


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	1.00001 1(3)	
No.	Definition	Data	Unit	Remarks		
1	Product	TEFC, 3-phase, squirrel cage induction motor				
2	Product code	3GBA 082 320-BSCIN			Calc. ref.	3GZH021008-18
3	Type/Frame	M2BAX 80MB 4				
4	Mounting	IM3001, B5(flange)				
5	Rated output P _N	0.75	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	1425	r/min			
11	Rated current I _N	1.97	A			
12						
13	Starting current I _s /I _N	6				
14	Nominal torque T _N	5	Nm			
15	Locked rotor torque T _S /T _N	3				
16	Maximum torque T _{max} /T _N	3.5				
17						
18						
Load characteristics		Load %	Current A	Efficiency %	Power factor	
19	PLL determined from residual loss	100	1.97	79.6 / IE2	0.67	
20		75	1.72	78.5	0.58	
21		50	1.56	74.3	0.45	
22						
23	Thermal withstand time hot	6	s			
24	Thermal withstand time cold	13	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	6204-2Z/C3 - 6203-2Z/C3				
31	Sound pressure level (LP dB(A) 1m)	61	dB(A)	at no-load		
32	Moment of inertia J = ¼ GD ²	0.00247	kg·m ²			
33	Position of terminal box	Top				
34	Direction of rotation	Bi-directional				
35	Weight of rotor	4	kg			
36	Total weight of motor	17	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


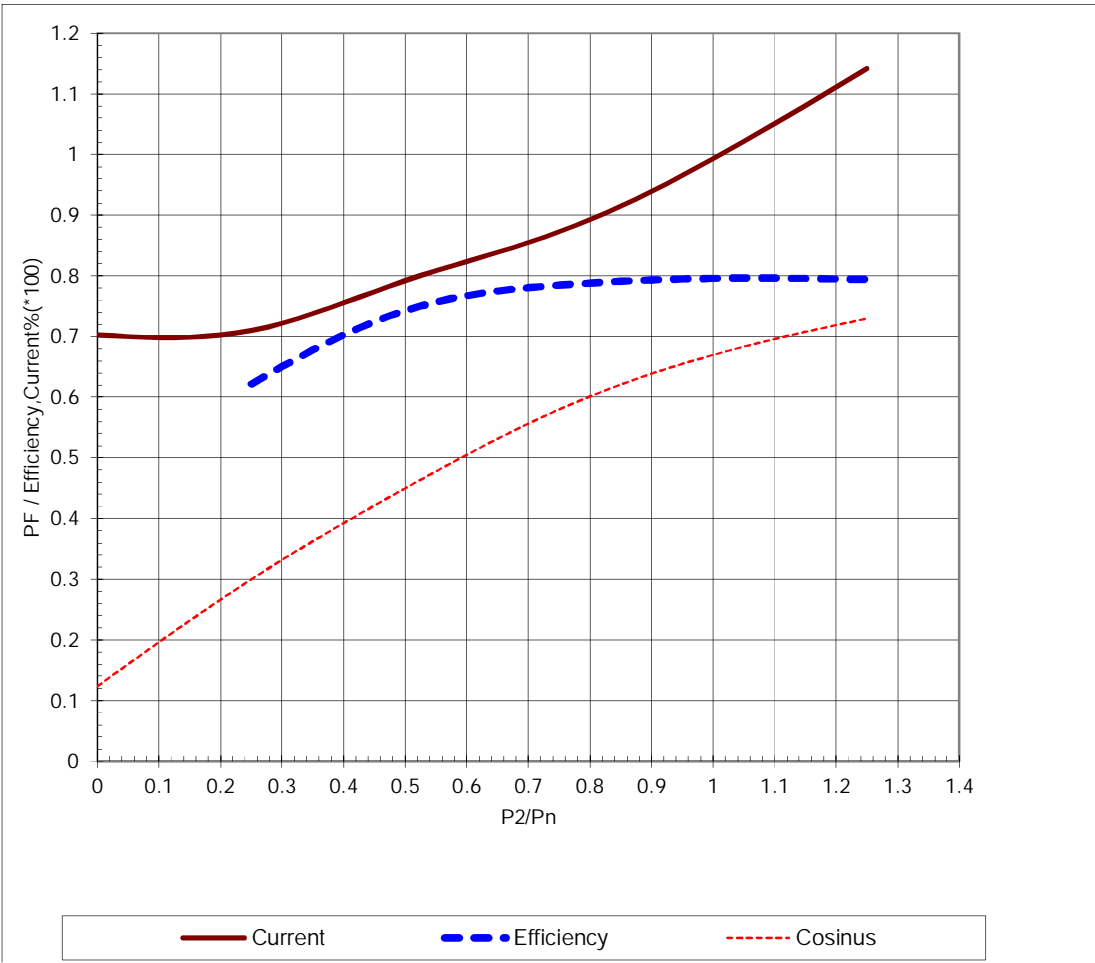


ABB Motors and Generators	Load Curves		
	Project	Location	
Department/Author	Customer name	Customer ref.	Item name 1.00001
Our ref.	Rev/Changed by A	Date of issue 1/16/2019	Saving ident untitled.xls
Pages 2(3)	Product TEFC, 3-phase, squirrel cage induction motor		
Type/Frame	M2BAX 80MB 4	Calc. ref.	3GZH021008-18
Product code	3GBA 082 320-BSCIN		
Rated output P _N	0.75 kW		
Type of duty	S1 100%		
Voltage (V)	415	Current I _N (A)	1.97
Frequency (Hz)	50	Speed (r/min)	1425
		Power factor at P _N	0.67
		Efficiency (%) at P _N	79.6
			
