


ABB Motors and Generators		Technical Data Sheet - DOL			
		Project	Location		
Department/Author		Customer name	Customer ref.		Item name
Our ref.		Rev/Changed by	Date of issue	Saving ident	Pages
		A	11/04/2011	untitled.xls	1.00001 1(3)
No.	Definition	Data	Unit	Remarks	
1	Product	TEFC, 3-phase, squirrel cage induction motor			
2	Product code	3GAA 091 313-ASE			
3	Type/Frame	M3AA 90 LB 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	415	VY	± 5 % (IEC 60034-1)	
9	Rated frequency f _N	50	Hz	± 2 % (IEC 60034-1)	
10	Rated speed n _N	2890	r/min		
11	Rated current I _N	4.3	A		
12	No-load current	2	A		
13	Starting current I _s /I _N	7.2		Fullfilled IEC 60034-12 des. N,H	
14	Nominal torque T _N	7.3	Nm		
15	Locked rotor torque T _s /T _N	2.8			
16	Maximum torque T _{max} /T _N	3.4			
17	Minimum torque T _{min} /T _N	2.8			
18	Speed at minimum torque	480	r/min		
Load characteristics (IEC 60034-2-1:2007)		Load %	Current A	Efficiency %	Power factor
19	PLL determined from residual loss	100	4.3	85.0 / IE2	0.83
20		75	3.4	85.5	0.78
21		50	2.6	84.5	0.69
22		Start	31		0.65
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	0.0027	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.				
43					
44					
45					
Ex-motors					
46					
47					
48					
Option Variant Codes / Definition					
49					
50					
51					
52					
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54					
55					
Remarks:					
Data based on situation 13/11/2010					
All data subject to tolerances in accordance with IEC					
Guaranteed values on request					


