MarelliMotori
Powering the future

# TECHNICAL DATASHEET

## THREE-PHASE SYNCHRONOUS GENERATOR

| | |
|---|---|
| Our Reference - | Date 30/07/2020 |
| Customer - | Rev. - |

| | | |
|---|---|---|
| GENERATORE TIPO - GENERATOR TYPE | | **MJB 315 SB4** |
| 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 |
| SOVRAVELOCITÁ - OVERSPEED | rpm | 2250 |
| NUMERO DI TERMINALI - NUMBER OF TERMINALS | | 12 |
| PASSO DI AVVOLGIMENTO - WINDING PITCH | | 2/3 - Random Wound |
| RESISTENZA STATORICA @20°C - STATOR RESISTANCE @20°C | mΩ | 11.75 |
| PESO - WEIGHT | kg | Approx. 920 |
| MOMENTO D'INERZIA - INERTIA (J) | kgm² | Approx. 4.25 |
| TEMPERATURA ACQUA RAFFREDDAMENTO– COOLING WATER TEMPERATURE | °C | not applicable |
| PORTATA DACQUA – WATER FLOW RATE | m³/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 | 505.2 |
| POTENZA - RATING | kVA | 350 |

| | | | | | | |
|---|---|---|---|---|---|---|
| PERCENTUALE DI CARICO - PARTIAL LOAD DATA | | % | 100 | 75 | 50 | 25 |
| RENDIMENTO - EFFICIENCY | P.F. = 1 | % | 94.8 | 95.2 | 95.3 | 94.1 |
| | P.F. = 0.80 | % | 93.4 | 93.9 | 94.1 | 92.9 |

| | | | | |
|---|---|---|---|---|
| Rapporto di corto circuito - short circuit ratio | | SCR | 0.27 | |
| | | | UNS | SAT |
| REATTANZA - REACTANCE (%) | sincrona diretta - synchronous direct axis | Xd | 371 | 341 |
| | sincrona in quadratura - synchr. quadrature axis | Xq | 157 | 144 |
| | transitoria diretta - transient direct axis | X'd | 33.3 | 26.7 |
| | transitoria in quadratura - transient quadrature axis | X'q | 157 | 144 |
| | subtransitoria diretta - subtransient direct axis | X"d | 18.7 | 17.2 |
| | subtransitoria in quad. - subtransient quadr. axis | X"q | 20.6 | 18.9 |
| | di sequenza negativa - negative sequence | X2 | 21.1 | 18.1 |
| | di sequenza zero - zero sequence | Xo | 9.2 | 8.5 |
| COSTANTI DI TEMPO - TIME CONSTANTS (s) | a vuoto - open circuit | T'do | 1.599 | |
| | transitoria - transient | T'd | 0.156 | |
| | subtransitoria - subtransient | T"d | 0.011 | |
| | unidirezionale - armature | Ta = Tdc | 0.016 | |
| COPPIA DI CORTO CIRCUITO DI BIFASE - PHASE TO PHASE SHORT CIRCUIT TORQUE | | kNm | 19.4 | |
| COPPIA DI CORTO CIRCUITO DI TRIFASE- THREE PHASE SHORT CIRCUIT TORQUE | | kNm | 13.0 | |

