



RELAYS

RAILWAY-APPROVED DOUBLE-BREAK MONOSTABLE RELAY

F-OK B SERIES

USER SECTORS



Power generation



Nuclear



Power transmission



Rolling Stock



Fixed railway installations



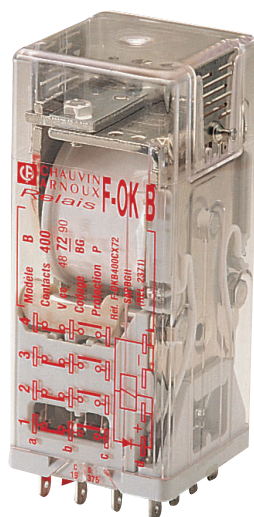
Shipbuilding



Petroleum industry



Heavy industry



F-OK B

PRODUCT ADVANTAGES

- 4 double-break changeover contacts / 13 A
- NF-F 62002 railway certification
- High reliability for intensive use in harsh conditions
- Long-travel contacts and excellent break reliability

DESCRIPTION

The relays in the **F-OK Series** are designed and manufactured with materials and solutions which make them particularly **long-lasting and rugged**. They are ideal for use in **difficult operating environments**, even in the event of significant thermal shocks. Thanks to their high resistance to **shocks and vibrations**, these relays are particularly suitable for use on rolling stock.

Because of the high electrical and mechanical performance provided by these relays, they can not only be used on rolling stock, but also in sectors such as **control and signaling** in railway transport or in applications with **continuous production processes**. Equipped with “**double break**” contacts, they are effective at **breaking DC loads**.

Models	Number of contacts	Nominal current
F-OK B	4	5 A

Coil specifications	F-OK B	F-OK B
Nominal voltages Un ⁽¹⁾	VDC: 24-36-48-72-96-110-125-550	VAC: 48-127-220
Max. consumption at Un (DC/AC)	< 4.8 W	< 4.8 VA
Operating range ⁽¹⁾	DC: 70...125% Un	AC: 80...110% Un
Type of duty	Continuous	
Drop-out voltage ⁽²⁾	> 10% Un	> 10% Un

1. Other values on request. For ESAPOKS, values > 24 V.

2. Limit value for supply voltage, expressed as % of the nominal value, beneath which the relay is certain to be de-energized.

Contact specifications		
Number and type	4 CO, Form Z	
Current	13 A	
Nominal ⁽¹⁾		
Maximum pulse (10 ms) ⁽²⁾	300 A for 10 ms	
Maximum breaking voltage	350 Vdc	
Contact material	AgNi AgCdO10	
Contact closure pressure	> 0.3 N	
Contact opening pressure	> 0.3 N	
Contact closure time	DC	≤ 55 ms
	AC	≤ 55 ms
Contact opening time	DC	≤ 25 ms
	AC	≤ 25 ms

Insulation		
Insulation resistance (at 500 Vdc)		
between the independent circuits and the ground	> 1,000 MΩ	
between open contact parts	> 1,000 MΩ	
Withstand voltage at industrial frequency		
between the independent circuits and the ground	2.5 kV (1 min)	
between open contact parts	2 kV (1 min)	

MONOSTABLE
INSTANTANEOUS

INSTANTANEOUS
MONOSTABLE WITH
FORCIBLY GUIDED
CONTACTS

BISTABLE

FAST-ACTING
MONOSTABLE
(AND BISTABLE)

TIME DELAY
(ON PICK-UP
OR DROP-OUT)

TIME DELAY WITH
FORCIBLY GUIDED
CONTACTS

MEASUREMENT

SOCKET
NUMBERING
EXPLANATIONS

FRONT
CONNECTION

BACK
CONNECTION

PCB MOUNT

RETAINING CLIPS

KEYING



Mechanical specifications

Mechanical life expectancy	100x10 ⁶ operations
Degree of protection (with relay mounted)	IP40
Dimensions (mm)	45x45x105 ⁽¹⁾
Weight (g)	300

1. Excluding output terminals



Environmental specifications

Operating temperature	Standard	-25 ÷ +70°C
Storage and shipping temperature		-40 ÷ +70°C
Relative humidity		Standard: 80%
Fire behavior		NF-F 16-101, NF-F 16-102, NF-F 62002



