



TECHNICAL MANUAL

Voltage monitoring relay (1P+N) RVb EKF

1 DESCRIPTION

Voltage monitoring relay (1P+N) RVb EKF is a switching device designed for continuous voltage monitoring in single-phase AC networks, to protect electrical installations against voltage variations. The relay is installed into a two-wire circuit directly after the incoming circuit breaker, protecting the branch circuits.

The relay monitors the voltage in a preset range of 165-275 V and trips after a preset time delay if the voltage is out of bounds, de-energizing downstream devices.

Voltage monitoring relays EKF comply with IEC 60947-5-1.

2 TECHNICAL DATA

Table 1 - Technical data

Characteristics	Values	
Rated supply voltage U_n , V	220-240	
Rated frequency, Hz	50/60	
Maximum output current, A	40	63
Overvoltage range, V	260-275	
Undervoltage range, V	165-175	
Trip delay range, sec.	1,5-2	
Reset time delay range, sec.	30	
Trip delay accuracy, %	±10	
Rated insulation voltage U_i , V	300	
Degree of protection	IP20	
Pollution degree	3	
Electrical endurance, cycles	100 000	
Mechanical endurance, cycles	1 000 000	
Max. altitude above sea level, m	2000	
Operating temperature, °C	-5 to +50	
Storage temperature, °C	-25 to +55	
Mounting	DIN rail	
Connection	Screw terminals, max. wire cross-section 10 mm ²	
Tightening torque, N*m	2,5	

For wiring diagram refer to Figure 1.

Wiring diagrams

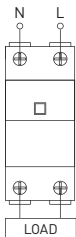


Figure 1. Relay wiring diagram

Application

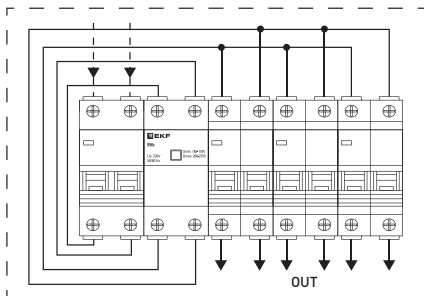


Figure 2. Relay wiring diagram

If the supply voltage is within the normal range, the relay will activate and power the line. If voltage is out of bounds, the relay will open, disconnecting the load.

Once the normal supply voltage is restored, the relay will automatically turn the load back on after a 30-second countdown.

3 OVERALL DIMENSIONS

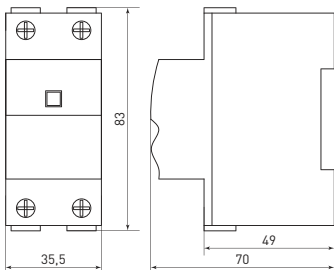


Figure 3. Relay overall dimensions

4 OPERATING CONDITIONS

Operating temperature: from -5°C to +50°C.

Max. altitude above sea level: 2000 m.

5 DELIVERY SCOPE

Voltage monitoring relays are supplied in an individual package. For all available documentation, scan the QR-code on the insert or on the inside of the package.

6 SAFETY REQUIREMENTS

Do not operate the devices with visible mechanical damage.

Relays conform to IEC 61140 Class 0 for protection against electrical shock and must be installed in distribution enclosures with Class 1 protection or higher.

7 MAINTENANCE

For maintenance, follow national safety rules for operation of electrical Installations.

Under normal operating conditions, visually inspect relays every 6 months.

Do not operate relays with damaged housing.

The relay must be installed and maintained by the qualified personnel.

Follow the wiring diagram when connecting the relay.

Do not install the relay without protective cover in any area exposed to water or direct sunlight.

8 TRANSPORTATION AND STORAGE

Relays can be transported by any means of enclosed transport that ensures protection of packed products from mechanical impacts and weather exposure.

Relays shall be stored indoors, in their original packaging, at the ambient temperatures from -25°C to +75°C and max. relative humidity of 80% at +25°C.

9 DISPOSAL

Life-expired and failed devices shall be disposed of in compliance with the effective national and local laws and regulations.

To dispose of the product, send it to an authorized company for recycling in compliance with the effective national and local laws and regulations.

10 MANUFACTURER'S WARRANTY

The manufacturer guarantees the relays comply with the declared characteristics, provided that the consumer follows the operation, transportation and storage conditions and requirements.

Warranty period: 3 years from the date of sale specified in the sales receipt.

Shelf life: 3 years from the date of manufacture specified on the product package or housing.

Service life: 8 years

Manufacturer: OOO Electroresheniya, Otravnaya st.,
2b/9, 127273, Moscow, Russia, tel. +7 (495) 788-88-15.

MEA regional headquarters: EKF ELECTRICAL SOLUTION FZCO,
Techno Hub-2, DSO, P.O. box 341079, Dubai, United Arab Emirates,
tel. +971-4-547-06-18.

**Importer and EKF trademark service representative in the territory
of the Republic of Kazakhstan:** TOO «Energoresheniya Kazakhstan»,
Kazakhstan, Almaty, Bostandyk district, Turgut Ozal st., 247, apt 4.

11 CERTIFICATE OF ACCEPTANCE

Voltage monitoring relay (1P+N) RVb EKF has been manufactured in compliance with the laws and regulations in effect and has been approved for operation.

Date of manufacture: for information, refer to the product packaging.

Quality control stamp

EHL



v3

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