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 **12/8/2020**	Saving ident **untitled.xlsm**	Pages **1(3)**

No.	Definition	Data	Unit	Remarks	
1	Product	***TEFC, 3-phase, squirrel cage induction motor***			
2	Product code	***3GBA 181 410-ADCIN***		Calc. ref.	3GZH021018-1
3	Type/Frame	***M2BAX 180MLA 2***			
4	Mounting	***IM1001, B3(foot)***			
5	Rated output P_N	***22***	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	***2932***	r/min		
11	Rated current I_N	***38***	A		
12					
13	Starting current I_s/I_N	***7***			
14	Nominal torque T_N	***72***	Nm		
15	Locked rotor torque T_S/T_N	***2.6***			
16	Maximum torque T_{max}/T_N	***3.2***			
17					
18					
	Load characteristics	Load %	Current A	Efficiency %	Power factor
19	PLL determined from residual loss	*100*	**38**	**91.3 / IE2**	**0.88**
20		*75*	**29.5**	**91.7**	**0.85**
21		*50*	**21**	**91**	**0.8**
22					
23	Thermal withstand time hot	***20***	s		
24	Thermal withstand time cold	***32***	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***			
30	Bearing DE/NDE	***6310-2Z/C3 - 6209-2Z/C3***			
31	Sound pressure level (LP dB(A) 1m)	***85***	dB(A)	at no-load	
32	Moment of inertia J = ¼ GD2	***0.0679***	kg-m2		
33	Position of terminal box	***Top***			
34	Direction of rotation	***Bi-directional***			
35	Weight of rotor	***36***	kg		
36	Total weight of motor	***152***	kg		
37					
38					
39					
40					
41					
42					
43					
44					
45					
Ex-motors					
46					
47					
48					
Option	Variant Codes / Definition				
49					
50					
51					
52					

Remarks:

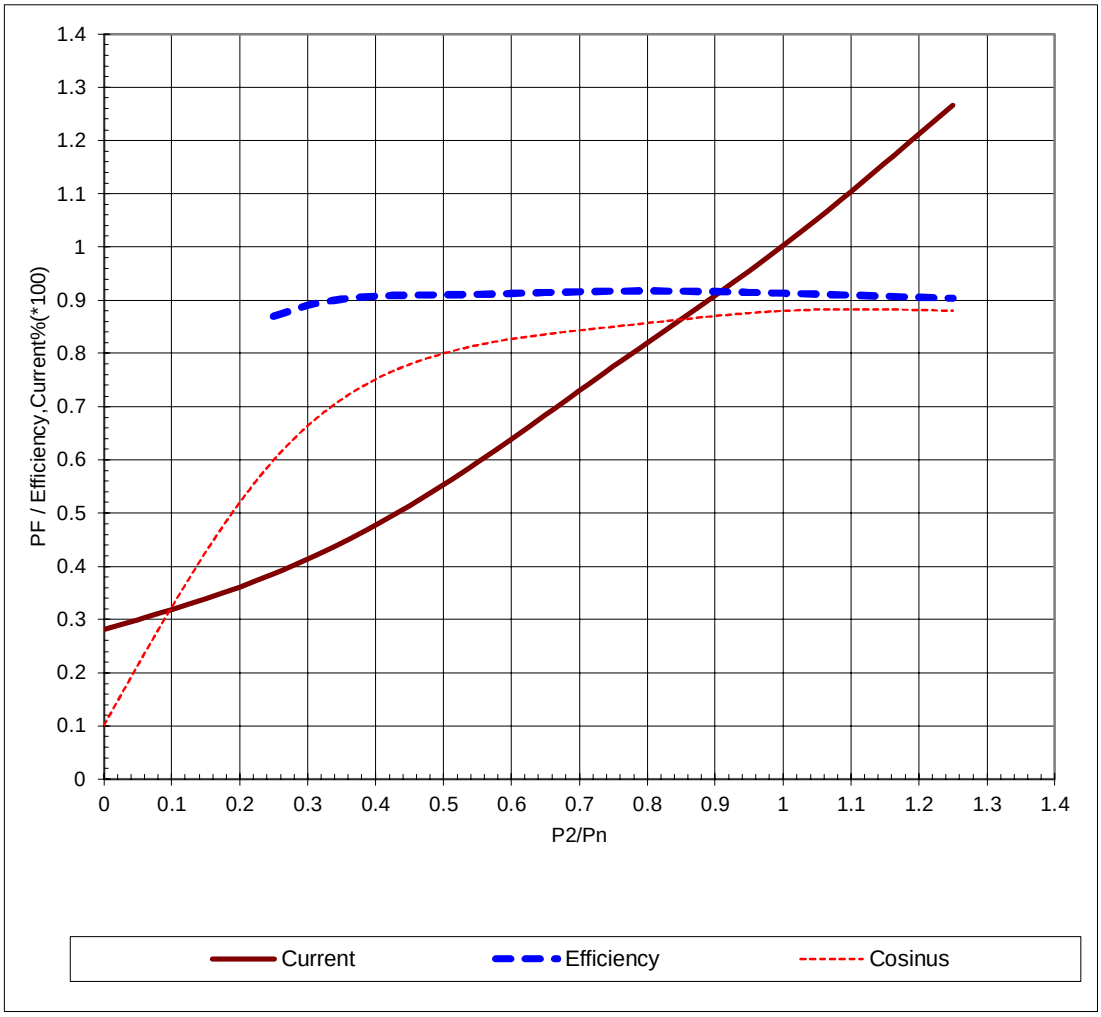
Applicable standards: IS 12615:2018, IEC 60034-30-1:2014

