


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	3GBA 092 120-BSDIN		Calc. ref.	3GZC021009-95	
3	Type/Frame	M2BAX 90SB 4				
4	Mounting	IM3001, B5(flange)				
5	Rated output P _N	1.1	kW			
6	Service factor	1				
7	Type of duty	S1 100%				
8	Rated voltage U _N	415	VY	+10, -10 %		
9	Rated frequency f _N	50	Hz	+5, -5 %		
10	Rated speed n _N	1435	r/min			
11	Rated current I _N	2.6	A			
12						
13	Starting current I _s /I _N	6				
14	Nominal torque T _N	7.3	Nm			
15	Locked rotor torque T _S /T _N	3				
16	Maximum torque T _{max} /T _N	3.7				
17						
18						
Load characteristics		Load %	Current A	Efficiency %	Power factor	
19	PLL determined from residual loss	100	2.6	84.1 / IE3	0.7	
20		75	2.2	83.7	0.61	
21		50	2	81	0.47	
22						
23	Thermal withstand time hot	10	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	6205-2Z/C3 - 6204-2Z/C3				
31	Sound pressure level (LP dB(A) 1m)	66	dB(A)	at no-load		
32	Moment of inertia J = ¼ GD ²	0.00397	kg-m ²			
33	Position of terminal box	Top				
34	Direction of rotation	Bi-directional				
35	Weight of rotor	5	kg			
36	Total weight of motor	22	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 12/21/2015						

All performance values are subject to IS/IEC tolerances


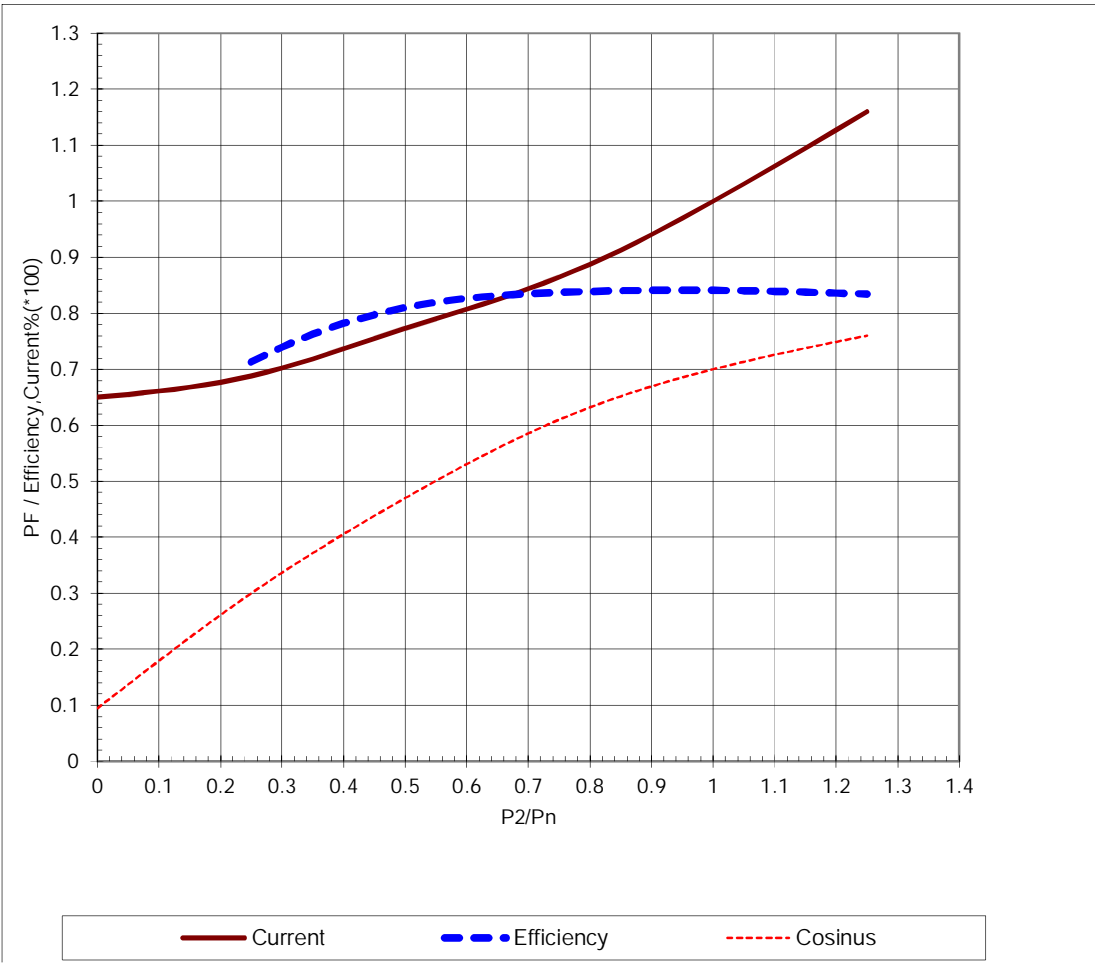
ABB Motors and Generators	Load Curves		
	Project	Location	
Department/Author	Customer name	Customer ref.	Item name 1.00001
Our ref.	Rev/Changed by A	Date of issue 1/18/2019	Saving ident untitled.xls
Pages 2(3)	Product TEFC, 3-phase, squirrel cage induction motor		
Type/Frame	M2BAX 90SB 4	Calc. ref.	3GZC021009-95
Product code	3GBA 092 120-BSDIN		
Rated output P _N	1.1 kW		
Type of duty	S1 100%		
Voltage (V)	415	Current I _N (A)	2.6
Frequency (Hz)	50	Speed (r/min)	1435
		Power factor at P _N	0.7
		Efficiency (%) at P _N	84.1
			
