ABB Motors and Generators	Technical Data Sheet - DOL			ABB
	Project		Location	
Department/Author	Customer name		Customer ref.	Item name **1,00001**
Our ref.	Rev/Changed by **A**	Date of issue **18/07/2018**	Saving ident **untitled.xls**	Pages **1(3)**

No.	Definition	Data	Unit	Remarks	
1	Product	***TEFC, 3-phase, squirrel cage induction motor***			
2	Product code	***3GAA 091 520-ASJ***		Calc. ref.	3GZF021009-298
3	Type/Frame	***M3AA 90LB 2***			
4	Mounting	***IM1001, B3(foot)***			
5	Rated output P_N	***2,2***	kW		
6	Service factor	***1***			
7	Type of duty	***S1(IEC) 100%***			
8	Rated voltage U_N	***400***	VY	± 5 % (IEC 60034-1)	
9	Rated frequency f_N	***50***	Hz	± 2 % (IEC 60034-1)	
10	Rated speed n_N	***2903***	r/min		
11	Rated current I_N	***4,7***	A		
12	No-load current	***2,8***	A		
13	Starting current I_s/I_N	***7,4***		Meet IEC 60034-12, N	
14	Nominal torque T_N	***7,2***	Nm		
15	Locked rotor torque T_S/T_N	***3,2***			
16	Maximum torque T_{max}/T_N	***3,8***			
17	Minimum torque T_{min}/T_N	***2,9***			
18	Speed at minimum torque	***480***	r/min		
	Load characteristics (IEC 60034-2-1:2014)	Load %	Current A	Efficiency %	Power factor
19	PLL determined from residual loss	*100*	**4,7**	**85,9 / IE3**	**0,79**
20		*75*	**3,9**	**86,3**	**0,71**
21		*50*	**3,3**	**84,9**	**0,57**
22		*Start*	**35**		**0,55**
23	Maximum starting time from hot	***10***	s		
24	Maximum starting time from cold	***18***	s		
25	Insulation class / Temperature class	***F / B***			
26	Ambient temperature	***40***	°C		
27	Altitude	***1000***	m.a.s.l.		
28	Enclosure	***IP55***			
29	Cooling system	***IC411 self ventilated***			
30	Bearing DE/NDE	***6205-2Z/C3 - 6204-2Z/C3***			
31	Type of Grease				
32	Sound pressure level (LP dB(A) 1m)	***63***	dB(A)	at load	
33	Moment of inertia J = ¼ GD2	***0,003***	kg-m2		
34	Balancing				
35	Vibration class				
36	Position of terminal box	***Top***			
37	Terminal box entries; no, dimens.				
38	Number of power terminals				
39	Direction of rotation	***CW or CCW***			
40	Weight of rotor	***4***	kg		
41	Total weight of motor	***18***	kg		
42	Dimension drawing no.				
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Ex-motors					
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Option	Variant Codes / Definition				
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52					

Remarks:

Data based on situation 04/05/2016
All data subject to tolerances in accordance with IEC
Guaranteed values on request

ABB Motors and Generators	Technical Data Sheet - DOL			
	Project		Location	
Department/Author	Customer name		Customer ref.	Item name 1,00002
Our ref.	Rev/Changed by A	Date of issue 18/07/2018	Saving ident untitled.xls	Pages 1(3)

