



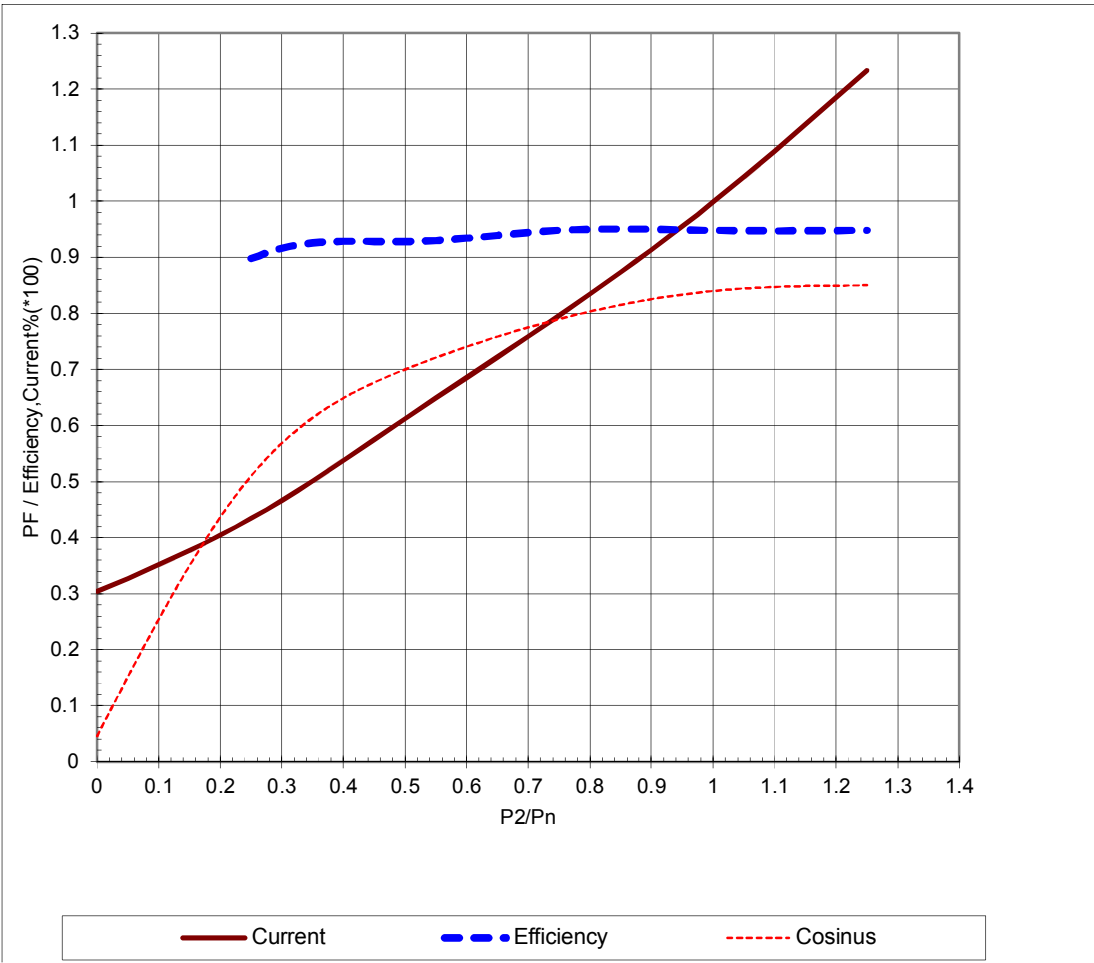
ABB Motors and Generators		Technical Data Sheet				
Project		Location				
Department/Author		Customer name		Customer ref.		
Our ref.		Rev/Changed by A		Date of issue 1/18/2019		
		Saving ident untitled.xls		Item name 1.00005		
				Pages 1(3)		
No.	Definition	Data	Unit	Remarks		
1	Product	TEFC, 3-phase, squirrel cage induction motor				
2	Product code	E2BA315MLD6				
3	Type/Frame	E2BA315MLD6				
4	Mounting	IM1001, B3(foot)				
5	Rated output P _N	160	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	989	r/min			
11	Rated current I _N	280	A			
12	Method of starting	DOL				
13	Starting current I _s /I _N	7				
14	Nominal torque T _N	1545	Nm			
15	Locked rotor torque T _S /T _N	2.1				
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	280	94.8 / IE2	0.84	
20		75	223	94.8	0.79	
21		50	171	92.8	0.7	
22						
23	Thermal withstand time hot	28	s			
24	Thermal withstand time cold	56	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 = ¼ GD ²	7.05	kg-m ²			
33	Position of terminal box	Top				
34	Direction of rotation	Bi-directional				
35	Total weight of motor	1340	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: IE2 as per IS 12615 2018					
51						
52						
Remarks:						
10/2/2014						


ABB Motors and Generators	Load Curves		
	Project	Location	
Department/Author	Customer name	Customer ref.	Item name 1.00005
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 E2BA315MLD6
Product code E2BA315MLD6
Rated output P_N 160 kW
Type of duty S1 100%

Voltage (V) 415 **Current I_N (A)** 280 **Power factor at P_N** 0.84
Frequency (Hz) 50 **Speed (r/min)** 989 **Efficiency (%) at P_N** 94.8




