

|                                                                                                                                                     |  |                                                                        |          |                    |      |                 |      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------|----------|--------------------|------|-----------------|------|
| <div></div> <div><b>MarelliMotori</b><br/>Powering the future</div> |  | <b>TECHNICAL DATASHEET</b><br><b>THREE-PHASE SYNCHRONOUS GENERATOR</b> |          |                    |      |                 |      |
|                                                                                                                                                     |  | Our Reference -                                                        |          |                    |      | Date 30/07/2020 |      |
|                                                                                                                                                     |  | Customer -                                                             |          |                    |      | Rev. -          |      |
| GENERATORE TIPO - GENERATOR TYPE                                                                                                                    |  |                                                                        |          | MJB 315 MB4        |      |                 |      |
| 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               |      |                 |      |
| SOVRAVELOCITÀ - 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       | 5.98               |      |                 |      |
| PESO - WEIGHT                                                                                                                                       |  |                                                                        | kg       | Approx. 1200       |      |                 |      |
| MOMENTO D'INERZIA - INERTIA (J)                                                                                                                     |  |                                                                        | kgm²     | Approx. 5.68       |      |                 |      |
| TEMPERATURA ACQUA RAFFREDDAMENTO- COOLING WATER TEMPERATURE                                                                                         |  |                                                                        | °C       | not applicable     |      |                 |      |
| PORTATA D'ACQUA - 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        | 649.5              |      |                 |      |
| POTENZA - RATING                                                                                                                                    |  |                                                                        | kVA      | 450                |      |                 |      |
| PERCENTUALE DI CARICO - PARTIAL LOAD DATA                                                                                                           |  |                                                                        | %        | 100                | 75   | 50              | 25   |
| RENDIMENTO - EFFICIENCY                                                                                                                             |  | P.F. = 1                                                               | %        | 95.3               | 95.7 | 95.8            | 94.5 |
|                                                                                                                                                     |  | P.F. = 0.80                                                            | %        | 94.0               | 94.6 | 94.7            | 93.4 |
| Rapporto di corto circuito - short circuit ratio                                                                                                    |  |                                                                        | SCR      | 0.31               |      |                 |      |
|                                                                                                                                                     |  |                                                                        |          | UNS                |      | SAT             |      |
| REATTANZA - REACTANCE (%)                                                                                                                           |  | sincrona diretta - synchronous direct axis                             | Xd       | 317                |      | 291             |      |
|                                                                                                                                                     |  | sincrona in quadratura - synchr. quadrature axis                       | Xq       | 134                |      | 123             |      |
|                                                                                                                                                     |  | transitoria diretta - transient direct axis                            | X'd      | 27.0               |      | 21.6            |      |
|                                                                                                                                                     |  | transitoria in quadratura - transient quadrature axis                  | X'q      | 134                |      | 123             |      |
|                                                                                                                                                     |  | subtransitoria diretta - subtransient direct axis                      | X''d     | 14.1               |      | 12.9            |      |
|                                                                                                                                                     |  | subtransitoria in quad. - subtransient quadr. axis                     | X''q     | 15.5               |      | 14.2            |      |
|                                                                                                                                                     |  | di sequenza negativa - negative sequence                               | X2       | 16.6               |      | 13.5            |      |
|                                                                                                                                                     |  | di sequenza zero - zero sequence                                       | Xo       | 6.8                |      | 6.2             |      |
| COSTANTI DI TEMPO - TIME CONSTANTS (s)                                                                                                              |  | a vuoto - open circuit                                                 | T'do     | 1.746              |      |                 |      |
|                                                                                                                                                     |  | transitoria - transient                                                | T'd      | 0.162              |      |                 |      |
|                                                                                                                                                     |  | subtransitoria - subtransient                                          | T''d     | 0.014              |      |                 |      |
|                                                                                                                                                     |  | unidirezionale - armature                                              | Ta = Tdc | 0.020              |      |                 |      |
| COPPIA DI CORTO CIRCUITO DI BIFASE - PHASE TO PHASE SHORT CIRCUIT TORQUE                                                                            |  |                                                                        | kNm      | 33.3               |      |                 |      |
| COPPIA DI CORTO CIRCUITO DI TRIFASE- THREE PHASE SHORT CIRCUIT TORQUE                                                                               |  |                                                                        | kNm      | 22.2               |      |                 |      |

