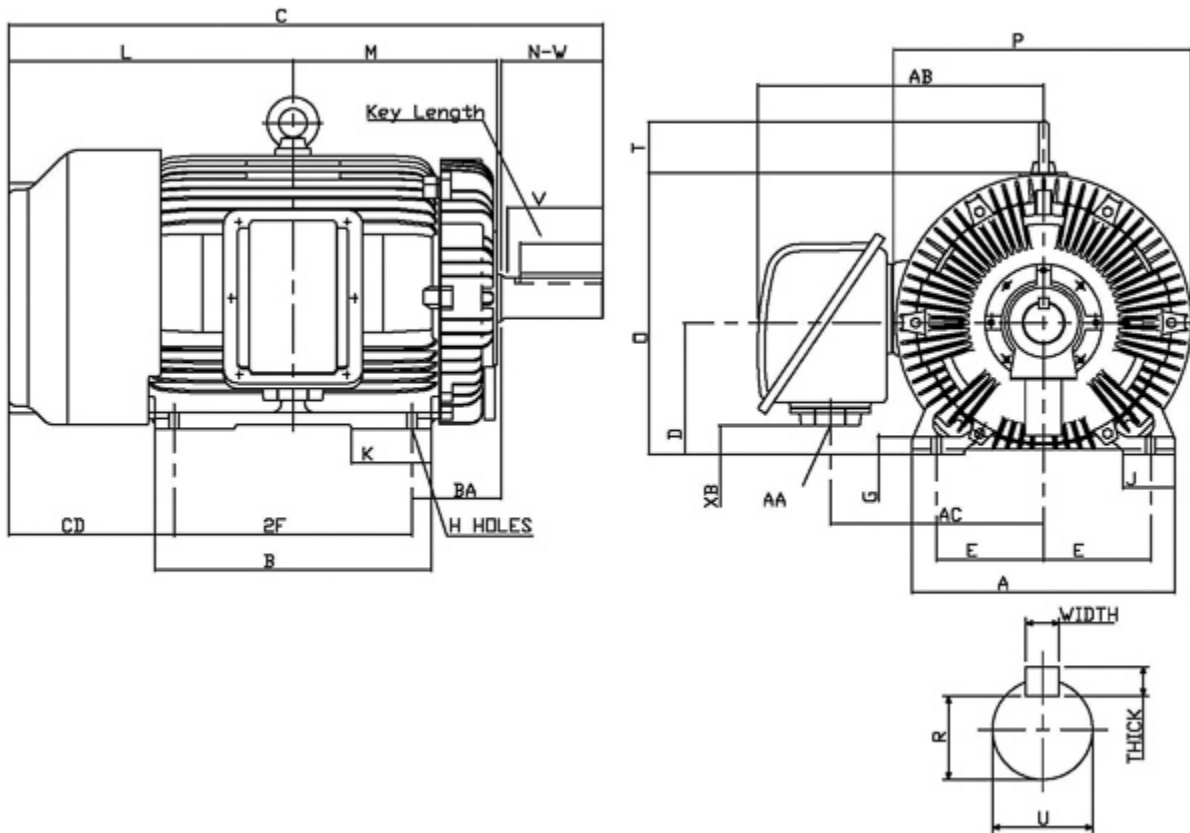
# **PDH1254**

## **Optim TEFC | AEHH8N**

Date: July 10, 2017

### Dimensional Drawing

Catalogue	Model	HP	Pole	kW	Rating	Voltage	Hz	RPM
PDH1254	AEHH8N	125	4	93	Continuous	230 / 460 V	60	1800



Frame Size	Mounting					A	B	C	CD	D	
	E	2F	2F2	H	BA						
444T	9	14.5		0.81	7.5	22.05	17.5	44.4		11	
G	J	K	L	M	O	P	T	Key			Keyseat
1.4	4.35	4.35	21.15	14.4	23.55	24.75	4.35	Width	Thick	Length	R
								0.875	0.875	6.91	2.88
Terminal Housing				Aux Box		C/D Flange					
AA	AB	AC	XB	AE	AX	BB	AH	AK	BD	AJ	BF
3 NPT	24	17.9	2.4								
Shaft Extension			Bearings		Approx. Weight Lbs	SPL dBA/3ft	Ins. Class	S.F.	Drive Method	Dimensions	
N-W	U	V	DE	NDE							
8.5	3.375	8	6318	6316	1716	81	F	1.15	Direct Coupling / Belt Drive	Inches	

