ABB Motors and Generators	Technical Data Sheet			
	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 **1(3)**

No.	Definition	Data	Unit	Remarks	
1	Product	***TEFC, 3-phase, squirrel cage induction motor***			
2	Product code	***3GBA 161 430-ADCIN***		Calc. ref.	3GZH021016-3
3	Type/Frame	***M2BAX 160MLC 2***			
4	Mounting	***IM1001, B3(foot)***			
5	Rated output P_N	***18.5***	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	***2928***	r/min		
11	Rated current I_N	***32.4***	A		
12					
13	Starting current I_s/I_N	***7***			
14	Nominal torque T_N	***60***	Nm		
15	Locked rotor torque T_S/T_N	***2.3***			
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*	**32.4**	**90.9 / IE2**	**0.87**
20		*75*	**24.9**	**91.2**	**0.85**
21		*50*	**17.8**	**90.4**	**0.8**
22					

23	Thermal withstand time hot	***19***	s	
24	Thermal withstand time cold	***31***	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	***6209-2Z/C3 - 6209-2Z/C3***		
31	Sound pressure level (LP dB(A) 1m)	***80***	dB(A)	at no-load
32	Moment of inertia J = ¼ GD2	***0.0581***	kg-m2	
33	Position of terminal box	***Top***		
34	Direction of rotation	***Bi-directional***		
35	Weight of rotor	***30***	kg	
36	Total weight of motor	***131***	kg	
37				
38				
39				
40				
41				
42				
43				
44				
45				
Ex-motors				
46				
47				
48				
Option	Variant Codes / Definition			
49				
50				
51				
52				

Remarks:

