

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	MM18224-PPN (3GBP182420-AD)	Calc. ref.	3GZF021018-192
3	Type/Frame	M3BP 180MLB 4		
4	Mounting	IM1001, B3(foot)		
5	Rated output P_N	22	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	1475	r/min	
11	Rated current I_N	41	A	
12	No-load current	13.9	A	
13	Starting current I_s/I_N	7.3		Fullfilled IEC 60034-12 design N,H
14	Nominal torque T_N	142	Nm	
15	Locked rotor torque T_s/T_N	2.6		
16	Maximum torque T_{max}/T_N	3		
17	Minimum torque T_{min}/T_N	2		
18	Speed at minimum torque	300	r/min	
Load characteristics (IEC 60034-2-1:2007)		Load %	Current A	Efficiency %
19	PLL determined from residual loss	100	41	92.3 / IE2
20		75	31.5	93.3
21		50	23.8	93.2
22		Start	300	0.46
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	6310/C3 - 6209/C3		
31	Type of Grease			
32	Sound pressure level (LP dB(A) 1m)	62	dB(A)	at load
33	Moment of inertia $J = \frac{1}{4} GD^2$	0.195	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	222	kg	
41	Dimension drawing no.			
42				
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Ex-motors				
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Option Variant Codes / Definition				
49	+332 Baldor Catalogue #			
50	+333 Not for use in the USA			
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Remarks:				
Data based on situation 8/10/2015				
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 180MLB 4	Calc. ref.	3GZF021018-192
Product code	3GBP 182 420-ADG		
Rated output P _N	22	kW	
Type of duty	S1(IEC) 100%		
Voltage (V)	400	Current I _N (A)	41
Frequency (Hz)	50	Speed (r/min)	1475
		Power factor at P _N	0.84
		Efficiency (%) at P _N	92.3
Load characteristics (IEC 60034-2-1:2007) Data based on situation 8/10/2015 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 180MLB 4	Calc. ref.	3GZF021018-192
Product code	3GBP 182 420-ADG	Frequency (Hz)	50
Rated output P _N	22 kW	Rated current I _N	41 A
Type of duty	S1(IEC) 100%		
J _{motor} (kgm ²)	0.19	Voltage (V) 100%	400
J _{load} (kgm ²)		T _{start} /T _N	2.6
Speed (r/min)	1475	Starting time (s)	
T _N (Nm)	142	Speed (r/min)	
T _{load} (Nm)		I _s /I _N	7.3
Nbr. of Consecutive Starts at UN		T _{max} /T _N	3
Load characteristics (IEC 60034-2-1:2007) Data based on situation 8/10/2015 All data subject to tolerances in accordance with IEC			

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No.	Definition	Data	Unit	Remarks
1	Product	TEFC, 3-phase, squirrel cage induction motor		
2	Product code	MM18224-PPN (3GBP182420-AD)	Calc. ref.	3GZF021018-192
3	Type/Frame	M3BP 180MLB 4		
4	Mounting	IM1001, B3(foot)		
5	Rated output P_N	22	kW	
6	Service factor	1		
7	Type of duty	S1(IEC) 100%		
8	Rated voltage U_N	415	VD	$\pm 5\%$ (IEC 60034-1)
9	Rated frequency f_N	50	Hz	$\pm 2\%$ (IEC 60034-1)
10	Rated speed n_N	1477	r/min	
11	Rated current I_N	39.9	A	
12	No-load current	15.3	A	
13	Starting current I_s/I_N	7.8		Fullfilled IEC 60034-12 design N,H
14	Nominal torque T_N	142	Nm	
15	Locked rotor torque T_s/T_N	2.9		
16	Maximum torque T_{max}/T_N	3.2		
17	Minimum torque T_{min}/T_N	2		
18	Speed at minimum torque	300	r/min	
Load characteristics (IEC 60034-2-1:2007)		Load %	Current A	Efficiency %
19	PLL determined from residual loss	100	39.9	92.5 / IE2
20		75	31.1	93.3
21		50	24	92.9
22		Start	311	0.47
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	6310/C3 - 6209/C3		
31	Type of Grease			
32	Sound pressure level (LP dB(A) 1m)	62	dB(A)	at load
33	Moment of inertia $J = \frac{1}{4} GD^2$	0.195	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	222	kg	
41	Dimension drawing no.			
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Ex-motors				
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Option Variant Codes / Definition				
49	+332 Baldor Catalogue #			
50	+333 Not for use in the USA			
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Remarks:				
Data based on situation 8/10/2015				
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 180MLB 4	Calc. ref.	3GZF021018-192
Product code	3GBP 182 420-ADG		
Rated output P _N	22	kW	
Type of duty	S1(IEC) 100%		
Voltage (V)	415	Current I _N (A)	39.9
Frequency (Hz)	50	Speed (r/min)	1477
		Power factor at P _N	0.83
		Efficiency (%) at P _N	92.5
Load characteristics (IEC 60034-2-1:2007) Data based on situation 8/10/2015 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 180MLB 4	Calc. ref.	3GZF021018-192
Product code	3GBP 182 420-ADG	Frequency (Hz)	50
Rated output P _N	22 kW	Rated current I _N	39.9 A
Type of duty	S1(IEC) 100%		
J _{motor} (kgm ²)	0.19	Voltage (V) 100%	415
J _{load} (kgm ²)		T _{start} /T _N	2.9
Speed (r/min)	1477	Starting time (s)	
T _N (Nm)	142	Speed (r/min)	
T _{load} (Nm)		I _s /I _n	7.8
Nbr. of Consecutive Starts at UN		T _{max} /T _n	3.2
Load characteristics (IEC 60034-2-1:2007) Data based on situation 8/10/2015 All data subject to tolerances in accordance with IEC			

