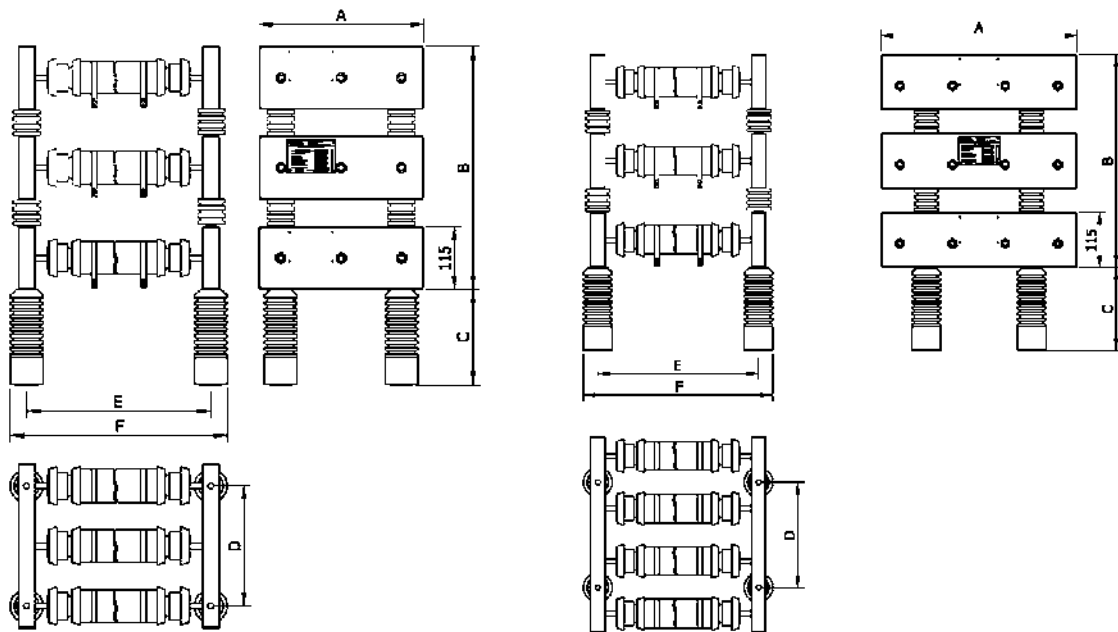




GROUNDING RESISTORS WIRE MODEL RMT RFC

TECHNICAL DESIGN



GENERAL FEATURES

OFEL RMT resistors are robustly built earth connection resistors produced with materials that guarantee high dependability; the stainless steel protective casing, the support in thermo electric material, the ceramic insulators confer the RMT product with robustness, a high degree of insulation and make them non-inflammable.

Additionally, the FeCrAl alloy used for the winding guarantees limited resistance variations, maintaining current veritably constant during use.

RMT resistors are now a consolidated OFEL product, thanks to the experience acquired over the years, and have achieved a standard configuration that is developed in height in order to contain space required inside electric panels and cabinets. The groups may start from a base of three or four elements and be developed in height up to 20 elements (max. 5 levels). Each level is insulated with ceramic insulators that have a guarantee for the required insulation class.

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.

ELECTRICAL CHARACTERISTICS

- Tolerance on resistance value $\pm 5\%$
- Low temperature coefficient ohm values 12 ppm
- High Ohm values 70 ppm
- Maximum utilisation temperature 55+350 [°C]
- Insulation current depends on requirements
- Minimum resistance value $1W \times n^\circ$ elements [W]
- Maximum resistance value $27kW \times n^\circ$ elements [W]
- Level of protection (IEC 529) IP 00
- Temperature reached on wire at end of transit less than 450 [°K]

USED MATERIAL

- Ceramics Cordierite C511
- Cement inorganic
- Resistive alloy FeCrAl/NiCr/Cuni
- Supports AISI 304
- Insulators in porcelain

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.

TYPE		RMT 3 RFC	RMT 4 RFC	RMT 6 RFC	RMT 8 RFC	RMT 9 RFC	RMT 12 RFC	RMT 16 RFC	RMT 20 RFC
Power rating at 25°C		600 W	1300 W	2200 W	4000 W	5000 W	5001 W	5002 W	5003 W
Resistance range		$1 \div 70$	$1 \div 100$	$1 \div 150$	$1R5 \div 200$	$1R5 \div 200$	$1R5 \div 201$	$1R5 \div 202$	$1R5 \div 203$
Classi di isolamento		0,72kV - 3,6kV - 7,2kV - 12kV - 17,5kV							
Insulation resistance		$\geq 100 \text{ M}\Omega$	$\geq 100 \text{ M}\Omega$	$\geq 100 \text{ M}\Omega$	$\geq 100 \text{ M}\Omega$	$\geq 100 \text{ M}\Omega$	$\geq 100 \text{ M}\Omega$	$\geq 100 \text{ M}\Omega$	$\geq 100 \text{ M}\Omega$
Tolerances of resistance		$\pm 5\%$	$\pm 5\%$	$\pm 5\%$	$\pm 5\%$	$\pm 5\%$	$\pm 5\%$	$\pm 5\%$	$\pm 5\%$
DIMENSIONS		RMT 3 RFC	RMT 4 RFC	RMT 6 RFC	RMT 8 RFC	RMT 9 RFC	RMT 12 RFC	RMT 16 RFC	RMT 20 RFC
Width	"A" mm	640	640	640	640	640	640	640	640
Insulator width	"A" mm	690	690	690	690	690	690	690	690
Height	"B" mm	115	115	280	280	445	445	610	775
Length's wheelbase	"E" mm	610	610	610	610	610	610	610	610
Width's wheelbase	"D" mm	220	220	220	220	220	220	220	220
Insulator's height for Vis. 3,6kV - 7,2kV	"C" mm	95	95	95	95	95	95	95	95
Insulator's height for Vis. 12kV	"C" mm	130	130	130	130	130	130	130	130
Insulator's height for Vis. 17,5kV	"C" mm	175	175	175	175	175	175	175	175
Weights Kg (Insulators excluded)		15	16	30	32	45	50	65	80

SPECIAL EXECUTIONS



APPLICABLE STANDARDS

- IEC 529
- IEEE 32
- CEI EN 60694

DATA NECESSARY FOR REQUEST AN OFFER

- The RMT resistor (n) RFC 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]