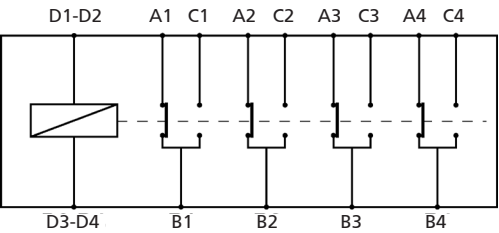
Standards and reference values

Resistance to vibrations (as per NF-F 62002)	2 g from 10 to 120 Hz (1 min)
Railway standards	NF-F 16-101, NF-F 16-102 (materials), NF-F 62002

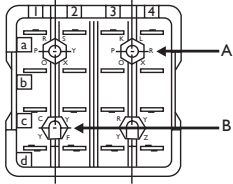


Ordering scheme - Please contact us

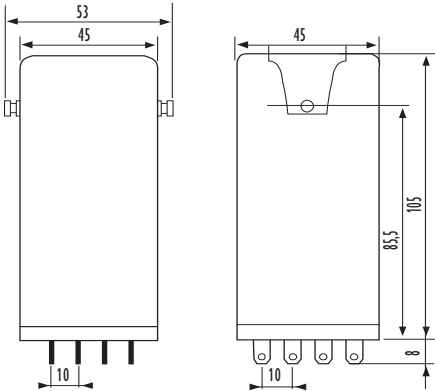
Connection diagram and positive mechanical keying

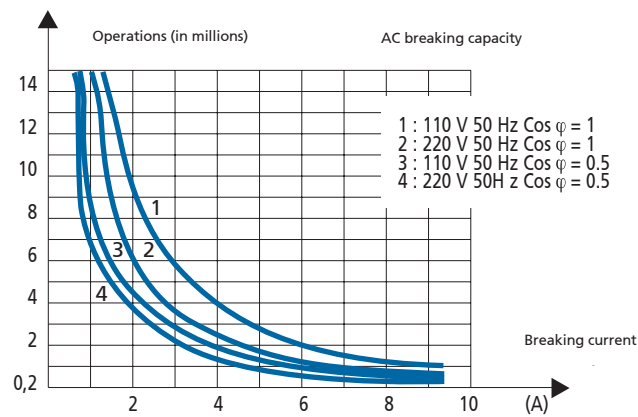
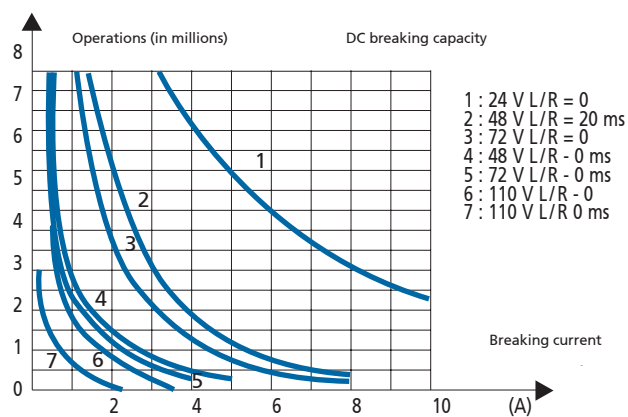


Coil voltage Keying position	Safety blank recess A	Safety blank recess B
220 Vac	C	G
24 Vdc	A	G
36 Vdc	F	L
48 Vdc	D	G
72 Vdc	B	G
72 Vdc double winding	J	F
110 Vdc	F	G
125 Vdc	E	G
550 Vdc	F	G



Dimensions





Sockets and retaining clips

Type of installation	Type of outputs	F-OK B	Model	Retaining clip
For flush mounting and DIN rail	Single faston		84F	Delivered with the socket

Mounting tips

The preferred mounting position is on the wall, with the relay positioned horizontally in the reading direction on the nameplate. For correct use of the relays, they should be spaced apart by at least 5 mm in the horizontal direction and 20 mm in the vertical direction. This is to allow correct upward dissipation of the heat generated by the coil. Set these distances according to the socket used. Distances can be reduced depending on the environmental application conditions and on the relay duty cycle.

For safe and secure operation, it is advisable to use retaining clips.

No special maintenance is required.

Condensation can form inside the relay when powered up and the outside ambient temperature is cold; this is quite normal and does not affect the operation of the relay. The plastic materials of the relay do not possess hygroscopic properties.