

ABB Motors and Generators		Technical Data Sheet - DOL		
Project		Location		
Department/Author	Customer name	Customer ref.		Item name 1.00001
Our ref.	Rev/Changed by A	Date of issue 12/23/2015	Saving ident untitled.xls	Pages 1(3)

No.	Definition	Data	Unit	Remarks	
1	Product	TEFC, 3-phase, squirrel cage induction motor			
2	Product code	MM22454-PPN (3GBP 222 220-ADG+332+333)		Calc. ref. 3GZF021022-196	
3	Type/Frame	M3BP 225SMB 4			
4	Mounting	IM1001, B3(foot)			
5	Rated output P_N	45	kW		
6	Service factor	1			
7	Type of duty	S1(IEC) 100%			
8	Rated voltage U_N	400	VD	$\pm 5\%$ (IEC 60034-1)	
9	Rated frequency f_N	50	Hz	$\pm 2\%$ (IEC 60034-1)	
10	Rated speed n_N	1480	r/min		
11	Rated current I_N	81.6	A		
12	No-load current	31	A		
13	Starting current I_s/I_N	7.5		Fullfilled IEC 60034-12 design N,H	
14	Nominal torque T_N	290	Nm		
15	Locked rotor torque T_s/T_N	2.8			
16	Maximum torque T_{max}/T_N	3.2			
17	Minimum torque T_{min}/T_N	2.5			
18	Speed at minimum torque	975	r/min		
Load characteristics (IEC 60034-2-1:2007)		Load %	Current A	Efficiency % Power factor	
19	PLL determined from residual loss	100	81.6	93.9 / IE2 0.85	
20		75	63.1	94.3 0.82	
21		50	47.2	93.9 0.73	
22		Start	612	0.41	
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	6313/C3 - 6212/C3			
31	Type of Grease				
32	Sound pressure level (LP dB(A) 1m)	66	dB(A)	at load	
33	Moment of inertia $J = \frac{1}{4} GD^2$	0.44	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	Total weight of motor	356	kg		
41	Dimension drawing no.				
42					
43					
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Ex-motors					
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Option Variant Codes / Definition					
49	332 = Baldor Catalog				
50	333 = Not for use in the USA				
51					
52					
Remarks:					
Data based on situation 9/11/2015					
All data subject to tolerances in accordance with IEC					
Guaranteed values on request					

ABB Motors and Generators Load Curves			
Department/Author	Customer name	Customer ref.	Item name 1.00001
Our ref.	Rev/Changed by A	Date of issue 12/23/2015	Saving ident untitled.xls Pages 2(3)
Product	TEFC, 3-phase, squirrel cage induction motor		
Type/Frame	M3BP 225SMB 4	Calc. ref.	3GZF021022-196
Product code	3GBP 222 220-ADG		
Rated output P _N	45	kW	
Type of duty	S1(IEC) 100%		
Voltage (V)	400	Current I _N (A)	81.6
Frequency (Hz)	50	Speed (r/min)	1480
		Power factor at P _N	0.85
		Efficiency (%) at P _N	93.9
Load characteristics (IEC 60034-2-1:2007) Data based on situation 9/11/2015 All data subject to tolerances in accordance with IEC			

ABB Motors and Generators Starting Curves			
Project		Location	
Department/Author	Customer name	Customer ref.	Item name 1.00001
Our ref.	Rev/Changed b Date of issue A 12/23/2015	Saving ident untitled.xls	Pages 3(3)
Type of product	TEFC, 3-phase, squirrel cage induction motor		
Type/Frame	M3BP 225SMB 4	Calc. ref.	3GZF021022-196
Product code	3GBP 222 220-ADG	Frequency (Hz)	50
Rated output P _N	45 kW	Rated current I _N	81.6 A
Type of duty	S1(IEC) 100%		
J _{motor} (kgm ²)	0.44	Voltage (V) 100%	400
J _{load} (kgm ²)		T _{start} /T _N	2.8
Speed (r/min)	1480	Starting time (s)	
T _N (Nm)	290	Speed (r/min)	
T _{load} (Nm)		I _s /I _N	7.5
Nbr. of consecutive starts		T _{max} /T _N	3.2
Load characteristics (IEC 60034-2-1:2007) Data based on situation 9/11/2015 All data subject to tolerances in accordance with IEC			

