ABB Motors and Generators

Technical Data Sheet

Project	Location

Department/Author	Customer name	Customer ref.	Item name
			1.00001

Our ref.	Rev/Changed by	Date of issue	Saving ident	Pages
	A	**12/8/2020**	**untitled.xlsm**	**1(3)**

No.	Definition	Data	Unit	Remarks		
1	Product	**TEFC, 3-phase, squirrel cage induction motor**				
2	Product code	**3GBA 104 510-ASCIN**		Calc. ref.	3GZH021010-7	
3	Type/Frame	**M2BAX 100LA 8**				
4	Mounting	**IM1001, B3(foot)**				
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	**710**	r/min			
11	Rated current I_N	**2.6**	A			
12						
13	Starting current I_s/I_N	**4**				
14	Nominal torque T_N	**10.1**	Nm			
15	Locked rotor torque T_S/T_N	**2**				
16	Maximum torque T_{max}/T_N	**2.5**				
17						
18						
	Load characteristics	Load %	Current A	Efficiency %	Power factor	
19	PLL determined from residual loss	*100*	**2.6**	**66.2**	**0.61**	
20		*75*	**2.3**	**62.1**	**0.54**	
21		*50*	**2.1**	**60**	**0.41**	
22						
23	Thermal withstand time hot	**21**	s			
24	Thermal withstand time cold	**33**	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	**6206-2Z/C3 - 6205-2Z/C3**				
31	Sound pressure level (LP dB(A) 1m)	**64**	dB(A)	at no-load		
32	Moment of inertia J = ¼ GD2	**0.0072**	kg-m2			
33	Position of terminal box	**Top**				
34	Direction of rotation	**Bi-directional**				
35	Weight of rotor	**7**	kg			
36	Total weight of motor	**30**	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	Saving ident	Pages
	A	**12/8/2020**	**untitled.xlsm**	**2(3)**

Product	**TEFC, 3-phase, squirrel cage induction motor**
Type/Frame	**M2BAX 100LA 8** Calc. ref. **3GZH021010-7**
Product code	**3GBA 104 510-ASCIN**
Rated output P_N	**0.75** kW
Type of duty	**S1 100%**

Voltage (V)	**415**	Current I_N (A)	**2.6**	Power factor at P_N	**0.61**
Frequency (Hz)	**50**	Speed (r/min)	**710**	Efficiency (%) at P_N	**66.2**

Current ——   Efficiency – – –   Cosinus - - - - -

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

ABB Motors and Generators	Starting Curves		ABB
	Project	Location	

Department/Author	Customer name	Customer ref.	Item name
			1.00001

Our ref.	Rev/Changed b Date of issue		Saving ident	Pages
	A 12/8/2020		**untitled.xlsm**	**3(3)**

Type of product	**TEFC, 3-phase, squirrel cage induction motor**
Type/Frame	**M2BAX 100LA 8**
Product code	**3GBA 104 510-ASCIN**
Rated output P_N	**0.75** kW
Type of duty	**S1 100%**

		Calc. ref.	3GZH021010-7
		Frequency (Hz)	**50**
		Rated current I_N	**2.6** A

J_{motor} (kgm2)	**0.0072**	Voltage (V) 100%	**415**	Voltage (V)	**415V(100%)**
J_{load} (kgm2)		T_{start}/T_N	**2**	T_{start}/T_N	**2**
Speed (r/min)	**710**	Starting time (s)		Starting time (s)	
T_N (Nm)	**10.1**	Speed (r/min)		Speed (r/min)	**1449**
T_{load} (Nm)		I_s/I_n	**4**	I_s/I_n	**4**
		T_{max}/T_n	**2.5**	T_{max}/T_n	**2.5**

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

ABB Motors and Generators	Current & Speed Vs Time		ABB
	Project	Location	
Department/Author	Customer name	Customer ref.	Item name **1.00001**
Our ref.	Rev/Changed b **A**	Date of issue **12/8/2020**	Saving ident **untitled.xlsm**	Pages **4(3)**

Type of product	**TEFC, 3-phase, squirrel cage induction motor**				
Type/Frame	**M2BAX 100LA 8**		Calc. ref.	3GZH021010-7	
Product code	**3GBA 104 510-ASCIN**		Frequency (Hz)	**50**	
Rated output P_N	**0.75** kW		Rated current I_N	**2.6** A	
Type of duty	**S1 100%**				

J_{motor} (kgm2)	**0.0072**	Voltage (V) 100%	**415**	Voltage (V)	**415V(100%)**
J_{load} (kgm2)		T_{start}/T_N	**2**	T_{start}/T_N	**2**
Speed (r/min)	**710**	Starting time (s)		Starting time (s)	
T_N (Nm)	**10.1**	Speed (r/min)		Speed (r/min)	**1449**
T_{load} (Nm)		I_s/I_n	**4**	I_s/I_n	**4**
		T_{max}/T_n	**2.5**	T_{max}/T_n	**2.5**

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

ABB Motors and Generators	**Thermal Withstand Curve**		**ABB**
	Project	Location	
Department/Author	Customer name	Customer ref.	Item name **1.00001**
Our ref.	Rev/Changed b Date of issue	Saving ident	Pages
	A **12/8/2020**	**untitled.xlsm**	**5(3)**

Type of product	**TEFC, 3-phase, squirrel cage induction motor**		
Type/Frame	**M2BAX 100LA 8**	Calc. ref.	3GZH021010-7
Product code	**3GBA 104 510-ASCIN**	Frequency (Hz)	**50**
Rated output P_N	**0.75** kW	Rated current I_N	**2.6** A
Type of duty	**S1 100%**		

J_{motor} (kgm2)	**0.0072**	Voltage (V) 100%	**415**	Voltage (V)	**415V(100%)**
J_{load} (kgm2)		T_{start}/T_N	**2**	T_{start}/T_N	**2**
Speed (r/min)	**710**	Withstand cold(s)	**33**	Withstand hot (s)	**21**
T_N (Nm)	**10.1**	Speed (r/min)		Speed (r/min)	**1449**
T_{load} (Nm)		I_s/I_n	**4**	I_s/I_n	**4**
		T_{max}/T_n	**2.5**	T_{max}/T_n	**2.5**

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