Data based on situation 10/2/2014
 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 1.00005		
Our ref.	Rev/Changed b	Date of issue	Saving ident	Pages	
	A	1/18/2019	untitled.xls	3(3)	
Type of product	TEFC, 3-phase, squirrel cage induction motor				
Type/Frame	E2BA315MLD6				
Product code	E2BA315MLD6		Frequency (Hz)	50	
Rated output P _N	160	kW	Rated current I _N	280	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	2.1	T _{start} /T _N	1.2
Speed (r/min)	989	Starting time (s)	0.3	Starting time (s)	0.5
T _N (Nm)	1545	Speed (r/min)	989	Speed (r/min)	980
T _{load} (Nm)	1545	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 (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 1250). The legend indicates: Torque load (solid red), TMotorUn 415V (solid blue), TMotorU2 332V(80%) (solid orange), IMotorUn 415V (dashed purple), and IMotorU2 332V(80%) (dashed green). The 415V curves show higher torque and current values compared to the 332V(80%) curves. All curves drop to zero at approximately 989 r/min.

Data based on situation 10/2/2014


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 1.00005
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	E2BA315MLD6			
Product code	E2BA315MLD6	Frequency (Hz)	50	
Rated output P_N	160 kW	Rated current I_N	280	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	2.1	T_{start}/T_N 1.2
Speed (r/min)	989	Starting time (s)	0.3	Starting time (s) 0.5
T_N (Nm)	1545	Speed (r/min)	989	Speed (r/min) 980
T_{load} (Nm)	1545	I_s/I_n	7	I_s/I_n 5.4
		T_{max}/T_n	2.7	T_{max}/T_n 1.7

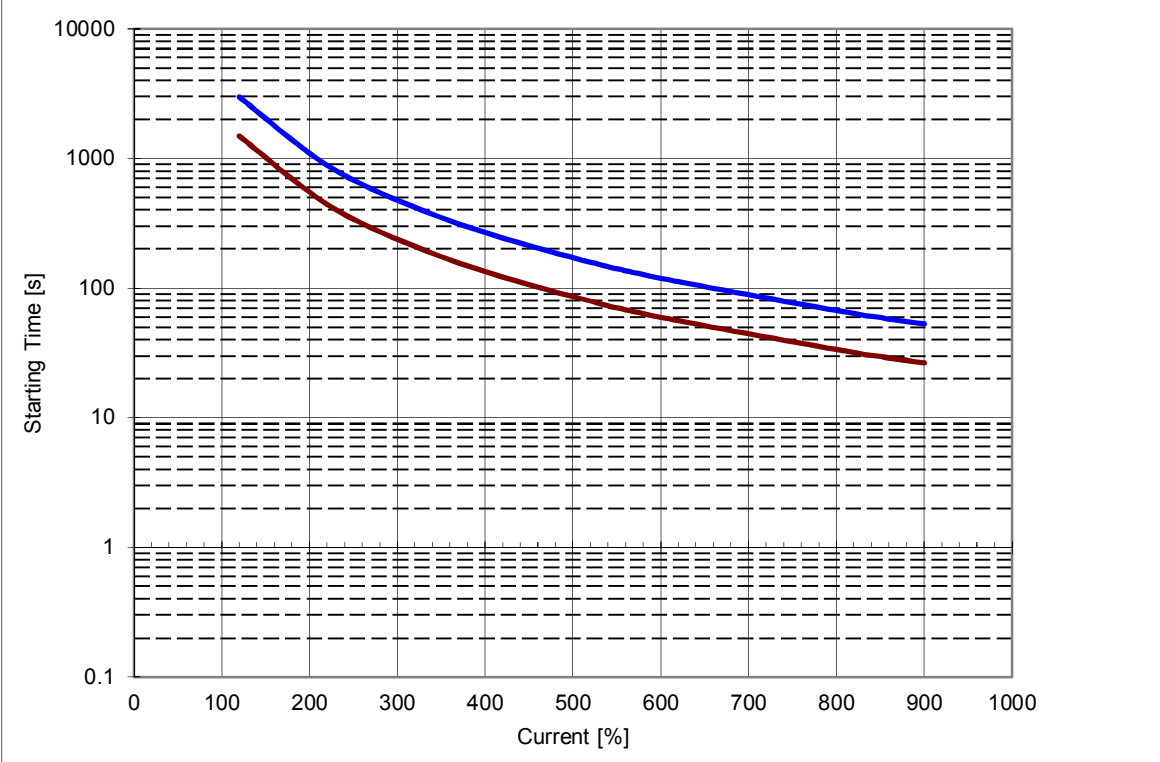
Starting Time [s]	Speed [rpm]	Current [A]
0.00	0	950
0.05	200	850
0.10	400	750
0.15	600	650
0.20	800	550
0.25	1000	50

Data based on situation 10/2/2014

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 1.00005
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	E2BA315MLD6		
Product code	E2BA315MLD6	Frequency (Hz)	50
Rated output P _N	160 kW	Rated current I _N	280 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)	989	T _{start} /T _N	2.1
T _N (Nm)	1545	T _{start} /T _N	1.2
T _{load} (Nm)	1545	Starting time (s)	0.3
		Starting time (s)	0.5
		Speed (r/min)	989
		Speed (r/min)	980
		I _s /I _N	7
		I _s /I _N	5.4
		T _{max} /T _n	2.7
		T _{max} /T _n	1.7

Starting Time [s]



— Running Hot
— Running Cold

Data based on situation 10/2/2014
All data subject to tolerances in accordance with IS/IEC 60034-1 : 2004