ABB Motors and Generators		Technical Data Sheet - DOL		
Project		Location		
Department/Author	Customer name	Customer ref.		Item name 2.00001
Our ref.	Rev/Changed by A	Date of issue 12/23/2015	Saving ident untitled.xls	Pages 1(3)
No.	Definition	Data	Unit	Remarks
1	Product	TEFC, 3-phase, squirrel cage induction motor		
2	Product code	MM22454-PPN (3GBP 222 220-ADG+332+333) Calc. ref. 3GZF021022-196		
3	Type/Frame	M3BP 225SMB 4		
4	Mounting	IM1001, B3(foot)		
5	Rated output P_N	45	kW	
6	Service factor	1		
7	Type of duty	S1(IEC) 100%		
8	Rated voltage U_N	415	VD	± 5 % (IEC 60034-1)
9	Rated frequency f_N	50	Hz	± 2 % (IEC 60034-1)
10	Rated speed n_N	1483	r/min	
11	Rated current I_N	80.3	A	
12	No-load current	35	A	
13	Starting current I_s/I_N	8		Fullfilled IEC 60034-12 design N,H
14	Nominal torque T_N	290	Nm	
15	Locked rotor torque T_s/T_N	3		
16	Maximum torque T_{max}/T_N	3.5		
17	Minimum torque T_{min}/T_N	2.5		
18	Speed at minimum torque	975	r/min	
Load characteristics (IEC 60034-2-1:2007)		Load %	Current A	Efficiency %
19	PLL determined from residual loss	100	80.3	94.1 / IE2
20		75	63	94.4
21		50	48.7	93.7
22		Start	643	0.42
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	6313/C3 - 6212/C3		
31	Type of Grease			
32	Sound pressure level (LP dB(A) 1m)	66	dB(A)	at load
33	Moment of inertia $J = \frac{1}{4} GD^2$	0.44	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	Total weight of motor	356	kg	
41	Dimension drawing no.			
42				
43				
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Ex-motors				
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Option Variant Codes / Definition				
49	332 = Baldor Catalog			
50	333 = Not for use in the USA			
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Remarks:				
Data based on situation 9/11/2015				
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Guaranteed values on request				

ABB Motors and Generators Load Curves			
Project		Location	
Department/Author	Customer name	Customer ref.	Item name 2.00001
Our ref.	Rev/Changed by A	Date of issue 12/23/2015	Saving ident untitled.xls Pages 2(3)
Product	TEFC, 3-phase, squirrel cage induction motor		
Type/Frame	M3BP 225SMB 4	Calc. ref.	3GZF021022-196
Product code	3GBP 222 220-ADG		
Rated output P _N	45	kW	
Type of duty	S1(IEC) 100%		
Voltage (V)	415	Current I _N (A)	80.3
Frequency (Hz)	50	Speed (r/min)	1483
		Power factor at P _N	0.83
		Efficiency (%) at P _N	94.1
Load characteristics (IEC 60034-2-1:2007) Data based on situation 9/11/2015 All data subject to tolerances in accordance with IEC			

ABB Motors and Generators Starting Curves			
Department/Author	Customer name	Customer ref.	Item name 2.00001
Our ref.	Rev/Changed b Date of issue A 12/23/2015	Saving ident untitled.xls	Pages 3(3)
Type of product	TEFC, 3-phase, squirrel cage induction motor		
Type/Frame	M3BP 225SMB 4	Calc. ref.	3GZF021022-196
Product code	3GBP 222 220-ADG	Frequency (Hz)	50
Rated output P _N	45 kW	Rated current I _N	80.3 A
Type of duty	S1(IEC) 100%		
J _{motor} (kgm ²)	0.44	Voltage (V) 100%	415
J _{load} (kgm ²)		T _{start} /T _N	3
Speed (r/min)	1483	Starting time (s)	
T _N (Nm)	290	Speed (r/min)	
T _{load} (Nm)		I _s /I _N	8
Nbr. of consecutive starts		T _{max} /T _N	3.5
Load characteristics (IEC 60034-2-1:2007) Data based on situation 9/11/2015 All data subject to tolerances in accordance with IEC			