### Technical Data Sheet

Motor Type: AEHH8N

Catalogue No: PDH1254

#### Nameplate Information

HP	Pole	RPM	Frame	Voltage	Hz	Phase
125	4	1780	444T	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 °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.					
95.4	94.5	95.0	94.1	84.0	82.0	77.0
Torque				Current (A)		
Full Load (lb-ft)	Locked Rotor (% FLT)	Pull Up (% FLT)	Break Down (% FLT)	No Load	Full Load	Locked Rotor
368.00	130	100	220	75.8 / 37.9	292.1 / 146.1	1815 / 908
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	
	44.300	542.0	1084.0	24	17	81

#### VFD Duty Information

Speed Range			VFD		S.F.
Constant Torque	Variable Torque	Constant Power	Carrier	Type	
12-60Hz	3-60Hz	60-90Hz	≤ 5 kHz	VPWM or CPWM	1.0 Only

#### Additional Information

Bearings		Approx. Weight
DE	NDE	lbs
6318	6316	1716

#### Hazardous Locations Information

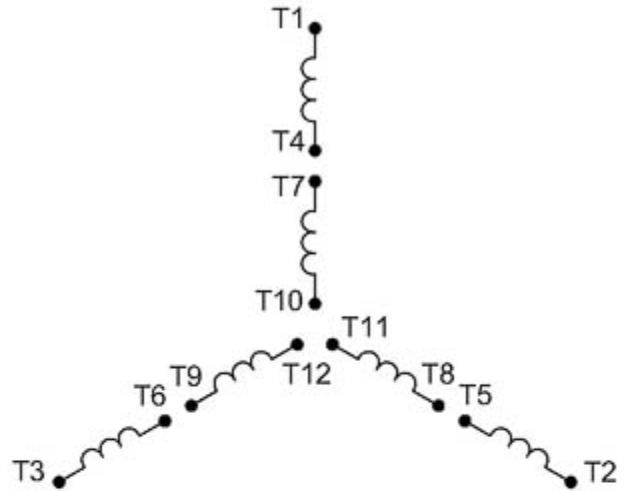
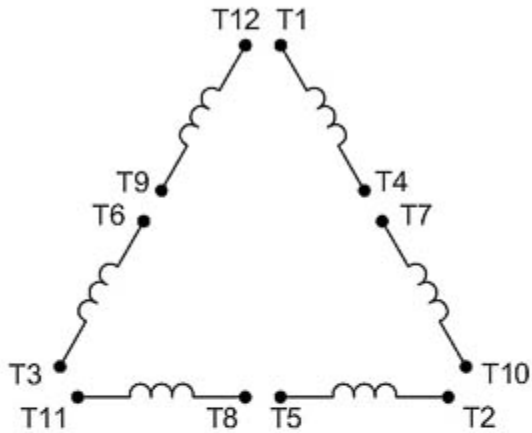
CSA Certified	
Class I, Div 2, Groups B, C & D Class I, Zone 2, Groups IIB+H2, IIB & IIA	
Temp Code (Sinewave / VFD)	T3C / T3

**Nameplate Drawing**

# Optim TEFC

TYPE	AEHH8N	CAT. NO.	PDH1254		
OUTPUT	125 HP 93 kW	FRAME	444T	TEFC	
R.P.M.	1780	POLE	4	INS.	F
VOLTS	230 / 460	PHASE	3	Hz	60
AMPS	292.1 / 146.1	CODE		S.F.	1.15
AMBIENT	40 °C	NOM. EFF. 95.4		MIN. EFF. 94.5	
BEARINGS	6318 / 6316			RATING Cont.	
SER. NO.	TBD	DESIGN	B	WT. 1716 LBS	
PWM VFD DUTY	VT	CT	CP	S.F.	
	3-60Hz	12-60Hz	60-90Hz	1.0 Only	

