

Technical Documentation

PDX0504
Optim TEFC | AEHH8N

Date: July 1, 2021

Dimensional Drawing

Catalogue	Type	HP	RPM	Voltage	Hz	Frame Size
PDX0504	AEHH8N	50	1800	230 / 460	60	326T(X)

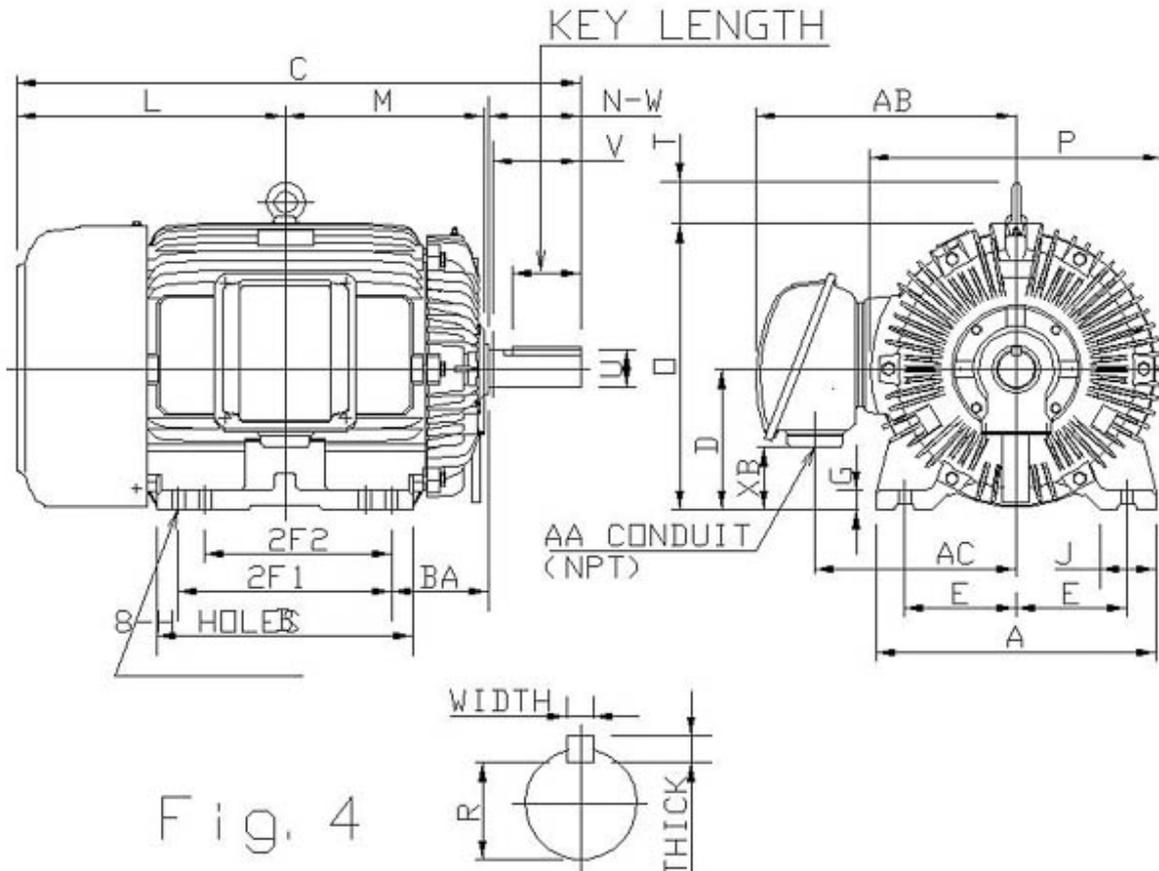


Fig. 4

Mounting					A	B	C	CL1	CL2	D	G
E	2F1	2F2	H	BA							
6.25	12	10.5	0.67	5.25	15.75	14.37	30.99			8	1.1

J	K	L	M	O	P	T
3.15		14.49	10.96	15.5	15.91	2.36

Terminal Housing			
AA	AB	AC	XB
2	16.07	12.2	3.59

Shaft Extension			Key			Keyseat
N-W	U	V	Width	Thick	Length	R
5.25	2.125	5.15	0.5	0.5	3.91	2.201

Bearings		Weight Lbs	Drive Method	Dimensions
DE	NDE			
6312	6310	591	Direct Coupling / Belt Drive	Inches

	
	Date: July 1, 2021

Technical Data Sheet

Motor Type: AEHH8N	Catalogue No: PDX0504
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Nameplate Information

HP	Pole	RPM	Frame	Voltage	Hz	Phase
50	4	1770	326T(X)	230 / 460	60	3
Enclosure	Ins. Class	Service Factor	Time Rating	NEMA Design	Rated Amb.	Rated Altitude
TEFC	F	1.15	Continuous	C	-40 to 40 °C	<1000 m

