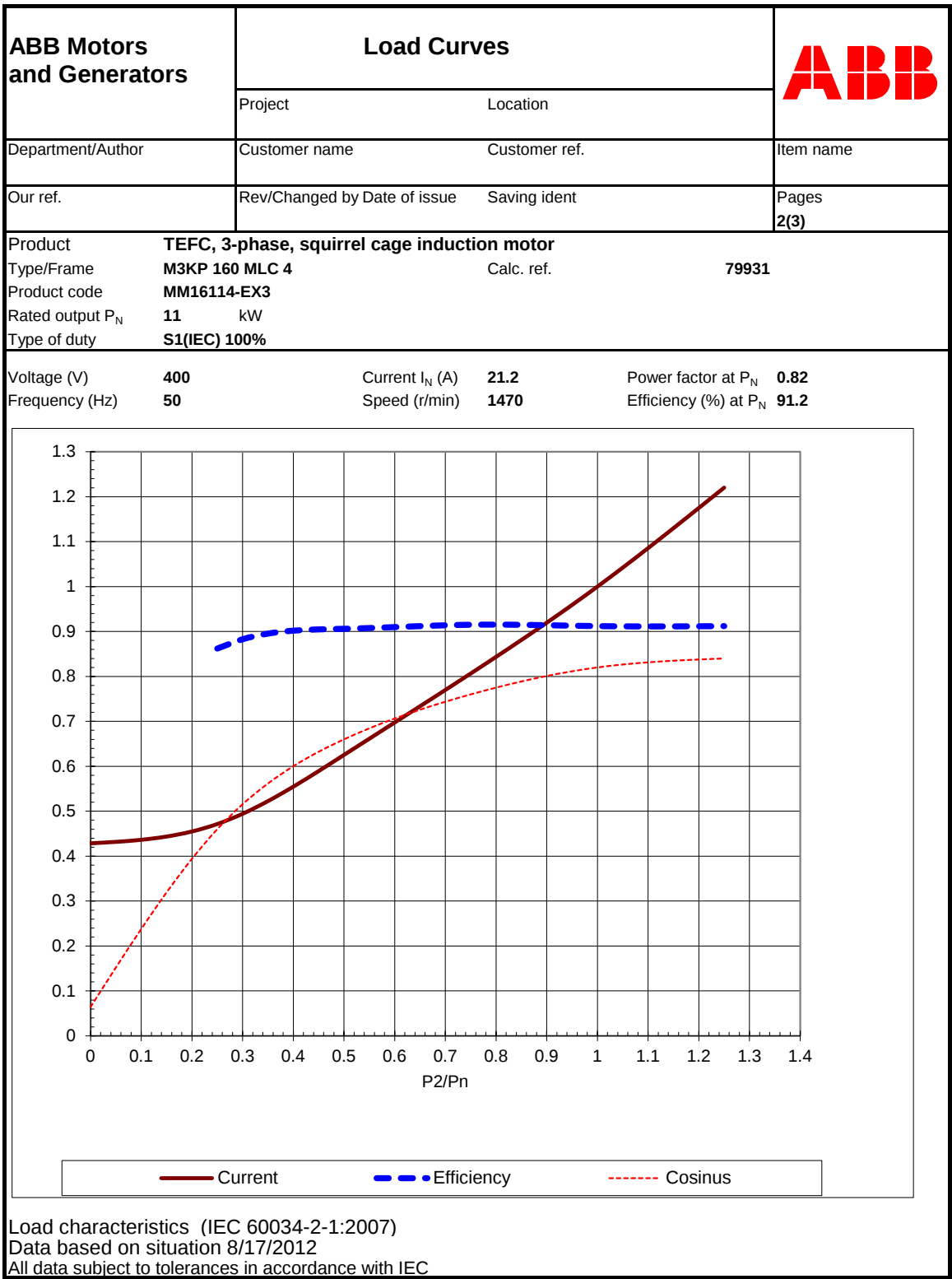


ABB Motors and Generators		Technical Data Sheet - DOL			
		Project		Location	
Department/Author		Customer name		Customer ref.	Item name
Our ref.		Rev/Changed by	Date of issue	Saving ident	Pages 1(3)

No.	Definition	Data	Unit	Remarks
1	Product	TEFC, 3-phase, squirrel cage induction motor		
2	Product code	MM16114-EX3 (3GKP162430-ADH+332+461)		
3	Type/Frame	M3KP 160 MLC 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	1470	r/min	
11	Rated current I _N	21.2	A	
12	No-load current	9.1	A	
13	Starting current I _s /I _N	7.8		Fullfilled IEC 60034-12 design N,H
14	Nominal torque T _N	71	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	195	r/min	
19	Load characteristics (IEC 60034-2-1:2007)	Load %	Current A	Efficiency % Power factor
20	PLL determined from residual loss	100	21.2	91.2 / IE2 0.82
21		75	17.1	91.5 0.76
22		50	13.2	90.6 0.66
23		Start	165	0.55
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	6309/C3 - 6309/C3		