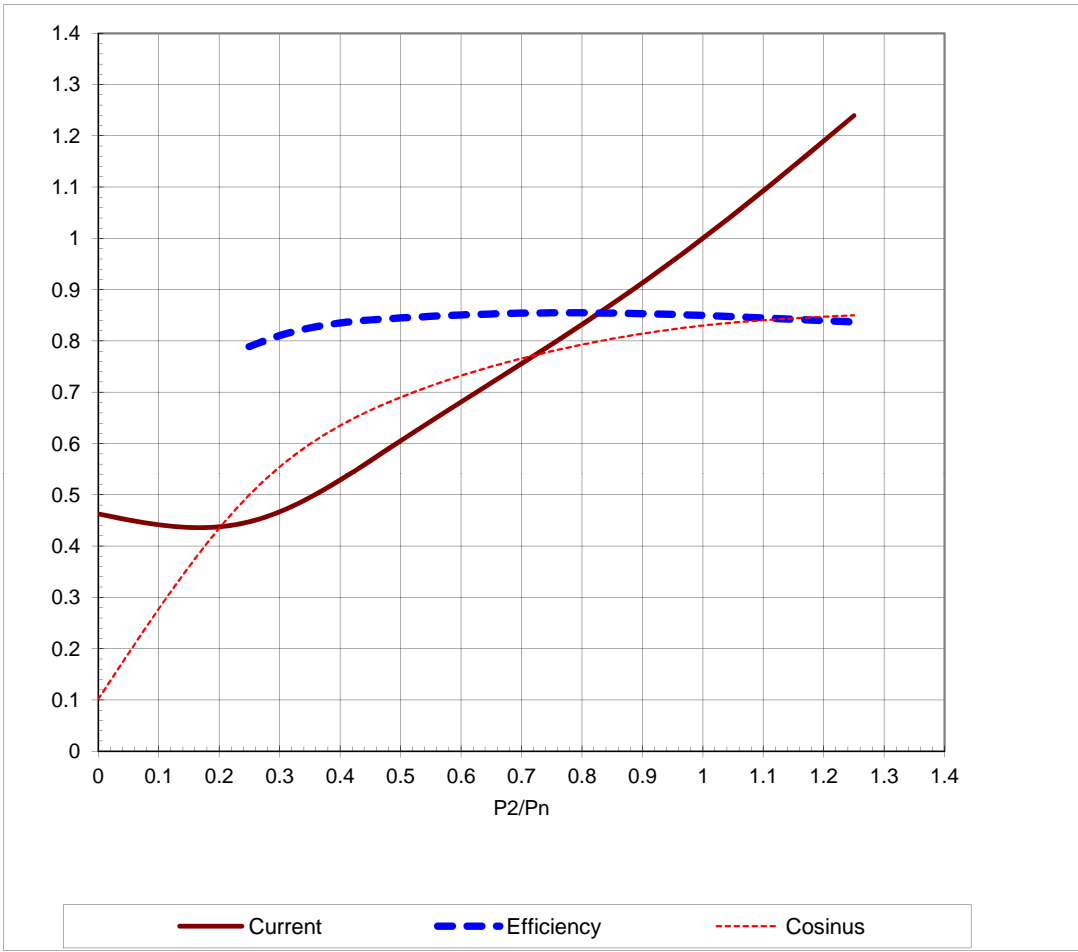


ABB Motors and Generators	Load Curves		
	Project	Location	
Department/Author	Customer name	Customer ref.	Item name 1.00001
Our ref.	Rev/Changed by A	Date of issue 11/04/2011	Saving ident untitled.xls
Pages 2(3)			
Product	TEFC, 3-phase, squirrel cage induction motor		
Type/Frame	M3AA 90 LB 2		
Product code	3GAA 091 313-ASE		
Rated output P _N	2.2	kW	
Type of duty	S1(IEC) 100%		
Voltage (V)	415	Current I _N (A)	4.3
Frequency (Hz)	50	Speed (r/min)	2890
		Power factor at P _N	0.83
		Efficiency (%) at P _N	85
			
<p>Load characteristics (IEC 60034-2-1:2007) Data based on situation 13/11/2010 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 t	Date of issue	Saving ident	Pages	
	A	11/04/2011	untitled.xls	3(3)	
Type of product	TEFC, 3-phase, squirrel cage induction motor				
Type/Frame	M3AA 90 LB 2				
Product code	3GAA 091 313-ASE	Frequency (Hz)	50		
Rated output P _N	2.2 kW	Rated current I _N	4.3	A	
Type of duty	S1(IEC) 100%				
J _{motor} (kgm2)	0.0027	Voltage (V) 100%	415	Voltage (V)	415V(100%)
J _{load} (kgm2)		T _{start} /T _N	2.8	T _{start} /T _N	2.8
Speed (r/min)	2890	Starting time (s)		Run-up time (s)	
T _N (Nm)	7.3	Speed (r/min)		Speed (r/min)	
T _{load} (Nm)		I _s /I _n	7.2	I _s /I _n	7.2
Nbr. of consecutive starts		T _{max} /T _n	3.4	T _{max} /T _n	3.4

The graph plots torque ratio (Ts/Tn) on the left y-axis (0 to 4.5) and current ratio (Is/In) on the right y-axis (0 to 9) against speed in r/min on the x-axis (0 to 3250). The solid blue line (TMotorUn 415V) shows a torque curve peaking at approximately 3.4 around 2000 r/min. The solid red line (TMotorU2 415V(100%)) shows a torque curve peaking at approximately 3.4 around 2000 r/min. The dashed purple line (IMotorUn 415V) shows a current curve starting at 7.2 at 0 r/min and decreasing to 1.0 at 3000 r/min. The dashed green line (IMotorU2 415V(100%)) shows a current curve starting at 7.2 at 0 r/min and decreasing to 1.0 at 3000 r/min.