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** **12/8/2020**	Saving ident **untitled.xlsm**	Pages **2(3)**

Product	**TEFC, 3-phase, squirrel cage induction motor**				
Type/Frame	**M2BAX 180MLA 2**		Calc. ref.	**3GZH021018-1**	
Product code	**3GBA 181 410-ADCIN**				
Rated output P_N	**22**	kW			
Type of duty	**S1 100%**				

Voltage (V)	**415**	Current I_N (A)	**38**	Power factor at P_N	**0.88**
Frequency (Hz)	**50**	Speed (r/min)	**2932**	Efficiency (%) at P_N	**91.3**

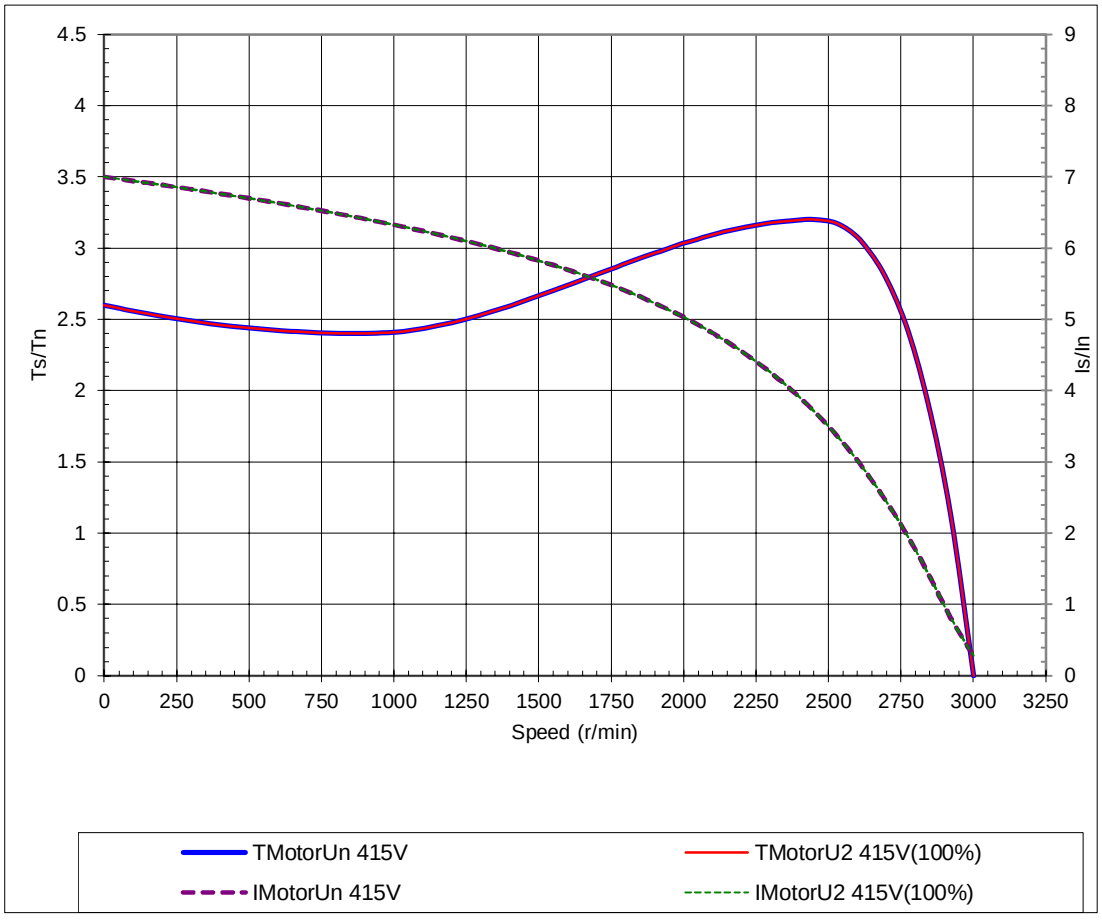


Applicable standards: IS 12615:2018, IEC 60034-30-1:2014

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 12/8/2020**	Saving ident **untitled.xlsm**	Pages **3(3)**

Type of product	**TEFC, 3-phase, squirrel cage induction motor**				
Type/Frame	**M2BAX 180MLA 2**		Calc. ref.	3GZH021018-1	
Product code	**3GBA 181 410-ADCIN**		Frequency (Hz)	**50**	
Rated output P_N	**22**	kW	Rated current I_N	**38**	A
Type of duty	**S1 100%**				

J_{motor} (kgm2)	**0.068**	Voltage (V) 100%	***415***	Voltage (V)	***415V(100%)***
J_{load} (kgm2)		T_{start}/T_N	***2.6***	T_{start}/T_N	***2.6***
Speed (r/min)	**2932**	Starting time (s)	***0.1***	Starting time (s)	***0.1***
T_N (Nm)	**72**	Speed (r/min)	***2932***	Speed (r/min)	***2932***
T_{load} (Nm)		I_s/I_n	***7***	I_s/I_n	***7***
		T_{max}/T_n	***3.2***	T_{max}/T_n	***3.2***