PRELIMINARY



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## TECHNICAL DATASHEET

### THREE-PHASE SYNCHRONOUS GENERATOR

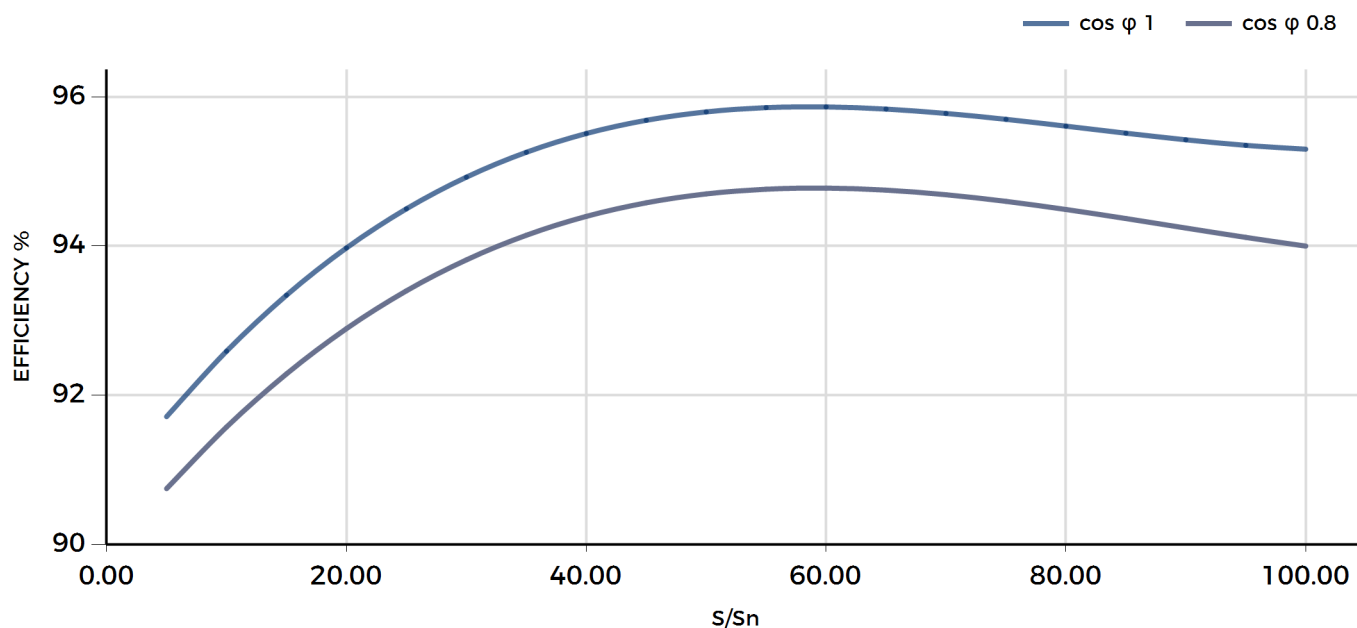
Our Reference -

Date 30/07/2020

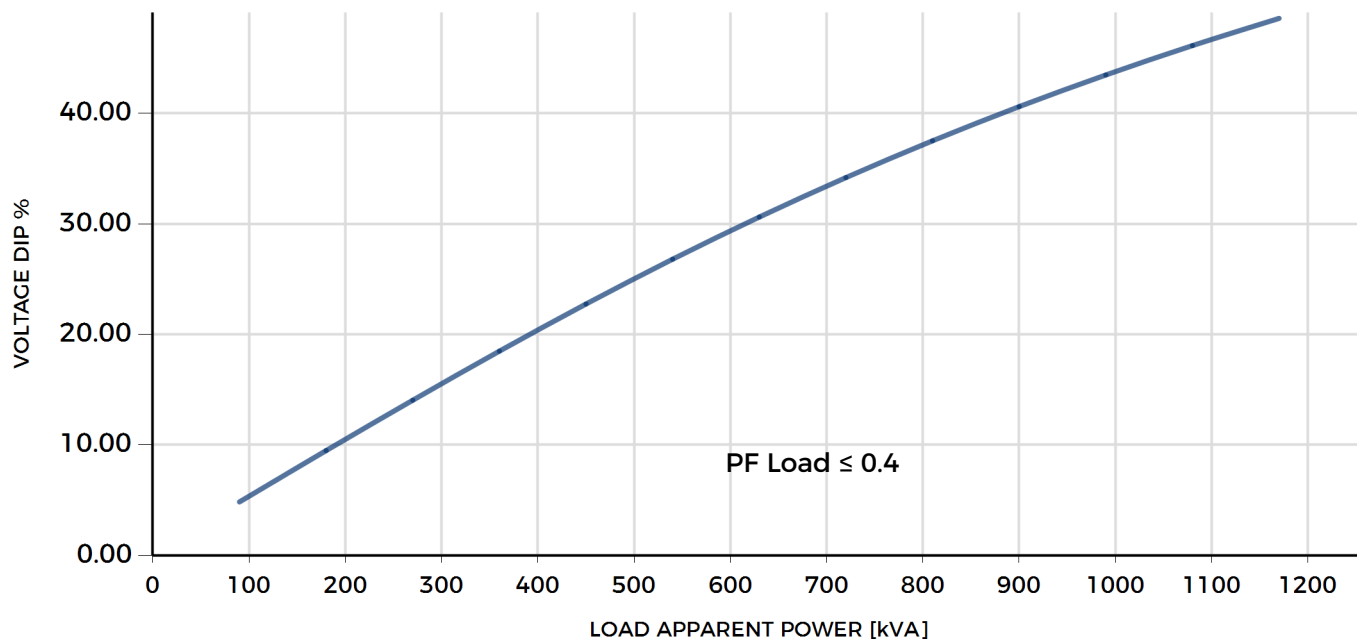
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#### CURVA DI RENDIMENTO - EFFICIENCY CURVE



