

ABB Motors and Generators		Technical Data Sheet			
		Project		Location	
Department/Author		Customer name		Customer ref.	Item name 1.00012
Our ref.		Rev/Changed by A	Date of issue 2/19/2021	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 282 220-ADMIN			
3	Type/Frame	M2BAX 280SMB 4			
4	Mounting	IM1001, B3(foot)			
5	Rated output P _N	75	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	1485	r/min		
11	Rated current I _N	133	A		
12					
13	Starting current I _s /I _N	7.7			
14	Nominal torque T _N	482	Nm		
15	Locked rotor torque T _s /T _N	2.3			
16	Maximum torque T _{max} /T _N	2.8			
17					
18					
Load characteristics		Load %	Current A	Efficiency %	Power factor
19	PLL determined from residual loss	100	133	95.0 / IE3	0.83
20		75	100	95	0.82
21		50	74	94	0.75
22					
23	Thermal withstand time hot	23	s		
24	Thermal withstand time cold	44	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	6316/C3 - 6316/C3			
31	Sound pressure level (LP dB(A) 1m)	85	dB(A)	at no-load	
32	Moment of inertia J = ¼ GD2	1.38	kg-m2		
33	Position of terminal box	Top			
34	Direction of rotation	Bi-directional			
35	Weight of rotor	144	kg		
36	Total weight of motor	597	kg		
37	Paint shade	Munsell Blue			
38	Cable size				
39	Vibration	As Per IS 12075			
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



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Saving ident

Pages

A

2/19/2021

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2(3)

