

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 1(3)	

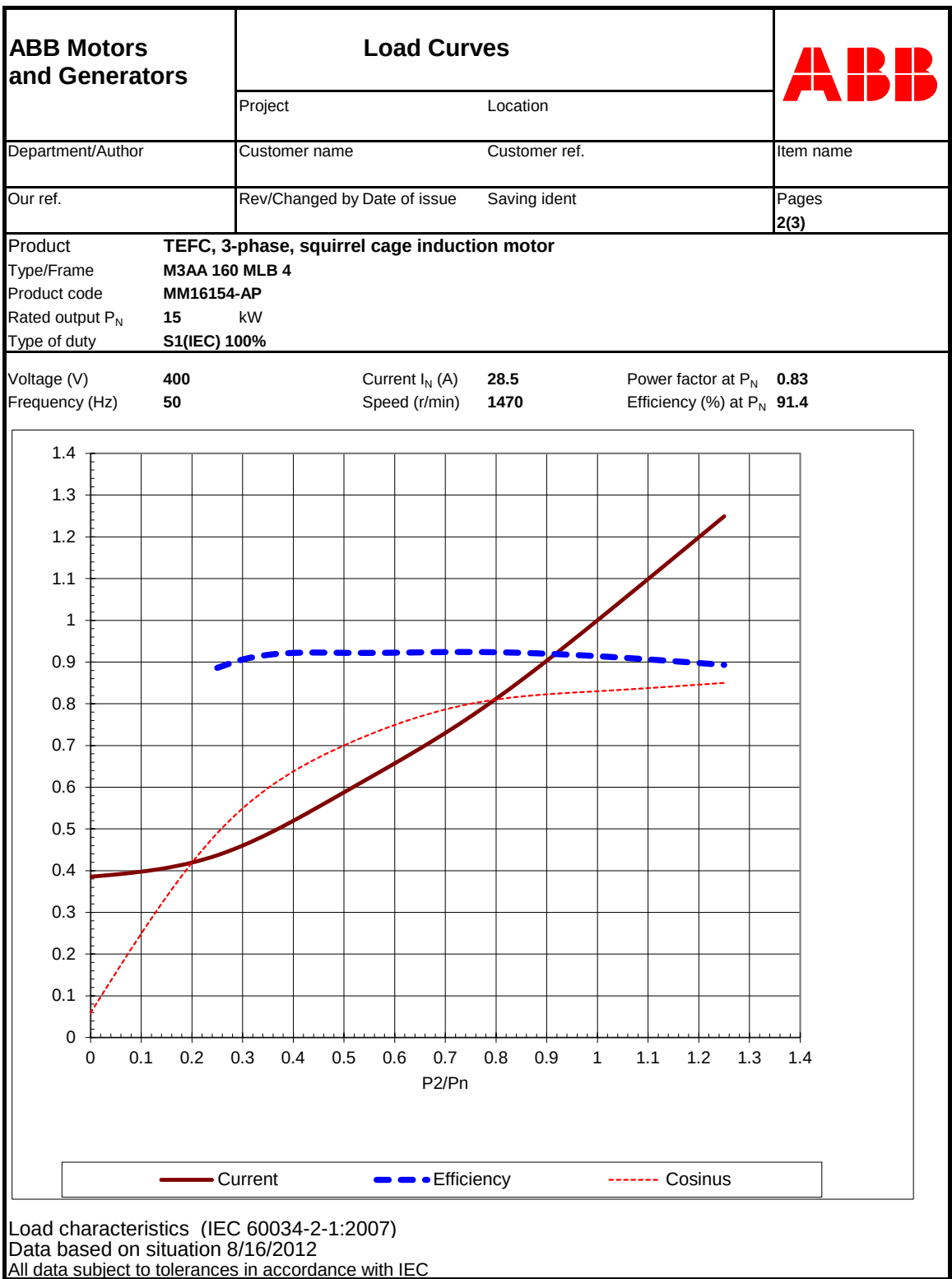
No.	Definition	Data	Unit	Remarks
1	Product	TEFC, 3-phase, squirrel cage induction motor		
2	Product code	MM16154-AP (3GAA162032-ADG+332+333)		
3	Type/Frame	M3AA 160 MLB 4		
4	Mounting	IM1001, B3(foot)		
5	Rated output P _N	15	kW	
6	Service factor	1		
7	Type of duty	S1(IEC) 100%		
8	Rated voltage U _N	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	28.5	A	
12	No-load current	11	A	
13	Starting current I _s /I _N	7.1		Fullfilled IEC 60034-12 design N,H
14	Nominal torque T _N	97	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	1.8		
18	Speed at minimum torque	300	r/min	
19	Load characteristics (IEC 60034-2-1:2007)	Load %	Current A	Efficiency %
20	PLL determined from residual loss	100	28.5	91.4 / IE2
21		75	21.9	92.4
22		50	16.7	92.2
23		Start	202	0.46
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	6309-2Z/C3 - 6209-2Z/C3		
32	Type of Grease	Greased for life		
33	Sound pressure level (LP dB(A) 1m)	62	dB(A)	at load
34	Moment of inertia J = ¼ GD2	0.099	kg-m2	
35	Balancing	Half Key		
36	Vibration class	Grade A		
37	Position of terminal box	Top		
38	Terminal box entries; no, dimens.	2xM40 + M16		
39	Number of power terminals	6		
40	Direction of rotation	CW or CCW		
41	Total weight of motor	118	kg	
42				