Load characteristics (IEC 60034-2-1:2007)
Data based on situation 13/11/2010
All data subject to tolerances in accordance with IEC

ABB Motors and Generators		Technical Data Sheet - DOL				
Department/Author		Project	Location		Item name	
Our ref.		Rev/Changed by	Date of issue	Saving ident	Pages	
		A	11/04/2011	untitled.xls	1.00002 1(3)	
No.	Definition	Data	Unit	Remarks		
1	Product	TEFC, 3-phase, squirrel cage induction motor				
2	Product code	3GAA 091 313-BSE				
3	Type/Frame	M3AA 90 LB 2				
4	Mounting	IM3001, B5(flange)				
5	Rated output P _N	2.2	kW			
6	Service factor	1				
7	Type of duty	S1(IEC) 100%				
8	Rated voltage U _N	415	VY	± 5 % (IEC 60034-1)		
9	Rated frequency f _N	50	Hz	± 2 % (IEC 60034-1)		
10	Rated speed n _N	2890	r/min			
11	Rated current I _N	4.3	A			
12	No-load current	2	A			
13	Starting current I _s /I _N	7.2		Fulfilled IEC 60034-12 des. N,H		
14	Nominal torque T _N	7.3	Nm			
15	Locked rotor torque T _s /T _N	2.8				
16	Maximum torque T _{max} /T _N	3.4				
17	Minimum torque T _{min} /T _N	2.8				
18	Speed at minimum torque	480	r/min			
Load characteristics (IEC 60034-2-1:2007)		Load %	Current A	Efficiency %	Power factor	
19	PLL determined from residual loss	100	4.3	85.0 / IE2	0.83	
20		75	3.4	85.5	0.78	
21		50	2.6	84.5	0.69	
22		<i>Start</i>	31		0.65	
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	0.0027	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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Remarks:						
Data based on situation 13/11/2010						
All data subject to tolerances in accordance with IEC						
Guaranteed values on request						

