


ABB Motors and Generators		Technical Data Sheet - DOL			
Project		Location			
Department/Author		Customer name		Customer ref.	
Our ref.		Rev/Changed by A		Date of issue 2/8/2016	
		Saving ident untitled.xls		Item name 1.00001	
				Pages 1(3)	
No.	Definition	Data	Unit	Remarks	
1	Product	TEFC, 3-phase, squirrel cage induction motor			
2	Product code	MM22374-PPA (3GBP222210-) Calc. ref. 3GZF021022-193			
3	Type/Frame	M3BP 225SMA 4			
4	Mounting	IM1001, B3(foot)			
5	Rated output P _N	37	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	1479	r/min		
11	Rated current I _N	68.4	A		
12	No-load current	27	A		
13	Starting current I _s /I _N	7.1		Fullfilled IEC 60034-12 design N,H	
14	Nominal torque T _N	239	Nm		
15	Locked rotor torque T _s /T _N	2.6			
16	Maximum torque T _{max} /T _N	2.9			
17	Minimum torque T _{min} /T _N	2			
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	68.4	93.4 / IE2	0.84
20		75	52.9	93.9	0.81
21		50	39.7	93.4	0.72
22		Start	486		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	0.356	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	324	kg		
41	Dimension drawing no.				
42					
43					
44					
45					
Ex-motors					
46					
47					
48					
Option Variant Codes / Definition					
49					
50					
51					
52					
Remarks:					
Data based on situation 11/30/2015					
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 1.00001
Our ref.	Rev/Changed by	Date of issue	Saving ident untitled.xls
	A	2/8/2016	Pages 2(3)
Product	TEFC, 3-phase, squirrel cage induction motor		
Type/Frame	M3BP 225SMA 4	Calc. ref.	3GZF021022-193
Product code	3GBP 222 210-ADG		
Rated output P _N	37	kW	
Type of duty	S1(IEC) 100%		
Voltage (V)	400	Current I _N (A)	68.4
Frequency (Hz)	50	Speed (r/min)	1479
		Power factor at P _N	0.84
		Efficiency (%) at P _N	93.4
<p>Load characteristics (IEC 60034-2-1:2007) Data based on situation 11/30/2015</p> <p style="text-align: center;">All data subject to tolerances in accordance with IEC</p>			


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	Saving ident	Pages
	A	2/8/2016	untitled.xls	3(3)
Type of product	TEFC, 3-phase, squirrel cage induction motor			
Type/Frame	M3BP 225SMA 4	Calc. ref.	3GZF021022-193	
Product code	3GBP 222 210-ADG	Frequency (Hz)	50	
Rated output P _N	37 kW	Rated current I _N	68.4	A
Type of duty	S1(IEC) 100%			
J _{motor} (kgm ²)	0.36	Voltage (V) 100%	400	Voltage (V) 400V(100%)
J _{load} (kgm ²)		T _{start} /T _N	2.6	T _{start} /T _N 2.6
Speed (r/min)	1479	Starting time (s)		Starting time (s)
T _N (Nm)	239	Speed (r/min)		Speed (r/min)
T _{load} (Nm)		I _s /I _n	7.1	I _s /I _n 7.1
Nbr. of Consecutive Starts at UN		T _{max} /T _n	2.9	T _{max} /T _n 2.9
<p>Load characteristics (IEC 60034-2-1:2007) Data based on situation 11/30/2015</p> <p style="text-align: center;">All data subject to tolerances in accordance with IEC</p>				


ABB Motors and Generators		Technical Data Sheet - DOL			
Project		Location			
Department/Author		Customer name		Customer ref.	
Our ref.		Rev/Changed by A		Date of issue 2/8/2016	
		Saving ident untitled.xls		Item name 1.00001	
				Pages 1(3)	
No.	Definition	Data	Unit	Remarks	
1	Product	TEFC, 3-phase, squirrel cage induction motor			
2	Product code	MM22374-PPA (3GBP222210-) Calc. ref. 3GZF021022-193			
3	Type/Frame	M3BP 225SMA 4			
4	Mounting	IM1001, B3(foot)			
5	Rated output P _N	37	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	1481	r/min		
11	Rated current I _N	68.1	A		
12	No-load current	30	A		
13	Starting current I _s /I _N	7.3		Fullfilled IEC 60034-12 design N,H	
14	Nominal torque T _N	239	Nm		
15	Locked rotor torque T _s /T _N	2.9			
16	Maximum torque T _{max} /T _N	3.1			
17	Minimum torque T _{min} /T _N	2			
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	68.1	93.4 / IE2	0.81
20		75	53.4	93.8	0.77
21		50	41.5	93.1	0.67
22		Start	497		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 = ¼ GD2	0.356	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	324	kg		
41	Dimension drawing no.				
42					
43					
44					
45					
Ex-motors					
46					
47					
48					
Option Variant Codes / Definition					
49					
50					
51					
52					
Remarks:					
Data based on situation 11/30/2015					
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 1.00001
Our ref.	Rev/Changed by	Date of issue	Saving ident
	A	2/8/2016	untitled.xls
Product	TEFC, 3-phase, squirrel cage induction motor		
Type/Frame	M3BP 225SMA 4	Calc. ref.	3GZF021022-193
Product code	3GBP 222 210-ADG		
Rated output P _N	37	kW	
Type of duty	S1(IEC) 100%		
Voltage (V)	415	Current I _N (A)	68.1
Frequency (Hz)	50	Speed (r/min)	1481
		Power factor at P _N	0.81
		Efficiency (%) at P _N	93.4
<p>Load characteristics (IEC 60034-2-1:2007) Data based on situation 11/30/2015</p> <p style="text-align: center;">All data subject to tolerances in accordance with IEC</p>			