Variant Codes / Definition

332 = Baldor catalog number
333 = Not for use in the USA

Remarks:

Data based on situation 8/16/2012
 All data subject to tolerances in accordance with IEC
 Guaranteed values on request



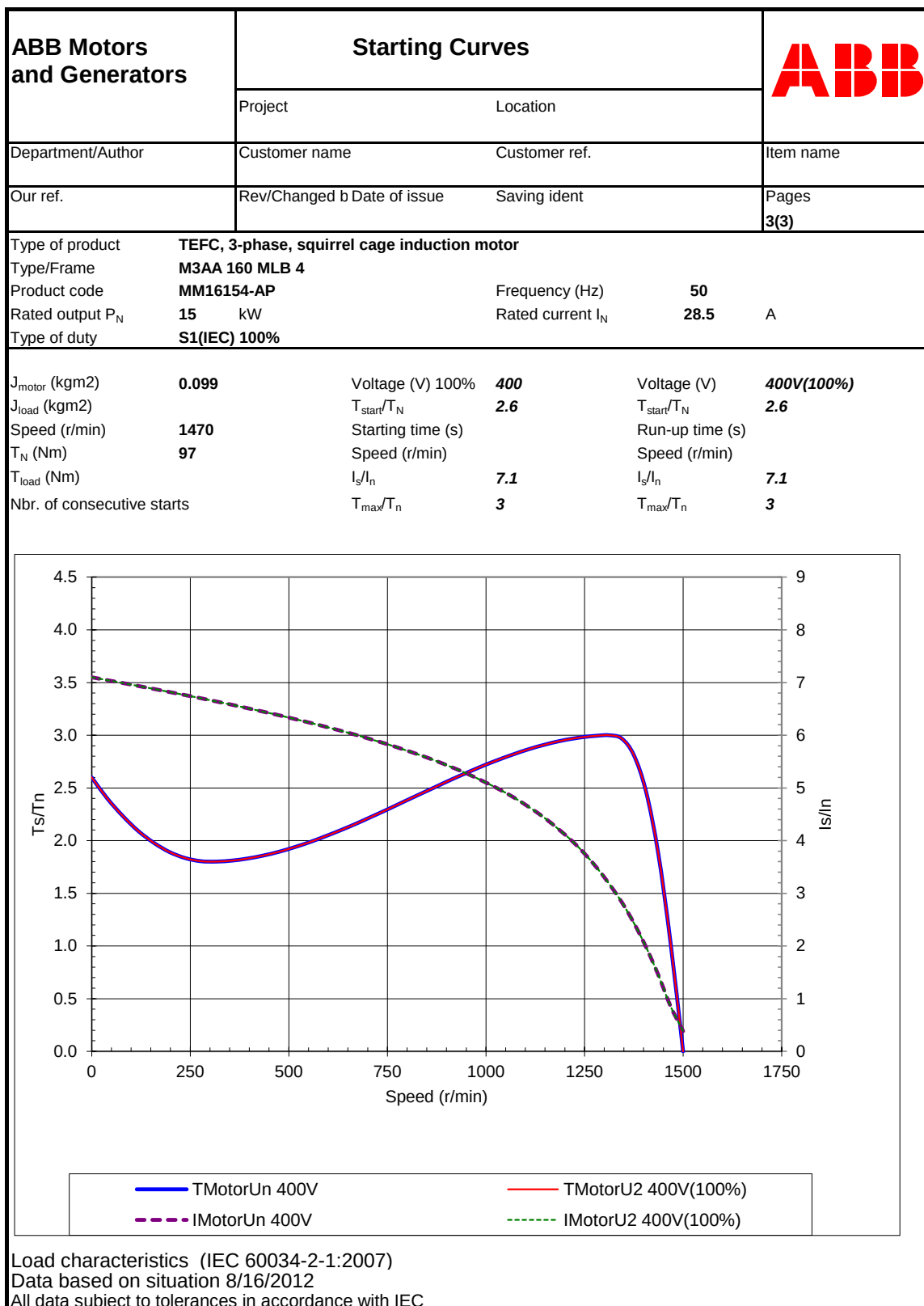


ABB Motors and Generators		Technical Data Sheet - DOL				
		Project		Location		
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Our ref.		Rev/Changed by	Date of issue	Saving ident	Pages 1(3)	