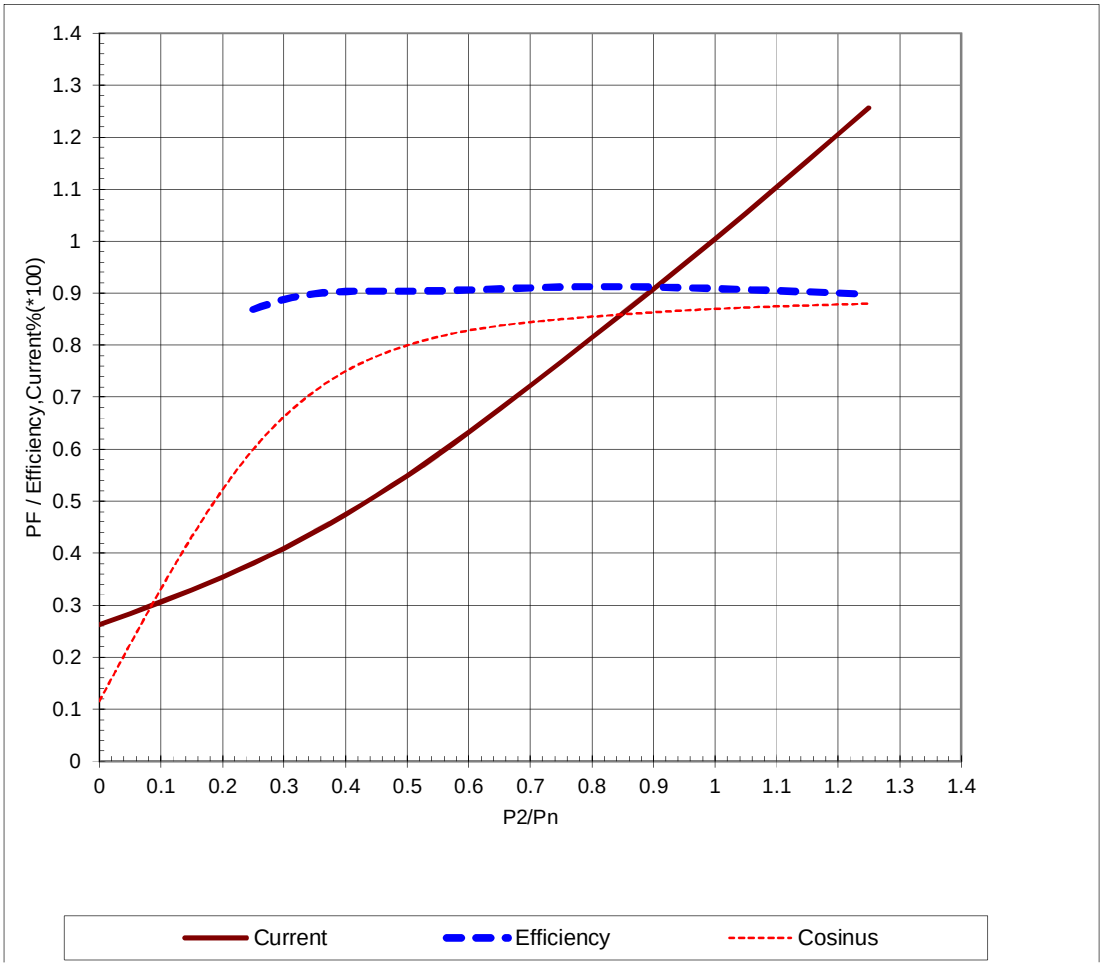
Data based on situation 9/19/2015

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 / Date of issue **A** **1/16/2019**	Saving ident **untitled.xls**	Pages **2(3)**

Product	**TEFC, 3-phase, squirrel cage induction motor**		
Type/Frame	**M2BAX 160MLC 2**	Calc. ref.	**3GZH021016-3**
Product code	**3GBA 161 430-ADCIN**		
Rated output P_N	**18.5** kW		
Type of duty	**S1 100%**		

Voltage (V)	**415**	Current I_N (A)	**32.4**	Power factor at P_N	**0.87**
Frequency (Hz)	**50**	Speed (r/min)	**2928**	Efficiency (%) at P_N	**90.9**