32	Type of Grease	Lithium based		
33	Sound pressure level (LP dB(A) 1m)	62	dB(A)	at load
34	Moment of inertia J = ¼ GD2	0.096	kg-m2	
35	Balancing	Half Key		
36	Vibration class	Grade A		
37	Position of terminal box	Top		
38	Terminal box entries; no, dims.	2xM40x1.5 + 2xM20x1.5		
39	Number of power terminals	6		
40	Direction of rotation	CW or CCW		
41	Weight of rotor	37	kg	
42	Total weight of motor	226	kg	
43				
Ex-motors				
44	Type of protection	*Ex de IICT4		
45				
Variant Codes / Definition				
	332 = Baldor catalog number			
	461 = Exde design, group IIC			
Remarks:				
Data based on situation 8/17/2012				
All data subject to tolerances in accordance with IEC				
Guaranteed values on request				
* For more information on the Atex/IECEx rating, please contact your local Baldor representative.				



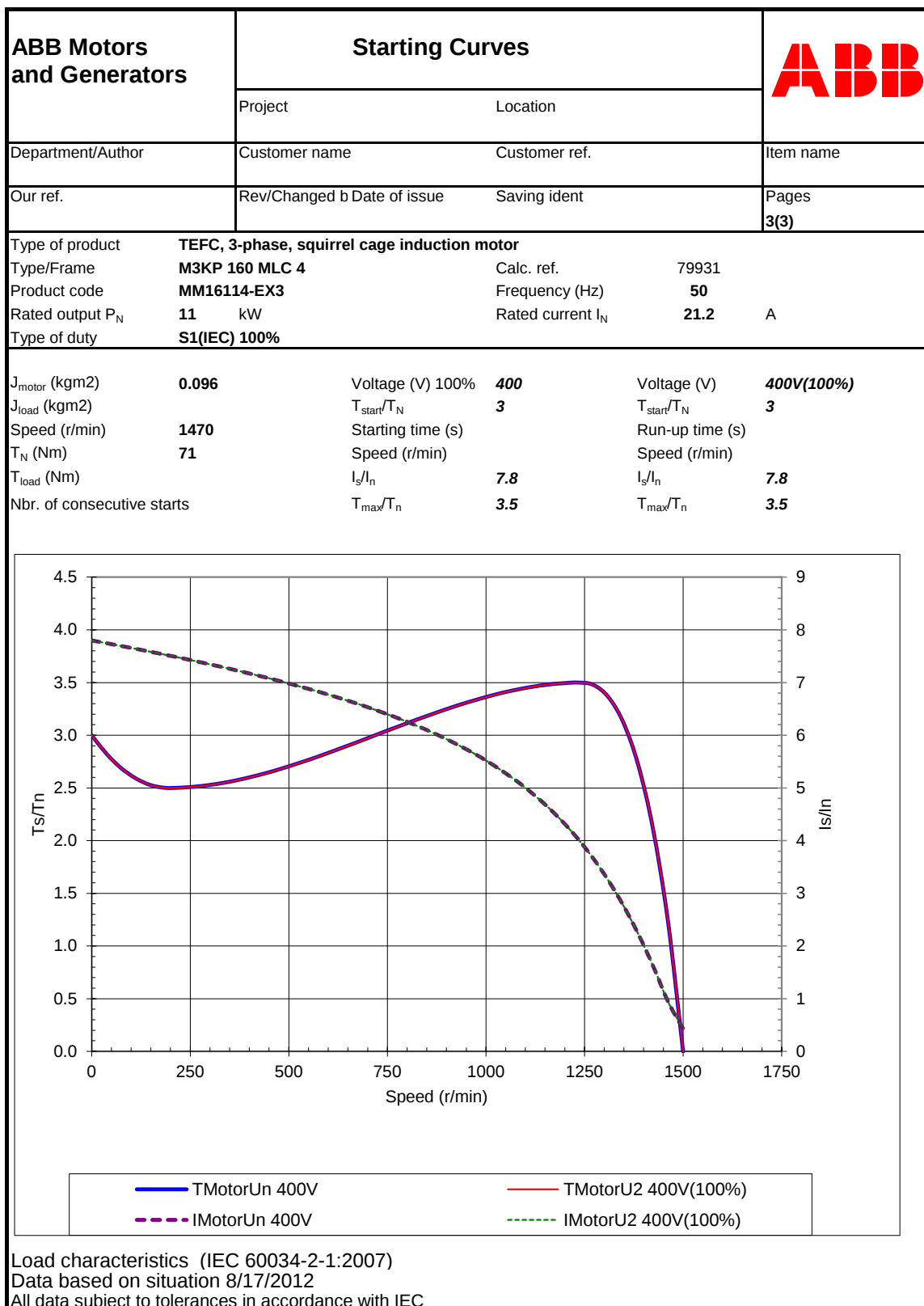
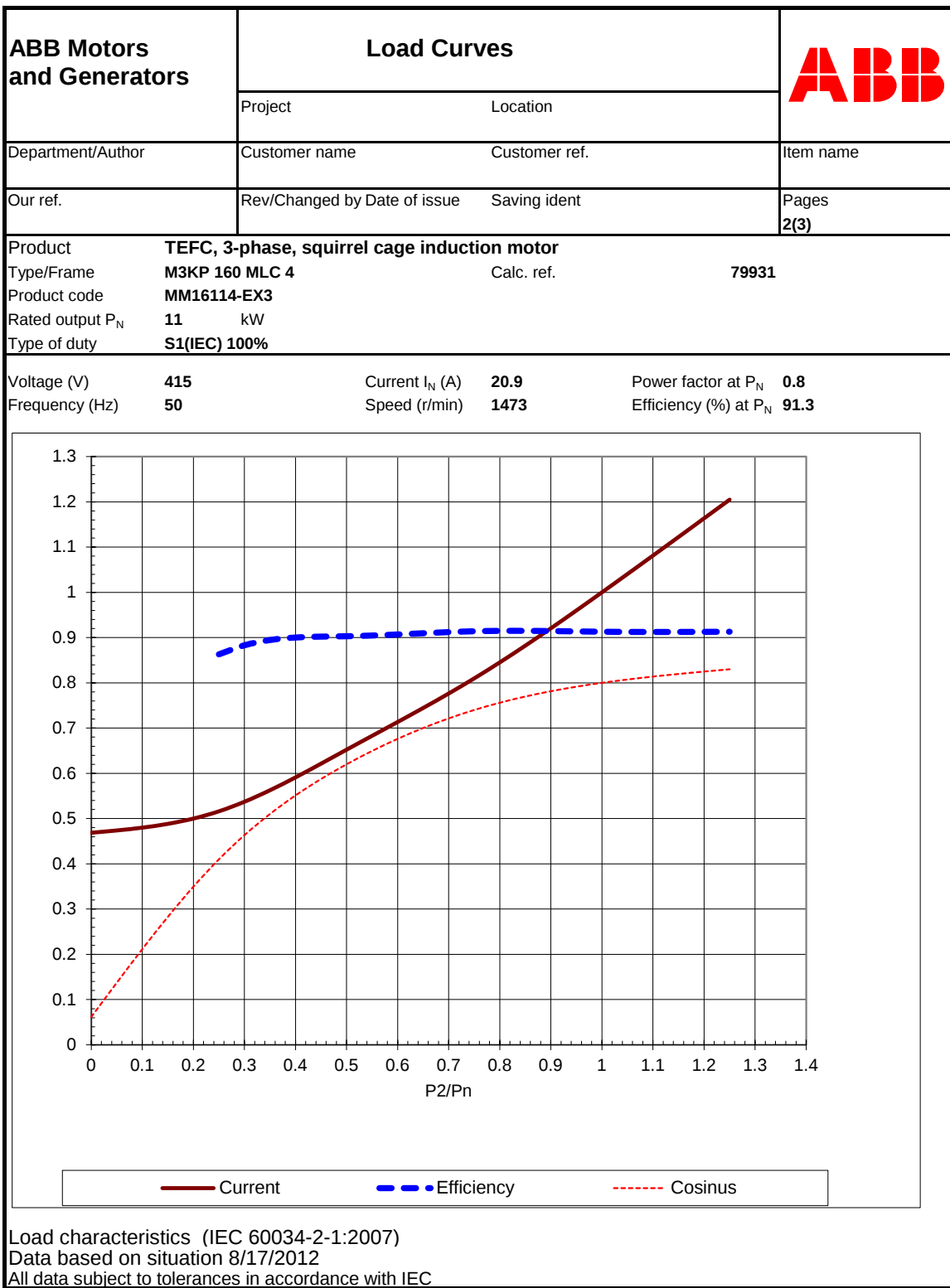


ABB Motors and Generators		Technical Data Sheet - DOL			
		Project		Location	