No.	Definition	Data	Unit	Remarks	
1	Product	***TEFC, 3-phase, squirrel cage induction motor***			
2	Product code	***3GAA 092 540-ASJ***		Calc. ref.	3GZF021009-302
3	Type/Frame	***M3AA 90LD 4***			
4	Mounting	***IM1001, B3(foot)***			
5	Rated output P_N	***1,5***	kW		
6	Service factor	***1***			
7	Type of duty	***S1(IEC) 100%***			
8	Rated voltage U_N	***400***	VY	± 5 % (IEC 60034-1)	
9	Rated frequency f_N	***50***	Hz	± 2 % (IEC 60034-1)	
10	Rated speed n_N	***1445***	r/min		
11	Rated current I_N	***3,3***	A		
12	No-load current	***1,88***	A		
13	Starting current I_s/I_N	***7,6***		Meet IEC 60034-12, N,(H at 60 Hz)	
14	Nominal torque T_N	***9,9***	Nm		
15	Locked rotor torque T_S/T_N	***3,4***			
16	Maximum torque T_{max}/T_N	***4,1***			
17	Minimum torque T_{min}/T_N	***3,4***			
18	Speed at minimum torque	***225***	r/min		
	Load characteristics (IEC 60034-2-1:2014)	Load %	Current A	Efficiency %	Power factor
19	PLL determined from residual loss	*100*	**3,3**	**85,3 / IE3**	**0,75**
20		*75*	**2,8**	**85**	**0,67**
21		*50*	**2,5**	**82,7**	**0,53**
22		*Start*	**25,4**		**0,62**
23	Maximum starting time from hot	***20***	s		
24	Maximum starting time from cold	***37***	s		
25	Insulation class / Temperature class	***F / B***			
26	Ambient temperature	***40***	°C		
27	Altitude	***1000***	m.a.s.l.		
28	Enclosure	***IP55***			
29	Cooling system	***IC411 self ventilated***			
30	Bearing DE/NDE	***6205-2Z/C3 - 6204-2Z/C3***			
31	Type of Grease				
32	Sound pressure level (LP dB(A) 1m)	***50***	dB(A)	at load	
33	Moment of inertia J = ¼ GD2	***0,007***	kg-m2		
34	Balancing				
35	Vibration class				
36	Position of terminal box	***Top***			
37	Terminal box entries; no, dimens.				
38	Number of power terminals				
39	Direction of rotation	***CW or CCW***			
40	Weight of rotor	***6***	kg		
41	Total weight of motor	***20***	kg		
42	Dimension drawing no.				
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Ex-motors					
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Option	Variant Codes / Definition				
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Remarks:

Data based on situation 13/02/2017
All data subject to tolerances in accordance with IEC
Guaranteed values on request

ABB Motors and Generators	Technical Data Sheet - DOL			
	Project		Location	
Department/Author	Customer name		Customer ref.	Item name **1,00003**
Our ref.	Rev/Changed by **A**	Date of issue **18/07/2018**	Saving ident **untitled.xls**	Pages **1(3)**

No.	Definition	Data	Unit	Remarks	
1	Product	***TEFC, 3-phase, squirrel cage induction motor***			
2	Product code	***3GAA 101 520-ASJ***		Calc. ref.	3GZF021010-603
3	Type/Frame	***M3AA 100LB 2***			
4	Mounting	***IM1001, B3(foot)***			
5	Rated output P_N	***3***	kW		
6	Service factor	***1***			
7	Type of duty	***S1(IEC) 100%***			
8	Rated voltage U_N	***400***	VY	± 5 % (IEC 60034-1)	
9	Rated frequency f_N	***50***	Hz	± 2 % (IEC 60034-1)	
10	Rated speed n_N	***2896***	r/min		
11	Rated current I_N	***5,4***	A		
12	No-load current	***1,8***	A		
13	Starting current I_s/I_N	***8,4***		Meet IEC 60034-12, N	
14	Nominal torque T_N	***9,9***	Nm		
15	Locked rotor torque T_S/T_N	***3,2***			
16	Maximum torque T_{max}/T_N	***3,9***			
17	Minimum torque T_{min}/T_N	***3,0***			
18	Speed at minimum torque	***540***	r/min		

	Load characteristics (IEC 60034-2-1:2014)	Load %	Current A	Efficiency %	Power factor
19	PLL determined from residual loss	*100*	**5,4**	**87,1 / IE3**	**0,9**
20		*75*	**4,2**	**88,2**	**0,87**
21		*50*	**3,1**	**87,9**	**0,79**
22		*Start*	**45**		**0,56**