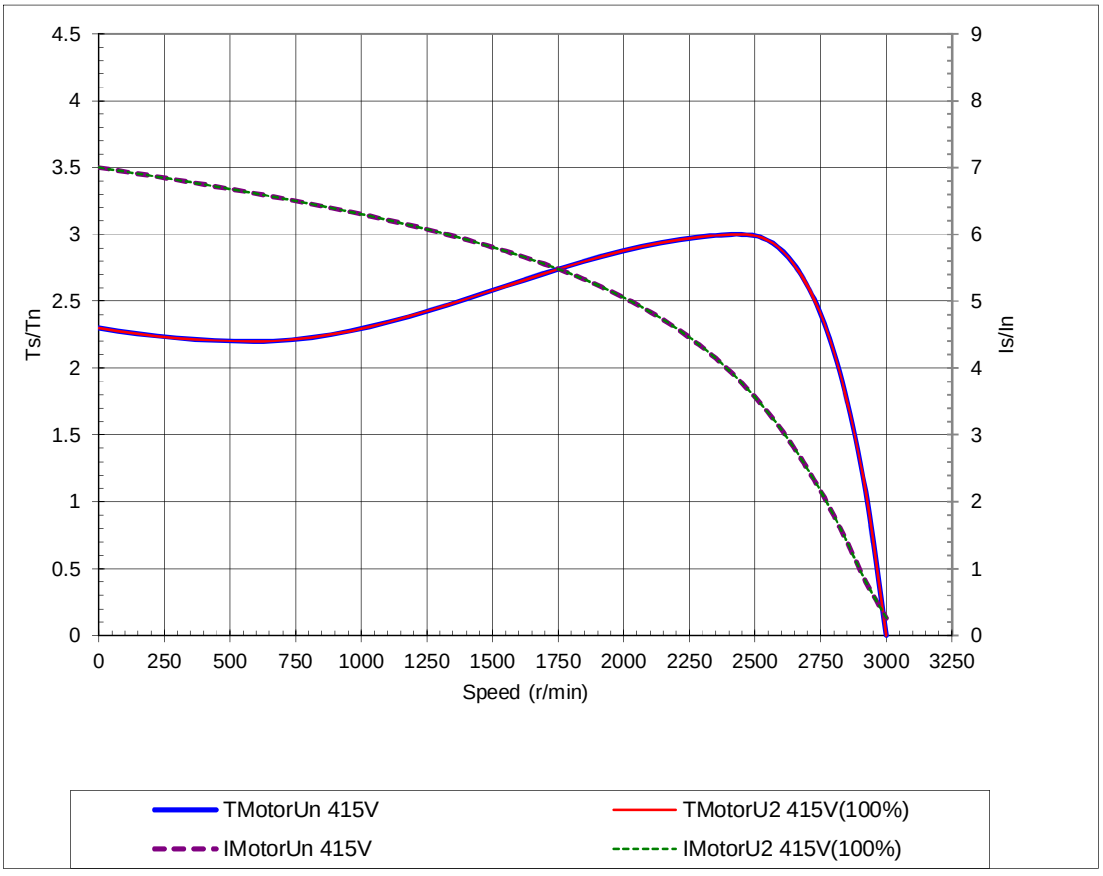
Data based on situation 9/19/2015

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 **1.00001**
Our ref.	Rev/Changed b Date of issue **A** **1/16/2019**	Saving ident **untitled.xls**	Pages **3(3)**

Type of product	**TEFC, 3-phase, squirrel cage induction motor**				
Type/Frame	**M2BAX 160MLC 2**		Calc. ref.	3GZH021016-3	
Product code	**3GBA 161 430-ADCIN**		Frequency (Hz)	**50**	
Rated output P_N	**18.5** kW		Rated current I_N	**32.4**	A
Type of duty	**S1 100%**				

J_{motor} (kgm2)	**0.058**	Voltage (V) 100%	***415***	Voltage (V)	***415V(100%)***
J_{load} (kgm2)		T_{start}/T_N	***2.3***	T_{start}/T_N	***2.3***
Speed (r/min)	**2928**	Starting time (s)	***0.1***	Starting time (s)	
T_N (Nm)	**60**	Speed (r/min)		Speed (r/min)	
T_{load} (Nm)		I_s/I_n	***7***	I_s/I_n	***7***
		T_{max}/T_n	***3***	T_{max}/T_n	***3***



