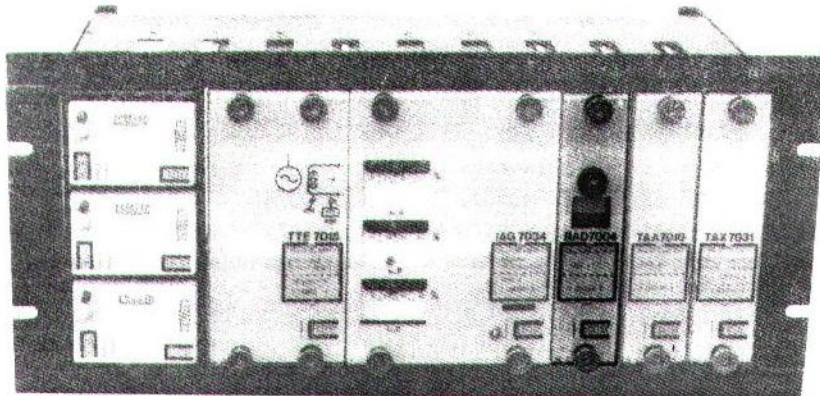


RAD 7000

*Trip relays
with mechanical
lock-out
in modular case*



C.E.E.'s range of trip relays which do not have a self-reset action on the contacts includes two types of device, both of which have a high contact capacity and operating speed.

The RAD 7004 provides in a small volume 4 independent hand-reset contacts (as a variant there is an electrically reset version; the reference becomes RADE 7004).

The RADE 7010 has 10 contacts which may be hand-reset or electrically-reset.

These devices are generally used as tripping auxiliaries, either when the number of contacts on the protective relay is insufficient compared to the required number of functions (which is often the case for bus-bar differential protection), or their capacity is below that necessary for the power of the breaker trip coil in question, or when a lock-out function is required on the signals given - (a mechanical lock-out is often essential in this case, as an electrical hold-in of a standard relay relies on the presence of an auxiliary supply source, which does not ensure a sufficiently high level of security).

DESCRIPTION

Their high operating speed requires a high power in the coil, which in turn imposes the use of a series cut-off contact.

The RAD 7004 consists essentially of an attracted armature unit with one coil, the lock-out function being performed on the contact assembly.

In order to provide for an electrical reset, the RADE 7010 is fitted with two coils, the mobile armature and contacts having two stable states.

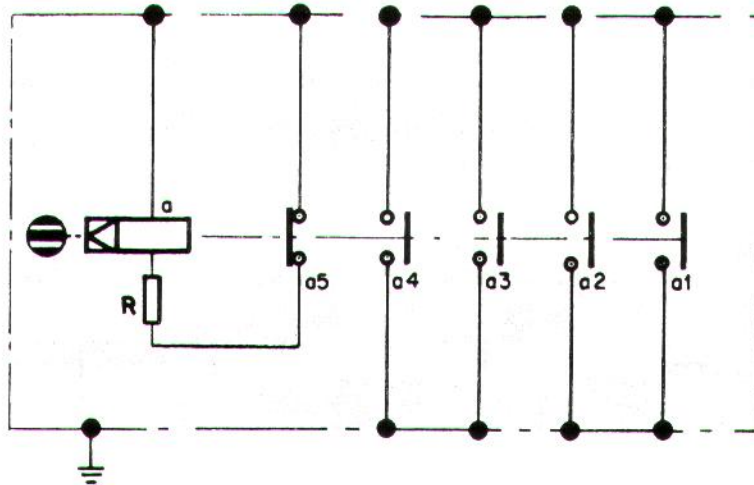
Both types have a reset push-button on the front plate of the case, as well as an operation indicator (which is directly associated with the contact position).

They have, respectively, 4 and 10 independent contacts which may be of the make type (normally open) or break type (normally closed). The required contact combination must be stated at the time of ordering (see the connection diagrams for the available standard combinations).

These devices are presented in modular plug-in case types R1 (RAD 7004) and R2 (RADE 7010) which may be mounted separately, either projecting (with front or rear connection) or flush, or grouped together with the protective relays in a standard 19" corresponding to 10 R1 (or smaller rack).

MAJOR ADVANTAGES

- Mechanically very robust.
- Identical presentation to that of the protective relay.
- Wide operating range.
- Possibility of remote electrical reset for the RADE 7004 and 7010.
- Correct operation when supplied from an un-smoothed rectifier source.



RAD 7004 — Simplified operation and connection diagram

GENERAL CHARACTERISTICS

	TYPE OF RELAY	
	RAD 7004	RADE 7010
1 DC nominal operating voltage	24/48/60/110/125/220/250V	24/48/110/125/220V For other values, please consult us
2 Number of contacts	4	10 (for combinations see connection diagram)
3 Contacts capacity :		
. Continuous current	5 A	10 A
. Closing capacity	30 A	60 A
. Short duration current	15 A—1 sec.	200 ms to CEI-255-020 Class III
. Breaking capacity :		30 A—1 sec.
— on AC	1250VA (cos $\phi = 1$) with max. of 5A or 500V 100W resistive with max. of 3A or 500V 50W inductive (L/R = 40 ms) with max. of 3A or 500V	2200VA (cos $\phi = 1$) with max. of 5A or 500V 500W resistive with max. of 10A or 500V 200W inductive (L/R = 40 ms) with max. of 5A or 500V
— on DC		
4 Nominal operating time	10 ms	12 ms
5 Maximum operating time within the following ranges :		
. Temperatures from -20 to $+70^{\circ}\text{C}$	(13 ms	18 ms
. Control voltage from -25% to $+20\%$)	
6 Transient burden at nom. V during operating time	25 W	120 W
7 Type of reset	manual mechanical operation indicator incorporated	manual or electrical mechanical operation indicator incorporated
8 Nominal insulation voltage (to CEI 255-5)	500 V	500 V
9 Dielectric withstand between :		
. Open contacts	1 kV - 50 Hz/1 min	1 kV - 50 Hz/1 min
. Coil, contacts and frame	2.2 kV - 50 Hz/1 min	2.2 kV - 50 Hz/1 min
10 Weight	1.8 kg	3 kg
11 Identifying drawing	9837	9838
12 Case	R1	R2

		projecting front connection	projecting rear connection	flush rear connection
CASE DIMENSIONS	CONNECTING SCREWS \varnothing M4			
R1	CASE DIMENSIONS			
	DRILLING AND CUT OUT			
R2	CASE DIMENSIONS			
	DRILLING AND CUT OUT			

Only documents supplied with our acknowledgement are to be considered as binding



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