



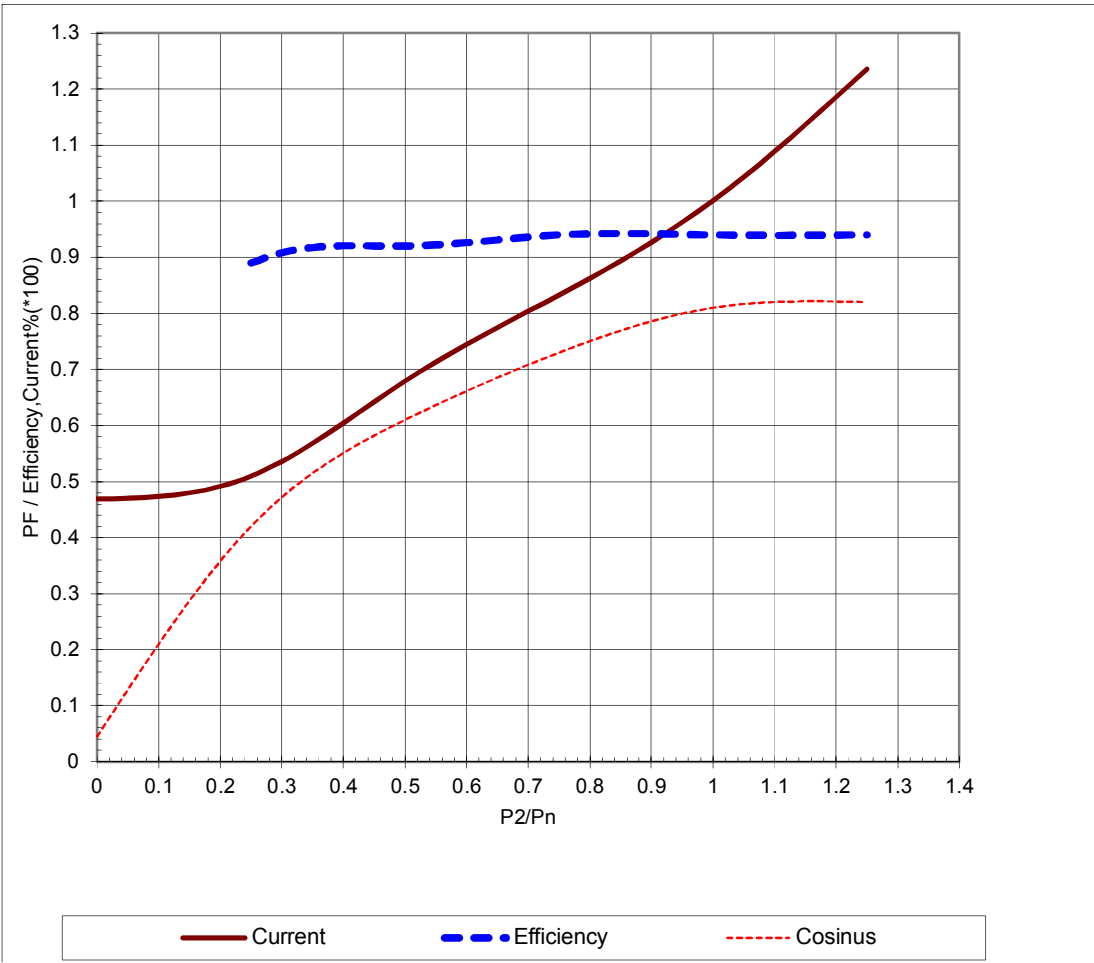
ABB Motors and Generators		Technical Data Sheet				
Department/Author		Project	Location		Item name	
Our ref.		Rev/Changed by	Date of issue	Saving ident	Pages	
		A	1/18/2019	untitled.xls	1.00007 1(3)	
No.	Definition	Data	Unit	Remarks		
1	Product	TEFC, 3-phase, squirrel cage induction motor				
2	Product code	E3BA355SMA8				
3	Type/Frame	E3BA355SMA8				
4	Mounting	IM1001, B3(foot)				
5	Rated output P _N	132	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	241	A			
12	Method of starting	DOL				
13	Starting current I _s /I _N	7.7				
14	Nominal torque T _N	1703	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	241	94.0 / IE3	0.81	
20		75	201	94	0.73	
21		50	164	92	0.61	
22						
23	Thermal withstand time hot	32	s			
24	Thermal withstand time cold	66	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	6322/C3 - 6319/C3				
31	Sound pressure level (LP dB(A) 1m)	85	dB(A)	at no-load		
32	Moment of inertia J = ¼ GD2	9.869	kg-m2			
33	Position of terminal box	Top				
34	Direction of rotation	Bi-directional				
35	Total weight of motor	1535	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 1.00007
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 E3BA355SMA8
Product code E3BA355SMA8
Rated output P_N 132 kW
Type of duty S1 100%

Voltage (V) 415 **Current I_N (A)** 241 **Power factor at P_N** 0.81
Frequency (Hz) 50 **Speed (r/min)** 740 **Efficiency (%) at P_N** 94



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 1.00007	
Our ref.	Rev/Changed b Date of issue A 1/18/2019	Saving ident untitled.xls	Pages 3(3)	
Type of product	TEFC, 3-phase, squirrel cage induction motor			
Type/Frame	E3BA355SMA8			
Product code	E3BA355SMA8	Frequency (Hz)	50	
Rated output P _N	132 kW	Rated current I _N	241	A
Type of duty	S1 100%			
J _{motor} (kgm ²)	9.9	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)
T _N (Nm)	1703	Speed (r/min)		Speed (r/min)
T _{load} (Nm)		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 plots torque (Ts/Tn) on the left y-axis (0 to 4.5) and current (Is/In) on the right y-axis (0 to 9) against speed (r/min) on the x-axis (0 to 1000). Four curves are shown: TMotorUn 415V (solid blue), TMotorU2 332V(80%) (solid red), IMotorUn 415V (dashed purple), and IMotorU2 332V(80%) (dashed green). The torque curves show a peak around 600-700 r/min before dropping to zero at approximately 740 r/min. The current curves show a peak around 600-700 r/min before dropping to zero at approximately 740 r/min.