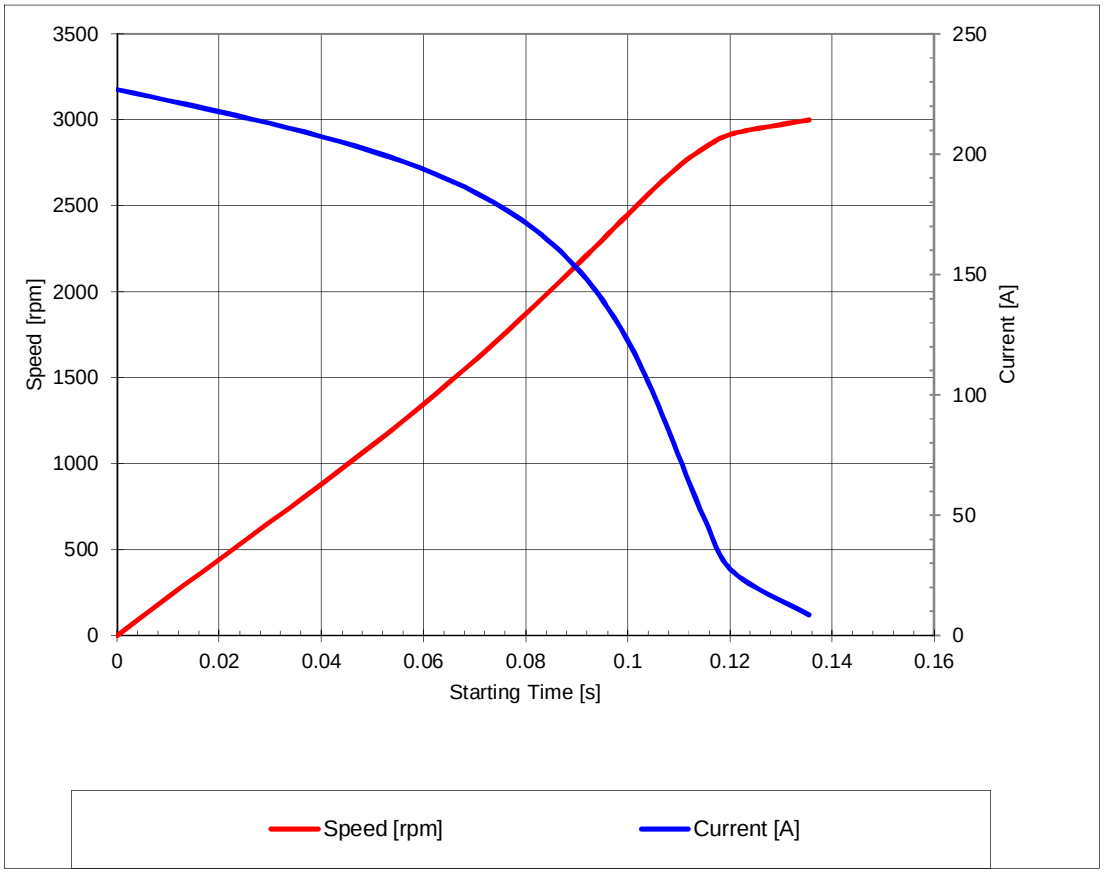
Data based on situation 9/19/2015

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 **1.00001**
Our ref.	Rev/Changed b Date of issue **A 1/16/2019**	Saving ident **untitled.xls**	Pages **4(3)**

Type of product	**TEFC, 3-phase, squirrel cage induction motor**			
Type/Frame	**M2BAX 160MLC 2**	Calc. ref.	3GZH021016-3	
Product code	**3GBA 161 430-ADCIN**	Frequency (Hz)	**50**	
Rated output P_N	**18.5** kW	Rated current I_N	**32.4**	A
Type of duty	**S1 100%**			

J_{motor} (kgm2)	**0.058**	Voltage (V) 100%	***415***	Voltage (V)	***415V(100%)***
J_{load} (kgm2)		T_{start}/T_N	***2.3***	T_{start}/T_N	***2.3***
Speed (r/min)	**2928**	Starting time (s)	***0.1***	Starting time (s)	
T_N (Nm)	**60**	Speed (r/min)		Speed (r/min)	
T_{load} (Nm)		I_s/I_n	***7***	I_s/I_n	***7***
		T_{max}/T_n	***3***	T_{max}/T_n	***3***