No.	Definition	Data	Unit	Remarks	
1	Product	TEFC, 3-phase, squirrel cage induction motor			
2	Product code	MM16154-AP (3GAA162032-ADG+332+333)			
3	Type/Frame	M3AA 160 MLB 4			
4	Mounting	IM1001, B3(foot)			
5	Rated output P _N	15	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	27.7	A		
12	No-load current	11.9	A		
13	Starting current I _s /I _N	7.5		Fullfilled IEC 60034-12 design N,H	
14	Nominal torque T _N	97	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	1.9			
18	Speed at minimum torque	300	r/min		
19	Load characteristics (IEC 60034-2-1:2007)	Load %	Current A	Efficiency %	Power factor
20	PLL determined from residual loss	100	27.7	91.6 / IE2	0.82
21		75	22	92.3	0.77
22		50	16.9	91.9	0.67
23		Start	208		0.47
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	6309-2Z/C3 - 6209-2Z/C3			
32	Type of Grease	Greased for life			
33	Sound pressure level (LP dB(A) 1m)	62	dB(A)	at load	
34	Moment of inertia J = ¼ GD2	0.099	kg-m2		
35	Balancing	Half Key			
36	Vibration class	Grade A			
37	Position of terminal box	Top			
38	Terminal box entries; no, dimens.	2xM40 + M16			
39	Number of power terminals	6			
40	Direction of rotation	CW or CCW			
41	Total weight of motor	118	kg		
42					

