

Technical Documentation

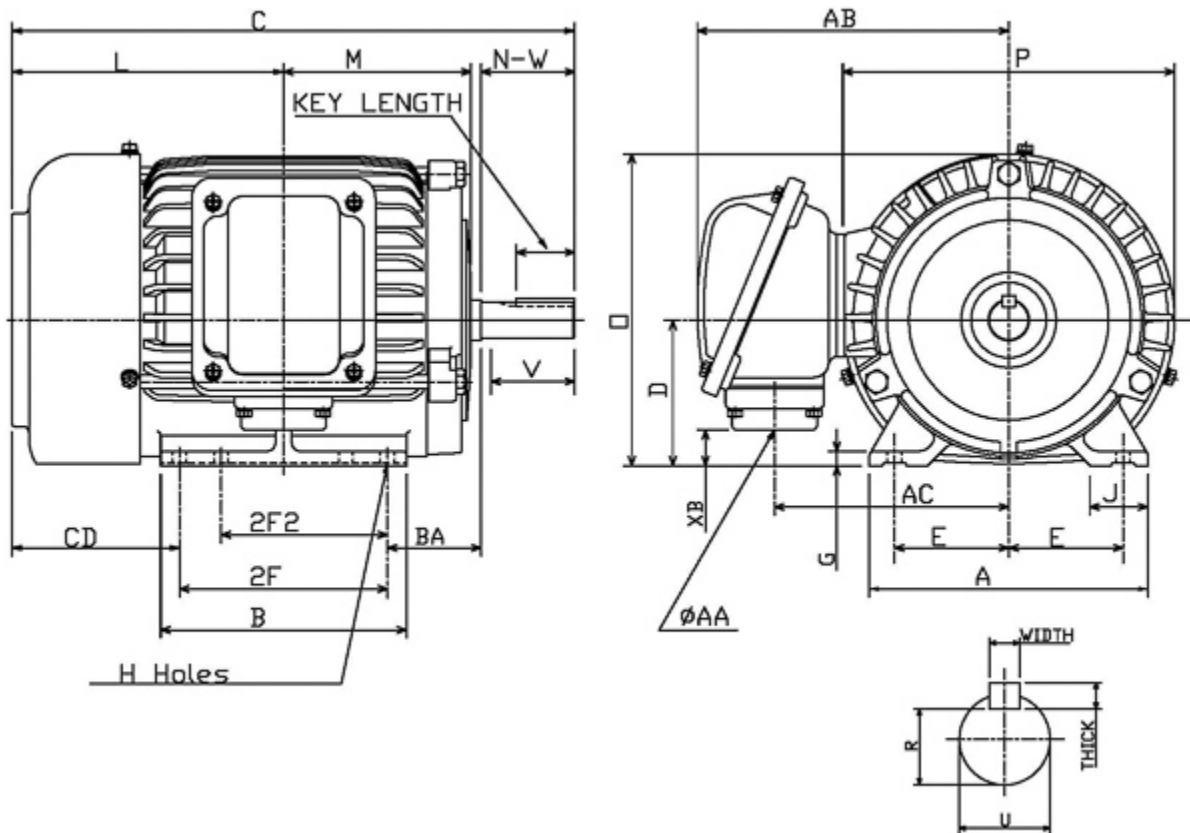
# **PDH1/54**

## **Optim TEFC | AEHH8N**

Date: November 30, 2016

### Dimensional Drawing

Catalogue	Model	HP	Pole	kW	Rating	Voltage	Hz	RPM
PDH1/54	AEHH8N	1.5	4	1.1	Continuous	230 / 460 V	60	1800



Frame Size	Mounting					A	B	C	CD	D	
	E	2F	2F2	H	BA						
145T	2.75	5	4	0.34	2.25	6.7	5.9	13.32		3.5	
G	J	K	L	M	O	P	T	Key			Keyseat
0.35	1.4		6.32	4.53	7.48	7.97		Width	Thick	Length	R
								0.188	0.188	1.41	0.771
Terminal Housing			Aux Box			C/D Flange					
AA	AB	AC	XB	AE	AX	BB	AH	AK	BD	AJ	BF
3/4 NPT	7.56	5.63	0.86								
Shaft Extension			Bearings		Approx. Weight Lbs	SPL dBA/3ft	Ins. Class	S.F.	Drive Method	Dimensions	
N-W	U	V	DE	NDE							
2.25	0.875	2.2	6205ZZ	6205ZZ	57	50	F	1.15	Direct Coupling / Belt Drive	Inches	

### Technical Data Sheet

Motor Type: AEHH8N

Catalogue No: PDH1/54

#### Nameplate Information

HP	Pole	RPM	Frame	Voltage	Hz	Phase
1.5	4	1730	145T	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.					
86.5	84.0	86.5	85.5	78.0	70.0	57.0
Torque				Current (A)		
Full Load (lb-ft)	Locked Rotor (% FLT)	Pull Up (% FLT)	Break Down (% FLT)	No Load	Full Load	Locked Rotor
4.55	300	260	360	2.2 / 1.1	4.2 / 2.1	40 / 20
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	
M	0.093	8.6	47.0	57	40	50

