


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	12/21/2017	untitled.xls	1.00024 1(3)	
No.	Definition	Data	Unit	Remarks		
1	Product	TEFC, 3-phase, squirrel cage induction motor				
2	Product code	E2BA 315 MLC6-ADCIN				
3	Type/Frame	E2BA315MLC6				
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, -10 %		
9	Rated frequency f_N	50	Hz	+5, -5 %		
10	Rated speed n_N	988	r/min			
11	Rated current I_N	226	A			
12	Method of starting	DOL				
13	Starting current I_s/I_N	7				
14	Nominal torque T_N	1276	Nm			
15	Locked rotor torque T_s/T_N	2.3				
16	Maximum torque T_{max}/T_N	2.7				
17						
18						
Load characteristics		Load %	Current A	Efficiency %	Power factor	
19	PLL determined from residual loss	100	226	94.6 / IE2	0.86	
20		75	180	94.6	0.81	
21		50	138	92.6	0.72	
22						
23	Thermal withstand time hot	26	s			
24	Thermal withstand time cold	54	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	6319/C3 - 6316/C3				
31	Sound pressure level (LP dB(A) 1m)	85	dB(A)	at no-load		
32	Moment of inertia $J = \frac{1}{4} GD^2$	7.05	kg-m ²			
33	Position of terminal box	Top				
34	Direction of rotation	Bi-directional				
35	Total weight of motor	1305	kg			
36						
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 : IE2 as per IS12615 2018.					
51						
52						
Remarks:						
Data based on situation 10/2/2014						

