



MarelliMotori
Powering the future

TECHNICAL DATASHEET

THREE-PHASE SYNCHRONOUS GENERATOR

Our Reference -

Date 30/07/2020

Customer -

Rev. -

GENERATORE TIPO - GENERATOR TYPE		MJB 500 SC4				
CLASSE DI SOVRATEMPERATURA - TEMPERATURE RISE CLASS		H				
CLASSE DI ISOLAMENTO - INSULATION CLASS		H				
FORMA COSTRUTTIVA - MOUNTING		None				
TEMPERATURA AMBIENTE - AMBIENT TEMPERATURE	°C	0				
ALTITUDINE - ALTITUDE	m	0				
PROTEZIONE - PROTECTION DEGREE	IP	IP23				
SISTEMA DI RAFFREDDAMENTO - COOLING SYSTEM	IC	IC01				
FATTORE DI POTENZA - POWER FACTOR		0.80				
NUMERO DI POLI - NUMBER OF POLES		4				
VELOCITA' NOMINALE - RATED SPEED	rpm	1500				
SOVRAVELOCITA' - OVERSPEED	rpm	2250				
NUMERO DI TERMINALI - NUMBER OF TERMINALS		6				
PASSO DI AVVOLGIMENTO - WINDING PITCH		2/3 - Random Wound				
RESISTENZA STATORICA @20°C - STATOR RESISTANCE @20°C	mΩ	0.83				
PESO - WEIGHT	kg	Approx. 4000				
MOMENTO D'INERZIA - INERTIA (J)	kgm ²	Approx. 44.23				
TEMPERATURA ACQUA RAFFREDDAMENTO - COOLING WATER TEMPERATURE	°C	not applicable				
PORTATA DACQUA - WATER FLOW RATE	m ³ /h	not applicable				
CADUTA DI PRESSIONE - PRESSURE DROP	kPa	not applicable				
AUMENTO TEMPERATURA ACQUA - WATER TEMPERATURE INCREASE	°C	not applicable				
TA DI CENTRO STELLA - NEUTRAL POINT CURRENT TRANSFORMER		-				
CUSCINETTI - BEARINGS		ANTI-FRICTION				
FREQUENZA - FREQUENCY	Hz	50				
TENSIONE - VOLTAGE	V	400				
CORRENTE NOMINALE - RATED CURRENT	A	2886.8				
POTENZA - RATING	kVA	2000				
PERCENTUALE DI CARICO - PARTIAL LOAD DATA		%	100	75	50	25
RENDIMENTO - EFFICIENCY	P.F. = 1	%	96.9	97.1	97.0	95.5
	P.F. = 0.80	%	96.1	96.3	96.1	94.4
Rapporto di corto circuito - short circuit ratio	SCR	0.32				
		UNS		SAT		
REATTANZA - REACTANCE (%)	sincrona diretta - synchronous direct axis	Xd	336	313		
	sincrona in quadratura - synchr. quadrature axis	Xq	188	175		
	transitoria diretta - transient direct axis	X'd	33.5	31.2		
	transitoria in quadratura - transient quadrature axis	X'q	188	175		
	subtransitoria diretta - subtransient direct axis	X''d	13.8	12.8		
	subtransitoria in quad. - subtransient quadr. axis	X''q	14.2	13.2		
	d _i sequenza negativa - negative sequence	X ₂	14.0	13.0		
	d _i sequenza zero - zero sequence	X ₀	3.2	3.0		
COSTANTI DI TEMPO - TIME CONSTANTS (s)	a vuoto - open circuit	T'do	3.730			
	transitoria - transient	T'd	0.340			
	subtransitoria - subtransient	T''d	0.010			
	unidirezionale - armature	T _a = T _{dc}	0.029			
COPPIA DI CORTO CIRCUITO DI BIFASE - PHASE TO PHASE SHORT CIRCUIT TORQUE	kNm	149.2				
COPPIA DI CORTO CIRCUITO DI TRIFASE - THREE PHASE SHORT CIRCUIT TORQUE	kNm	99.5				

