## **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 132 210-ADDIN 3GZH021013-3 2 Product code Calc. ref. 3 Type/Frame M2BAX 132SMA 4 Mounting IM1001, B3(foot) Rated output P<sub>N</sub> kW 5.5 5 6 Service factor S1 100% 7 Type of duty Rated voltage U<sub>N</sub> VD 8 415 +10, -10 % Rated frequency f<sub>N</sub> 9 50 Hz +5, -5 % Rated speed n<sub>N</sub> 1460 10 r/min 11 Rated current IN 11.1 Α 12 13 Starting current I<sub>s</sub>/I<sub>N</sub> Nominal torque T<sub>N</sub> 36 Nm 14 Locked rotor torque T<sub>S</sub>/T<sub>N</sub> 15 2 Maximum torque T<sub>max</sub>/T<sub>N</sub> 16 17 18 Load characteristics Load % Current A Efficiency % Power factor 89.6 / IE3 19 PLL determined from residual loss 100 11.1 0.77 90.6 0.72 20 75 8.8 50 90.2 0.61 21 7 22 23 Thermal withstand time hot 11 s 24 Thermal withstand time cold 18 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 6208-2Z/C3 - 6208-2Z/C3 30 Sound pressure level (LP dB(A) 1m) 31 75 dB(A) at no-load 32 Moment of inertia J = 1/4 GD2 0.03505 kg-m2 Position of terminal box 33 Тор Direction of rotation Bi-directional 35 Weight of rotor 18 kg 36 Total weight of motor 72 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

## **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 132SMA 4 Type/Frame Calc. ref. 3GZH021013-3 Product code 3GBA 132 210-ADDIN Rated output P<sub>N</sub> kW Type of duty S1 100% Voltage (V) 415 Current I<sub>N</sub> (A) 11.1 Power factor at P<sub>N</sub> **0.77** Frequency (Hz) Speed (r/min) Efficiency (%) at P<sub>N</sub> 89.6 50 1460 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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se, squirrel cage inductions SMA 4 0-ADDIN  Voltage (V) 1000  T <sub>start</sub> /T <sub>N</sub> Starting time (s)  Speed (r/min)  I <sub>s</sub> /I <sub>n</sub>	rn motor Calc. ref. Frequency (Hz) Rated current I <sub>N</sub> 415 2 0.1	Voltage (V) T <sub>start</sub> /T <sub>N</sub> Starting time (s) Speed (r/min) I <sub>s</sub> /I <sub>n</sub>	A 415V(100%) 2 1449 7 3
Voltage (V) 1000  T <sub>start</sub> /T <sub>N</sub> Starting time (s)  Speed (r/min)  I <sub>s</sub> /I <sub>n</sub>	Calc. ref. Frequency (Hz) Rated current I <sub>N</sub> 415 2 0.1	Voltage (V) T <sub>start</sub> /T <sub>N</sub> Starting time (s) Speed (r/min) I <sub>s</sub> /I <sub>n</sub>	415V(100%) 2 1449 7 3
Voltage (V) 1009  T <sub>start</sub> /T <sub>N</sub> Starting time (s)  Speed (r/min)  I <sub>s</sub> /I <sub>n</sub>	Frequency (Hz) Rated current I <sub>N</sub>	Voltage (V) T <sub>start</sub> /T <sub>N</sub> Starting time (s) Speed (r/min) I <sub>s</sub> /I <sub>n</sub>	415V(100%) 2 1449 7 3
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$I_s/I_n$		I <sub>s</sub> /I <sub>n</sub>	7 3 9 8 7
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500 750	1000	1250 150	
·	d (r/min) 	·TMotorU2 415V(	100%)
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Tune of product	A TEEC 3 phase says	12/8/2020	untitled.xlsm		4(3)
Type of product Type/Frame	M2BAX 132SMA 4	irrel cage induction r	Calc. ref.	3GZH021013-3	
Product code	3GBA 132 210-ADDI	NI		50	
		IN	Frequency (Hz)		٨
Rated output P <sub>N</sub>	5.5 kW		Rated current I <sub>N</sub>	11.1	Α
Type of duty	S1 100%				
I <sub>motor</sub> (kgm2)	0.0351	Voltage (V) 100%	415	Voltage (V)	415V(100%)
I <sub>load</sub> (kgm2)		$T_{start}/T_{N}$	2	$T_{\text{start}}/T_{\text{N}}$	2
Speed (r/min)	1460	Starting time (s)	0.1	Starting time (s)	
N <sub>N</sub> (Nm)	36	Speed (r/min)		Speed (r/min)	1449
「 <sub>load</sub> (Nm)		$I_s/I_n$	7	$I_s/I_n$	7
		T <sub>max</sub> /T <sub>n</sub>	3	$T_{max}/T_n$	3
1200 1000 [wd] poods 600 400					- 70 - 60 - 50 - 40 - 30 - 20 - 10
0 0	0.01 0.02	0.03 0.0 Starting -	Time [s]	0.06 0.  Current [A]	07 0.08

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Type of product		uirrel cage induction r			
Type/Frame	M2BAX 132SMA 4		Calc. ref.	3GZH021013-3	<b>,</b>
Product code	3GBA 132 210-ADD	IN	Frequency (Hz)	50	•
Rated output P <sub>N</sub>	5.5 kW		Rated current I <sub>N</sub>	11.1	Α
ype of duty	S1 100%				
J <sub>motor</sub> (kgm2)	0.0351	Voltage (V) 100%	415	Voltage (V)	415V(100%)
J <sub>load</sub> (kgm2)		$T_{start}/T_{N}$	2	T <sub>start</sub> /T <sub>N</sub>	2
Speed (r/min)	1460	Withstand cold(s)	18	Withstand hot (s	) 11
Γ <sub>N</sub> (Nm)	36	Speed (r/min)		Speed (r/min)	1449
T <sub>load</sub> (Nm)		$I_s/I_n$	7	$I_s/I_n$	7
	Hot: 149 Cold: 269	$T_{max}/T_n$	3	$T_{max}/T_n$	3
100					
700 Stall Time [S]					
Stall Time [s]	100 200	300 400 50 Curre		700 800	900 1000