Variant Codes / Definition

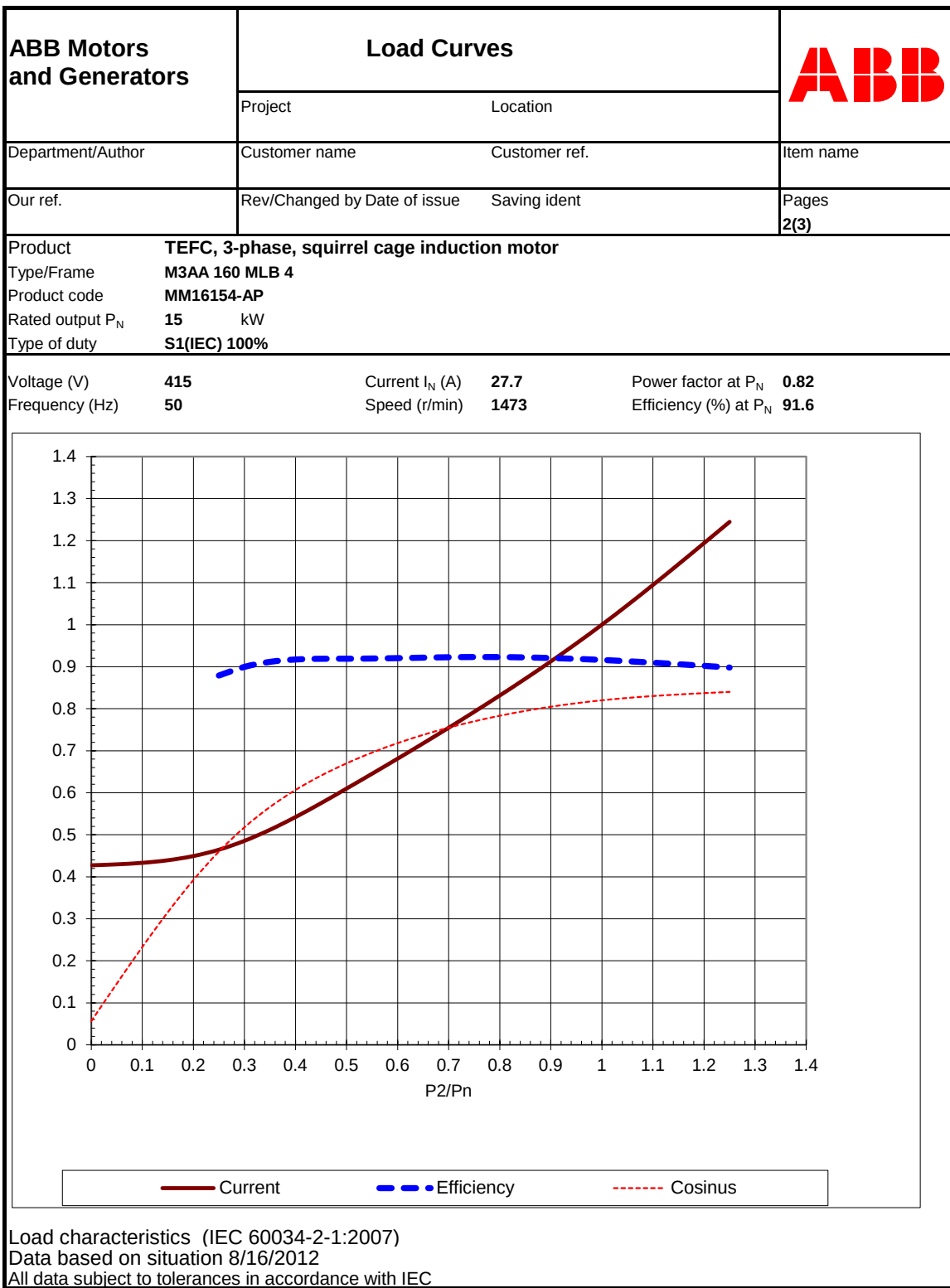
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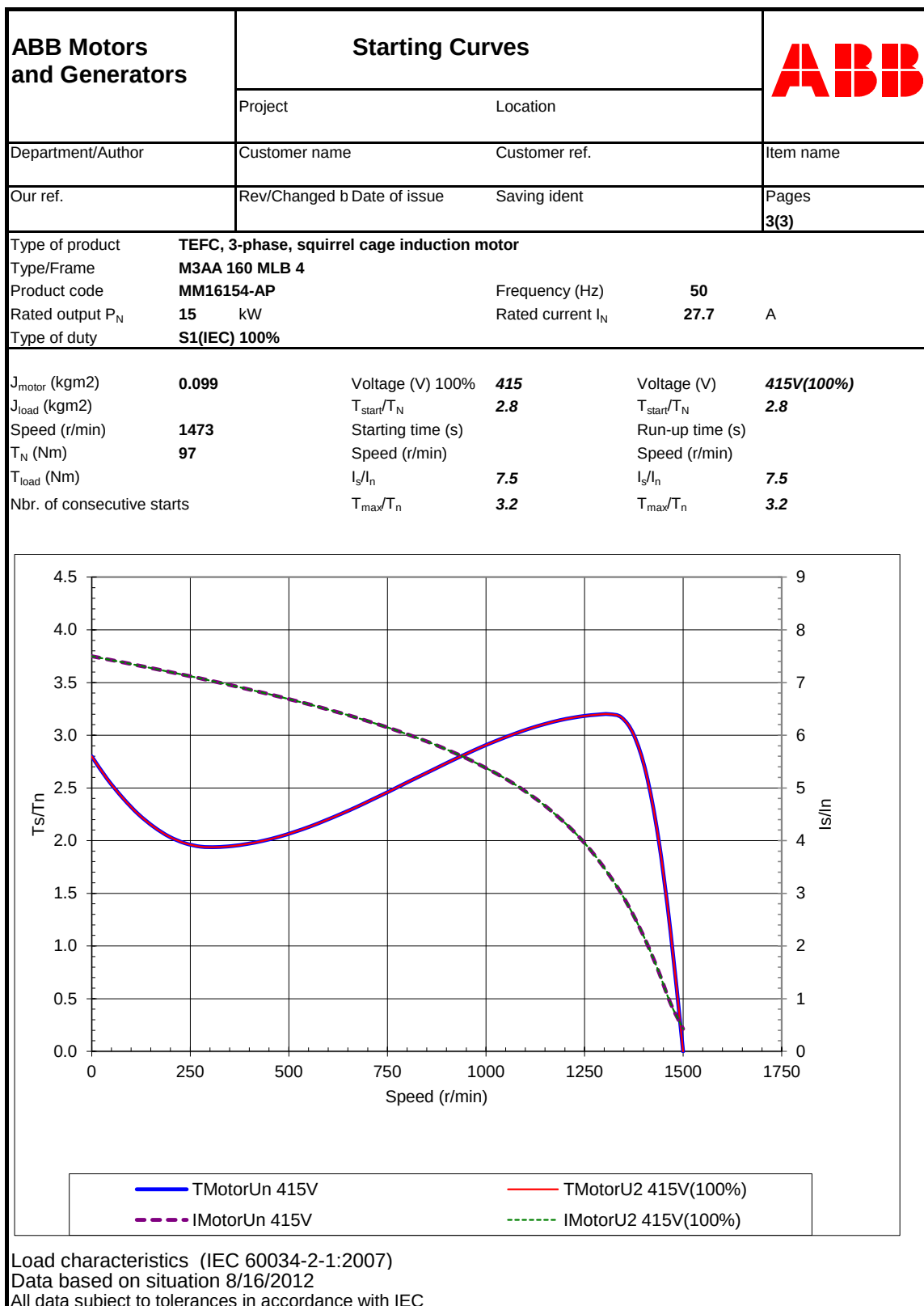


ABB Motors and Generators		Technical Data Sheet - DOL				
		Project		Location		
Department/Author		Customer name		Customer ref.		Item name
Our ref.		Rev/Changed by	Date of issue	Saving ident		Pages 1(3)

