

#### **USE**

The purpose of an earth resistor of the star centre is to protect transformers and generators from short circuits between phases and between phases and the earth connection. In fact, when a resistor is inserted between the star and the earth connection the short circuit current is limited to a pre-set value that does not damage the equipment connected.

Additionally, the use of the resistor has the following advantages over other systems:

- It minimizes damage caused by mono phase failures at the earth connection
- It prevents the formation of temporary overloads;
- It limits the electro dynamic strain deriving from external breakdowns (in the network and down line);
- It decreases needless interruptions by protective devices.

#### **GENERAL FEATURES**

OFEL RMT GRJ resistors are robustly built earth connection resistors produced with materials that guarantee high dependability; the stainless steel protective casing, the stainless steel grid, the insulators in steatite and the insulating materials used confer robustness and a high degree of insulation to the RMT GRJ product, also making it non-inflammable.

The RMT GRJ resistors are used in all cases where there are high breakdown voltages and low electrical resistance values are required. This type of resistor has a high overload capacity thanks to the materials used, which permit it to operate at high temperatures (800° C) without undergoing damage

The groups are mounted on modular grid elements on two M16 braces and realise connections through the joining of grid fins, which may be reinforced with copper bars in the event of strong voltages.

#### **ELECTRICAL CHARACTERISTICS**

Tolerance on resistance value  $\pm 10\%$

Temperature coefficient depending on the type of material used

Maximum utilisation temperature 55+750 [°C]

Insulation current depends on requirements

Minimum resistance value depends on the number of elements

Maximum resistance value depends on the number of elements

Level of protection (IEC 529) IP 00

Maximum temperature reached on elements at end of transit 450 [°K]

#### USED MATERIALS

- Active material : AISI 430 (Standard), AISI 304, AISI 310, AISI 316, FeCr-Al
- Support Braces AISI 304
- Insulators steatite C221
- Screws Inox A2

#### APPLICABLE STANDARD

- IEC 529
- IEEE 32
- CEI EN 60694

#### DATA NECESSARY TO REQUEST AN OFFER

The RMT resistor GRJ has dimensions established by our technical office, taking into consideration

- The maximum breakdown current  $I_g$  [A]
- The maximum duration of breakdown current  $t$  [Sec]
- Level of potential respect for earth connection  $E$  [Kv]

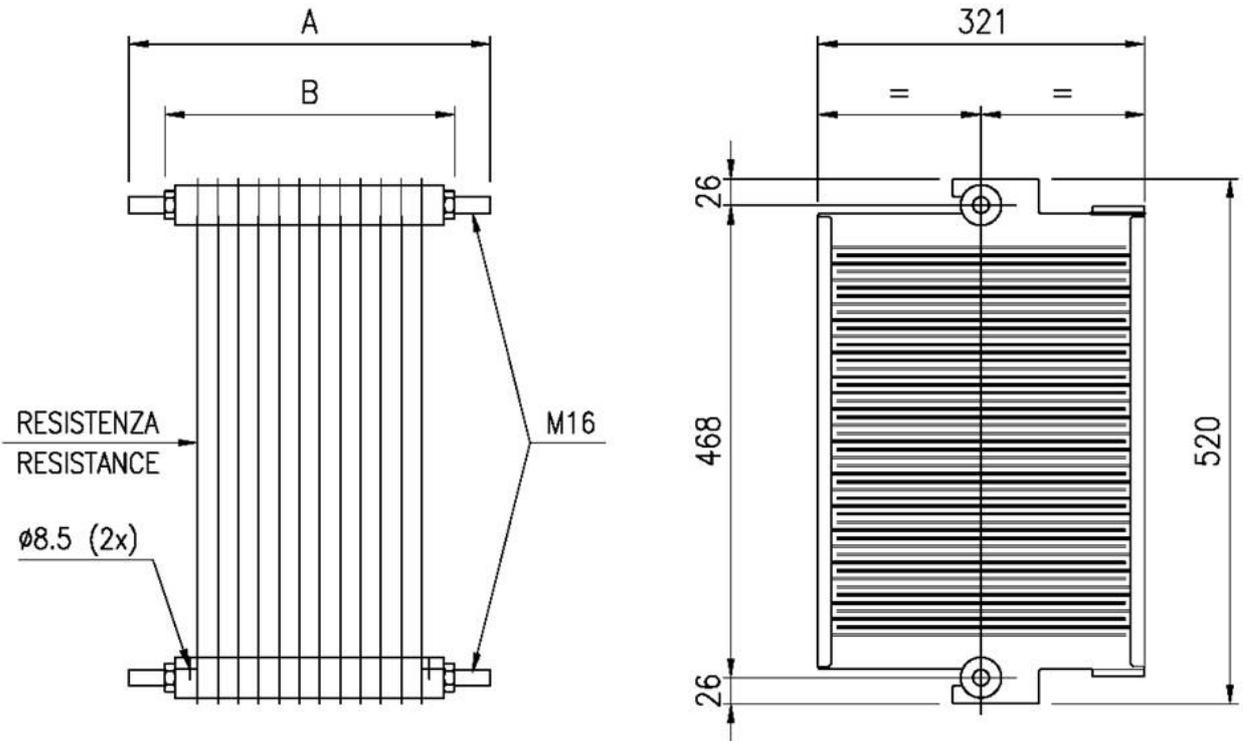
#### OPTIONAL

- Ohm values off standard compatibly with production
- Off standard tolerances
- Special production with increased protection level up to IP IP54.
- Epoxy powder paint in RAL colours on request.

#### SPECIAL EXECUTIONS



**GENERAL FEATURES FOR BANKS IP00 (INSULATORS EXCLUDED)**



Max Nr of GRIDS	13	17	21	30	36	40
Tie rod length "A" mm	410	500	600	800	940	1100
Banks grid length "B" mm	330	420	520	720	860	1030