PRELIMINARY



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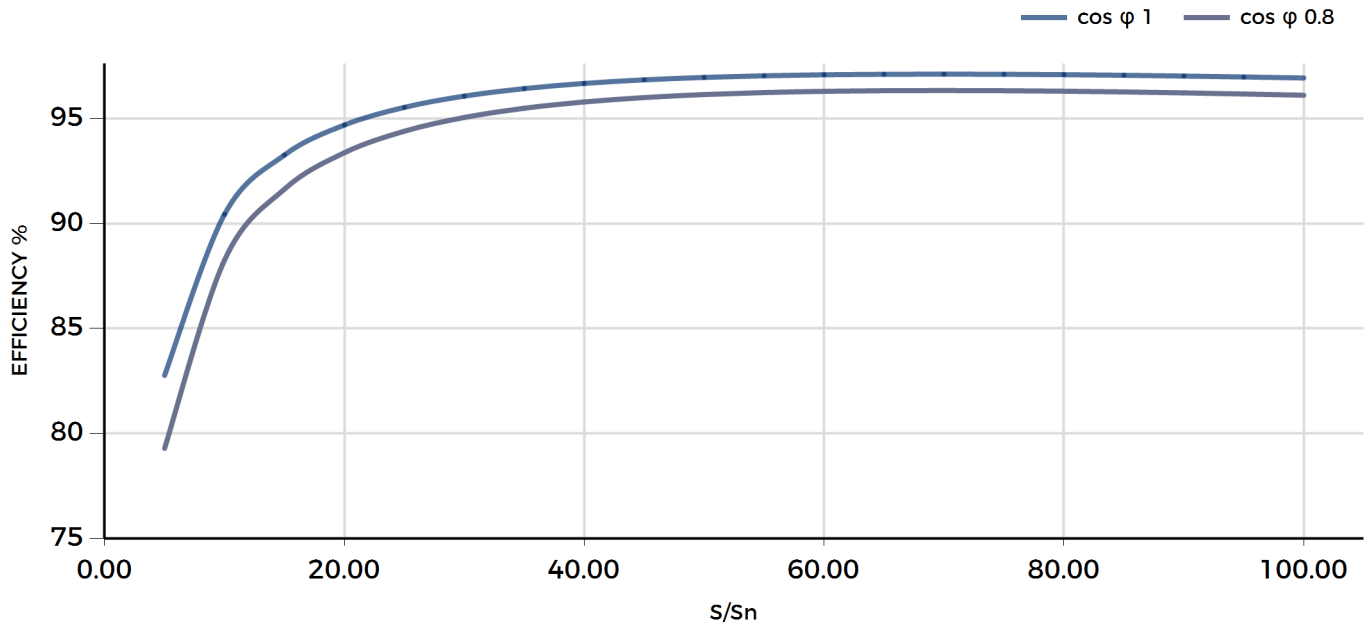
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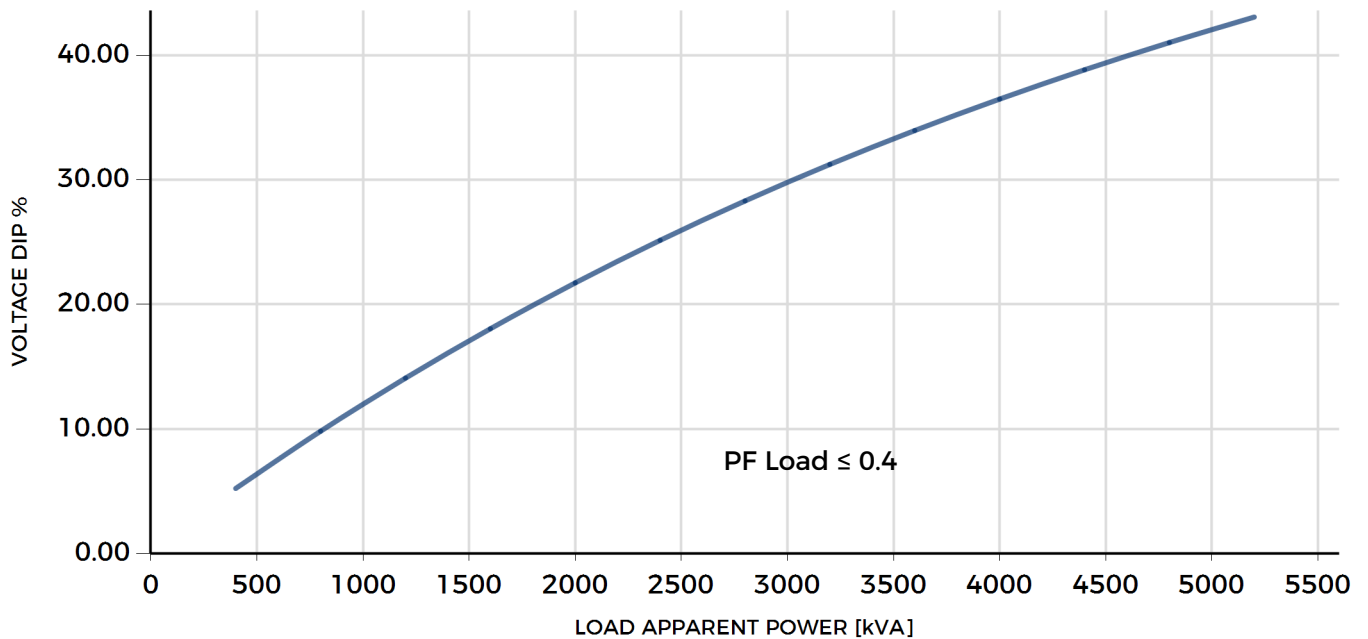
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CURVA DI RENDIMENTO - EFFICIENCY CURVE