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No.	Definition	Data	Unit	Remarks
1	Product	TEFC, 3-phase, squirrel cage induction motor		
2	Product code	MM18224-PPN (3GBP182420-AD) Calc. ref. 3GZF021018-192		
3	Type/Frame	M3BP 180MLB 4		
4	Mounting	IM1001, B3(foot)		
5	Rated output P _N	22	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	1475	r/min	
11	Rated current I _N	23.8	A	
12	No-load current	8	A	
13	Starting current I _s /I _N	7.3		Fullfilled IEC 60034-12 design N,H
14	Nominal torque T _N	142	Nm	
15	Locked rotor torque T _s /T _N	2.6		
16	Maximum torque T _{max} /T _N	3		
17	Minimum torque T _{min} /T _N	2		
18	Speed at minimum torque	300	r/min	
Load characteristics (IEC 60034-2-1:2007)		Load %	Current A	Efficiency %
19	PLL determined from residual loss	100	23.8	92.3 / IE2
20		75	18.3	93.3
21		50	13.8	93.2
22		Start	174	0.46
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	6310/C3 - 6209/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	0.195	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	222	kg	
41	Dimension drawing no.			
42				
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Ex-motors				
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Option Variant Codes / Definition				
49	+332 Baldor Catalogue #			
50	+333 Not for use in the USA			
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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 180MLB 4	Calc. ref.	3GZF021018-192
Product code	3GBP 182 420-ADG		
Rated output P _N	22	kW	
Type of duty	S1(IEC) 100%		
Voltage (V)	690	Current I _N (A)	23.8
Frequency (Hz)	50	Speed (r/min)	1475
		Power factor at P _N	0.84
		Efficiency (%) at P _N	92.3
Load characteristics (IEC 60034-2-1:2007) Data based on situation 8/10/2015 All data subject to tolerances in accordance with IEC			

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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 180MLB 4	Calc. ref.	3GZF021018-192
Product code	3GBP 182 420-ADG	Frequency (Hz)	50
Rated output P _N	22 kW	Rated current I _N	23.8 A
Type of duty	S1(IEC) 100%		
J _{motor} (kgm ²)	0.19	Voltage (V) 100%	690
J _{load} (kgm ²)		T _{start} /T _N	2.6
Speed (r/min)	1475	Starting time (s)	
T _N (Nm)	142	Speed (r/min)	
T _{load} (Nm)		I _s /I _N	7.3
Nbr. of Consecutive Starts at UN		T _{max} /T _N	3
Load characteristics (IEC 60034-2-1:2007) Data based on situation 8/10/2015 All data subject to tolerances in accordance with IEC			

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1	Product	TEFC, 3-phase, squirrel cage induction motor		
2	Product code	MM18224-PPN (3GBP182420-AD) Calc. ref. 3GZF021018-192		
3	Type/Frame	M3BP 180MLB 4		
4	Mounting	IM1001, B3(foot)		
5	Rated output P_N	22	kW	
6	Service factor	1		
7	Type of duty	S1(IEC) 100%		
8	Rated voltage U_N	460	VD	$\pm 5\%$ (IEC 60034-1)
9	Rated frequency f_N	60	Hz	$\pm 2\%$ (IEC 60034-1)
10	Rated speed n_N	1780	r/min	
11	Rated current I_N	35.8	A	
12	No-load current	12.7	A	
13	Starting current I_s/I_N	8.3		Fullfilled IEC 60034-12 design N,H
14	Nominal torque T_N	118	Nm	
15	Locked rotor torque T_s/T_N	2.8		
16	Maximum torque T_{max}/T_N	3.3		
17	Minimum torque T_{min}/T_N	2.1		
18	Speed at minimum torque	360	r/min	
Load characteristics (IEC 60034-2-1:2007)		Load %	Current A	Efficiency %
19	PLL determined from residual loss	100	35.8	93.1 / IE2
20		75	28.1	93.4
21		50	21.5	92.5
22		Start	297	0.43
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	6310/C3 - 6209/C3		
31	Type of Grease			
32	Sound pressure level (LP dB(A) 1m)	70	dB(A)	at load
33	Moment of inertia $J = \frac{1}{4} GD^2$	0.195	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	222	kg	
41	Dimension drawing no.			
42				
43				
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Ex-motors				
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Option Variant Codes / Definition				
49	+332 Baldor Catalogue #			
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Remarks:				
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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 180MLB 4	Calc. ref.	3GZF021018-192
Product code	3GBP 182 420-ADG		
Rated output P _N	22	kW	
Type of duty	S1(IEC) 100%		
Voltage (V)	460	Current I _N (A)	35.8
Frequency (Hz)	60	Speed (r/min)	1780
		Power factor at P _N	0.83
		Efficiency (%) at P _N	93.1
Load characteristics (IEC 60034-2-1:2007) Data based on situation 8/10/2015 All data subject to tolerances in accordance with IEC			

ABB Motors and Generators Starting Curves			
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 180MLB 4	Calc. ref.	3GZF021018-192
Product code	3GBP 182 420-ADG	Frequency (Hz)	60
Rated output P _N	22 kW	Rated current I _N	35.8 A
Type of duty	S1(IEC) 100%		
J _{motor} (kgm ²)	0.19	Voltage (V) 100%	460
J _{load} (kgm ²)		T _{start} /T _N	2.8
Speed (r/min)	1780	Starting time (s)	
T _N (Nm)	118	Speed (r/min)	
T _{load} (Nm)		I _s /I _N	8.3
Nbr. of Consecutive Starts at UN		T _{max} /T _N	3.3
Load characteristics (IEC 60034-2-1:2007) Data based on situation 8/10/2015 All data subject to tolerances in accordance with IEC			