<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 80MB 4	Calc. ref.	3GZH021008-18	
Product code	3GBA 082 320-BSCIN	Frequency (Hz)	50	
Rated output P _N	0.75 kW	Rated current I _N	1.97	A
Type of duty	S1 100%			
J _{motor} (kgm ²)	0.0025	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)	1425	Starting time (s)		Starting time (s)
T _N (Nm)	5	Speed (r/min)		Speed (r/min)
T _{load} (Nm)		I _s /I _n	6	I _s /I _n 6
		T _{max} /T _n	3.5	T _{max} /T _n 3.5

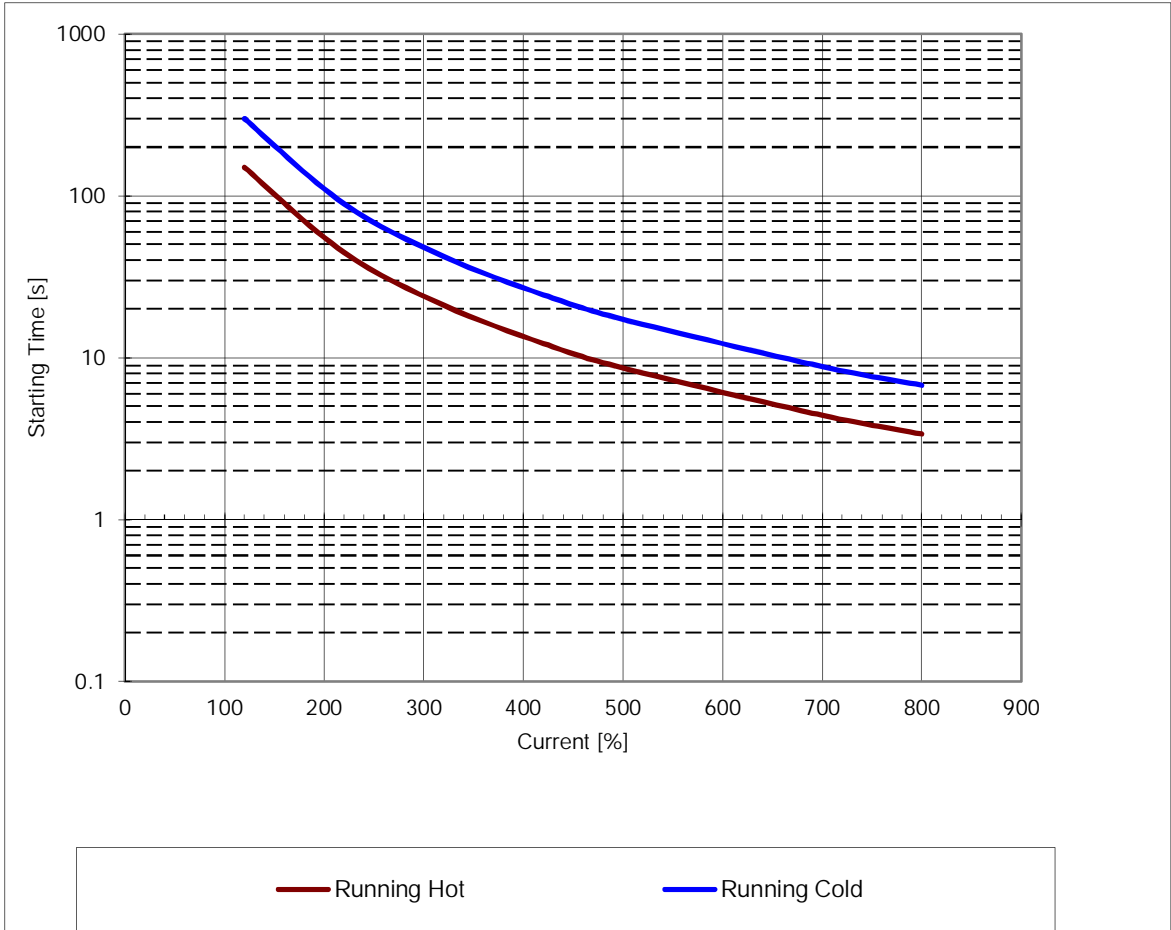
The graph displays the starting characteristics of the motor. The x-axis represents Speed (r/min) from 0 to 1750. The left y-axis represents torque ratio (Ts/Tn) from 0 to 4. The right y-axis represents current ratio (Is/In) from 0 to 8. Four curves are shown: T_{MotorUn} 415V (solid blue), T_{MotorU2} 415V(100%) (solid red), I_{MotorUn} 415V (dashed purple), and I_{MotorU2} 415V(100%) (dashed green). The torque curves peak at approximately 1000 r/min with a value of 3.5. The current curves peak at approximately 250 r/min with a value of 6. The 100% voltage curves (red and green) are consistently higher than the 415V curves (blue and purple).

Data based on situation 8/8/2016
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ABB Motors and Generators	Thermal Withstand Curve		
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Our ref.	Rev/Changed by A	Date of issue 1/16/2019	Saving ident untitled.xls
			Pages 5(3)

Type of product	TEFC, 3-phase, squirrel cage induction motor		
Type/Frame	M2BAX 80MB 4	Calc. ref.	3GZH021008-18
Product code	3GBA 082 320-BSCIN	Frequency (Hz)	50
Rated output P _N	0.75 kW	Rated current I _N	1.97 A
Type of duty	S1 100%		

J _{motor} (kgm ²)	0.0025	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)	1425	Starting time (s)		Starting time (s)	
T _N (Nm)	5	Speed (r/min)		Speed (r/min)	
T _{load} (Nm)		I _s /I _n	6	I _s /I _n	6
		T _{max} /T _n	3.5	T _{max} /T _n	3.5



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