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	Saving ident	Pages
	A	2/8/2016	untitled.xls	3(3)
Type of product	TEFC, 3-phase, squirrel cage induction motor			
Type/Frame	M3BP 225SMA 4	Calc. ref.	3GZF021022-193	
Product code	3GBP 222 210-ADG	Frequency (Hz)	50	
Rated output P _N	37 kW	Rated current I _N	68.1	A
Type of duty	S1(IEC) 100%			
J _{motor} (kgm ²)	0.36	Voltage (V) 100%	415	Voltage (V) 415V(100%)
J _{load} (kgm ²)		T _{start} /T _N	2.9	T _{start} /T _N 2.9
Speed (r/min)	1481	Starting time (s)		Starting time (s)
T _N (Nm)	239	Speed (r/min)		Speed (r/min)
T _{load} (Nm)		I _s /I _n	7.3	I _s /I _n 7.3
Nbr. of Consecutive Starts at UN		T _{max} /T _n	3.1	T _{max} /T _n 3.1
<p>Load characteristics (IEC 60034-2-1:2007) Data based on situation 11/30/2015</p> <p style="text-align: center;">All data subject to tolerances in accordance with IEC</p>				


ABB Motors and Generators		Technical Data Sheet - DOL			
Project		Location			
Department/Author		Customer name		Customer ref.	
Our ref.		Rev/Changed by		Date of issue	
		A		2/8/2016	
		Saving ident		untitled.xls	
				Pages	
				1(3)	
No.	Definition	Data	Unit	Remarks	
1	Product	TEFC, 3-phase, squirrel cage induction motor			
2	Product code	MM22374-PPA (3GBP222210-) Calc. ref. 3GZF021022-193			
3	Type/Frame	M3BP 225SMA 4			
4	Mounting	IM1001, B3(foot)			
5	Rated output P _N	37	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	1479	r/min		
11	Rated current I _N	39.7	A		
12	No-load current	15.2	A		
13	Starting current I _s /I _N	7.1		Fullfilled IEC 60034-12 design N,H	
14	Nominal torque T _N	239	Nm		
15	Locked rotor torque T _s /T _N	2.6			
16	Maximum torque T _{max} /T _N	2.9			
17	Minimum torque T _{min} /T _N	2.2			
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	39.7	93.4 / IE2	0.84
20		75	30.7	93.9	0.81
21		50	23	93.4	0.72
22		Start	282		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	0.356	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	324	kg		
41	Dimension drawing no.				
42					
43					
44					
45					
Ex-motors					
46					
47					
48					
Option Variant Codes / Definition					
49					
50					
51					
52					
Remarks:					
Data based on situation 11/30/2015					
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 1.00001
Our ref.	Rev/Changed by	Date of issue	Saving ident untitled.xls
	A	2/8/2016	Pages 2(3)
Product	TEFC, 3-phase, squirrel cage induction motor		
Type/Frame	M3BP 225SMA 4	Calc. ref.	3GZF021022-193
Product code	3GBP 222 210-ADG		
Rated output P _N	37	kW	
Type of duty	S1(IEC) 100%		
Voltage (V)	690	Current I _N (A)	39.7
Frequency (Hz)	50	Speed (r/min)	1479
		Power factor at P _N	0.84
		Efficiency (%) at P _N	93.4
<p>Load characteristics (IEC 60034-2-1:2007) Data based on situation 11/30/2015</p> <p style="text-align: center;">All data subject to tolerances in accordance with IEC</p>			