#### 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
6205ZZ	6205ZZ	57

#### 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 / T3C

**Connection Diagram**

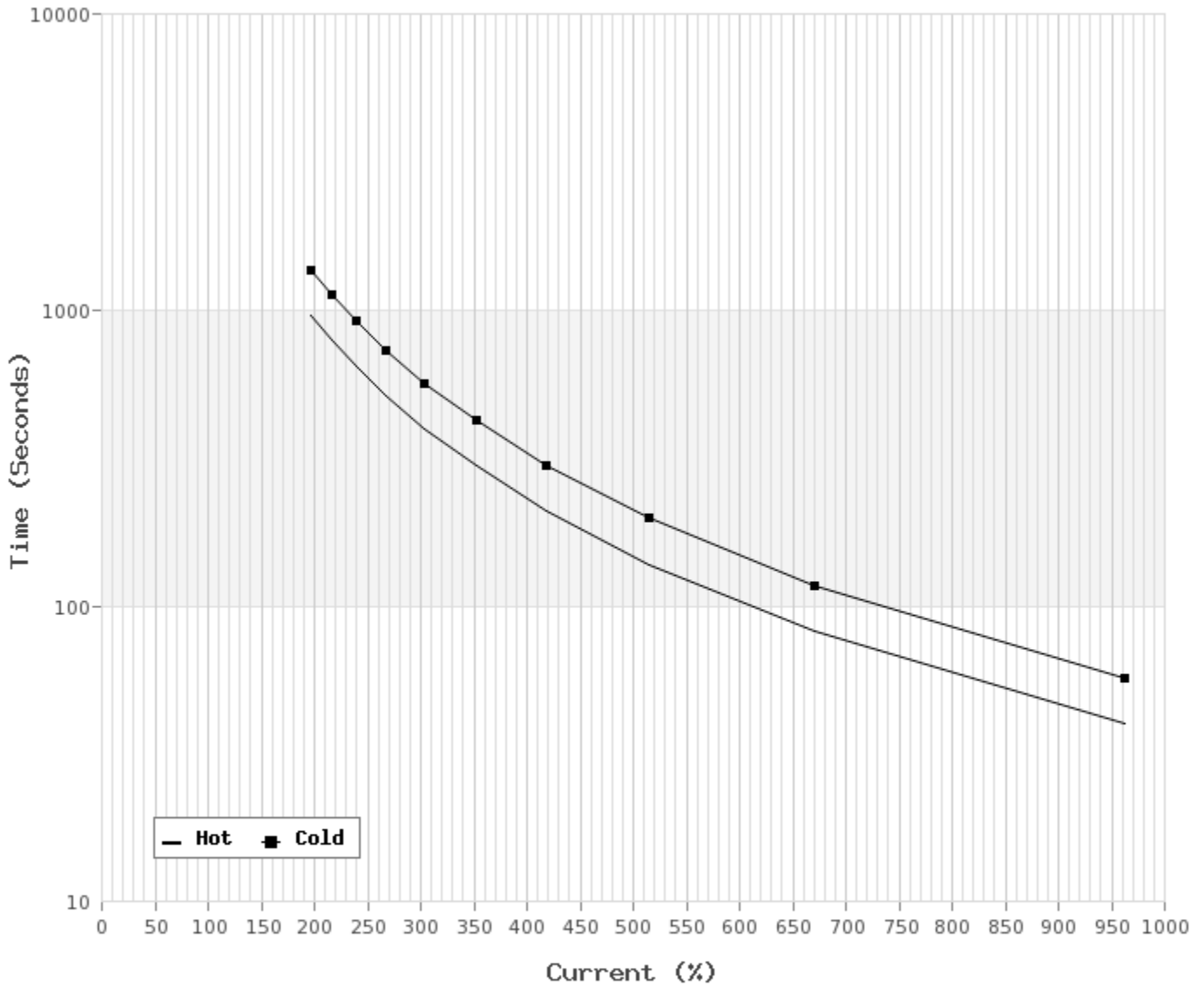


9 LEAD DUAL VOLTAGE WYE					
VOLTAGE	CONN.	L1	L2	L3	JOIN
HIGH	WYE	1	2	3	4&7,5&8,6&9
LOW	2 WYE	1,7	2,8	3,9	4&5&6

WD\_9Y

**Thermal Limit Curves**

Motor Type: AEHH8N		Catalogue No: PDH1/54		Family: Optim TEFC	
HP	1.5	Safe Stall Time		Full Load A	4.2 / 2.1 A
Voltage	230 / 460V 60Hz	Hot	40 s	Locked Rotor A	962 / 962 %
RPM	1800	Cold	57 s	Locked Rotor A	40.0 / 20 A



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

Motor Type: AEHH8N		Catalogue No: PDH1/54		Family: Optim TEFC	
HP	1.5	Full Load T	4.55 lb-ft	Full Load A	4.2 / 2.1 A
Voltage	230 / 460V 60Hz	Locked Rotor T	300 %	Locked Rotor A	40.0 / 20.0 A
RPM	1800	Pull Up T	260 %	Break Down T	360 %