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Our ref.		Rev/Changed by		Date of issue	
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				Item name	
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				1(3)	
No.	Definition	Data	Unit	Remarks	
1	Product	TEFC, 3-phase, squirrel cage induction motor			
2	Product code	MM22454-PPN (3GBP 222 220-ADG+332+333)			
3	Type/Frame	M3BP 225SMB 4			
4	Mounting	IM1001, B3(foot)			
5	Rated output P _N	45	kW		
6	Service factor	1			
7	Type of duty	S1(IEC) 100%			
8	Rated voltage U _N	690	VY	± 5 % (IEC 60034-1)	
9	Rated frequency f _N	50	Hz	± 2 % (IEC 60034-1)	
10	Rated speed n _N	1480	r/min		
11	Rated current I _N	47.3	A		
12	No-load current	17.6	A		
13	Starting current I _s /I _N	7.5		Fullfilled IEC 60034-12 design N,H	
14	Nominal torque T _N	290	Nm		
15	Locked rotor torque T _s /T _N	2.8			
16	Maximum torque T _{max} /T _N	3.2			
17	Minimum torque T _{min} /T _N	2.5			
18	Speed at minimum torque	975	r/min		
Load characteristics (IEC 60034-2-1:2007)		Load %	Current A	Efficiency %	Power factor
19	PLL determined from residual loss	100	47.3	93.9 / IE2	0.85
20		75	36.6	94.3	0.82
21		50	27.3	93.9	0.73
22		Start	355		0.41
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	6313/C3 - 6212/C3			
31	Type of Grease				
32	Sound pressure level (LP dB(A) 1m)	66	dB(A)	at load	
33	Moment of inertia J = ¼ GD2	0.44	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	Total weight of motor	356	kg		
41	Dimension drawing no.				
42					
43					
44					
45					
Ex-motors					
46					
47					
48					
Option Variant Codes / Definition					
49	332 = Baldor Catalog				
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Remarks:					
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ABB Motors and Generators Load Curves			
Department/Author	Customer name	Customer ref.	Item name 3.00001
Our ref.	Rev/Changed by A	Date of issue 12/23/2015	Saving ident untitled.xls Pages 2(3)
Product	TEFC, 3-phase, squirrel cage induction motor		
Type/Frame	M3BP 225SMB 4	Calc. ref.	3GZF021022-196
Product code	3GBP 222 220-ADG		
Rated output P _N	45	kW	
Type of duty	S1(IEC) 100%		
Voltage (V)	690	Current I _N (A)	47.3
Frequency (Hz)	50	Speed (r/min)	1480
		Power factor at P _N	0.85
		Efficiency (%) at P _N	93.9
Load characteristics (IEC 60034-2-1:2007) Data based on situation 9/11/2015 All data subject to tolerances in accordance with IEC			

ABB Motors and Generators Starting Curves			
Project		Location	
Department/Author	Customer name	Customer ref.	Item name 3.00001
Our ref.	Rev/Changed b Date of issue A 12/23/2015	Saving ident untitled.xls	Pages 3(3)
Type of product	TEFC, 3-phase, squirrel cage induction motor		
Type/Frame	M3BP 225SMB 4	Calc. ref.	3GZF021022-196
Product code	3GBP 222 220-ADG	Frequency (Hz)	50
Rated output P _N	45 kW	Rated current I _N	47.3 A
Type of duty	S1(IEC) 100%		
J _{motor} (kgm ²)	0.44	Voltage (V) 100%	690
J _{load} (kgm ²)		T _{start} /T _N	2.8
Speed (r/min)	1480	Starting time (s)	
T _N (Nm)	290	Speed (r/min)	
T _{load} (Nm)		I _s /I _N	7.5
Nbr. of consecutive starts		T _{max} /T _N	3.2
Load characteristics (IEC 60034-2-1:2007) Data based on situation 9/11/2015 All data subject to tolerances in accordance with IEC			

