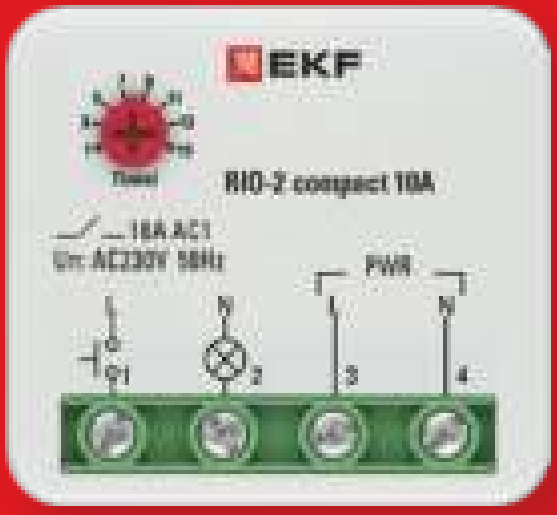
EKF



TECHNICAL MANUAL

Pulse relay
RIO compact EKF

1 DESCRIPTION

Pulse relays RIO compact EKF are designed to switch lighting or other electrical equipment over a two-wire network from multiple points using parallel connected momentary switches. Relays comply with IEC 60947-1 and IEC 60947-5-1.

2 TECHNICAL DATA

Table 1

Characteristics		RIO-1 compact 10A	RIO-2 compact 10A	RIO-1 compact 16A	RIO-2 compact 16A
Rated supply voltage Un, V AC		220-240			
Rated frequency, Hz		50/60			
Rated control circuit voltage, V		230			
Insulation voltage Ui, V		250			
Rated contact current, A	at cosφ = 1	10		16	
	at cosφ = 0,7	6		10	
Utilization category		AC-1			

Table 1 continued

Characteristics	RIO-1 compact 10A	RIO-2 compact 10A	RIO-1 compact 16A	RIO-2 compact 16A
Time delay, min	-	1-15	-	1-15
Type and number of contacts	1 NO			
Control current, mA	⩽1			
Max. power consumption, VA	0,8			
Electrical endurance, cycles	100 000			
Mechanical endurance, cycles	1 000 000			
Max. conductor cross-section, mm^2	1,5			
Tightening torque, N·m	0,5			
Degree of protection	IP20			
Max weight, g	50			

Table 2

Characteristics	Value
Operating temperature, °C	-5 to 50
Max. altitude above sea level, m	2000
Max. relative humidity at 40 °C (non-condensing), %	60
Pollution degree	3
Position in space	Arbitrary
Mounting	Junction box

The product must be operated under the following ambient conditions:

- non-explosive environment;
- no corrosive gases and vapors in concentrations damaging to metals and insulation;
- no saturation with conductive dust and vapors;
- no direct exposure to ultraviolet radiation (for the relay).

The product housing is made of flame retardant ABS plastic
When a control signal pulse is received and one of the momentary switches closes, the output contact N closes . When the pulse is repeated, the contact opens.
The relay is switched off by pressing the momentary switch or after the integrated timer finishes the countdown.

