



**MarelliMotori**  
Powering the future

# TECHNICAL DATASHEET

## THREE-PHASE SYNCHRONOUS GENERATOR

Our Reference -

Date 30/07/2020

Customer -

Rev. -

GENERATORE TIPO - GENERATOR TYPE		<b>MJB 500 MB4</b>				
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	0.62				
PESO - WEIGHT	kg	Approx. 4400				
MOMENTO D'INERZIA - INERTIA (J)	kgm <sup>2</sup>	Approx. 50				
TEMPERATURA ACQUA RAFFREDDAMENTO - COOLING WATER TEMPERATURE	°C	not applicable				
PORTATA DACQUA - WATER FLOW RATE	m <sup>3</sup> /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	3175.4				
POTENZA - RATING	kVA	2200				
PERCENTUALE DI CARICO - PARTIAL LOAD DATA		%	100	75	50	25
RENDIMENTO - EFFICIENCY	P.F. = 1	%	97.0	97.2	97.1	95.9
	P.F. = 0.80	%	96.1	96.4	96.3	94.8
Rapporto di corto circuito - short circuit ratio	SCR	0.34				
		UNS	SAT			
REATTANZA - REACTANCE (%)	sincrona diretta - synchronous direct axis	Xd	312	294		
	sincrona in quadratura - synchr. quadrature axis	Xq	175	165		
	transitoria diretta - transient direct axis	X'd	30.4	28.7		
	transitoria in quadratura - transient quadrature axis	X'q	175	165		
	subtransitoria diretta - subtransient direct axis	X''d	12.6	11.9		
	subtransitoria in quad. - subtransient quadr. axis	X''q	12.5	11.8		
	d <sub>i</sub> sequenza negativa - negative sequence	X <sub>2</sub>	12.5	11.8		
	d <sub>i</sub> sequenza zero - zero sequence	X <sub>0</sub>	3.2	3.0		
COSTANTI DI TEMPO - TIME CONSTANTS (s)	a vuoto - open circuit	T'do	3.600			
	transitoria - transient	T'd	0.350			
	subtransitoria - subtransient	T''d	0.020			
	unidirezionale - armature	T <sub>a</sub> = T <sub>dc</sub>	0.032			
COPPIA DI CORTO CIRCUITO DI BIFASE - PHASE TO PHASE SHORT CIRCUIT TORQUE	kNm	176.5				
COPPIA DI CORTO CIRCUITO DI TRIFASE - THREE PHASE SHORT CIRCUIT TORQUE	kNm	117.7				

**PRELIMINARY**



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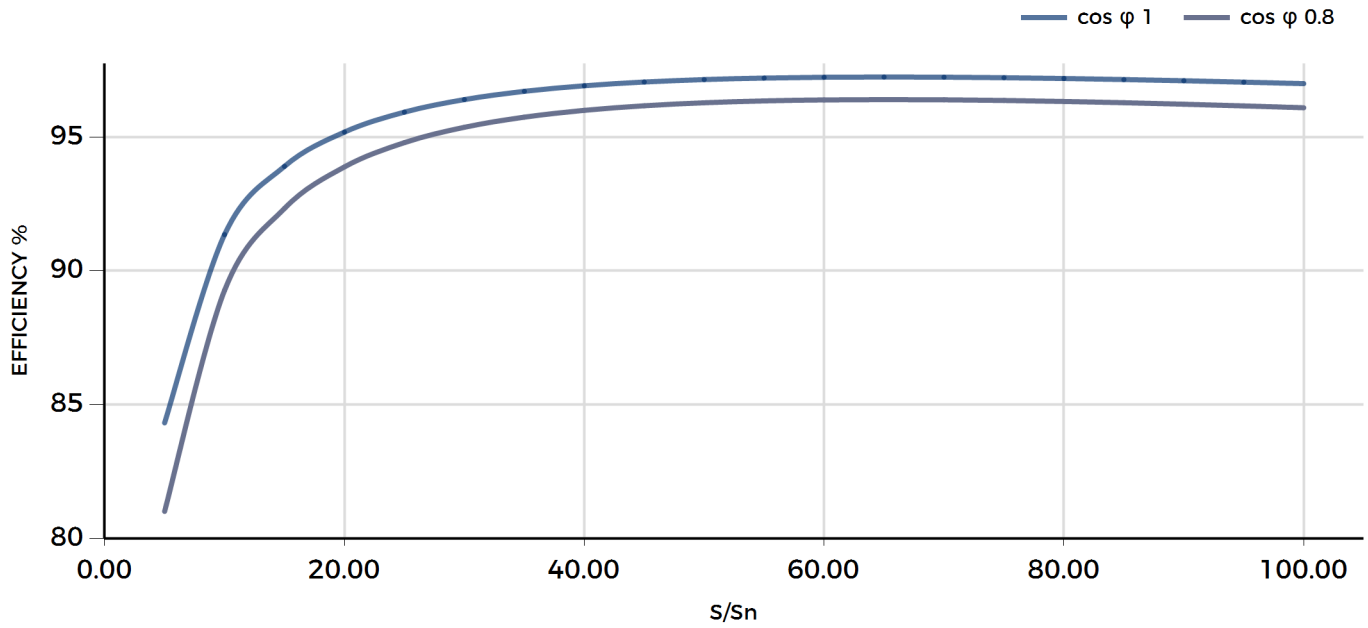
Our Reference -