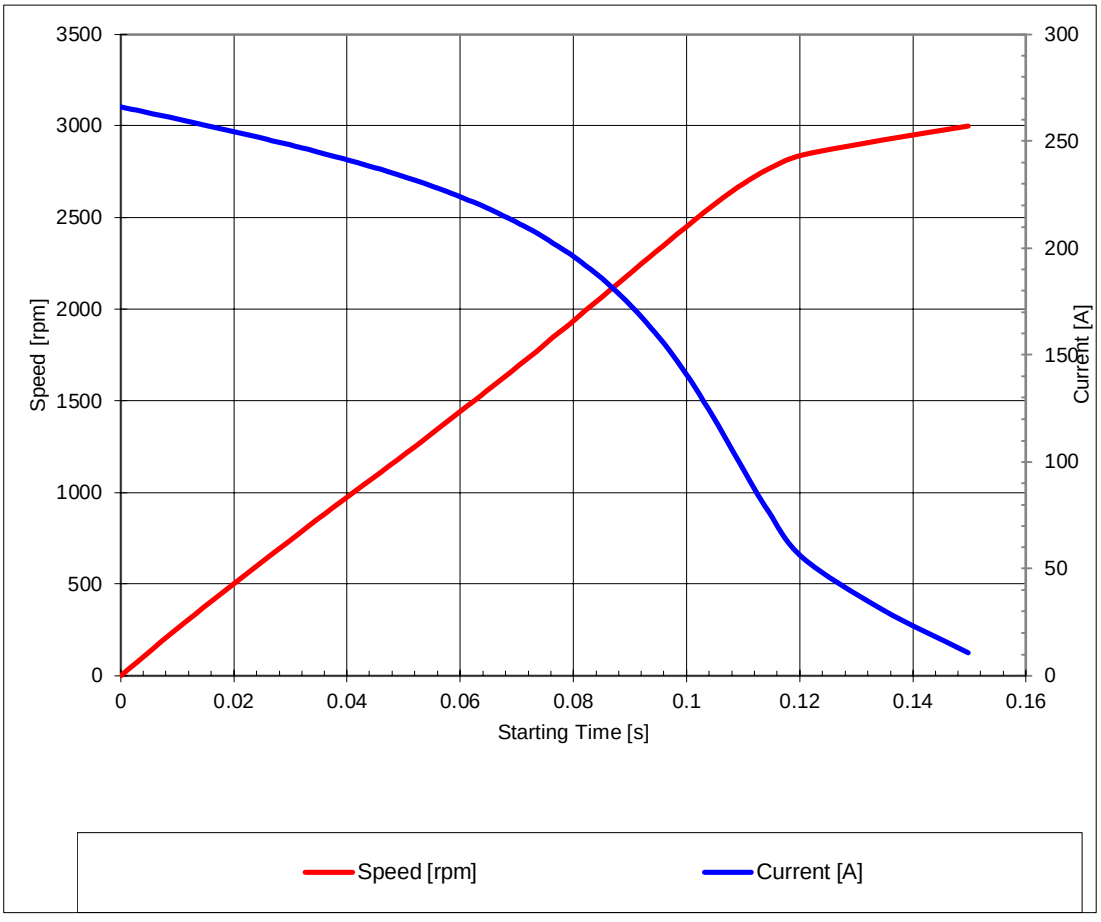


Applicable standards: IS 12615:2018, IEC 60034-30-1:2014

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 12/8/2020**	Saving ident **untitled.xlsm**	Pages **4(3)**

Type of product	**TEFC, 3-phase, squirrel cage induction motor**			
Type/Frame	**M2BAX 180MLA 2**	Calc. ref.	3GZH021018-1	
Product code	**3GBA 181 410-ADCIN**	Frequency (Hz)	**50**	
Rated output P_N	**22** kW	Rated current I_N	**38**	A
Type of duty	**S1 100%**			

J_{motor} (kgm2)	**0.068**	Voltage (V) 100%	***415***	Voltage (V)	***415V(100%)***
J_{load} (kgm2)		T_{start}/T_N	***2.6***	T_{start}/T_N	***2.6***
Speed (r/min)	**2932**	Starting time (s)	***0.1***	Starting time (s)	***0.1***
T_N (Nm)	**72**	Speed (r/min)	***2932***	Speed (r/min)	***2932***
T_{load} (Nm)		I_s/I_n	***7***	I_s/I_n	***7***
		T_{max}/T_n	***3.2***	T_{max}/T_n	***3.2***