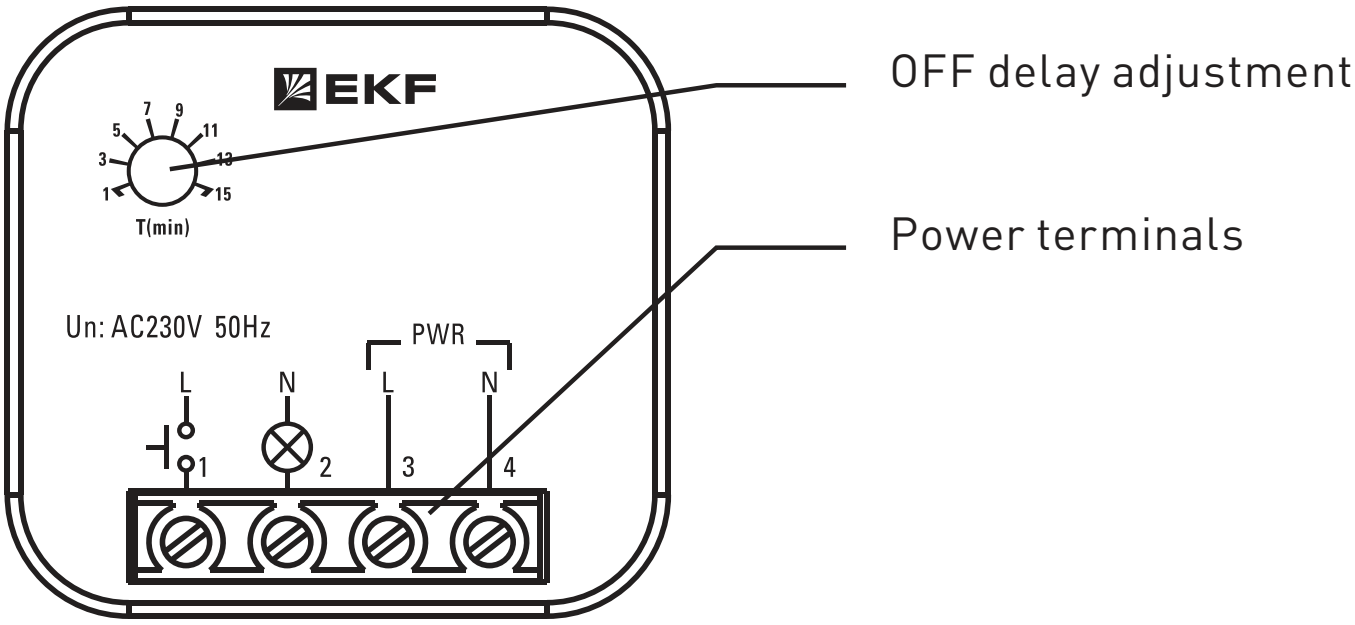
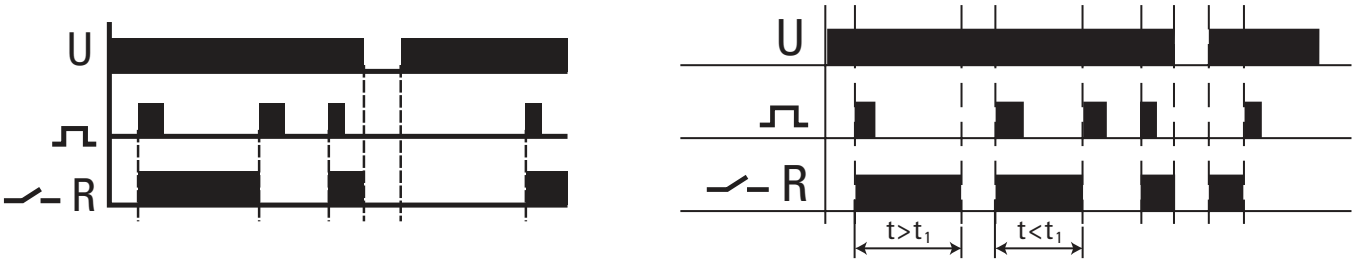


Figure 1. Control panel

For relay operation diagram, refer to Figure 2.



RIO-1 compact RIO-2 compact

Figure 2. Relay operation diagram

Relay RIO-1 compact has no memory function, i.e. when the power is off, the contacts open and remain open after power is back on.
Relay RIO-2 compact has a memory function, i.e. when the power is off, the contacts open, and after the power is back on, the contacts close.
Relays can be used with backlit button switches.

3 INSTALLATION AND OPERATION

The relays are installed in the junction boxes.
To avoid interference, false tripping, or malfunctioning of the relay, do not route the relay supply wires along with the power wiring. If necessary, use a shielded cable.
Copper and aluminum wire connections are supported (max. cross-section is 1,5 mm^2). Before connecting stranded conductors, terminate them with a ferrule or a sleeve using an appropriate tool.
Follow Figure 3 to connect the relay.
Pulse relays are compatible only with momentary (non-latching) switches.
Relay does not require any additional maintenance. Tighten screw terminals of the relay min. once every 6 months.