All performance values are subject to IS/IEC tolerances


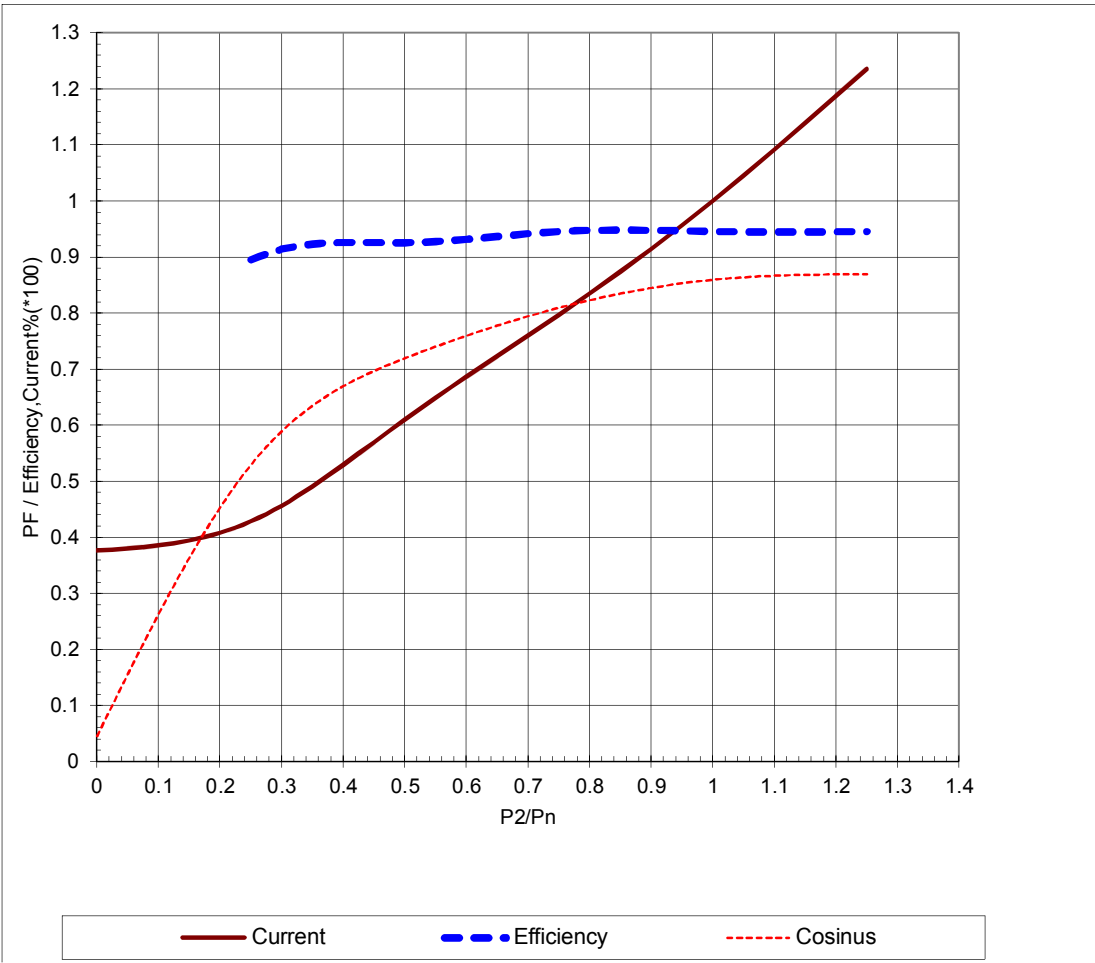

ABB Motors and Generators	Load Curves		
	Project	Location	
Department/Author	Customer name	Customer ref.	Item name 1.00024
Our ref.	Rev/Changed by A	Date of issue 12/21/2017	Saving ident untitled.xls
			Pages 2(3)
Product	TEFC, 3-phase, squirrel cage induction motor		
Type/Frame	E2BA315MLC6		
Product code	E2BA315MLC6		
Rated output P _N	132	kW	
Type of duty	S1 100%		
Voltage (V)	415	Current I _N (A)	226
Frequency (Hz)	50	Speed (r/min)	988
		Power factor at P _N	0.86
		Efficiency (%) at P _N	94.6
			
<p>All data subject to tolerances in accordance with IS/IEC 60034-1 : 2004</p>			

ABB Motors and Generators	Starting Curves		
	Project	Location	
Department/Author	Customer name	Customer ref.	Item name 1.00024
Our ref.	Rev/Changed b Date of issue A 12/21/2017	Saving ident untitled.xls	Pages 3(3)
Type of product	TEFC, 3-phase, squirrel cage induction motor		
Type/Frame	E2BA315MLC6		
Product code	E2BA315MLC6	Frequency (Hz)	50
Rated output P _N	132 kW	Rated current I _N	226 A
Type of duty	S1 100%		
J _{motor} (kgm ²)	7.1	Voltage (V) 100%	415
J _{load} (kgm ²)		Voltage (V)	332V(80%)
Speed (r/min)	988	T _{start} /T _N	2.3
T _N (Nm)	1276	T _{start} /T _N	1.3
T _{load} (Nm)		Starting time (s)	0.2
		Speed (r/min)	988
		I _s /I _N	7
		I _s /I _N	5.4
		T _{max} /T _N	2.7
		T _{max} /T _N	1.7

The graph plots torque ratios (Ts/Tn and Tload/Tn) and current ratio (Is/In) against speed (r/min). The x-axis ranges from 0 to 1250 r/min. The left y-axis (Ts/Tn) ranges from 0 to 4.5, and the right y-axis (Is/In) ranges from 0 to 9. Four curves are shown: TMotorUn 415V (solid blue), TMotorU2 332V(80%) (solid red), IMotorUn 415V (dashed purple), and IMotorU2 332V(80%) (dashed green). All curves show a sharp drop at 1000 r/min.

