

Technical Documentation

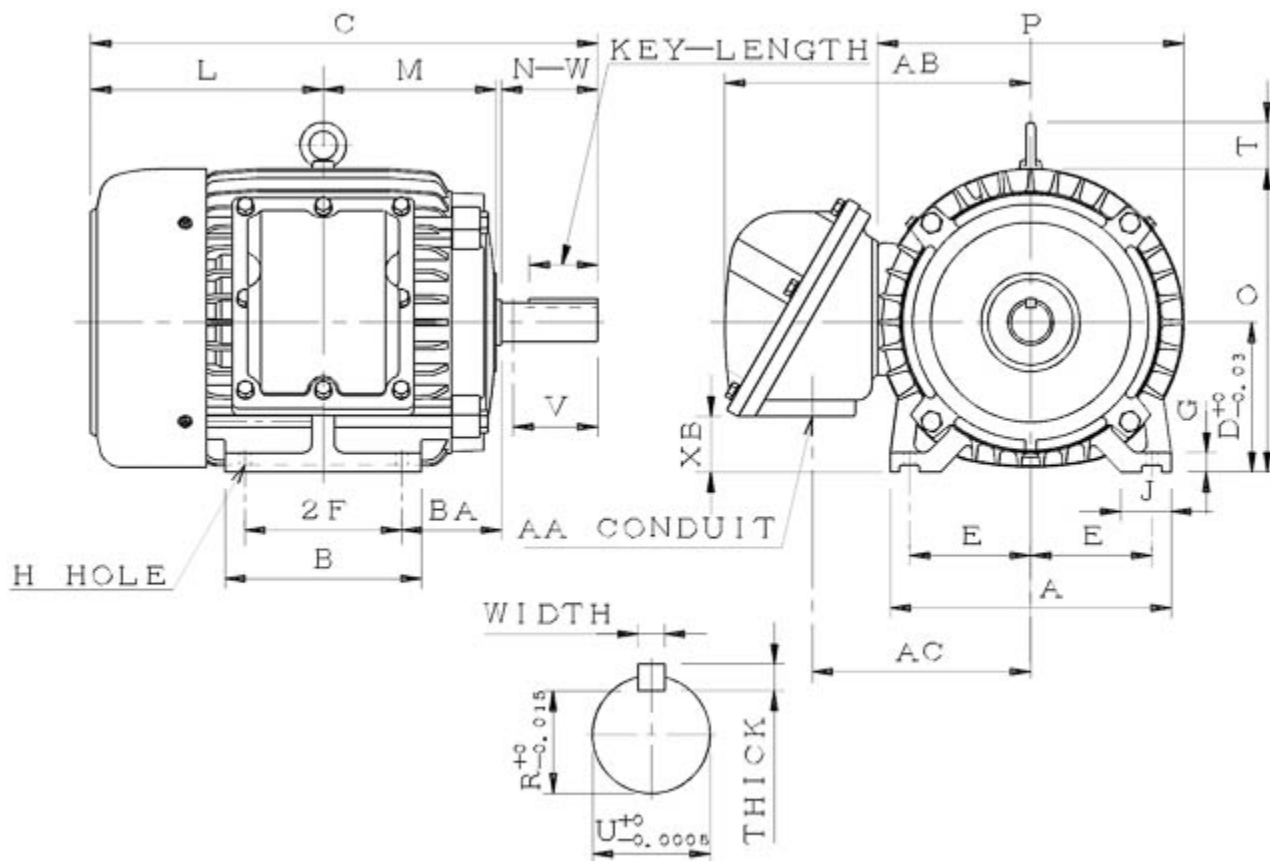
XC7/54

Optim TEXP | AEHHXV

Date: December 1, 2016

Dimensional Drawing

Catalogue	Model	HP	Pole	kW	Rating	Voltage	Hz	RPM
XC7/54	AEHHXV	7.5	4	5.6	Continuous	230 / 460 V	60	1800



AEHHXV-SMP-3 1 0

Frame Size		Mounting					A	B	C	CD	D
		E	2F	2F2	H	BA					
213T		4.25	5.5		0.41	3.5	9.85	6.9	18.26		5.25
G	J	K	L	M	O	P	T	Key			Keyseat
								Width	Thick	Length	R
0.7	1.75		8.63	6.02	10.8	11.1	1.45	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
NPT1"	10.73	7.45	1.94								
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	187	60	F	1.15	Direct Coupling / Belt Drive	Inches	