Product **TEFC, 3-phase, squirrel cage induction motor**

Type/Frame **M2BAX 280SMB 4**

Product code **3GBA 282 220-ADMIN**

Rated output P_N **75** kW

Type of duty **S1 100%**

Voltage (V) **415**

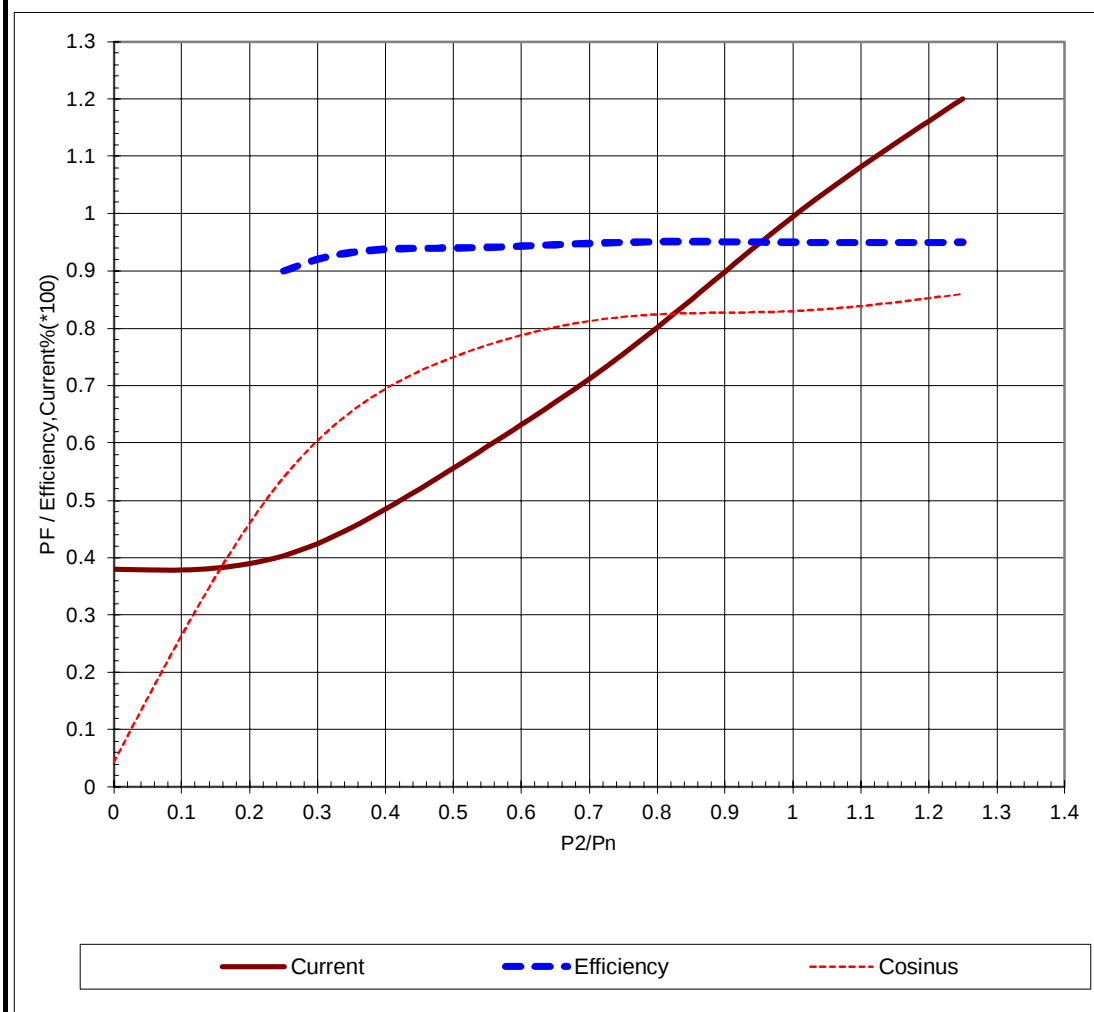
Current I_N (A) **133**

Power factor at P_N **0.83**

Frequency (Hz) **50**

Speed (r/min) **1485**

Efficiency (%) at P_N **95**



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

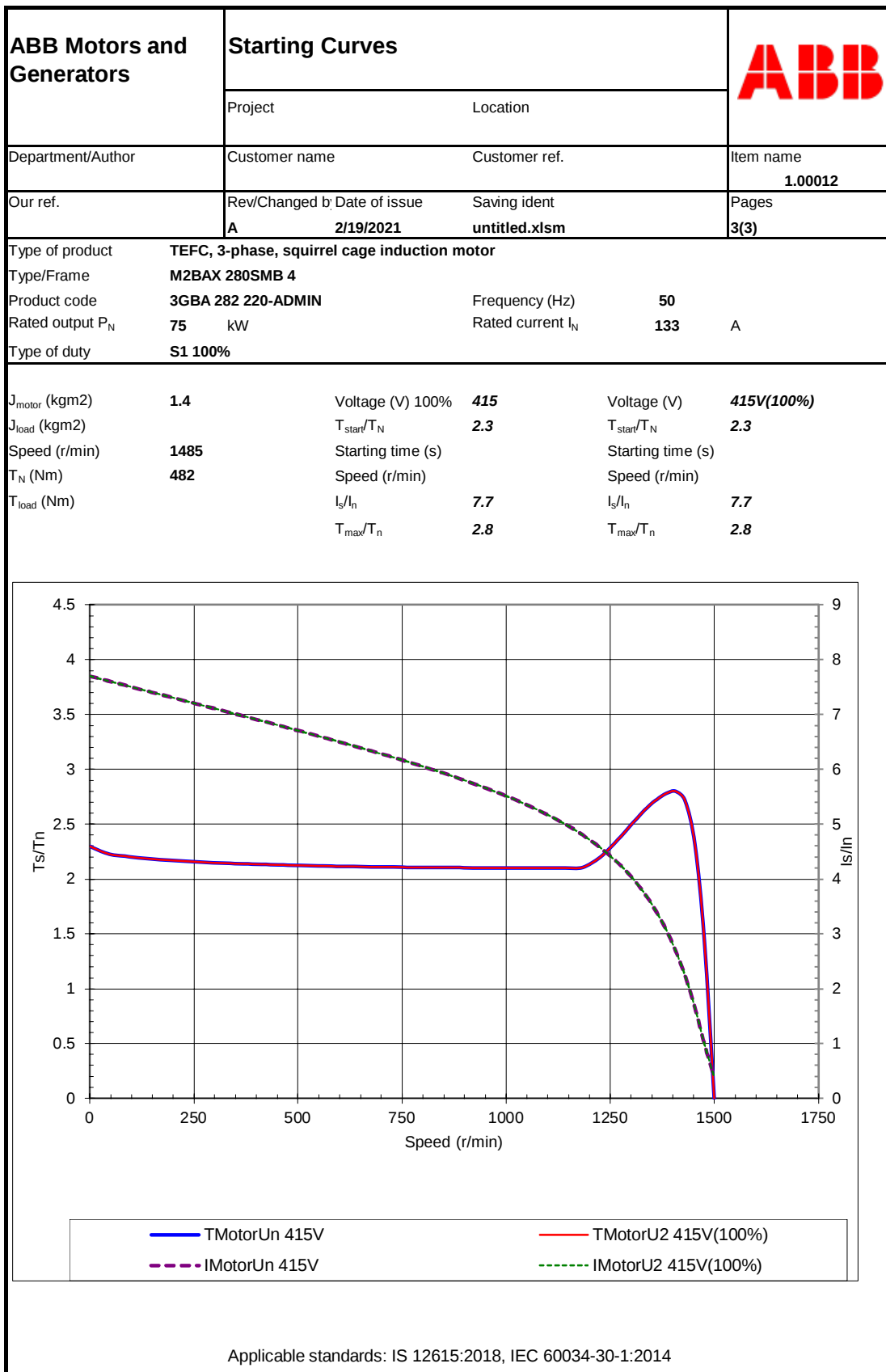


ABB Motors and Generators	Thermal Withstand Curve		
	Project	Location	
Department/Author	Customer name	Customer ref.	Item name 1.00012
Our ref.	Rev/Changed by: Date of issue A 2/19/2021	Saving ident untitled.xlsm	Pages 5(3)
Type of product	TEFC, 3-phase, squirrel cage induction motor		
Type/Frame	M2BAX 280SMB 4		
Product code	3GBA 282 220-ADMIN	Frequency (Hz)	50
Rated output P_N	75 kW	Rated current I_N	133 A
Type of duty	S1 100%		

J _{motor} (kgm ²)	1.4	Voltage (V) 100%	415	Voltage (V)	415V(100%)
J _{load} (kgm ²)		T _{start} /T _N	2.3	T _{start} /T _N	2.3
Speed (r/min)	1485	Withstand cold(s)	44	Withstand hot (s)	23
T _N (Nm)	482	Speed (r/min)		Speed (r/min)	
T _{load} (Nm)		I _s /I _N	7.7	I _s /I _N	7.7
		T _{max} /T _N	2.8	T _{max} /T _N	2.8

The graph plots Stall Time [s] on a logarithmic y-axis (0.1 to 10000) against Current [%] on a linear x-axis (0 to 1200). Two curves are shown: 'Running Hot' (red line) and 'Running Cold' (blue line). Both curves show a decrease in stall time as current increases. The 'Running Cold' curve is consistently higher than the 'Running Hot' curve.

Current [%]	Running Hot Stall Time [s]	Running Cold Stall Time [s]
100	~1000	~2000
200	~300	~600
400	~80	~150
600	~30	~60
800	~15	~30
1000	~8	~15

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