All data subject to tolerances in accordance with IS/IEC 60034-1 : 2004


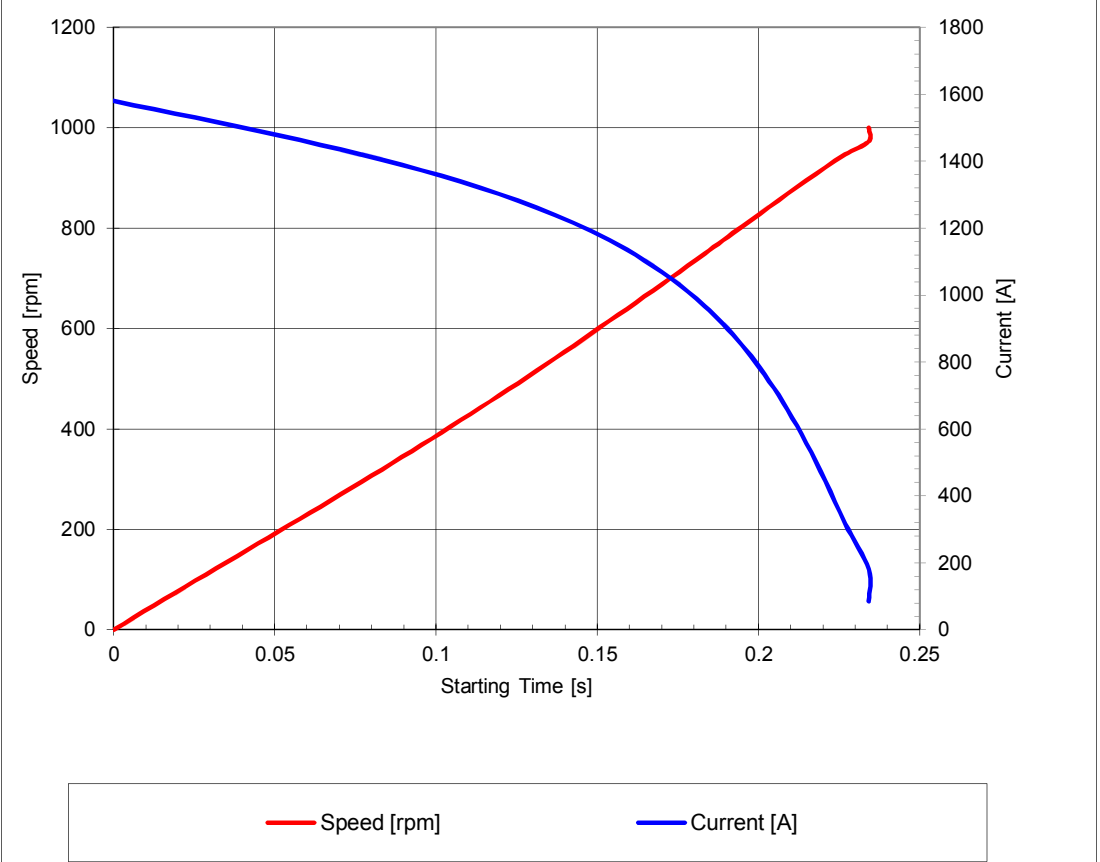
ABB Motors and Generators	Current & Speed Vs Time			
	Project	Location		
Department/Author	Customer name	Customer ref.	Item name 1.00024	
Our ref.	Rev/Changed b Date of issue A 12/21/2017	Saving ident untitled.xls	Pages 4(3)	
Type of product	TEFC, 3-phase, squirrel cage induction motor			
Type/Frame	E2BA315MLC6			
Product code	E2BA315MLC6	Frequency (Hz)	50	
Rated output P_N	132 kW	Rated current I_N	226	A
Type of duty	S1 100%			
J_{motor} (kgm ²)	7.1	Voltage (V) 100%	415	Voltage (V) 332V(80%)
J_{load} (kgm ²)		T_{start}/T_N	2.3	T_{start}/T_N 1.3
Speed (r/min)	988	Starting time (s)	0.2	Starting time (s)
T_N (Nm)	1276	Speed (r/min)		Speed (r/min)
T_{load} (Nm)		I_s/I_N	7	I_s/I_N 5.4
		T_{max}/T_N	2.7	T_{max}/T_N 1.7
				
<p>All data subject to tolerances in accordance with IS/IEC 60034-1 : 2004</p>				

ABB Motors and Generators	Thermal Withstand Curve		ABB	
	Project	Location		
Department/Author	Customer name	Customer ref.	Item name 1.00024	
Our ref.	Rev/Changed b Date of issue A 12/21/2017	Saving ident untitled.xls	Pages 5(3)	
Type of product	TEFC, 3-phase, squirrel cage induction motor			
Type/Frame	E2BA315MLC6			
Product code	E2BA315MLC6	Frequency (Hz)	50	
Rated output P_N	132 kW	Rated current I_N	226	A
Type of duty	S1 100%			
J_{motor} (kgm ²)	7.1	Voltage (V) 100%	415	Voltage (V) 332V(80%)
J_{load} (kgm ²)		T_{start}/T_N	2.3	T_{start}/T_N 1.3
Speed (r/min)	988	Starting time (s)	0.2	Starting time (s)
T_N (Nm)	1276	Speed (r/min)		Speed (r/min)
T_{load} (Nm)		I_s/I_N	7	I_s/I_N 5.4
		T_{max}/T_N	2.7	T_{max}/T_N 1.7
<p>The graph plots Starting Time [s] on a logarithmic y-axis (0.1 to 10000) against Current [%] on a linear x-axis (0 to 1000). Two curves are shown: a blue curve for 'Running Cold' and a red curve for 'Running Hot'. Both curves show a decrease in starting time as current increases. The 'Running Cold' curve starts at approximately 2000s at 100% current and drops to about 50s at 900% current. The 'Running Hot' curve starts at approximately 1200s at 100% current and drops to about 25s at 900% current.</p>				
<p>— Running Hot — Running Cold</p>				
All data subject to tolerances in accordance with IS/IEC 60034-1 : 2004				