


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	1/16/2019	untitled.xls	1(3)	
No.	Definition	Data	Unit	Remarks		
1	Product	<i>TEFC, 3-phase, squirrel cage induction motor</i>				
2	Product code	3GBA 132 310-HDCIN		Calc. ref.	3GZH021013-18	
3	Type/Frame	M2BAX 132MA 4				
4	Mounting	IM2001, B35(foot-flange)				
5	Rated output P _N	7.5	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	1455	r/min			
11	Rated current I _N	15.3	A			
12						
13	Starting current I _s /I _N	6				
14	Nominal torque T _N	49	Nm			
15	Locked rotor torque T _S /T _N	1.7				
16	Maximum torque T _{max} /T _N	3				
17						
18						
Load characteristics		Load %	Current A	Efficiency %	Power factor	
19	PLL determined from residual loss	100	15.3	88.7 / IE2	0.77	
20		75	12.5	89.2	0.7	
21		50	9.8	88.3	0.6	
22						
23	Thermal withstand time hot	9	s			
24	Thermal withstand time cold	17	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	6208-2Z/C3 - 6208-2Z/C3				
31	Sound pressure level (LP dB(A) 1m)	72	dB(A)	at no-load		
32	Moment of inertia J = ¼ GD ²	0.03195	kg·m ²			
33	Position of terminal box	Top				
34	Direction of rotation	Bi-directional				
35	Weight of rotor	14	kg			
36	Total weight of motor	68	kg			
37						
38						
39						
40						
41						
42						
43						
44						
45						
Ex-motors						
46						
47						
48						
Option Variant Codes / Definition						
49						
50						
51						
52						
Remarks:						
Data based on situation 8/8/2016						

All performance values are subject to IS/IEC tolerances


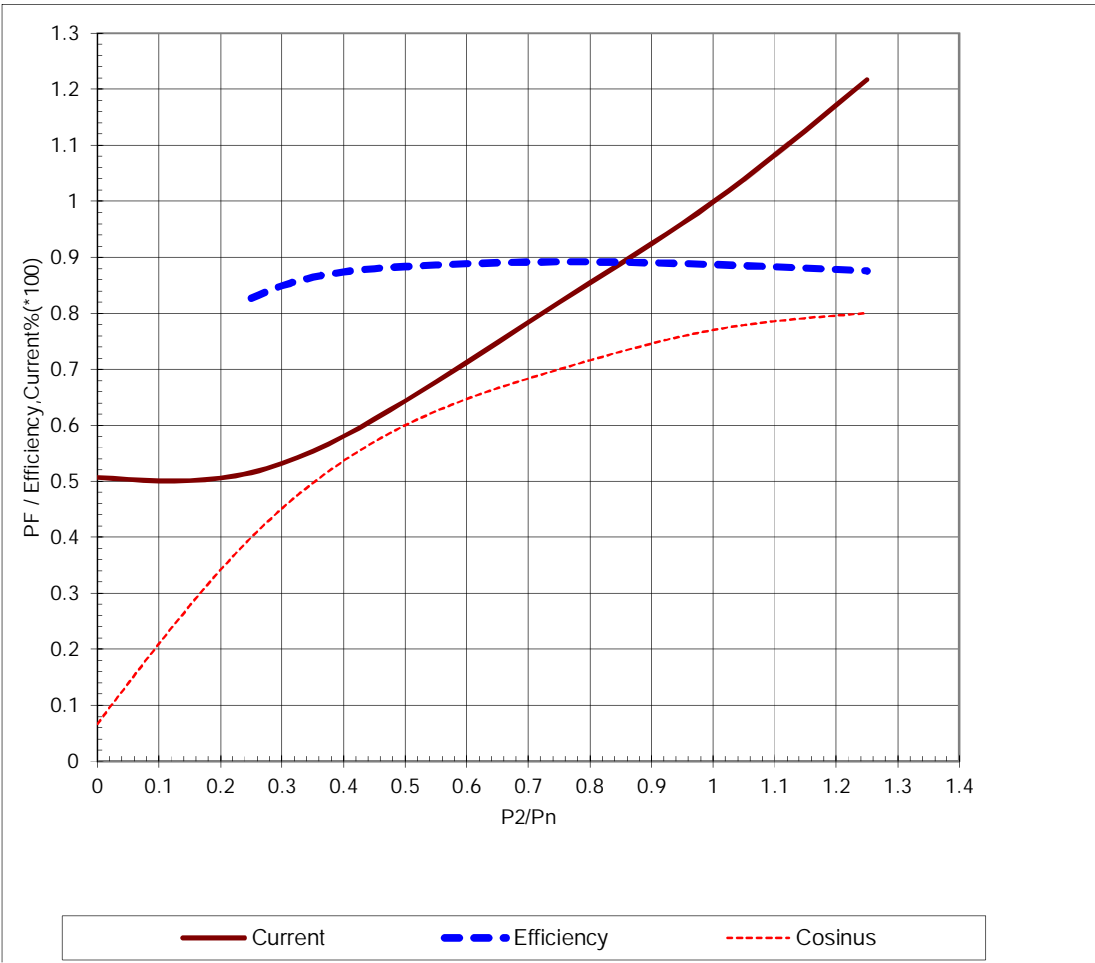
ABB Motors and Generators	Load Curves		
	Project	Location	
Department/Author	Customer name	Customer ref.	Item name 1.00001
Our ref.	Rev/Changed by A	Date of issue 1/16/2019	Saving ident untitled.xls
			Pages 2(3)
Product	TEFC, 3-phase, squirrel cage induction motor		
Type/Frame	M2BAX 132MA 4	Calc. ref.	3GZH021013-18
Product code	3GBA 132 310-HDCIN		
Rated output P _N	7.5	kW	
Type of duty	S1 100%		
Voltage (V)	415	Current I _N (A)	15.3
Frequency (Hz)	50	Speed (r/min)	1455
		Power factor at P _N	0.77
		Efficiency (%) at P _N	88.7
			