No.	Definition	Data	Unit	Remarks	
1	Product	TEFC, 3-phase, squirrel cage induction motor			
2	Product code	MM16154-AP (3GAA162032-ADG+332+333)			
3	Type/Frame	M3AA 160 MLB 4			
4	Mounting	IM1001, B3(foot)			
5	Rated output P _N	15	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	16.5	A		
12	No-load current	6.4	A		
13	Starting current I _s /I _N	7.1		Fullfilled IEC 60034-12 design N,H	
14	Nominal torque T _N	97	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	1.8			
18	Speed at minimum torque	300	r/min		
19	Load characteristics (IEC 60034-2-1:2007)	Load %	Current A	Efficiency %	Power factor
20	PLL determined from residual loss	100	16.5	91.4 / IE2	0.83
21		75	12.7	92.4	0.8
22		50	9.7	92.2	0.7
23		Start	117		0.46
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	6309-2Z/C3 - 6209-2Z/C3			
32	Type of Grease	Greased for life			
33	Sound pressure level (LP dB(A) 1m)	62	dB(A)	at load	
34	Moment of inertia J = ¼ GD2	0.099	kg-m2		
35	Balancing	Half Key			
36	Vibration class	Grade A			
37	Position of terminal box	Top			
38	Terminal box entries; no, dimens.	2xM40 + M16			
39	Number of power terminals	6			
40	Direction of rotation	CW or CCW			
41	Total weight of motor	118	kg		
42					