Department/Author		Customer name		Customer ref.	Item name
Our ref.		Rev/Changed by	Date of issue	Saving ident	Pages 1(3)

No.	Definition	Data	Unit	Remarks	
1	Product	TEFC, 3-phase, squirrel cage induction motor			
2	Product code	MM16114-EX3 (3GKP162430-ADH+332+461)			
3	Type/Frame	M3KP 160 MLC 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	415	VD	± 5 % (IEC 60034-1)	
9	Rated frequency f _N	50	Hz	± 2 % (IEC 60034-1)	
10	Rated speed n _N	1473	r/min		
11	Rated current I _N	20.9	A		
12	No-load current	9.8	A		
13	Starting current I _s /I _N	8.3		Fullfilled IEC 60034-12 design N,H	
14	Nominal torque T _N	71	Nm		
15	Locked rotor torque T _s /T _N	3.3			
16	Maximum torque T _{max} /T _N	3.8			
17	Minimum torque T _{min} /T _N	2.7			
18	Speed at minimum torque	195	r/min		
19	Load characteristics (IEC 60034-2-1:2007)	Load %	Current A	Efficiency %	Power factor
20	PLL determined from residual loss	100	20.9	91.3 / IE2	0.8
21		75	16.9	91.4	0.74
22		50	13.6	90.3	0.62
23		Start	173		0.56
24	Maximum starting time from hot	15	s		
25	Maximum starting time from cold	30	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	6309/C3 - 6309/C3			
32	Type of Grease	Lithium based			
33	Sound pressure level (LP dB(A) 1m)	62	dB(A)	at load	
34	Moment of inertia J = ¼ GD2	0.096	kg-m2		
35	Balancing	Half Key			
36	Vibration class	Grade A			
37	Position of terminal box	Top			
38	Terminal box entries; no, dims.	2xM40x1.5 + 2xM20x1.5			
39	Number of power terminals	6			
40	Direction of rotation	CW or CCW			
41	Weight of rotor	37	kg		
42	Total weight of motor	226	kg		
43					
Ex-motors					
44	Type of protection	*Ex de IICT4			
45					
Variant Codes / Definition					
	332 = Baldor catalog number				
	461 = Exde design, group IIC				
Remarks:					
Data based on situation 8/17/2012					
All data subject to tolerances in accordance with IEC					
Guaranteed values on request					
* For more information on the Atex/IECEx rating, please contact your local Baldor representative.					