Typical Performance

Efficiency (%)				Power Factor (%)		
Full Load		3/4 Load	1/2 Load	Full Load	3/4 Load	1/2 Load
Nom.	Min.					
94.50	93.60	94.50	94.00	85.00	83.00	77.00
Torque				Current (A)		
Full Load (lb-ft)	Locked Rotor (% FLT)	Pull Up (% FLT)	Break Down (% FLT)	No Load	Full Load	Locked Rotor
148.31	230	200	250	36.6 / 18.3	116.6 / 58.3	726.00 / 363.00
NEMA KVA Code	Inertia (WR ²)			Safe Stall Time (s)		Noise Level Sound Press. dB(A)
	Rotor (lb-ft ²)	NEMA Load (lb-ft ²)	Max. Allowable (lb-ft ²)	Cold	Hot	
G	6.393	39.00	596.00	17	12	76.0

VFD Duty Information

Speed Range			VFD		S.F.
Constant Torque	Variable Torque	Constant Power	Carrier	Type	
6-60Hz	3-60Hz	60-90Hz	0	VPWM or CPWM	1.0 Only

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) T3 / T3

Additional Certifications

Other Certification

Additional Information

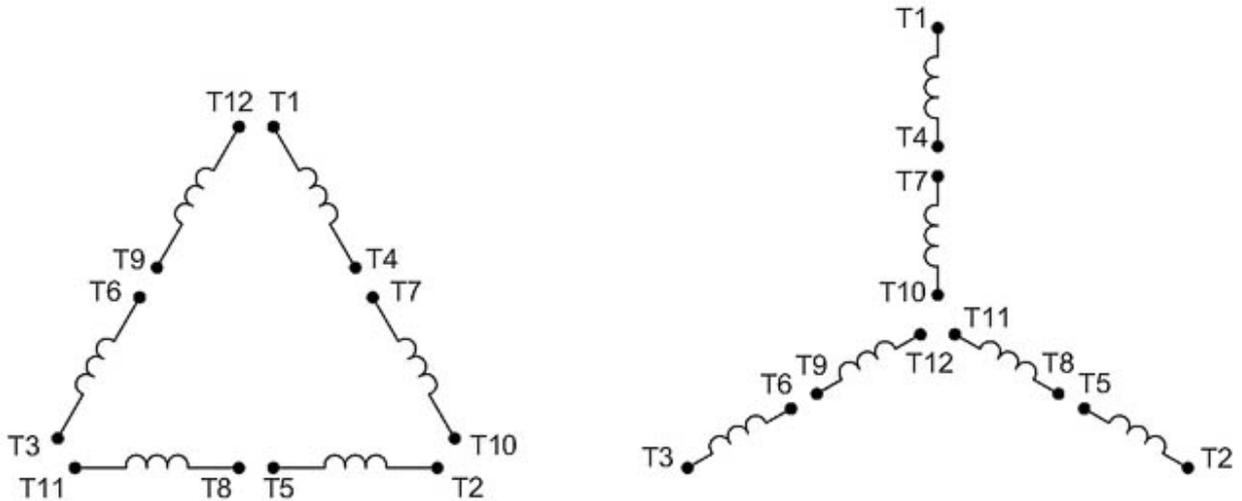
Bearings		Approx. Weight
DE	NDE	lbs
6312	6310	591

Nameplate Drawing

Optim TEFC

TYPE	AEHH8N	CAT. NO.	PDX0504		
OUTPUT	50 HP 37.30 kW	FRAME	326T(X)	TEFC	
R.P.M.	1770	POLE	4	INS.	F
VOLTS	230 / 460	PHASE	3	Hz	60
AMPS	116.6 / 58.3	CODE	G	S.F.	1.15
AMBIENT	40 °C	NOM. EFF. 94.50		MIN. EFF. 93.60	
BEARINGS	6312 / 6310			RATING Cont.	
SER. NO.	TBD	DESIGN	C	WT. 591 LBS	
PWM VFD DUTY	VT	CT	CP	S.F.	
	3-60Hz	6-60Hz	60-90Hz	1.0 Only	