Date 30/07/2020

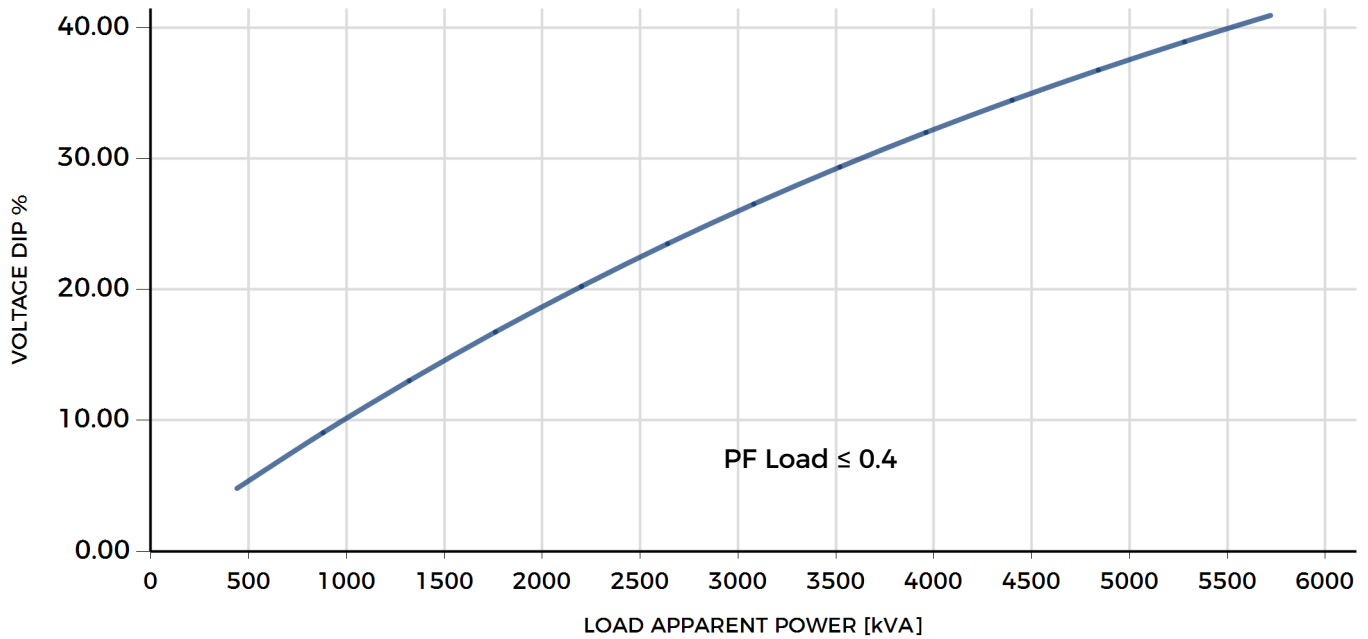
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### CURVA DI RENDIMENTO - EFFICIENCY CURVE