Technical Data Sheet

Motor Type: AEHHXV

Catalogue No: XC7/54

Nameplate Information

HP	Pole	RPM	Frame	Voltage	Hz	Phase
7.5	4	1760	213T	230 / 460	60	3
Enclosure	Ins. Class	Service Factor	Time Rating	NEMA Design	Rated Amb.	Rated Altitude
TEXP	F	1.15	Continuous	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	92.0	91.0	86.5	83.0	75.0
Torque				Current (A)		
Full Load (lb-ft)	Locked Rotor (% FLT)	Pull Up (% FLT)	Break Down (% FLT)	No Load	Full Load	Locked Rotor
22	280	230	310	5.8 / 2.9	17.7 / 8.9	127 / 64
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	
H	0.731	39	91	17	12	60

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

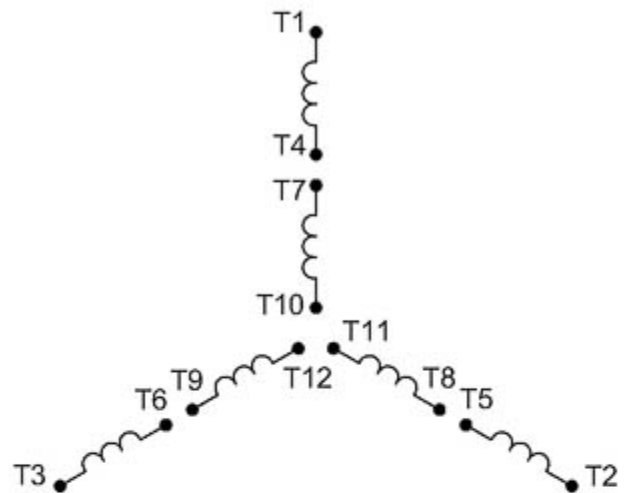
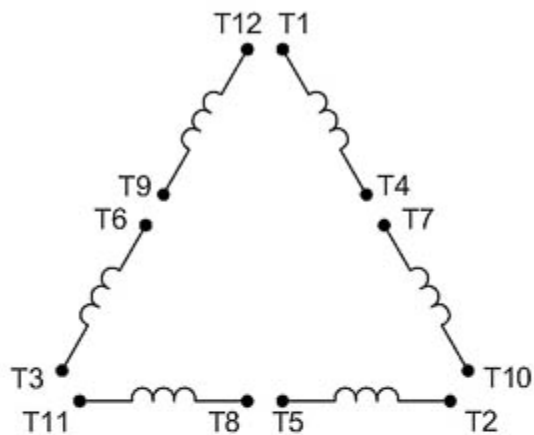
Additional Information

Bearings		Approx. Weight
DE	NDE	lbs
6308ZZ	6306ZZ	187

Hazardous Locations Information

CSA/UL Certified	
Class I, Div 1, Groups C & D; Class II, Div 1, Groups E, F & G Class I, Zone 1, Groups IIB & IIA; Class II, Div 1, Groups E, F & G	
Temp Code (Sinewave / VFD)	T3B / T3B