Connection Diagram

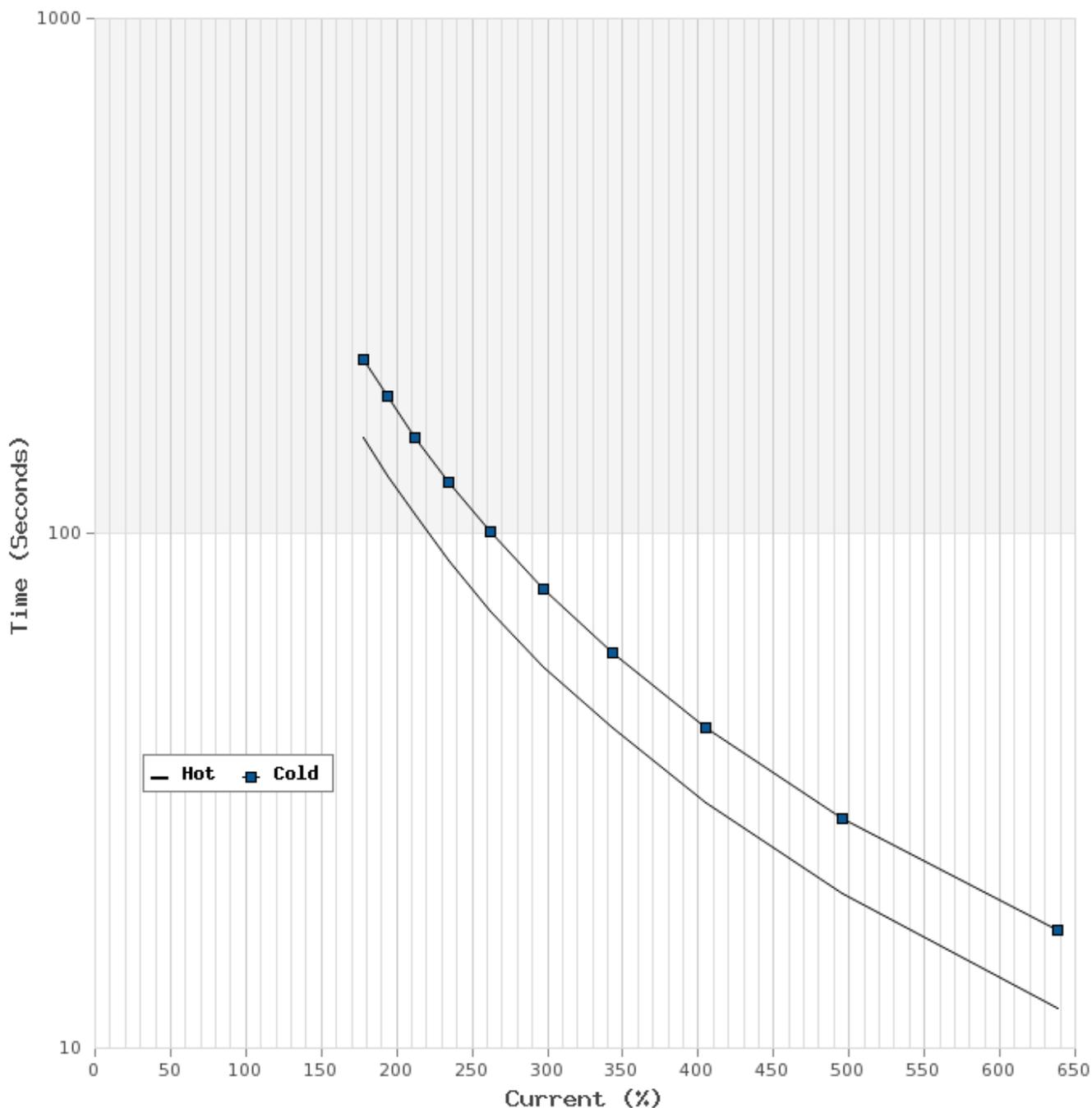


12 LEAD		DUAL VOLTAGE			WYE/DELTA	
VOLTAGE	CONNECTION	L1	L2	L3	JOIN	
HIGH	START	WYE	1	2	3	4&7,5&8,6&9 10&11&12
	RUN	DELTA	1,12	2,10	3,11	4&7,5&8,6&9
LOW	START	2 WYE	1,7	2,8	3,9	4&5&6 10&11&12
	RUN	2 DELTA	1,6,7 12	2,4,8 10	3,5,9 11	

WD_12YD

Thermal Limit Curves

Motor Type: AEHH8N		Catalogue No: PDX0504		Family: Optim TEFC	
HP	50	Safe Stall Time		Full Load A	116.6 / 58.3 A
Voltage	230 / 460V 60Hz	Hot	12 s	% Inrush	623 / 623 %
RPM	1800	Cold	17 s	Locked Rotor A	726.00 / 363.00 A



T-N and I-N Curves

Motor Type: AEHH8N		Catalogue No: PDX0504		Family: Optim TEFC	
HP	50	Full Load T	148.31 lb-ft	Full Load A	116.6 / 58.3 A
Voltage	230 / 460V 60Hz	Locked Rotor T	230 %	Locked Rotor A	726.0 / 363.0 A
RPM	1800	Pull Up T	200 %	Break Down T	250 %