23	Maximum starting time from hot	***10***	s	
24	Maximum starting time from cold	***19***	s	
25	Insulation class / Temperature class	***F / B***		
26	Ambient temperature	***40***	°C	
27	Altitude	***1000***	m.a.s.l.	
28	Enclosure	***IP55***		
29	Cooling system	***IC411 self ventilated***		
30	Bearing DE/NDE	***6306-2Z/C3 - 6205-2Z/C3***		
31	Type of Grease			
32	Sound pressure level (LP dB(A) 1m)	***62***	dB(A)	at load
33	Moment of inertia J = ¼ GD2	***0,0057***	kg-m2	
34	Balancing			
35	Vibration class			
36	Position of terminal box	***Top***		
37	Terminal box entries; no, dimens.			
38	Number of power terminals			
39	Direction of rotation	***CW or CCW***		
40	Weight of rotor	***8***	kg	
41	Total weight of motor	***31***	kg	
42	Dimension drawing no.			
43				
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Ex-motors				
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Option	Variant Codes / Definition			
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Remarks:

Data based on situation 27/05/2018
All data subject to tolerances in accordance with IEC
Guaranteed values on request

ABB Motors and Generators	Technical Data Sheet - DOL			
	Project		Location	
Department/Author	Customer name		Customer ref.	Item name **1,00004**
Our ref.	Rev/Changed by **A**	Date of issue **18/07/2018**	Saving ident **untitled.xls**	Pages **1(3)**

No.	Definition	Data	Unit	Remarks	
1	Product	***TEFC, 3-phase, squirrel cage induction motor***			
2	Product code	***3GBA 162 410-ADD***		Calc. ref.	3GZF021016-139
3	Type/Frame	***M2BAX 160MLA 4***			
4	Mounting	***IM1001, B3(foot)***			
5	Rated output P_N	***11***	kW		
6	Service factor	***1***			
7	Type of duty	***S1(IEC) 100%***			
8	Rated voltage U_N	***400***	VD	± 5 % (IEC 60034-1)	
9	Rated frequency f_N	***50***	Hz	± 2 % (IEC 60034-1)	
10	Rated speed n_N	***1477***	r/min		
11	Rated current I_N	***21,1***	A		
12	No-load current	***8,3***	A		
13	Starting current I_s/I_N	***7,6***		Meet IEC 60034-12, N,(H at 60 Hz)	
14	Nominal torque T_N	***71***	Nm		
15	Locked rotor torque T_S/T_N	***2,6***			
16	Maximum torque T_{max}/T_N	***3,3***			
17	Minimum torque T_{min}/T_N	***2,5***			
18	Speed at minimum torque	***345***	r/min		
	Load characteristics (IEC 60034-2-1:2014)	Load %	Current A	Efficiency %	Power factor
19	PLL determined from residual loss	*100*	**21,1**	**91,4 / IE3**	**0,82**
20		*75*	**16,8**	**91,8**	**0,77**
21		*50*	**13,0**	**91,1**	**0,67**
22		*Start*	**160**		**0,28**
23	Maximum starting time from hot	***15***	s		
24	Maximum starting time from cold	***27***	s		
25	Insulation class / Temperature class	***F / B***			
26	Ambient temperature	***40***	°C		
27	Altitude	***1000***	m.a.s.l.		
28	Enclosure	***IP55***			
29	Cooling system	***IC411 self ventilated***			
30	Bearing DE/NDE	***6209-2Z/C3 - 6209-2Z/C3***			
31	Type of Grease				
32	Sound pressure level (LP dB(A) 1m)	***61***	dB(A)	at load	
33	Moment of inertia J = ¼ GD2	***0,11***	kg-m2		
34	Balancing				
35	Vibration class				
36	Position of terminal box	***Top***			
37	Terminal box entries; no, dimens.				
38	Number of power terminals				
39	Direction of rotation	***CW or CCW***			
40	Weight of rotor	***38***	kg		
41	Total weight of motor	***134***	kg		
42	Dimension drawing no.				
43					
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45					
Ex-motors					
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47					
48					

Option	Variant Codes / Definition
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Remarks:

Data based on situation 02/07/2018
All data subject to tolerances in accordance with IEC
Guaranteed values on request