**Connection Diagram**

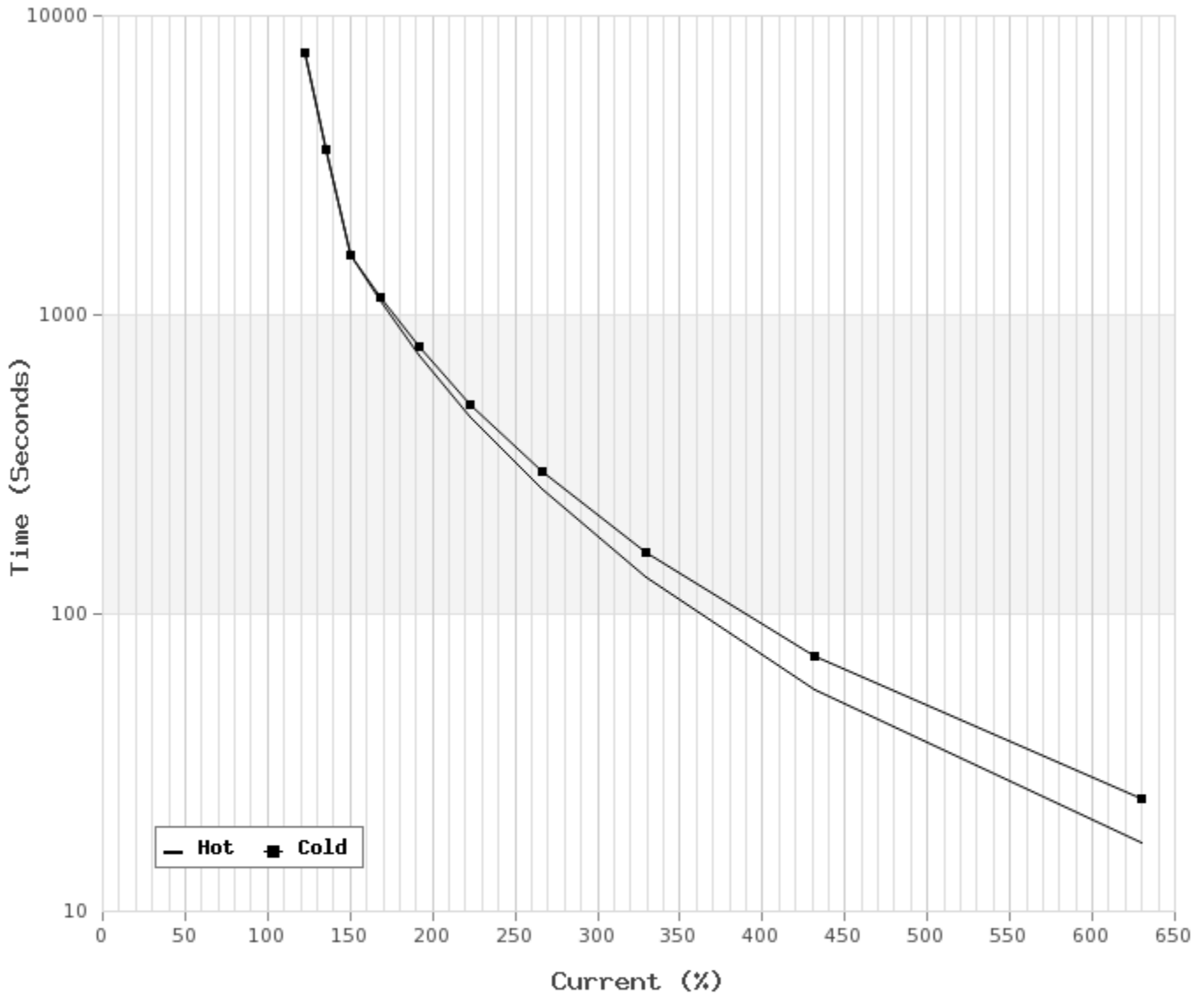


12 LEAD DUAL VOLTAGE WYE/DELTA						
VOLTAGE	CONNECTION		L1	L2	L3	JOIN
HIGH	START	WYE	1	2	3	4&7,5&8,6&9 10&11&12
	RUN	DELTA	1,12	2,10	3,11	4&7,5&8,6&9
LOW	START	2 WYE	1,7	2,8	3,9	4&5&6 10&11&12
	RUN	2 DELTA	1,6,7 12	2,4,8 10	3,5,9 11	

WD\_12YD

**Thermal Limit Curves**

Motor Type: AEHH8N		Catalogue No: PDH1254		Family: Optim TEFC	
HP	125	Safe Stall Time		Full Load A	292.1 / 146.1 A
Voltage	230 / 460V 60Hz	Hot	17 s	Locked Rotor A	621 / 622 %
RPM	1800	Cold	24 s	Locked Rotor A	1,815.0 / 908 A



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

Motor Type: AEHH8N		Catalogue No: PDH1254		Family: Optim TEFC	
HP	125	Full Load T	368.00 lb-ft	Full Load A	292.1 / 146.1 A
Voltage	230 / 460V 60Hz	Locked Rotor T	130 %	Locked Rotor A	1,815.0 / 908.0 A
RPM	1800	Pull Up T	100 %	Break Down T	220 %