**PRELIMINARY**

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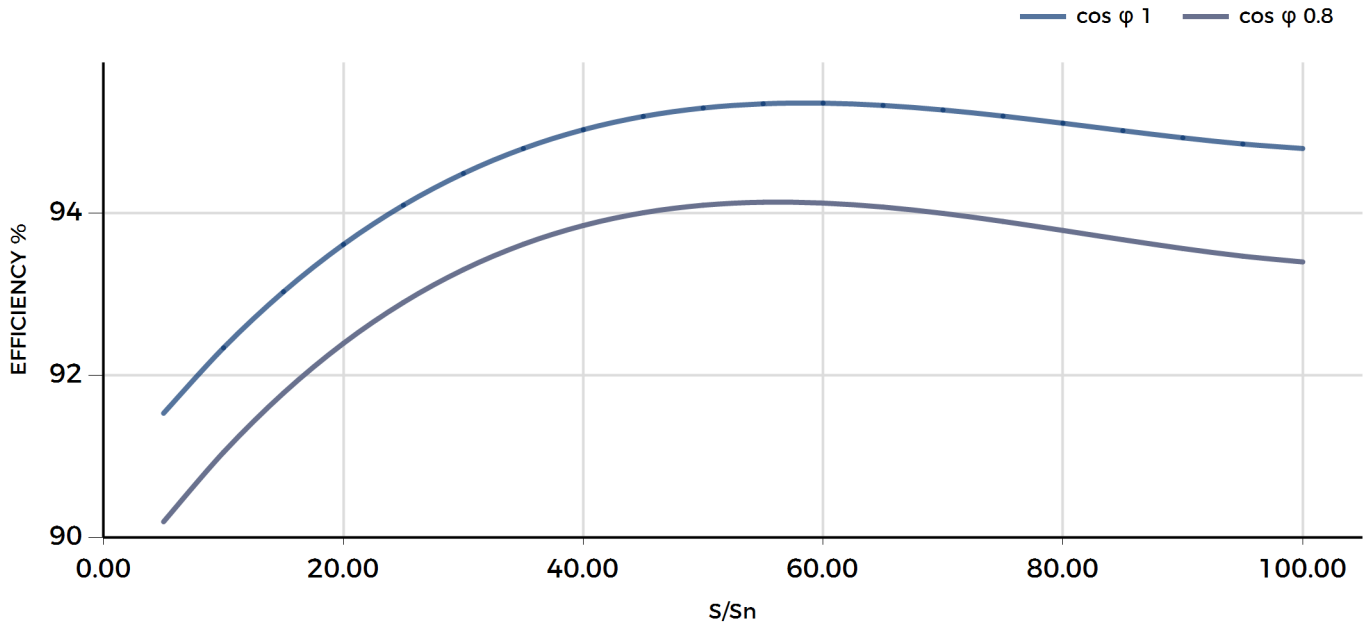
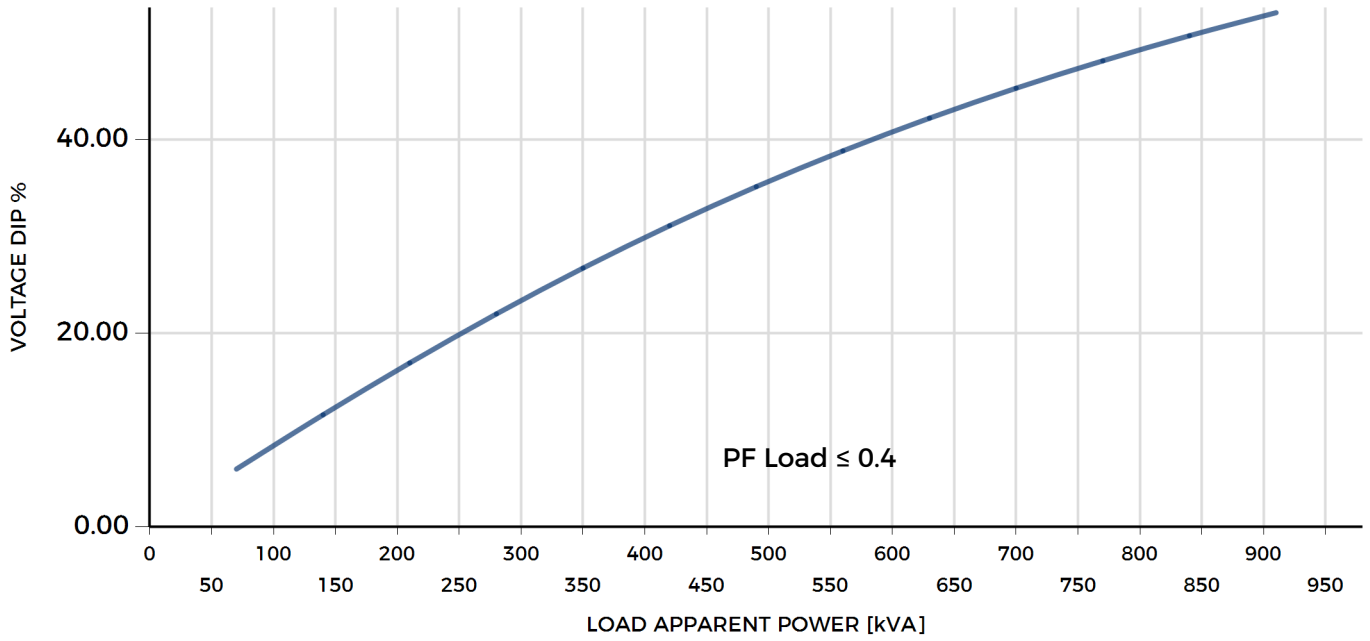
## CURVA DI RENDIMENTO - EFFICIENCY CURVE