4 WIRING DIAGRAM

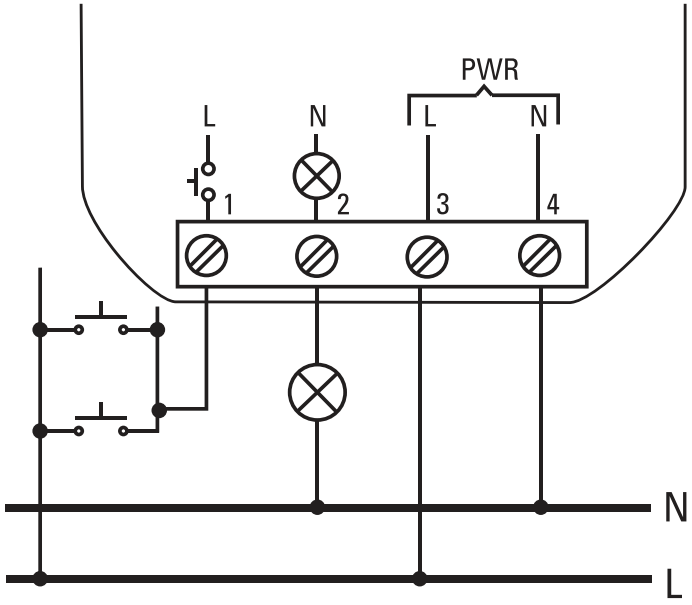


Figure 3. Wiring diagram

5 OVERALL AND INSTALLATION DIMENSIONS

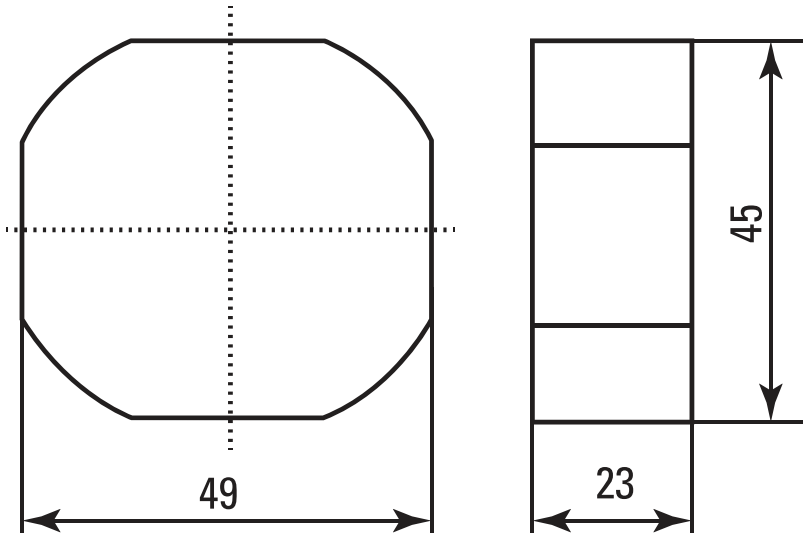


Figure 4. Overall and installation dimensions

6 DELIVERY SCOPE

Relays are supplied in an individual package.
Scan the QR-code on the insert or on the inside of the package for all available documentation.

7 SAFETY REQUIREMENTS

WARNING! Hazardous voltage.
The device conforms to IEC 61140 Class 0 for protection against electrical shock.
The devices must be installed and serviced by qualified electrical personnel only.
Do not operate relays with visible mechanical damage.
For maintenance, follow national safety rules for operation of electrical Installations.
Do not operate the relays with damaged housing.
Failure to comply with the instructions may lead to product malfunction, electrical shock or fire.

8 TRANSPORTATION AND STORAGE

Relays can be transported by any means of enclosed transport that protects the packaged goods from mechanical impact and weather exposure.
Relays shall be stored indoors, in their original packaging, at the ambient temperatures from -40 °C to +55 °C and max. relative humidity of 80% at +25 °C.

9 DISPOSAL

Life-expired and failed products shall be disposed of in compliance with the national and local laws and regulations in force.
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: 7 years from the date of sale specified in the sales receipt.

Shelf life: 7 years from the date of manufacture specified on the product package or housing.

Service life: 10 years.

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

Importer and EKF trademark service representative: EKF ELECTRICAL SOLUTION — FZCO, Dubai Silicon Oasis, DDP, Building A2, Dubai, United Arab Emirates, tel. +971-4-547-06-18.

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

11 CERTIFICATE OF ACCEPTANCE

Pulse relays RIO compact EKF have been manufactured in compliance with the effective laws and regulations and have been approved for operation.

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

Quality control stamp

EAC

v3

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