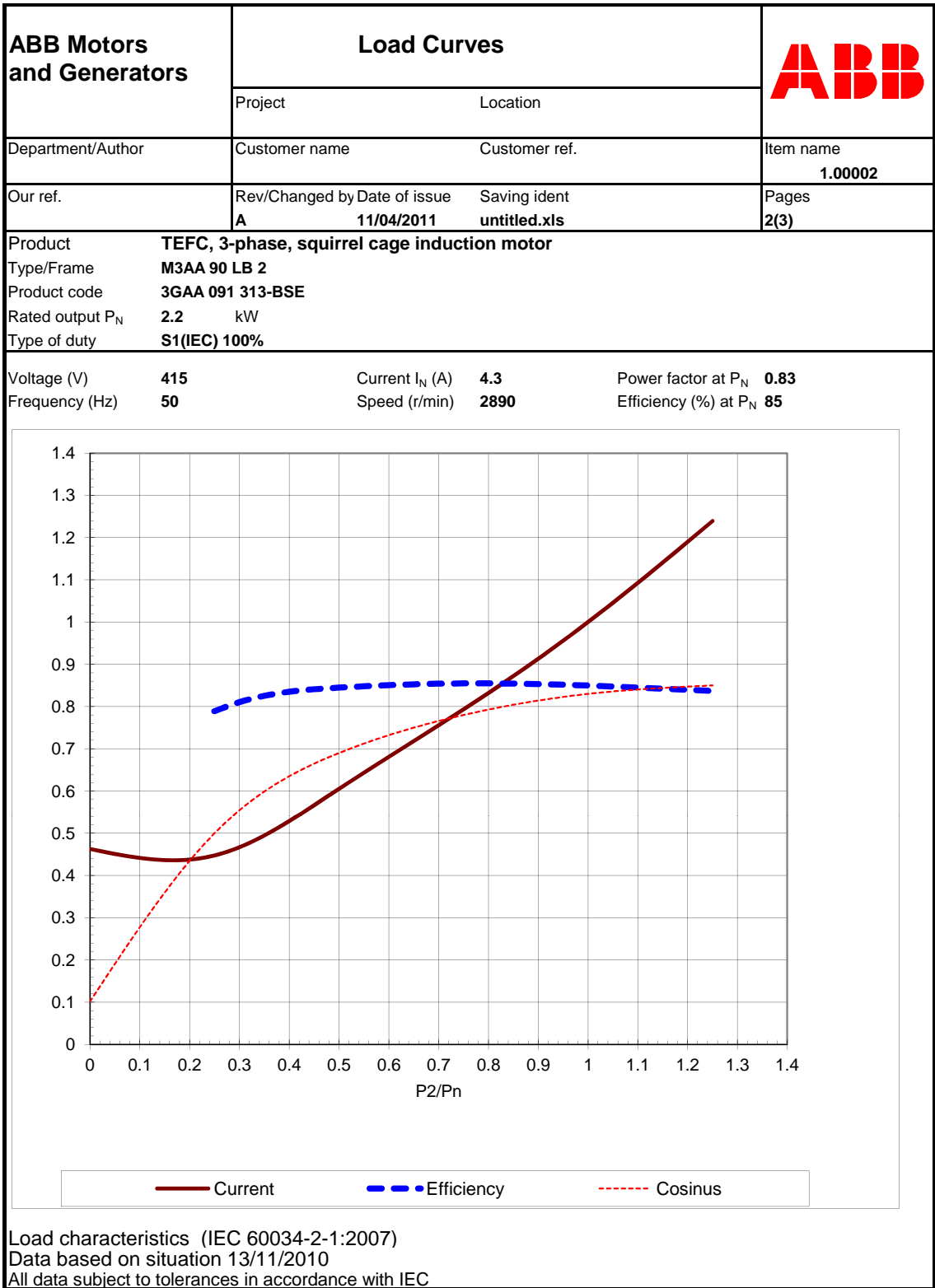

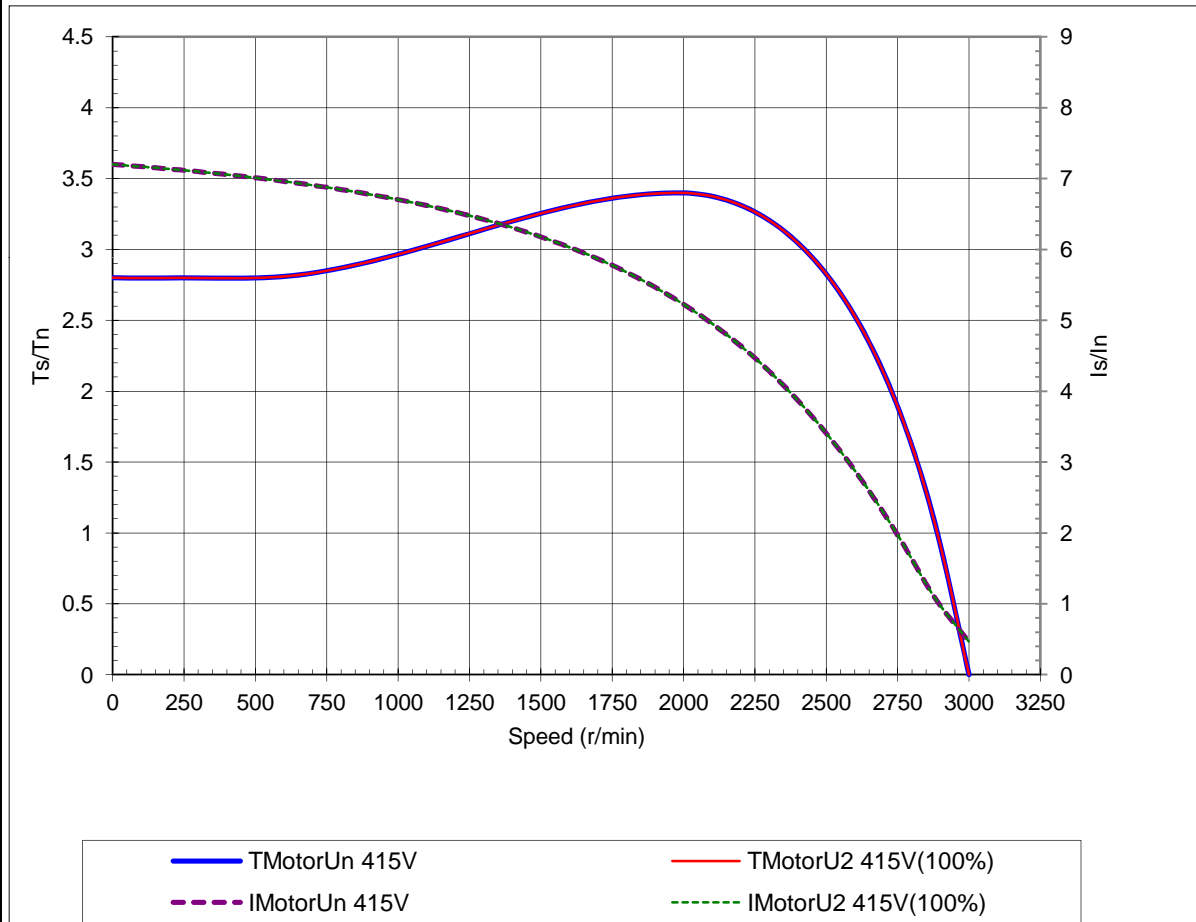


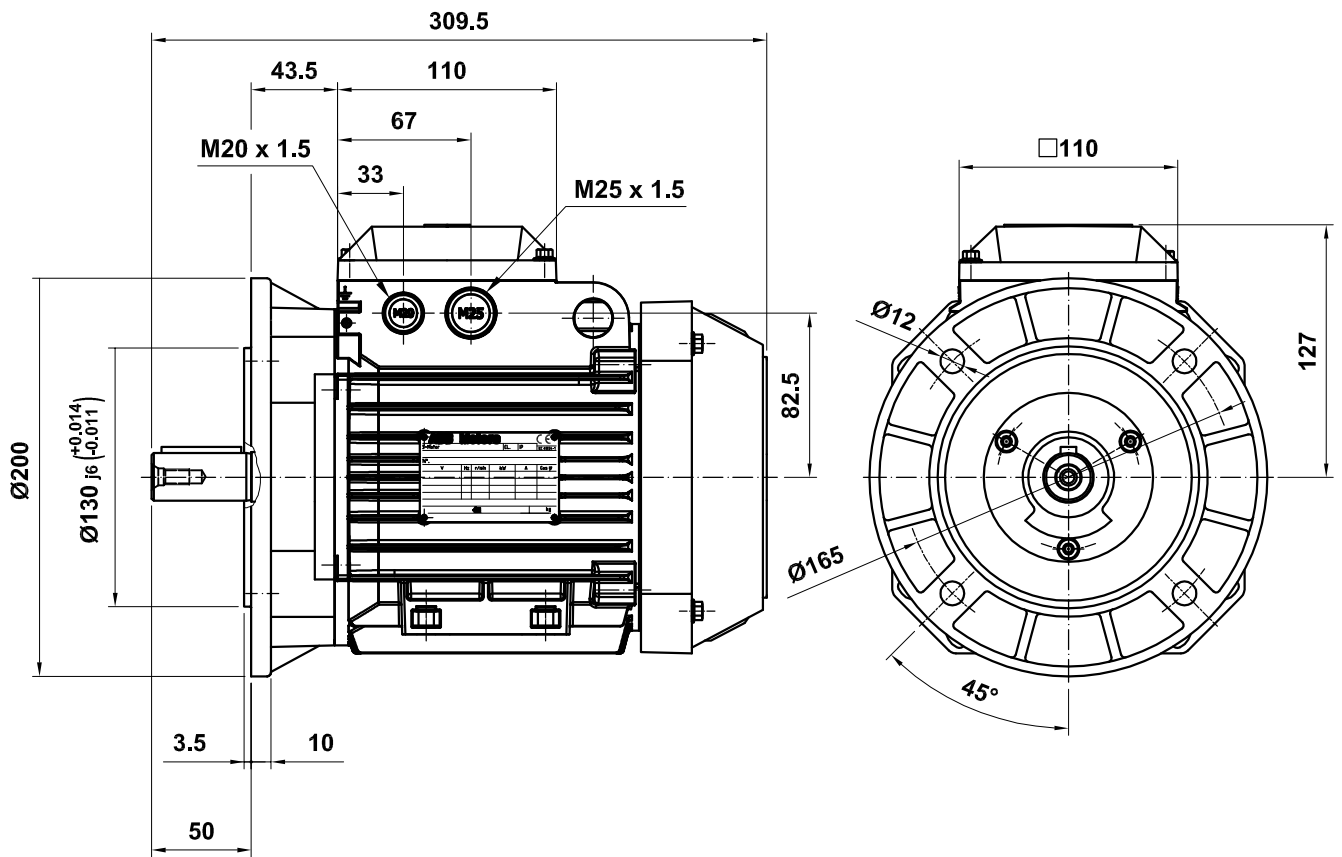
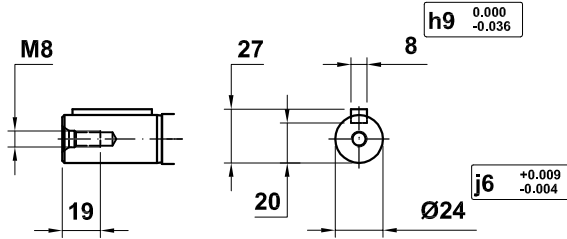
ABB Motors and Generators	Starting Curves		
	Project	Location	
Department/Author	Customer name	Customer ref.	Item name 1.00002
Our ref.	Rev/Changed b Date of issue A 11/04/2011	Saving ident untitled.xls	Pages 3(3)