### CADUTA DI TENSIONE - VOLTAGE DIP





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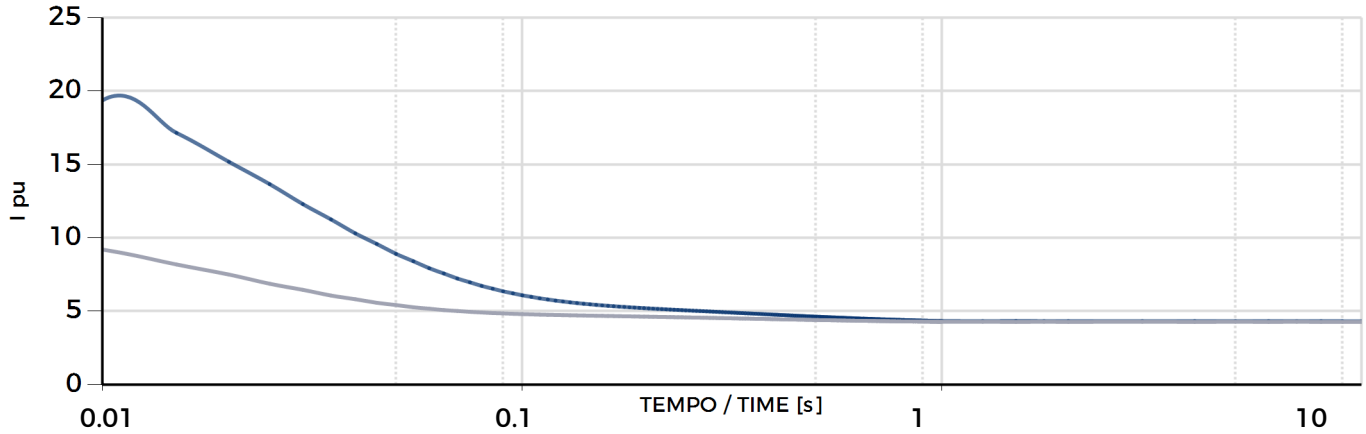
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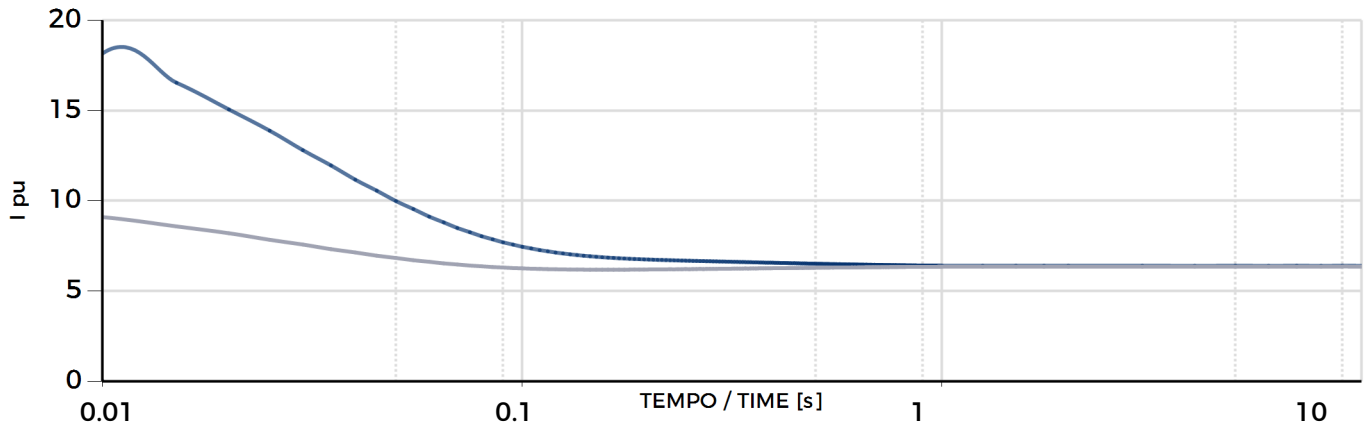
### 3 - PHASE SHORT CIRCUIT DECREMENT CURVE