#### CADUTA DI TENSIONE - VOLTAGE DIP





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# TECHNICAL DATASHEET

## THREE-PHASE SYNCHRONOUS GENERATOR

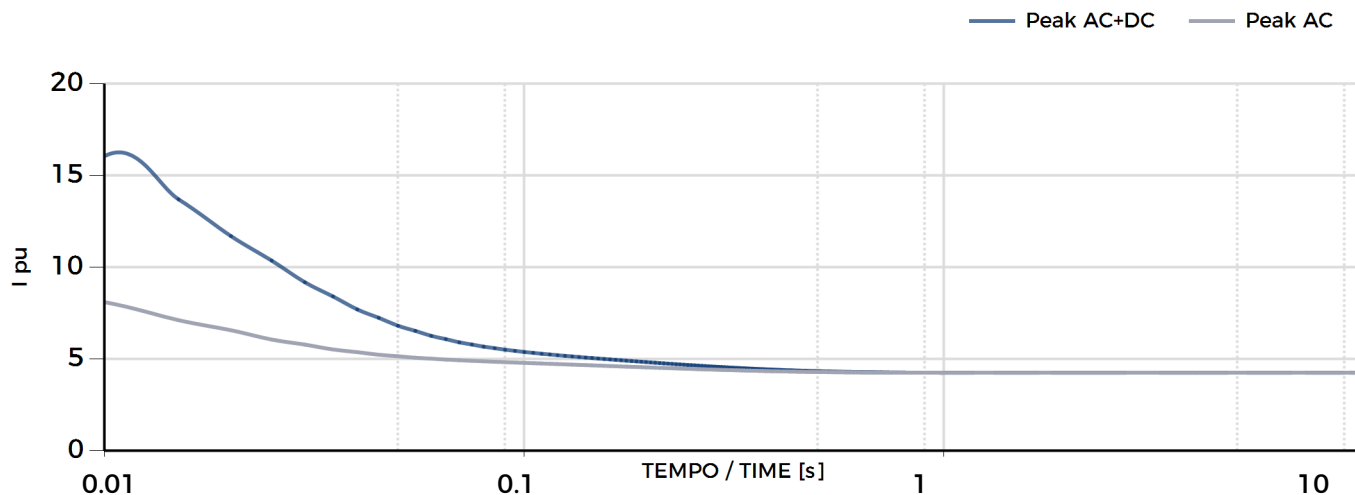
Our Reference -

