



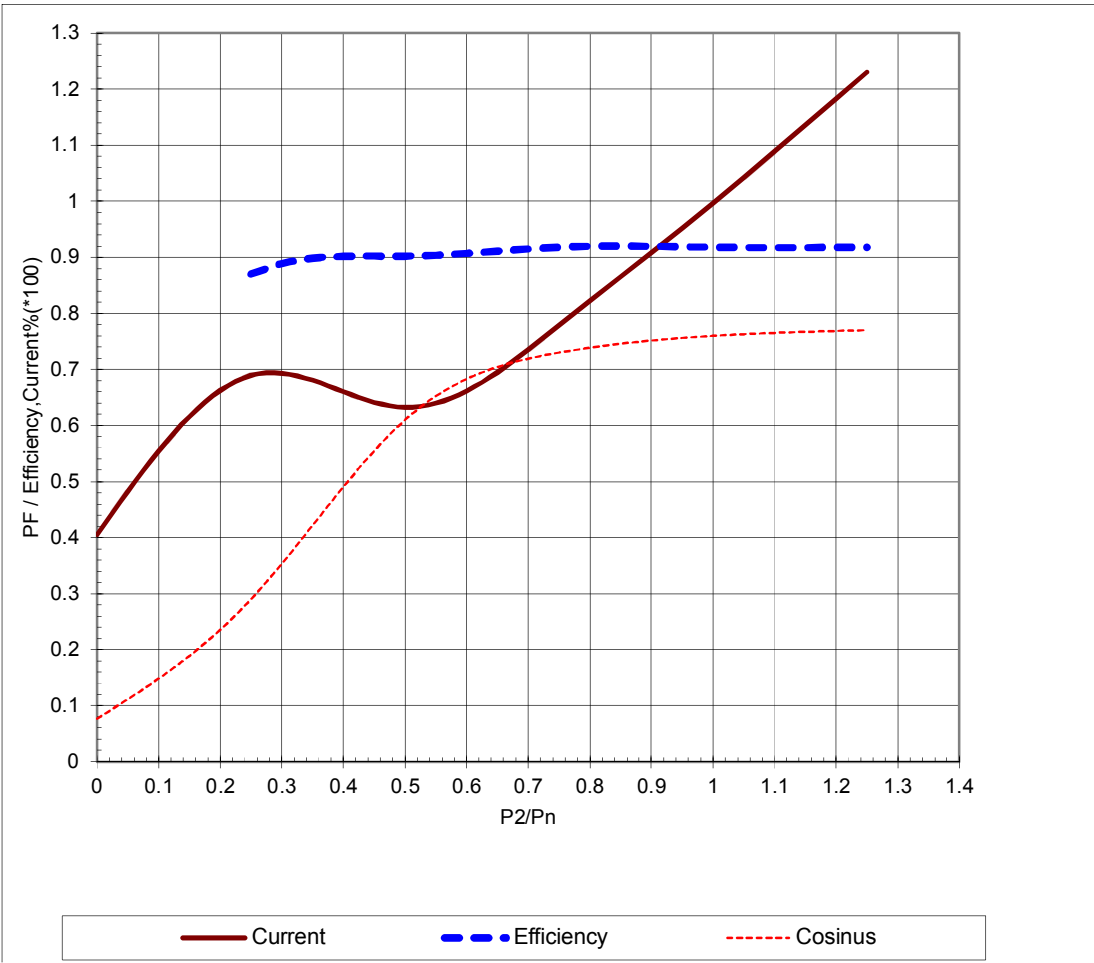
ABB Motors and Generators		Technical Data Sheet				
Project		Location				
Department/Author		Customer name		Customer ref.		
Our ref.		Rev/Changed by A		Date of issue 1/18/2019		
		Saving ident untitled.xls		Item name 1.00001		
				Pages 1(3)		
No.	Definition	Data	Unit	Remarks		
1	Product	TEFC, 3-phase, squirrel cage induction motor				
2	Product code	E3HX280SMB8				
3	Type/Frame	E3HX280SMB8				
4	Mounting	IM1001, B3(foot)				
5	Rated output P _N	37	kW			
6	Service factor	1				
7	Type of duty	S1 100%				
8	Rated voltage U _N	415	VD	± 10 %		
9	Rated frequency f _N	50	Hz	± 5 %		
10	Rated speed n _N	740	r/min			
11	Rated current I _N	74	A			
12	Method of starting	DOL				
13	Starting current I _s /I _N	7.7				
14	Nominal torque T _N	477	Nm			
15	Locked rotor torque T _S /T _N	2.1				
16	Maximum torque T _{max} /T _N	2.3				
17						
18						
Load characteristics		Load %	Current A	Efficiency %	Power factor	
19	PLL determined from residual loss	100	74	91.8 / IE3	0.76	
20		75	57.6	91.8	0.73	
21		50	46.8	90.2	0.61	
22						
23	Thermal withstand time hot	20	s			
24	Thermal withstand time cold	46	s			
25	Insulation class / Temperature class	F / B				
26	Ambient temperature	50	°C			
27	Altitude	1000 m.a.s.l.				
28	Degree of protection	IP55				
29	Cooling system	IC411 self ventilated				
30	Bearing DE/NDE	6316/C3 - 6315/C3				
31	Sound pressure level (LP dB(A) 1m)	85	dB(A)	at no-load		
32	Moment of inertia J = ¼ GD ²	1.91	kg-m ²			
33	Position of terminal box	Top				
34	Direction of rotation	Bi-directional				
35	Total weight of motor	590	kg			
36		User defined motor				
37						
38						
39						
40						
41						
42						
43						
44						
45						
Ex-motors						
46						
47						
48						
Option Variant Codes / Definition						
49	Application check not made in absence of load details					
50	Efficiency level :IE3 as per IS 12615 2018					
51						
52						
Remarks:						
9/4/2014						