— Peak AC+DC — Peak AC



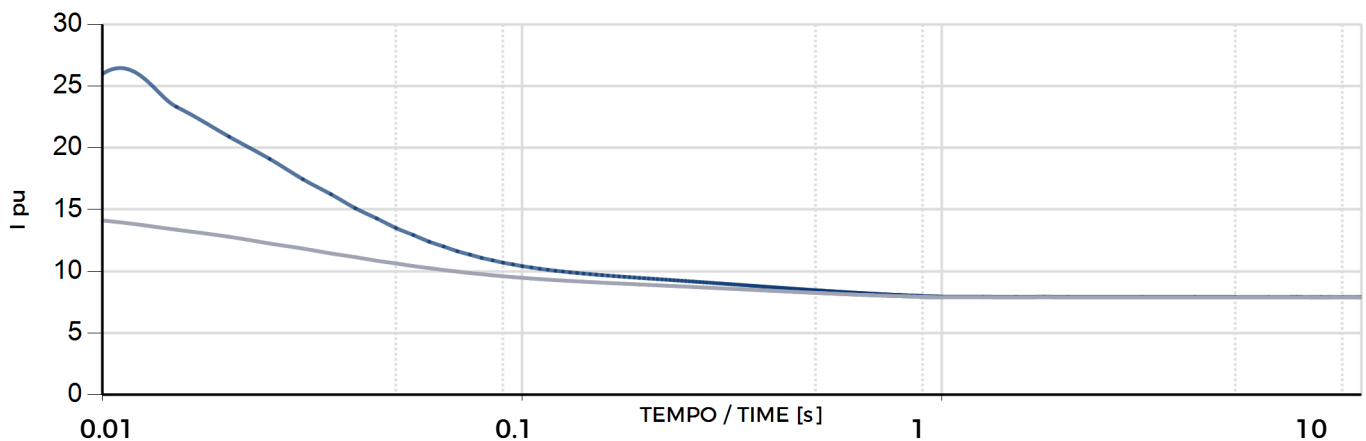
### 2 - PHASE SHORT CIRCUIT DECREMENT CURVE