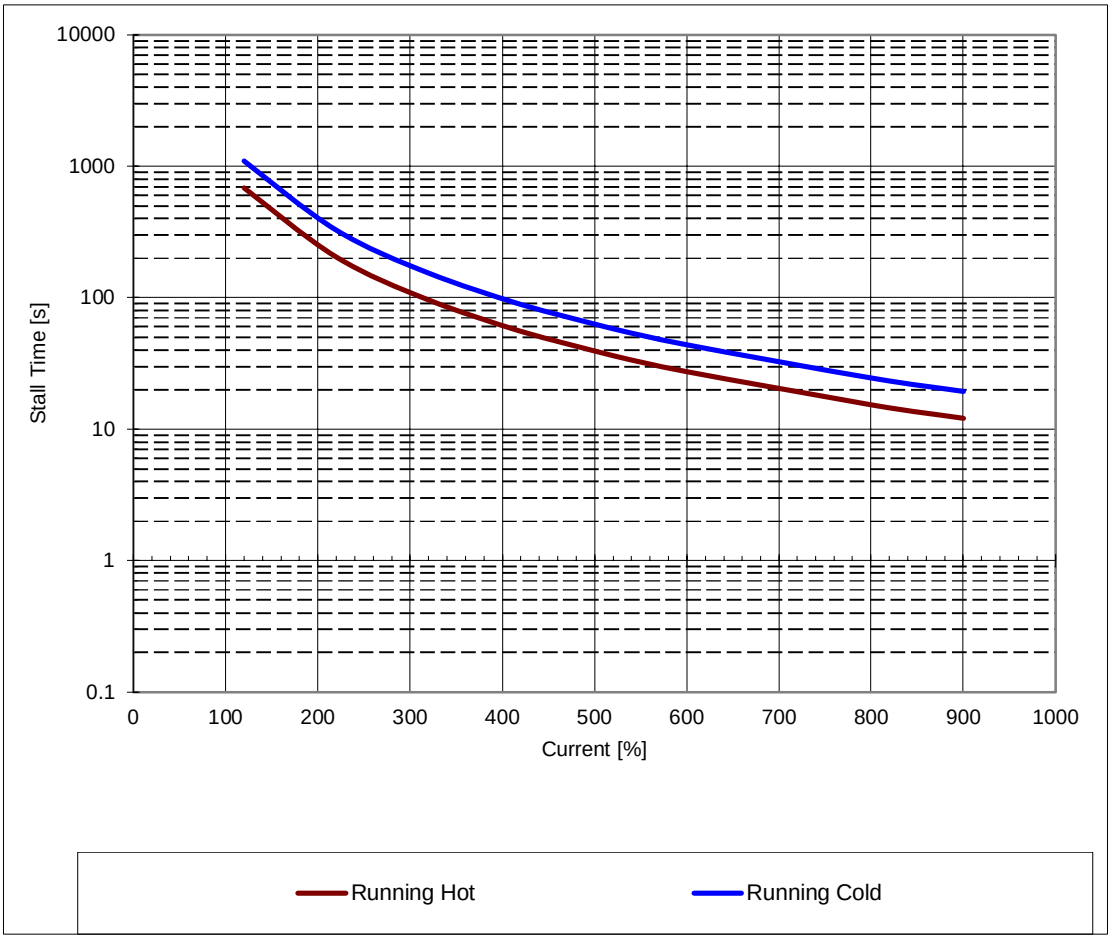


Applicable standards: IS 12615:2018, IEC 60034-30-1:2014

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** **12/8/2020**	Saving ident **untitled.xlsm**	Pages **5(3)**

Type of product	**TEFC, 3-phase, squirrel cage induction motor**			
Type/Frame	**M2BAX 180MLA 2**	Calc. ref.	3GZH021018-1	
Product code	**3GBA 181 410-ADCIN**	Frequency (Hz)	**50**	
Rated output P_N	**22** kW	Rated current I_N	**38**	A
Type of duty	**S1 100%**			

J_{motor} (kgm2)	**0.068**	Voltage (V) 100%	***415***	Voltage (V)	***415V(100%)***
J_{load} (kgm2)		T_{start}/T_N	***2.6***	T_{start}/T_N	***2.6***
Speed (r/min)	**2932**	Starting time (s)	***0.1***	Starting time (s)	***0.1***
T_N (Nm)	**72**	Speed (r/min)	***2932***	Speed (r/min)	***2932***
T_{load} (Nm)		I_s/I_n	***7***	I_s/I_n	***7***
		T_{max}/T_n	***3.2***	T_{max}/T_n	***3.2***



Applicable standards: IS 12615:2018, IEC 60034-30-1:2014