



(SE970898)

Features

- Protection against misoperation of auxiliary relays due to voltage transients/surges
- No delay of normal operation
- Use for trip relays or any function requiring pick-up voltage control
- No limit to tolerated DC battery system capacitance

Application

High-speed auxiliary relays can at earth-fault in unearthed DC voltage systems give unwanted operation.

If the earth-fault occurs on the wire between the relay coil and the contact which connect the voltage to the relay, the energy stored in the leakage capacitances of the system will be redistributed. Then the relay will be energized with a voltage which is about 50% of the system voltage. The voltage over the relay decreases fast to a value decided by the resistance of the relay coil and the leakage capacitance of the system to earth.

To avoid the risk that the voltage, caused by the earth-fault, causes unwanted operation on auxiliary relays, a control unit, type designated RTXV, should be connected in series with the terminal of the relay coil.

The control unit connects the applied voltage to the relay only if the voltage is large than 60-80% of the rated voltage of the unit. The voltage drop in the control unit is about 2 V.

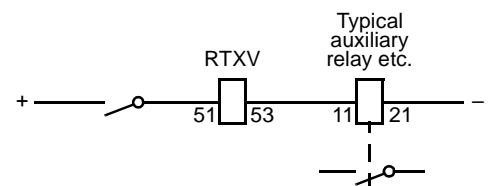


Fig. 1 Example of connection to an auxiliary relay.

Design

The control unit is mounted in a small component box, which in its turn can be mounted into the rear pocket of the terminal base of COMBIFLEX-relays. The terminals of the unit are marked 51 and 53. Terminal 51 is equipped with a branch connector RTXCB, to which two 10 A COMBIFLEX-sockets can be connected. Terminal 53 is equipped with a wire with 10 A COMBIFLEX-socket.

The RTXV control unit can be connected at will to either the positive or negative side of the auxiliary device/relay depending on configuration.

To terminal 51 the positive pole of the voltage is to be connected.

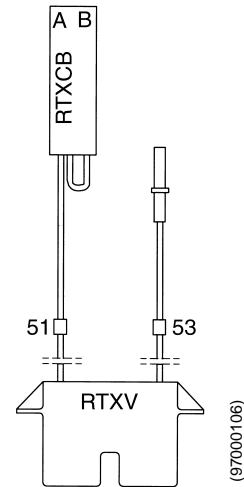


Fig. 2 RTXV Control unit

Technical data

Table 1: Rated voltage and operation

Rated voltage U_r	48, 110, 125, 220 or 250 V DC
Operate voltage	60-80% of U_r
Permissible burden	1-8 W
Voltage drop	Approx. 2 V
Temperature range	-20 to +55 °C
Operate time at U_r	< 1 ms
Resetting time	< 0,5 ms

Table 2: Electromagnetic compatibility (EMC), Immunity tests

1 MHz burst test	2,5 kV	IEC 60255-22-1, class 3
Spark test	4-8 kV	SS 436 15 03, PL 4
Fast transient test	4 kV	IEC 60255-22-4, class 4

Ordering

Specify:

- Type
- Quantity
- Ordering No.

The following ordering numbers are valid for the control unit type RTXV:

$U_r = 48 \text{ V DC}$	1MRK 001 400-AA
$U_r = 110 \text{ V DC}$	1MRK 001 400-CA
$U_r = 125 \text{ V DC}$	1MRK 001 400-DA
$U_r = 220 \text{ V DC}$	1MRK 001 400-EA
$U_r = 250 \text{ V DC}$	1MRK 001 400-FA

References

RXKL 1 and RXKM 2H	1MRK 508 002-BEN
RXMB 1, RXMB 2 and RXMC 1	1MRK 508 006-BEN
Auxiliary relays	1MRK 508 015-BEN

Manufacturer

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