Date 30/07/2020

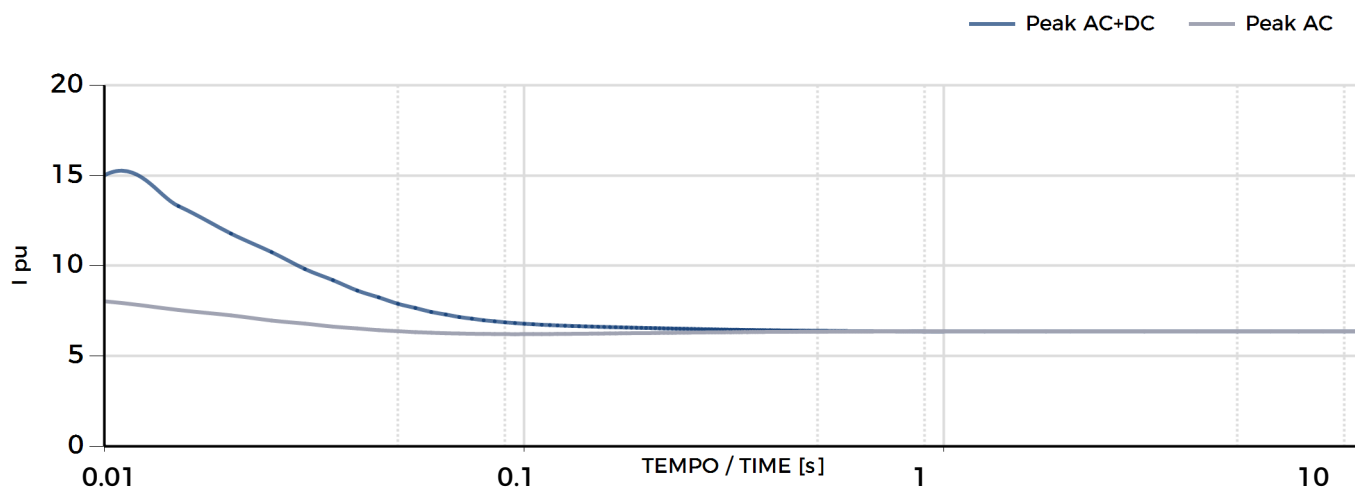
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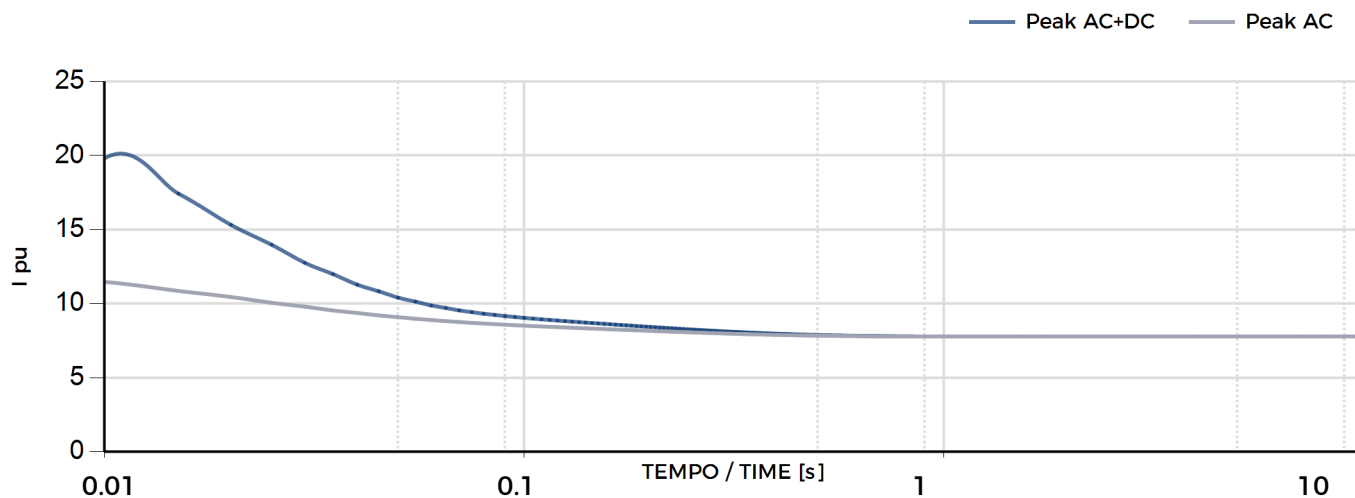
### 3 - PHASE SHORT CIRCUIT DECREMENT CURVE



