

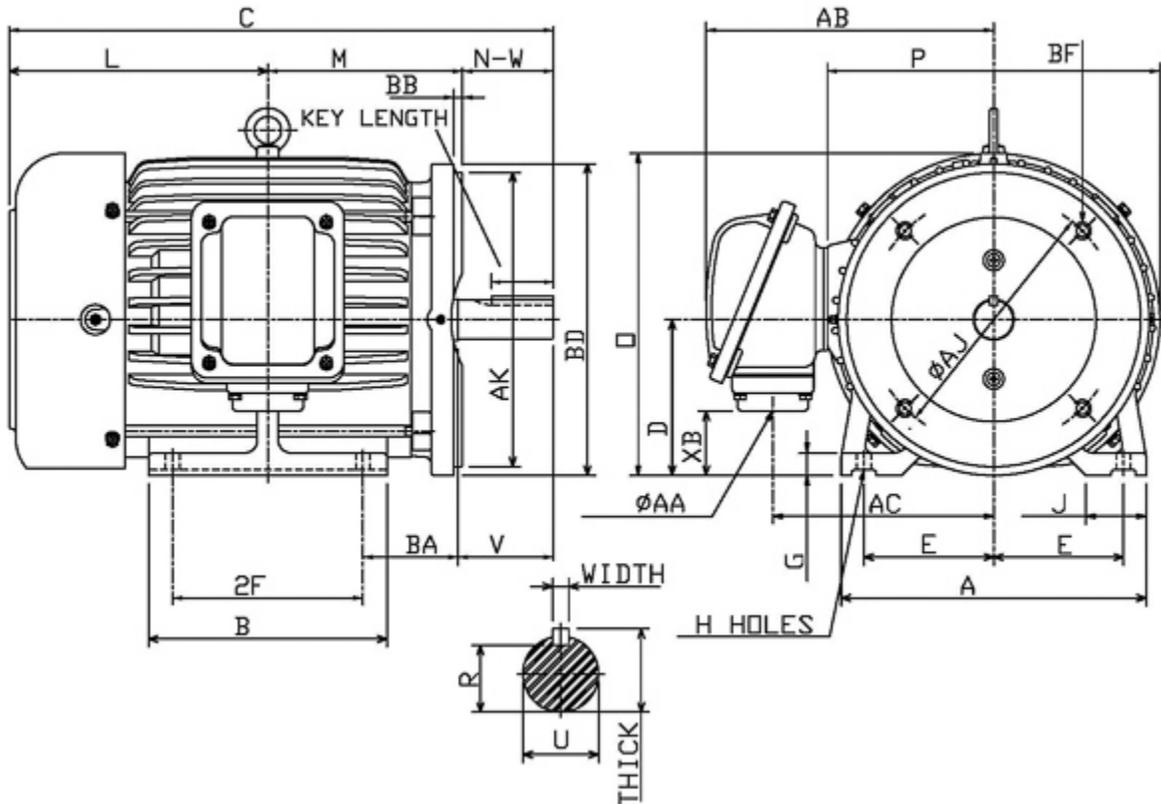
Technical Documentation

**PDH7/54C**  
**Optim TEFC | AEHH8N**

Date: July 10, 2017

### Dimensional Drawing

Catalogue	Model	HP	Pole	kW	Rating	Voltage	Hz	RPM
PDH7/54C	AEHH8N	7.5	4	5.6	Continuous	230 / 460 V	60	1800



Frame Size	Mounting					A	B	C	CD	D	
	E	2F	2F2	H	BA						
213TC	4.25	5.5		0.41	3.5	9.85	6.9	17.98		5.25	
G	J	K	L	M	O	P	T	Key			Keyseat
0.7	1.75		8.35	6.06	10.8	11.1	1.46	Width	Thick	Length	R
								0.312	0.312	2.41	1.201
Terminal Housing			Aux Box			C/D Flange					
AA	AB	AC	XB	AE	AX	BB	AH	AK	BD	AJ	BF
1 NPT	9.78	7.34	2.34			0.25	3.12	8.5	9	7.25	1/2-13UNC
Shaft Extension			Bearings		Approx. Weight Lbs	SPL dBA/3ft	Ins. Class	S.F.	Drive Method	Dimensions	
N-W	U	V	DE	NDE							
3.38	1.375	3.3	6308ZZ	6306ZZ	174	60	F	1.15	Direct Coupling / Belt Drive	Inches	