<p>Data based on situation 12/21/2015</p> <p style="text-align: center;">All data subject to tolerances in accordance with IS/IEC 60034-1 : 2004</p>			


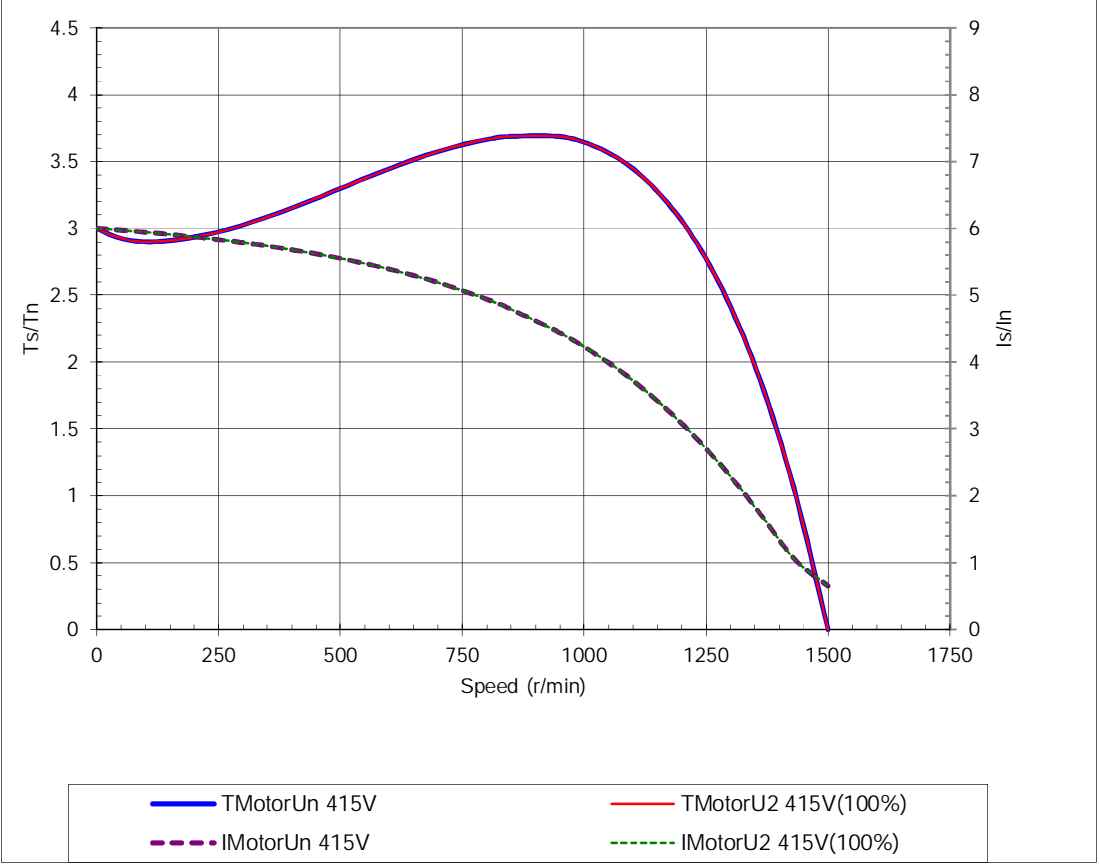

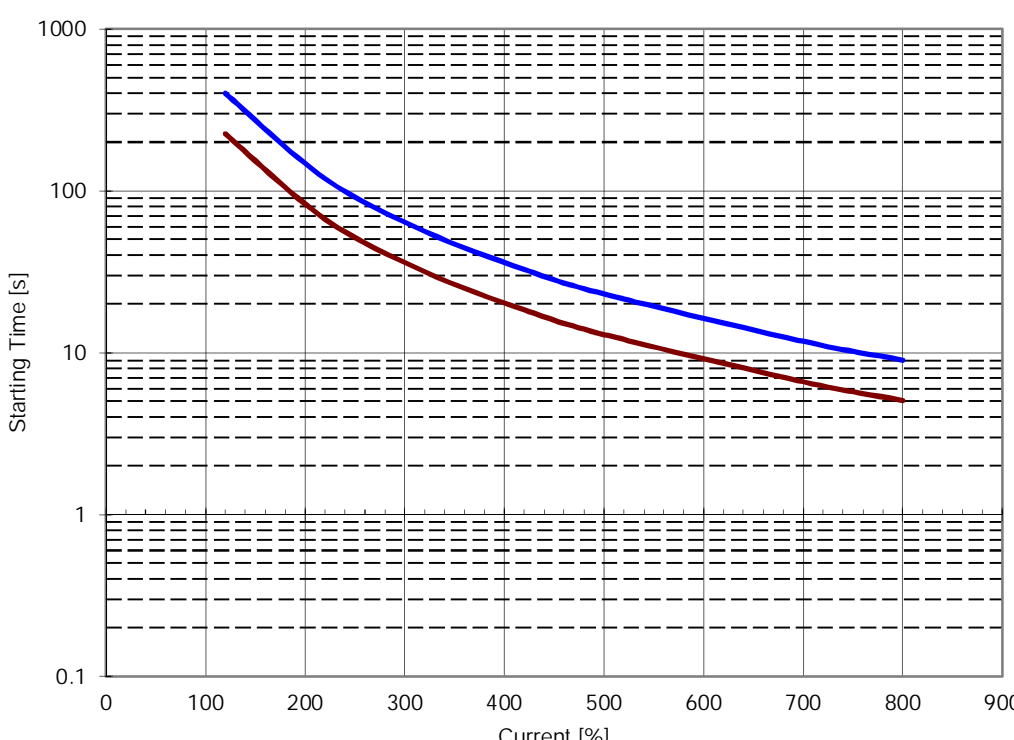
ABB Motors and Generators	Starting Curves			
	Project	Location		
Department/Author	Customer name	Customer ref.		Item name 1.00001
Our ref.	Rev/Changed by A	Date of issue 1/18/2019	Saving ident untitled.xls	Pages 3(3)
Type of product	TEFC, 3-phase, squirrel cage induction motor			
Type/Frame	M2BAX 90SB 4	Calc. ref.	3GZC021009-95	
Product code	3GBA 092 120-BSDIN	Frequency (Hz)	50	
Rated output P _N	1.1 kW	Rated current I _N	2.6	A
Type of duty	S1 100%			
J _{motor} (kgm ²)	0.004	Voltage (V) 100%	415	Voltage (V) 415V(100%)
J _{load} (kgm ²)		T _{start} /T _N	3	T _{start} /T _N 3
Speed (r/min)	1435	Starting time (s)		Starting time (s)
T _N (Nm)	7.3	Speed (r/min)		Speed (r/min) 939
T _{load} (Nm)		I _s /I _N	6	I _s /I _N 6
		T _{max} /T _N	3.7	T _{max} /T _N 3.7
 <p>The graph plots torque (T_s/T_N) and current (I_s/I_N) against speed (r/min). The x-axis ranges from 0 to 1750 r/min. The left y-axis (T_s/T_N) ranges from 0 to 4.5, and the right y-axis (I_s/I_N) ranges from 0 to 9. A solid blue line represents T_{MotorUn} 415V, a solid red line represents T_{MotorU2} 415V(100%), a dashed purple line represents I_{MotorUn} 