

Technical Documentation

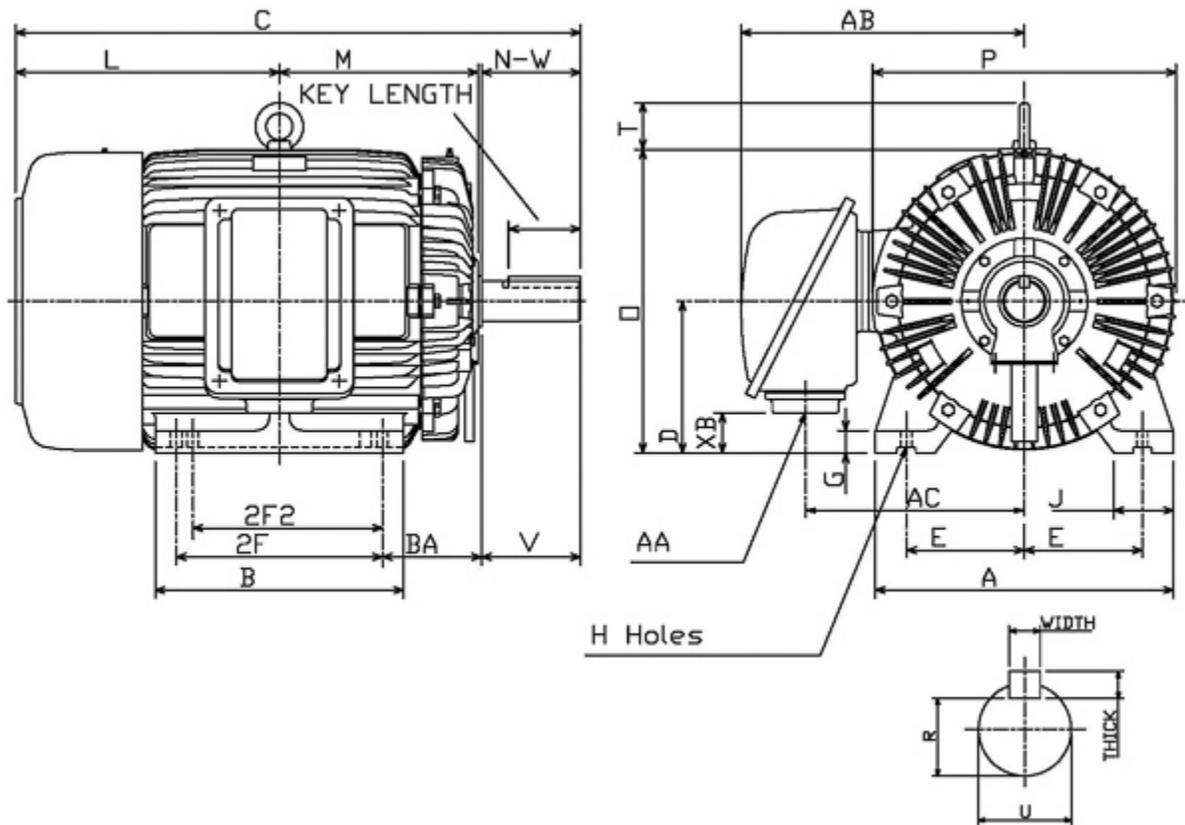
PDH0302

Optim TEFC | AEHH8N

Date: November 30, 2016

Dimensional Drawing

Catalogue	Model	HP	Pole	kW	Rating	Voltage	Hz	RPM
PDH0302	AEHH8N	30	2	22	Continuous	230 / 460 V	60	3600



Frame Size	Mounting					A	B	C	CD	D	
	E	2F	2F2	H	BA						
286TS	5.5	11	9.5	0.53	4.75	14	13.2	26.93		7	
G	J	K	L	M	O	P	T	Key			Keyseat
								Width	Thick	Length	R
0.7	2.95		13.43	10.06	14.52	15.04	1.97	0.375	0.375	1.93	1.416
Terminal Housing				Aux Box		C/D Flange					
AA	AB	AC	XB	AE	AX	BB	AH	AK	BD	AJ	BF
1.25 NPT	12.28	9.84	3.97								
Shaft Extension			Bearings		Approx. Weight Lbs	SPL dBA/3ft	Ins. Class	S.F.	Drive Method	Dimensions	
N-W	U	V	DE	NDE							
3.25	1.625	3.2	6211C3	6211C3	482	77	F	1.15	Direct Coupling	Inches	