## CADUTA DI TENSIONE - VOLTAGE DIP



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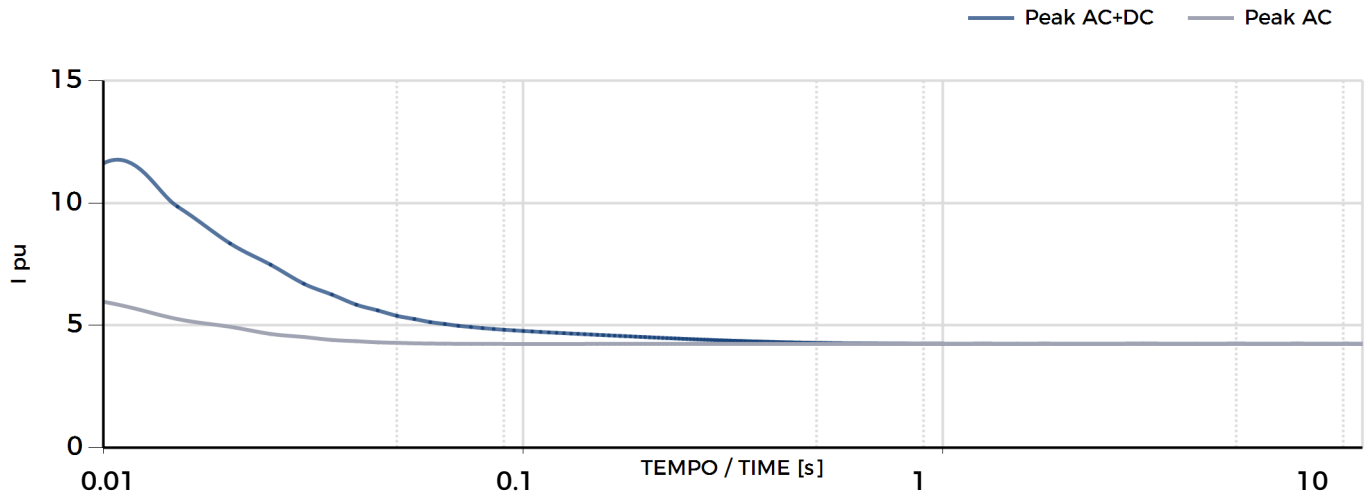