CADUTA DI TENSIONE - VOLTAGE DIP





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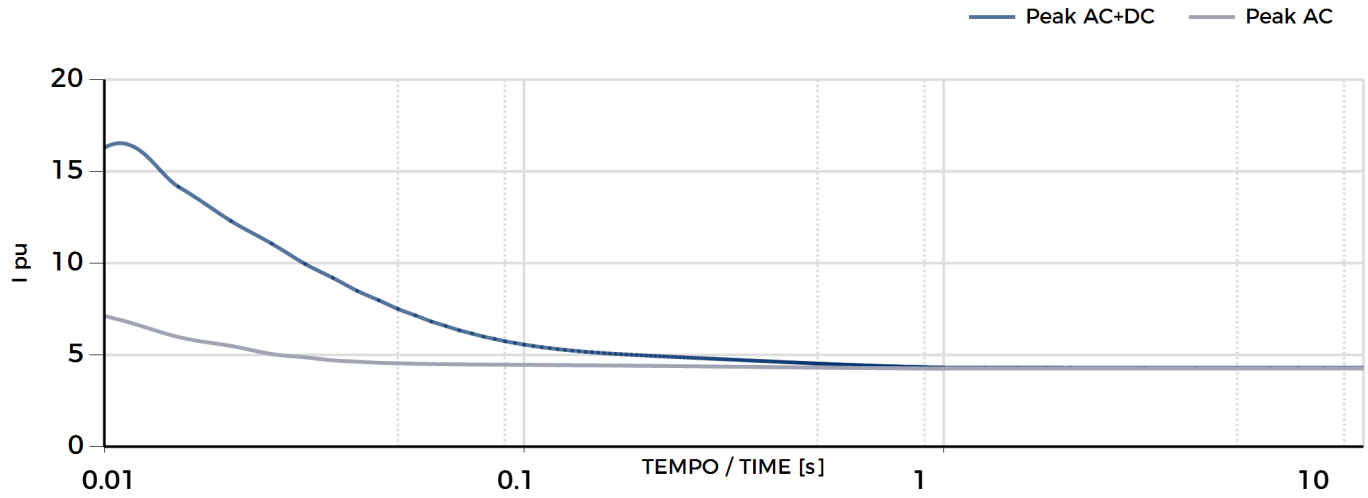
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