Technical Data Sheet

Motor Type: AEHH8N

Catalogue No: PDH0302

Nameplate Information

HP	Pole	RPM	Frame	Voltage	Hz	Phase
30	2	3545	286TS	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.					
93.0	91.7	93.6	93.0	91.0	90.5	87.5
Torque				Current (A)		
Full Load (lb-ft)	Locked Rotor (% FLT)	Pull Up (% FLT)	Break Down (% FLT)	No Load	Full Load	Locked Rotor
44.43	175	140	240	12.1 / 6.0	66.4 / 33.2	436 / 218
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	2.831	30.0	73.0	24	17	77

VFD Duty Information

Speed Range			VFD		S.F.
Constant Torque	Variable Torque	Constant Power	Carrier	Type	
6-60Hz	3-60Hz	60-90Hz	≤ 5 kHz	VPWM or CPWM	1.0 Only

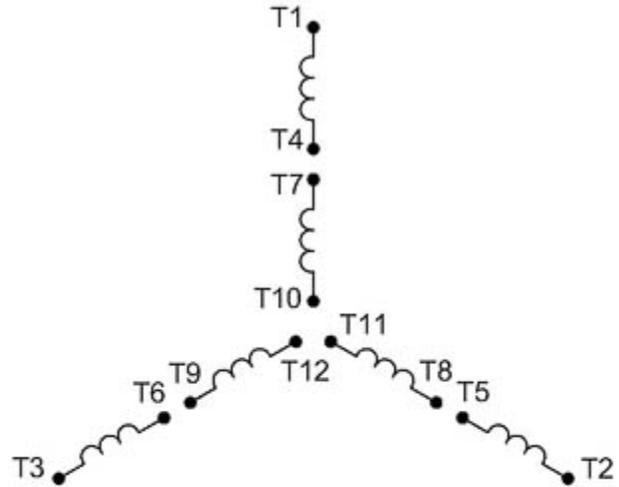
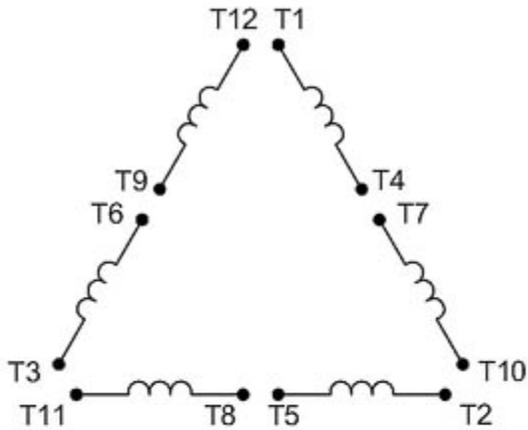
Additional Information