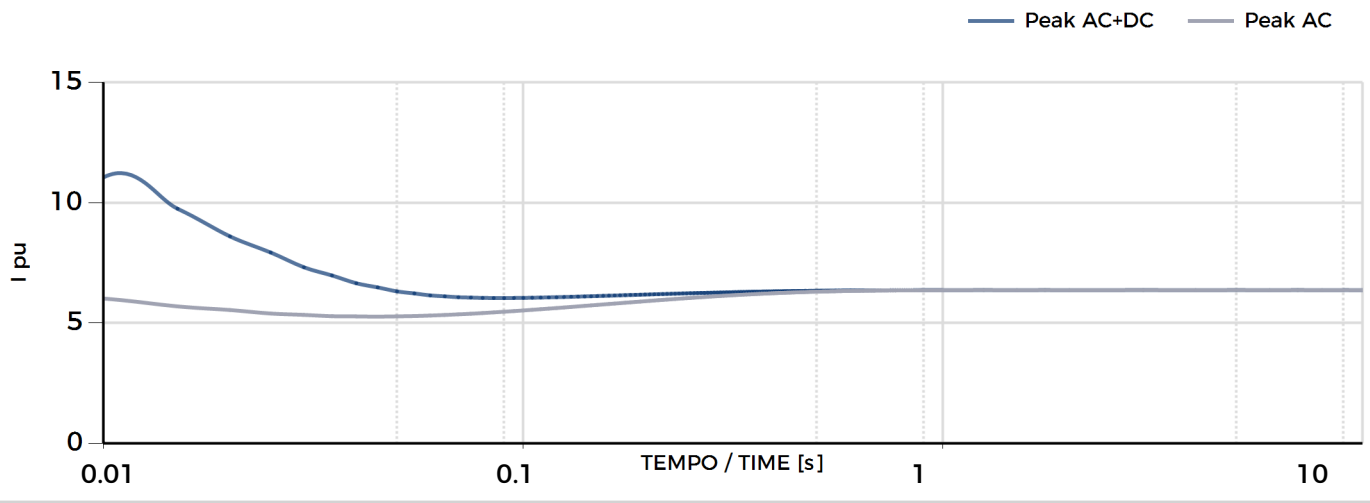
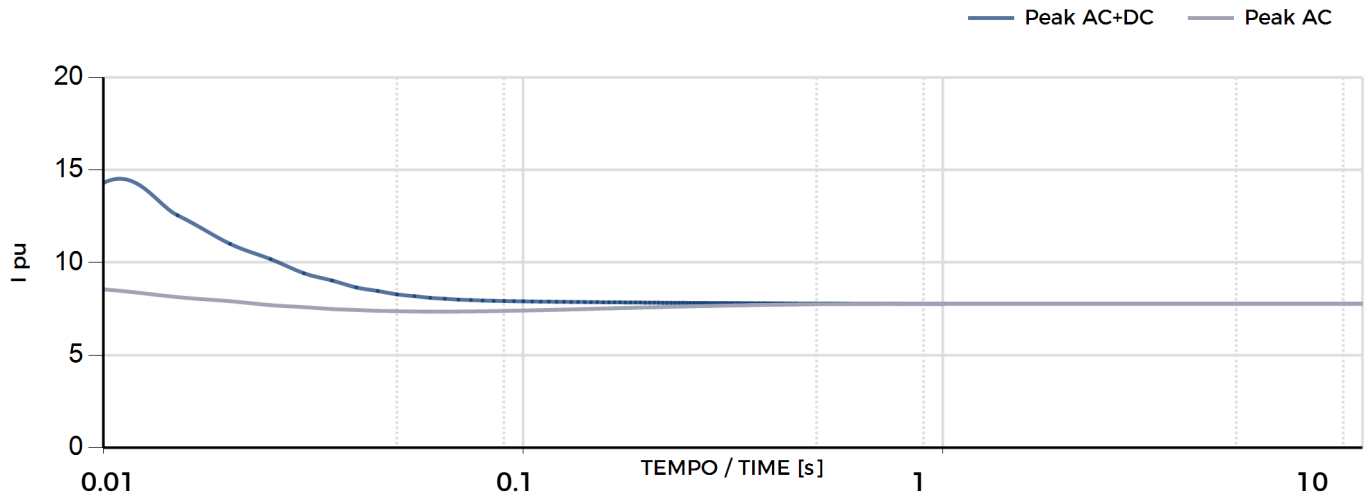
## 3 - PHASE SHORT CIRCUIT DECREMENT CURVE