ABB Motors and Generators	Load Curves		
	Project	Location	
Department/Author	Customer name	Customer ref.	Item name 1.00001
Our ref.	Rev/Changed by A	Date of issue 1/18/2019	Saving ident untitled.xls
			Pages 2(3)

Product TEFC, 3-phase, squirrel cage induction motor
Type/Frame E3HX280SMB8
Product code E3HX280SMB8
Rated output P_N 37 kW
Type of duty S1 100%

Voltage (V) 415 **Current I_N (A)** 74 **Power factor at P_N** 0.76
Frequency (Hz) 50 **Speed (r/min)** 740 **Efficiency (%) at P_N** 91.8

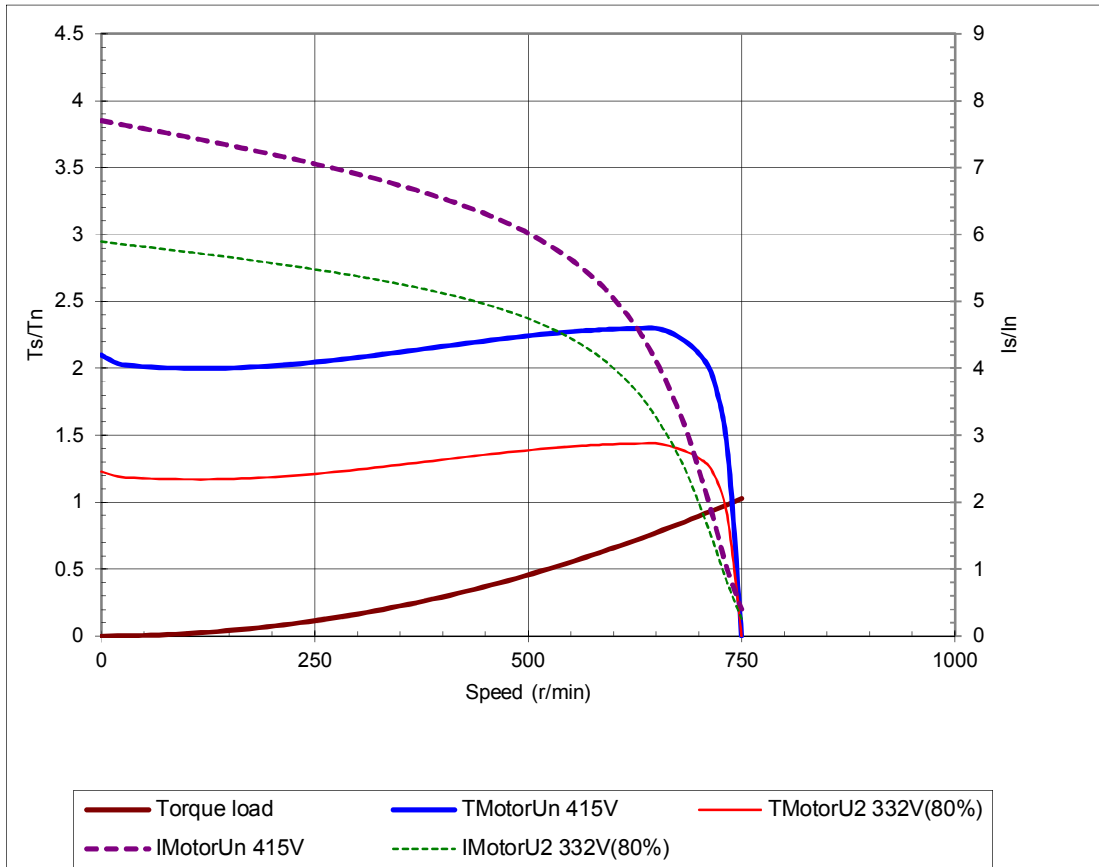


Data based on situation 9/4/2014
 All data subject to tolerances in accordance with IS/IEC 60034-1 : 2004


ABB Motors and Generators	Starting Curves		
	Project	Location	
Department/Author	Customer name	Customer ref.	Item name
Our ref.	Rev/Changed b Date of issue	Saving ident	Pages
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Type of product	TEFC, 3-phase, squirrel cage induction motor		
Type/Frame	E3HX280SMB8		
Product code	E3HX280SMB8	Frequency (Hz)	50
Rated output P _N	37 kW	Rated current I _N	74 A
Type of duty	S1 100%		

J _{motor} (kgm ²)	1.9	Voltage (V) 100%	415	Voltage (V)	332V(80%)
J _{load} (kgm ²)		T _{start} /T _N	2.1	T _{start} /T _N	1.2
Speed (r/min)	740	Starting time (s)	0.2	Starting time (s)	0.4
T _N (Nm)	477	Speed (r/min)	739	Speed (r/min)	730
T _{load} (Nm)	477	I _s /I _N	7.7	I _s /I _N	5.9
		T _{max} /T _N	2.3	T _{max} /T _N	1.4