Variant Codes / Definition

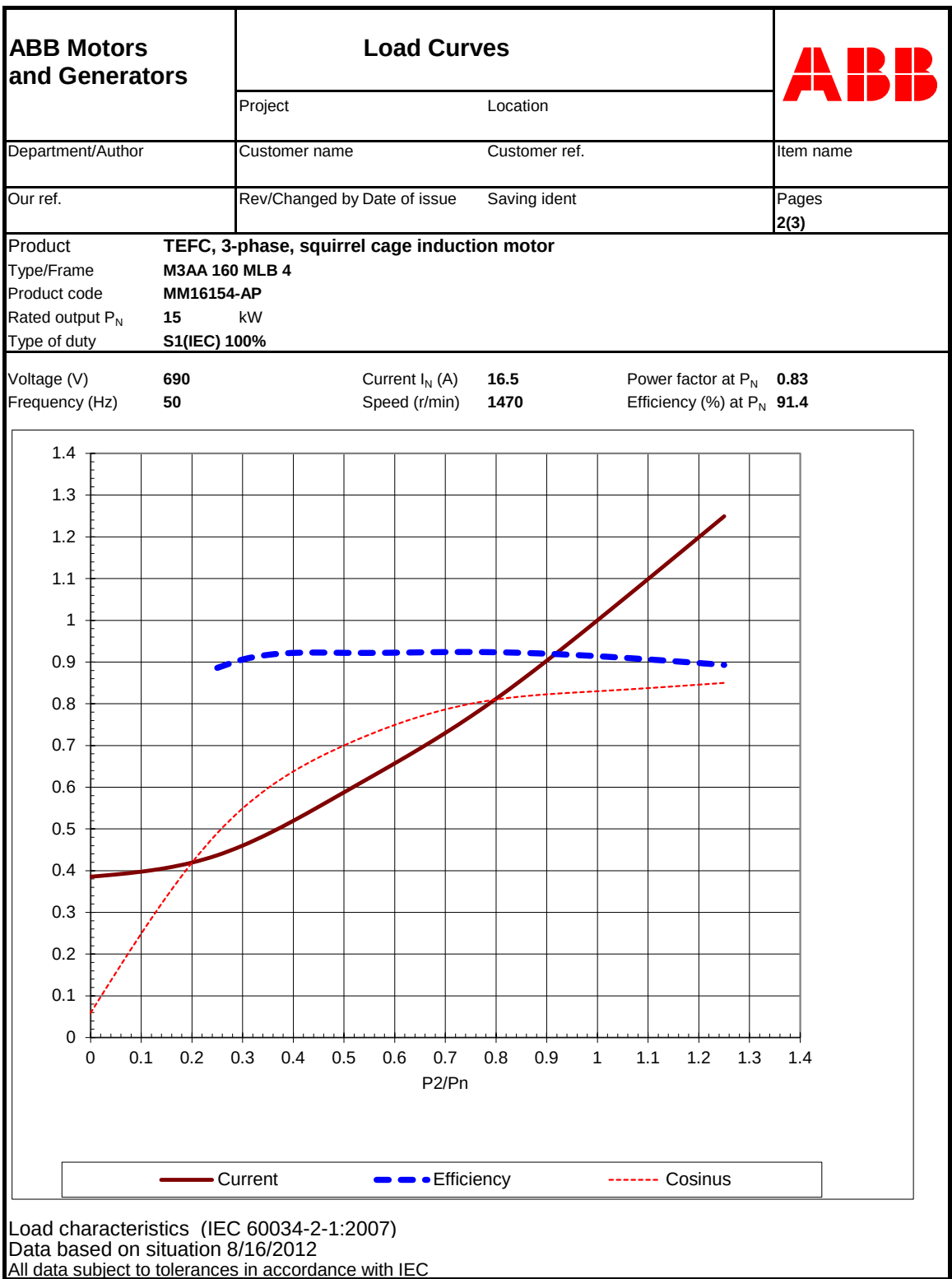
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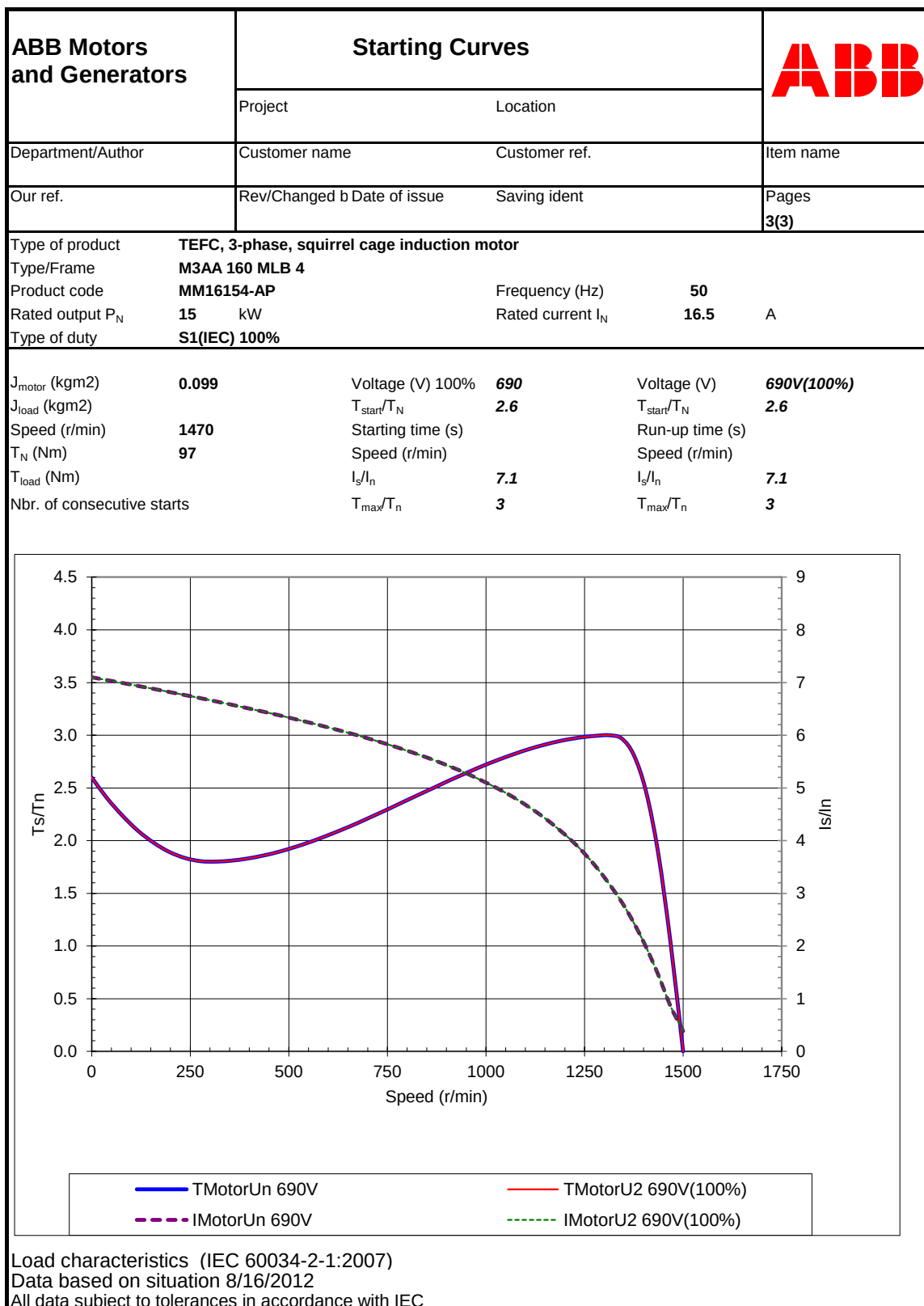


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Department/Author _____		Customer name _____		Customer ref. _____	
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				Saving ident _____	
				Pages 1(3)	

