



TECHNICAL MANUAL

Time relay RT-SBE

off delay trailing edge

1 DESCRIPTION

Time relay RT-SBE EKF is an electronic switching device with an adjustable time setting. The relay is designed to switch on the load after the signal appears and switch it off with a time delay after the signal disappears. Time delay can be adjusted using the dials on the front panel of the relay.

The time relay complies with IEC 61000-4-4:2004.

The relay can be used in industrial and household automation, e.g. in HVAC and lighting systems.

2 TECHNICAL DATA

Table 1

Characteristics	Values			
	RT-SBE	RT-SBE-2	RT-SBE-12-240	RT-SBE-12-240-2
Rated voltage, V	24-240 AC/DC		12-240 AC/DC	
Rated pulse voltage, V AC	400			
Power consumption	AC: $\leq 1,5$ VA; DC: ≤ 1 W			
Time delay range	0,1 s ... 10 days			
Set-point accuracy, %	≤ 5			
Repeatability, %	$\leq 0,2$			
Power interruption, ms	min 200			
Electrical life, cycles	100 000			
Mechanical life, cycles	1 000 000			
Number of switching contacts	1	2	1	2
Rated load current	8A at 230 V AC1			
Interference immunity	3 in accordance with IEC 61000-4-4:2004			

Table 1 continued

Characteristics	Values			
	RT-SBE	RT-SBE-2	RT-SBE-12-240	RT-SBE-12-240-2
Max. altitude above sea level, m	2000			
Degree of protection	IP20			
Pollution degree	3			
Operating temperature, °C	-5 ... 40			
Storage temperature, °C	-25 ... 75			
Connection	Screw terminals, max. conductor cross-section 2,5 mm ²			
Tightening torque, N*m	0,5			
Mounting	35 mm DIN rail			

LED indication

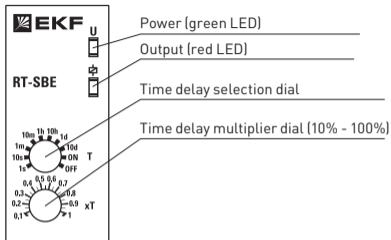
Green "U" LED: constantly lit when the relay is powered.

Red "⚡" LED: flashes red during timer countdown.

The relay is on, contacts 15-18 (25-28) are closed - lit.

The relay is off, contacts 15-18 (25-28) are open – not lit.

Control panel



Function diagram

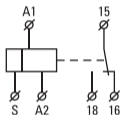


The relay activates at signal S detection (leading edge) and deactivates with an off delay after the signal S disappears (trailing edge). After the relay is energized, it remains in a steady state until a signal (S) is detected. As soon as the signal is detected, contacts 15-16 [25-26] open, contacts 15-18 [25-28] close, and relay remains in the steady state while the signal (S) is being detected. As soon as the signal (S) disappears, a countdown (T) is started. Once the countdown is finished, contacts 15-18 [25-28] open, and contacts 15-16 [25-26] close. The cycle repeats when the signal (S) reappears.

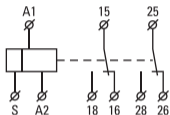
Setup:

- Install and secure the relay in the intended location.
- Connect the relay as per wiring diagram.
- Energize the relay, the "U" LED will light up green.
- Set up the required time ranges.

Wiring diagram



RT-SBE, RT-SBE-12-240



RT-SBE-2, RT-SBE-12-240-2

3 OVERALL AND INSTALLATION DIMENSIONS

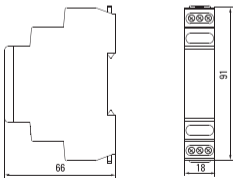


Fig. 1

4 OPERATING CONDITIONS

4.1 Operating temperature: -5°C to $+40^{\circ}\text{C}$

4.2 Max. altitude above sea level: 2000 m.

5 DELIVERY SCOPE

1. Time relay RT-SBE EKF – 1 pc.

2. Technical manual – 1 pc.

6 SAFETY REQUIREMENTS

6.1. Do not operate relays with visible mechanical damage.

6.2. The relays conform to IEC 61140 Class 0 for protection against electrical shock and must be installed in Class 1 enclosures or higher.

7 MAINTENANCE

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

7.2. Under normal operating conditions, visually inspect the relay and check the set modes and trigger time every 6 months. Tighten the screw terminals, as they may become loose due to cyclical changes in the ambient temperature and material flow.

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

7.4 Follow the wiring diagram when installing the relay.

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

8 TRANSPORTATION AND STORAGE

8.1 Relays can be transported by any means of enclosed transport that protects the packaged goods from mechanical impact and weather exposure.

8.2 Relays shall be stored indoors, in their original packaging, at the ambient temperatures from -25°C to $+75^{\circ}\text{C}$ and max. relative humidity of 80% at $+25^{\circ}\text{C}$.

9 MANUFACTURER'S WARRANTY

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

9.2 Warranty period: 7 years from the date of sale.

9.3 Shelf life: 7 years.

9.4 Service life: 10 years.

Manufacturer: For information, refer to the product packaging.

Importer and EKF trademark service representative:

EKF ELECTRICAL SOLUTION – FZCO, Dubai Silicon Oasis, DDP, Building A2, Dubai, United Arab Emirates.

Importer and EKF trademark service representative on the territory of the Russian Federation: OOO «Electroresheniya»,

Otradnaya st., 2b bld. 9, 5th floor, 127273, Moscow, Russia.

Tel.: +7 (495) 788-88-15.

Importer and EKF trademark service representative on the territory of the Republic of Kazakhstan:

TOO «Energoresheniya Kazakhstan», Kazakhstan, Almaty, Bostandyk district, Turgut Ozal st., 247, apt 4.

10 CERTIFICATE OF ACCEPTANCE

The time relay has been manufactured in compliance with the effective laws and regulations and has been approved for operation.

Date of manufacture:

For information, refer to the product packaging.

Quality control stamp



EAC



v3

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