### 2 - PHASE SHORT CIRCUIT DECREMENT CURVE



### 1- PHASE SHORT CIRCUIT DECREMENT CURVE





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# TECHNICAL DATASHEET

## THREE-PHASE SYNCHRONOUS GENERATOR

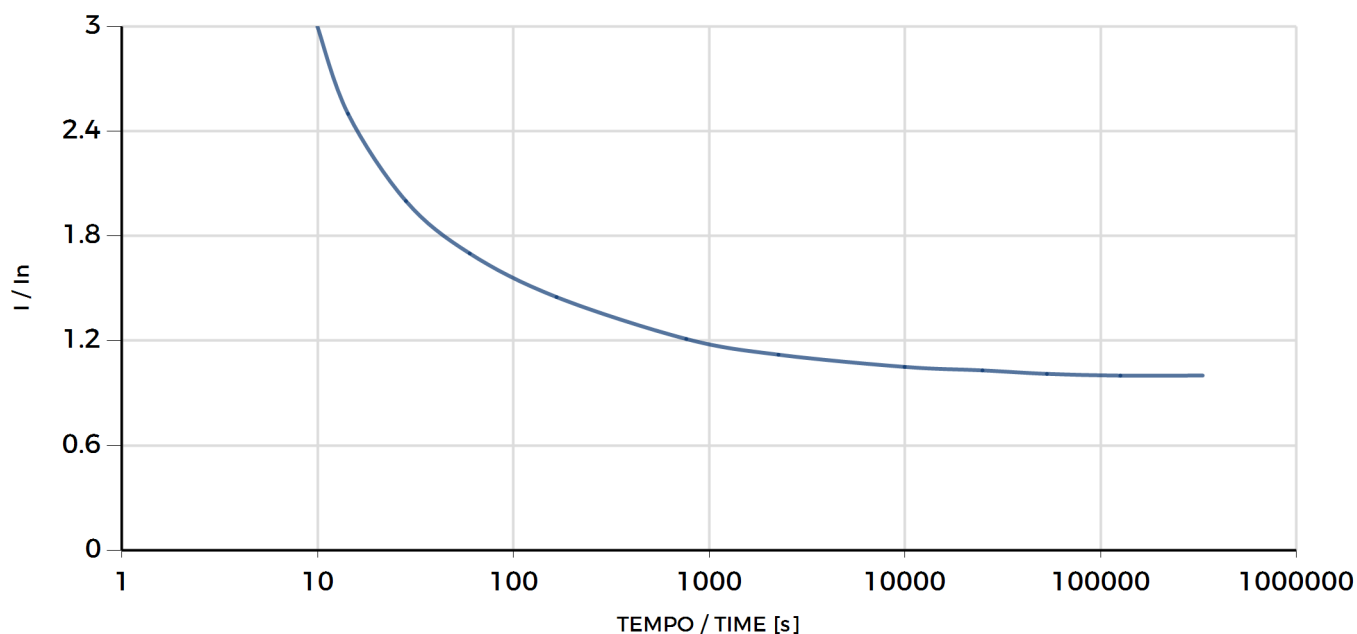
Our Reference -

Date 30/07/2020

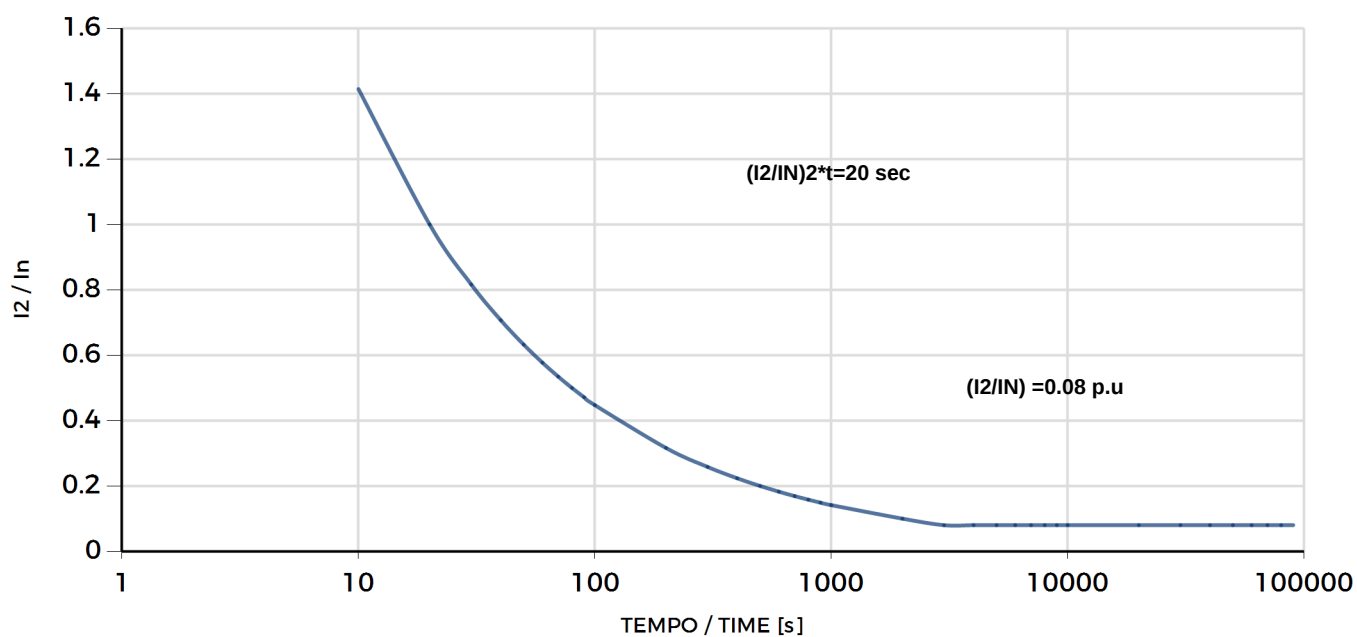
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### CURVA DI LIMITE TERMICO - THERMAL DAMAGE CURVE



### CORRENTE SEQUENZA INVERSA - NEGATIVE SEQUENCE CURRENT





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# TECHNICAL DATASHEET

## THREE-PHASE SYNCHRONOUS GENERATOR

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### CURVA DI CAPABILITY - CAPABILITY CURVE