Connection Diagram

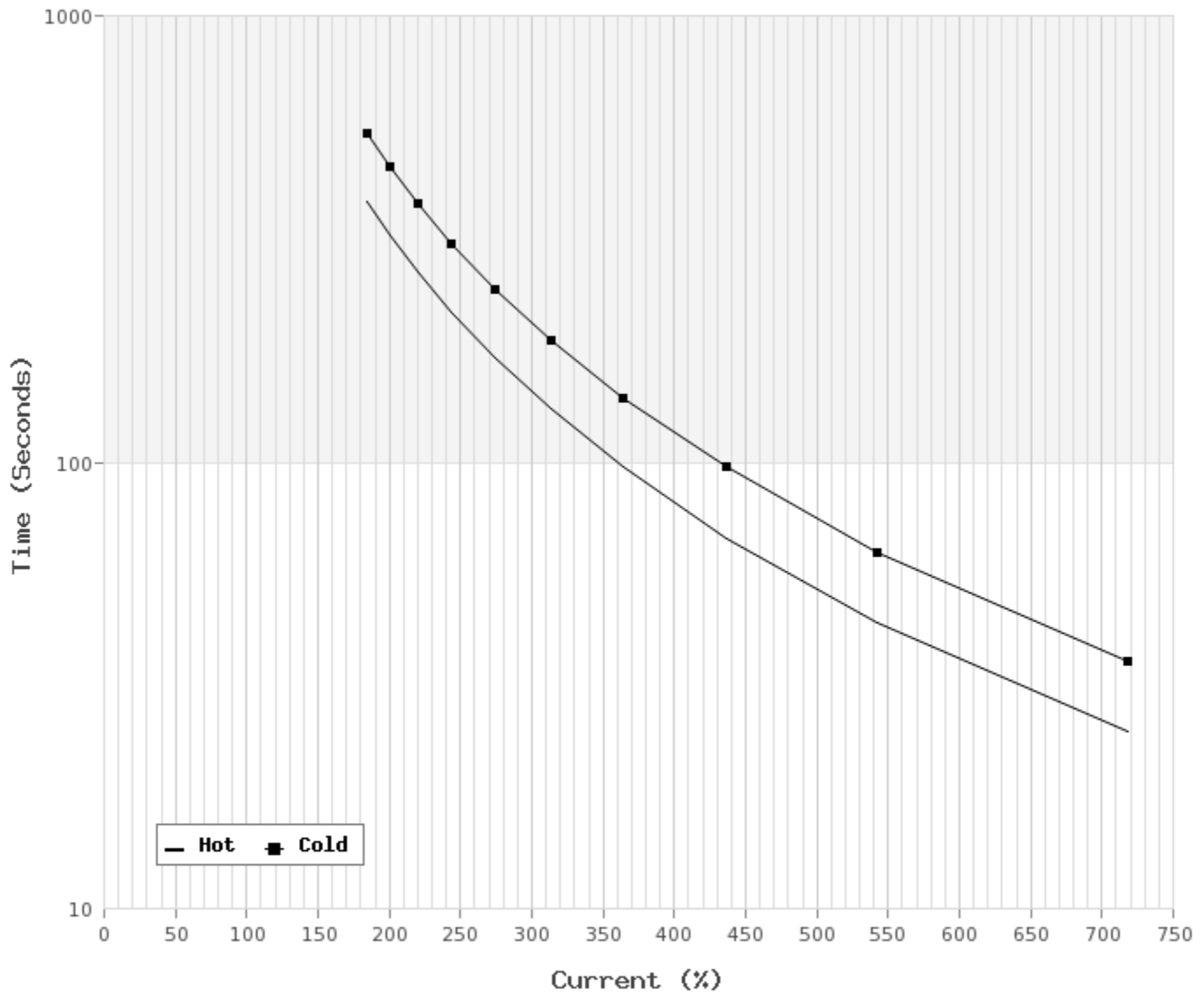


12 LEAD DUAL VOLTAGE WYE/DELTA						
VOLTAGE	CONNECTION		L1	L2	L3	JOIN
HIGH	START	WYE	1	2	3	4&7,5&8,6&9 10&11&12
	RUN	DELTA	1,12	2,10	3,11	4&7,5&8,6&9
LOW	START	2 WYE	1,7	2,8	3,9	4&5&6 10&11&12
	RUN	2 DELTA	1,6,7 12	2,4,8 10	3,5,9 11	

WD_12YD

Thermal Limit Curves

Motor Type: AEHHXV		Catalogue No: XC7/54		Family: Optim TEXP	
HP	7.5	Safe Stall Time		Full Load A	17.7 / 8.9 A
Voltage	230 / 460V 60Hz	Hot	12 s	Locked Rotor A	718 / 723 %
RPM	1800	Cold	17 s	Locked Rotor A	127.0 / 64 A



T-N and I-N Curves

Motor Type: AEHHXV		Catalogue No: XC7/54		Family: Optim TEXP	
HP	7.5	Full Load T	22 lb-ft	Full Load A	17.7 / 8.9 A
Voltage	230 / 460V 60Hz	Locked Rotor T	280 %	Locked Rotor A	127.0 / 64.0 A
RPM	1800	Pull Up T	230 %	Break Down T	310 %