<p>Data based on situation 8/8/2016</p> <p style="text-align: center;">All data subject to tolerances in accordance with IS/IEC 60034-1 : 2004</p>			


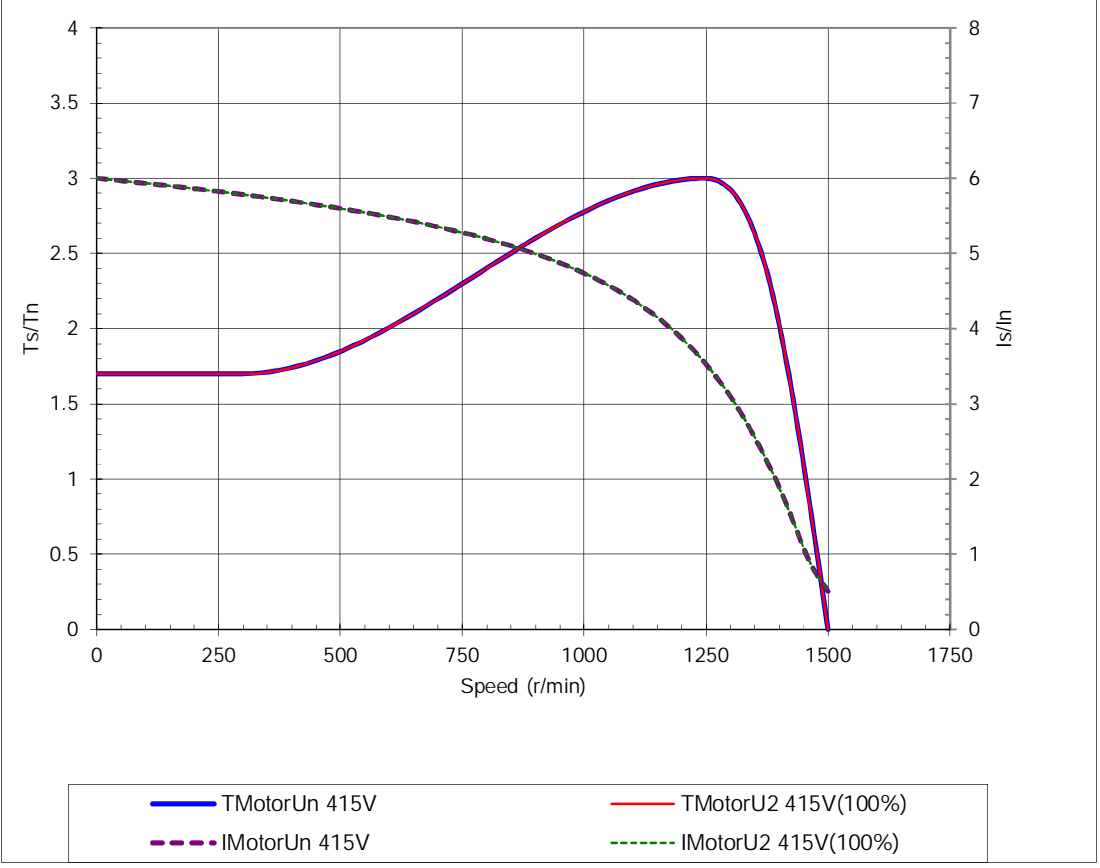

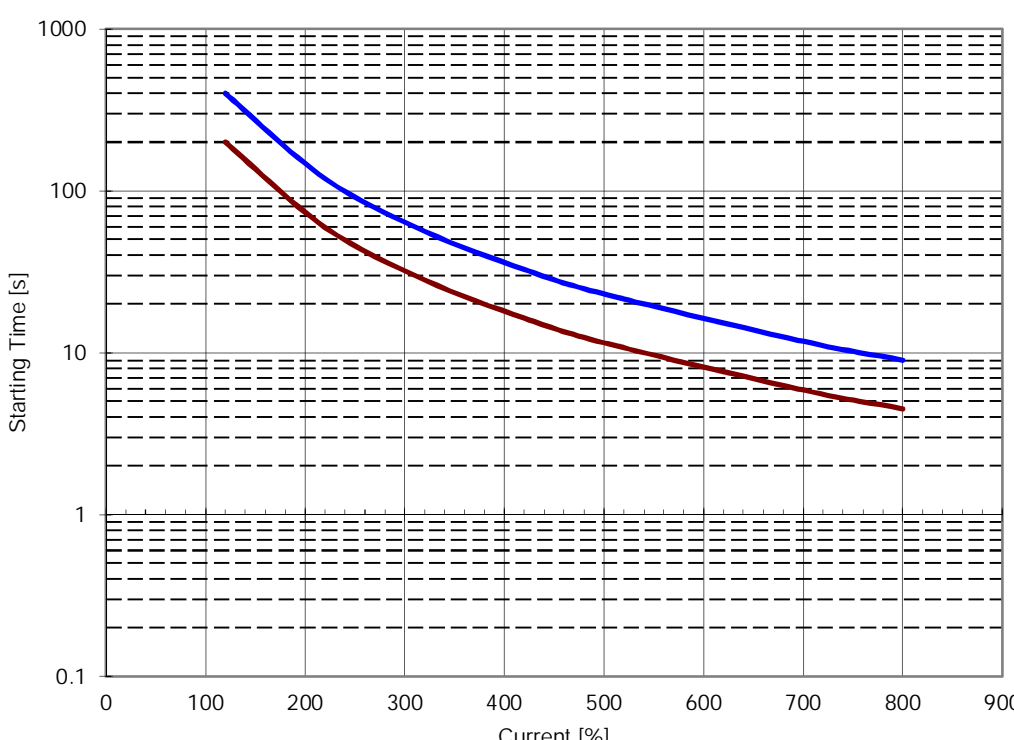
ABB Motors and Generators	Starting Curves			
	Project	Location		
Department/Author	Customer name	Customer ref.		Item name 1.00001
Our ref.	Rev/Changed by A	Date of issue 1/16/2019	Saving ident untitled.xls	Pages 3(3)
Type of product	TEFC, 3-phase, squirrel cage induction motor			
Type/Frame	M2BAX 132MA 4	Calc. ref.	3GZH021013-18	
Product code	3GBA 132 310-HDCIN	Frequency (Hz)	50	
Rated output P _N	7.5 kW	Rated current I _N	15.3	A
Type of duty	S1 100%			
J _{motor} (kgm ²)	0.032	Voltage (V) 100%	415	Voltage (V) 415V(100%)
J _{load} (kgm ²)		T _{start} /T _N	1.7	T _{start} /T _N 1.7
Speed (r/min)	1455	Starting time (s)	0.1	Starting time (s)
T _N (Nm)	49	Speed (r/min)		Speed (r/min)
T _{load} (Nm)		I _s /I _n	6	I _s /I _n 6
		T _{max} /T _n	3	T _{max} /T _n 3
 <p>The graph plots torque (Ts/Tn) on the left y-axis (0 to 4) and current (Is/In) on the right y-axis (0 to 8) against speed (r/min) on the x-axis (0 to 1750). Two torque curves are shown: a solid blue line for 415V (T_{MotorUn}) and a solid red line for 415V(100%) (T_{MotorU2}). Two current curves are shown: a dashed purple line for 415V (I_{MotorUn}) and a dashed green line for 415V(100%) (I_{MotorU2}). The 415V(100%) torque curve peaks at approximately 3.0 at 1250 r/min. The 415V(100%) current curve peaks at approximately 6.0 at 1250 r/min. The 415V torque curve starts at approximately 1.7 at 0 r/min. The 415V current curve starts at approximately 3.0 at 0 r/min.</p>				