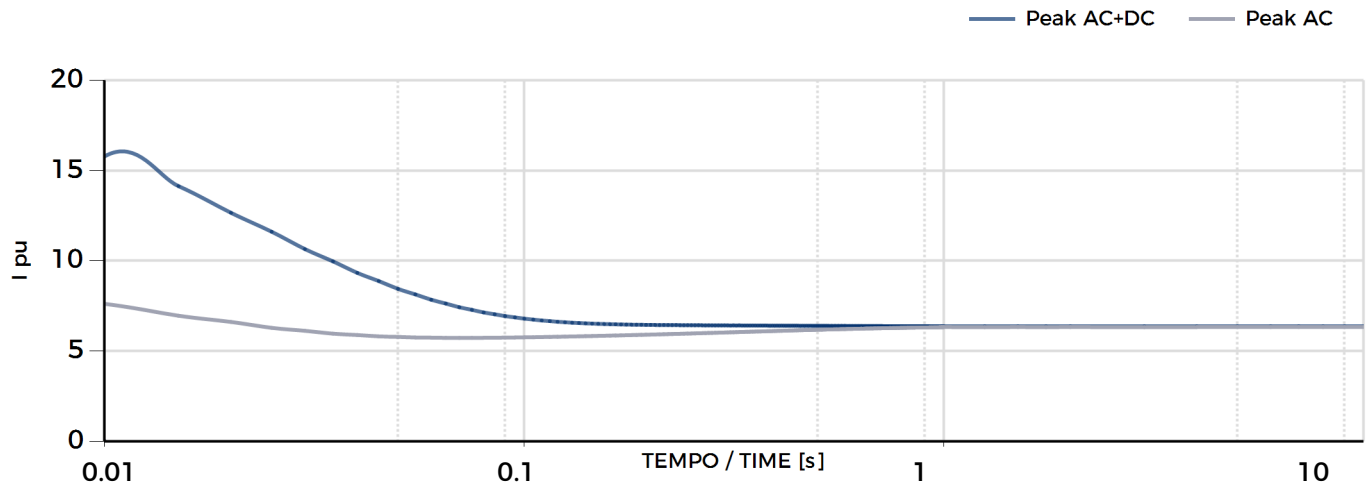
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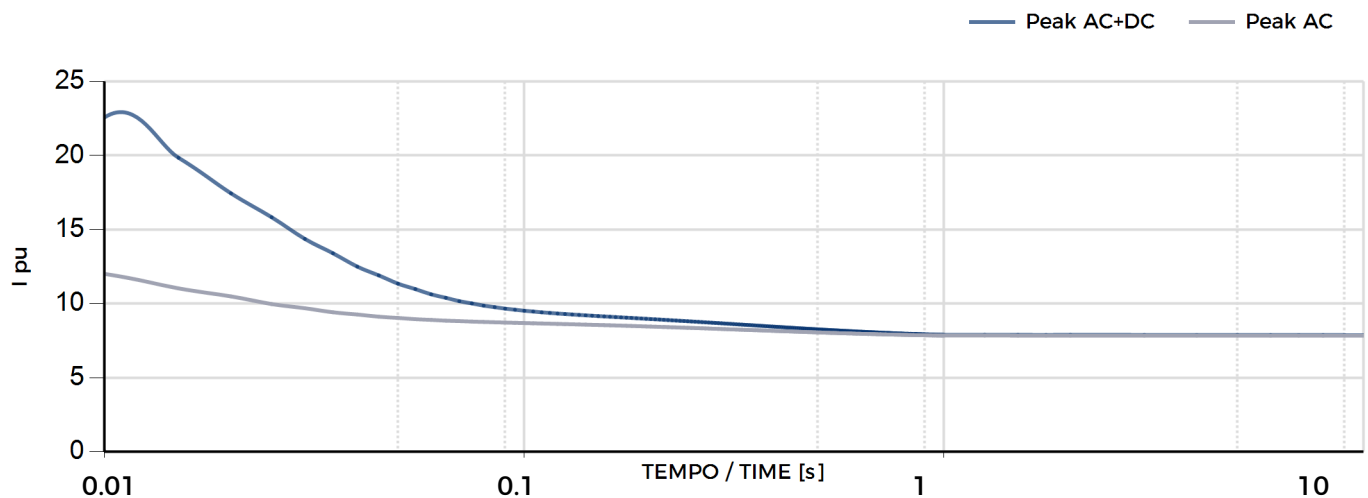
3 - PHASE SHORT CIRCUIT DECREMENT CURVE