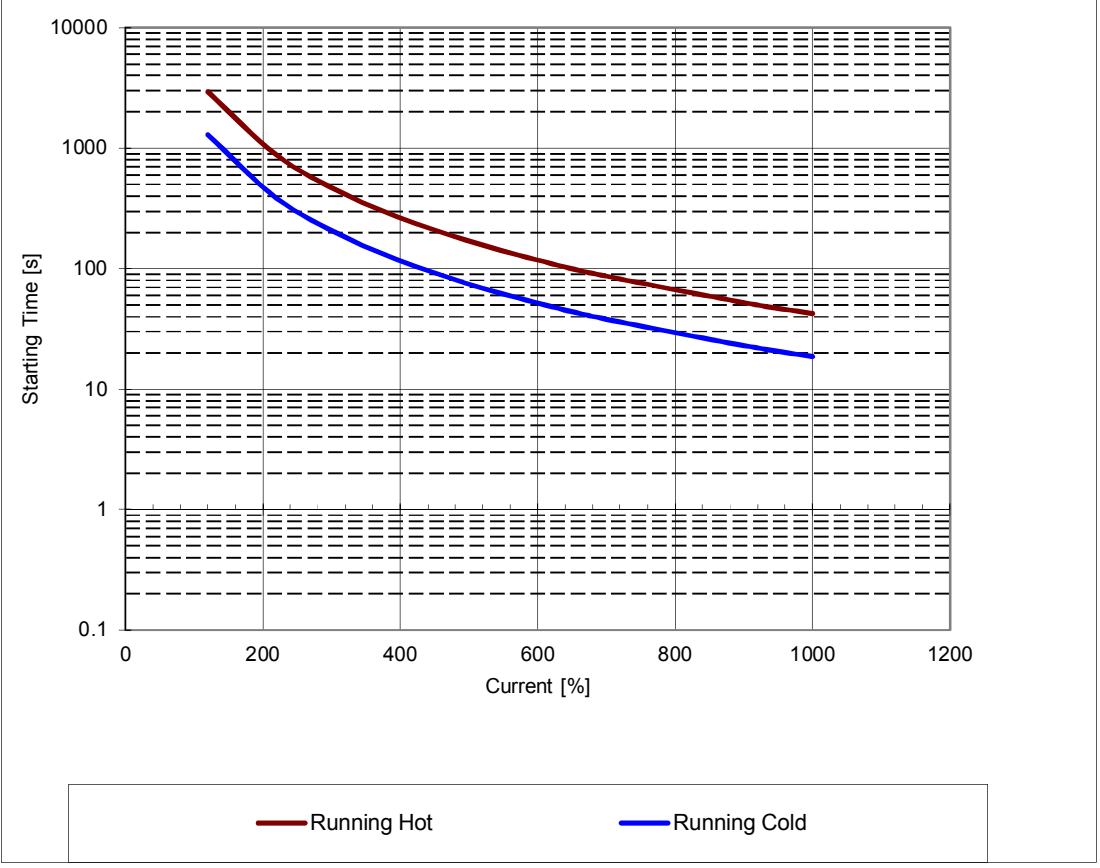
Data based on situation 9/4/2014
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ABB Motors and Generators	Current & Speed Vs Time			
	Project	Location		
Department/Author	Customer name	Customer ref.		Item name 1.00001
Our ref.	Rev/Changed b	Date of issue	Saving ident	Pages
	A	1/18/2019	untitled.xls	4(3)
Type of product	TEFC, 3-phase, squirrel cage induction motor			
Type/Frame	E3HX280SMB8			
Product code	E3HX280SMB8		Frequency (Hz)	50
Rated output P _N	37 kW	Rated current I _N	74	A
Type of duty	S1 100%			
J _{motor} (kgm ²)	1.9	Voltage (V) 100%	415	Voltage (V) 332V(80%)
J _{load} (kgm ²)		T _{start} /T _N	2.1	T _{start} /T _N 1.2
Speed (r/min)	740	Starting time (s)	0.2	Starting time (s) 0.4
T _N (Nm)	477	Speed (r/min)	739	Speed (r/min) 730
T _{load} (Nm)	477	I _s /I _N	7.7	I _s /I _N 5.9
		T _{max} /T _N	2.3	T _{max} /T _N 1.4

Starting Time [s]	Speed [rpm]	Current [A]
0.00	0	750
0.02	100	700
0.04	200	650
0.06	300	600
0.08	400	550
0.10	500	500
0.12	600	450
0.14	700	400
0.16	750	300
0.18	750	150
0.20	750	50

Data based on situation 9/4/2014
All data subject to tolerances in accordance with IS/IEC 60034-1 : 2004

ABB Motors and Generators	Thermal Withstand Curve		
	Project	Location	