ABB Motors and Generators		Technical Data Sheet - DOL		
Project		Location		
Department/Author	Customer name	Customer ref.		Item name 4.00001
Our ref.	Rev/Changed by A	Date of issue 12/23/2015	Saving ident untitled.xls	Pages 1(3)
No.	Definition	Data	Unit	Remarks
1	Product	TEFC, 3-phase, squirrel cage induction motor		
2	Product code	MM22454-PPN (3GBP 222 220-ADG+332+333)		
3	Type/Frame	Calc. ref. 3GZF021022-196		
4	Mounting	M3BP 225SMB 4		
5	Rated output P _N	IM1001, B3(foot)		
6	Service factor	45 kW		
7	Type of duty	1		
8	Rated voltage U _N	S1(IEC) 100%		
9	Rated frequency f _N	460 VD ± 5 % (IEC 60034-1)		
10	Rated speed n _N	60 Hz ± 2 % (IEC 60034-1)		
11	Rated current I _N	1784 r/min		
12	No-load current	70.8 A		
13	Starting current I _s /I _N	28 A		
14	Nominal torque T _N	8.6 Fullfilled IEC 60034-12 design N,H		
15	Locked rotor torque T _s /T _N	241 Nm		
16	Maximum torque T _{max} /T _N	2.7		
17	Minimum torque T _{min} /T _N	3.3		
18	Speed at minimum torque	2.6		
19	Load characteristics (IEC 60034-2-1:2007)	Load %	Current A	Efficiency %
20	PLL determined from residual loss	100	70.8	94.2 / IE2
21		75	55.6	94.1
22		50	41.9	93
23		Start	609	0.38
24	Maximum starting time from hot	15 s		
25	Maximum starting time from cold	27 s		
26	Insulation class / Temperature class	F / B		
27	Ambient temperature	40 °C		
28	Altitude	1000 m.a.s.l.		
29	Enclosure	IP55		
30	Cooling system	IC411 self ventilated		
31	Bearing DE/NDE	6313/C3 - 6212/C3		
32	Type of Grease			
33	Sound pressure level (LP dB(A) 1m)	74 dB(A) at load		
34	Moment of inertia J = ¼ GD ²	0.44 kg-m ²		
35	Balancing			
36	Vibration class			
37	Position of terminal box	Top		
38	Terminal box entries; no, dimens.			
39	Number of power terminals			
40	Direction of rotation	CW or CCW		
41	Total weight of motor	356 kg		
42	Dimension drawing no.			
43				
44				
45				
Ex-motors				
46				
47				
48				
Option Variant Codes / Definition				
49	332 = Baldor Catalog			
50	333 = Not for use in the USA			
51				
52				
Remarks:				
Data based on situation 9/11/2015				
All data subject to tolerances in accordance with IEC				
Guaranteed values on request				

ABB Motors and Generators Load Curves		
Project	Location	
Department/Author	Customer name	Customer ref.
		Item name 4.00001
Our ref.	Rev/Changed by	Date of issue
	A	12/23/2015
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		Pages 2(3)
Product	TEFC, 3-phase, squirrel cage induction motor	
Type/Frame	M3BP 225SMB 4	Calc. ref. 3GZF021022-196
Product code	3GBP 222 220-ADG	
Rated output P _N	45	kW
Type of duty	S1(IEC) 100%	
Voltage (V)	460	Current I _N (A) 70.8
Frequency (Hz)	60	Speed (r/min) 1784
		Power factor at P _N 0.85
		Efficiency (%) at P _N 94.2
Load characteristics (IEC 60034-2-1:2007) Data based on situation 9/11/2015 All data subject to tolerances in accordance with IEC		

ABB Motors and Generators Starting Curves			
Department/Author	Customer name	Customer ref.	Item name
			4.00001
Our ref.	Rev/Changed b Date of issue	Saving ident	Pages
	A 12/23/2015	untitled.xls	3(3)
Type of product	TEFC, 3-phase, squirrel cage induction motor		
Type/Frame	M3BP 225SMB 4	Calc. ref.	3GZF021022-196
Product code	3GBP 222 220-ADG	Frequency (Hz)	60
Rated output P _N	45 kW	Rated current I _N	70.8 A
Type of duty	S1(IEC) 100%		
J _{motor} (kgm ²)	0.44	Voltage (V) 100%	460
J _{load} (kgm ²)		T _{start} /T _N	2.7
Speed (r/min)	1784	Starting time (s)	
T _N (Nm)	241	Speed (r/min)	
T _{load} (Nm)		I _s /I _N	8.6
Nbr. of consecutive starts		T _{max} /T _N	3.3
Load characteristics (IEC 60034-2-1:2007) Data based on situation 9/11/2015 All data subject to tolerances in accordance with IEC			