

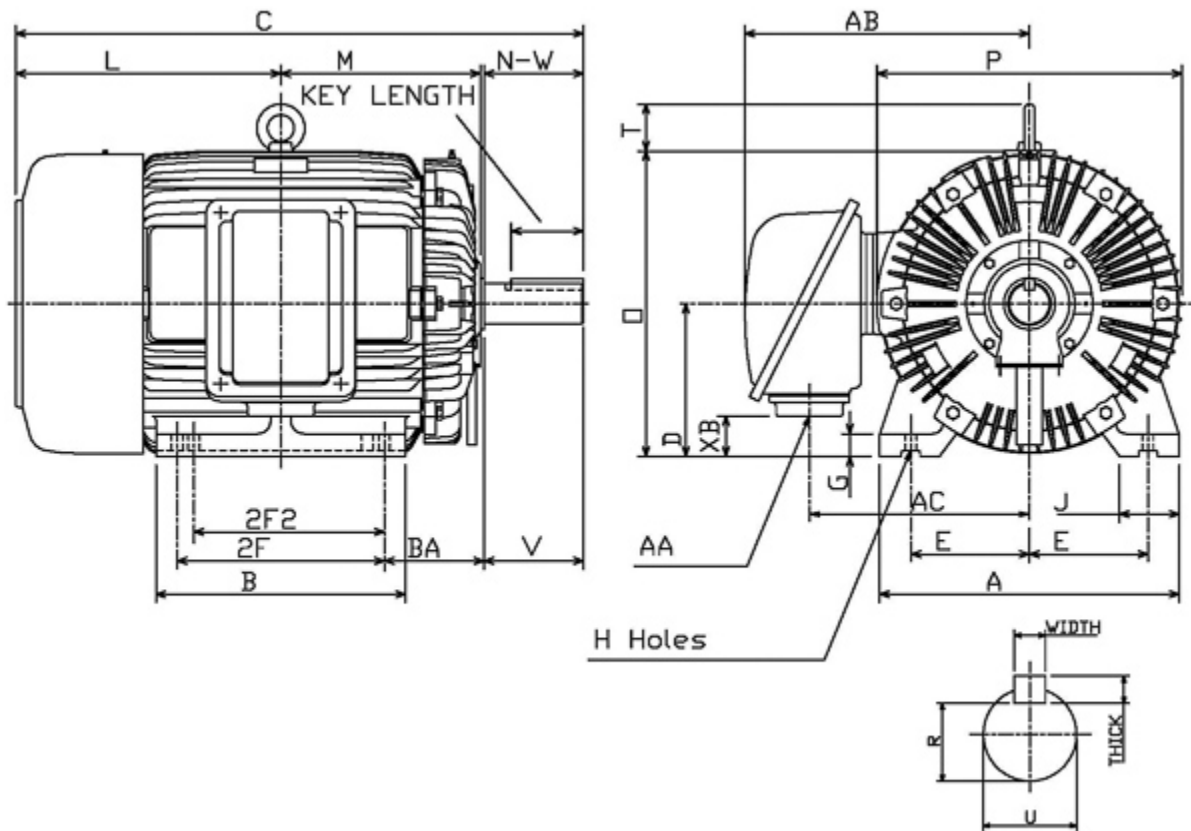
Technical Documentation

**PDH1002**  
**Optim TEFC | AEHH8N**

Date: July 10, 2017

**Dimensional Drawing**

Catalogue	Model	HP	Pole	kW	Rating	Voltage	Hz	RPM
PDH1002	AEHH8N	100	2	75	Continuous	230 / 460 V	60	3600



Frame Size	Mounting					A	B	C	CD	D	
	E	2F	2F2	H	BA						
405TS	8	13.75	12.25	0.81	6.62	19.7	16.75	34.8		10	
G	J	K	L	M	O	P	T	Key			Keyseat
1.55	3.95		17.05	13.27	20.04	20.08	2.76	Width	Thick	Length	R
								0.5	0.5	2.78	1.845
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							
4.25	2.125	4.15	6313C3	6313C3	1225	85	F	1.15	Direct Coupling	Inches	