Bearings		Approx. Weight
DE	NDE	lbs
6211C3	6211C3	482

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

Connection Diagram

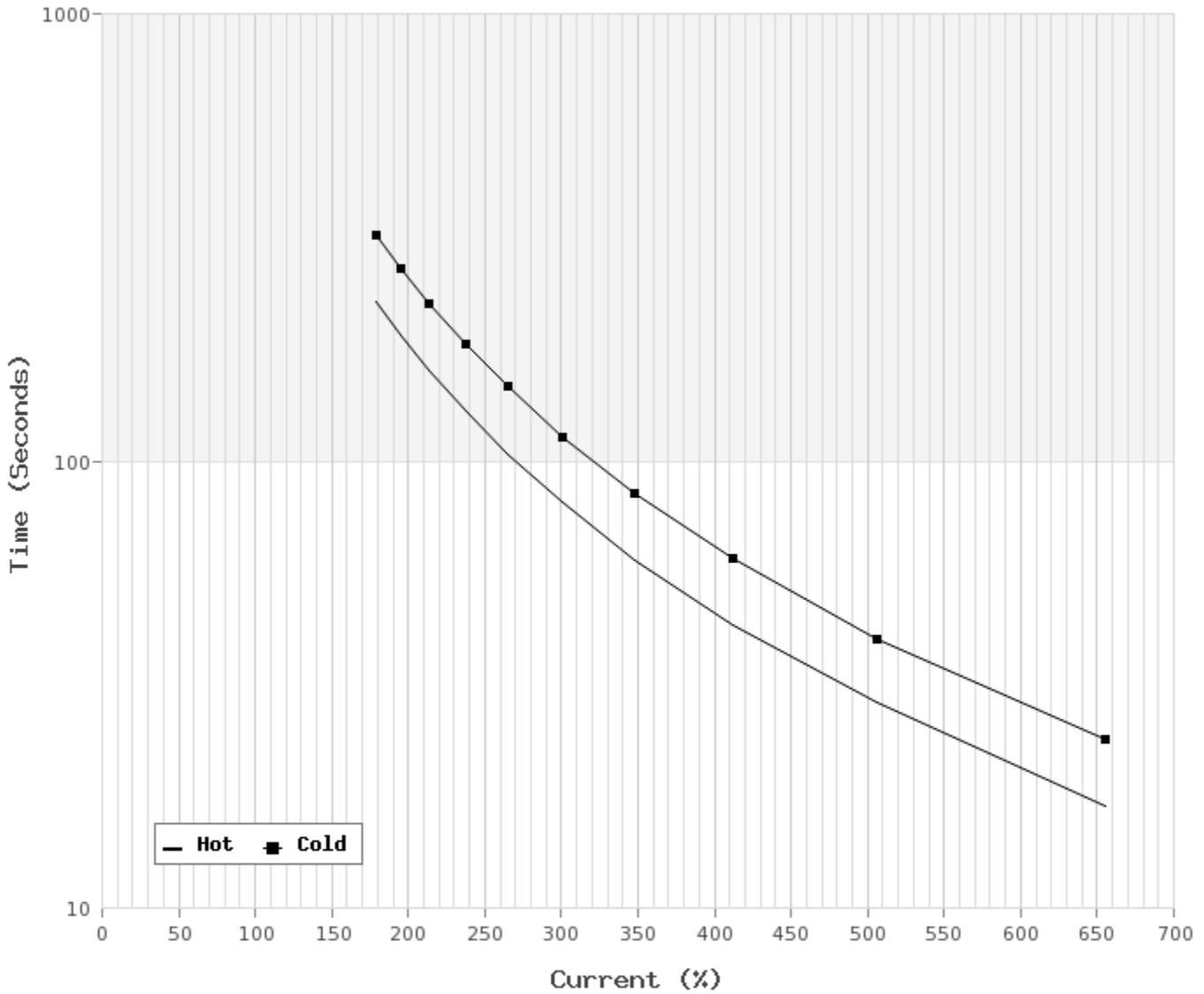


12 LEAD DUAL VOLTAGE WYE/DELTA						
VOLTAGE	CONNECTION		L1	L2	L3	JOIN
HIGH	START	WYE	1	2	3	4&7,5&8,6&9 10&11&12
	RUN	DELTA	1,12	2,10	3,11	4&7,5&8,6&9
LOW	START	2 WYE	1,7	2,8	3,9	4&5&6 10&11&12
	RUN	2 DELTA	1,6,7 12	2,4,8 10	3,5,9 11	

WD_12YD

Thermal Limit Curves

Motor Type: AEHH8N		Catalogue No: PDH0302		Family: Optim TEFC	
HP	30	Safe Stall Time		Full Load A	66.4 / 33.2 A
Voltage	230 / 460V 60Hz	Hot	17 s	Locked Rotor A	657 / 657 %
RPM	3600	Cold	24 s	Locked Rotor A	436.0 / 218 A



T-N and I-N Curves

Motor Type: AEHH8N		Catalogue No: PDH0302		Family: Optim TEFC	
HP	30	Full Load T	44.43 lb-ft	Full Load A	66.4 / 33.2 A
Voltage	230 / 460V 60Hz	Locked Rotor T	175 %	Locked Rotor A	436.0 / 218.0 A
RPM	3600	Pull Up T	140 %	Break Down T	240 %