## 2 - PHASE SHORT CIRCUIT DECREMENT CURVE




## 1- PHASE SHORT CIRCUIT DECREMENT CURVE



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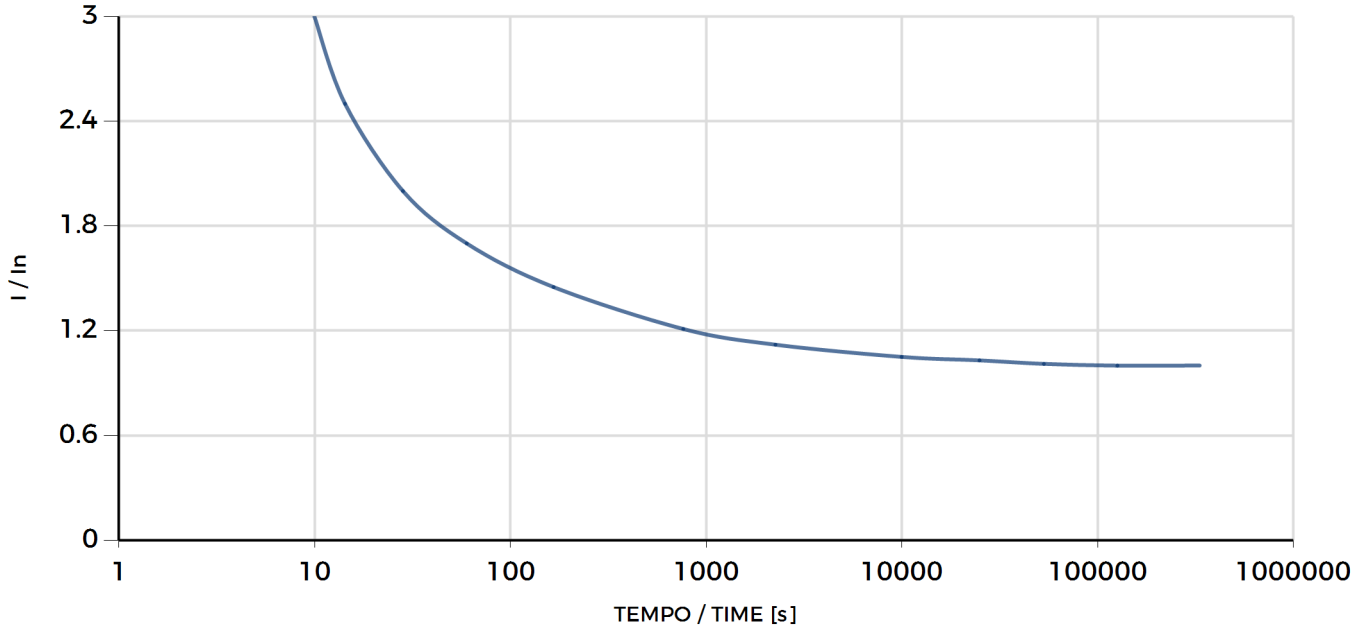
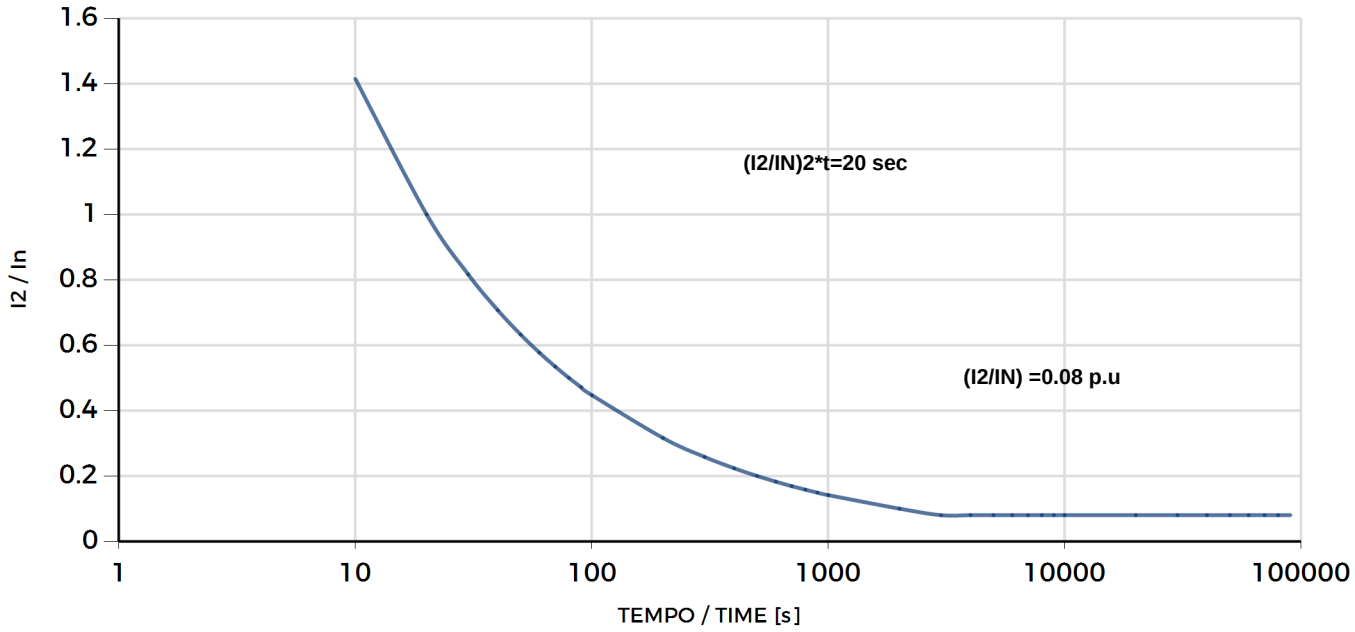
## CURVA DI LIMITE TERMICO - THERMAL DAMAGE CURVE




## CORRENTE SEQUENZA INVERSA - NEGATIVE SEQUENCE CURRENT



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## CURVA DI CAPABILITY - CAPABILITY CURVE