Data based on situation 8/8/2016				
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 by A	Date of issue 1/16/2019	Saving ident untitled.xls
Type of product	TEFC, 3-phase, squirrel cage induction motor		
Type/Frame	M2BAX 132MA 4	Calc. ref.	3GZH021013-18
Product code	3GBA 132 310-HDCIN	Frequency (Hz)	50
Rated output P _N	7.5 kW	Rated current I _N	15.3 A
Type of duty	S1 100%		
J _{motor} (kgm ²)	0.032	Voltage (V) 100%	415
J _{load} (kgm ²)		Voltage (V)	415V(100%)
Speed (r/min)	1455	T _{start} /T _N	1.7
T _N (Nm)	49	Starting time (s)	0.1
T _{load} (Nm)		Speed (r/min)	
		I _s /I _n	6
		T _{max} /T _n	3
		I _s /I _n	6
		T _{max} /T _n	3



The graph plots Starting Time [s] on a logarithmic y-axis (0.1 to 1000) against Current [%] on a linear x-axis (0 to 900). 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 300s at 100% current and drops to about 10s at 800% current. The 'Running Hot' curve starts at approximately 150s at 100% current and drops to about 5s at 800% current.

Current [%]	Starting Time [s] (Running Cold)	Starting Time [s] (Running Hot)
100	~300	~150
200	~100	~50
300	~50	~30
400	~30	~20
500	~20	~15
600	~15	~12
700	~12	~10
800	~10	~8

Data based on situation 8/8/2016
All data subject to tolerances in accordance with IS/IEC 60034-1 : 2004