No.	Definition	Data	Unit	Remarks
1	Product	TEFC, 3-phase, squirrel cage induction motor		
2	Product code	MM16154-AP (3GAA162032-ADG+332+333)		
3	Type/Frame	M3AA 160 MLB 4		
4	Mounting	IM1001, B3(foot)		
5	Rated output P _N	15	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	1775	r/min	
11	Rated current I _N	24.6	A	
12	No-load current	9.1	A	
13	Starting current I _s /I _N	8		Fullfilled IEC 60034-12 design N,H
14	Nominal torque T _N	81	Nm	
15	Locked rotor torque T _S /T _N	2.7		
16	Maximum torque T _{max} /T _N	3.3		
17	Minimum torque T _{min} /T _N	1.9		
18	Speed at minimum torque	360	r/min	
19	Load characteristics (IEC 60034-2-1:2007)	Load %	Current A	Efficiency %
20	PLL determined from residual loss	100	24.6	92.2 / IE2
21		75	19.3	92.4
22		50	14.9	91.5
23		Start	196	0.43
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	6309-2Z/C3 - 6209-2Z/C3		
32	Type of Grease	Greased for life		
33	Sound pressure level (LP dB(A) 1m)	70	dB(A)	at load
34	Moment of inertia J = ¼ GD2	0.099	kg-m2	
35	Balancing	Half Key		
36	Vibration class	Grade A		
37	Position of terminal box	Top		