415V, and a dashed green line represents I_{MotorU2} 415V(100%). The torque curves peak at approximately 3.7 around 900 r/min. The current curves peak at 6 around 900 r/min. The motor speed is 1435 r/min and the load speed is 939 r/min.</p>				
Data based on situation 12/21/2015				
All data subject to tolerances in accordance with IS/IEC 60034-1 : 2004				

ABB Motors and Generators	Thermal Withstand Curve		
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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 5(3)			
Type of product	TEFC, 3-phase, squirrel cage induction motor		
Type/Frame	M2BAX 90SB 4	Calc. ref.	3GZC021009-95
Product code	3GBA 092 120-BSDIN	Frequency (Hz)	50
Rated output P _N	1.1 kW	Rated current I _N	2.6 A
Type of duty	S1 100%		
J _{motor} (kgm ²)	0.004	Voltage (V) 100%	415
J _{load} (kgm ²)		T _{start} /T _N	3
Speed (r/min)	1435	Starting time (s)	
T _N (Nm)	7.3	Speed (r/min)	939
T _{load} (Nm)		I _s /I _N	6
		T _{max} /T _n	3.7
		Voltage (V)	415V(100%)
		T _{start} /T _N	3
		Starting time (s)	
		Speed (r/min)	939
		I _s /I _N	6
		T _{max} /T _n	3.7



Current [%]	Starting Time [s] (Running Hot)	Starting Time [s] (Running Cold)
100	~200	~300
200	~80	~120
300	~45	~70
400	~30	~50
500	~20	~38
600	~15	~30
700	~11	~23
800	~8	~18

Data based on situation 12/21/2015
All data subject to tolerances in accordance with IS/IEC 60034-1 : 2004