Type of product	TEFC, 3-phase, squirrel cage induction motor		
Type/Frame	M3AA 90 LB 2		
Product code	3GAA 091 313-BSE	Frequency (Hz)	50
Rated output P _N	2.2 kW	Rated current I _N	4.3 A
Type of duty	S1(IEC) 100%		

J _{motor} (kgm ²)	0.0027	Voltage (V) 100%	415	Voltage (V)	415V(100%)
J _{load} (kgm ²)		T _{start} /T _N	2.8	T _{start} /T _N	2.8
Speed (r/min)	2890	Starting time (s)		Run-up time (s)	
T _N (Nm)	7.3	Speed (r/min)		Speed (r/min)	
T _{load} (Nm)		I _s /I _n	7.2	I _s /I _n	7.2
Nbr. of consecutive starts		T _{max} /T _n	3.4	T _{max} /T _n	3.4



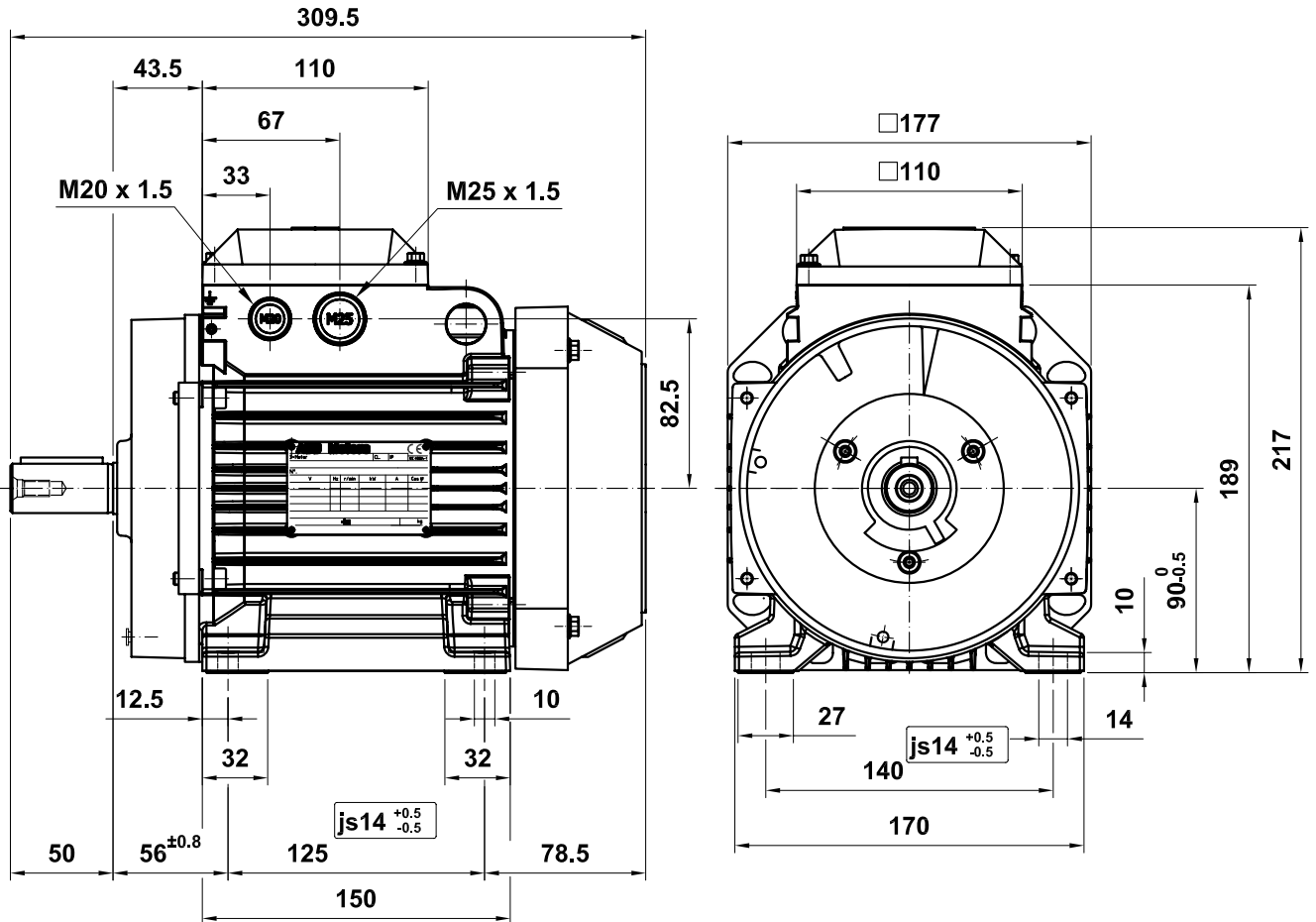
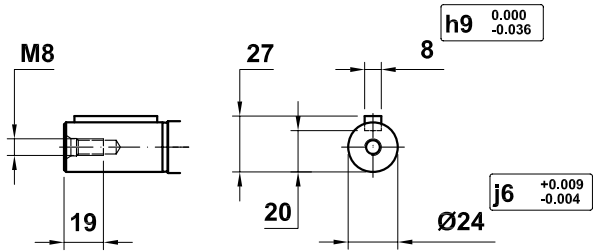
Load characteristics (IEC 60034-2-1:2007)
 Data based on situation 13/11/2010
 All data subject to tolerances in accordance with IEC



M2(3)AA 090L

(*) Except 090 LD

Motor Dimension Print		Motor Type : M2(3)AA 090 L (*)	Document N° : A1.4878
Description : Motor flange mounted IM3001 / Motor con brida IM3001			
Unit : Automation Products - Fábrica Motores	Issued by : EMD/ G.Gállego	Replaces :	
Date : 2008-02-19	Approved by : EMD/ G.Blanes	Replaced by :	
Asea Brown Boveri, S.A.	Customer Reference :		ABB



M2(3)AA 090L

(*) Except 090 LD

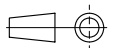
Motor Dimension Print

Motor Type :
M2(3)AA 090 L (*)

Document N° :
A1.4877 / 3D A2.4285

Description :

Motor foot mounted IM1001 / Motor con patas IM1001



Unit : Discrete Automation & Motion - Fábrica Motores
Date : 2011-03-10

Issued by : EMD/ G.Gállego
Approved by : EMD/ G.Blanes

Replaces : To date 2008-02-19
Replaced by :

Asea Brown Boveri, S.A.

Customer Reference :

ABB