— Peak AC+DC — Peak AC



### 1 - PHASE SHORT CIRCUIT DECREMENT CURVE

— Peak AC+DC — Peak AC





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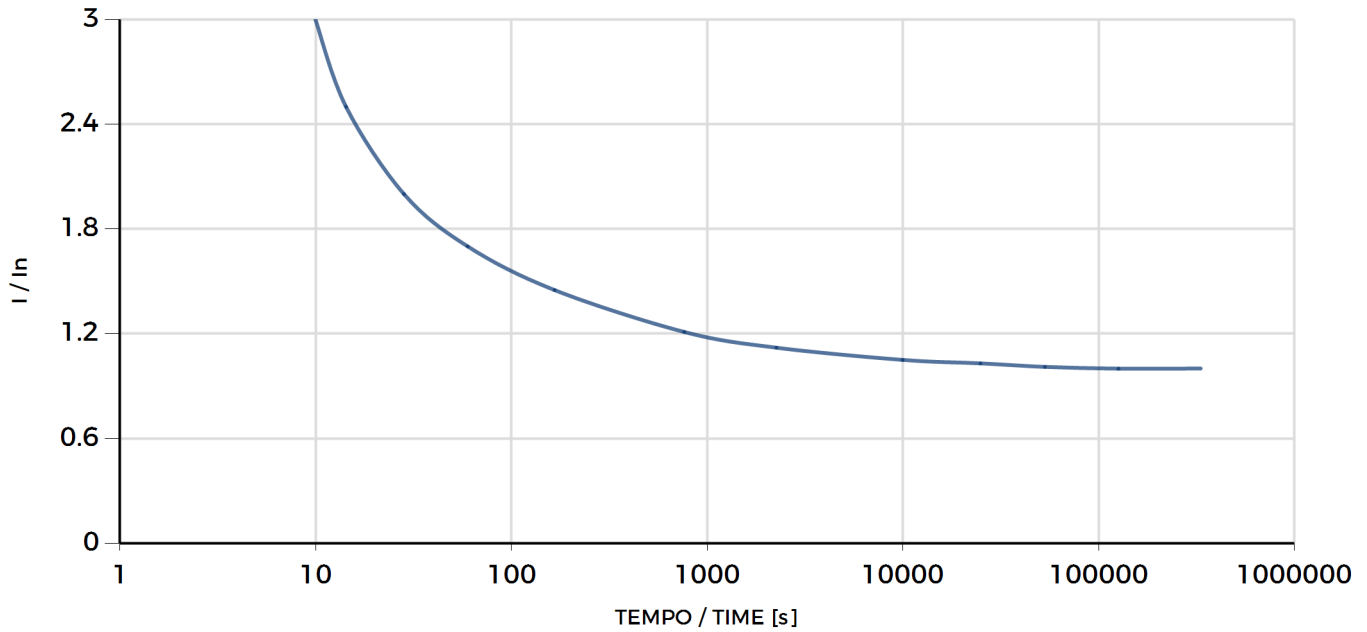
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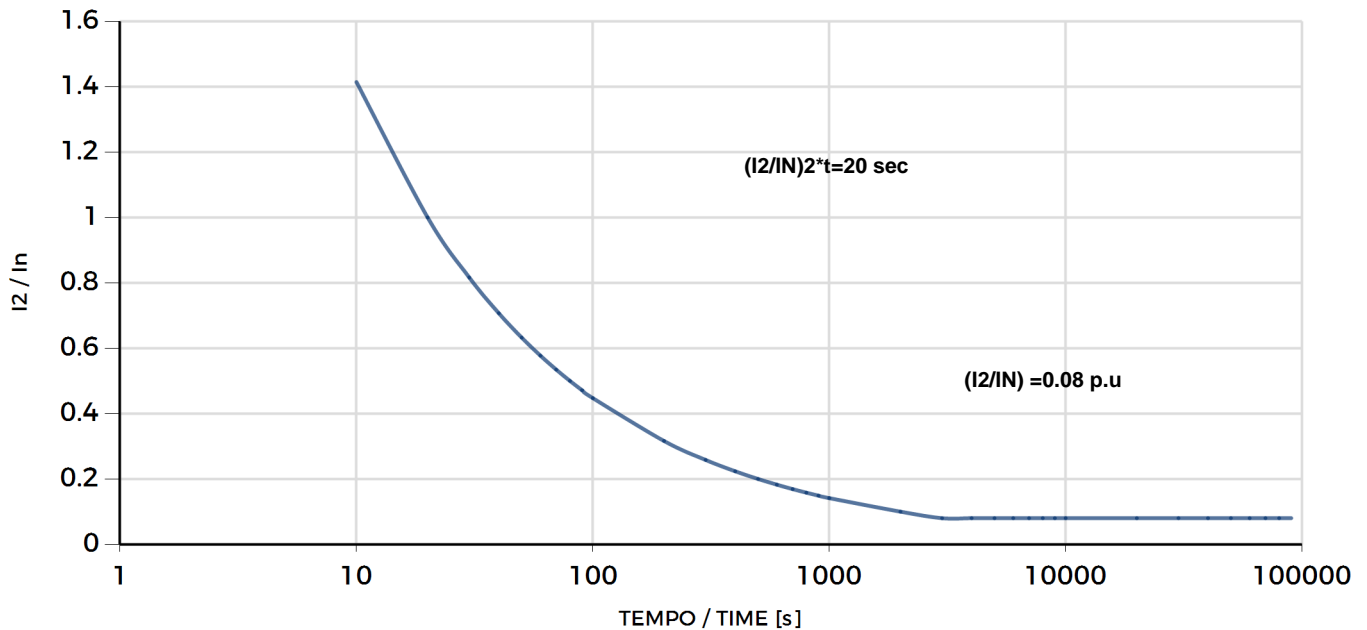
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### CURVA DI LIMITE TERMICO - THERMAL DAMAGE CURVE



### CORRENTE SEQUENZA INVERSA - NEGATIVE SEQUENCE CURRENT





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### CURVA DI CAPABILITY - CAPABILITY CURVE

