ABB Motors and Technical Data Sheet Generators Project Location Department/Author Customer ref. Item name Customer name 1.00001 Rev/Changed by Our ref. Date of issue Saving ident Pages 12/8/2020 untitled.xlsm 1(3) Definition No. Data Unit Remarks Product TEFC, 3-phase, squirrel cage induction motor 3GBA 112 410-ADDIN 3GZH021011-1 2 Product code Calc. ref. 3 Type/Frame M2BAX 112MLA 4 Mounting IM1001, B3(foot) Rated output P_N kW 3.7 5 6 Service factor S1 100% 7 Type of duty Rated voltage U_N VD 8 415 +10, -10 % Rated frequency f_N 9 50 Hz +5, -5 % Rated speed n_N 1450 10 r/min 11 Rated current IN 7.7 Α 12 13 Starting current I_s/I_N 7.5 Nominal torque T_N 24.4 Nm 14 Locked rotor torque T_S/T_N 15 3.3 Maximum torque T_{max}/T_N 3.9 16 17 18 Load characteristics Load % Current A Efficiency % Power factor 88.4 / IE3 19 PLL determined from residual loss 100 7.7 0.76 88.5 0.68 20 75 6.4 50 5.4 0.55 21 87 22 23 Thermal withstand time hot s 24 Thermal withstand time cold 12 s F/B 25 Insulation class / Temperature class °C 50 26 Ambient temperature 27 Altitude 1000 m.a.s.l. Degree of protection IP55 28 29 Cooling system IC411 Bearing DE/NDE 6206-2Z/C3 - 6205-2Z/C3 30 Sound pressure level (LP dB(A) 1m) 31 72 dB(A) at no-load 32 Moment of inertia J = 1/4 GD2 0.01542 kg-m2 Position of terminal box 33 Тор Direction of rotation Bi-directional 35 Weight of rotor 13 kg 50 36 Total weight of motor kg 37 38 39 40 41 42 43 44 45 Ex-motors 46 47 48 Variant Codes / Definition Option 49 50 51 52 Applicable standards: IS 12615:2018, IEC 60034-30-1:2014

All performance values are subject to IS/IEC tolerances

ABB Motors and Load Curves Generators Project Location Department/Author Customer name Customer ref. Item name 1.00001 Our ref. Rev/Changed by Date of issue Saving ident Pages 12/8/2020 untitled.xlsm 2(3) Product TEFC, 3-phase, squirrel cage induction motor M2BAX 112MLA 4 Type/Frame Calc. ref. 3GZH021011-1 Product code **3GBA 112 410-ADDIN** Rated output P_N 3.7 kW Type of duty S1 100% Voltage (V) 415 Current I_N (A) 7.7 Power factor at P_N **0.76** Frequency (Hz) Speed (r/min) Efficiency (%) at P_N 88.4 50 1450 1.3 1.2 1.1 1 0.4 0.3 0.2 0.1 0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.1 1.2 1.3 P2/Pn Current - - Efficiency ----- Cosinus Applicable standards: IS 12615:2018, IEC 60034-30-1:2014

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	erC, 3-pnase, squir 2BAX 112MLA 4	rel cage induction r	Calc. ref.	3GZH021011-1	
,,					
	3BA 112 410-ADDIN		Frequency (Hz)	50	
Rated output P _N 3.			Rated current I _N	7.7	Α
Type of duty S	1 100%				
	0154	Voltage (V) 100%	415	Voltage (V)	415V(100%)
J _{load} (kgm2)		T_{start}/T_{N}	3.3	T_{start}/T_{N}	3.3
Speed (r/min) 14	150	Starting time (s)		Starting time (s)	
Γ _N (Nm) 24	1.4	Speed (r/min)	1449	Speed (r/min)	1449
Γ _{load} (Nm)		I_s/I_n	7.5	I_s/I_n	7.5
		T _{max} /T _n	3.9	T_{max}/T_n	3.9
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0 1 2	250 500	750	1000	1250 150	0 1750
	330	Speed (_ 1700
	- TMotorUn 415V			TMotorU2 415V(100%)
	IMotorUn 415V		IMotorU2 415V(
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Гуре of product	A TEEC 3-phase so	12/8/2020 uirrel cage induction r	untitled.xlsm		4(3)
гуре огргосист Гуре/Frame	M2BAX 112MLA 4	uirrei cage induction i	Calc. ref.	3GZH021011-1	
Product code		NINI			
Product code Rated output P _N	3GBA 112 410-ADE	/II N	Frequency (Hz) Rated current I _N	50	۸
	3.7 kW		Nateu Current I _N	7.7	Α
Гуре of duty	S1 100%				
J _{motor} (kgm2)	0.0154	Voltage (V) 100%	415	Voltage (V)	415V(100%)
J _{load} (kgm2)		T_{start}/T_{N}	3.3	T_{start}/T_{N}	3.3
Speed (r/min)	1450	Starting time (s)		Starting time (s)	
Γ _N (Nm)	24.4	Speed (r/min)	1449	Speed (r/min)	1449
Γ _{load} (Nm)	24	I _s /I _n	7.5	I _s /I _n	7.5
•		T _{max} /T _n	3.9	T_{max}/T_n	3.9
1200 1000 1000 800 600 400 0	0.005 0.01	0.015 0.02 Starting	0.025 0.03 Time [s]	0.035	20 - 10 - 0 0.045
	—-Sr	peed [rpm]	_	Current [A]	

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Type of product		quirrel cage induction r			
Type/Frame	M2BAX 112MLA 4		Calc. ref.	3GZH021011-1	
Product code	3GBA 112 410-AD	DIN	Frequency (Hz)	50	
Rated output P _N	3.7 kW		Rated current I _N	7.7	Α
Type of duty	S1 100%				
J _{motor} (kgm2)	0.0154	Voltage (V) 100%	415	Voltage (V)	415V(100%)
J _{load} (kgm2)		$T_{\text{start}}/T_{\text{N}}$	3.3	T _{start} /T _N	3.3
Speed (r/min)	1450	Withstand cold(s)	12	Withstand hot (s)	7
T _N (Nm)	24.4	Speed (r/min)	1449	Speed (r/min)	1449
T _{load} (Nm)		I _s /I _n	7.5	I _s /I _n	7.5
• • •		T_{max}/T_n	3.9	T _{max} /T _n	3.9
100					
0.1 0	200		00 800 nt [%]	1000	1200