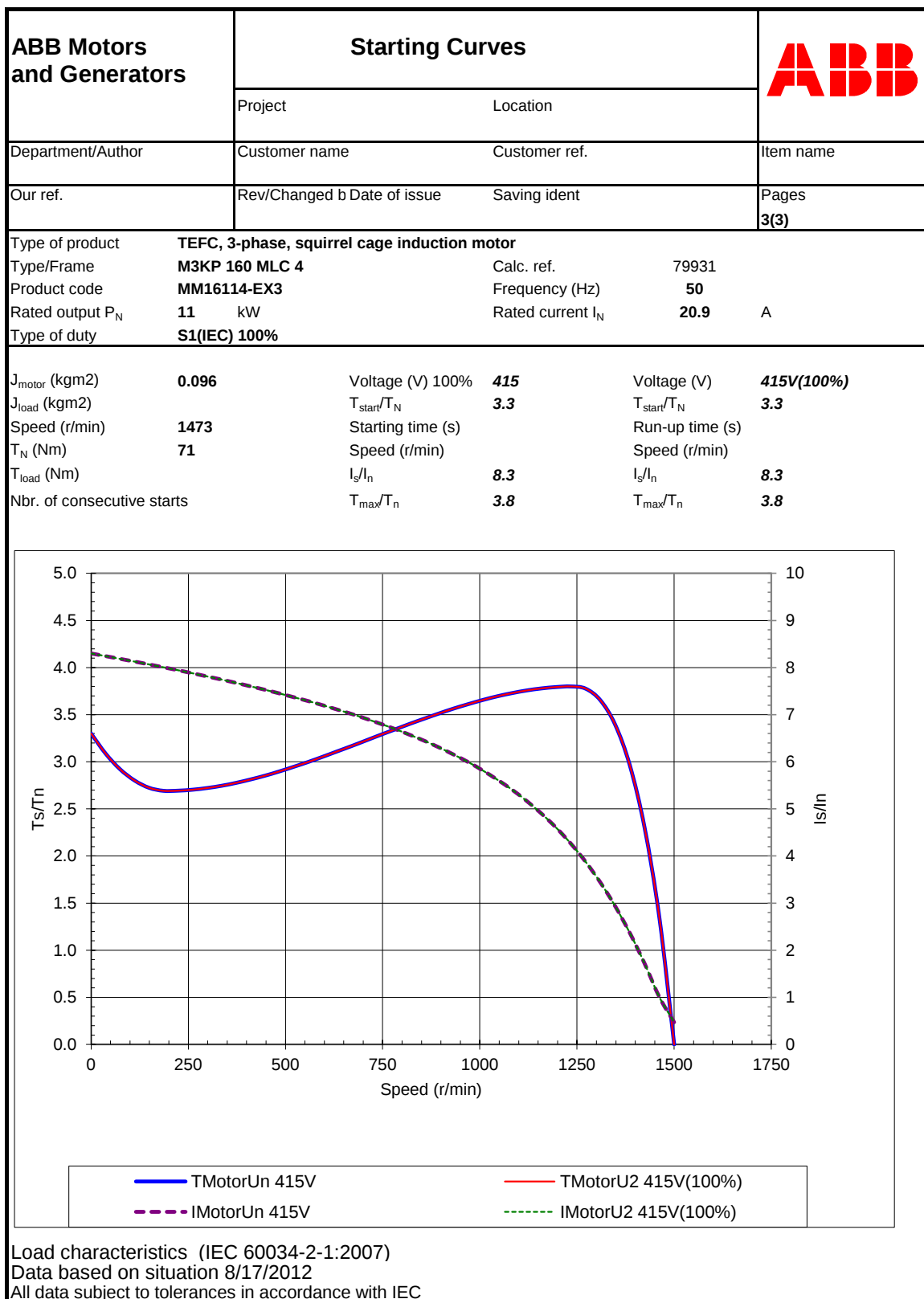


ABB Motors and Generators		Technical Data Sheet - DOL			
		Project		Location	
Department/Author		Customer name		Customer ref.	Item name
Our ref.		Rev/Changed by	Date of issue	Saving ident	Pages 1(3)

No.	Definition	Data	Unit	Remarks
1	Product	TEFC, 3-phase, squirrel cage induction motor		
2	Product code	MM16114-EX3 (3GKP162430-ADH+332+461)		
3	Type/Frame	M3KP 160 MLC 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	690	VY	± 5 % (IEC 60034-1)
9	Rated frequency f _N	50	Hz	± 2 % (IEC 60034-1)
10	Rated speed n _N	1470	r/min	
11	Rated current I _N	12.3	A	
12	No-load current	5.3	A	
13	Starting current I _s /I _N	7.8		Fullfilled IEC 60034-12 design N,H
14	Nominal torque T _N	71	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	195	r/min	
19	Load characteristics (IEC 60034-2-1:2007)	Load %	Current A	Efficiency % Power factor
20	PLL determined from residual loss	100	12.3	91.2 / IE2 0.82
21		75	9.9	91.5 0.76
22		50	7.6	90.6 0.66
23		Start	96	0.55
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	6309/C3 - 6309/C3		
32	Type of Grease	Lithium based		
33	Sound pressure level (LP dB(A) 1m)	62	dB(A)	at load
34	Moment of inertia J = ¼ GD2	0.096	kg-m2	
35	Balancing	Half Key		
36	Vibration class	Grade A		
37	Position of terminal box	Top		
38	Terminal box entries; no, dims.	2xM40x1.5 + 2xM20x1.5		
39	Number of power terminals	6		
40	Direction of rotation	CW or CCW		
41	Weight of rotor	37	kg	
42	Total weight of motor	226	kg	
43				
Ex-motors				
44	Type of protection	*Ex de IICT4		
45				
Variant Codes / Definition				
	332 = Baldor catalog number			
	461 = Exde design, group IIC			
Remarks:				
Data based on situation 8/17/2012				
All data subject to tolerances in accordance with IEC				
Guaranteed values on request				
* For more information on the Atex/IECEx rating, please contact your local Baldor representative.				