2 - PHASE SHORT CIRCUIT DECREMENT CURVE



1 - PHASE SHORT CIRCUIT DECREMENT CURVE





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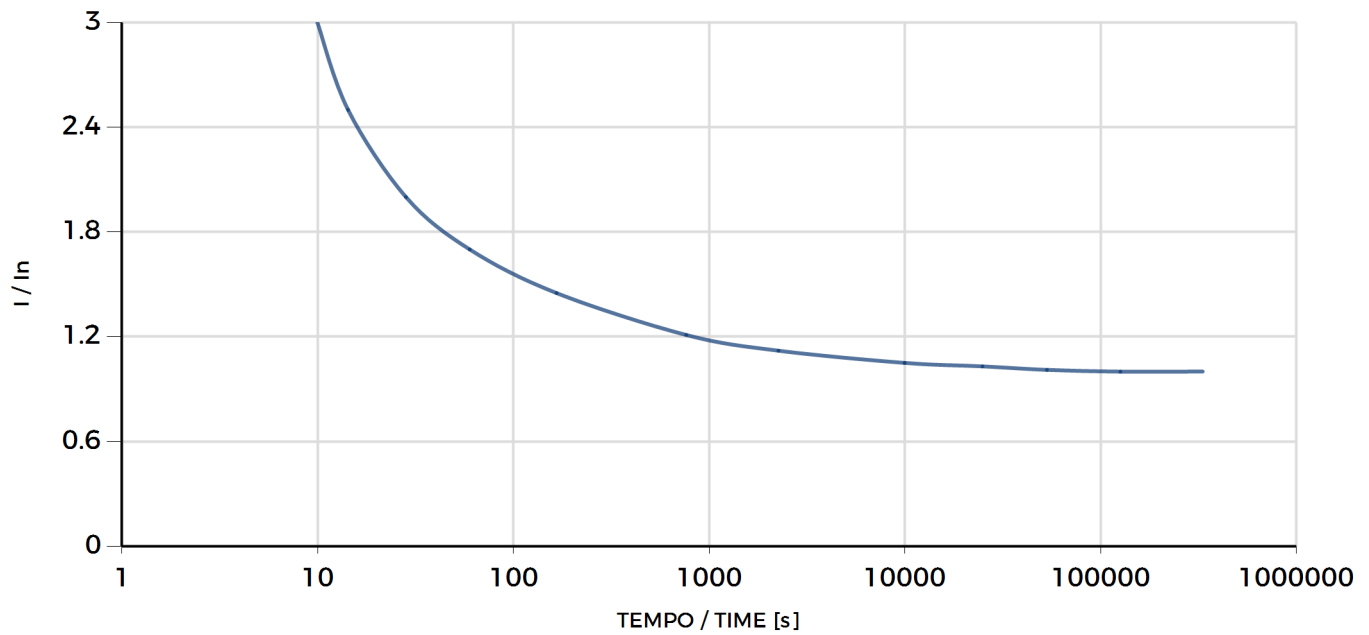
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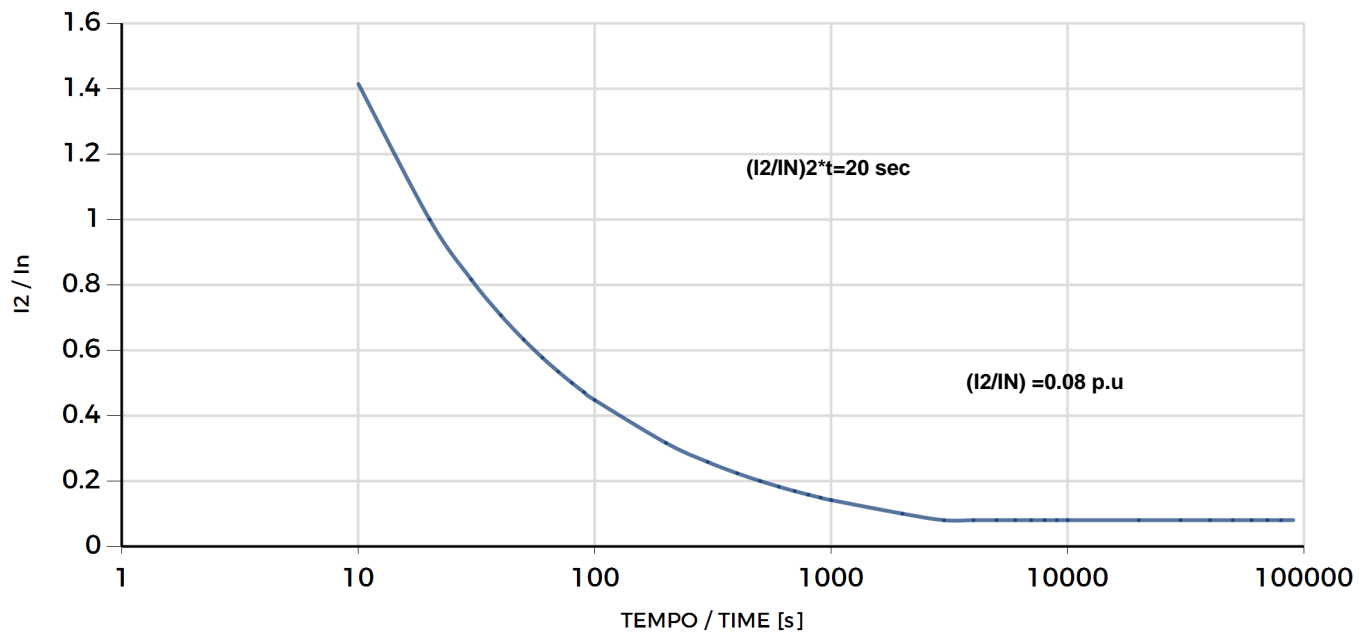
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CURVA DI LIMITE TERMICO - THERMAL DAMAGE CURVE



CORRENTE SEQUENZA INVERSA - NEGATIVE SEQUENCE CURRENT





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CURVA DI CAPABILITY - CAPABILITY CURVE

