

Technical Documentation

**XC7/54C**  
**Optim TEXP | AEHHXF**

Date: May 28, 2018

### Technical Data Sheet

Motor Type: AEHHXF

Catalogue No: XC7/54C

#### Nameplate Information

HP	Pole	RPM	Frame	Voltage	Hz	Phase
7.5	4	1760	213TC	230 / 460	60	3
Enclosure	Ins. Class	Service Factor	Time Rating	NEMA Design	Rated Amb.	Rated Altitude
TEXP	F	1.15	Continuous	C	-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.					
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 <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	
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

**Nameplate Drawing**

# Optim TEXP

TYPE	AEHHXF	CAT. NO.	XC7/54C		
OUTPUT	7.5 HP 5.6 kW	FRAME	213TC	TEXP	
R.P.M.	1760	POLE	4	INS.	F
VOLTS	230 / 460	PHASE	3	Hz	60
AMPS	17.7 / 8.9	CODE	H	S.F.	1.15
AMBIENT	40 °C	NOM. EFF. 91.7		MIN. EFF. 90.2	
BEARINGS	6308ZZ / 6306ZZ			RATING Cont.	
SER. NO.	TBD	DESIGN	C	WT. 187 LBS	
PWM VFD DUTY	VT	CT	CP	S.F.	
	3-60Hz	6-60Hz	60-90Hz	1.0 Only	

**Connection Diagram**

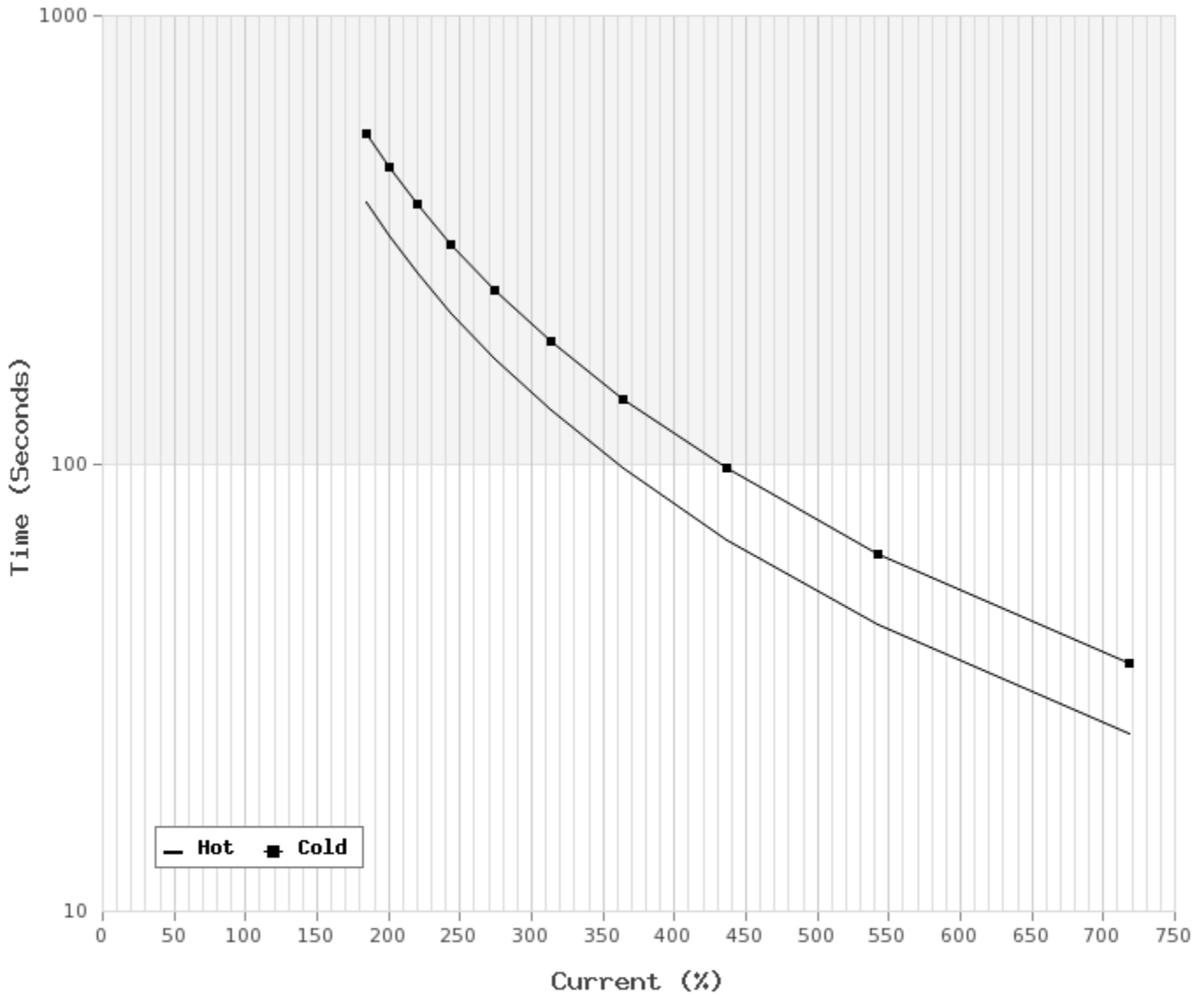


12 LEAD DUAL VOLTAGE WYE/DELTA						
VOLTAGE	CONNECTION		L1	L2	L3	JOIN
HIGH	START	WYE	1	2	3	4&7,5&8,6&9 10&11&12
	RUN	DELTA	1,12	2,10	3,11	4&7,5&8,6&9
LOW	START	2 WYE	1,7	2,8	3,9	4&5&6 10&11&12
	RUN	2 DELTA	1,6,7 12	2,4,8 10	3,5,9 11	

WD\_12YD

**Thermal Limit Curves**

Motor Type: AEHHXF		Catalogue No: XC7/54C		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: AEHHXF		Catalogue No: XC7/54C		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 %