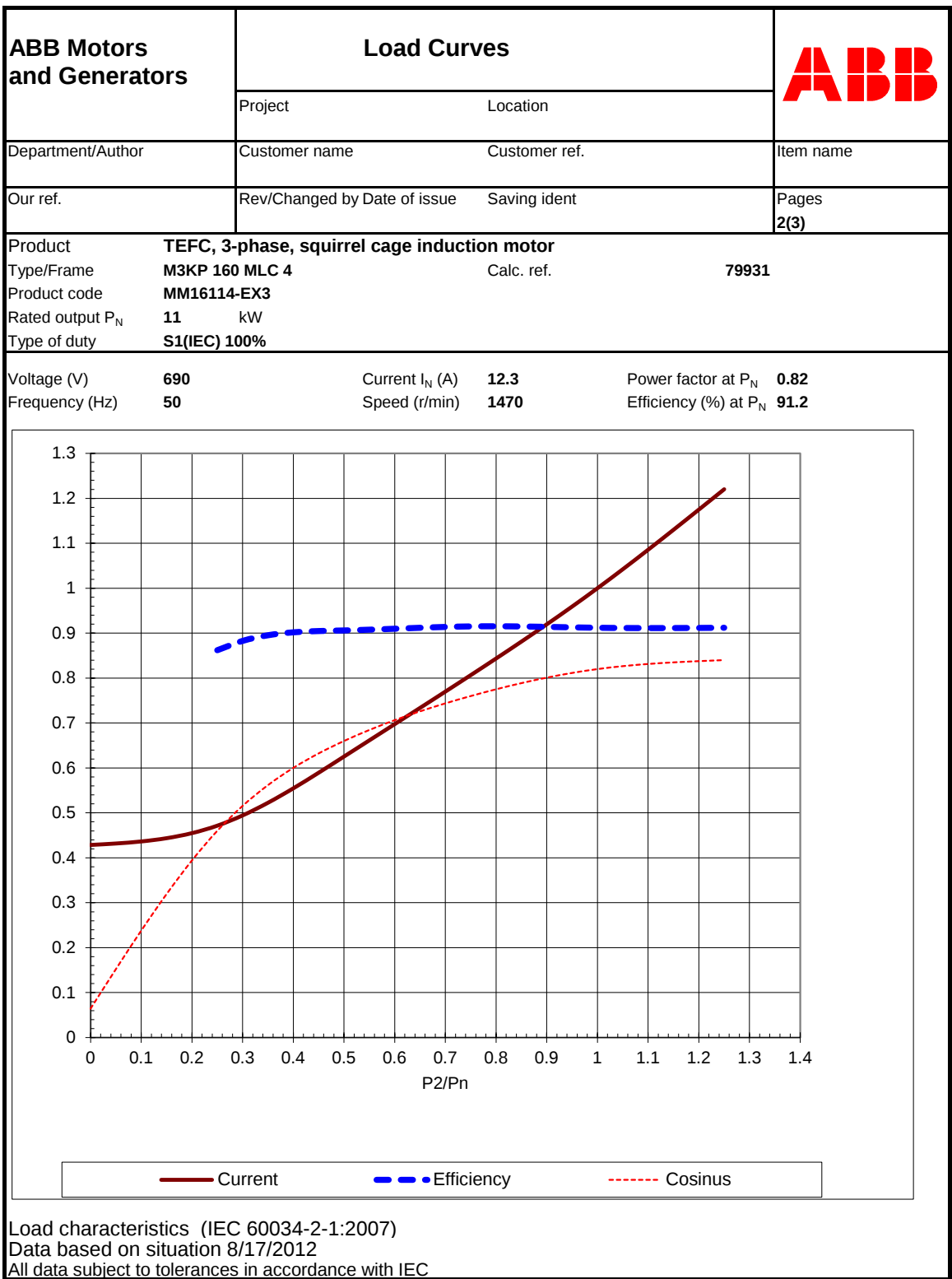
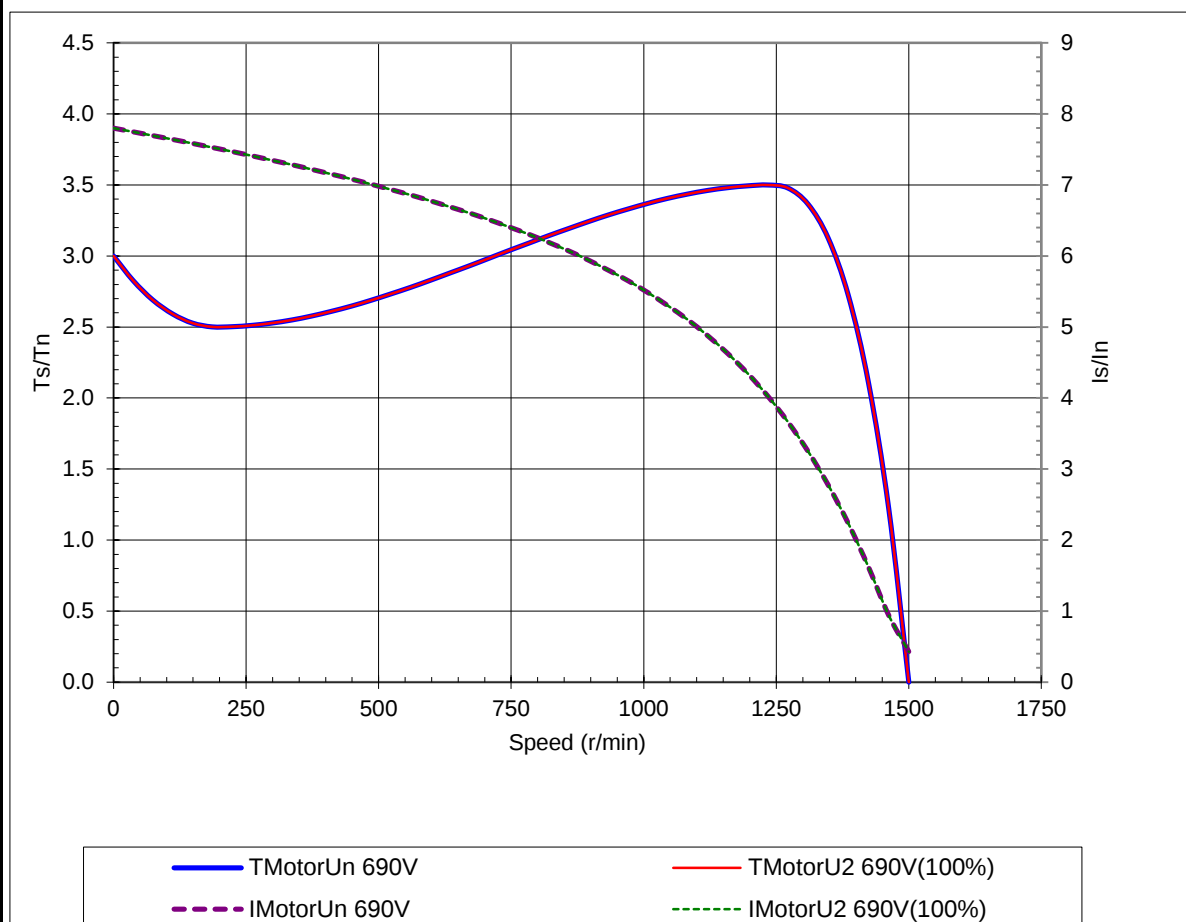


ABB Motors and Generators	Starting Curves		ABB
	Project	Location	
Department/Author	Customer name	Customer ref.	Item name
Our ref.	Rev/Changed b	Date of issue	Saving ident
			Pages 3(3)

Type of product	TEFC, 3-phase, squirrel cage induction motor		
Type/Frame	M3KP 160 MLC 4	Calc. ref.	79931
Product code	MM16114-EX3	Frequency (Hz)	50
Rated output P_N	11 kW	Rated current I_N	12.3 A
Type of duty	S1(IEC) 100%		

J_{motor} (kgm ²)	0.096	Voltage (V) 100%	690	Voltage (V)	690V(100%)
J_{load} (kgm ²)		T_{start}/T_N	3	T_{start}/T_N	3
Speed (r/min)	1470	Starting time (s)		Run-up time (s)	
T_N (Nm)	71	Speed (r/min)		Speed (r/min)	
T_{load} (Nm)		I_s/I_n	7.8	I_s/I_n	7.8
Nbr. of consecutive starts		T_{max}/T_n	3.5	T_{max}/T_n	3.5



Load characteristics (IEC 60034-2-1:2007)
Data based on situation 8/17/2012
All data subject to tolerances in accordance with IEC