### Technical Data Sheet

Motor Type: AEHH8N

Catalogue No: PDH1002

#### Nameplate Information

HP	Pole	RPM	Frame	Voltage	Hz	Phase
100	2	3560	405TS	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	95.8	95.4	92.0	91.5	88.5
Torque				Current (A)		
Full Load (lb-ft)	Locked Rotor (% FLT)	Pull Up (% FLT)	Break Down (% FLT)	No Load	Full Load	Locked Rotor
147.50	140	125	270	39.2 / 19.6	214.0 / 106.7	1450 / 725
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	10.773	92.0	213.0	17	12	85

#### VFD Duty Information

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

#### Additional Information

Bearings		Approx. Weight
DE	NDE	lbs
6313C3	6313C3	1225

#### Hazardous Locations Information

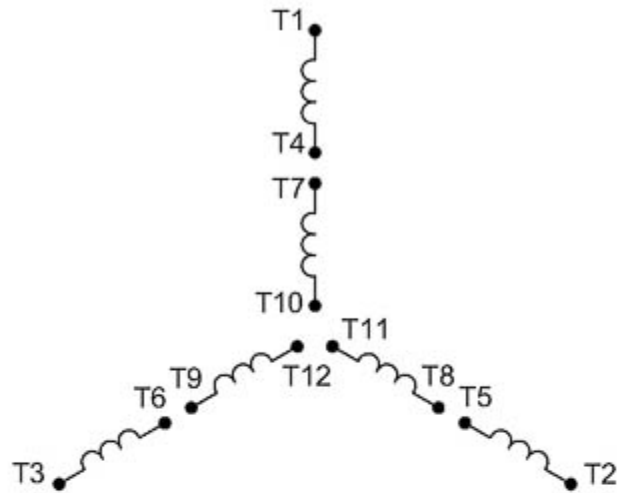
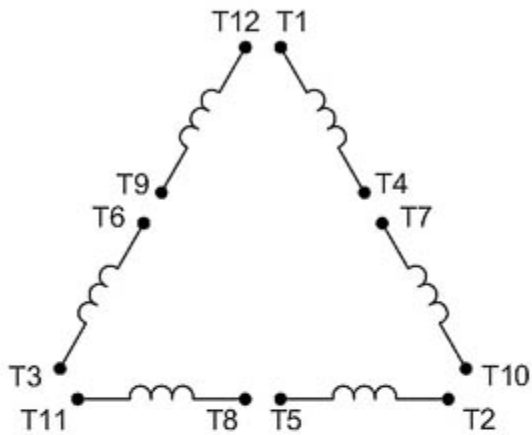
CSA Certified	
Class I, Div 2, Groups B, C & D Class I, Zone 2, Groups IIB+H2, IIB & IIA	
Temp Code (Sinewave / VFD)	T3C / T3

**Nameplate Drawing**

# Optim TEFC

TYPE	AEHH8N	CAT. NO.	PDH1002		
OUTPUT	100 HP 75 kW	FRAME	405TS	TEFC	
R.P.M.	3560	POLE	2	INS.	F
VOLTS	230 / 460	PHASE	3	Hz	60
AMPS	214.0 / 106.7	CODE	G	S.F.	1.15
AMBIENT	40 °C	NOM. EFF. 95.4		MIN. EFF. 94.5	
BEARINGS	6313C3 / 6313C3			RATING Cont.	
SER. NO.	TBD	DESIGN	B	WT. 1225 LBS	
PWM VFD DUTY	VT	CT	CP	S.F.	
	3-60Hz	6-60Hz	60-60Hz	1.0 Only	