### Technical Data Sheet

Motor Type: AEHH8N

Catalogue No: PDH7/54C

#### Nameplate Information

HP	Pole	RPM	Frame	Voltage	Hz	Phase
7.5	4	1755	213TC	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.					
91.7	90.2	91.0	89.5	86.5	82.0	72.0
Torque				Current (A)		
Full Load (lb-ft)	Locked Rotor (% FLT)	Pull Up (% FLT)	Break Down (% FLT)	No Load	Full Load	Locked Rotor
22.44	250	155	270	5.5 / 2.8	17.7 / 8.9	128 / 64
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	
H	0.848	39.0	110.0	29	20	60

#### 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
6308ZZ	6306ZZ	174

#### Hazardous Locations Information

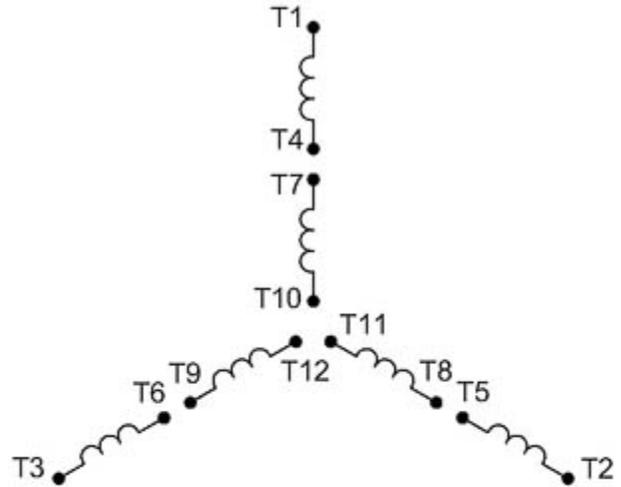
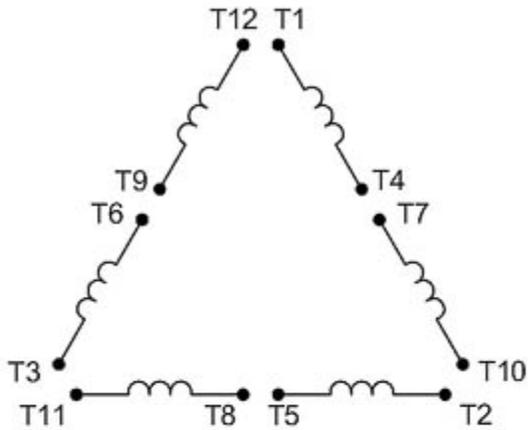
CSA Certified	
Class I, Div 2, Groups B, C & D	
Class I, Zone 2, Groups IIB+H2, IIB & IIA	
Temp Code (Sinewave / VFD)	T3C / T3B

**Nameplate Drawing**

# Optim TEFC

TYPE	AEHH8N	CAT. NO.	PDH7/54C		
OUTPUT	7.5 HP 5.6 kW	FRAME	213TC	TEFC	
R.P.M.	1755	POLE	4	INS.	F
VOLTS	230 / 460	PHASE	3	Hz	60
AMPS	17.7 / 8.9	CODE	H	S.F.	1.15
AMBIENT	40 °C	NOM. EFF. 91.7		MIN. EFF. 90.2	
BEARINGS	6308ZZ / 6306ZZ			RATING Cont.	
SER. NO.	TBD	DESIGN	B	WT. 174 LBS	
PWM VFD DUTY	VT	CT	CP	S.F.	
	3-60Hz	6-60Hz	60-120Hz	1.0 Only	