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	Saving ident	Pages
	A	2/8/2016	untitled.xls	3(3)
Type of product	TEFC, 3-phase, squirrel cage induction motor			
Type/Frame	M3BP 225SMA 4	Calc. ref.	3GZF021022-193	
Product code	3GBP 222 210-ADG	Frequency (Hz)	50	
Rated output P _N	37 kW	Rated current I _N	39.7	A
Type of duty	S1(IEC) 100%			
J _{motor} (kgm ²)	0.36	Voltage (V) 100%	690	Voltage (V) 690V(100%)
J _{load} (kgm ²)		T _{start} /T _N	2.6	T _{start} /T _N 2.6
Speed (r/min)	1479	Starting time (s)		Starting time (s)
T _N (Nm)	239	Speed (r/min)		Speed (r/min)
T _{load} (Nm)		I _s /I _n	7.1	I _s /I _n 7.1
Nbr. of Consecutive Starts at UN		T _{max} /T _n	2.9	T _{max} /T _n 2.9
<p>Load characteristics (IEC 60034-2-1:2007) Data based on situation 11/30/2015</p> <p style="text-align: center;">All data subject to tolerances in accordance with IEC</p>				


ABB Motors and Generators		Technical Data Sheet - DOL			
Project		Location			
Department/Author		Customer name		Customer ref.	
Our ref.		Rev/Changed by	Date of issue	Saving ident	Pages
		A	2/8/2016	untitled.xls	1(3)
No.	Definition	Data	Unit	Remarks	
1	Product	TEFC, 3-phase, squirrel cage induction motor			
2	Product code	MM22374-PPA (3GBP222210-) Calc. ref. 3GZF021022-193			
3	Type/Frame	M3BP 225SMA 4			
4	Mounting	IM1001, B3(foot)			
5	Rated output P _N	37	kW		
6	Service factor	1			
7	Type of duty	S1(IEC) 100%			
8	Rated voltage U _N	460	VD	± 5 % (IEC 60034-1)	
9	Rated frequency f _N	60	Hz	± 2 % (IEC 60034-1)	
10	Rated speed n _N	1782	r/min		
11	Rated current I _N	59.2	A		
12	No-load current	24	A		
13	Starting current I _s /I _N	8.1		Fullfilled IEC 60034-12 design N,H	
14	Nominal torque T _N	198	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	2.4			
18	Speed at minimum torque	1170	r/min		
Load characteristics (IEC 60034-2-1:2007)		Load %	Current A	Efficiency %	Power factor
19	PLL determined from residual loss	100	59.2	93.6 / IE2	0.84
20		75	46	93.5	0.81
21		50	35.2	92.4	0.71
22		Start	480		0.38
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)	74	dB(A)	at load	
33	Moment of inertia J = ¼ GD2	0.356	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	324	kg		
41	Dimension drawing no.				
42					
43					
44					
45					
Ex-motors					
46					
47					
48					
Option Variant Codes / Definition					
49					
50					
51					
52					
Remarks:					
Data based on situation 11/30/2015					
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 1.00001
Our ref.	Rev/Changed by	Date of issue	Saving ident untitled.xls
	A	2/8/2016	Pages 2(3)
Product	TEFC, 3-phase, squirrel cage induction motor		
Type/Frame	M3BP 225SMA 4	Calc. ref.	3GZF021022-193
Product code	3GBP 222 210-ADG		
Rated output P _N	37	kW	
Type of duty	S1(IEC) 100%		
Voltage (V)	460	Current I _N (A)	59.2
Frequency (Hz)	60	Speed (r/min)	1782
		Power factor at P _N	0.84
		Efficiency (%) at P _N	93.6
<p>Load characteristics (IEC 60034-2-1:2007) Data based on situation 11/30/2015</p> <p style="text-align: center;">All data subject to tolerances in accordance with IEC</p>			

ABB Motors and Generators Starting Curves		Project		Location			
Department/Author							
Our ref.		Rev/Changed b Date of issue		Saving ident		Pages	
A		2/8/2016		untitled.xls		3(3)	
Type of product	TEFC, 3-phase, squirrel cage induction motor						
Type/Frame	M3BP 225SMA 4	Calc. ref.	3GZF021022-193				
Product code	3GBP 222 210-ADG	Frequency (Hz)	60				
Rated output P _N	37 kW	Rated current I _N	59.2	A			
Type of duty	S1(IEC) 100%						
J _{motor} (kgm ²)	0.36	Voltage (V) 100%	460	Voltage (V)	460V(100%)		
J _{load} (kgm ²)		T _{start} /T _N	2.8	T _{start} /T _N	2.8		
Speed (r/min)	1782	Starting time (s)		Starting time (s)			
T _N (Nm)	198	Speed (r/min)		Speed (r/min)			
T _{load} (Nm)		I _s /I _n	8.1	I _s /I _n	8.1		
Nbr. of Consecutive Starts at UN		T _{max} /T _n	3.2	T _{max} /T _n	3.2		
<p>Load characteristics (IEC 60034-2-1:2007) Data based on situation 11/30/2015</p> <p style="text-align: center;">All data subject to tolerances in accordance with IEC</p>							