**Connection Diagram**

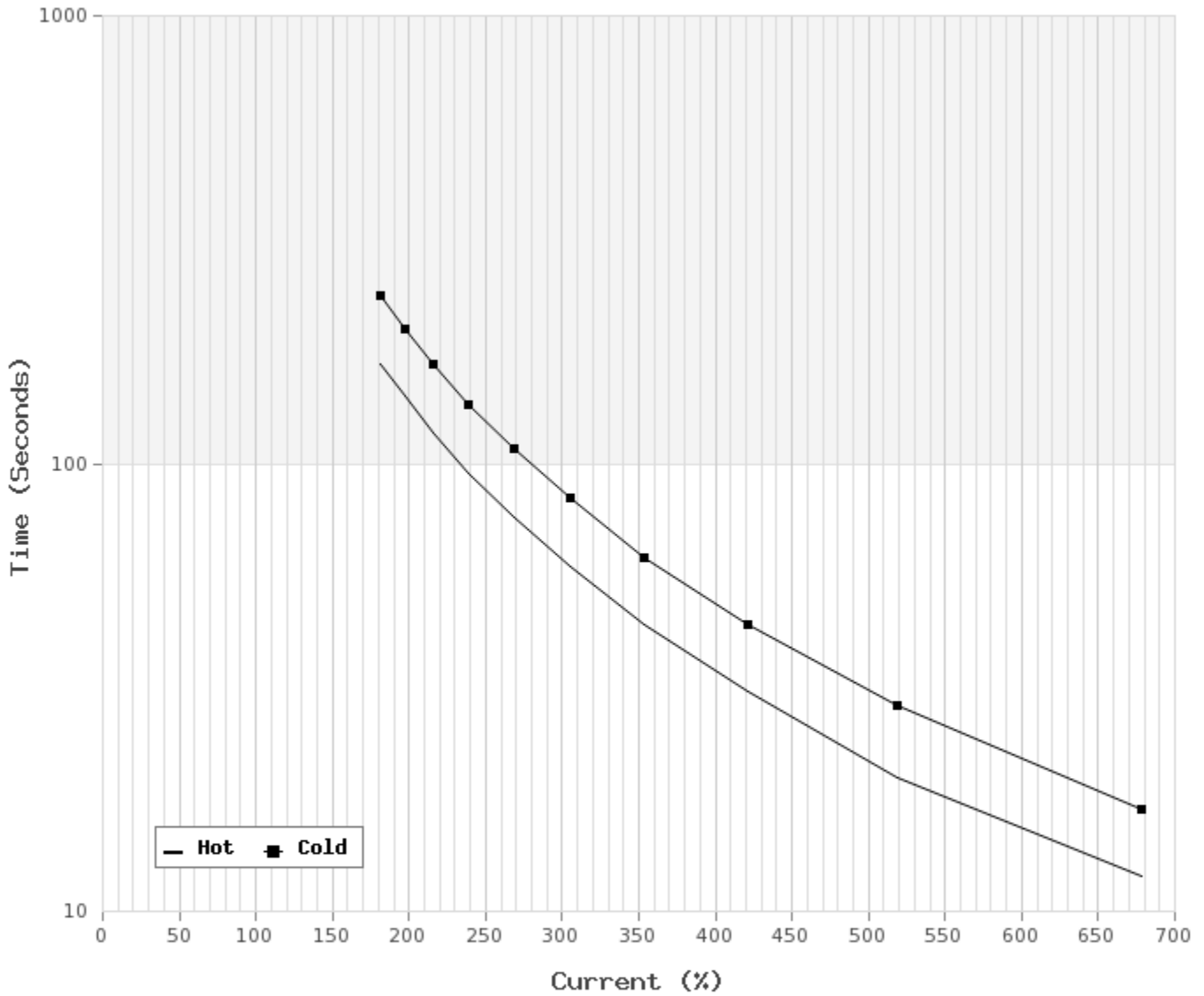


12 LEAD DUAL VOLTAGE WYE/DELTA						
VOLTAGE	CONNECTION		L1	L2	L3	JOIN
HIGH	START	WYE	1	2	3	4&7,5&8,6&9 10&11&12
	RUN	DELTA	1,12	2,10	3,11	4&7,5&8,6&9
LOW	START	2 WYE	1,7	2,8	3,9	4&5&6 10&11&12
	RUN	2 DELTA	1,6,7 12	2,4,8 10	3,5,9 11	

WD\_12YD

**Thermal Limit Curves**

Motor Type: AEHH8N		Catalogue No: PDH1002		Family: Optim TEFC	
HP	100	Safe Stall Time		Full Load A	214.0 / 106.7 A
Voltage	230 / 460V 60Hz	Hot	12 s	Locked Rotor A	678 / 680 %
RPM	3600	Cold	17 s	Locked Rotor A	1,450.0 / 725 A



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

Motor Type: AEHH8N		Catalogue No: PDH1002		Family: Optim TEFC	
HP	100	Full Load T	147.50 lb-ft	Full Load A	214.0 / 106.7 A
Voltage	230 / 460V 60Hz	Locked Rotor T	140 %	Locked Rotor A	1,450.0 / 725.0 A
RPM	3600	Pull Up T	125 %	Break Down T	270 %

