

Technical Documentation

XH1004C

Optim TEXP | AEHHXF

Date: May 28, 2018

Technical Data Sheet

Motor Type: AEHHXF

Catalogue No: XH1004C

Nameplate Information

HP	Pole	RPM	Frame	Voltage	Hz	Phase
100	4	1780	405TC	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.					
95.4	94.5	95.5	95.5	90.0	89.0	84.0
Torque				Current (A)		
Full Load (lb-ft)	Locked Rotor (% FLT)	Pull Up (% FLT)	Break Down (% FLT)	No Load	Full Load	Locked Rotor
295	200	170	240	53.8 / 26.9	218.0 / 109.0	1450 / 725
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	25.778	441	761	17	12	80

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
6317	6313	1408

Hazardous Locations Information

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

Nameplate Drawing

Optim TEXP

TYPE	AEHHXF	CAT. NO.	XH1004C		
OUTPUT	100 HP 75 kW	FRAME	405TC	TEXP	
R.P.M.	1780	POLE	4	INS.	F
VOLTS	230 / 460	PHASE	3	Hz	60
AMPS	218.0 / 109.0	CODE	G	S.F.	1.15
AMBIENT	40 °C	NOM. EFF. 95.4		MIN. EFF. 94.5	
BEARINGS	6317 / 6313			RATING Cont.	
SER. NO.	TBD	DESIGN	C	WT. 1408 LBS	
PWM VFD DUTY	VT	CT	CP	S.F.	
	3-60Hz	6-60Hz	60-90Hz	1.0 Only	

Connection Diagram

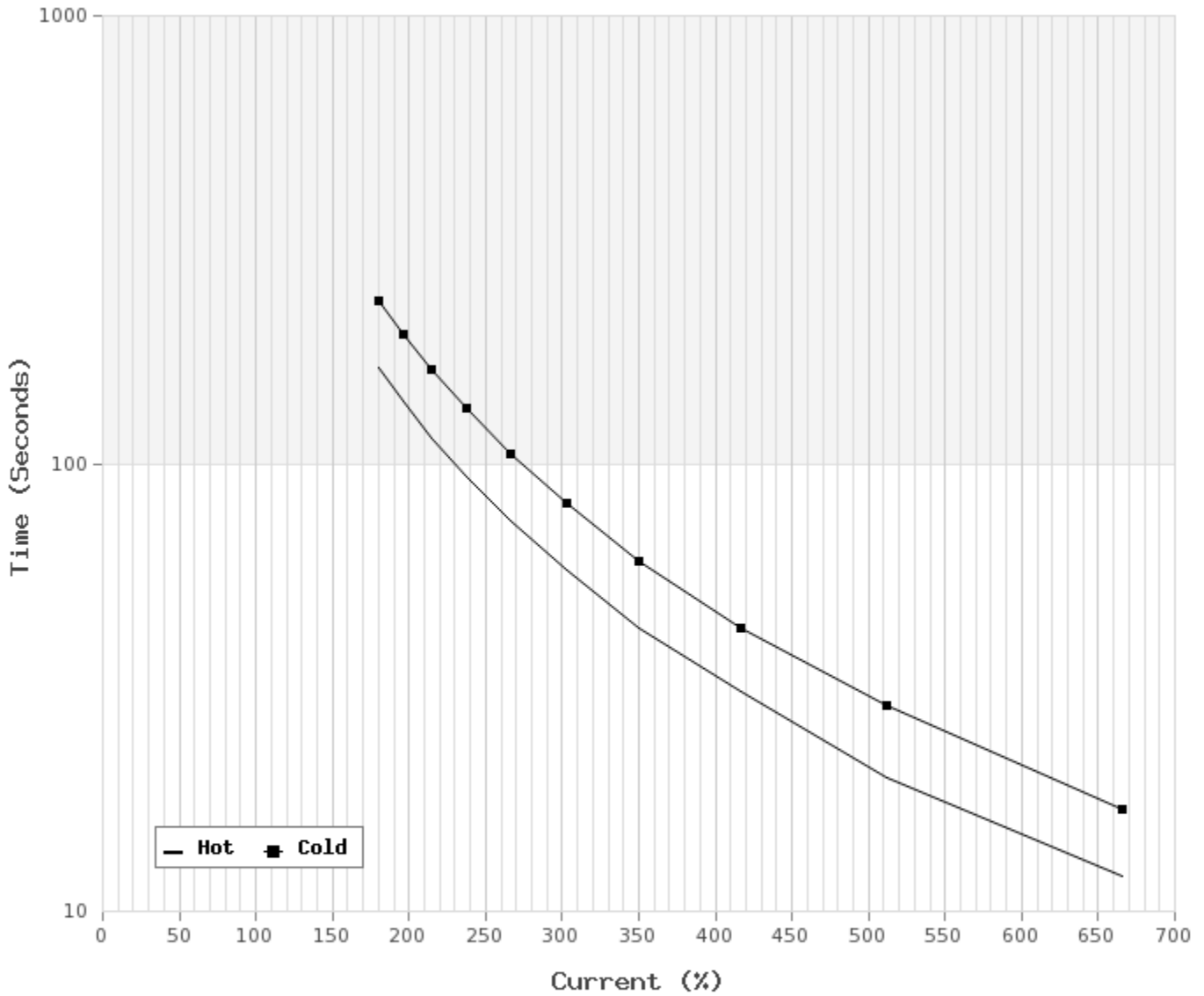


12 LEAD DUAL VOLTAGE WYE/DELTA						
VOLTAGE	CONNECTION		L1	L2	L3	JOIN
HIGH	START	WYE	1	2	3	4&7,5&8,6&9 10&11&12
	RUN	DELTA	1,12	2,10	3,11	4&7,5&8,6&9
LOW	START	2 WYE	1,7	2,8	3,9	4&5&6 10&11&12
	RUN	2 DELTA	1,6,7 12	2,4,8 10	3,5,9 11	

WD_12YD

Thermal Limit Curves

Motor Type: AEHHXF		Catalogue No: XH1004C		Family: Optim TEXP	
HP	100	Safe Stall Time		Full Load A	218.0 / 109.0 A
Voltage	230 / 460V 60Hz	Hot	12 s	Locked Rotor A	665 / 665 %
RPM	1800	Cold	17 s	Locked Rotor A	1,450.0 / 725 A



T-N and I-N Curves

Motor Type: AEHHXF		Catalogue No: XH1004C		Family: Optim TEXP	
HP	100	Full Load T	295 lb-ft	Full Load A	218.0 / 109.0 A
Voltage	230 / 460V 60Hz	Locked Rotor T	200 %	Locked Rotor A	1,450.0 / 725.0 A
RPM	1800	Pull Up T	170 %	Break Down T	240 %