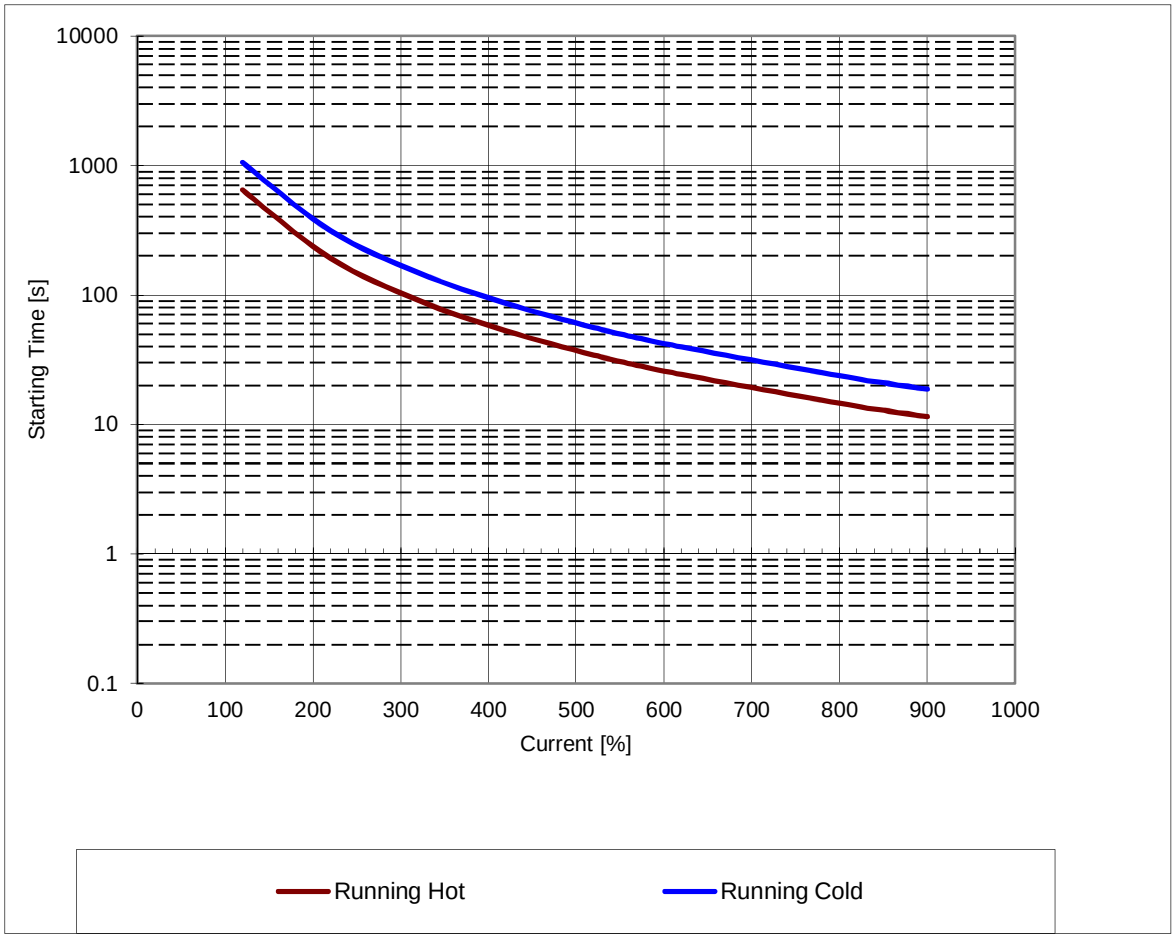
Data based on situation 9/19/2015

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 b Date of issue **A** **1/16/2019**	Saving ident **untitled.xls**	Pages **5(3)**

Type of product	**TEFC, 3-phase, squirrel cage induction motor**			
Type/Frame	**M2BAX 160MLC 2**	Calc. ref.	3GZH021016-3	
Product code	**3GBA 161 430-ADCIN**	Frequency (Hz)	**50**	
Rated output P_N	**18.5** kW	Rated current I_N	**32.4**	A
Type of duty	**S1 100%**			

J_{motor} (kgm2)	**0.058**	Voltage (V) 100%	***415***	Voltage (V)	***415V(100%)***
J_{load} (kgm2)		T_{start}/T_N	***2.3***	T_{start}/T_N	***2.3***
Speed (r/min)	**2928**	Starting time (s)	***0.1***	Starting time (s)	
T_N (Nm)	**60**	Speed (r/min)		Speed (r/min)	
T_{load} (Nm)		I_s/I_n	***7***	I_s/I_n	***7***
		T_{max}/T_n	***3***	T_{max}/T_n	***3***



Data based on situation 9/19/2015

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