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


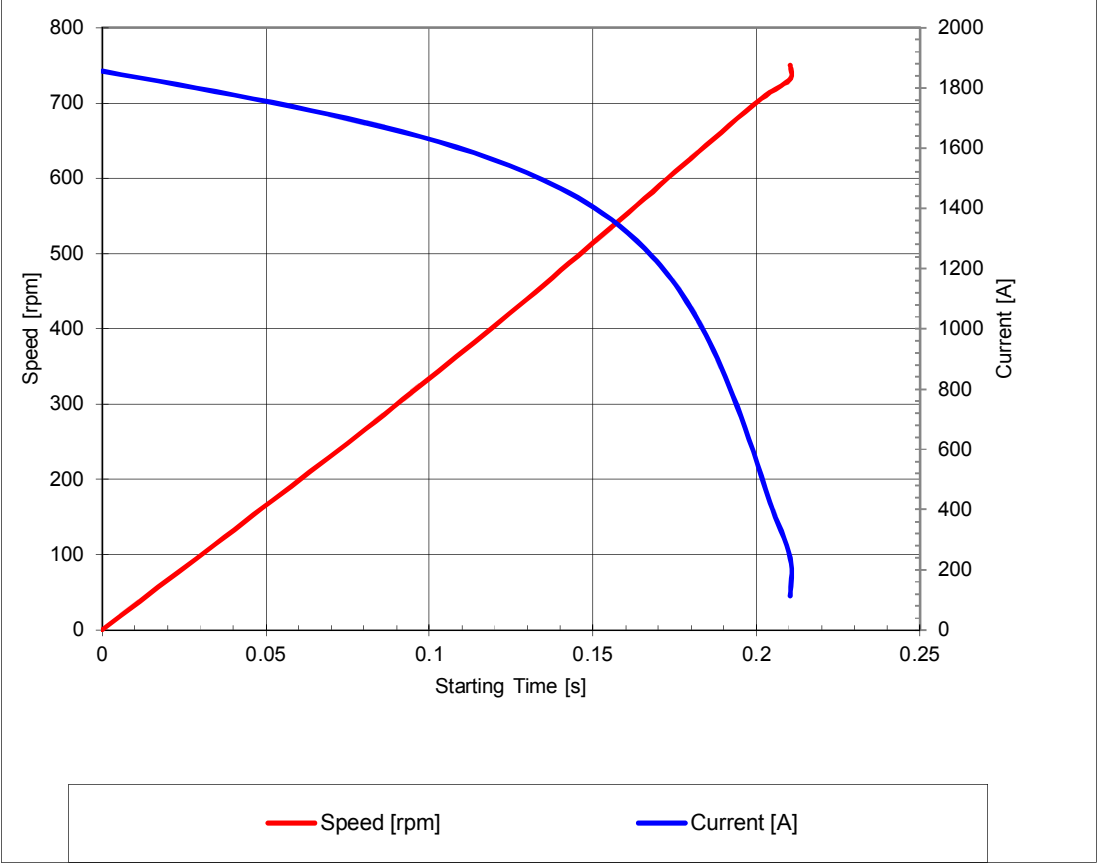

ABB Motors and Generators	Current & Speed Vs Time			
	Project	Location		
Department/Author	Customer name	Customer ref.		Item name 1.00007
Our ref.	Rev/Changed b	Date of issue	Saving ident	Pages
	A	1/18/2019	untitled.xls	4(3)
Type of product	TEFC, 3-phase, squirrel cage induction motor			
Type/Frame	E3BA355SMA8			
Product code	E3BA355SMA8		Frequency (Hz)	50
Rated output P_N	132 kW	Rated current I_N	241	A
Type of duty	S1 100%			
J_{motor} (kgm ²)	9.9	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)
T_N (Nm)	1703	Speed (r/min)		Speed (r/min)
T_{load} (Nm)		I_s/I_N	7.7	I_s/I_N 5.9
		T_{max}/T_N	2.3	T_{max}/T_N 1.4
				
<p>Data based on situation 9/4/2014</p> <p>All data subject to tolerances in accordance with IS/IEC 60034-1 : 2004</p>				

ABB Motors and Generators	Thermal Withstand Curve			
	Project	Location		
Department/Author	Customer name	Customer ref.	Item name 1.00007	
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	E3BA355SMA8			
Product code	E3BA355SMA8	Frequency (Hz)	50	
Rated output P _N	132 kW	Rated current I _N	241	A
Type of duty	S1 100%			
J _{motor} (kgm ²)	9.9	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)
T _N (Nm)	1703	Speed (r/min)		Speed (r/min)
T _{load} (Nm)		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 the current percentage on a linear x-axis (0 to 1200). Two curves are plotted: a red curve for 'Running Hot' and a blue curve for 'Running Cold'. Both curves show that starting time decreases as current increases. The 'Running Cold' curve is consistently lower than the 'Running Hot' curve.

Current [%]	Starting Time [s] (Running Hot)	Starting Time [s] (Running Cold)
100	~3000	~1000
200	~1000	~300
400	~300	~100
600	~150	~50
800	~80	~30
1000	~50	~20

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