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RELAIS DE PROTECTION CONTRE LES
DEFAUTS D'ISOLEMENT DES RESEAUX CONTINUS
EN BOITIER MODULAIRE

D.C. SYSTEM EARTH FAULT PROTECTION RELAY
IN MODULAR CASE

I A G B 7 0 1 2

Nr 1791/2
04/88

**D.C. SYSTEM EARTH FAULT PROTECTION RELAY
IN MODULAR CASE**

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I. GENERAL

The IAGB 7012 relay detects earth faults in DC systems whose terminals and circuits are normally insulated from earth. Supplied in a R1 modular case, this relay benefits from the experience acquired over many years by C.E.E. in all types of electrical installations, in France and numerous other countries around the world, and under all climatic conditions.

The principle of operation is based upon the appearance of an unbalance between the voltages on the system terminals with respect to earth. The IAGB 7012 is designed to give an alarm shortly after to the development of an earth fault on either of the terminals being monitored. The relay setting range of 5mA to 20mA is achieved by means of a plug-bridge arrangement.

II. GENERAL CHARACTERISTICS

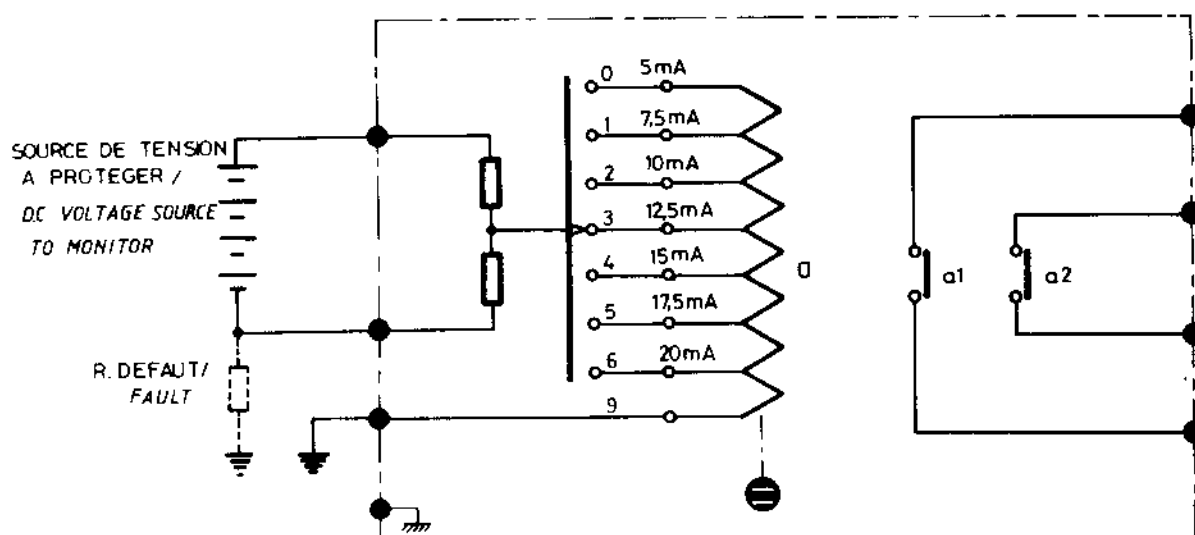
1. I > plug settings	5 - 7.5 - 10 - 12.5 - 17.5 - 20mA
2. Rated voltage	48 - 110 - 125 - 220 - 230 V DC $\pm$ 15%
3. Operating time	< 70ms at twice the I > plug setting
4. Burden	48V DC : $\approx$ 2.5W - 110V DC : $\approx$ 1.6W 125V DC : $\approx$ 2.5W - 220V DC : $\approx$ 4.5W 230V DC : $\approx$ 5W
5. Precision class index at the reference temperature (20°C)	10%
6. Maximum error on the I > pick-up, within the temperature range : -5°C to +55°C	$\pm$ 5%
7. Temperature range over which operation of the relay is assured	-10°C to +60°C
8. Overload capacity at 115% of rated voltage	a "solid" fault permanently
9. Output contacts :	2NO or 1NO + 1 NC
. Maximum voltage	600V
. Maximum continuous current	5A
. Making capacity (0.2 s)	10A
. Rupturing capacity :	
- DC (L/R = 40ms)	50W (1A/48V DC - 0.5A/110V DC)
- AC (cos ϕ = 0.4)	1,250VA (I < 3A)
10. Operation indicator	manual reset
11. Insulation :	
- Dielectric withstand :	
. between all terminals connected together and the frame	2kV - 50 or 60Hz for 1 minute
. between input terminals and the contacts	2kV - 50 or 60Hz for 1 minute
- Impulse voltage withstand in common and tranverse mode	5kV - 1.2/50 μ s according to IEC 255-5

12. Insensibilité aux perturbations haute fréquence	2,5 et 1kV/1MHz selon CEI 255-6 Annexe C Classe III
13. Boîtier	R1
14. Schéma d'identification	9951
15. Poids	$\approx$ 1,7 Kg

III. TABLEAU DE CORRESPONDANCE ENTRE LES SEUILS EN mA ET LES RESISTANCES DE DEFAUTS EN KOhms POUR LES DIFFERENTES SOURCES DE TENSION A PROTEGER

Tension nominale	Seuil 5mA à 20mA
48V CC	0,8 KOhms à 0,25 KOhms
110V CC	5 KOhms à 0,5 KOhms
125V CC	7 KOhms à 0,7 KOhms
220V CC	13 KOhms à 2 KOhms
230V CC	15 KOhms à 2 KOhms

IAGB 7012 - EXEMPLE DE SCHEMA DE FONCTIONNEMENT ET DE RACCORDEMENT SIMPLIFIE
- EXAMPLE OF SIMPLIFIED AND CONNECTION DIAGRAM



12. Immunity to high frequency disturbance	2.5 and 1kV/1MHz according to class III of IEC 255-5
13. Case	R1
14. Identifying drawing	9951
15. Weight	≈ 1.7 Kg

III. TABLE SHOWING THE FAULT RESISTANCES IN KOHms CORRESPONDING TO THE RELAY SETTING IN mA, FOR THE VARIOUS SYSTEM VOLTAGES TO BE PROTECTED

Rated voltage	Setting 5mA to 20mA
48V DC	0.8 KOHms to 0.25 KOHms
110V DC	5 KOHms to 0.5 KOHms
125V DC	7 KOHms to 0.7 KOHms
220V DC	13 KOHms to 2 KOHms
230V DC	15 KOHms to 2 KOHms

BOITIER/CASE

TYPE R1

		saillie prises avant projecting front connection	saillie prises arrière projecting rear connection	encastré prises arrière flush rear connection
R1	ENCOMBREMENTS CASE DIMENSIONS			
	PERÇAGES ET DECOUPES DRILLING AND CUT OUT			