38	Terminal box entries; no, dimens.	2xM40 + M16		
39	Number of power terminals	6		
40	Direction of rotation	CW or CCW		
41	Total weight of motor	118	kg	
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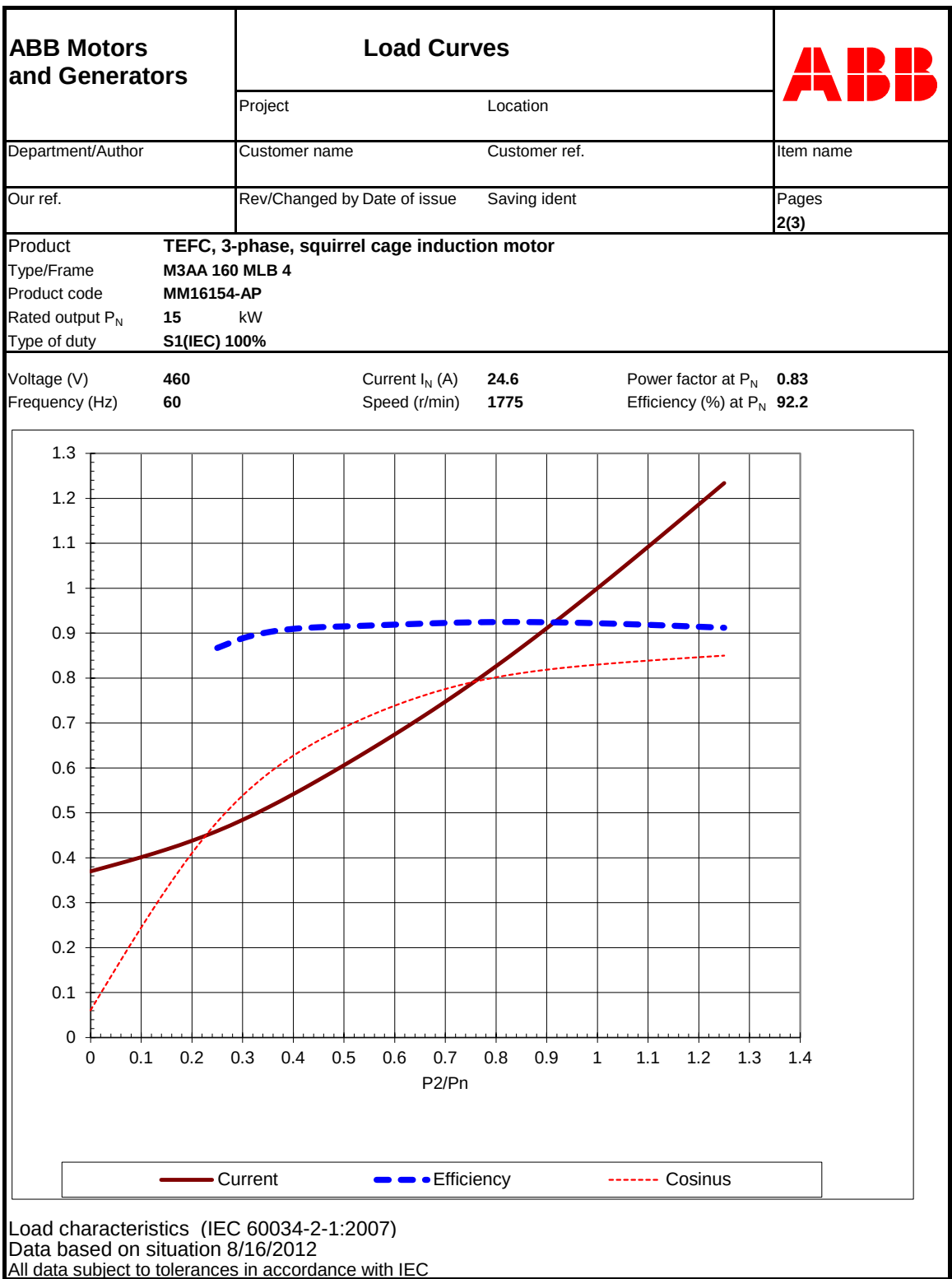
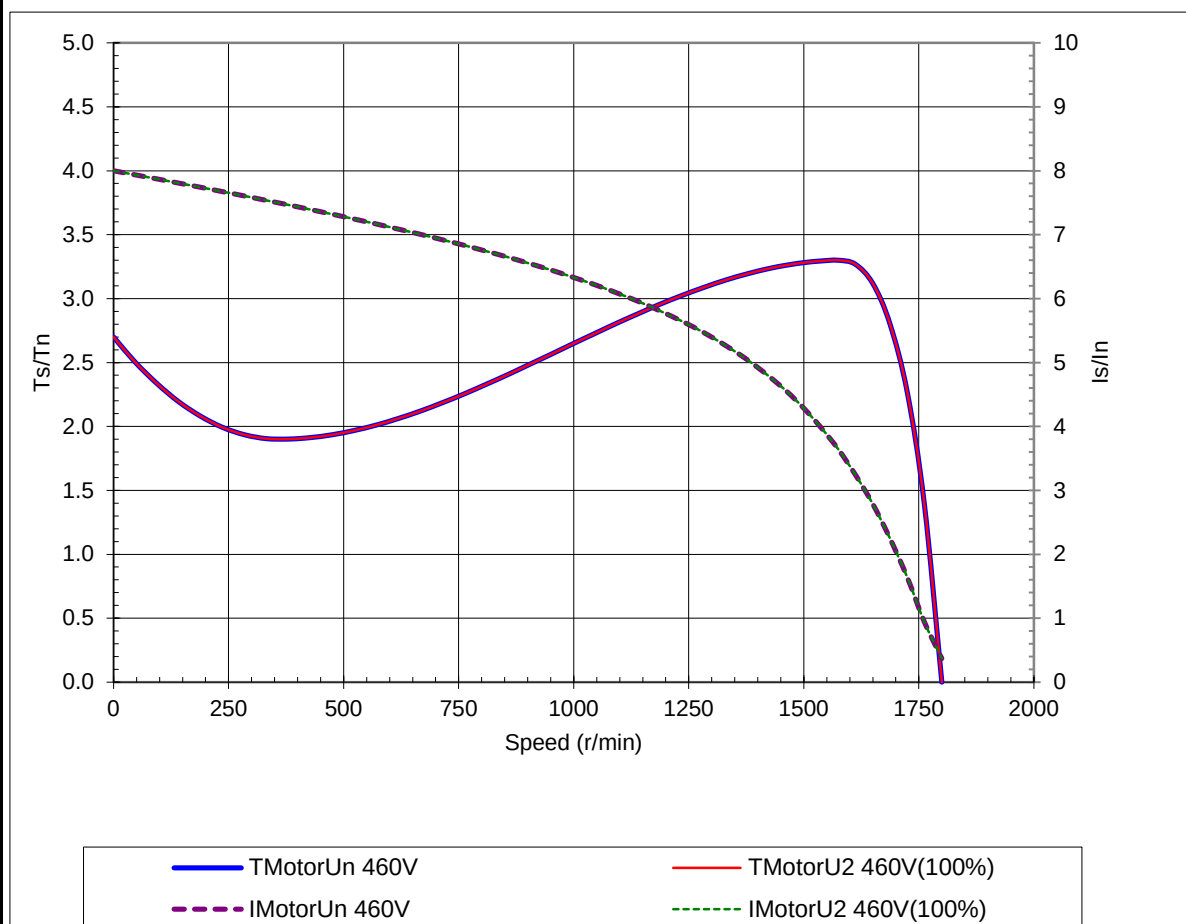


ABB Motors and Generators	Starting Curves		ABB
	Project	Location	
Department/Author	Customer name	Customer ref.	Item name
Our ref.	Rev/Changed b	Date of issue	Saving ident
			Pages 3(3)

Type of product	TEFC, 3-phase, squirrel cage induction motor		
Type/Frame	M3AA 160 MLB 4		
Product code	MM16154-AP	Frequency (Hz)	60
Rated output P_N	15 kW	Rated current I_N	24.6 A
Type of duty	S1(IEC) 100%		

J_{motor} (kgm ²)	0.099	Voltage (V) 100%	460	Voltage (V)	460V(100%)
J_{load} (kgm ²)		T_{start}/T_N	2.7	T_{start}/T_N	2.7
Speed (r/min)	1775	Starting time (s)		Run-up time (s)	
T_N (Nm)	81	Speed (r/min)		Speed (r/min)	
T_{load} (Nm)		I_s/I_n	8	I_s/I_n	8
Nbr. of consecutive starts		T_{max}/T_n	3.3	T_{max}/T_n	3.3



Load characteristics (IEC 60034-2-1:2007)
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