**Connection Diagram**

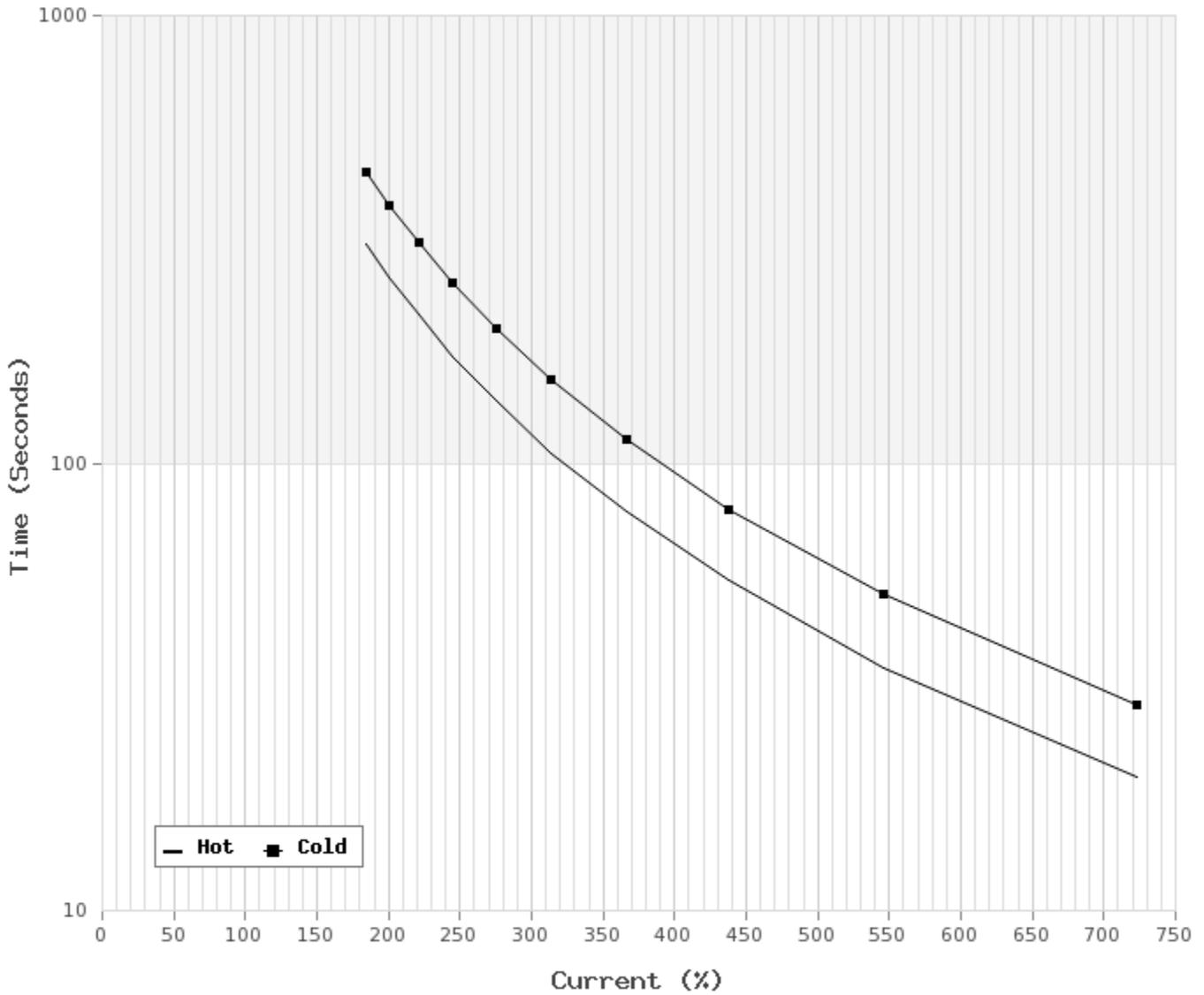


12 LEAD DUAL VOLTAGE WYE/DELTA						
VOLTAGE	CONNECTION		L1	L2	L3	JOIN
HIGH	START	WYE	1	2	3	4&7,5&8,6&9 10&11&12
	RUN	DELTA	1,12	2,10	3,11	4&7,5&8,6&9
LOW	START	2 WYE	1,7	2,8	3,9	4&5&6 10&11&12
	RUN	2 DELTA	1,6,7 12	2,4,8 10	3,5,9 11	

WD\_12YD

**Thermal Limit Curves**

Motor Type: AEHH8N		Catalogue No: PDH7/54C		Family: Optim TEFC	
HP	7.5	Safe Stall Time		Full Load A	17.7 / 8.9 A
Voltage	230 / 460V 60Hz	Hot	20 s	Locked Rotor A	723 / 723 %
RPM	1800	Cold	29 s	Locked Rotor A	128.0 / 64 A



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

Motor Type: AEHH8N		Catalogue No: PDH7/54C		Family: Optim TEFC	
HP	7.5	Full Load T	22.44 lb-ft	Full Load A	17.7 / 8.9 A
Voltage	230 / 460V 60Hz	Locked Rotor T	250 %	Locked Rotor A	128.0 / 64.0 A
RPM	1800	Pull Up T	155 %	Break Down T	270 %