Department/Author	Customer name	Customer ref.	Item name 1.00001
Our ref.	Rev/Changed b Date of issue A 1/18/2019	Saving ident untitled.xls	Pages 5(3)
Type of product	TEFC, 3-phase, squirrel cage induction motor		
Type/Frame	E3HX280SMB8		
Product code	E3HX280SMB8	Frequency (Hz)	50
Rated output P _N	37 kW	Rated current I _N	74 A
Type of duty	S1 100%		
J _{motor} (kgm ²)	1.9	Voltage (V) 100%	415
J _{load} (kgm ²)		Voltage (V)	332V(80%)
Speed (r/min)	740	T _{start} /T _N	2.1
T _N (Nm)	477	T _{start} /T _N	1.2
T _{load} (Nm)	477	Starting time (s)	0.2
		Starting time (s)	0.4
		Speed (r/min)	739
		Speed (r/min)	730
		I _s /I _N	7.7
		I _s /I _N	5.9
		T _{max} /T _N	2.3
		T _{max} /T _N	1.4



The graph shows the starting time in seconds on a logarithmic y-axis (0.1 to 10000) versus current percentage on a linear x-axis (0 to 1200). Two curves are shown: a red line for 'Running Hot' and a blue line for 'Running Cold'. Both curves show a decrease in starting time as current increases. The 'Running Cold' curve starts at approximately 1200s at 100% current and drops to about 20s at 1000% current. The 'Running Hot' curve starts at approximately 3000s at 100% current and drops to about 50s at 1000% current.

Data based on situation 9/4/2014
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